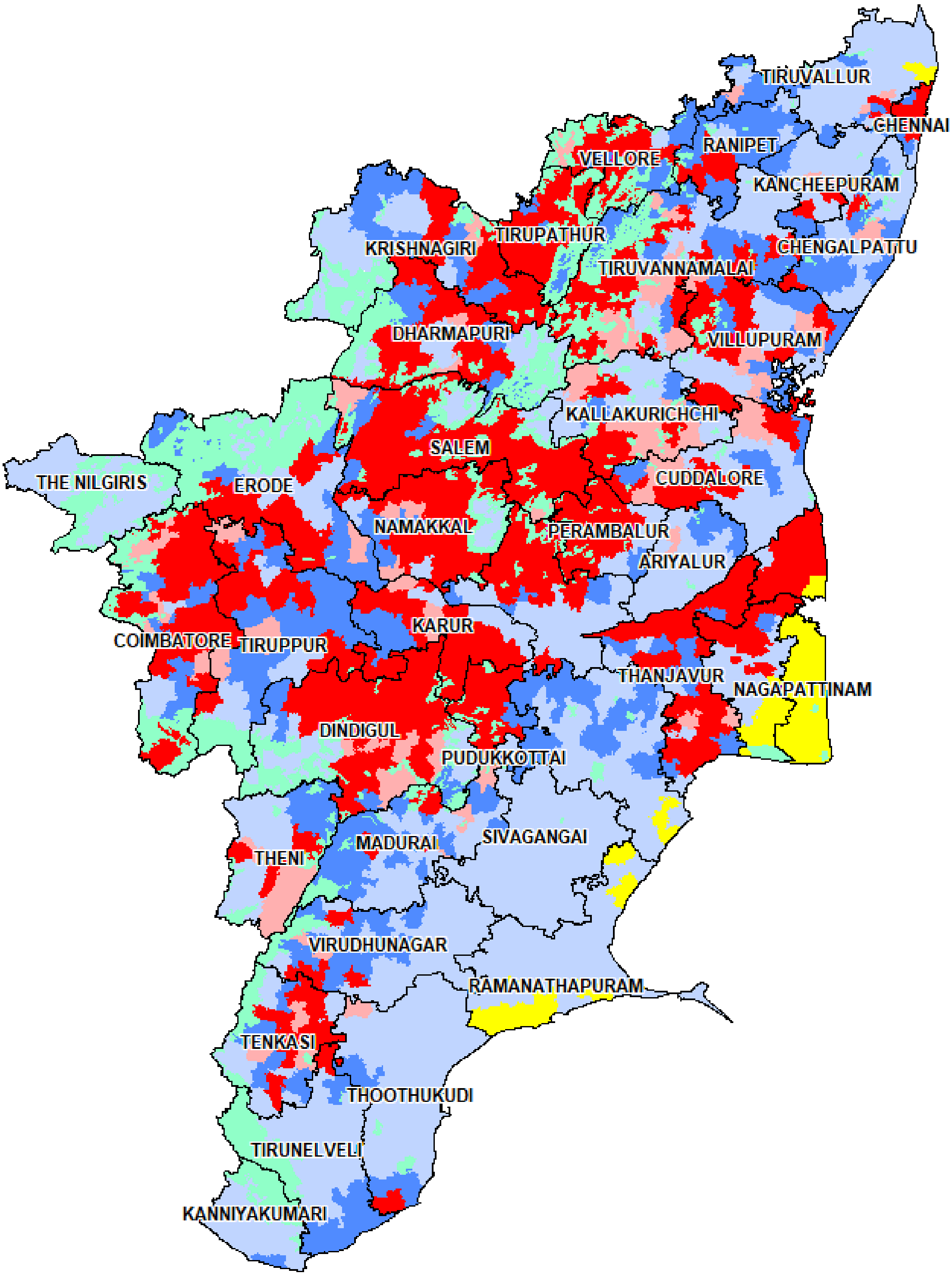
REPORT ON
DYNAMIC GROUNDWATER RESOURCES
OF
TAMIL NADU
2024



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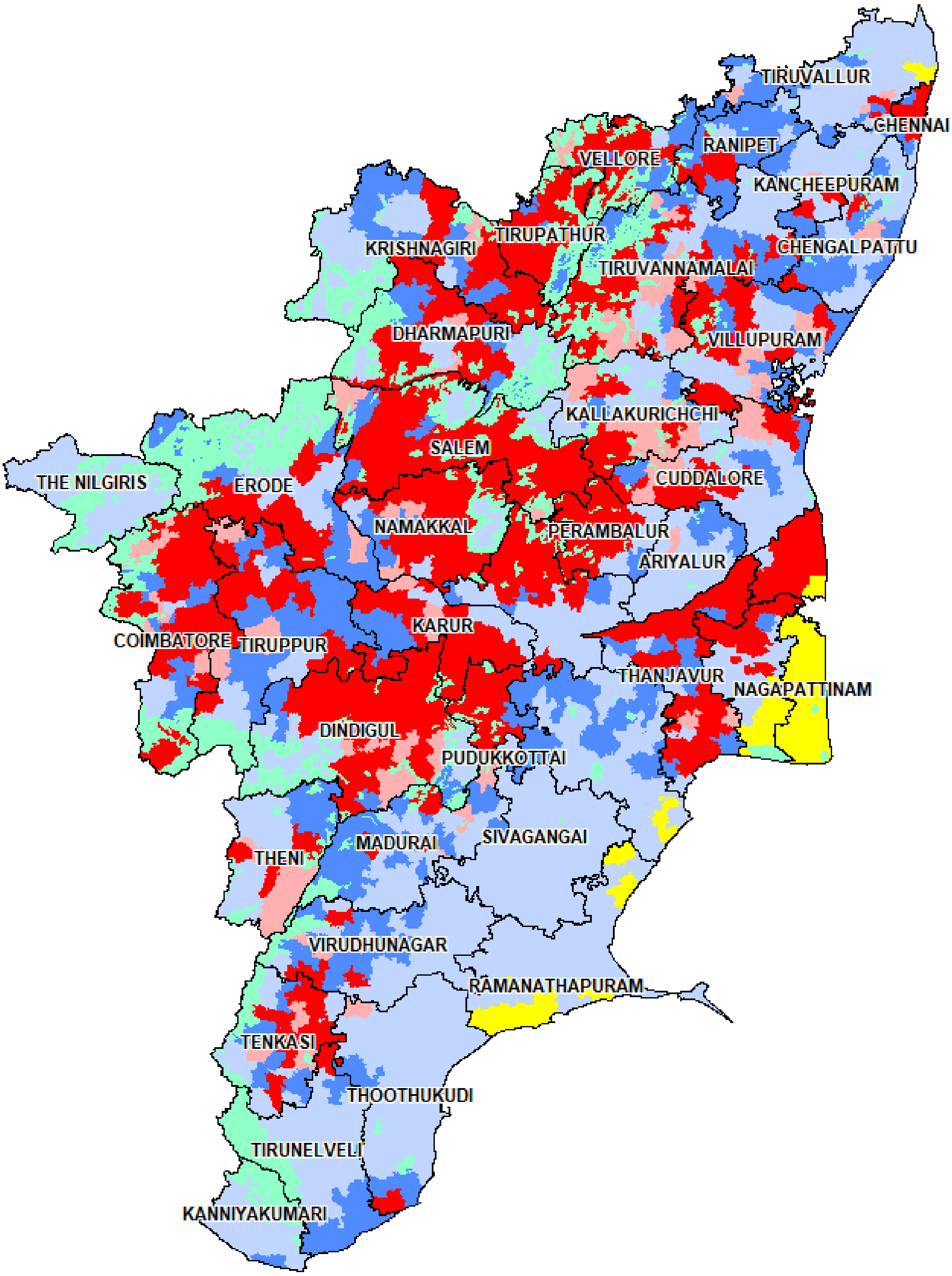

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एम. सिवकुमार
क्षेत्रीय निदेशक
M. SIVAKUMAR
REGIONAL DIRECTOR
दूरभाष / Tel : 044-24914334
Email: rdsecr-cgwb@nic.in

भारत सरकार Government Of India
जल शक्ति मंत्रालय Ministry Of Jal Shakti
जल संसाधन, नदी विकास एवं गंगा संरक्षण विभाग
Dept. of Water Resources,
River Development & Ganga Rejuvenation
केन्द्रीय भूमि जल बोर्ड CENTRAL GROUND WATER BOARD
दक्षिण पूर्वी तटीय क्षेत्र South Eastern Coastal Region

FOREWORD

In recent years, groundwater become more dependable source of water for all uses. It needs to be managed judiciously to ensure its sustainability. A proper understanding of groundwater resources availability and its utilization is essential for its management. Hence, a periodic assessment of groundwater resources assumes significance for its development and management.

The report on "Dynamic Groundwater Resources of the State of Tamil Nadu -2024" depicts the estimation of groundwater resource of the state of Tamil Nadu, which has been jointly carried out by Central Ground Water Board (CGWB), South Eastern Coastal Region, Ministry of Jal Shakti, Government of India and State Ground & Surface Water Resources Data Centre (SG&SWRDC), Water Resources Department, Government of Tamil Nadu under the supervision of State level Committee (SLC) with overall guidance of Central Level Expert Group. The assessment is done based on the Groundwater Estimation Methodology. 2015 (GEC-2015), for the 1202 assessment units (firka) which considers all the relevant parameters contributing to ground water recharge and extraction. The assessment is automated through a web-based application namely "INDIA GROUND WATER RESOURCE ESTIMATION SYSTEM (IN-GRES)" developed by CGWB in collaboration with IIT, Hyderabad. This application provides a standardized platform for the assessment of dynamic Ground Water Resources of the country.

I would like to express my appreciation to all the officers from SG&SWRDC engaged in ground water resource estimation 2024, duly supported by Er.T.Tamizhselvi, Chief Engineer, S. Sridhar, Deputy Director (Geology) and his team from SG&SWRDC, Govt. of Tamil Nadu and Shri. J. Sivaramakrishnan, Scientist-D, Dr.K.Paramasivam, Scientist-B, duly supported by Ms. D. Dhayamalar, Scientist-D, Dr.M.Senthilkumar, Scientist-D, and G. Vengatajalapathi, Scientist-B of CGWB, SECR, Chennai for their efforts in bringing out this report in excellent way. This report will be useful for planners, administrators, ground water professionals & academicians in ensuring for holistic approach in development and Management of ground water resources.

(M. SIVAKUMAR)

Er.T.Thamizhselvi
Chief Engineer

Government of Tamil Nadu
Water Resources Department,
State Ground and Surface
Water Resources Data Centre,
Tharamani, Chennai-600 113.

FOREWORD

Groundwater, though a renewable natural resource, its occurrence and movement is controlled by the hydrometeorological and hydrogeological conditions, which are not uniform throughout the State. As a result, there is significant variations in the quantitative and qualitative distribution of this valuable resource. The advancement of scientific technology particularly in water lifting devices and deep well drilling, has further boosted groundwater resource extraction. However, the increased dependency on groundwater has led to significant groundwater depletion in many parts of the State, making sustainable groundwater management a critical priority. For the planned and optimal development of any resource, assessing its quantity and quality in space and time is essential.

The report "Dynamic Groundwater Resources Assessment of the State of Tamil Nadu as on March 2024" is a comprehensive compilation of groundwater assessment carried out firka-wise. It has been jointly carried out by the State Ground and Surface Water Resources Data Centre (SG&SWRDC), Water Resources Department (WRD), Tharamani, Chennai and the Central Ground Water Board (CGWB), South Eastern Coastal Region (SECR), Chennai under the guidance of the State Level Committee and Central Level Expert Group. The assessment follows the Groundwater Estimation Methodology, 2015 (GEC-2015), which incorporates all relevant parameters contributing to groundwater recharge and extraction.

All computations have been automated and conducted in a GIS environment using the web-based application "INDIA GROUNDWATER RESOURCE ESTIMATION SYSTEM (IN-GRES)," developed in collaboration with IIT Hyderabad. This platform provides a standardized approach to groundwater assessment, aiding in data visualization and informed decision-making for resource management.

I sincerely appreciate the efforts of the officers of SG&SWRDC, WRD and CGWB, SECR for successfully completing assessment in the stipulated time frame.

I am confident that this report will serve as a valuable resource for planners, administrators, and groundwater professionals, assisting in the sustainable and optimal management of Tamil Nadu's groundwater resources.

(T.Thamizhselvi)
Chief Engineer, SG&SWRDC,

Contents

DYNAMIC GROUND WATER RESOURCES OF TAMILNADU 2024
AT A GLANCE

1.	Total Annual Ground Water Recharge	21.51 BCM
2.	Annual Extractable Ground Water Resources	19.46 BCM
3.	Annual Ground Water Extraction	14.45 BCM
4.	Stage of Ground Water Extraction	74.26%

CATEGORIZATION OF ASSESSMENT UNITS (2024)

(Firka)

SI.No	Category	Number of Assessment Units		Recharge worthy Area		Annual Extractable Ground Water Resource	
		Number	**%**	**in lakh sq. km**	%	**(in bcm)**	%
1	Safe	481	40.0	43886.57	40.41	9.04	46.47
2	Semi Critical	239	19.9	22663.35	20.87	3.94	20.25
3	Critical	56	4.7	5517.20	5.08	1.12	5.76
4	Over-Exploited	392	32.6	33375.93	30.73	5.35	27.53
5	Saline	34	2.83	1911.56	1.76	-	-
	TOTAL	**1202**		**107354.61**		**19.46**	

EXECUTIVE SUMMARY

Ground Water Resource Assessment is carried out at periodical intervals jointly by State Ground Water Departments and Central Ground Water Board under the guidance of the respective State Level Committee on Ground Water Assessment at State Levels and under the overall supervision of the Central Level Expert Group (CLEG). Such joint exercises have been taken up earlier in 1980, 1995, 2004, 2009, 2011, 2013, 2017, 2020, 2022, and 2023 and from the year 2022, the exercise is being carried out annually.

The assessment involves computation of dynamic ground water resources or Annual Extractable Ground Water Resource, Total Current Annual Ground Water Extraction (utilization) and the percentage of utilization with respect to annual extractable resources (stage of Ground Water Extraction). The assessment units (Talukas/Blocks/Mandals) are categorized based on Stage of Ground Water Extraction, which are then validated with long-term water level trends. The assessment prior to that of year 2017 were carried out following Ground Water Estimation Committee (GEC) 97 Methodology, whereas from2017 onwards assessment is based on norms and guidelines of the GEC 2015 Methodology.

The state is underlain by diverse hydrogeological formations. Nearly 73 % of the state is occupied by hard rocks, semi-consolidated and consolidated formations which are mainly confined to the eastern part including the coastal tract. In the hard rock areas, groundwater is developed through dug wells tapping the weathered zone and dug cum bore wells and bore wells tap the deeper fractures down to a depth of 300 m. In semi consolidated and unconsolidated formation, shallow zones are tapped by filter points and shallow tube wells and deeper zones through deeper tube wells. The yield of open wells varies from 1 to 3 lps, where as in dug wells tapping soft rocks including sedimentary formations, the yield is up to 10 lps. The yield from unconsolidated and semi consolidated formations are in general 10 to 20 lps and also as high as 40 lps are also noticed at select places.

The ground water resources for the State have been assessed firka-wise. Total Annual Ground Water Recharge of the State has been assessed as 21.51 bcm and Annual Extractable Ground Water resources as 19.46 bcm. The Annual Ground Water Extraction is 14.45 bcm and Stage of Ground Water Extraction as 74.26 %. Out of 1202 assessment units (firkas), 392 units (32.60%) have been categorized as 'Over Exploited', 56 units (4.7 %) as 'Critical', 239 units (19.90 %) as 'Semi-Critical', 481 units (40.00 %) as 'Safe' and 34 units (2.83 %) have been categorized as 'Saline' . Similarly, out of 108613.35 sq km recharge worthy area of the State, 33375.93sq km (30.73) area are under ‘Over-Exploited’, 5517.20 sq km (5.08 %) under ‘Critical’, 22663.35 sq km (20.87%) under ‘Semi-critical’, 43886.57sq km (40.41%) under ‘Safe’ and 1911.56 sq km (1.76 %) area under ‘Saline’ categories of assessment units. Out of total 19461.53 mcm annual extractable ground water resources of the State, 5352.91 mcm (27.51%) are under ‘Over-exploited,’ 1118.75mcm (5.75%) under ‘Critical’, 3939.48 mcm (20.24%) under ‘Semi-critical’ and 9041.39mcm (46.46%) are under ‘Safe’ categories of assessment units.

As compared to the previous 2023 assessment, the present 2024 Ground Water Resource Assessment, the Total Annual Ground Water Recharge has decreased from 21.54 to 21.51 bcm. The Annual Extractable Ground Water Resources has decreased from 19.47 to 194.6 bcm and the annual ground water extraction has increased marginally from 14.41 to 14.45bcm. Consequently, there is a deterioration in the stage of ground water extraction from 74.02 % to 74.26%. The deterioration is due to changes in rainfall recharge and increased extraction is due to reduction in dependency on ground water.

CHAPTER 1

1.0 INTRODUCTION

Quantification of the groundwater recharge is essential for efficient groundwater resources development. To achieve the objective based on the Groundwater Estimation Committee (GEC) 2015 methodology, the dynamic groundwater resources in the State of Tamil Nadu, using firka as an assessing unit were estimated with regard to groundwater potential and extraction. In order to locate the favorable pockets within the administrative blocks and also for effective implementation of various plans / schemes by the District Administration in the State and by the availability of easy segregation of land use and agricultural statistical records in the State it was decided to take up the groundwater resources estimation for the year 2024 on basis of revenue firka. Accordingly, 1202 revenue firkas belongs to 38 Districts were taken as assessment units and dynamic groundwater resources estimation as on March 2024 was carried out for the state of Tamil Nadu with 2019-2023 as the resource year. Moreover, all computations for the assessment of groundwater resources have been automated and done in a GIS environment through a web-based application called IN-GRES.

1.1. Constitution of State Level Committee and State Level Working Group Committee for Ground Water Resources Estimation

1.1.1. STATE LEVEL COMMITTEE

To review the present groundwater resource estimation based on GEC-15 Norms, the parameters used for estimation, availability of site-specific parameters for each hydrological situation and the need to collect data etc., and suggest suitable modifications, the Government of Tamil Nadu ordered the constitution of State Level Committee.

The State Level Committee with Additional Chief Secretary, Water Resources Department, Government of Tamil Nadu as the Chairman of the committee and other members as given below.

1.	Additional Chief Secretary to Government	Water Resources Department	**Chairman**
2.	Additional Chief Secretary to Government	Industries Investment Promotion and Commerce Department	Member
3.	Principal Secretary to Government	Municipal Administration & Water Supply Department	Member
4.	Principal Secretary to Government	Rural Development and Panchayat Raj Department	Member
5.	Principal Secretary to Government	Finance Department	Member
6.	Agricultural Production Commissioner and Secretary to Government	Agriculture and Farmers Welfare Department	Member

7.	Chairman	Cauvery Technical Cell-Cum-Inter State Waters wing	Member
8.	Chairman and Managing Director	SIPCOT	Member
9.	Chairman	Tamil Nadu Pollution Control Board	Member
10.	Engineering-in Chief and Chief Engineer (General)	Water Resources Department	Member
11.	Regional Director	Central Ground Water Board, Chennai	Member
12.	Head of Department of Civil Engineering	IIT, Chennai	Member
13.	Head of Department-Geology	Anna University, Chennai	Member
14.	Director	Department of Economics & Statistics	Member
15.	General Manager	NABARD	Member
16.	Chief Engineer	Institute of Water Studies, Hydrology and Quality Control	Member
17.	Engineering Director	Tamil Nadu Water Supply and Drainage Board	Member
18.	Commissioner	Agriculture Department	Member
19.	Chief Engineer (Agricultural Engineering)	Agricultural Engineering Department	Member
20.	Chief Engineer	State Ground & Surface Water Resources Data Centre	Member Secretary
21.	Special Invitees (as per need)	-	Member

1.1.2. STATE LEVEL WORKING GROUP COMMITTEE / GROUND WATER RESOURCE ASSESSMENT CELL

Ground Water Resource Assessment is a time bound activity and for timely assessment and publication of Ground Water Resource Assessment Reports, a Ground Water Resource Assessment Cell is proposed to be constituted at CGWB and State Nodal Ground Water Departments. GWRAC will be constituted for each State where GWRA are proposed to be carried out. The following major activities will be carried out by members of GWRAC • Assessment of Ground Water Resources

- Data Collection and Compilation for Ground Water Resource Assessment.
- Validation of data collected for entry in IN-GRES in consultation with State Nodal GW Departments.
- Data Entry in IN-GRES.
- Discussions with Central Team at CHQ, Faridabad, IIT-Hyderabad, and Vassar Labs to resolve issues if any in IN-GRES.
- Provision of verified Data for Annexures and Write up Part to Central team at CHQ, Faridabad for "National Report on Dynamic Ground Water Resources of India."
- Compilation and Publication of State Report on Dynamic Ground Water Resources

The following composition for GWRAC: -

S.No	Name	Designation
Central Ground Water Board, South Eastern Coastal Region, Chennai		
1.	Dr. M. Senthil Kumar	Scientist-D
2.	Sh. J. Sivaramakrishnan	Scientist-D
3.	Dr. K. Paramasivam	Scientist-B
4.	Sh. G. Vengatajalapathi	Scientist-B
State Ground & Surface Water Resources Data Centre, Tharamani, Chennai		
5.	Sh. S. Sridhar	Deputy Director (Geology)
6.	Sh. S. Lenin	Assistant Director (Geology)
7.	Smt. S. Suganthi	Assistant Geologist
8.	Sh. Sugan	Assistant Geologist
9.	Sh. K. Karthik	Assistant Geologist
10.	Sh. M. Pushpharaj	Assistant Geologist

CHAPTER 2

2.0 GROUND WATER RESOURCE ESTIMATION METHODOLOGY

Ground water resource as in 2024 have been estimated following the guidelines mentioned in the GEC 2015 methodology using appropriate assumptions/calculations depending on data availability. The principal attributes of GEC 2015 methodology are given below:

It is also important to add that as it is advisable to restrict the groundwater development as far as possible to annual replenishable resources, the categorization also considers the relation between the annual replenishment and groundwater development. An area devoid of ground water potential may not be considered for development and may remain safe whereas an area with good groundwater potential may be developed and may become over exploited over a period. Thus, water augmentation efforts can be successful in such areas, where the groundwater potential is high and there is scope for augmentation.

2.1. GROUND WATER ASSESSMENT OF UNCONFINED AQUIFER

Though the assessment of ground water resources includes assessment of dynamic and in-storage resources, the development planning should mainly focus on dynamic resource as it gets replenished on an annual basis. Changes in static or in-storage resources normally reflect long-term impacts of ground water mining. Such resources may not be replenishable annually and may be allowed to be extracted only during exigencies with proper planning for augmentation in the succeeding excess rainfall years.

2.1.1. Assessment of Annually Replenishable or Dynamic Ground Water Resources

The methodology for ground water resources estimation is based on the principle of water balance as given below –

$$\boldsymbol{Inflow - Outflow = Change\ in\ Storage(of\ an\ aquifer)} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots .. (\mathbf{1})$$

Equation (1) can be further elaborated as –

$$\boldsymbol{\Delta S = R_{RF} + R_{STR} + R_{C} + R_{SWI} + R_{GWI} + R_{TP} + R_{WCS} \pm VF \pm LF - GE - T - E - B} \ldots \ldots .. (\mathbf{2})$$

Where,

ΔS - Change is storage
R_{RF} - Rainfall recharge
R_{STR} - Recharge from stream channels
R_{C} - Recharge from canals
R_{SWI} - Recharge from surface water irrigation
R_{GWI} - Recharge from ground water irrigation
R_{TP} - Recharge from Tanks & Ponds
R_{WCS} - Recharge from water conservation structures
VF - Vertical flow across the aquifer system
LF - Lateral flow along the aquifer system (through flow)
GE - Ground Water Extraction
T - Transpiration
E - Evaporation
B - Base flow

Due to lack of data for all the components in most of the assessment units, at present the water budget has been assessed based on major components only, taking into consideration certain reasonable assumptions. The estimation has been carried out using lumped parameter estimation approach keeping in mind that data from many more sources if available may be used for refining the assessment.

2.1.1.1. Rainfall Recharge

Ground water recharge has been estimated on ground water level fluctuation and specific yield approach since this method considers the response of ground water levels to ground water input and output components. In units or subareas where adequate data on ground water level fluctuations are not available, ground water recharge is estimated using rainfall infiltration factor method only. The rainfall recharge during non-monsoon season has been estimated using rainfall infiltration factor method only.

2.1.1.1.1. Ground Water Level Fluctuation Method

The ground water level fluctuation method is used for assessment of rainfall recharge in the monsoon season. The ground water balance equation in non-command areas is given by

$$\Delta \boldsymbol{S} = \boldsymbol{R_{RF}} + \boldsymbol{R_{STR}} + \boldsymbol{R_{SWI}} + \boldsymbol{R_{GWI}} + \boldsymbol{R_{TP}} + \boldsymbol{R_{WCS}} \pm \boldsymbol{VF} \pm \boldsymbol{LF} - \boldsymbol{GE} - \boldsymbol{T} - \boldsymbol{E} - \boldsymbol{B} \dots\dots\dots\dots\dots\dots\dots..(\mathbf{3})$$

Where,

ΔS - Change is storage
R_{RF} - Rainfall recharge
R_{STR} - Recharge from stream channels
R_{SWI} - Recharge from surface water irrigation
R_{GWI} - Recharge from ground water irrigation
R_{TP} - Recharge from Tanks& Ponds
R_{WCS} - Recharge from water conservation structures
VF - Vertical flow across the aquifer system
LF - Lateral flow along the aquifer system (through flow)
GE - Ground water extraction
T - Transpiration
E - Evaporation
B - Base flow

Whereas the water balance equation in command area has another term i.e., Recharge due to canals (R_C) and the equation is as follows:

$$\Delta \boldsymbol{S} = \boldsymbol{R_{RF}} + \boldsymbol{R_{STR}} + \boldsymbol{R_{C}} + \boldsymbol{R_{SWI}} + \boldsymbol{R_{GWI}} + \boldsymbol{R_{TP}} + \boldsymbol{R_{WCS}} \pm \boldsymbol{VF} \pm \boldsymbol{LF} - \boldsymbol{GE} - \boldsymbol{T} - \boldsymbol{E} - \boldsymbol{B} \dots\dots\dots\dots...(\mathbf{4})$$

The change in storage has been estimated using the following equation:

$$\Delta \boldsymbol{S} = \Delta \boldsymbol{h} \times \boldsymbol{A} \times \boldsymbol{S_Y} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots.\dots\dots\dots\dots\dots\dots..(\mathbf{5})$$

Where,

ΔS - Change is storage
Δh - rise in water level in the monsoon season
A - Area for computation of recharge
S_Y - Specific Yield

Substituting the expression in equation (5) for storage increase ΔS in terms of water level fluctuation and specific yield, the equations (3) & (4) becomes (6) & (7) for non-command and command sub-units,

$$\boldsymbol{R_{RF} = \Delta h \times A \times S_Y - R_{STR} - R_{SWI} - R_{GWI} - R_{TP} - R_{WCS} \pm VF \pm LF + GE + T + E + B \ldots\ldots\ldots\ldots\ldots..(6)}$$

$$\boldsymbol{R_{RF} = \Delta h \times A \times S_Y - R_{STR} - R_C - R_{SWI} - R_{GWI} - R_{TP} - R_{WCS} \pm VF \pm LF + GE + T + E + B \ldots\ldots\ldots.(7)}$$

Where base flow/ recharge to/from streams have not been estimated, the same is assumed to be zero. The rainfall recharge obtained by using equation (6) and (7) provides the recharge in any particular monsoon season for the associated monsoon season rainfall. This estimate has been normalized for the normal monsoon season rainfall as per the procedure indicated below.

Normalization of Rainfall Recharge

Let R_i be the rainfall recharge and r_i be the associated rainfall. The subscript "i" takes values 1 to N where N is the number of years for which data is available. This should be at least 5. The rainfall recharge, R_i is obtained as per equation (6) & equation (7) depending on the sub-unit for which the normalization is being done.

After the pairs of data on R_i and r_i have been obtained as described above, a normalisation procedure is carried out for obtaining the rainfall recharge corresponding to the normal monsoon season rainfall. Let r(normal) be the normal monsoon season rainfall obtained as the average of recent 30 to 50 years of monsoon season rainfall. Two methods are possible for the normalisation procedure. The first method is based on a linear relationship between recharge and rainfall of the form

$$\boldsymbol{R = ar \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..\ldots\ldots\ldots.(8)}$$

Where,

R = Rainfall recharge during monsoon season

r = Monsoon season rainfall

a = a constant

The computational procedure is followed in the first method is as given below:

$$\boldsymbol{R_{RF}(normal) = \frac{\sum_{i=1}^{N}\left[R_i \frac{r(normal)}{r_i}\right]}{N} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..\ldots\ldots\ldots\ldots\ldots\ldots..(9)}$$

Where,

R_{RF} (normal) - Normalized Rainfall Recharge in the monsoon season

R_i- Rainfall Recharge in the monsoon season for the i^{th}year

r(normal) - Normal monsoon season rainfall

r_i- Rainfall in the monsoon season for the i^{th} year

N - No. of years for which data is available

The second method is also based on a linear relation between recharge and rainfall. However, this linear relationship is of the form,

$$\boldsymbol{R_{RF}(normal) = a \times r(normal) + b \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(10)}$$

Where,

R_{RF} (normal) - Normalized Rainfall Recharge in the monsoon season

r(normal) - Normal monsoon season rainfall
a and b - Constants.

The two constants 'a' and 'b' in the above equation are obtained through a linear regression analysis. The computational procedure has been followed in the second method is as given below:

$$\boldsymbol{a = \frac{NS_4 - S_1S_2}{NS_3 - S_1^2}} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \boldsymbol{(11)}$$

$$\boldsymbol{b = \frac{S_2 - aS_1}{N}} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \boldsymbol{(12)}$$

Where,

$$\boldsymbol{S_1 = \sum_{i=1}^{N} r_i \;,\;\; S_2 = \sum_{i=1}^{N} R_i \;,\;\; S_3 = \sum_{i=1}^{N} r_i^2 \;,\;\; S_4 = \sum_{i=1}^{N} R_i r_i}$$

2.1.1.1.2. Rainfall Infiltration Factor Method

The rainfall recharge estimation based on Water level fluctuation method reflects actual field conditions since it considers the response of ground water level. However, the ground water extraction estimation included in the computation of rainfall recharge using water level fluctuation approach is often subject to uncertainties. Therefore, the rainfall recharge obtained from water level fluctuation approach has been compared with that estimated using rainfall infiltration factor method. Recharge from rainfall is estimated by using the following relationship –

$$\boldsymbol{R_{RF} = RFIF \times A \times \frac{(R - a)}{1000}} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \boldsymbol{(13)}$$

Where,

R_{RF} - Rainfall recharge in ham
A - Area in hectares
RFIF - Rainfall Infiltration Factor
R- Rainfall in mm
a - Minimum threshold value above which rainfall induces ground water recharge in mm

The threshold limit of minimum and maximum rainfall event which can induce recharge to the aquifer is considered while estimating ground water recharge using rainfall infiltration factor method. The minimum threshold limit is in accordance with the relation shown in equation (13) and the maximum threshold limit is based on the premise that after a certain limit, the rate of storm rain is too high to contribute to infiltration and they will only contribute to surface runoff. Thus, 10% of Normal annual rainfall has been taken as minimum rainfall threshold and 3000 mm as maximum rainfall limit. While computing the rainfall recharge, 10% of the normal annual rainfall has been deducted from the monsoon rainfall and balance rainfall is considered for computation of rainfall recharge. The same recharge factor is used for both monsoon and non-monsoon rainfall, with the condition that the recharge due to non-monsoon rainfall is taken as zero, if the normal rainfall during the non-monsoon season is less than 10% of normal annual rainfall. In using the method based on the specified norms, recharge due to both monsoon and non-monsoon rainfall has been estimated for normal rainfall, based on recent 30 to 50 years of data.

2.1.1.1.3. Percent Deviation

After computing the rainfall recharge for normal monsoon season rainfall using the ground water level fluctuation method and rainfall infiltration factor method these two estimates are compared with each other. A term, Percent Deviation (PD) which is the difference between the two expressed as a percentage of the latter is computed as

$$PD = \frac{R_{RF}(normal, wtfm) - R_{RF}(normal, rifm)}{R_{RF}(normal, rifm)} \times 100 \ldots\ldots\ldots\ldots\ldots\ldots.\ldots\ldots\ldots.(14)$$

Where,

R_{RF} (normal, wlfm) = Rainfall recharge for normal monsoon season rainfall estimated by the ground water level fluctuation method

R_{RF} (normal, rifm) = Rainfall recharge for normal monsoon season rainfall estimated by the rainfall infiltration factor method

The rainfall recharge for normal monsoon season rainfall is finally adopted as per the criteria given below:

- If PD is greater than or equal to -20%, and less than or equal to +20%, R_{RF} (normal) is taken as the value estimated by the ground water level fluctuation method.
- If PD is less than -20%, R_{RF} (normal) is taken as equal to 0.8 times the value estimated by the rainfall infiltration factor method.
- If PD is greater than +20%, R_{RF} (normal) is taken as equal to 1.2 times the value estimated by the rainfall infiltration factor method.

2.1.1.2. Recharge from Other Sources

Recharge from other sources constitutes recharges from canals, surface water irrigation, ground water irrigation, tanks & ponds, and water conservation structures in command areas where as in non-command areas it constitutes the recharge due to surface water irrigation, ground water irrigation, tanks & ponds and water conservation structures. The methods of estimation of recharge from different sources are used in the assessment as follows.

Sl. No.	Source	Estimation Formula	Parameters
1	Recharge from Canals	$R_C = WA \times SF \times Days$	R_C = Recharge from Canals WA = Wetted Area SF = Seepage Factor Days = Number of Canal Running Days
2	Recharge from Surface Water Irrigation	$R_{SWI} = AD \times Days \times RFF$	R_{SWI} = Recharge due to applied surface water irrigation AD = Average Discharge Days = Number of days water is discharged to the Fields RFF = Return Flow Factor
3	Recharge from Ground Water Irrigation	$R_{GWI} = GE_{IRR} \times RFF$	R_{GWI} = Recharge due to applied ground water irrigation GE_{IRR} = Ground Water Extraction for Irrigation RFF = Return Flow Factor
4	Recharge due to Tanks & Ponds	$R_{TP} = AWSA \times N \times RF$	R_{TP} = Recharge due to Tanks & Ponds AWSA = Average Water Spread Area N = Number of days Water is available in the Tank/Pond

Sl. No.	Source	Estimation Formula	Parameters
			RF = Recharge Factor
5	Recharge due to Water Conservation Structures	$R_{WCS} = GS \times RF$	RWCS = Recharge due to Water Conservation Structures GS = Gross Storage = Storage Capacity multiplied by number of fillings. RF = Recharge Factor

2.1.1.3. Evaporation and Transpiration

Evaporation is estimated for the aquifer in the assessment unit if water levels in the aquifer are within the capillary zone. For areas with water levels within 1.0mbgl, evaporation is estimated using the evaporation rates available for other adjoining areas. If depth to water level is more than 1.0mbgl, the evaporation losses from the aquifer is taken as zero.
Transpiration through vegetation has been estimated if water levels in the aquifer are within the maximum root zone of the local vegetation. If water levels are within 3.5mbgl, transpiration is estimated using the transpiration rates available for other areas. If it is greater than3.5m bgl, the transpiration has been taken as zero.

2.1.1.4. Recharge During Monsoon Season

The sum of normalized monsoon rainfall recharge and the recharge from other sources and lateral and vertical flows into & out of the sub unit and stream inflows & outflows during monsoon season is the total recharge/ accumulation during monsoon season for the sub unit. Similarly, this is to be computed for all the sub units available in the assessment unit.

2.1.1.5. Recharge During Non-Monsoon Season

The rainfall recharge during non-monsoon season is estimated using rainfall infiltration factor Method only when the non-monsoon season rainfall is more than 10% of normal annual rainfall. The sum of non-monsoon rainfall recharge and the recharge from other sources and lateral and vertical flows into & out of the sub unit and stream inflows & outflows during non-monsoon season is the total recharge/ accumulation during non-monsoon season for the sub unit. Similarly, this is to be computed for all the sub units available in the assessment unit.

2.1.1.6. Total Annual Ground Water Recharge

The sum of the recharge/ accumulations during monsoon and non-monsoon seasons is the total annual ground water recharge/ accumulations for the sub unit. Similarly, this is computed for all the sub units available in the assessment unit.

2.1.1.7. Annual Extractable Ground Water Resource (EGR)

The Annual Extractable Ground Water Resource (EGR) is computed by deducting the Total Annual Natural Discharge from Total Annual Ground Water Recharge.
In the water level fluctuation method, a significant portion of base flow is already accounted for by taking the post monsoon water level one month after the end of rainfall. The base flow in the remaining non-monsoon period is

likely to be small, especially in hard rock areas. In the assessment units, where river stage data are not available and neither the detailed data for quantitative assessment of the natural discharge are available, allocation of unaccountable natural discharges to 5% or 10% of annual recharge is considered. If the rainfall recharge is assessed using water level fluctuation method this has been taken 5% of the annual recharge and if it is assessed using rainfall infiltration factor method, 10% of the annual recharge is considered. The balance is account for Annual Extractable Ground Water Resources (EGR).

2.1.1.8. Estimation of Ground Water Extraction

Ground water draft or extraction is assessed as follows.

$$GE_{ALL} = GE_{IRR} + GE_{DOM} + GE_{IND} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (15)$$

Where,

GE_{ALL} = Ground water extraction for all uses
GE_{IRR} = Ground water extraction for irrigation
GE_{DOM} = Ground water extraction for domestic uses
GE_{IND} = Ground water extraction for industrial uses

2.1.1.8.1. Ground Water Extraction for Irrigation (GE_{IRR})

The methods for estimation of ground water extraction are as follows.
***Unit Draft Method:* –** In this method, season-wise unit draft of each type of well in an assessment unit is estimated. The unit draft of different types (eg. Dug well, dug cum bore well, shallow tube well, deep tube well, bore well etc.) is multiplied with the number of wells of that particular type to obtain season-wise ground water extraction by that particular structure.
***Crop Water Requirement Method:* –** For each crop, the season-wise net irrigation water requirement is determined. This is then multiplied with the area irrigated by ground water abstraction structures. The database on crop area is obtained from Revenue records in Tehsil office, Agriculture Census and also by using Remote Sensing techniques.
***Power Consumption Method:* –**Ground water extraction for unit power consumption (electric) is determined. Extraction per unit power consumption is then multiplied with number of units of power consumed for agricultural pump sets to obtain total ground water extraction for irrigation.

2.1.1.8.2. Ground Water Extraction for Domestic Use (GE_{DOM})

There are several methods for estimation of extraction for domestic use (GEDOM). Some of the commonly adopted methods are described here.
***Unit Draft Method:* –** In this method, unit draft of each type of well is multiplied by the number of wells used for domestic purpose to obtain the domestic ground water extraction.
***Consumptive Use Method:* –** In this method, population is multiplied with per capita consumption usually expressed in liter per capita per day (lpcd). It can be expressed using following equation.

$$GE_{DOM} = Population \times Consumptive\ Requirement \times L_g \ldots\ldots\ldots\ldots\ldots.\ldots\ldots\ldots\ldots\ldots\ldots. (16)$$

Where,

L_g = Fractional Load on Ground Water for Domestic Water Supply.

The Load on Ground water can be obtained from the Information based on Civic water supply agencies in urban areas.

2.1.1.8.3. Ground Water Extraction for Industrial Use (GE_{IND})

The commonly adopted methods for estimating the extraction for industrial use are as below:
Unit Draft Method: - In this method, unit draft of each type of well is multiplied by the number of wells used for industrial purpose to obtain the industrial ground water extraction.
***Consumptive Use Pattern Method:* –** In this method, water consumption of different industrial units is determined. Numbers of Industrial units which are dependent on ground water are multiplied with unit water consumption to obtain ground water extraction for industrial use.

$$GE_{IND} = Number\ of\ Industrial\ Units \times Unit\ Water\ Consumption \times L_g \ldots\ldots\ldots\ldots\ldots\ldots\ldots (17)$$

Where,

L_g = Fractional load on ground water for industrial water supply.

The load on ground water for industrial water supply can be obtained from water supply agencies in the Industrial belt.
Ground water extraction obtained from different methods need to be compared and based on field checks, the seemingly best value may be adopted. At times, ground water extraction obtained by different methods may vary widely. In such cases, the value matching the field situation should be considered. The storage depletion during a season, where other recharges are negligible can be taken as ground water extraction during that particular period.

2.1.1.9. Stage of Ground Water Extraction

The stage of ground water extraction is defined by,

$$Stage\ of\ GW\ Extraction = \frac{Existing\ Gross\ GW\ Extraction\ for\ all\ Uses}{Annual\ Extractable\ GW\ Resources} \times 100 \ldots\ldots\ldots\ldots\ldots (18)$$

The existing gross ground water extraction for all uses refers to the total of existing gross ground water extraction for irrigation and all other purposes. The stage of ground water extraction should be obtained separately for command areas, non-command areas and poor ground water quality areas.

2.1.1.10. Validation of Stage of Ground Water Extraction

The assessment based on the stage of ground water extraction has inherent uncertainties. In view of this, it is desirable to validate the 'Stage of Ground Water Extraction' with long term trend of ground water levels.
Long term Water Level trends are prepared for a minimum period of 10 years for both pre-monsoon and post-monsoon period. If the ground water resource assessment and the trend of long-term water levels contradict each other, this anomalous situation requires a review of the ground water resource computation, as well as the reliability of water level data. The mismatch conditions are enumerated below.

SOGWE	Ground Water Level Trend	Remarks
≤ 70%	Significant decline in trend in both pre-monsoon and post-monsoon	Not acceptable and needs reassessment
> 100%	No significant decline in both pre-monsoon and post-monsoon long term trend	Not acceptable and needs reassessment

2.1.1.11. Categorization of Assessment Unit

The Assessment units are categorized finally quantity and quality-based outcome.

2.1.1.11.1. Categorization of Assessment Unit Based on Quantity

The categorization based on status of ground water availability and Stage of Ground Water Extraction as given below:

Stage of Ground Water Extraction	Category
≤ 70%	Safe
> 70% and ≤90%	Semi-critical
> 90% and ≤100%	Critical
> 100%	Over Exploited

2.1.1.11.2. categorization of Assessment Unit Based on Quality

As it is not possible to categorize the assessment units in terms of the extent of quality hazard, based on the available water quality monitoring mechanism and database on ground water quality, the Committee recommends that each assessment unit, in addition to the Quantity based categorization (safe, semi-critical, critical, and over-exploited) should bear a quality hazard identifier. If any of the three quality hazards in terms of Arsenic, Fluoride and Salinity are encountered in the assessment sub unit in mappable units, the assessment sub unit has been tagged with the particular Quality hazard.

2.1.1.12. Allocation of Ground Water Resource for Utilization

The Annual Extractable Ground Water Resources are to be apportioned between domestic, industrial and irrigation uses. Among these, as per the National Water Policy, requirement for domestic water supply is to be accorded priority. This requirement based on population has been projected to the year 2025, per capita requirement of water for domestic use, and relative load on ground water for urban and rural water supply. In situations where adequate data is not available to make this estimate, the following empirical relation has been utilized.

$$\boldsymbol{Alloc = 22 \times N \times L_g mm\ per\ year} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ldots\ldots\ldots\ldots\ldots\ldots\ldots.\ \boldsymbol{(19)}$$

Where,

Alloc = Allocation for domestic water requirement
N = population density in the unit in thousands per sq. km.
L_g= fractional load on ground water for domestic water supply (≤ 1.0)

2.1.1.13. Net Annual Ground Water Availability for Future Use

The water available for future use is obtained by deducting the allocation for domestic use and current extraction for Irrigation and Industrial uses from the Annual Extractable Ground Water Recharge. The resulting ground water potential is termed as the net annual ground water availability for future use. The Net annual ground water availability for future use is calculated separately for non-command areas and command areas. As per the recommendations of the R&D Advisory committee, the ground water available for future use can never be negative. If it becomes negative, the future allocation of Domestic needs can be reduced to current extraction for domestic use. Even then if it is still negative, then the ground water available for future uses has been projected as zero.

2.1.1.14. Additional Potential Resources under Specific Conditions

2.1.1.14.1. Potential Resource Due to Spring Discharge

Spring discharge occurs at the places where ground water level cuts the surface topography. The spring discharge is equal to the ground water recharge minus the outflow through evaporation and evapotranspiration and vertical and lateral sub-surface flow. Thus, Spring Discharge is a form of ‘Annual Extractable Ground Water Recharge.’ It is a renewable resource, though has not been used for categorization. Spring discharge measurement has been carried out by volumetric measurement of discharge of the springs. Spring discharges multiplied with time in days of each season will give the quantum of spring resources available during that season.

$$\boldsymbol{Potential\ ground\ water\ resource\ due\ to\ springs} \\ = \boldsymbol{Q \times No.of days} \ldots\ldots\ldots\ldots..\ldots\ldots.(\mathbf{20})$$

Where,

Q = Spring Discharge

No of days = No of days spring yields.

2.1.1.14.2. Potential Resource in Waterlogged and Shallow Water Table Areas

In the area where the ground water level is less than 5m below ground level or in waterlogged areas, the resources up to 5m below ground level are potential and would be available for development in addition to the annual recharge in the area. The computation of potential resource to ground water reservoir in shallow water table areas has been done by adopting the following equation:

$$\boldsymbol{Potential\ groundwater\ resource\ in\ shallow\ water\ table\ areas} \\ = (\mathbf{5} - \boldsymbol{D}) \times \boldsymbol{A} \times \boldsymbol{S_Y} \ldots\ldots\ldots..(\mathbf{21})$$

Where,

D = Depth to water table below ground surface in pre-monsoon period in shallow aquifers.

A = Area of shallow water table zone.

S_Y = Specific Yield

2.1.1.14.3. Potential Resource in Flood Prone Areas

Ground water recharge from a flood plain is mainly the function of the following parameters-

- Areal extent of flood plain
- Retention period of flood
- Type of sub-soil strata and silt charge in the river water which gets deposited and controls seepage

Since collection of data on all these factors is time taking and difficult, in the meantime, the potential resource from flood plain may be estimated on the same norms as for ponds, tanks and lakes. This has been calculated over the water spread area and only for the retention period using the following formula.

$$\boldsymbol{Potential\ groundwater\ resource\ in\ Flood\ Prone\ Areas} \\ = \mathbf{1.4} \times \boldsymbol{N} \times \frac{\boldsymbol{A}}{\mathbf{1000}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots...(\mathbf{22})$$

Where,

N = No. of Days Water is Retained in the Area

A = Flood Prone Area

2.1.1.15. Apportioning of Ground Water Assessment from Watershed to Development Unit

Where the assessment unit is a watershed, there is a need to convert the ground water assessment in terms of an administrative unit such as block/ taluka/ mandal. This has been done as follows.

A block may comprise of one or more watersheds, in part or full. First, the ground water assessment in the subareas, command, non-command, and poor ground water quality areas of the watershed has been converted into depth unit (mm), by dividing the annual recharge by the respective area. The contribution of this subarea of the watershed to the block, is now calculated by multiplying this depth with the area in the block occupied by this sub-area.

The total ground water resource of the block has been presented separately for each type of sub-area, namely for command areas, non-command areas and poor ground water quality areas, as in the case of the individual watersheds.

2.2. GROUND WATER ASSESSMENT IN URBAN AREAS

The Assessment of Ground Water Resources in urban areas is similar to that of rural areas. Because of the availability of draft data and slightly different infiltration process and recharge due to other sources, the following few points are to be considered.

- Even though the data on existing ground water abstraction structures are available, accuracy is somewhat doubtful and individuals cannot even enumerate the well census in urban areas. Hence the difference of the actual demand and the supply by surface water sources as the withdrawal from the ground water resources has been considered for the assessment.

- The urban areas are sometimes concrete jungles and rainfall infiltration is not equal to that of rural areas unless and until special measures are taken in the construction of roads and pavements. Hence, 30% of the rainfall infiltration factor has been taken into consideration for urban areas as an ad hoc arrangement till field studies in these areas are done and documented field studies are available.

- Because of the water supply schemes, there are many pipelines available in the urban areas and the seepages from these channels or pipes are huge in some areas. Hence this component has been included in the other resources and the recharge has also been considered. The percent losses have been collected from the individual water supply agencies, 50% of which has been considered as recharge to the ground water system.

- In the urban areas in India, normally, there is no separate channels either open or sub surface for the drainage and flash floods. These channels also recharge to some extent the ground water reservoir. As on today, there is no documented field study to assess the recharge. The seepages from the sewerages, which normally contaminate the ground water resources with nitrate also contribute to the quantity of resources and hence same percent as in the case of water supply pipes has been taken as norm for the recharge on the quantity of sewerage when there is sub surface drainage system. If estimated flash flood data is available, the same percent has been used on the quantum of flash floods to estimate the recharge from the flash floods.

- Urban areas with population more than 10 lakhs, has been considered as urban assessment unit while assessing the dynamic ground water resources.

2.3. GROUND WATER ASSESSMENT IN WATER LEVEL DEPLETION ZONES

There are areas where ground water level shows a decline even in the monsoon season. The reasons for this may be any one of the following: (a) There is a genuine depletion in the ground water regime, with ground water extraction and natural ground water discharge in the monsoon season (outflow from the region and base flow) exceeding the recharge. (b) There may be an error in water level data due to inadequacy of observation wells.
If it is concluded that the water level data is erroneous, recharge assessment has been made based on rainfall infiltration factor method. If, on the other hand, water level data is assessed as reliable, the ground water level fluctuation method has been applied for recharge estimation. As ΔS in equation 3& 4 is negative, the estimated recharge will be less than the gross ground water extraction in the monsoon season. It must be noted that this recharge is the gross recharge minus the natural discharges in the monsoon season. The immediate conclusion from such an assessment in water depletion zones is that the area falls under the over-exploited category which requires micro level study.

2.4. NORMS USED IN THE ASSESSMENT

2.4.1. Specific Yield

Recently under Aquifer Mapping Project, Central Ground Water Board has classified all the aquifers into 14 Principal Aquifers which in turn were divided into 42 Major Aquifers. Hence, it is required to assign Specific Yield values to all these aquifer units. The values recommended in the ***Table-2.1*** has been followed in the present assessments, unless sufficient data based on field studies are available to justify the minimum, maximum or other intermediate values

Table-2.1: Norms Recommended for Specific Yield

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
1	Alluvium	AL01	Younger Alluvium (Clay/Silt/Sand/ Calcareous concretions)	Quaternary	10	8	12
2	Alluvium	AL02	Pebble / Gravel/ Bazada/ Kandi	Quaternary	16	12	20
3	Alluvium	AL03	Older Alluvium (Silt/Sand/Gravel/Lithomargic clay)	Quaternary	6	4	8
4	Alluvium	AL04	Aeolian Alluvium (Silt/ Sand)	Quaternary	16	12	20
5	Alluvium	AL05	Coastal Alluvium (Sand/Silt/Clay)	Quaternary	10	8	12
6	Alluvium	AL06	Valley Fills	Quaternary	16	12	20
7	Alluvium	AL07	Glacial Deposits	Quaternary	16	12	20
8	Laterite	LT01	Laterite / Ferruginous concretions	Quaternary	2.5	2	3

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
9	Basalt	BS01	Basic Rocks (Basalt) - Weathered, Vesicular or Jointed	Mesozoic to Cenozoic	2	1	3
10	Basalt	BS01	Basic Rocks (Basalt) - Massive Poorly Jointed	Mesozoic to Cenozoic	0.35	0.2	0.5
11	Basalt	BS02	Ultra Basic - Weathered, Vesicular or Jointed	Mesozoic to Cenozoic	2	1	3
12	Basalt	BS02	Ultra Basic - Massive Poorly Jointed	Mesozoic to Cenozoic	0.35	0.2	0.5
13	Sandstone	ST01	Sandstone/Conglomerate	Upper Palaeozoic to Cenozoic	3	1	5
14	Sandstone	ST02	Sandstone with Shale	Upper Palaeozoic to Cenozoic	3	1	5
15	Sandstone	ST03	Sandstone with shale/ coal beds	Upper Palaeozoic to Cenozoic	3	1	5
16	Sandstone	ST04	Sandstone with Clay	Upper Palaeozoic to Cenozoic	3	1	5
17	Sandstone	ST05	Sandstone/Conglomerate	Proterozoic to Cenozoic	3	1	5
18	Sandstone	ST06	Sandstone with Shale	Proterozoic to Cenozoic	3	1	5
19	Shale	SH01	Shale with limestone	Upper Palaeozoic to Cenozoic	1.5	1	2
20	Shale	SH02	Shale with Sandstone	Upper Palaeozoic to Cenozoic	1.5	1	2

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
21	Shale	SH03	Shale, limestone, and sandstone	Upper Palaeozoic to Cenozoic	1.5	1	2
22	Shale	SH04	Shale	Upper Palaeozoic to Cenozoic	1.5	1	2
23	Shale	SH05	Shale/Shale with Sandstone	Proterozoic to Cenozoic	1.5	1	2
24	Shale	SH06	Shale with Limestone	Proterozoic to Cenozoic	1.5	1	2
25	Limestone	LS01	Miliolitic Limestone	Quaternary	2	1	3
26	Limestone	LS01	KarstifiedMiliolitic Limestone	Quaternary	10	5	15
27	Limestone	LS02	Limestone / Dolomite	Upper Palaeozoic to Cenozoic	2	1	3
28	Limestone	LS02	Karstified Limestone / Dolomite	Upper Palaeozoic to Cenozoic	10	5	15
29	Limestone	LS03	Limestone/Dolomite	Proterozoic	2	1	3
30	Limestone	LS03	Karstified Limestone/Dolomite	Proterozoic	10	5	15
31	Limestone	LS04	Limestone with Shale	Proterozoic	2	1	3
32	Limestone	LS04	Karstified Limestone with Shale	Proterozoic	10	5	15
33	Limestone	LS05	Marble	Azoic to Proterozoic	2	1	3
34	Limestone	LS05	Karstified Marble	Azoic to Proterozoic	10	5	15
35	Granite	GR01	Acidic Rocks (Granite, Syenite, Rhyolite etc.) - Weathered, Jointed	Mesozoic to Cenozoic	1.5	1	2
36	Granite	GR01	Acidic Rocks (Granite, Syenite, Rhyolite etc.)- Massive or Poorly Fractured	Mesozoic to Cenozoic	0.35	0.2	0.5
37	Granite	GR02	Acidic Rocks (Pegmatite, Granite, Syenite, Rhyolite etc.) - Weathered, Jointed	Proterozoic to Cenozoic	3	2	4

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
38	Granite	GR02	Acidic Rocks (Pegmatite, Granite, Syenite, Rhyolite etc.) - Massive, Poorly Fractured	Proterozoic to Cenozoic	0.35	0.2	0.5
39	Schist	SC01	Schist - Weathered, Jointed	Azoic to Proterozoic	1.5	1	2
40	Schist	SC01	Schist - Massive, Poorly Fractured	Azoic to Proterozoic	0.35	0.2	0.5
41	Schist	SC02	Phyllite	Azoic to Proterozoic	1.5	1	2
42	Schist	SC03	Slate	Azoic to Proterozoic	1.5	1	2
43	Quartzite	QZ01	Quartzite - Weathered, Jointed	Proterozoic to Cenozoic	1.5	1	2
44	Quartzite	QZ01	Quartzite - Massive, Poorly Fractured	Proterozoic to Cenozoic	0.3	0.2	0.4
45	Quartzite	QZ02	Quartzite - Weathered, Jointed	Azoic to Proterozoic	1.5	1	2
46	Quartzite	QZ02	Quartzite- Massive, Poorly Fractured	Azoic to Proterozoic	0.3	0.2	0.4
47	Charnockite	CK01	Charnockite - Weathered, Jointed	Azoic	3	2	4
48	Charnockite	CK01	Charnockite - Massive, Poorly Fractured	Azoic	0.3	0.2	0.4
49	Khondalite	KH01	Khondalites, Granulites - Weathered, Jointed	Azoic	1.5	1	2
50	Khondalite	KH01	Khondalites, Granulites - Massive, Poorly Fractured	Azoic	0.3	0.2	0.4
51	Banded Gneissic Complex	BG01	Banded Gneissic Complex - Weathered, Jointed	Azoic	1.5	1	2
52	Banded Gneissic Complex	BG01	Banded Gneissic Complex - Massive, Poorly Fractured	Azoic	0.3	0.2	0.4
53	Gneiss	GN01	Undifferentiated metasedimentary/ Undifferentiated metamorphic - Weathered, Jointed	Azoic to Proterozoic	1.5	1	2
54	Gneiss	GN01	Undifferentiated metasedimentary/	Azoic to Proterozoic	0.3	0.2	0.4

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
			Undifferentiated metamorphic - Massive, Poorly Fractured				
55	Gneiss	GN02	Gneiss -Weathered, Jointed	Azoic to Proterozoic	3	2	4
56	Gneiss	GN02	Gneiss-Massive, Poorly Fractured	Azoic to Proterozoic	0.3	0.2	0.4
57	Gneiss	GN03	Migmatitic Gneiss - Weathered, Jointed	Azoic	1.5	1	2
58	Gneiss	GN03	Migmatitic Gneiss - Massive, Poorly Fractured	Azoic	0.3	0.2	0.4
59	Intrusive	IN01	Basic Rocks (Dolerite, Anorthosite etc.) - Weathered, Jointed	Proterozoic to Cenozoic	2	1	3
60	Intrusive	IN01	Basic Rocks (Dolerite, Anorthosite etc.) - Massive, Poorly Fractured	Proterozoic to Cenozoic	0.35	0.2	0.5
61	Intrusive	IN02	Ultrabasic (Epidiorite, Granophyre etc.) - Weathered, Jointed	Proterozoic to Cenozoic	2	1	3
62	Intrusive	IN02	Ultrabasic (Epidiorite, Granophyre etc.) - Massive, Poorly Fractured	Proterozoic to Cenozoic	0.35	0.2	0.5

2.4.2. Rainfall Infiltration Factor

The values mentioned in ***Table-2.2*** has been used in the present assessment. The recommended Rainfall Infiltration Factor values has been used for assessment, unless sufficient data based on field studies are available to justify the minimum, maximum or other intermediate values.

Table-2.2: Norms Recommended for Rainfall Infiltration Factor

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
1	Alluvium	AL01	Younger Alluvium (Clay/Silt/Sand/ Calcareous concretions)	Quaternary	22	20	24
2	Alluvium	AL02	Pebble / Gravel/ Bazada/ Kandi	Quaternary	22	20	24
3	Alluvium	AL03	Older Alluvium (Silt/Sand/Gravel/Lithomargic clay)	Quaternary	22	20	24
4	Alluvium	AL04	Aeolian Alluvium (Silt/ Sand)	Quaternary	22	20	24

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
5	Alluvium	AL05	Coastal Alluvium (Sand/Silt/Clay) -East Coast	Quaternary	16	14	18
5	Alluvium	AL05	Coastal Alluvium (Sand/Silt/Clay) - West Coast	Quaternary	10	8	12
6	Alluvium	AL06	Valley Fills	Quaternary	22	20	24
7	Alluvium	AL07	Glacial Deposits	Quaternary	22	20	24
8	Laterite	LT01	Laterite / Ferruginous concretions	Quaternary	7	6	8
9	Basalt	BS01	Basic Rocks (Basalt) - Vesicular or Jointed	Mesozoic to Cenozoic	13	12	14
9	Basalt	BS01	Basic Rocks (Basalt) - Weathered	Mesozoic to Cenozoic	7	6	8
10	Basalt	BS01	Basic Rocks (Basalt) - Massive Poorly Jointed	Mesozoic to Cenozoic	2	1	3
11	Basalt	BS02	Ultra Basic - Vesicular or Jointed	Mesozoic to Cenozoic	13	12	14
11	Basalt	BS02	Ultra Basic - Weathered	Mesozoic to Cenozoic	7	6	8
12	Basalt	BS02	Ultra Basic - Massive Poorly Jointed	Mesozoic to Cenozoic	2	1	3
13	Sandstone	ST01	Sandstone/Conglomerate	Upper Palaeozoic to Cenozoic	12	10	14
14	Sandstone	ST02	Sandstone with Shale	Upper Palaeozoic to Cenozoic	12	10	14
15	Sandstone	ST03	Sandstone with shale/ coal beds	Upper Palaeozoic to Cenozoic	12	10	14
16	Sandstone	ST04	Sandstone with Clay	Upper Palaeozoic to Cenozoic	12	10	14

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
17	Sandstone	ST05	Sandstone/Conglomerate	Proterozoic to Cenozoic	6	5	7
18	Sandstone	ST06	Sandstone with Shale	Proterozoic to Cenozoic	6	5	7
19	Shale	SH01	Shale with limestone	Upper Palaeozoic to Cenozoic	4	3	5
20	Shale	SH02	Shale with Sandstone	Upper Palaeozoic to Cenozoic	4	3	5
21	Shale	SH03	Shale, limestone, and sandstone	Upper Palaeozoic to Cenozoic	4	3	5
22	Shale	SH04	Shale	Upper Palaeozoic to Cenozoic	4	3	5
23	Shale	SH05	Shale/Shale with Sandstone	Proterozoic to Cenozoic	4	3	5
24	Shale	SH06	Shale with Limestone	Proterozoic to Cenozoic	4	3	5
25	Limestone	LS01	Miliolitic Limestone	Quaternary	6	5	7
27	Limestone	LS02	Limestone / Dolomite	Upper Palaeozoic to Cenozoic	6	5	7
29	Limestone	LS03	Limestone/Dolomite	Proterozoic	6	5	7
31	Limestone	LS04	Limestone with Shale	Proterozoic	6	5	7
33	Limestone	LS05	Marble	Azoic to Proterozoic	6	5	7
35	Granite	GR01	Acidic Rocks (Granite, Syenite, Rhyolite etc.) - Weathered , Jointed	Mesozoic to Cenozoic	7	5	9
36	Granite	GR01	Acidic Rocks (Granite, Syenite, Rhyolite etc.)- Massive or Poorly Fractured	Mesozoic to Cenozoic	2	1	3

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
37	Granite	GR02	Acidic Rocks (Pegmatite, Granite, Syenite, Rhyolite etc.) - Weathered, Jointed	Proterozoic to Cenozoic	11	10	12
38	Granite	GR02	Acidic Rocks (Pegmatite, Granite, Syenite, Rhyolite etc.) - Massive, Poorly Fractured	Proterozoic to Cenozoic	2	1	3
39	Schist	SC01	Schist - Weathered, Jointed	Azoic to Proterozoic	7	5	9
40	Schist	SC01	Schist - Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
41	Schist	SC02	Phyllite	Azoic to Proterozoic	4	3	5
42	Schist	SC03	Slate	Azoic to Proterozoic	4	3	5
43	Quartzite	QZ01	Quartzite - Weathered, Jointed	Proterozoic to Cenozoic	6	5	7
44	Quartzite	QZ01	Quartzite - Massive, Poorly Fractured	Proterozoic to Cenozoic	2	1	3
45	Quartzite	QZ02	Quartzite - Weathered, Jointed	Azoic to Proterozoic	6	5	7
46	Quartzite	QZ02	Quartzite- Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
47	Charnockite	CK01	Charnockite - Weathered, Jointed	Azoic	5	4	6
48	Charnockite	CK01	Charnockite - Massive, Poorly Fractured	Azoic	2	1	3
49	Khondalite	KH01	Khondalites, Granulites - Weathered, Jointed	Azoic	7	5	9
50	Khondalite	KH01	Khondalites, Granulites - Massive, Poorly Fractured	Azoic	2	1	3
51	Banded Gneissic Complex	BG01	Banded Gneissic Complex - Weathered, Jointed	Azoic	7	5	9
52	Banded Gneissic Complex	BG01	Banded Gneissic Complex - Massive, Poorly Fractured	Azoic	2	1	3
53	Gneiss	GN01	Undifferentiated metasedimentary/ Undifferentiated	Azoic to Proterozoic	7	5	9

Sl. No.	Principal Aquifer	Major Aquifers		Age	Recommended (%)	Minimum (%)	Maximum (%)
		Code	Name				
			metamorphic - Weathered, Jointed				
54	Gneiss	GN01	Undifferentiated metasedimentary/ Undifferentiated metamorphic - Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
55	Gneiss	GN02	Gneiss -Weathered, Jointed	Azoic to Proterozoic	11	10	12
56	Gneiss	GN02	Gneiss-Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
57	Gneiss	GN03	Migmatitic Gneiss - Weathered, Jointed	Azoic	7	5	9
58	Gneiss	GN03	Migmatitic Gneiss - Massive, Poorly Fractured	Azoic	2	1	3
59	Intrusive	IN01	Basic Rocks (Dolerite, Anorthosite etc.) - Weathered, Jointed	Proterozoic to Cenozoic	7	6	8
60	Intrusive	IN01	Basic Rocks (Dolerite, Anorthosite etc.) - Massive, Poorly Fractured	Proterozoic to Cenozoic	2	1	3
61	Intrusive	IN02	Ultra Basics (Epidiorite, Granophyre etc.) - Weathered, Jointed	Proterozoic to Cenozoic	7	6	8
62	Intrusive	IN02	Ultra Basics (Epidiorite, Granophyre etc.) - Massive, Poorly Fractured	Proterozoic to Cenozoic	2	1	3

2.4.3. Norms for Canal Recharge

The Norms suggested in ***Table-2.3*** has been used for estimating the recharge from Canals, where sufficient data based on field studies are not available.

Table-2.3: Norms Recommended for Recharge due to Canals

Formation	Canal Seepage factor ham/day/million square meters of wetted area		
	Recommended	Minimum	Maximum
Unlined canals in normal soils with some clay content along with sand	17.5	15	20
Unlined canals in sandy soil with some silt content	27.5	25	30
Lined canals in normal soils with some clay content along with sand	3.5	3	4
Lined canals in sandy soil with some silt content	5.5	5	6
All canals in hard rock area	3.5	3	4

2.4.4. Norms for Recharge Due to Irrigation

The Recommended Norms are presented in ***Table-2.4***.

Table-2.4: Norms Recommended for Recharge from Irrigation

DTW m bgl	Ground Water		Surface Water	
	Paddy	Non-paddy	Paddy	Non-paddy
≤ 10	45.0	25.0	50.0	30.0
11	43.3	23.7	48.3	28.7
12	40.4	22.1	45.1	26.8
13	37.7	20.6	42.1	25.0
14	35.2	19.2	39.3	23.3
15	32.9	17.9	36.7	21.7
16	30.7	16.7	34.3	20.3
17	28.7	15.6	32.0	18.9
18	26.8	14.6	29.9	17.6
19	25.0	13.6	27.9	16.4
20	23.3	12.7	26.0	15.3
21	21.7	11.9	24.3	14.3
22	20.3	11.1	22.7	13.3
23	18.9	10.4	21.2	12.4
24	17.6	9.7	19.8	11.6
≥ 25	20.0	5.0	25.0	10.0

2.4.5. Norms for Recharge due to Tanks & Ponds

As the data on the field studies for computing recharge from Tanks & Ponds are very limited, for Seepage from Tanks & Ponds has been used as 1.4 mm / day in the present assessment.

2.4.6. Norms for Recharge due to Water Conservation Structures

The data on the field studies for computing recharge from Water Conservation Structures are very limited, hence, the norm recommended by GEC-2015 for the seepage from Water Conservation Structures is 40% of gross storage during a year which means 20% during monsoon season and 20% during non-monsoon Season is adopted.

2.4.7. Unit Draft

The methodology recommends to use well census method for computing the ground water draft. The norm used for computing ground water draft is the unit draft. The unit draft can be computed by field studies. This method involves selecting representative abstraction structure and calculating the discharge from that particular type of structure and collecting the information on how many hours of pumping is being done in various seasons and number of such days during each season. The Unit Draft during a particular season is computed using the following equation:

$$Unit\ Draft = Discharge\ in\ m^3/hr \times No.of\ pumping\ hours\ in\ a\ day \times No.of\ days \ldots\ldots\ldots (29)$$

But the procedure that is being followed for computing unit draft does not have any normalization procedure. Normally, if the year in which one collects the draft data in the field is an excess rainfall year, the abstraction from ground water will be less. Similarly, if the year of the computation of unit draft is a drought year the unit draft will be high. Hence, there is a requirement to devise a methodology that can be used for the normalization of unit draft figures. The following are the two simple techniques, which are followed for normalization of Unit Draft. Areas where, unit draft values for one rainfall cycle are available for at least 10 years second method shown in equation 31 is followed or else the first method shown in equation 30 has been used.

$$Normalised\ Unit\ Draft = \frac{Unit\ Draft \times Rainfall\ for\ the\ year}{Normal\ Rainfall} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (30)$$

$$Normalised\ Unit\ Draft = \frac{\sum_{i=1}^{n} Unit\ Draft_i}{Number\ of\ Years} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (31)$$

2.5. INDIA -GROUNDWATER RESOURCE ESTIMATION SYSTEM (IN-GRES)

"INDIA-GROUNDWATER RESOURCE ESTIMATION SYSTEM (IN-GRES) is a Software/Web-based Application developed by CGWB in collaboration with IIT-Hyderabad. It provides common and standardized platform for Ground Water Resource Estimation for the entire country and its pan-India operationalization (Central and State Governments). The system takes 'Data Input' through Excel as well as Forms, compute various ground water components (recharge, extraction etc.) and classify assessment units into appropriate categories (safe, semi-critical, critical, and over-exploited). The Software uses GEC 2015 Methodology for estimation and calculation of Groundwater resources. It allows for unique and homogeneous representation of groundwater fluxes as well as categories for all the assessment units (AU) of the country.

URL of IN-GRES →http://ingres.iith.ac.in

CHAPTER 3

3.0 RAINFALL

3.1 Normal Rainfall of the State

Generally, sub-tropical climate prevails throughout the State and there is no variation in climate. The temperature slowly raises to its maximum in summer up to May and from June shows the general decline. The maximum temperature ranges from 37°C to 44°C and the minimum temperature varies from 12° C to 17° C. During May (summer) the average relative humidity varies from 40% to 70 % and during October (winter) the average relative humidity varies from 60% to 85%.

The State receives rainfall during Southwest and Northeast monsoon. The intensity of rainfall is high during north east monsoon, moderate during south west monsoon and low during transitional period. The annual rainfall recorded from minimum 400 mm to maximum 1300 mm and the average annual rainfall is 925 mm based on 70 years' rainfall.

Rainfall is the major source for Ground Water recharge and the rainfall pattern has got an important role on the water levels in the phreatic aquifer. There are three rainfall seasons in the state viz., i) South west monsoon ii) North east monsoon iii) Transitional dry season. The transitional dry season stretches from January to May and the state receives scanty rainfall. Southwest monsoon is expected between June and September. During the assessment year, the rainfall with high intensity has been observed in the Districts of Nilgiris, parts of Cuddalore, Kanyakumari, part of Villupuram and Tiruvallur. The northeast monsoon from October to December is closely associated with seasonal depressions in the Bay of Bengal.

Rainfall data corresponding to the measurement of water level has been downloaded from the website of India Meteorological Department. As per IMD's classification of monsoon performance over a meteorological subdivision, if the amount of rainfall received over a region (expressed as PDN) is between -19% and +19%, the monsoon performance is termed as normal. If the PDN is between -20% and -59%, the region comes under deficient category, if PDN is less than or equal to -60%, the region falls under scanty category, PDN of +20% to +59% indicates excess rainfall category and if the PDN is greater than or equal to +60%, it is termed as large excess.

3.2 North East Monsoon 2023

The Indian southwest monsoon (SWM) season of June to September is the chief rainy season for India and about 75% of the country's annual rainfall is realized during this season. Subsequent to the withdrawal of SWM, the northeast monsoon (NEM), a small-scale monsoon confined to parts of southern peninsular India comprising of the meteorological sub-divisions of Tamil Nadu, Puducherry & Karaikal (TN), Kerala & Mahe (KER), coastal Andhra Pradesh &Yanam(cap), Rayalaseema (RYS) and south interior Karnataka (SIK) occurs. For the subdivision of TN, the normal SWM seasonal rainfall realized is only about 36% (328.5 mm) of its annual rainfall (921.4 mm) as this subdivision comes under the rain-shadow region during the SWM. The northeast monsoon (NEM) season of October to December (OND) is the chief rainy season for this subdivision with 48% (442.8 mm) of its annual rainfall realized during this season and hence its performance is a key factor for its regional agricultural activity.

Table-3.1: Sub-Divisional Seasonal Rainfall during October-December 2023

Subdivision	01st October – 31st December 2023		
	Actual (mm)	Normal (mm)	PDN(%)
TAMIL NADU, PUDUCHERRY & KARALKAL	458.9	442.8	+4%

Table-3.2: Frequency of various categories of spatial rainfall distribution during October to December 2023

No. of days					
State	Widespread	Fairly widespread	Scattered	Isolated	Dry
Tamil Nadu	5	16	29	48	1

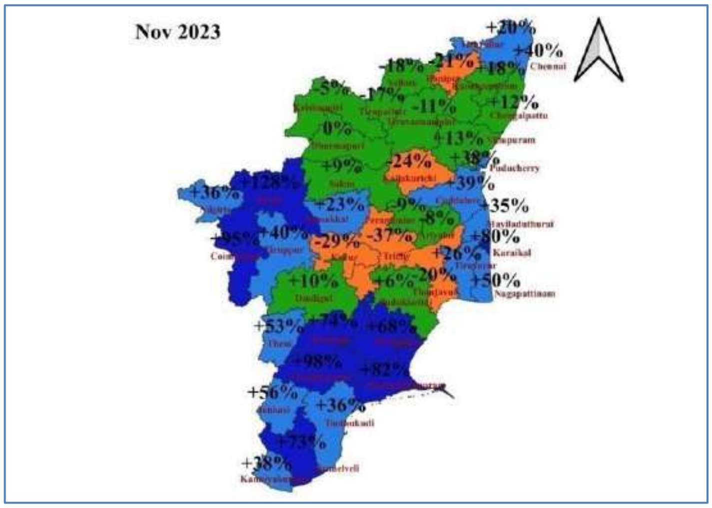
Table-3.3: Sub-divisional monthly rainfall during NEM 2023

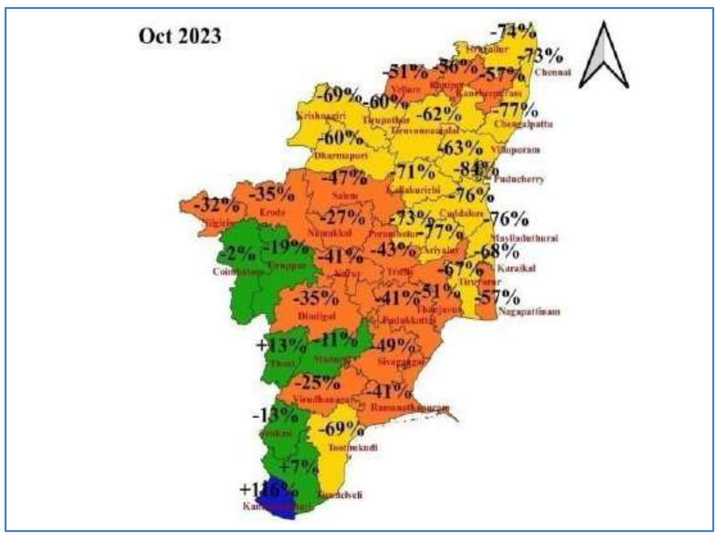
Sub- division	OCT			NOV			DEC		
	Actual (mm)	Normal (mm)	PDN (%)	Actual (mm)	Normal (mm)	PDN (%)	Actual (mm)	Normal (mm)	PDN (%)
TN	98.4	171.9	-43%	233	181.7	+28%	127.5	89.2	+43%

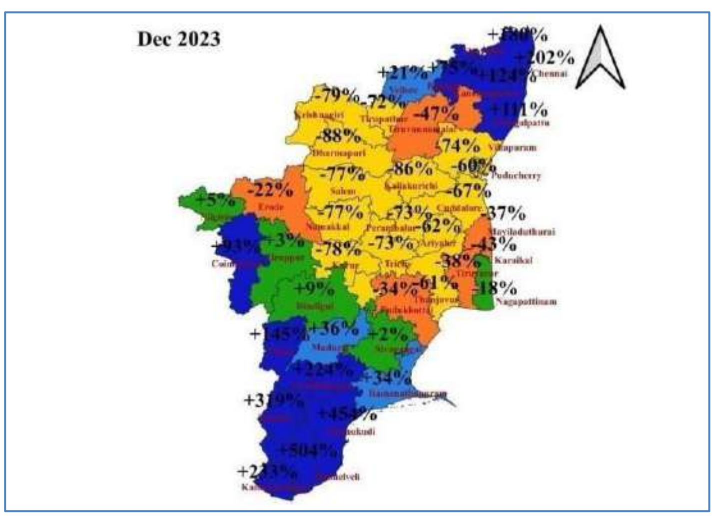
Largely Deficient	Deficient	Normal	Excess	Large Excess
≤ -60%	-20% to -59%	-19% to +19%	+20% to +59%	≥+60%

Plate-III District wise rainfall distribution over the Tamil Nadu subdivision during Oct, Nov & Dec

Fig.3.1 District Wise Normal Rainfall of the State/UT







CHAPTER 4

4.0 HYDROGEOLOGICAL SETUP OF State

4.1 Description of rock types with area coverage

Tamil Nadu State is underlain with various geological formations ranging in age from Archaean to Recent. The crystalline rocks of Archaean age like granites gneisses, charnockites etc., are of considerable interest as they occupy nearly 73% of the total geographical area of the State. Semi consolidated and consolidated formations ranging in age from Mesozoic to Recent, overlie the crystalline basement and their occurrence is confined to the east coast only. The general stratigraphic succession of the formations in the State is presented in Table-4.1

Table-4.1: Stratigraphic succession of Geological formations in Tamil Nadu

Era	Age	Stage	Lithology
Quaternary	Recent to Sub-recent	-	Soil, alluvium and beach sands Boulder, conglomerates, older alluvium, and laterites.
Tertiary	Pliocene	Karaikal beds	Sands and clay with fossils
	Miocene	Cuddalore Sandstone	Mottled and friable sandstones, buff-coloured clays and gravels.
Unconformity			
	Cretaceous	Ninniyur	Arenaceous limestones and sandstones.
		Ariyalur	Sandstones and clays
		Tiruchirappalli	Sandstones, clays, and shell limestones
		Uttattur	Basal limestones, coral clays, and sandy beds
	Jurassic	Satyavedu	Ferruginous sandstones and conglomerates
		Sriperumbudur	Clays, shales and feldspathic sandstones
Unconformity			
	Archaean	Archaean	Gneisses, charnockites and ultrabasic intrusive.

The crystalline complex of the Archaean age forms the oldest of the rock types in the state. Pink and grey granites are exposed in Cuddalore, Villupuram, Coimbatore, Madurai, and Tirunelveli districts. Metasediments of the Khondalite group are well exposed in the southern districts of Tamil Nadu and are widely noticed in Kanyakumari, Tirunelveli, Coimbatore, and Madurai districts. The ultramafic rocks are widespread in the districts of Vellore, Dharmapuri, Coimbatore and Salem. The widely exposed charnockite is more prominent in the northwestern part of Tamil Nadu, which is well exposed in the hill ranges of Javadi, Shevroy, Palani and Nilgiris (Figure 4.1).

The Mesozoic era is represented by the upper Gondwana's of Jurassic age and marine beds of Cretaceous age. The Gondwana beds occur as patches spread over in certain parts of Tiruvallur, Kancheepuram, and Vellore Districts. The cretaceous beds are well exposed in Tiruchirappalli District. The cretaceous beds overlie the granitic gneisses and charnockites along the western fringe and by alluvium in the north. They are also exposed at

Viruddhachalam area of Cuddalore District.

The important Tertiary formations in the State include the cuddalore sandstones and Conjeevaram gravels (Figure 2.1). They occur in a wide stretch and extend from Karaikudi through Pudukkottai, Thanjavur, Cuddalore to Chennai. They are overlain by Alluvium and coastal sands in the coastal tract and in river valleys. The Panamparai sandstones of sub-recent age occur along the coastal tract of Tirunelveli District.

4.2 Description of Hydrogeological units, aquifer parameters

The Geological setup, topography rainfall and drainage etc. are the main criteria for the occurrence of Ground Water. The occurrence of ground water is controlled by factors like geological conditions of the terrain and the hydrological parameters prevailing in a year. In hard rock terrain the occurrence of ground water is limited to top weathered, fissured, and fractured zone which extends to maximum 30m on an average it is about 10-15 m in Tamil Nadu. The sedimentary area which occupies the eastern part of the State along the coastal track is relatively favorable. Ground water occurs both in water table conditions and also in semi-confined and confined conditions. In the hard rock formations, the yield of the open wells varies from 30 to 250 m^3/day and in bore well the yield varies between 260 to 430 m^3/day. In the sedimentary formation the yield of the well varies from 200 to 650 m^3/day.

4.2.1 Hard rock terrain

- Ground Water occurs under the phreatic condition and wherever there is deep seated fractures, it occurs under semi-confined to confined conditions.
- The occurrence of ground water in hard rock depends upon the intensity and depth of weathering, fractures and fissures present in the rocks.
- Granites and gneisses yield moderately compared to the yield in Charnockites.
- Depth of well in hard rock generally ranges between 8 and 15m below ground level.
- Generally, yield in open wells ranges from 30 to 250m^3/day and in bore well between 260 and 430 m^3/day.
- The weathered thickness varies from 2.5 m to 42 m in general there are 3 to 5 fracture zones within 100 m and 1 to 4 fracture zones between 100 and 200 m. A few fractures zone is also encountered in highly tectonically disturbed areas of Salem, Namakkal & Coimbatore beyond 200 m down to 350 m bgl.
- The average aquifer parameters are given in the table below

1.	Coefficient of Transmissivity (T)	< 01 to 375 m^2/day
2.	Coefficient of storage (S)	2.6×10^{-6} to 3.6×10^{-2}

3.	Specific capacity	0.265 to 1316 lps/m of dd.
4.	Draw down	0.33 to 6.55 m
5.	Discharge	< 01 to 29.58 lps.

4.2.2 Sedimentary terrain

- Upper Gondwana formation covers about 1.90% of area (2626 sq.km.) of this State which do not contribute much to ground water because of its low transmissivity and compact nature.
- Ground water occurs mostly in phreatic conditions
- The average aquifer parameters are given in table below

1.	Coefficient of Transmissibility (T)	2.0 to 870 m^2/day
2.	Coefficient of storage (S)	2.9×10^{-4} to 3.6×10^{-3}
3.	Specific capacity	5.7 to 322 lps/m of dd.
4.	Draw down	0.22 to 67 m
5.	Discharge	1 to 32.78 lps.

- Cretaceous formation occupies about 1.16% (about 1515 sq.km.) of this State, forms moderate source for ground water.
- Ground water occurs under phreatic, semi-confined, and confined conditions.
- The average aquifer parameters of the cretaceous terrain are given below

1.	Coefficient of Transmissibility (T)	295 to 540 m^2/day
2.	Coefficient of storage (S)	1.77×10^{-3} to 2.4×10^{-2}
3.	Specific capacity	3.6 to 217.24 lps/m of dd.
4.	Draw down	7.56 to 32.57 m
5.	Discharge	3.08 to 3.34 lps.

- The Tertiary - Cuddalore sandstone formation covers about 6.92% (8546 sq.km) of this State and forms potential source for ground water.
- They are highly permeable, confined aquifers and occur under artesian/sub-artesian conditions.
- The average aquifer characteristics of the tertiary sandstone are given below

1.	Coefficient of Transmissibility (T)	30 to 8492 m^2/day
2.	Coefficient of storage (S)	7.74×10^{-6} to 2.575×10^{-1}
3.	Specific capacity	5.22 to 1892 lps/m of dd.
4.	Draw down	0.26 to 23.45 m
5.	Discharge	3.0 to 68.9 lps.

- The Sub-Recent to Recent-Alluvium covers about 16.92% (i.e. about 22,018 sq.km.) of this State, apart from the river alluvium of Palar, Ponnaiyar, Kusasthalayar, Cauvery and Tamiraparani, above the river courses.
- Ground water is found to occur in confined/semi-confined or water table conditions.
- The average aquifer characteristics of alluvium are given below

1.	Coefficient of Transmissibility (T)	7 to 4180 m^2/day
2.	Coefficient of storage (S)	1.2 x 10^{-3} to 7.55 x 10^{-4}
3.	Specific capacity	6.9 to 942 lps/m of dd.
4.	Draw down	2.4 to 24 m
5.	Discharge	1.0 to 39 lps.

4.3 Ground Water Level Conditions

The water level is being monitored by State Ground & Surface Water Resources Data Centre from 1971 onwards from a network of 3231 observation wells (open wells) and 1461 piezometers all over the State. The water level readings are observed the first week of every month. The Central Ground Water Board also monitors the water level from 779 numbers of open wells spread all over the State. They observe water level four times in a year. (i.e. January, May, August, and November). In addition to this, a network of observation wells has been increased under the Hydrology Project both in hard rock and sedimentary area. Totally 459 piezometers have been established all over the State. The water level collected from these network of observation wells and piezometers are uploaded in GWDES software and database is being uploaded regularly.

The long-term fluctuations of water levels have been studied. The minimum range of water level is 3 to 4 mts in many parts of the State. The analysis of water level reveals that the water level has gone down in the western and central parts of the State. The inference taken from the annual fluctuation is that the rainfall greatly affects the groundwater levels in phreatic aquifer. The seasonal fluctuation study reveals that due to necessity for development of ground water for drinking purpose and due to failure of monsoons, the water level has gone down.

4.4 Ground Water Quality

The rainfall is the main source for the availability of water both in surface and sub-surface. The quantum of rainfall varies every year depending upon the monsoon. However, the extraction of surface and sub-surface water is increasing year by year. It leads to environmental impact on the water sources like depletion of water level, deterioration of water quality. It necessitates as the quantification of available water and also its quality for specific purposes like agriculture, industries, drinking and domestic purposes.

For the present assessment, the value of Total Dissolved Solids (TDS) has been considered for demarcation of good / bad quality areas. For this purpose, the TDS value of less than or equal to 2000 mg/l have been considered as good quality and the value more than 2000 mg/l have been considered as bad quality areas.

The presence of fluoride in natural ground water is having its merits and demerits depending upon the concentration. Presence of fluoride <1.0 mg/l in drinking water reduces dental diseases whereas higher level > 1.50 mg/l will affect the health and causes dental fluorosis. A part of Dharmapuri, Krishnagiri, Salem, Namakkal, Trichy and Madurai have fluoride above the prescribed limit. Nitrate is noted significantly in ground water due to use of chemical fertilizer for agriculture and other local pollution rocks and soils are also contributing nitrate to ground water. Arsenic is another poisonous heavy metal in ground water. The allowable limits for drinking purposes are 0.05 mg/l. In Tamil Nadu the ground water is not having the excess arsenic both in the shallow dug well and bore well.

4.5 Area having Ground Water Development Prospects

The firkas categorized as safe and semi-critical can be considered for further development. However, locating favorable site for digging dug well and drilling bore/tube wells depend on hydrogeological conditions and scientific methods may be employed for locating the exact sites. The State of Tamil Nadu is characterized by varied hydrogeological environment. Nearly 73% of the State is underlain by hard rocks and the rest of the State is underlain by semi consolidated formations like Gondwana, Cretaceous sediments, Tertiary and unconsolidated deposits like recent Alluvium (Fig 2.1). The hard rocks are seen in the districts of western parts of the State. The jointed and fractured forms a good groundwater development zone. The sedimentary formations generally occur on the eastern portion along the coastal tracts of the State. They vary in age from Jurassic to recent and are generally suitable for groundwater development in view of the high primary porosity and permeability. Further along the flood plains (alluvium formations) of the major rivers, canal command forms a good groundwater development zone in the State of Tamil Nadu.

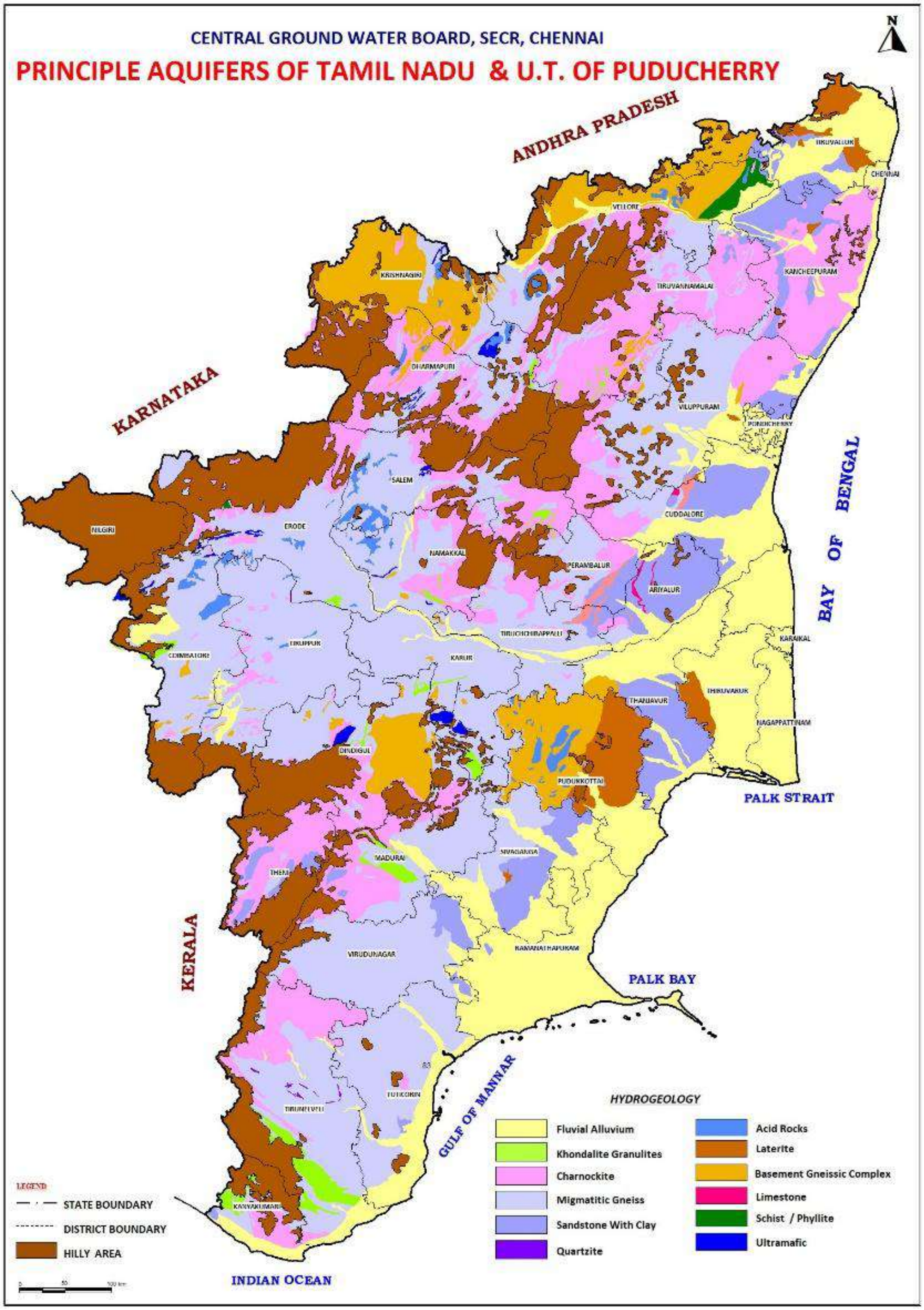


Fig-4.1. Principal and Major Aquifers of the State of Tamil Nadu

CHAPTER-5

5.0 GROUND WATER LEVEL SCENARIO IN THE State

5.1 Groundwater Level Scenario (2023)

5.1.1 Groundwater level data of pre-monsoon 2023

A perusal of the water level data reveals that the depth to water level ranged from 0.1 m bgl (Trichy district) to 39.2 m bgl (Coimbatore District) in Tamil Nadu. Overall, 91.25 % of the wells monitored in the state are in <10 m bgl range and spread over entire Tamil Nadu.

About 8.34 % of wells show depth to water level between 10 to 20 m bgl in Coimbatore, Cuddalore, Dharmapuri, Erode, Kancheepuram, Kanyakumari, Madurai, Namakkal, Perambalur, Salem, Theni, Tiruvallur, Trichy, Tuticorin and Vellore districts. Less than 1 % of wells show depth to water level more than 20 m bgl in Coimbatore and Namakkal districts. Depth to water level of less than 2 m bgl has been recorded in 13.9% of wells analyzed and noted in all over the State except Ariyalur, Thiruvarur. Depth to water level in the range of 2 to 5 m bgl has been recorded in 46.62 % of wells analyzed and noted in all the districts. Depth to water level in the range of 5 to 10 m bgl has been recorded in 30.72 % of wells analyzed except Ariyalur.

5.1.2 Groundwater level data of post-monsoon 2024

A perusal of the water level data reveals that the depth to water level ranged from 0.02m bgl (Theni district) to 44 m bgl (Perambalur District) in Tamil Nadu. Overall, 93.77 % of the wells monitored in the state are in <10 m bgl range and spread over entire Tamil Nadu. 5.79 % of wells show depth to water level between 10 to 20 m bgl in Dharmapuri, Erode, Salem, Tirupur and Coimbatore districts. <1 % of wells show depth to water level more than 20 m bgl in Coimbatore and Namakkal districts. Depth to water level of less than 2 m bgl has been recorded in 33.68 % of wells analyzed and noted in all over the State except Tirupathur district. Depth to water level in the range of 2 to 5 m bgl has been recorded in 38.28 % of wells analyzed and noted in all the districts. Depth to water level in the range of 5 to 10 m bgl has been recorded in 21.81 % of wells analyzed mainly in Coimbatore, Dharmapuri, Erode, Namakkal, Salem and Tiruchirappalli districts.

5.1.3 Fluctuation in Groundwater Level

Annual fluctuation of water level is calculated by comparing the water level of the particular period during last year with water level of the same period of current year. This indicates the impact of ground water development and ground water recharge during one year. Positive fluctuation indicates improved recharge over and above ground water development and negative fluctuation indicates increased ground water development over and above the recharge.

5.1.4 Comparison of Pre-monsoon 2023 to Pre-monsoon 2022

A comparison of water level shows a rise in 21.06 % and a fall in 78.94 % of the wells. Both the rise and fall is mainly in 0-2 m range. The entire state and Tamil Nadu have recorded fall in more than 50% wells except Theni, Tiruvarur. Rise in the water level in the range of 0-2m has been observed in 15.17% of wells analyzed, and found all over the state except Ariyalur, Kanyakumari, Nagapattinam, Perambalur, Tuticorin. Rise in the water level in the range of 2-4 m has been observed in 3.98 % of wells analyzed and mainly noted in Chennai, Dindigul, Erode, Madurai, Namakkal and Tiruvallur districts. Rise in water level more than 4 m has been observed in 1.91 % of wells analyzed and noted mainly in Coimbatore, Erode and Namakkal district.

The fall in water level in the range of 0-2m has been observed in 53.31 % of wells analysed and noted all over the state. The fall in water level in the range of 2-4m has been observed in 17.38 % of wells analysed and noted all over the state except Chennai, Karur, Krishnagiri, Madurai, Nagapattinam and Tiruvarur districts. Fall in water level more than 4 m has been observed in 8.25 % of wells analysed and noted isolated patches in some districts mainly in Coimbatore, Cuddalore, Dharmapuri, Erode, Kanyakumari, Namakkal, Salem, Tirunelveli, Tiruvannamalai, Tuticorin and Villupuram district.

5.1.5 Comparison of January 2023 to January 2024

A comparison of water level shows a rise in 66.61 % and a fall in 33.39 % of the wells. Both the rise and fall is mainly in 0-2 m range. The entire state has recorded rise in more than 50% wells except Dharmapuri, Krishnagiri, Namakkal and Thanjavur districts. Rise in the water level in the range of 0-2m has been observed in 48.21 % of wells analysed, and found all over the state. Rise in the water level in the range of 2-4 m has been observed in 13.73 % of wells analysed and mainly noted in Chennai, Kanyakumari, Nagapattinam, Ramanathapuram, Theni and Tiruchirappalli districts. Rise in water level more than 4 m has been observed in 4.68 % of wells analysed and noted mainly in Coimbatore, Erode and Ramanathapuram districts. The fall in water level in the range of 0-2m has been observed in 22.93 % of wells analysed and noted all over the state except Chengalpattu, Dharmapuri, Erode, Namakkal and Tirupur districts. The fall in water level in the range of 2-4 m has been observed in 5.30 % of wells analysed and noted all over the state except Dindigul, Namakkal and Thanjavur districts. Fall in water level more than 4 m has been observed in 5.15 % of wells analysed and noted isolated patches in some districts mainly in Dindigul, Erode, Namakkal and Salem districts.

5.1.6 Comparison of Pre-Monsoon 2023 with decadal mean of Pre-Monsoon (2013 to 2022)

The fluctuation of water level recorded during the particular period with respect to decadal mean of the same period indicate the impact of ground water development and ground water recharge during the decade. Positive fluctuation indicates improved recharge over and above ground water development and negative fluctuation indicates increased ground water development over and above the recharge. A comparison of water levels shows that a rise in the water level is recorded in 74.75 % of wells analysed, while 25.25 % recorded fall. While rise is more in 0-2 m range and the fall is also in the same range. The most of the districts of Tamil Nadu have recorded rise in more than 50% wells except Ramanathapuram, Tirunelveli and Tuticorin. Rise in the water level in the range of 0-2m has been observed in 30.84 % of wells analysed, noted all over the State.

Rise in the water level of 2 to 4 m has been observed in 19.29 % and of wells analysed and noted all over the state except Ariyalur, Karaikal, Tiruvarur and Tuticorin. Rise in the water level more than 4 m has been observed in 24.62 % and of wells analysed and noted all over the state except Karaikal, Kanyakumari, Nilgiris, Ramanathapuram and Tiruvarur districts. The fall in water level in the range of 0-2m has been observed in 20.56 % of wells analysed and spread most the districts in the State except Sivaganga. The fall in water level in the range of 2-4m has been observed in 3.30 % of wells analysed and noted mainly in Coimbatore, Dindigul, Kanyakumari, Namakkal, Salem, Tiruvallur, Tuticorin and Villupuram districts. The fall in water level more than 4 m has been observed in 1.40 % of wells analysed and noted as isolated pockets mainly in Coimbatore, Dharmapuri, Erode, Pudukkottai, Tirunelveli, Tiruvallur, Tuticorin, and Villupuram districts.

5.1.7 Comparison of Post-Monsoon 2024 with decadal mean of post-monsoon (2014 to 2023)

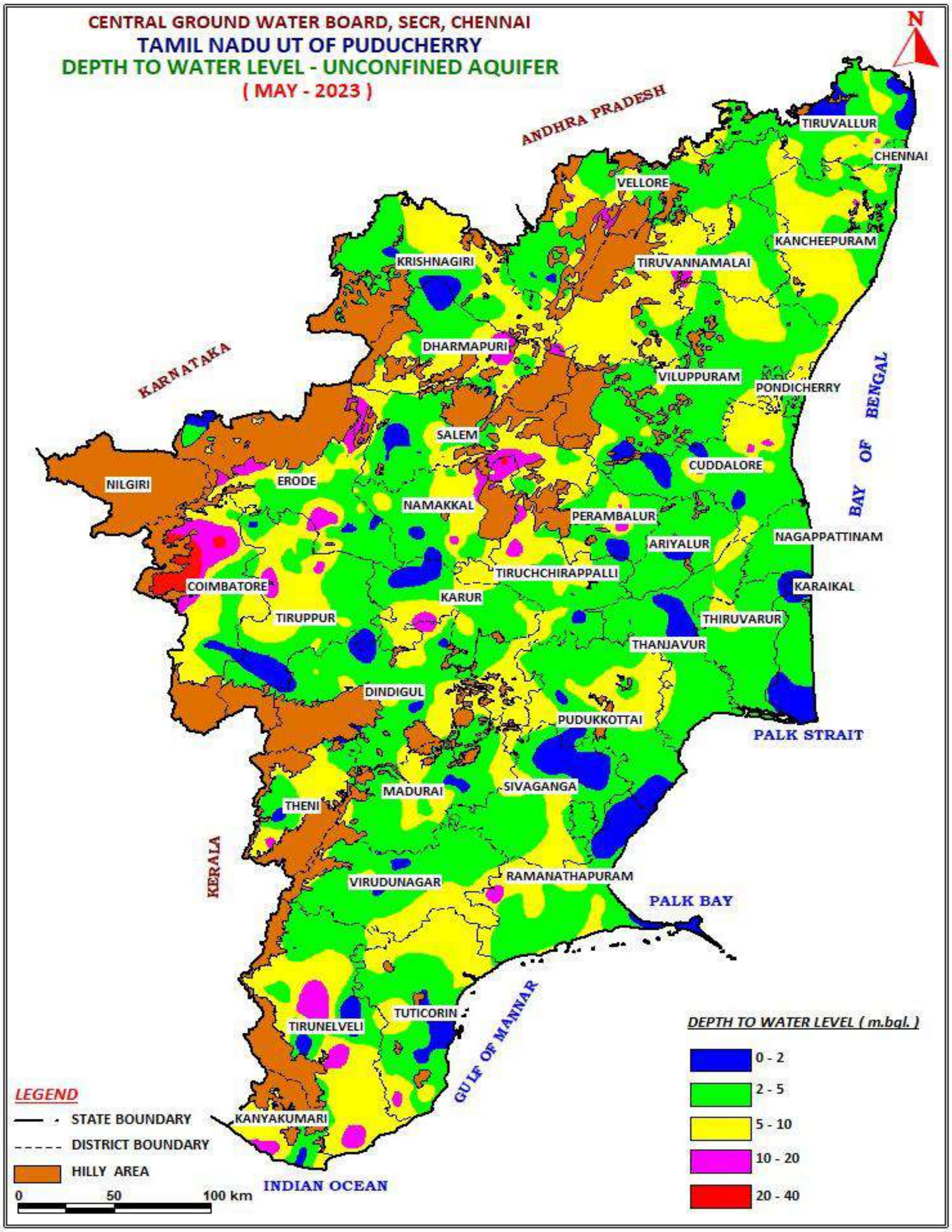
A comparison of water levels shows that a rise in the water level is recorded in 82.62 % of wells analysed, while 17.38 % recorded fall. While rise is more in 0-2 m range and the fall is also in the same range.

The most of the districts of Tamil Nadu have recorded rise in more than 50% wells. Rise in the water level in the range of 0-2m has been observed in 44.58 % of wells analysed, noted all over the State except Virudhunagar. Rise in the water level of 2 to 4 m has been observed in 23.48 % and of wells analysed and noted all over the state except Coimbatore District. Rise in the water level more than 4 m has been observed in 14.56 % and of wells analysed and noted all over the state except Ariyalur, Cuddalore, Nagapattinam.

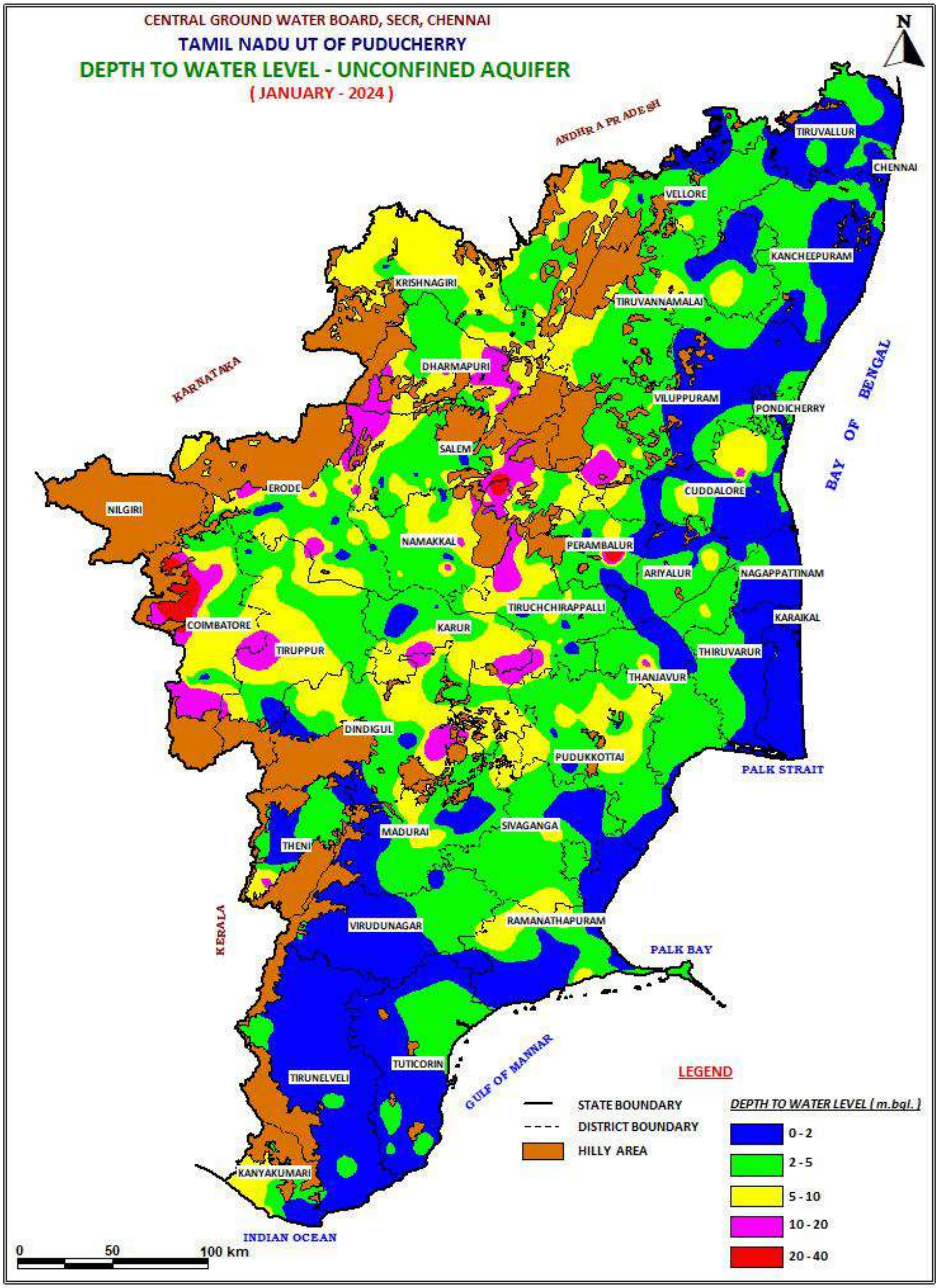
The fall in water level in the range of 0-2m has been observed in 13.37 % of wells analysed and spread most the districts in the State except Chennai, Kancheepuram and Theni district.

The fall in water level in the range of 2-4m has been observed in 2.23 % of wells analysed and noted mainly in Dindigul, Erode and Namakkal districts. The fall in water level more than 4 m has been observed in 1.78 % of wells analysed and noted as isolated pockets mainly in Namakkal, Tiruchirappalli, Tirupur and Dharmapuri districts.

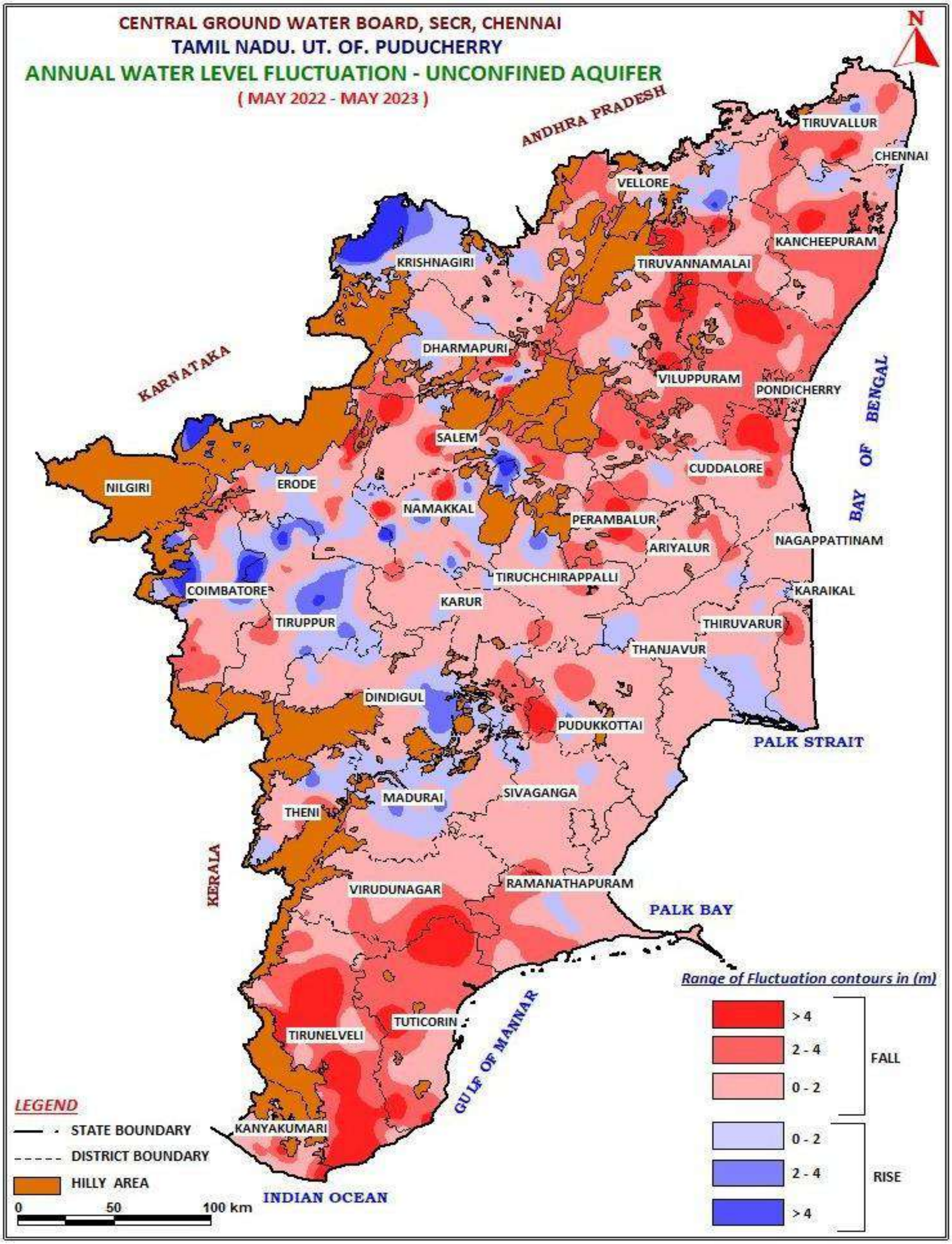
Depth to Water Level Map of the State - Pre-Monsoon 2023



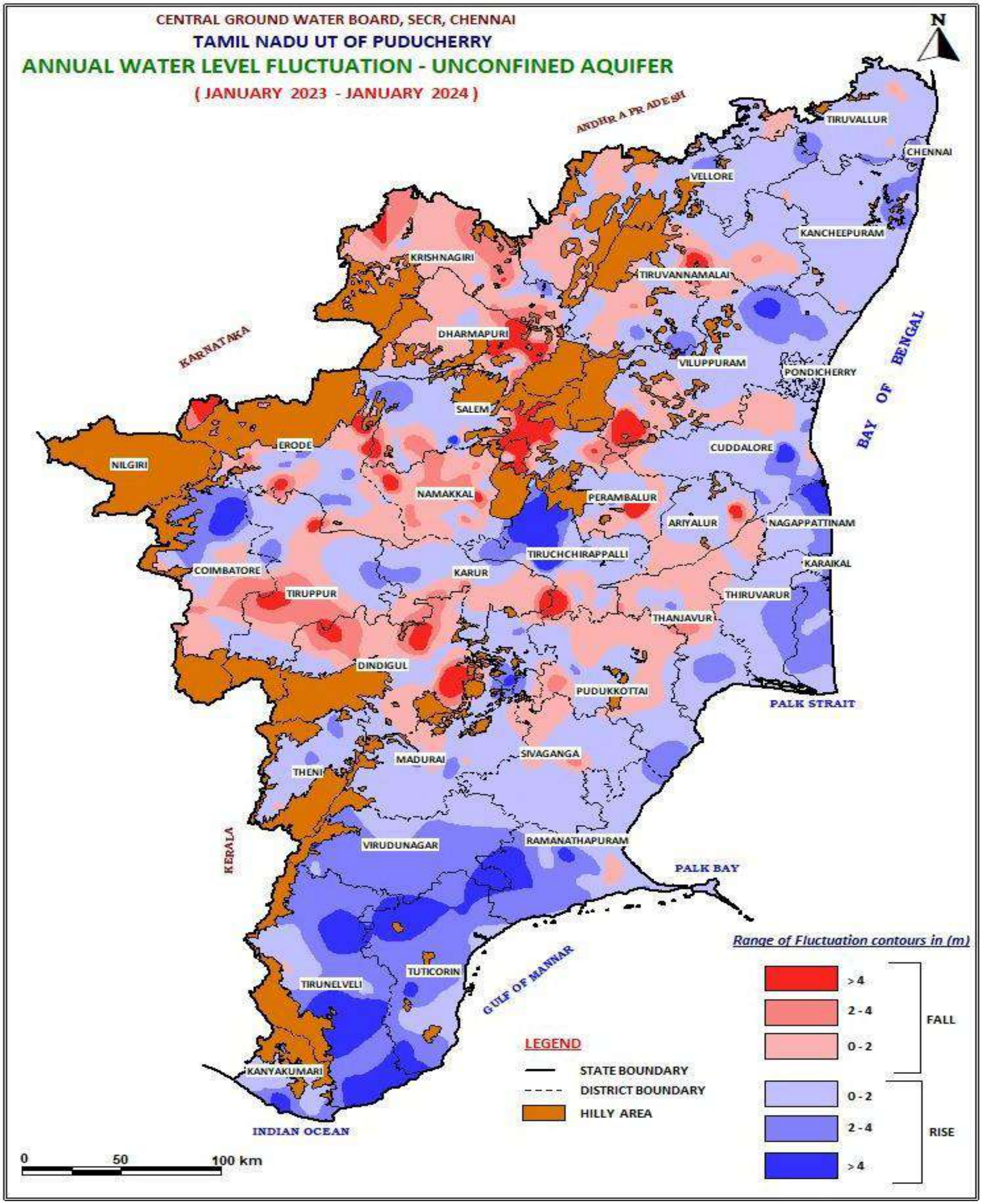
Depth to Water Level Map of the State - Post Monsoon 2023



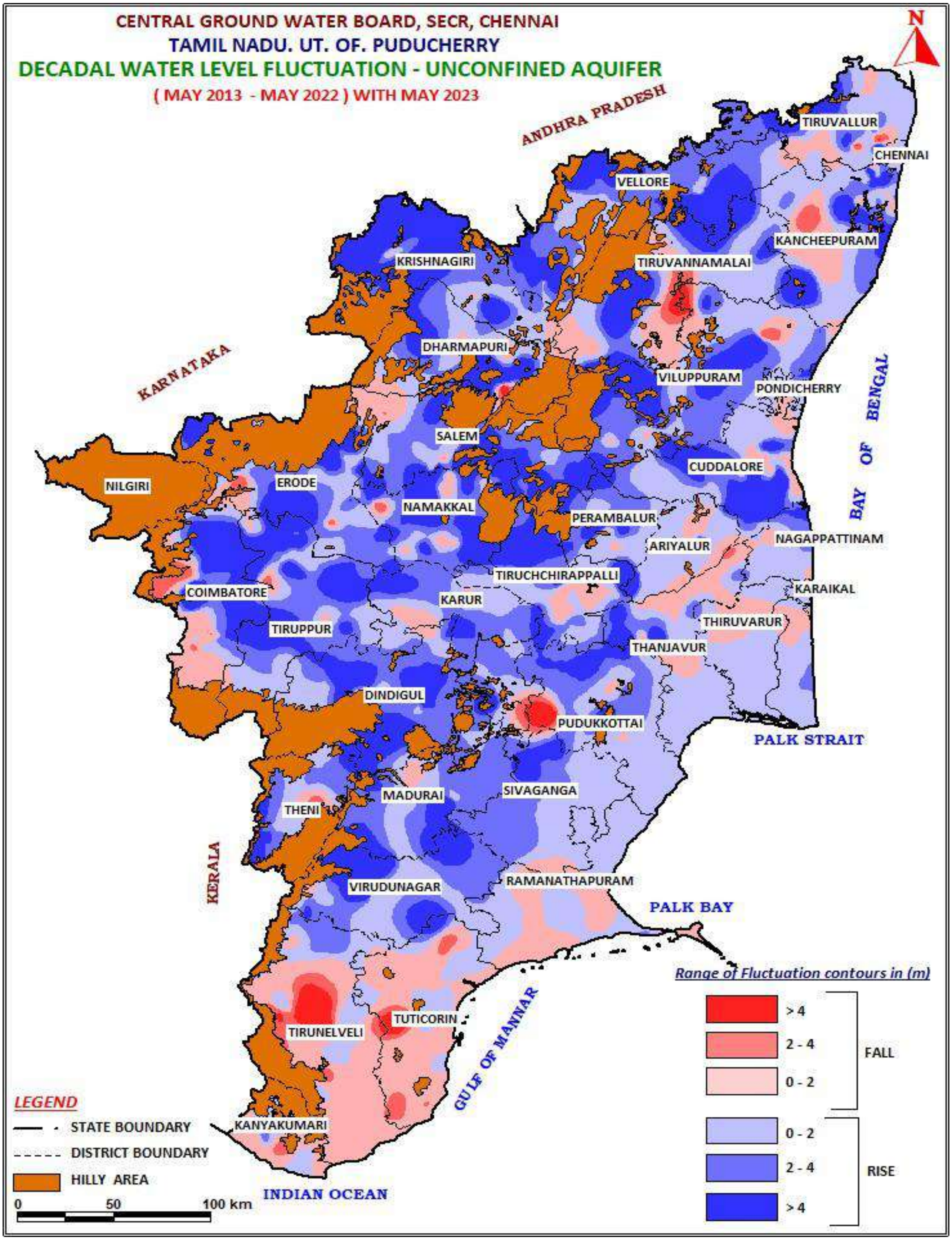
Groundwater Level Fluctuation: Pre-monsoon 2022 compared to Pre-monsoon 2023



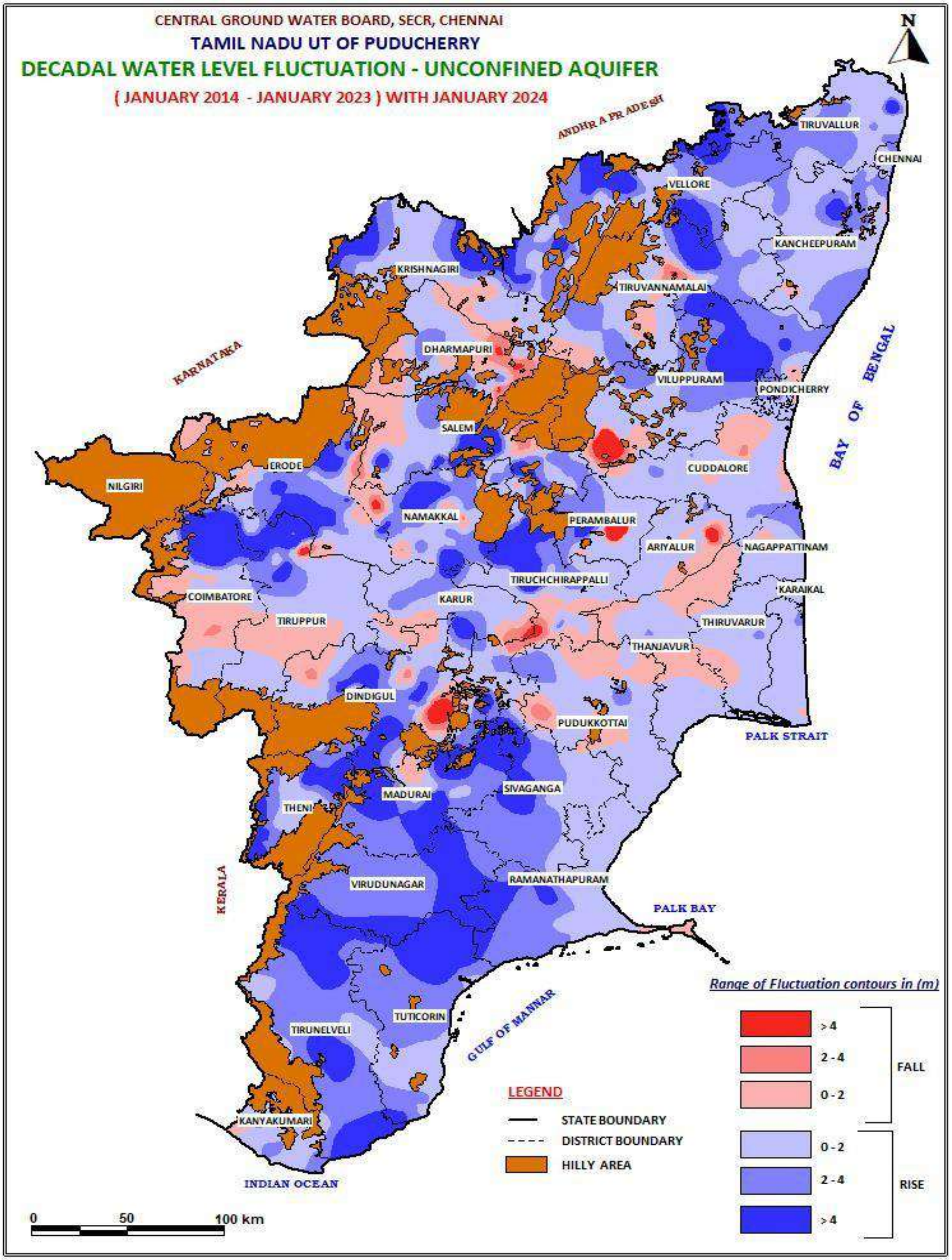
Groundwater Level Fluctuation: Post-monsoon 2023 compared to post-monsoon 2024



Decadal water level fluctuation with mean Pre-Monsoon (2013 to 2022) and Pre-Monsoon 2023



Decadal water level fluctuation with mean post-monsoon (2014 to 2023) and post-monsoon 2024



CHAPTER 6

6.0 GROUND WATER RESOURCES IN THE STATE OF TAMIL NADU

6.1. ANNUAL GROUND WATER RECHARGE

It is recommended that to assign Rainfall Infiltration Factor values to all the aquifer units recently classified by the Central Ground Water Board. The values recommended in Table 6.1 may be followed in the future assessments. The recommended Rainfall Infiltration Factor values are to be used for assessment, unless sufficient data based on field studies are available to justify the minimum, maximum or other intermediate values.

An additional 2% of rainfall recharge factor may be used in such areas or parts of the areas where watershed development with associated soil conservation measures is implemented. This additional factor is subjective and is separate from the contribution due to the water conservation structures such as check dams, nalla bunds, percolation tanks etc. The norms for the estimation of recharge due to these structures are provided separately. This additional factor of 2% is at this stage, only provisional, and will need revision based on pilot studies.

The Norms suggested below are nothing but the redistribution of norms suggested by GEC-2015 methodology and hence people are encouraged to conduct field studies and strengthen the Norms database.

Table 6.1: Norms Recommended for Rainfall Infiltration Factor

Sl. No.	PrincipalAquifer	Major Aquifers		Age	Recommended(%)	Minimum(%)	Maximum(%)
		Code	Name				
1	Alluvium	AL01	Younger Alluvium (Clay/Silt/Sand/ Calcareous concretions)	Quaternary	22	20	24
2	Alluvium	AL02	Pebble / Gravel/ Bazada/ Kandi	Quaternary	22	20	24
3	Alluvium	AL03	Older Alluvium (Silt/Sand/Gravel/Lithomargic clay)	Quaternary	22	20	24
4	Alluvium	AL04	Aeolian Alluvium (Silt/ Sand)	Quaternary	22	20	24
5	Alluvium	AL05	Coastal Alluvium (Sand/Silt/Clay) -East Coast	Quaternary	16	14	18
6	Alluvium	AL05	Coastal Alluvium (Sand/Silt/Clay) - West Coast	Quaternary	10	8	12
7	Alluvium	AL06	Valley Fills	Quaternary	22	20	24
8	Alluvium	AL07	Glacial Deposits	Quaternary	22	20	24
9	Laterite	LT01	Laterite / Ferruginous concretions	Quaternary	7	6	8
9	Basalt	BS01	Basic Rocks (Basalt) - Vesicular or Jointed	Mesozoic to Cenozoic	13	12	14
10	Basalt	BS01	Basic Rocks (Basalt) - Weathered	Mesozoic to Cenozoic	7	6	8
11	Basalt	BS01	Basic Rocks (Basalt) – Massive Poorly Jointed	Mesozoic to Cenozoic	2	1	3
11	Basalt	BS02	Ultra Basic - Vesicular or	Mesozoic to	13	12	14

			Jointed	Cenozoic			
12	Basalt	BS02	Ultra Basic - Weathered	Mesozoic to Cenozoic	7	6	8
13	Basalt	BS02	Ultra Basic - Massive Poorly Jointed	Mesozoic to Cenozoic	2	1	3
14	Sandstone	ST01	Sandstone/Conglomerate	Upper Palaeozoic to Cenozoic	12	10	14
15	Sandstone	ST02	Sandstone with Shale	Upper Palaeozoic to Cenozoic	12	10	14
16	Sandstone	ST03	Sandstone with shale/ coal beds	Upper Palaeozoic to Cenozoic	12	10	14
17	Sandstone	ST04	Sandstone with Clay	Upper Palaeozoic to Cenozoic	12	10	14
18	Sandstone	ST05	Sandstone/Conglomerate	Proterozoic to Cenozoic	6	5	7
19	Sandstone	ST06	Sandstone with Shale	Proterozoic to Cenozoic	6	5	7
20	Shale	SH01	Shale with limestone	Upper Palaeozoic to Cenozoic	4	3	5
21	Shale	SH02	Shale with Sandstone	Upper Palaeozoic to Cenozoic	4	3	5
22	Shale	SH03	Shale, limestone and sandstone	Upper Palaeozoic to Cenozoic	4	3	5
23	Shale	SH04	Shale	Upper Palaeozoic to Cenozoic	4	3	5
24	Shale	SH05	Shale/Shale with Sandstone	Proterozoic to Cenozoic	4	3	5
25	Shale	SH06	Shale with Limestone	Proterozoic to Cenozoic	4	3	5
27	Limestone	LS01	Miliolitic Limestone	Quaternary	6	5	7
29	Limestone	LS02	Limestone / Dolomite	Upper Palaeozoic to Cenozoic	6	5	7
31	Limestone	LS03	Limestone/Dolomite	Proterozoic	6	5	7
33	Limestone	LS04	Limestone with Shale	Proterozoic	6	5	7
35	Limestone	LS05	Marble	Azoic to Proterozoic	6	5	7
36	Granite	GR01	Acidic Rocks (Granite, Syenite, Rhyolite etc.) - Weathered Jointed	Mesozoic toCenozoic	7	5	9
37	Granite	GR01	Acidic Rocks (Granite, Syenite Rhyolite etc.)-Massive or Poorly Fractured	Mesozoic toCenozoic	2	1	3
38	Granite	GR02	Acidic Rocks (Pegmatite, Granite, Syenite, Rhyolite etc.) - Weathered, Jointed	Proterozoic toCenozoic	11	10	12
39	Granite	GR02	Acidic Rocks (Pegmatite Granite, Syenite, Rhyolite etc.) - Massive, Poorly Fractured	Proterozoic toCenozoic	2	1	3
40	Schist	SC01	Schist - Weathered, Jointed	Azoic to Proterozoic	7	5	9
41	Schist	SC01	Schist - Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
42	Schist	SC02	Phyllite	Azoic to Proterozoic	4	3	5
43	Schist	SC03	Slate	Azoic to Proterozoic	4	3	5
44	Quartzite	QZ01	Quartzite - Weathered, Jointed	Proterozoic to Cenozoic	6	5	7
45	Quartzite	QZ01	Quartzite - Massive, Poorly	Proterozoic to	2	1	3

			Fractured	Cenozoic			
46	Quartzite	QZ02	Quartzite - Weathered, Jointed	Azoic to Proterozoic	6	5	7
47	Quartzite	QZ02	Quartzite- Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
48	Charnockite	CK01	Charnockite - Weathered, Jointed	Azoic	5	4	6
49	Charnockite	CK01	Charnockite - Massive, Poorly Fractured	Azoic	2	1	3
50	Khondalite	KH01	Khondalites, Granulites - Weathered, Jointed	Azoic	7	5	9
51	Khondalite	KH01	Khondalites, Granulites - Massive, Poorly Fractured	Azoic	2	1	3
52	BandedGneissic Complex	BG01	Banded Gneissic Complex - Weathered, Jointed	Azoic	7	5	9
53	Banded GneissicComplex	BG01	Banded Gneissic Complex - Massive, Poorly Fractured	Azoic	2	1	3
54	Gneiss	GN01	Undifferentiated metasedimentary/ Undifferentiated metamorphic - Weathered, Jointed	Azoic to Proterozoic	7	5	9
55	Gneiss	GN01	Undifferentiated metasedimentary/ Undifferentiated metamorphic - Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
56	Gneiss	GN02	Gneiss -Weathered, Jointed	Azoic to Proterozoic	11	10	12
57	Gneiss	GN02	Gneiss-Massive, Poorly Fractured	Azoic to Proterozoic	2	1	3
58	Gneiss	GN03	Migmatitic Gneiss - Weathered, Jointed	Azoic	7	5	9
59	Gneiss	GN03	Migmatitic Gneiss - Massive, Poorly Fractured	Azoic	2	1	3
60	Intrusive	IN01	Basic Rocks (Dolerite Anorthosite etc.) - Weathered, Jointed	Proterozoic toCenozoic	7	6	8
61	Intrusive	IN01	Basic Rocks (Dolerite Anorthosite etc.) - Massive, Poorly Fractured	Proterozoic toCenozoic	2	1	3
62	Intrusive	IN02	Ultra Basics (Epidiorite Granophyre etc.) - Weathered, Jointed	Proterozoic toCenozoic	7	6	8
63	Intrusive	IN02	Ultra Basics (Epidiorite Granophyre etc.) - Massive, Poorly Fractured	Proterozoic toCenozoic	2	1	3

6.1.1 Norms for Canal Recharge

Unlike other norms, the recharge factor for calculating recharge due to canals is given in two units viz. ham/million m^2 of wetted area/day and cumecs per million m^2 of wetted area. As all other norms are in ham, the committee recommends the norm in ham/million m^2 of wetted area for computing the recharge due to canals.

There is a wide variation in the values of the recharge norms proposed by GEC 1997.The Canal seepage norm is approximately 150 times the other recharge norms. In the absence of any field studies to refine the norms it is decided by the committee to continue with the same norms. The committee strongly recommends that each state agency must conduct one filed study at least one ineach district before completing the first assessment using this methodology. The committee also suggests a recommended value and minimum and maximum values as in the case of other norms. Where specific results are available from case studies in some states, the ad hoc norms are to be replaced by norms evolved from these results.

The Norms suggested in Table 6.2 below are nothing but the rationalization and redistribution of norms suggested by GEC-2015 methodology and hence people are encouraged to conduct field studies and strengthen the norms database.

Table 6.2: Norms Recommended for Recharge due to Canals

Formation	Canal Seepage factor ham/day/million square meters of wetted area		
	Recommended	Minimum	Maximum
Unlined canals in normal soils with some clay content along with sand	17.5	15	20
Unlined canals in sandy soil with some silt content	27.5	25	30
Lined canals in normal soils with some clay content along with sand	3.5	3	4
Lined canals in sandy soil with some silt content	5.5	5	6
All canals in hard rock area	3.5	3	4

6.1.2 Norms for Recharge Due to Irrigation

The norms suggested by GEC-2015 gives for only three ranges of water levels and it creates a problem in the boundary conditions. For instance, as a result of the variation in water level from 24.9 to 25.1m bgl in the adjoining blocks, change occurs in the return flow from irrigation in the range of 10% to 15%. Hence to reduce the discrepancy it is recommended to have linearrelationship of the norms in between 10m bgl water level and 25 m bgl water level. It is proposed to have the same norm of 10m bgl zone for all the water levels less than 10m. Similarly, the norm recommended for 25m may be used for the water levels more than 25 m as well. The recommended norms are presented in Table 6.3.

For surface water, the recharge is to be estimated based on water released at the outlet. For ground water, the recharge is to be estimated based on gross draft. Where continuous supply is used instead of rotational supply, an additional recharge of 5% of application may be used. Where specific results are available from case studies in some states, the ad hoc norms are to be replaced by norms evolved from these results.

Table 6.3: Norms Recommended for Recharge from Irrigation

DTW (m bgl)	Ground Water		Surface Water	
	Paddy	Non-paddy	Paddy	Non-paddy
≤ 10	45.0	25.0	50.0	30.0
11	43.3	23.7	48.3	28.7
12	40.4	22.1	45.1	26.8
13	37.7	20.6	42.1	25.0
14	35.2	19.2	39.3	23.3
15	32.9	17.9	36.7	21.7
16	30.7	16.7	34.3	20.3
17	28.7	15.6	32.0	18.9
18	26.8	14.6	29.9	17.6
19	25.0	13.6	27.9	16.4
20	23.3	12.7	26.0	15.3
21	21.7	11.9	24.3	14.3
22	20.3	11.1	22.7	13.3
23	18.9	10.4	21.2	12.4
24	17.6	9.7	19.8	11.6
≥ 25	20.0	5.0	25.0	10.0

6.1.3 Norms for Recharge due to Tanks & Ponds

As the data on the field studies for computing recharge from tanks & ponds are very limited, it is recommended to follow the same norm as followed in GEC 1997 in future assessments also. Hence the norm recommended by GEC-2015 for seepage from tanks & ponds is 1.4 mm / day.

6.1.4 Norms for Recharge due to Water Conservation Structures

Even though the data on the field studies for computing recharge from Water Conservation Structures are very limited, it is recommended that the Recharge from the water conservation structures is 40% of the Gross Storage based on the field studies by non-government organizations. Hence, the norm recommended by GEC-2015 for the seepage from Water Conservation Structures is 40% of gross storage during a year which means 20% during monsoon season and 20% during non- monsoon Season.

6.2. ANNUAL EXTRACTABLE GROUND WATER RESOURCES

6.2.1 Norm for Per Capita Requirement

As the option is given to use the actual requirement for domestic needs, the Requirement Norm recommended by the committee is 60 lpcd for domestic needs. This can be modified if the actual requirement is known. The ground water resources for the State have been assessed firka-wise. Total Annual Ground Water Recharge of the State has been assessed as 21.51 bcm and Annual Extractable Ground Water resources as 19.46 bcm.

6.2.2 Norm for Natural Discharges

The Discharge Norm used in computing Unaccounted Natural Discharge is 5% if water table fluctuation method is used or 10% if rainfall infiltration factor method is used for assessing the Rainfall recharge. This committee recommends to compute the base flow for each assessment unit. Wherever, there is no assessment of base flow, earlier norms recommended by GEC 1997 i.e. 5% or 10% of the Total Annual Ground Water Recharge as the Natural Discharges may be continued.

6.2.3 Unit Draft

GEC-2015 methodology recommends to use well census method for computing the ground water draft. The norm used for computing ground water draft is the unit draft. The unit draft can be computed by field studies. This method involves selecting representative abstraction structure and calculating the discharge from that particular type of structure and collecting the information onhow many hours of pumping is being done in various seasons and number of such days during each season. The Unit Draft during a particular season can be computed using the following equation:

$$Unit\ Draft = Discharge\ in\ m^3/hr \times No.\ of\ pumping\ hours\ in\ a\ day \times No.\ of\ days \ldots\ldots\ldots \quad \textbf{(29)}$$

One basic drawback in the methodology of computing unit draft is that there is no normalization procedure for the same. As per GEC-2015 guidelines, the recharge from rainfall is normalized for a normal rainfall. It means that even though the resources are estimated in a surplus rainfall year or in a deficit rainfall year, the assessment is normalized for a normal rainfall which is required for planning. For recharge from other sources, average figures/ values are taken. If the average figures are not available for any reason, 60% of the design figures are taken. This procedure is very much essential as the planning should be for average resources rather than for the recharge due to excess rainfall or deficit rainfall. But the procedure that is being followed for computing unit draft does not have any normalization procedure. Normally, if the year in which one collects the draft data in the field is an excess rainfall year, the abstraction from ground water will be less. Similarly, if the year of the computation of unit draft is a drought year the unit draft will be high. Hence, there is a requirement to devise a methodology that can be used for the normalization of unit draft figures. The following are the two simple techniques, which can be followed. If the unit draft values for one rainfall cycle are available for at least 10 years second method shown in equation 31 is to be followed or else the first method shown in equation 30 may be used.

Although GEC-2015 methodology recommends a default value for the unit drafts, each State is using its own values, generally after conducting field studies, even though without a documentation. Hence, it is felt that this norm may be computed by the state agency, which is going to assess the norms before commencement of the assessment. But it is strongly recommended that the field studies should be documented and submitted along with the results of the assessment.

6.2.4 INDIA -GROUNDWATER RESOURCE ESTIMATION SYSTEM (IN-GRES)

"INDIA-GROUNDWATER RESOURCE ESTIMATION SYSTEM (IN-GRES) is a Software/Web-based Application developed by CGWB in collaboration with IIT-Hyderabad. It will provide common and standardized platform for Ground Water Resource Estimation for the entire country and its pan - India operationalization (Central and State Governments). The system will take 'Data Input' through Excel as well as Forms, compute various ground water components (recharge, extraction etc.) and classify assessment units into appropriate categories (safe, semi-critical, critical, and over-exploited). The Software uses GEC 2015 Methodology for estimation and calculation of Groundwater resources. It allows for unique and homogeneous representation of groundwater fluxes as well as categoriesfor all the Assessment Units (AU) of the country.
The detailed description about In-GRES Software is given in http://ingres.iith.ac.in

6.2.5 Salient Features of Assessment

In Tamil Nadu, the Resource Estimation was being carried out on Macro level i.e. on Block wise basis up to 2009 and from 2011, assessment is being carried out on Micro Level Basis i.e. on firka wise basis. Since the ground water movement is not bound by watershed boundary on surface and for effective implementation of policies, physical and financial implications, welfare measures etc., by the District administration of Tamil Nadu State and also by the easy segregation of available State Records and in coordination with Central Ground Water Board, Chennai this Resource Estimation computations have now been carried out on Micro Level Basis with Revenue Firka as the assessment unit and in the absence of data on command and non-command area, they have been estimated together. The present assessment is estimated based on water table aquifer. The base year for data collection is 2019 -2023 and the resources computed to March 2024.

6.2.6 Norms used in the Assessment

Parameters

The specific yield computed on the basis of water level fluctuation during non-monsoon period has been used wherever, it is found realistic and in other places, the values have been assumed from the norms provided in the methodology. Further, the local hydrogeological conditions have also been considered while assuming the values for the parameters. The parameters considered in the computations have been summarized below.

- **Specific Yield**

Crystalline	:	1 to 1.5%
Sandstone	:	6 to 13 0%
Alluvium consisting of clay, silt and sand admixture (Cauvery Delta)	:	6 to 22%

- **Infiltration Factor**

Crystalline	:	2 to 9 %
Sandstone	:	10 to 12%
Alluvium consisting of clay, silt and sand admixture (Cauvery Delta)	:	5 – 14%

Groundwater Draft

Ground water draft has been computed using unit draft method. The unit draft multiplied by total number of structures has yielded the groundwater draft.

Return Flow from Groundwater Irrigation

Crop water requirement has been calculated on the basis of cropped area and average water requirement. Return flow from ground water irrigation has been computed on the basis of the percentage as given in the methodology in relation to depth to water level.

Return Flow from Surface water Irrigation

The data on cropped area has been grouped into paddy and non-paddy. Average water requirements of 1.20 m & 0.53 m have been assumed for paddy & non paddy crops. The crop water requirement has been worked out and the return flow from surface water irrigation has been computed on the basis of percentage of applied irrigation water on the basis of the percentage as given in the methodology.

Seepage from Canals

The canal length, wetted perimeter, days of flow (monsoon & non monsoon) and the seepage factor (given in the methodology manuscript) have been used to determine the seepage from canal for monsoon & non-monsoon periods separately. The data on canal details have been assumed to be the same as there will be little change in the functioning of a canal. In areas of shallow water table, the canal seepage is sometimes overestimated, as the storage space is not available. In Cauvery delta, comprising, Thanjavur, Tiruvarur and Nagapattinam districts, there are three types of canals, viz., Canal/River, Canal A Type/Channel and BCD Type Canals. GEC-2015 has suggested that seepage factor can be suitably reduced in case of shallow water table areas or water-logged areas, which is the case during the release of water in the canal and the factor has been reduced accordingly and canal seepage has been computed.

Seepage from Tanks

Water spread area, days of water availability (monsoon & non monsoon) and seepage from tank (given in the methodology) have been used to determine the seepage from tanks for monsoon and non-monsoon separately.

Seepage from Check Dams/Nalas:

The seepage from water conservation structures has been estimated as per norms given in GEC – 15 methodology.

Base Flow Computations

In Tamil Nadu it has been assumed as 10% of annual ground water recharge as per GEC-15 methodology.

Allocation for Domestic & Industrial Requirement

The population density (thousand per sq.km), fractional load on ground water for domestic purposes and area (sq.km) have been used to determine the domestic demand as suggested in the manual. The data on actual fractional load is not available for each block and TWAD Board, which is responsible for water supply, informed that in general the share of ground water (load on ground water) for domestic water supply in rural & urban area is taken as 0.7 & 0.3 respectively. In hilly areas the load is taken as 0.3. Accordingly, the allocation for domestic & industrial purposes has been computed. This present exercise, about 7300 extraction points of Tamil Nadu Water Supply and Drainage Board and about 16900 extraction points of Tamil Nadu Pollution Control Board were also included and computed for allocation of Domestic and Industrial requirement.

Normalization of rainfall RECHARGES

The rainfall recharge has been determined using a linear relationship between recharge and rainfall in the form of

$R = ar + b$

where,

R = Rainfall recharge

r = Rainfall

a & b = Constants.

Percentage Departure has also been determined and accordingly either Water Level Fluctuation approach or rainfall infiltration method (ad-hoc) has been used to determine the rainfall recharge.

DYNAMIC GROUND WATER RESOURCE ESTIMATION – CATEGORIZATION OF FIRKAS AS ON MARCH 2024 FOR THE STATE OF TAMILNADU

Tamil Nadu state is underlain by diverse hydrogeological formations. Nearly 73 % of the state is occupied by hard rocks, semi-consolidated and consolidated formations which are mainly confined to the eastern part including the coastal tract. In the hard rock areas, groundwater is developed through dug wells tapping the weathered zone and dug cum bore wells and bore wells tap the deeper fractures down to a depth of 300 m. In semi consolidated and unconsolidated formation, shallow zones are tapped by filter points and shallow tube wells and deeper zones through deeper tube wells. The yield of open wells varies from 1 to 3 lps, where as in dug wells tapping soft rocks including sedimentary formations, the yield is up to 10 lps. The yield from unconsolidated and semi consolidated formations are in general 10 to 20 lps and also as high as 40 lps are also noticed at select places.

The ground water resources for the State have been assessed firka-wise. Total Annual Ground Water Recharge of the State has been assessed as 21.51 bcm and Annual Extractable Ground Water resources as 19.46 bcm. The Annual Ground Water Extraction is 14.45 bcm and Stage of Ground Water Extraction as 74.26 %. Out of 1202 assessment units (firkas), 392 units (32.60%) have been categorized as ‘Over Exploited’, 56 units (4.7 %) as ‘Critical’, 239 units (19.90 %) as ‘Semi-Critical’, 481 units (40.00 %) as ‘Safe’ and 34 units (2.83 %) have been categorized as ‘Saline’ (Fig 5.1). Similarly, out of 108613.35 sq km recharge worthy area of the State, 33375.93sq km (30.73) area are under ‘Over-Exploited’, 5517.20 sq km (5.08 %) under ‘Critical’, 22663.35 sq km (20.87%) under ‘Semi-critical’, 43886.57sq km (40.41%) under ‘Safe’ and 1911.56 sq km (1.76 %) area under ‘Saline’ categories of assessment units. Out of total 19461.53 mcm annual extractable ground water resources of the State, 5352.91 mcm (27.51%) are under ‘Over-exploited,’ 1118.75mcm (5.75%) under ‘Critical’, 3939.48 mcm (20.24%) under ‘Semi-critical’ and 9041.39mcm (46.46%) are under ‘Safe’ categories of assessment units.

As compared to the previous 2023 assessment, the present 2024 Ground Water Resource Assessment, the Total Annual Ground Water Recharge has decreased from 21.54 to 21.51 bcm. The Annual Extractable Ground Water Resources has decreased from 19.47 to 19.46 bcm and the annual ground water extraction has increased marginally from 14.41 to 14.45 bcm. Consequently, there is a deterioration in the stage of ground water extraction from 74.02 % to 74.26%. The deterioration is due to changes in rainfall recharge and increased extraction is due to reduction in dependency on ground water.

ANNUAL GROUND WATER RECHARGE

Annual groundwater recharge refers to the process by which water from precipitation, rivers, lakes, or other sources infiltrates the soil and replenishes underground aquifers. This recharge depends on factors like rainfall, soil type, vegetation, and land use. Sustainable recharge is crucial for maintaining groundwater levels, especially in regions facing over-extraction and water scarcity. Conservation methods such as rainwater harvesting, afforestation, and artificial recharge structures help enhance groundwater replenishment and ensure long-term water availability. The Annual Ground Water Recharge of the Tamil Nadu has been assessed as 21.51 bcm a) Recharge from Rainfall :8.62 bcm b) Recharge from Other Sources: 12.89 bcm

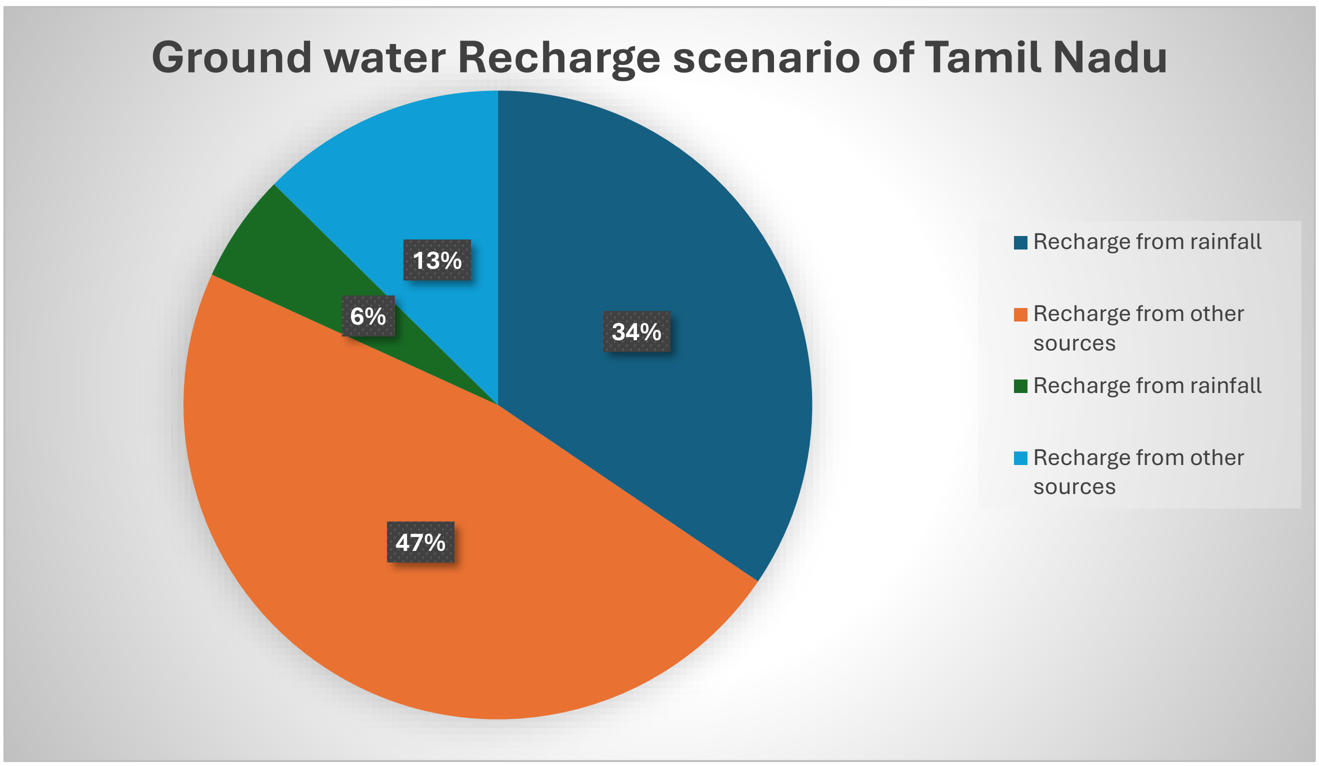
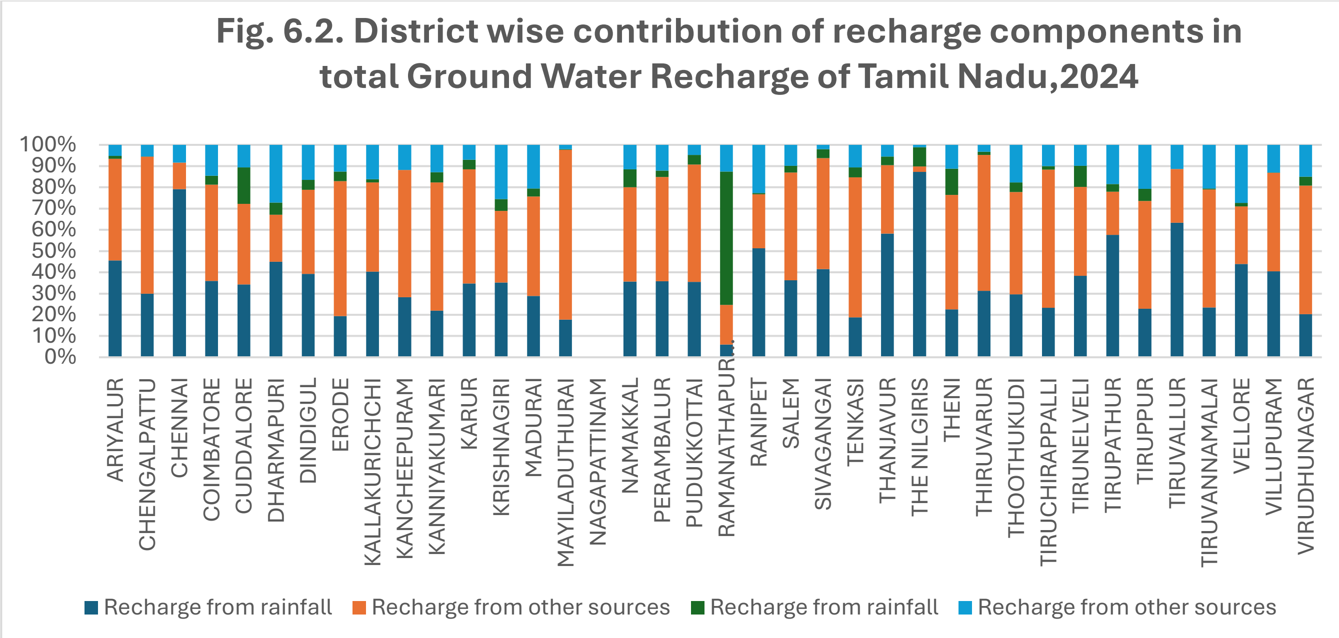


Fig-6.1: Ground Water Recharge scenario in Tamil Nadu, 2024



6.3. ANNUAL TOTAL GROUND WATER EXTRACTION

Annual extractable groundwater resources refer to the total volume of groundwater that can be sustainably withdrawn from aquifers each year without causing adverse effects on the environment or long-term water availability. This measure is determined by considering factors like natural recharge rates, existing water use, and ecological requirements. Sustainable management of these resources is vital for meeting agricultural, industrial, and domestic water demands while preventing over-exploitation and depletion of aquifers. Effective water conservation practices and regulatory frameworks are essential to ensure that groundwater extraction remains within safe limits. As per current assessment Total Annual Ground Water Recharge of the State has been assessed as 21.51 bcm and Annual Extractable Ground Water resources as 19.46 bcm. The Annual Ground Water Extraction is 14.45 bcm and Stage of Ground Water Extraction as 74.26 %. Out of 1202 assessment units (firkas), 392 units (32.60%) have been categorized as 'Over Exploited', 56 units (4.7 %) as 'Critical', 239 units (19.90 %) as 'Semi-Critical', 481 units (40.00 %) as 'Safe' and 34 units (2.83 %) have been categorized as 'Saline'.

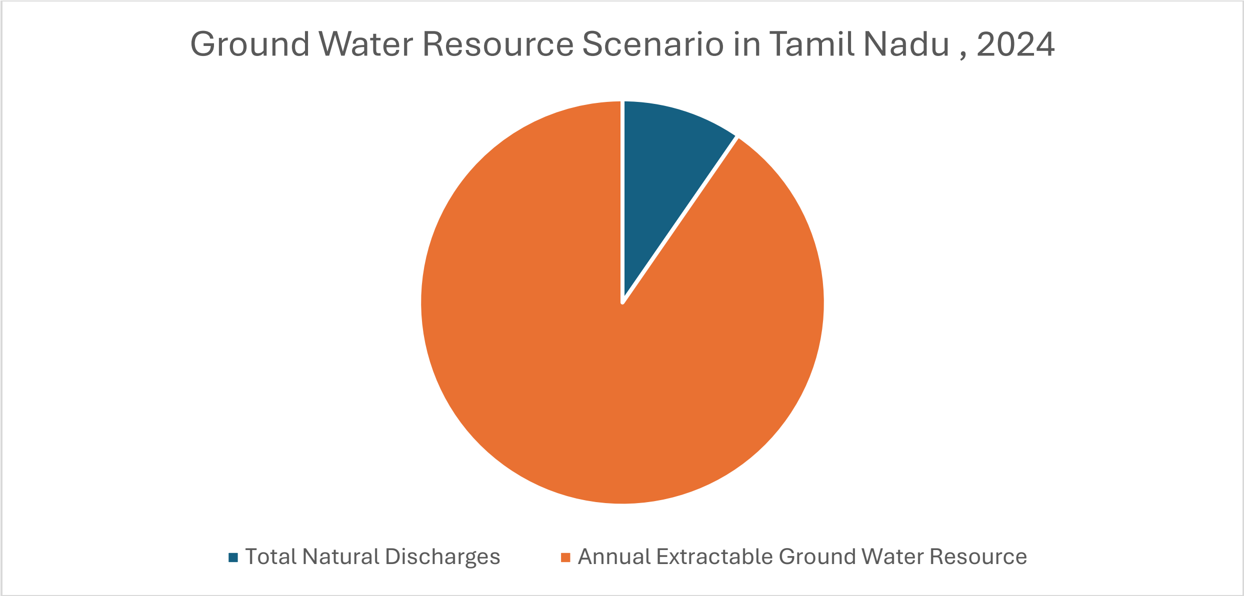


Fig-6.3: Ground Water Resource Scenario in Tamil Nadu ,2024

6.4. STAGE OF GROUND WATER EXTRACTION

The assessment of ground water extraction is carried out considering the Minor Irrigation Census data and sample surveys carried out by the State Ground Water & Surface Water Departments. The Total Annual Ground Water Extraction of Tamil Nadu for the year 2024 has been estimated as 14.45 bcm. The agriculture sector is the largest consumer of groundwater resources, accounting for 93% of the total annual groundwater extraction, which amounts to 13.51 bcm. The domestic use accounts for 6 % (0.80 bcm), while industrial use represents 1% (0.14bcm) of total annual groundwater extraction of Tamil Nadu Fig-6.4: Ground water Extraction Scenario in Tamil nadu,2024.

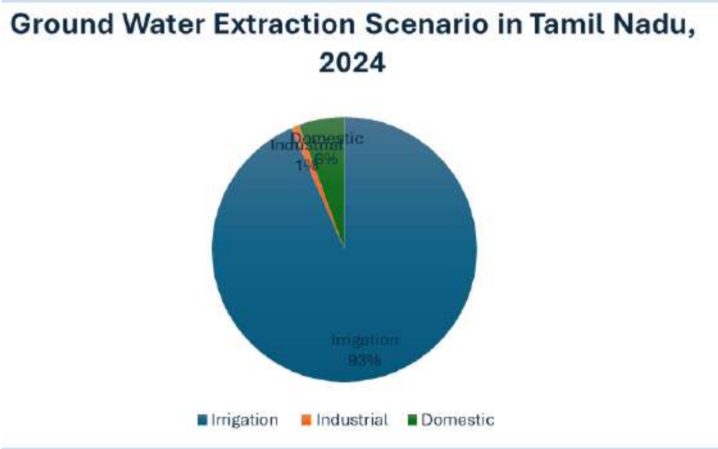


Fig-6.4: Ground water Extraction Scenario in Tamil Nadu ,2024

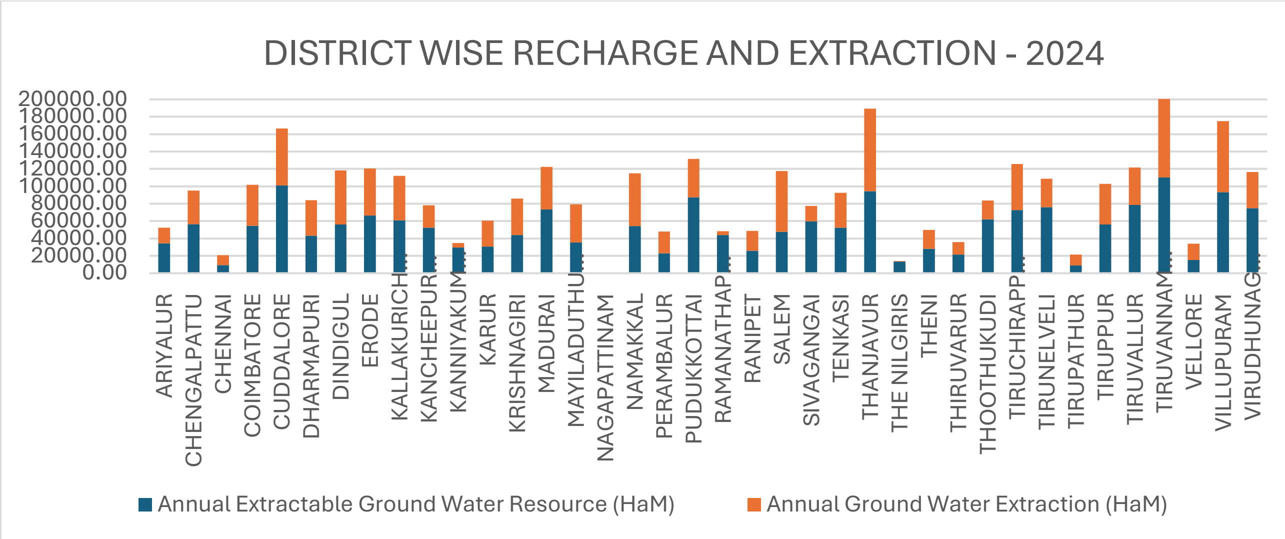
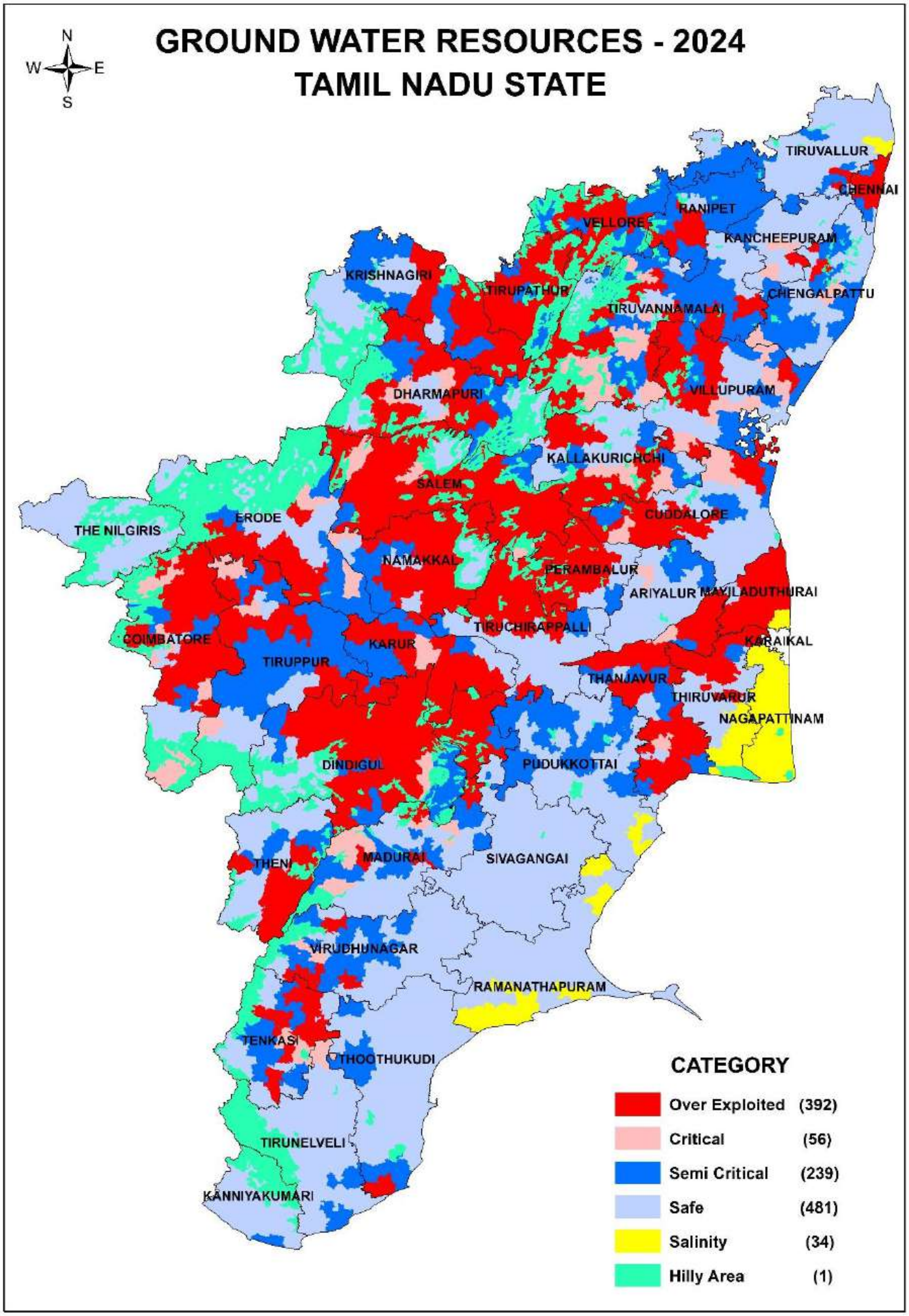


Fig-6.5: District wise Recharge and Extraction

6.5. CATEGORIZATION OF ASSESSMENT UNITS

The stage of groundwater extraction is the ratio of annual groundwater extraction to the annual extractable groundwater resources, expressed as a percentage. It indicates the level of groundwater utilization and helps assess sustainability. A stage below 70% is considered safe, while 70–90% is classified as semi-critical, 90–100% as critical, and above 100% as over-exploited. Stage of Ground Water Extraction of Tamil Nadu is 74.26%


GROUND WATER RESOURCES - 2024
TAMIL NADU STATE
N
S
W
E
TIRUVALLUR
CHENNAI
RANIPET
VELLORE
KANCHEEPURAM
KRISHNAGIRI
TIRUPATHUR
TIRUVANNAMALAI
CHENGALPATTU
DHARMAPURI
VILLUPURAM
KALLAKURICHCHI
SALEM
THE NILGIRIS
ERODE
CUDDALORE
NAMAKKAL
PERAMBALUR
ARIYALUR
MAYILADUTHURAI
TIRUCHIRAPPALLI
COIMBATORE
KARUR
KARAIKAL
TIRUPPUR
THANJAVUR
THIRUVARUR
NAGAPATTINAM
DINDIGUL
PUDUKKOTTAI
THENI
MADURAI
SIVAGANGAI
VIRUDHUNAGAR
RAMANATHAPURAM
TENKASI
THOOTHUKUDI
TIRUNELVELI
KANNIYAKUMARI
CATEGORY
Over Exploited (392)
Critical (56)
Semi Critical (239)
Safe (481)
Salinity (34)
Hilly Area (1)

The following are the category of firkas as on March 2024 Groundwater Resources Estimation (GWRE):

S. N	CATEGORY OF FIRKA	NUMBER OF FIRKAS (MARCH 2024)
1	Safe	481
2	Semi-critical	239
3	Critical	56
4	Over exploited	392
5	Poor quality/Saline	34
TOTAL		**1202**

6.6. COMPARISON OF PREVIOUS ASSESSMENTS (2020 TO 2023) WITH PRESENT ASSESSMENT (2024)

Description	Unit	2020 - Ground Water Resource Assessment	2022 - Ground Water Resource Assessment	2023 - Ground Water Resource Assessment	2024 - Ground Water Resource Assessment
Total Annual Ground Water Recharge	**bcm**	**19.59**	**21.11**	**21.54**	**21.51**
a. Recharge from Rainfall	bcm	8.09	8.76	8.56	**8.62**
b. Recharge from Other Sources	bcm	11.50	12.35	13.00	12.89
Annual Extractable Ground Water Resources	**bcm**	**17.69**	**19.09**	**19.47**	**19.46**
Current Total Annual Ground Water Extraction	**bcm**	**14.67**	**14.43**	**14.41**	**14.45**
a. Current Annual Ground Water Extraction for Irrigation	bcm	13.52	13.68	13.47	13.51
b. & c. Current Annual Ground Water Extraction for Industrial & Current Annual Ground Water Extraction for Domestic	bcm	1.15	0.75	0.94	0.94
Stage of Ground Water Extraction	**%**	**82.93**	**75.59**	**74.02**	**74.26**
Total number of Ground Water Assessment Units (Firka)	**Nos.**	**1166**	**1166**	**1202**	**1202**
a. Number of **Over-Exploited** Ground Water Assessment Units (Firka)	Nos.	435	360	395	392
b. Number of **Critical** Ground Water Assessment Units (Firka)	Nos.	63	78	64	56
c. Number of **Semi-Critical** Ground Water Assessment Units (Firka)	Nos.	225	231	227	239
Total number of **OCS** Ground Water Assessment Units (Firka)	Nos.	723	669	686	687
d. Number of **Saline** Ground Water Assessment Units (Firka)	Nos.	34	34	34	34
e. Number of **Safe** Ground Water Assessment Units (Firka)	Nos.	409	463	482	481

CHAPTER 7

CONCLUSION

Tamil Nadu state is underlain by diverse hydrogeological formations. Nearly 73 % of the state is occupied by hard rocks, semi-consolidated and consolidated formations which are mainly confined to the eastern part including the coastal tract. In the hard rock areas, groundwater is developed through dug wells tapping the weathered zone and dug cum bore wells and bore wells tap the deeper fractures down to a depth of 300 m. In semi consolidated and unconsolidated formation, shallow zones are tapped by filter points and shallow tube wells and deeper zones through deeper tube wells. The yield of open wells varies from 1 to 3 lps, where as in dug wells tapping soft rocks including sedimentary formations, the yield is up to 10 lps. The yield from unconsolidated and semi consolidated formations are in general 10 to 20 lps and also as high as 40 lps are also noticed at select places.

The ground water resources for the State have been assessed firka-wise. Total Annual Ground Water Recharge of the State has been assessed as 21.51 bcm and Annual Extractable Ground Water resources as 19.46 bcm. The Annual Ground Water Extraction is 14.45 bcm and Stage of Ground Water Extraction as 74.26 %. Out of 1202 assessment units (firkas), 392 units (32.60%) have been categorized as 'Over Exploited', 56 units (4.7 %) as 'Critical', 239 units (19.90 %) as 'Semi-Critical', 481 units (40.00 %) as 'Safe' and 34 units (2.83 %) have been categorized as 'Saline' (Fig 5.1). Similarly, out of 108613.35 sq km recharge worthy area of the State, 33375.93sq km (30.73) area are under 'Over-Exploited', 5517.20 sq km (5.08 %) under 'Critical', 22663.35 sq km (20.87%) under 'Semi-critical', 43886.57sq km (40.41%) under 'Safe' and 1911.56 sq km (1.76 %) area under 'Saline' categories of assessment units. Out of total 19461.53 mcm annual extractable ground water resources of the State, 5352.91 mcm (27.51%) are under 'Over-exploited,' 1118.75mcm (5.75%) under 'Critical', 3939.48 mcm (20.24%) under 'Semi-critical' and 9041.39mcm (46.46%) are under 'Safe' categories of assessment units.

As compared to the previous 2023 assessment, the present 2024 Ground Water Resource Assessment, the Total Annual Ground Water Recharge has decreased from 21.54 to 21.51 bcm. The Annual Extractable Ground Water Resources has decreased from 19.47 to 19.46 bcm and the annual ground water extraction has increased marginally from 14.41 to 14.45bcm. Consequently, there is a deterioration in the stage of ground water extraction from 74.02 % to 74.26%. The deterioration is due to changes in rainfall recharge and increased extraction is due to reduction in dependency on ground water.

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 | **Annexure - I**

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
1	TAMIL NADU	ARIYALUR	ANDIMADAM	FIRKA	13526.49	13522.36	1062.14	396.41	19.80	316.44	1794.79	179.47	1615.32	966.90	0.80	182.70	1150.40	182.70	464.92	71.22	Semi Critical
2	TAMIL NADU	ARIYALUR	ARIYALUR	FIRKA	19017.84	19017.84	1477.39	555.75	67.71	153.87	2254.72	225.47	2029.25	1248.80	16.80	93.80	1359.41	94.50	669.14	66.99	Safe
3	TAMIL NADU	ARIYALUR	ELAKKURICHI	FIRKA	10008.27	9895.90	965.87	2398.72	40.02	117.84	3522.45	352.25	3170.20	1154.40	0.00	75.88	1230.28	75.88	1939.92	38.81	Safe
4	TAMIL NADU	ARIYALUR	JAYANKONDAM	FIRKA	12021.67	12021.67	1416.40	337.15	17.60	61.87	1833.02	183.30	1649.72	604.40	5.00	48.68	658.08	53.56	986.76	39.89	Safe
5	TAMIL NADU	ARIYALUR	KEELAPALUR	FIRKA	17741.41	17741.41	1505.18	2286.59	44.71	167.33	4003.81	400.37	3603.44	1633.20	10.80	74.90	1718.90	80.76	1878.68	47.70	Safe
6	TAMIL NADU	ARIYALUR	KOVAGAM	FIRKA	15416.51	15223.66	1195.78	255.00	22.29	79.88	1552.95	155.29	1397.66	778.80	0.00	218.20	997.00	218.20	400.66	71.33	Semi Critical
7	TAMIL NADU	ARIYALUR	KUNDAVELI	FIRKA	10162.31	10162.31	1021.90	692.79	0.00	120.66	1835.35	103.56	1731.79	1182.00	7.20	49.09	1238.29	76.34	466.25	71.50	Semi Critical
8	TAMIL NADU	ARIYALUR	MATHUR(A)	FIRKA	12529.57	12529.57	1218.78	1549.66	72.92	127.97	2969.33	296.93	2672.40	1251.60	3.00	48.32	1302.92	66.69	1351.11	48.75	Safe
9	TAMIL NADU	ARIYALUR	NAGAMANGALAM	FIRKA	13664.03	13663.92	1212.58	1520.84	79.52	113.88	2926.82	200.90	2725.92	1114.80	6.80	76.17	1197.78	76.17	1528.14	43.94	Safe
10	TAMIL NADU	ARIYALUR	PONPARPPI	FIRKA	10267.89	10267.89	998.78	546.15	59.76	37.90	1642.59	164.27	1478.32	370.20	0.00	41.56	411.76	54.50	1053.62	27.85	Safe
11	TAMIL NADU	ARIYALUR	SENDURAI(A)	FIRKA	8684.94	8684.94	532.95	405.59	5.33	83.74	1027.61	54.74	972.87	888.70	0.00	62.37	951.07	62.37	60.57	97.76	critical
12	TAMIL NADU	ARIYALUR	SUTHAMAALLI	FIRKA	18855.89	18669.77	1786.58	2105.53	46.47	260.07	4198.65	419.86	3778.79	2547.60	0.54	53.52	2601.66	82.41	1278.43	68.85	Safe
13	TAMIL NADU	ARIYALUR	T.PALUR	FIRKA	12089.48	11957.60	1204.80	2352.51	17.51	93.34	3668.16	266.45	3401.71	914.40	1.20	71.72	987.32	79.87	2406.24	29.02	Safe
14	TAMIL NADU	ARIYALUR	THIRUMANUR	FIRKA	7214.82	7102.79	602.60	2260.19	17.90	112.70	2993.39	299.34	2694.05	1104.00	0.00	66.56	1170.57	66.56	1523.48	43.45	Safe
15	TAMIL NADU	ARIYALUR	UDAYARPALAYAM	FIRKA	12197.02	12197.02	1008.40	380.02	17.86	91.33	1497.61	79.27	1418.34	893.60	1.20	56.37	951.17	56.37	467.17	67.06	Safe
16	TAMIL NADU	CHENGALPATTU	APPUR	FIRKA	2244.70	1629.63	123.62	180.15	0.00	23.13	326.90	32.69	294.21	304.36	1.04	14.68	320.08	14.68	0.00	108.79	Over Exploited
17	TAMIL NADU	CHENGALPATTU	ATCHARAPPAKKAM	FIRKA	9305.04	8864.04	649.78	1215.25	0.00	100.00	1965.03	196.51	1768.52	1259.22	0.75	14.36	1274.33	63.74	444.81	72.06	Semi Critical
18	TAMIL NADU	CHENGALPATTU	CHENGALPATTU	FIRKA	6989.17	5292.93	267.67	318.53	0.00	48.21	634.41	63.44	570.97	533.18	49.20	30.38	612.76	43.13	0.12	107.32	Over Exploited
19	TAMIL NADU	CHENGALPATTU	CHEYYUR	FIRKA	6624.07	6624.07	398.98	821.73	0.79	46.16	1267.66	126.77	1140.89	684.21	0.00	6.75	690.96	44.06	412.62	60.56	Safe
20	TAMIL NADU	CHENGALPATTU	CHITLAPAKKAM	FIRKA	1785.57	1785.57	183.44	28.18	0.00	2.42	214.04	21.40	192.64	20.68	0.00	92.88	113.56	92.88	79.08	58.95	Safe
21	TAMIL NADU	CHENGALPATTU	GUDUVANCHERI	FIRKA	4776.27	3394.90	339.44	250.35	0.00	23.43	613.22	61.32	551.90	346.38	11.90	41.88	400.16	41.88	151.74	72.51	Semi Critical
22	TAMIL NADU	CHENGALPATTU	JAMEEN ENDATHUR	FIRKA	5504.03	5504.03	403.48	765.23	0.00	78.46	1247.17	124.72	1122.45	994.14	1.38	2.32	997.84	16.75	110.18	88.90	Semi Critical
23	TAMIL NADU	CHENGALPATTU	KADAPAKKAM	FIRKA	9587.83	9190.15	611.66	1684.90	1.22	252.29	2550.07	255.00	2295.07	497.63	0.00	10.68	508.31	24.68	1772.76	22.15	Safe
24	TAMIL NADU	CHENGALPATTU	KARUMPAKKAM	FIRKA	4324.98	3777.66	195.21	890.96	0.00	59.92	1146.09	114.61	1031.48	758.45	0.00	4.80	763.25	19.40	253.63	74.00	Semi Critical
25	TAMIL NADU	CHENGALPATTU	KARUNKUZI	FIRKA	11319.28	11319.28	965.98	1890.11	0.00	94.02	2950.11	295.01	2655.10	1182.60	5.40	17.84	1205.84	43.57	1423.53	45.42	Safe
26	TAMIL NADU	CHENGALPATTU	KATTANKOLATHUR	FIRKA	5754.86	4403.49	275.18	434.32	0.00	27.35	736.85	73.69	663.16	470.03	22.80	5.15	497.98	8.36	161.97	75.09	Semi Critical
27	TAMIL NADU	CHENGALPATTU	KAYAPAKKAM	FIRKA	7614.74	7515.23	456.62	1750.68	0.91	230.94	2439.15	243.92	2195.23	1638.00	0.00	14.84	1652.84	37.87	519.36	75.29	Semi Critical
28	TAMIL NADU	CHENGALPATTU	KELAMPAKKAM	FIRKA	6444.50	5848.00	380.16	368.49	0.00	49.61	798.26	79.83	718.43	120.25	40.80	31.53	192.58	48.45	508.93	26.81	Safe
29	TAMIL NADU	CHENGALPATTU	KODUR	FIRKA	9659.24	9659.24	602.16	1617.95	1.20	111.39	2332.70	233.27	2099.43	1535.02	0.00	14.44	1549.46	55.19	509.22	73.80	Semi Critical
30	TAMIL NADU	CHENGALPATTU	L ENDATHTHUR	FIRKA	8190.34	7903.83	626.95	1495.62	0.00	114.28	2236.85	223.69	2013.16	1588.84	0.00	13.52	1602.36	37.94	386.38	79.59	Semi Critical
31	TAMIL NADU	CHENGALPATTU	LATHUR	FIRKA	9991.03	9991.03	1026.31	1702.72	0.00	102.90	2831.93	283.19	2548.74	1292.93	0.00	18.12	1311.05	48.35	1207.46	51.44	Safe
32	TAMIL NADU	CHENGALPATTU	MADAMBAKKAM	FIRKA	1476.27	1476.27	126.39	233.33	0.00	10.79	370.51	37.05	333.46	137.60	2.76	9.16	149.52	17.40	175.70	44.84	Safe
33	TAMIL NADU	CHENGALPATTU	MADHURANTAKAM	FIRKA	6596.50	6596.50	487.79	881.68	0.00	67.49	1436.96	143.70	1293.26	849.70	0.00	3.52	853.22	28.82	414.74	65.97	Safe
34	TAMIL NADU	CHENGALPATTU	MAMALLAPURAM	FIRKA	8688.62	8462.17	524.68	1482.37	0.00	93.59	2100.64	210.07	1890.57	1338.60	19.20	16.68	1374.48	43.18	489.59	72.70	Semi Critical
35	TAMIL NADU	CHENGALPATTU	MAMPAKKAM	FIRKA	6761.37	5346.57	449.07	501.65	0.00	26.12	976.84	97.68	879.16	272.00	16.40	7.96	296.36	22.96	567.80	33.71	Safe
36	TAMIL NADU	CHENGALPATTU	MANAMATHI	FIRKA	2676.97	2360.24	223.69	574.89	0.00	32.25	830.83	83.08	747.75	409.50	0.00	1.56	411.07	18.78	319.46	54.97	Safe
37	TAMIL NADU	CHENGALPATTU	MEDAVAKKAM	FIRKA	2884.92	2884.92	246.99	119.20	0.00	1.20	367.39	36.74	330.65	10.50	0.00	23.80	34.30	23.80	296.35	10.37	Safe
38	TAMIL NADU	CHENGALPATTU	NELLIKUPPAM	FIRKA	8135.92	5580.09	447.92	946.25	0.00	64.98	1459.15	145.92	1313.23	836.32	6.80	3.20	846.32	15.63	454.48	64.45	Safe
39	TAMIL NADU	CHENGALPATTU	NERUMPUR	FIRKA	7076.77	6923.85	597.75	2297.97	0.00	314.77	3210.49	321.05	2889.44	2507.80	2.14	28.54	2538.48	38.67	340.83	87.85	Semi Critical
40	TAMIL NADU	CHENGALPATTU	OONAMPAKKAM	FIRKA	8152.50	7997.04	1115.88	1141.55	0.00	129.00	2386.43	238.64	2147.79	1822.70	0.00	7.64	1830.34	37.79	287.30	85.22	Semi Critical
41	TAMIL NADU	CHENGALPATTU	ORATHI	FIRKA	8100.41	7942.23	582.21	1869.59	0.00	187.77	2639.57	263.96	2375.61	2201.60	0.00	14.88	2216.48	48.39	125.62	93.30	critical
42	TAMIL NADU	CHENGALPATTU	P.V.KALATHUR	FIRKA	9673.19	8504.40	732.73	2463.23	0.00	160.94	3356.90	335.69	3021.21	2356.48	0.00	10.48	2366.96	41.08	623.65	78.34	Semi Critical
43	TAMIL NADU	CHENGALPATTU	PAIYANUR	FIRKA	4409.20	4130.30	394.65	804.36	0.00	45.27	1244.28	124.43	1119.85	579.20	0.00	4.92	584.12	22.49	518.16	52.16	Safe
44	TAMIL NADU	CHENGALPATTU	PALLAVARAM	FIRKA	1808.32	1808.32	139.33	27.77	0.00	3.06	170.16	17.02	153.14	36.00	0.00	15.38	51.38	15.38	101.76	33.55	Safe
45	TAMIL NADU	CHENGALPATTU	PALUR(C)	FIRKA	5677.46	5474.44	315.85	566.71	0.00	38.94	921.50	92.15	829.35	503.62	0.00	9.26	512.89	30.37	295.35	61.84	Safe
46	TAMIL NADU	CHENGALPATTU	PAMMAL	FIRKA	1655.62	1651.19	169.64	25.24	0.00	1.31	196.19	19.61	176.57	41.04	0.00	0.41	41.45	0.44	135.09	23.48	Safe
47	TAMIL NADU	CHENGALPATTU	PERUMPAKKAM	FIRKA	10081.91	8723.13	661.84	2390.83	0.00	113.57	3166.24	316.63	2849.61	2187.60	0.00	13.44	2201.04	29.81	632.20	77.24	Semi Critical
48	TAMIL NADU	CHENGALPATTU	SINGAPERUMAL KOVIL	FIRKA	3715.96	2990.46	186.88	271.10	0.00	18.95	476.93	47.70	429.23	368.55	6.48	10.44	385.47	10.44	43.76	89.80	Semi Critical
49	TAMIL NADU	CHENGALPATTU	SITHAMOOR	FIRKA	8234.93	8050.19	303.05	2218.83	0.60	215.59	2738.07	273.81	2464.26	1840.95	2.40	33.07	1876.42	43.53	577.38	76.15	Semi Critical
50	TAMIL NADU	CHENGALPATTU	SOONAMPEDU	FIRKA	7839.22	7839.22	306.91	1579.12	0.61	131.66	2018.30	201.84	1816.46	721.50	0.00	14.96	736.46	51.45	1043.51	40.54	Safe
51	TAMIL NADU	CHENGALPATTU	TAMBARAM	FIRKA	2286.77	2286.77	198.85	45.82	0.00	1.59	246.26	12.31	233.95	10.80	0.00	54.70	65.50	54.70	168.45	28.00	Safe
52	TAMIL NADU	CHENGALPATTU	THIRUKKALUKUNDRAM	FIRKA	11218.18	10214.01	898.80	2809.52	0.00	230.26	3938.58	393.86	3544.72	3156.66	0.00	59.35	3216.01	59.35	328.71	90.73	critical
53	TAMIL NADU	CHENGALPATTU	THIRUPPORUR	FIRKA	9461.13	7782.72	613.57	580.94	0.00	57.62	1252.13	62.80	1189.33	711.20	30.00	41.25	782.46	41.25	406.87	65.79	Safe
54	TAMIL NADU	CHENGALPATTU	VAIAYUR	FIRKA	10418.42	10146.88	1111.27	1156.72	0.00	83.00	2350.99	235.10	2115.89	1047.20	10.90	3.08	1061.18	62.64	995.15	50.15	Safe
55	TAMIL NADU	CHENGALPATTU	VANDALUR	FIRKA	5444.05	4540.00	453.93	163.42	0.00	24.85	642.20	64.22	577.98	360.36	92.60	59.97	512.93	59.97	65.05	88.75	Semi Critical
56	TAMIL NADU	CHENNAI	ADYAR	FIRKA	740.22	740.22	220.69	0.00	0.00	0.00	220.69	22.07	198.62	0.00	0.00	240.00	240.00	240.00	0.00	120.83	Over Exploited
57	TAMIL NADU	CHENNAI	ALANDUR	FIRKA	1770.97	1770.97	113.74	428.67	0.00	410.03	952.44	95.24	857.20	40.00	14.00	680.00	734.00	680.00	123.20	85.63	Semi Critical
58	TAMIL NADU	CHENNAI	AMBATTUR	FIRKA	1770.70	1770.70	512.25	23.93	0.00	0.20	536.38	53.64	482.74	2.10	464.80	397.38	864.28	397.38	0.00	179.04	Over Exploited
59	TAMIL NADU	CHENNAI	AMINJIKARAI	FIRKA	356.62	356.62	118.96	0.00	0.00	0.00	118.96	11.90	107.06	0.00	0.00	186.32	186.32	186.32	0.00	174.03	Over Exploited
60	TAMIL NADU	CHENNAI	ANNA NAGAR	FIRKA	254.45	254.45	77.30	0.00	0.00	0.00	77.30	7.73	69.57	0.00	0.00	95.02	95.02	95.02	0.00	136.58	Over Exploited
61	TAMIL NADU	CHENNAI	ASHOK NAGAR	FIRKA	669.65	669.65	50.86	0.00	0.00	0.00	50.86	5.09	45.77	0.00	0.00	78.76	78.76	78.76	0.00	172.08	Over Exploited
62	TAMIL NADU	CHENNAI	AYANAVARAM	FIRKA	546.39	546.39	163.70	0.00	0.00	0.00	163.70	16.37	147.33	0.00	0.00	152.11	152.11	152.11	0.00	103.24	Over Exploited
63	TAMIL NADU	CHENNAI	BESANT NAGAR	FIRKA	411.23	411.23	111.46	0.00	0.00	0.00	111.46	11.15	100.31	0.00	0.00	153.11	153.11	153.11	0.00	152.64	Over Exploited
64	TAMIL NADU	CHENNAI	CHINTADRIPET	FIRKA	172.32	172.32	50.27	0.00	0.00	0.00	50.27	5.03	45.24	0.00	0.00	60.00	60.00	60.00	0.00	132.63	Over Exploited
65	TAMIL NADU	CHENNAI	EGMORE (EGMORE SOUTH)	FIRKA	302.87	302.87	90.74	0.00	0.00	0.00	90.74	9.07	81.67	0.00	0.00	142.72	142.72	142.72	0.00	174.75	Over Exploited
66	TAMIL NADU	CHENNAI	EKKATUTHANGAL	FIRKA	404.99	404.99	30.76	0.00	0.00	0.00	30.76	3.08	27.68	0.00	0.00	29.12	29.12	45.68	0.00	105.20	Over Exploited
67	TAMIL NADU	CHENNAI	ERUKANCHERY	FIRKA	110.48	110.48	18.38	0.00	0.00	0.00	18.38	1.84	16.54	0.00	0.00	27.08	27.08	27.08	0.00	163.72	Over Exploited
68	TAMIL NADU	CHENNAI	KILPAUK (EGMORE NORTH)	FIRKA	492.93	492.93	147.68	0.00	0.00	0.00	147.68	14.77	132.91	0.00	0.00	150.00	150.00	150.00	0.00	112.86	Over Exploited

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024																					Annexure - I
TAMIL NADU																					(in ham)
Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
69	TAMIL NADU	CHENNAI	KODUNGAIYUR	FIRKA	680.67	680.67	92.83	0.00	0.00	0.00	92.83	4.64	88.19	0.00	0.00	120.00	120.00	120.00	0.00	136.07	Over Exploited
70	TAMIL NADU	CHENNAI	KOLATHUR(C)	FIRKA	312.25	312.25	89.13	0.00	0.00	0.00	89.13	8.91	80.22	0.00	0.00	100.80	100.80	100.80	0.00	125.65	Over Exploited
71	TAMIL NADU	CHENNAI	KONNUR	FIRKA	282.41	282.41	69.03	0.00	0.00	0.00	69.03	6.90	62.13	0.00	0.00	71.84	71.84	71.84	0.00	115.63	Over Exploited
72	TAMIL NADU	CHENNAI	KORATTUR	FIRKA	3934.04	3934.04	1034.62	13.20	0.00	13.20	1061.02	106.10	954.92	0.00	122.50	1946.60	2069.10	1946.60	0.00	216.68	Over Exploited
73	TAMIL NADU	CHENNAI	KORRUKUPET	FIRKA	167.54	167.54	17.08	0.00	0.00	0.00	17.08	0.85	16.23	0.00	0.00	27.00	27.00	27.00	0.00	166.36	Over Exploited
74	TAMIL NADU	CHENNAI	KOTTUR(C)	FIRKA	349.61	349.61	23.69	0.00	0.00	0.00	23.69	2.37	21.32	0.00	0.00	38.71	38.71	38.71	0.00	181.57	Over Exploited
75	TAMIL NADU	CHENNAI	KOYAMBEDU	FIRKA	553.60	553.60	116.40	0.00	0.00	0.00	116.40	5.82	110.58	0.00	0.00	114.31	114.32	114.31	0.00	103.38	Over Exploited
76	TAMIL NADU	CHENNAI	MADHAVARAM	FIRKA	3022.26	3022.26	782.71	183.80	0.00	8.51	975.02	48.76	926.26	16.70	202.50	440.62	659.82	440.62	266.44	71.23	Semi Critical
77	TAMIL NADU	CHENNAI	MADURAVOYAL	FIRKA	1478.05	1478.05	505.28	19.50	0.00	24.45	549.23	54.93	494.30	60.00	60.00	620.00	740.00	620.00	0.00	149.71	Over Exploited
78	TAMIL NADU	CHENNAI	MAMBALAM	FIRKA	187.85	187.85	14.27	0.00	0.00	0.00	14.27	1.43	12.84	0.00	0.00	24.62	24.62	24.62	0.00	191.74	Over Exploited
79	TAMIL NADU	CHENNAI	MANALI	FIRKA	2963.66	2963.66	930.51	49.73	0.00	36.16	1016.40	101.64	914.76	37.80	112.70	1097.80	1248.30	1097.80	0.00	136.46	Over Exploited
80	TAMIL NADU	CHENNAI	MYLAPORE (SOUTH)	FIRKA	1426.10	1426.10	208.01	0.00	0.00	0.00	208.01	20.80	187.21	0.00	0.00	276.32	276.32	276.32	0.00	147.60	Over Exploited
81	TAMIL NADU	CHENNAI	NUNGAMBAKKAM	FIRKA	439.01	439.01	94.86	0.00	0.00	0.00	94.86	4.74	90.12	0.00	0.00	112.00	112.00	112.00	0.00	124.28	Over Exploited
82	TAMIL NADU	CHENNAI	OLD WASHERMANPET	FIRKA	462.07	462.07	34.94	0.00	0.00	0.00	34.94	3.49	31.45	0.00	0.00	51.18	51.18	51.18	0.00	162.73	Over Exploited
83	TAMIL NADU	CHENNAI	OTTERI (PURASAWALKAM WEST)	FIRKA	256.40	256.40	62.63	0.00	0.00	0.00	62.63	6.26	56.37	0.00	0.00	61.70	61.70	61.70	0.00	109.46	Over Exploited
84	TAMIL NADU	CHENNAI	PALLIKARANAI	FIRKA	3821.44	3821.44	258.94	96.52	0.00	11.98	367.44	36.75	330.69	3.20	6.00	255.73	264.93	255.73	65.76	80.11	Semi Critical
85	TAMIL NADU	CHENNAI	PERAMBUR(C)	FIRKA	883.91	883.91	264.81	0.00	0.00	0.00	264.81	26.48	238.33	0.00	0.00	279.21	279.21	279.21	0.00	117.15	Over Exploited
86	TAMIL NADU	CHENNAI	PERAVALLUR	FIRKA	387.48	387.48	116.09	0.00	0.00	0.00	116.09	11.61	104.48	0.00	0.00	105.59	105.59	105.59	0.00	101.06	Over Exploited
87	TAMIL NADU	CHENNAI	PORUR	FIRKA	1790.40	1790.40	126.72	234.10	0.00	225.44	586.26	58.63	527.63	4.90	23.40	523.48	551.78	523.48	0.04	104.58	Over Exploited
88	TAMIL NADU	CHENNAI	PURASAWALKAM (EAST)	FIRKA	497.74	497.74	150.94	0.00	0.00	0.00	150.94	15.09	135.85	0.00	0.00	240.00	240.00	240.00	0.00	176.67	Over Exploited
89	TAMIL NADU	CHENNAI	PUZHAL(C)	FIRKA	590.39	590.39	177.67	8.62	0.00	0.00	186.29	18.63	167.66	0.00	27.00	70.62	97.62	100.30	40.36	58.22	Safe
90	TAMIL NADU	CHENNAI	ROYAPETTAH (MYLAPORE NORTH)	FIRKA	244.00	244.00	71.18	0.00	0.00	0.00	71.18	7.12	64.06	0.00	0.00	75.11	75.11	75.11	0.00	117.25	Over Exploited
91	TAMIL NADU	CHENNAI	ROYAPURAM	FIRKA	372.25	372.25	27.63	0.00	0.00	0.00	27.63	1.38	26.25	0.00	0.00	39.81	39.81	39.81	0.00	151.66	Over Exploited
92	TAMIL NADU	CHENNAI	SALIGRAMAM	FIRKA	252.89	252.89	19.21	0.00	0.00	0.00	19.21	1.92	17.29	0.00	0.00	17.85	17.85	26.80	0.00	103.24	Over Exploited
93	TAMIL NADU	CHENNAI	SEMBIUM	FIRKA	181.57	181.57	44.35	0.00	0.00	0.00	44.35	4.44	39.91	0.00	0.00	40.80	40.80	40.80	0.00	102.23	Over Exploited
94	TAMIL NADU	CHENNAI	SHOLINGANALLUR	FIRKA	3246.30	3246.30	365.64	211.33	0.00	127.69	704.66	38.18	666.48	11.20	37.10	285.50	333.80	285.50	332.68	50.08	Safe
95	TAMIL NADU	CHENNAI	THARAMANI	FIRKA	449.42	449.42	30.45	0.00	0.00	0.00	30.45	3.04	27.41	0.00	0.00	33.78	33.78	33.78	0.00	123.24	Over Exploited
96	TAMIL NADU	CHENNAI	THIRUVANMIYUR	FIRKA	556.25	556.25	75.38	0.00	0.00	0.00	75.38	7.54	67.84	0.00	0.00	104.00	104.00	104.00	0.00	153.30	Over Exploited
97	TAMIL NADU	CHENNAI	THIRUVOTTIYUR	FIRKA	2624.13	2624.13	158.75	7.41	0.00	0.00	166.16	16.61	149.54	0.00	67.20	248.45	315.65	248.45	6.67	211.08	Over Exploited
98	TAMIL NADU	CHENNAI	THYAGARAYA NAGAR	FIRKA	642.79	642.79	58.59	0.00	0.00	0.00	58.59	5.86	52.73	0.00	0.00	60.00	60.00	60.00	0.00	113.79	Over Exploited
99	TAMIL NADU	CHENNAI	TONDIARPET	FIRKA	299.89	299.89	22.68	0.00	0.00	0.00	22.68	2.27	20.41	0.00	0.00	28.11	28.11	28.11	0.00	137.73	Over Exploited
100	TAMIL NADU	CHENNAI	TRIPLICANE	FIRKA	385.15	385.15	56.18	0.00	0.00	0.00	56.18	5.62	50.56	0.00	0.00	75.97	75.97	75.97	0.00	150.26	Over Exploited
101	TAMIL NADU	CHENNAI	V.O.C NAGAR	FIRKA	415.83	415.83	41.93	0.00	0.00	0.00	41.93	4.19	37.74	0.00	0.00	48.64	48.64	49.31	0.00	128.88	Over Exploited
102	TAMIL NADU	CHENNAI	VADAPALANI	FIRKA	532.09	532.09	39.85	0.00	0.00	0.00	39.85	3.99	35.86	0.00	0.00	49.20	49.20	58.62	0.00	137.20	Over Exploited
103	TAMIL NADU	CHENNAI	VELACHERY	FIRKA	660.56	660.56	44.76	0.00	0.00	0.00	44.76	4.48	40.28	0.00	0.00	42.10	42.10	42.10	0.00	104.52	Over Exploited
104	TAMIL NADU	CHENNAI	VEPERY	FIRKA	557.82	557.82	39.65	0.00	0.00	0.00	39.65	1.98	37.67	0.00	0.00	72.35	72.35	72.35	0.00	192.06	Over Exploited
105	TAMIL NADU	CHENNAI	VILLIVAKKAM	FIRKA	390.67	390.67	95.49	0.00	0.00	0.00	95.49	9.55	85.94	0.00	0.00	90.79	90.79	178.48	0.00	105.64	Over Exploited
106	TAMIL NADU	CHENNAI	VIRUGAMBAKKAM	FIRKA	326.18	326.18	13.75	0.00	0.00	0.00	13.75	1.38	12.37	0.00	0.00	14.67	14.67	23.38	0.00	118.59	Over Exploited
107	TAMIL NADU	COIMBATORE	ALANTHURAI	FIRKA	7036.74	6984.33	0.00	1112.63	0.00	371.99	1484.62	148.47	1336.15	1350.20	0.00	1.15	1351.35	65.45	789.32	101.14	Over Exploited
108	TAMIL NADU	COIMBATORE	ANAIMALAI	FIRKA	15602.24	15602.24	4633.87	2573.06	90.96	141.97	7439.86	743.99	6695.87	969.89	0.80	9.10	979.79	88.69	5636.49	14.63	Safe
109	TAMIL NADU	COIMBATORE	ANNUR NORTH	FIRKA	13992.78	13992.78	523.62	488.36	99.12	399.84	1510.94	151.09	1359.85	1350.40	7.20	4.50	1362.10	78.56	383.27	100.17	Over Exploited
110	TAMIL NADU	COIMBATORE	ANNUR SOUTH	FIRKA	15067.18	15067.18	562.51	394.00	106.74	302.87	1366.12	136.62	1229.50	1217.82	23.20	4.95	1245.97	113.69	260.82	101.34	Over Exploited
111	TAMIL NADU	COIMBATORE	ANUPAR PALAYAM	FIRKA	2118.09	2118.09	0.00	114.61	0.00	16.41	131.02	13.10	117.92	114.57	1.20	2.20	117.97	439.10	81.83	100.04	Over Exploited
112	TAMIL NADU	COIMBATORE	COIMBATORE	FIRKA	1533.86	1533.86	0.00	311.59	0.00	67.95	379.54	37.96	341.58	221.40	0.00	282.36	503.76	291.87	271.84	147.48	Over Exploited
113	TAMIL NADU	COIMBATORE	GANAPATHY	FIRKA	2434.72	2434.72	0.00	80.62	0.00	20.41	101.03	10.10	90.93	76.92	96.00	4.90	177.82	438.55	66.70	195.56	Over Exploited
114	TAMIL NADU	COIMBATORE	KARAMADAI	FIRKA	16453.45	16442.67	755.24	496.13	211.08	288.98	1751.43	175.13	1576.30	1460.50	9.20	19.25	1488.95	141.81	400.58	94.46	critical
115	TAMIL NADU	COIMBATORE	KARUMATHAMPATTY	FIRKA	17160.08	17160.08	791.12	968.92	161.01	283.22	2204.27	220.43	1983.84	1968.30	80.40	60.84	2109.54	163.81	545.38	106.34	Over Exploited
116	TAMIL NADU	COIMBATORE	KINATHUKADAVU	FIRKA	11291.58	11291.58	893.49	775.51	115.26	356.57	2140.83	214.09	1926.74	2245.13	11.60	12.20	2268.93	84.13	352.95	117.76	Over Exploited
117	TAMIL NADU	COIMBATORE	KOLARPATTY	FIRKA	9296.25	9296.25	472.67	794.89	72.30	282.55	1622.41	162.24	1460.17	1636.86	0.80	4.25	1641.91	45.06	522.48	112.45	Over Exploited
118	TAMIL NADU	COIMBATORE	KOTTUR(CBE)	FIRKA	15549.93	15549.93	655.32	2529.79	96.22	288.40	3569.73	280.51	3289.22	1977.35	4.00	7.85	1989.20	91.79	1836.53	60.48	Safe
119	TAMIL NADU	COIMBATORE	KOVILPALAYAM	FIRKA	8661.67	8661.67	685.22	849.28	88.42	281.76	1904.68	190.46	1714.22	1888.86	4.80	9.50	1903.15	51.90	379.00	111.02	Over Exploited
120	TAMIL NADU	COIMBATORE	KUNIAMUTHUR	FIRKA	1896.01	1896.01	0.00	259.86	0.00	108.43	368.29	36.84	331.45	139.30	3.20	0.10	142.60	118.48	287.57	43.02	Safe
121	TAMIL NADU	COIMBATORE	KURICHY	FIRKA	3649.96	3649.96	0.00	254.82	0.00	86.07	340.89	34.08	306.81	129.50	1.60	1.70	132.80	179.08	266.02	43.28	Safe
122	TAMIL NADU	COIMBATORE	MADAMPATTY	FIRKA	5539.85	5300.49	0.00	473.00	0.00	112.36	585.36	58.54	526.82	695.00	0.40	0.20	695.60	62.53	307.90	132.04	Over Exploited
123	TAMIL NADU	COIMBATORE	MADUKARAI	FIRKA	5526.98	5490.24	0.00	455.40	0.00	159.27	614.67	61.47	553.20	497.00	10.40	2.00	509.40	66.00	396.65	92.08	critical
124	TAMIL NADU	COIMBATORE	MARCHANAYEKANPALAYAM	FIRKA	10562.70	10562.70	523.72	1063.73	78.54	137.73	1803.72	180.37	1623.35	807.33	1.60	4.45	813.38	72.42	809.97	50.11	Safe
125	TAMIL NADU	COIMBATORE	METTUPALAYAM	FIRKA	19472.95	19204.56	1352.71	1365.21	291.31	408.44	3417.67	341.76	3075.91	2838.60	17.10	467.39	3323.09	467.39	835.03	108.04	Over Exploited
126	TAMIL NADU	COIMBATORE	OTHAKALMANDAPAM	FIRKA	10125.10	10125.10	0.00	423.12	0.00	136.64	559.76	55.99	503.77	549.50	3.20	4.05	556.75	73.68	330.69	110.52	Over Exploited
127	TAMIL NADU	COIMBATORE	PERIANAICKENPALAYAM	FIRKA	10877.01	10877.01	0.00	624.55	0.00	149.92	774.47	77.45	697.02	1009.08	11.60	11.10	1031.78	53.10	379.16	148.03	Over Exploited
128	TAMIL NADU	COIMBATORE	PERIYANEKAMAM	FIRKA	7719.07	7719.07	608.69	732.22	97.99	219.60	1658.50	165.85	1492.65	1342.76	0.00	3.75	1346.51	139.01	339.63	90.21	critical
129	TAMIL NADU	COIMBATORE	PERUR	FIRKA	3302.67	3302.67	0.00	320.74	0.00	155.93	476.67	47.66	429.01	413.00	1.20	1.70	415.90	93.57	298.92	96.94	critical
130	TAMIL NADU	COIMBATORE	POLLACHI NORTH	FIRKA	7368.24	7368.24	490.19	700.09	75.21	232.99	1498.48	149.85	1348.63	1078.47	0.00	10.90	1089.37	231.97	521.77	80.78	Semi Critical
131	TAMIL NADU	COIMBATORE	POLLACHI SOUTH	FIRKA	4312.72	4312.72	286.92	343.41	44.02	83.18	757.53	75.76	681.77	534.08	0.80	26.80	561.68	164.94	180.57	82.39	Semi Critical
132	TAMIL NADU	COIMBATORE	RAMAPATTINAM	FIRKA	13469.19	13469.19	869.34	995.43	82.78	302.49	2250.04	225.01	2025.03	2032.78	0.00	5.00	2037.78	80.51	562.77	100.63	Over Exploited
133	TAMIL NADU	COIMBATORE	SARAVANAM PATTY	FIRKA	7609.14	7609.14	0.00	241.96	0.00	132.88	374.84	37.49	337.35	354.50	15.47	6.22	376.19	131.03	154.80	111.51	Over Exploited
134	TAMIL NADU	COIMBATORE	SARKAR SAMAKULAM	FIRKA	9792.78	9792.78	0.00	597.54	0.00	264.91	862.45	86.24	776.21	912.30	15.20	4.60	932.10	76.11	488.84	120.08	Over Exploited
135	TAMIL NADU	COIMBATORE	SELAKARICHAL	FIRKA	13677.56	13677.56	524.18	448.86	145.03	204.50	1322.57	132.26	1190.31	1257.16	14.00	13.70	1284.86	52.42	205.44	107.94	Over Exploited
136	TAMIL NADU	COIMBATORE	SINGANALLUR	FIRKA	3118.05	3118.05	0.00	131.28	0.00	19.01	150.29	15.03	135.26	130.30	5.20	2.30	137.80	436.65	94.21	101.88	Over Exploited

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024

Annexure - I

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
137	TAMIL NADU	COIMBATORE	SULUR	FIRKA	11761.31	11761.31	535.28	566.41	110.36	174.04	1386.09	138.61	1247.48	860.01	48.80	10.60	919.41	167.98	460.64	73.70	Semi Critical
138	TAMIL NADU	COIMBATORE	THIRUMALAYAMPALAYAM	FIRKA	7595.74	7595.27	501.09	391.12	62.16	86.61	1040.98	104.10	936.88	604.34	2.80	3.25	610.39	53.09	276.65	65.15	Safe
139	TAMIL NADU	COIMBATORE	THONDAMUTHUR	FIRKA	5717.31	5717.31	0.00	684.61	0.00	236.96	921.57	92.15	829.42	1261.60	0.00	0.70	1262.30	49.13	432.02	152.19	Over Exploited
140	TAMIL NADU	COIMBATORE	THUDIYALUR	FIRKA	10916.86	9137.45	0.00	550.51	0.00	99.64	650.15	65.02	585.13	440.82	6.00	9.20	456.02	164.16	446.28	77.93	Semi Critical
141	TAMIL NADU	COIMBATORE	VAARAPATTY	FIRKA	15897.11	15897.11	609.24	1479.46	168.58	406.97	2664.25	266.42	2397.83	2636.24	5.20	17.80	2659.24	77.88	780.32	110.90	Over Exploited
142	TAMIL NADU	COIMBATORE	VADASITHUR	FIRKA	12621.88	12621.88	996.66	754.71	160.22	344.64	2256.23	225.63	2030.60	2059.80	1.20	5.15	2066.15	54.13	369.14	101.75	Over Exploited
143	TAMIL NADU	COIMBATORE	VADAVALLI	FIRKA	3439.22	3433.66	0.00	499.60	0.00	89.54	589.14	58.91	530.23	391.52	0.40	0.30	392.22	61.71	406.90	73.97	Semi Critical
144	TAMIL NADU	COIMBATORE	VALPARAI	FIRKA	24930.06	20676.06	4405.95	1554.14	188.77	1303.94	7452.80	745.29	6707.51	5675.10	0.00	611.60	6286.70	611.60	1009.33	93.73	critical
145	TAMIL NADU	CUDDALORE	BHUVANAGIRI	FIRKA	6763.55	6763.55	604.12	3290.70	274.60	124.44	4293.86	429.38	3864.48	1845.10	11.00	414.00	2270.10	414.00	1594.38	58.74	Safe
146	TAMIL NADU	CUDDALORE	CHIDAMBARAM	FIRKA	9455.90	9455.90	1601.26	3043.13	642.43	175.99	5462.81	546.28	4916.53	1044.62	12.50	22.93	1080.05	111.02	3748.39	21.97	Safe
147	TAMIL NADU	CUDDALORE	KADAMPULIYUR	FIRKA	16404.53	15964.91	610.91	306.76	343.05	1014.27	2274.99	227.50	2047.49	1920.45	2.80	15.62	1938.87	138.42	108.62	94.69	critical
148	TAMIL NADU	CUDDALORE	KAMMAPURAM	FIRKA	6219.03	6219.03	762.55	264.25	539.69	107.36	1673.85	167.38	1506.47	2079.66	0.00	4.30	2083.96	61.94	0.00	138.33	Over Exploited
149	TAMIL NADU	CUDDALORE	KATTUMANNARKOIL	FIRKA	9432.09	9432.09	1686.91	1646.40	779.47	272.28	4385.06	438.51	3946.55	1977.52	0.40	3.50	1981.42	68.26	1900.37	50.21	Safe
150	TAMIL NADU	CUDDALORE	KAVANUR	FIRKA	8273.32	8273.32	1014.44	260.22	717.96	175.70	2168.32	216.84	1951.48	2775.60	0.00	4.60	2780.20	67.48	0.00	142.47	Over Exploited
151	TAMIL NADU	CUDDALORE	KULLANCHAVADI	FIRKA	17971.42	17971.42	1154.37	1393.46	608.37	558.22	3714.42	371.44	3342.98	2200.14	1.70	21.60	2223.44	89.28	1051.86	66.51	Safe
152	TAMIL NADU	CUDDALORE	KUMARATCHI	FIRKA	7678.64	7678.64	1144.42	2587.06	634.56	146.64	4512.68	451.27	4061.41	874.72	0.00	1.00	875.72	49.71	3136.98	21.56	Safe
153	TAMIL NADU	CUDDALORE	KURINJIPADI	FIRKA	15406.84	15406.84	1320.65	1039.10	36.79	263.75	2660.29	266.03	2394.26	2040.00	13.00	32.74	2085.74	63.49	277.77	87.11	Semi Critical
154	TAMIL NADU	CUDDALORE	MANAGALAM KO	FIRKA	6421.78	6421.78	372.24	99.94	281.89	133.21	887.28	88.73	798.55	556.74	0.00	2.20	558.94	47.69	194.12	69.99	Safe
155	TAMIL NADU	CUDDALORE	MANJAKKUPPAM	FIRKA	11178.29	11178.29	2054.48	322.89	813.33	591.22	3781.92	378.20	3403.72	2686.50	14.30	66.82	2767.62	108.22	594.70	81.31	Semi Critical
156	TAMIL NADU	CUDDALORE	MARUNGUR	FIRKA	9317.29	9020.83	762.84	12.97	320.96	5.72	1102.49	55.12	1047.37	165.60	0.02	13.85	179.47	70.76	810.99	17.14	Safe
157	TAMIL NADU	CUDDALORE	NELLIKUPPAM(C)	FIRKA	9370.75	9370.75	1572.15	344.12	611.25	214.94	2742.46	274.25	2468.21	4118.40	0.08	21.62	4140.10	110.28	0.00	167.74	Over Exploited
158	TAMIL NADU	CUDDALORE	ORATHUR	FIRKA	10353.03	10353.03	1836.21	5018.43	751.22	63.78	7669.64	766.96	6902.68	681.60	0.14	48.76	730.50	93.66	6127.28	10.58	Safe
159	TAMIL NADU	CUDDALORE	PANRUTI	FIRKA	12180.45	12031.45	1835.04	612.77	713.46	535.30	3696.57	369.66	3326.91	3042.60	2.40	21.35	3066.35	157.33	124.58	92.17	critical
160	TAMIL NADU	CUDDALORE	PARANGIPETTAI	FIRKA	11792.74	11740.36	2016.99	3566.56	687.99	65.90	6337.44	633.75	5703.69	512.00	6.40	60.00	578.40	95.75	5089.54	10.14	Safe
161	TAMIL NADU	CUDDALORE	PENNADAM	FIRKA	14357.10	14357.10	1816.45	527.90	1364.77	960.68	4669.80	466.98	4202.82	5372.90	1.80	55.89	5430.59	115.86	0.00	129.21	Over Exploited
162	TAMIL NADU	CUDDALORE	PUTHUR(C)	FIRKA	5291.29	5291.29	735.38	2564.74	425.31	155.46	3880.89	388.09	3492.80	823.65	0.00	0.70	824.35	50.42	2618.73	23.60	Safe
163	TAMIL NADU	CUDDALORE	RETTICHAVADI	FIRKA	8952.93	8952.93	1645.48	1465.68	651.42	2233.33	5995.91	599.60	5396.31	5612.53	0.00	66.84	5679.37	112.01	0.00	105.25	Over Exploited
164	TAMIL NADU	CUDDALORE	SETHIYATHOPE	FIRKA	11638.64	11638.64	1617.54	2406.96	935.51	478.74	5438.75	543.88	4894.87	1945.20	2.00	21.61	1968.81	75.18	2872.49	40.22	Safe
165	TAMIL NADU	CUDDALORE	SIRUPAKKAM	FIRKA	13586.44	13586.44	243.20	203.36	301.96	198.87	947.39	94.74	852.65	734.80	0.02	22.50	757.32	68.09	49.74	88.82	Semi Critical
166	TAMIL NADU	CUDDALORE	SRIMUSHNAM	FIRKA	16290.01	16290.01	2282.10	2912.08	1099.89	132.55	6426.62	642.66	5783.96	2203.60	0.01	1.40	2205.02	114.38	3465.96	38.12	Safe
167	TAMIL NADU	CUDDALORE	THIRUVAKKULAM	FIRKA	14878.16	14878.16	1763.63	3772.38	707.58	41.19	6284.78	628.48	5656.30	536.19	0.04	20.76	556.99	99.44	5020.63	9.85	Safe
168	TAMIL NADU	CUDDALORE	THIRUVANTHIPURAM	FIRKA	11959.53	11959.53	2417.87	372.98	957.19	749.00	4497.04	449.70	4047.34	4105.50	3.20	50.79	4159.49	119.15	0.00	102.77	Over Exploited
169	TAMIL NADU	CUDDALORE	THOZHUDUR	FIRKA	12144.66	12143.68	400.60	198.58	303.47	254.54	1157.19	115.72	1041.47	1222.00	0.02	17.79	1239.81	65.64	0.00	119.04	Over Exploited
170	TAMIL NADU	CUDDALORE	TITAGUDI(EAST)	FIRKA	8414.27	8414.27	716.70	181.71	549.35	255.72	1703.48	85.17	1618.31	1513.90	0.80	105.07	1619.77	105.07	0.00	100.09	Over Exploited
171	TAMIL NADU	CUDDALORE	TITAGUDI(WEST)	FIRKA	11184.52	11184.52	355.52	98.94	292.08	132.94	879.48	43.97	835.51	719.10	0.74	48.91	768.75	52.27	63.40	92.01	critical
172	TAMIL NADU	CUDDALORE	UDAIYARKUDI	FIRKA	9444.92	9444.92	748.60	1691.58	434.66	145.95	3020.79	302.08	2718.71	1808.00	0.10	5.60	1813.70	69.61	841.00	66.71	Safe
173	TAMIL NADU	CUDDALORE	UMANGALAM	FIRKA	19836.04	19836.04	1345.36	595.19	1068.77	203.26	3212.58	321.26	2891.32	1446.00	0.00	23.63	1469.63	114.38	1330.94	50.83	Safe
174	TAMIL NADU	CUDDALORE	VEPPUR	FIRKA	20321.00	20316.00	582.68	879.54	469.00	619.00	2550.22	255.02	2295.20	2599.60	0.02	43.62	2643.24	95.09	0.00	115.16	Over Exploited
175	TAMIL NADU	CUDDALORE	VRIDHACHALAM NORTH	FIRKA	10976.82	10974.38	820.23	460.07	481.73	518.39	2280.42	114.03	2166.39	1875.30	2.60	320.00	2197.90	320.00	0.00	101.45	Over Exploited
176	TAMIL NADU	CUDDALORE	VRIDHACHALAM SOUTH	FIRKA	7178.02	7123.07	504.04	334.02	377.29	300.11	1515.46	151.55	1363.91	2869.60	4.20	34.02	2907.82	36.39	0.00	213.20	Over Exploited
177	TAMIL NADU	DHARMAPURI	BOMMIDI	FIRKA	14161.24	13046.48	703.76	485.52	48.95	654.99	1893.22	189.32	1703.90	2307.50	0.50	23.50	2331.50	70.42	2.50	136.83	Over Exploited
178	TAMIL NADU	DHARMAPURI	DHARMAPURI	FIRKA	19511.16	12137.36	996.23	772.15	168.95	822.32	2759.65	275.97	2483.68	1641.10	0.80	86.10	1728.00	136.49	705.29	69.57	Safe
179	TAMIL NADU	DHARMAPURI	HARUR	FIRKA	18435.12	18435.12	1506.08	521.13	125.65	642.61	2795.47	279.55	2515.92	1886.80	0.20	71.97	1958.98	71.97	556.94	77.86	Semi Critical
180	TAMIL NADU	DHARMAPURI	INDUR	FIRKA	14212.81	12468.73	991.47	369.72	176.86	478.50	2016.55	201.66	1814.89	1716.00	2.40	15.40	1733.80	76.61	19.88	95.53	critical
181	TAMIL NADU	DHARMAPURI	KADATHUR	FIRKA	15732.37	11338.63	930.67	285.92	157.83	391.81	1766.23	176.62	1589.61	1660.20	0.00	3.21	1663.41	60.47	1.89	104.64	Over Exploited
182	TAMIL NADU	DHARMAPURI	KAMBAINALLUR	FIRKA	12214.26	11196.53	858.68	334.75	139.87	427.61	1760.91	176.09	1584.82	1670.70	0.00	22.53	1693.23	43.03	3.00	106.84	Over Exploited
183	TAMIL NADU	DHARMAPURI	KARIMANGALAM	FIRKA	12912.10	12874.08	1132.16	765.95	147.85	992.15	3038.11	303.82	2734.29	3491.10	0.00	75.49	3566.59	75.49	0.86	130.44	Over Exploited
184	TAMIL NADU	DHARMAPURI	KRISHNAPURAM	FIRKA	13975.75	11371.36	933.36	484.11	158.29	603.55	2179.31	217.93	1961.38	1867.00	8.80	48.07	1923.86	75.53	10.06	98.09	critical
185	TAMIL NADU	DHARMAPURI	MARANDAHALLI	FIRKA	13269.50	7768.68	629.49	384.07	104.13	488.39	1606.08	160.61	1445.47	1693.64	0.60	20.79	1715.03	57.37	4.42	118.65	Over Exploited
186	TAMIL NADU	DHARMAPURI	MORAPPUR	FIRKA	16976.21	15593.41	1273.92	375.09	106.28	501.31	2256.60	225.66	2030.94	1758.90	0.90	10.44	1770.24	60.76	210.38	87.16	Semi Critical
187	TAMIL NADU	DHARMAPURI	NALLAMPALLI	FIRKA	9100.72	8175.20	671.02	434.39	113.80	470.08	1689.29	168.93	1520.36	955.80	3.20	17.07	976.07	68.08	493.28	64.20	Safe
188	TAMIL NADU	DHARMAPURI	PALACODE	FIRKA	17981.45	11233.30	1086.05	565.73	147.47	668.62	2467.87	246.79	2221.08	1870.10	4.10	55.01	1929.21	55.01	291.87	86.86	Semi Critical
189	TAMIL NADU	DHARMAPURI	PALAYAM(D)	FIRKA	14400.00	11669.07	720.36	381.78	63.99	494.34	1660.47	166.05	1494.42	1714.00	3.60	20.52	1738.12	77.90	4.57	116.31	Over Exploited
190	TAMIL NADU	DHARMAPURI	PAPPIREDDIPATTI	FIRKA	12904.07	12791.92	948.80	291.15	106.07	411.63	1757.65	175.77	1581.88	1293.65	4.50	34.83	1332.98	54.33	229.40	84.27	Semi Critical
191	TAMIL NADU	DHARMAPURI	PAUPARAPATTY	FIRKA	13432.45	11611.08	701.61	371.77	114.32	448.09	1635.79	163.58	1472.21	1294.00	0.00	27.22	1321.22	52.45	125.76	89.74	Semi Critical
192	TAMIL NADU	DHARMAPURI	PENNAGARAM	FIRKA	12347.99	11504.33	371.57	502.35	66.32	609.66	1549.90	154.99	1394.91	1493.50	0.00	66.50	1560.00	68.56	0.21	111.84	Over Exploited
193	TAMIL NADU	DHARMAPURI	PERIYANAHALLI	FIRKA	9422.24	9413.83	827.86	687.88	108.11	837.97	2461.82	246.18	2215.64	2897.50	0.00	62.21	2959.71	66.02	0.84	133.58	Over Exploited
194	TAMIL NADU	DHARMAPURI	PERUMBALAI	FIRKA	16020.02	11245.95	196.02	188.71	37.32	259.25	681.30	68.13	613.17	1012.50	0.00	19.37	1031.88	47.39	1.17	168.29	Over Exploited
195	TAMIL NADU	DHARMAPURI	PULIKARAI	FIRKA	7185.06	7185.06	578.89	425.21	94.33	518.01	1616.44	161.64	1454.80	1646.80	0.00	5.10	1651.90	29.86	0.00	113.55	Over Exploited
196	TAMIL NADU	DHARMAPURI	SUNJALNATHAM	FIRKA	22567.41	15420.23	895.14	730.85	169.96	715.66	2511.61	251.15	2260.45	971.00	0.00	10.79	981.79	66.92	1222.53	43.43	Safe
197	TAMIL NADU	DHARMAPURI	THEERTHAMALAI	FIRKA	30057.27	30057.27	2946.67	435.04	204.87	555.13	4141.71	414.17	3727.54	1917.50	0.00	13.42	1930.92	81.00	1729.04	51.80	Safe
198	TAMIL NADU	DHARMAPURI	THENKARAIKOTTAI	FIRKA	13290.02	10733.16	876.86	307.32	73.16	415.09	1672.43	167.25	1505.18	1607.80	1.20	4.89	1613.89	70.48	1.24	107.22	Over Exploited
199	TAMIL NADU	DHARMAPURI	VELLICHANTHAI	FIRKA	12889.70	8329.15	761.50	468.78	109.84	552.44	1892.56	189.26	1703.30	1940.40	0.00	22.16	1962.56	56.21	0.34	115.22	Over Exploited
200	TAMIL NADU	DINDIGUL	ATHOOR	FIRKA	8220.88	8220.88	409.81	553.03	44.29	262.63	1269.76	126.98	1142.78	1146.07	8.10	14.64	1168.80	69.42	23.56	102.28	Over Exploited
201	TAMIL NADU	DINDIGUL	AYYAKUDI	FIRKA	15952.57	11288.82	434.22	1320.96	54.43	414.41	2224.02	222.40	2001.62	2381.45	1.30	38.28	2421.02	101.23	106.73	120.95	Over Exploited
202	TAMIL NADU	DINDIGUL	AYYALUR	FIRKA	23135.70	16359.64	714.22	1153.07	96.45	308.19	2271.93	227.19	2044.74	2106.00	0.00	17.40	2123.40	105.74	621.49	103.85	Over Exploited
203	TAMIL NADU	DINDIGUL	AYYAMPALAYAM	FIRKA	12999.18	12999.18	648.01	997.35	70.03	411.91	2127.30	212.72	1914.58	2500.39	1.50	11.68	2513.57	179.51	108.01	131.29	Over Exploited
204	TAMIL NADU	DINDIGUL	CHINNAKKAMPATTI	FIRKA	16828.40	16678.54	734.92	767.77	66.88	386.51	1956.08	195.61	1760.47	2347.13	2.10	5.11	2354.34	89.29	116.09	133.73	Over Exploited

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024																					Annexure - I
TAMIL NADU																					(in ham)
Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
205	TAMIL NADU	DINDIGUL	CHINNALAPATTI	FIRKA	5418.95	5418.95	270.14	445.85	29.19	281.18	1026.36	102.64	923.72	1463.50	9.60	16.49	1489.59	53.63	23.89	161.26	Over Exploited
206	TAMIL NADU	DINDIGUL	DEVATHUR	FIRKA	11255.02	11255.02	495.94	390.97	45.13	216.56	1148.60	114.86	1033.74	1314.06	1.30	12.60	1327.96	274.07	56.64	128.46	Over Exploited
207	TAMIL NADU	DINDIGUL	DHARMATHUPATTI	FIRKA	10485.40	9677.10	482.40	407.76	52.13	133.10	1075.39	107.53	967.86	813.95	13.80	27.20	854.94	88.51	112.92	88.33	Semi Critical
208	TAMIL NADU	DINDIGUL	DINDIGUL EAST	FIRKA	24050.18	21745.18	903.33	259.64	117.14	147.68	1427.79	142.78	1285.01	952.39	38.50	413.39	1404.28	413.39	30.95	109.28	Over Exploited
209	TAMIL NADU	DINDIGUL	DINDIGUL WEST	FIRKA	12052.65	12052.65	600.83	416.94	64.93	218.11	1300.81	130.08	1170.73	1382.56	67.50	300.26	1750.33	300.26	41.36	149.51	Over Exploited
210	TAMIL NADU	DINDIGUL	ERIODU	FIRKA	10095.02	10095.02	440.72	555.57	59.52	326.14	1381.95	138.20	1243.75	2183.95	65.40	8.10	2257.45	68.34	64.59	181.50	Over Exploited
211	TAMIL NADU	DINDIGUL	KALLIMANTHAYAM	FIRKA	17747.47	16761.47	738.57	497.49	67.22	301.59	1604.87	160.49	1444.38	1913.51	1.00	17.20	1931.70	43.99	37.97	133.74	Over Exploited
212	TAMIL NADU	DINDIGUL	KAMBILIYAMPATTI	FIRKA	10405.76	10405.76	538.10	473.70	53.52	213.22	1278.54	127.85	1150.69	1076.00	10.20	51.85	1138.04	56.74	159.91	98.90	critical
213	TAMIL NADU	DINDIGUL	KODAIKANAL	FIRKA	48207.58	20646.58	1622.37	208.44	308.69	9.46	2148.96	117.18	2031.78	0.00	0.00	6.85	6.85	69.77	1962.01	0.34	Safe
214	TAMIL NADU	DINDIGUL	KORIKKADAVU	FIRKA	16454.56	15474.56	595.22	366.66	74.62	129.95	1166.45	116.65	1049.80	755.69	3.60	12.25	771.53	126.72	163.80	73.49	Semi Critical
215	TAMIL NADU	DINDIGUL	KOTTANATHAM	FIRKA	23131.89	20513.75	787.94	392.72	76.87	231.99	1489.52	148.96	1340.56	1603.76	2.50	5.70	1611.96	90.11	49.19	120.25	Over Exploited
216	TAMIL NADU	DINDIGUL	KOVILUR	FIRKA	9368.80	9368.80	359.86	503.10	35.11	306.44	1204.51	120.45	1084.06	1957.56	0.00	5.20	1962.76	63.02	60.52	181.06	Over Exploited
217	TAMIL NADU	DINDIGUL	NATHAM	FIRKA	18606.64	10191.08	599.21	509.88	65.17	240.42	1414.68	141.47	1273.21	979.76	8.80	57.90	1046.47	57.90	226.74	82.19	Semi Critical
218	TAMIL NADU	DINDIGUL	NEIKKARAPATTI	FIRKA	11195.33	9295.33	468.70	1086.10	53.81	201.13	1809.74	180.97	1628.77	1226.26	5.50	12.38	1244.14	74.99	322.02	76.39	Semi Critical
219	TAMIL NADU	DINDIGUL	NILAKKOTTAI	FIRKA	8724.20	8332.80	504.20	533.57	48.24	273.42	1359.43	135.95	1223.48	1919.56	0.00	47.01	1966.57	47.01	21.21	160.74	Over Exploited
220	TAMIL NADU	DINDIGUL	ODDENCHATRAM	FIRKA	19112.36	15435.27	933.95	1085.75	89.35	386.60	2495.65	249.56	2246.09	2513.45	5.50	87.99	2606.94	151.37	338.94	116.07	Over Exploited
221	TAMIL NADU	DINDIGUL	ORUTHATTU	FIRKA	9075.84	8477.31	366.97	668.53	56.44	171.87	1263.81	126.39	1137.42	973.95	3.90	17.14	994.99	34.88	185.26	87.48	Semi Critical
222	TAMIL NADU	DINDIGUL	PALANI	FIRKA	10624.81	9821.64	495.24	1151.46	56.85	135.88	1839.43	183.94	1655.49	746.09	4.80	67.96	818.85	109.10	795.50	49.46	Safe
223	TAMIL NADU	DINDIGUL	PALAYAM(DI)	FIRKA	12139.35	7130.39	431.44	671.92	41.28	416.41	1561.05	156.11	1404.94	2148.70	2.00	10.10	2160.80	47.27	99.22	153.80	Over Exploited
224	TAMIL NADU	DINDIGUL	PALLAGANUTHU	FIRKA	23336.12	22083.07	1336.20	577.44	127.83	376.60	2418.07	241.81	2176.26	2277.92	21.80	33.12	2332.84	33.12	68.75	107.19	Over Exploited
225	TAMIL NADU	DINDIGUL	PANNAIKADU	FIRKA	33742.52	16993.52	693.30	173.43	98.37	8.04	973.14	56.87	916.27	0.00	0.00	4.40	4.40	129.98	786.29	0.48	Safe
226	TAMIL NADU	DINDIGUL	PAPPAMPATTI	FIRKA	19864.99	9599.69	484.05	545.43	55.57	92.87	1177.92	117.79	1060.13	429.66	1.40	4.85	435.91	74.20	554.87	41.12	Safe
227	TAMIL NADU	DINDIGUL	PILLAIYAR NATHAM	FIRKA	8177.97	7326.14	378.85	777.03	37.68	203.90	1397.46	139.75	1257.71	1060.39	1.20	10.05	1071.65	65.42	314.92	85.21	Semi Critical
228	TAMIL NADU	DINDIGUL	PULIURNATAM	FIRKA	14910.01	13253.96	801.97	931.61	76.72	415.19	2225.49	222.55	2002.94	2400.42	1.90	4.34	2406.66	49.06	302.37	120.16	Over Exploited
229	TAMIL NADU	DINDIGUL	REDDIAPATTI	FIRKA	25096.81	11285.21	682.84	384.73	65.33	174.46	1307.36	130.74	1176.62	871.39	1.50	16.95	889.84	80.90	222.83	75.63	Semi Critical
230	TAMIL NADU	DINDIGUL	REDIYARCHATIRAM	FIRKA	11667.97	11273.45	682.13	482.79	65.26	339.56	1569.74	156.98	1412.76	1993.86	14.60	37.32	2045.78	38.86	10.75	144.81	Over Exploited
231	TAMIL NADU	DINDIGUL	SANARPATTI	FIRKA	21567.60	16414.72	818.27	1153.04	88.42	501.80	2561.53	256.15	2305.38	2971.32	25.90	97.31	3094.53	97.31	414.12	134.23	Over Exploited
232	TAMIL NADU	DINDIGUL	SENDURAI	FIRKA	11996.58	11996.58	587.81	413.63	76.72	291.35	1369.51	136.96	1232.55	991.14	0.60	20.88	1012.62	341.88	219.93	82.16	Semi Critical
233	TAMIL NADU	DINDIGUL	SILUVATHUR	FIRKA	5713.67	5713.67	284.83	495.94	30.78	292.43	1103.98	110.39	993.59	1613.70	0.00	64.50	1678.21	64.50	98.59	168.90	Over Exploited
234	TAMIL NADU	DINDIGUL	THANDIKUDI	FIRKA	22332.91	7718.91	637.52	42.59	115.41	2.06	797.58	79.76	717.82	0.00	0.00	5.25	5.25	37.40	680.42	0.73	Safe
235	TAMIL NADU	DINDIGUL	THOPPAMPATTI	FIRKA	14757.96	14257.96	548.42	861.91	68.75	227.57	1706.65	170.66	1535.99	1588.95	4.20	27.98	1621.13	33.67	166.52	105.54	Over Exploited
236	TAMIL NADU	DINDIGUL	VADAMADURAI	FIRKA	12281.30	12281.30	536.17	571.73	72.41	279.43	1459.74	145.97	1313.77	1744.73	0.00	56.61	1801.34	59.10	124.10	137.11	Over Exploited
237	TAMIL NADU	DINDIGUL	VATHALAKUNDU	FIRKA	9758.09	7092.24	332.29	612.60	44.88	353.04	1342.81	134.28	1208.53	2198.14	12.30	27.00	2237.44	96.13	111.67	185.14	Over Exploited
238	TAMIL NADU	DINDIGUL	VEDASANDUR	FIRKA	14405.19	12058.19	526.43	542.60	71.09	319.49	1459.61	145.96	1313.65	2145.26	1.60	6.72	2153.59	73.76	77.75	163.94	Over Exploited
239	TAMIL NADU	DINDIGUL	VIRUVEEDU	FIRKA	11765.92	10746.77	503.51	613.30	68.00	264.14	1448.95	144.89	1304.06	1437.98	5.70	12.80	1456.48	63.69	227.15	111.69	Over Exploited
240	TAMIL NADU	ERODE	AMMAPETTAI(E)	FIRKA	12324.56	12324.56	696.94	962.88	180.49	217.71	2058.02	205.80	1852.22	1418.40	0.00	16.95	1435.35	597.87	416.87	77.49	Semi Critical
241	TAMIL NADU	ERODE	ANTHIYUR	FIRKA	13478.74	13478.74	187.20	1072.90	45.91	336.83	1642.84	164.28	1478.56	1278.55	4.40	131.00	1413.95	573.59	64.61	95.63	critical
242	TAMIL NADU	ERODE	ARACHALUR	FIRKA	10835.25	10397.25	144.48	2478.74	323.31	496.71	3443.24	344.32	3098.92	2333.30	3.10	18.60	2355.00	369.42	393.10	75.99	Semi Critical
243	TAMIL NADU	ERODE	ARASUR(E)	FIRKA	6002.29	6002.29	242.25	1049.93	47.78	225.88	1565.84	156.59	1409.25	1504.10	4.90	12.78	1521.78	210.43	0.00	107.99	Over Exploited
244	TAMIL NADU	ERODE	ATHANI(E)	FIRKA	9249.37	9249.37	410.14	511.52	108.70	215.55	1245.91	124.60	1121.31	1226.60	0.00	13.24	1239.84	458.37	0.00	110.57	Over Exploited
245	TAMIL NADU	ERODE	AVAL POONDURAI	FIRKA	10589.24	10589.24	356.39	2596.81	59.05	469.17	3481.42	348.14	3133.28	2188.68	19.12	106.87	2314.67	318.67	606.81	73.87	Semi Critical
246	TAMIL NADU	ERODE	BARGUR(E)	FIRKA	5522.46	5522.46	244.88	18.84	64.90	13.99	342.61	34.26	308.35	77.00	0.00	2.72	79.72	146.80	84.55	25.85	Safe
247	TAMIL NADU	ERODE	BHAVANI	FIRKA	12239.79	12239.79	678.43	2688.99	215.76	279.06	3862.24	386.22	3476.02	1817.20	21.00	4.56	1842.76	659.07	978.75	53.01	Safe
248	TAMIL NADU	ERODE	BHAVANISAGAR	FIRKA	8848.65	8848.65	325.94	798.92	86.86	289.78	1501.50	150.15	1351.35	1925.80	6.00	8.38	1940.18	357.64	0.00	143.57	Over Exploited
249	TAMIL NADU	ERODE	CHENNIMALAI	FIRKA	17337.58	16414.70	690.68	1038.98	146.16	377.07	2252.89	225.29	2027.60	2282.20	14.50	17.30	2314.01	278.97	0.00	114.13	Over Exploited
250	TAMIL NADU	ERODE	ELATHUR(E)	FIRKA	7271.00	7271.00	378.81	591.33	81.26	293.25	1344.65	134.46	1210.19	1863.40	1.00	8.95	1873.35	354.27	0.00	154.80	Over Exploited
251	TAMIL NADU	ERODE	ERODE EAST	FIRKA	6899.07	6899.07	303.34	798.27	78.15	108.53	1288.29	128.83	1159.46	643.40	156.80	187.62	987.82	4190.47	171.64	85.20	Semi Critical
252	TAMIL NADU	ERODE	ERODE NORTH	FIRKA	3986.08	3986.08	175.26	713.60	45.15	106.03	1040.04	104.01	936.03	612.60	8.00	90.78	711.39	202.73	112.69	76.00	Semi Critical
253	TAMIL NADU	ERODE	ERODE WEST	FIRKA	6878.05	6878.05	459.32	1240.45	12.79	204.96	1917.52	191.76	1725.76	1080.00	22.80	63.00	1165.80	411.03	211.93	67.55	Safe
254	TAMIL NADU	ERODE	GOBICHETTIPALAYAM	FIRKA	10671.73	10671.73	463.32	2337.36	119.27	224.06	3144.01	314.40	2829.61	1456.20	3.00	10.65	1469.85	468.60	901.81	51.95	Safe
255	TAMIL NADU	ERODE	GUTHIYALATHUR	FIRKA	16493.00	16493.00	849.93	164.23	117.17	188.42	1319.75	131.98	1187.77	631.26	0.00	13.62	644.88	108.80	447.71	54.29	Safe
256	TAMIL NADU	ERODE	KANJIKOIL	FIRKA	7503.86	7503.86	426.73	1255.62	99.86	152.81	1935.02	193.51	1741.51	894.00	0.00	7.11	901.11	166.98	680.53	51.74	Safe
257	TAMIL NADU	ERODE	KASIPALAYAM	FIRKA	4036.35	4036.35	175.24	1642.35	45.11	94.53	1957.23	195.72	1761.51	619.20	25.00	2.43	646.63	86.64	1030.67	36.71	Safe
258	TAMIL NADU	ERODE	KAVINDAPADI	FIRKA	11772.55	11772.55	508.95	3625.51	90.79	229.85	4455.10	445.51	4009.59	1376.60	4.60	17.40	1398.60	635.38	1993.01	34.88	Safe
259	TAMIL NADU	ERODE	KILAMPADI	FIRKA	5467.81	5467.81	137.00	1540.46	30.27	324.57	2032.30	203.23	1829.07	1601.40	0.00	7.66	1609.06	96.31	131.36	87.97	Semi Critical
260	TAMIL NADU	ERODE	KODUMUDI	FIRKA	6996.24	6996.24	175.30	1657.50	38.73	333.00	2204.53	220.45	1984.08	1471.80	10.50	3.05	1485.36	290.80	210.97	74.86	Semi Critical
261	TAMIL NADU	ERODE	KUGALUR	FIRKA	5711.83	5711.83	247.98	2775.36	63.84	182.30	3269.48	326.94	2942.54	1254.30	0.00	7.01	1261.31	142.75	1545.49	42.86	Safe
262	TAMIL NADU	ERODE	KURICHI(E)	FIRKA	7236.67	7236.67	454.69	1461.28	117.76	160.01	2193.74	219.38	1974.36	1005.20	0.49	8.30	1013.99	376.88	591.79	51.36	Safe
263	TAMIL NADU	ERODE	MODAKKURICHI	FIRKA	13465.27	13465.27	453.19	3169.31	75.08	673.26	4370.84	437.08	3933.76	3714.40	5.80	27.94	3748.14	563.15	185.62	95.28	critical
264	TAMIL NADU	ERODE	NAMBIYUR	FIRKA	13890.58	13890.58	345.21	549.83	27.92	378.18	1301.14	130.11	1171.03	2489.70	8.30	15.80	2513.80	337.84	0.00	214.67	Over Exploited
265	TAMIL NADU	ERODE	PERUNDURAI	FIRKA	13168.61	13168.61	374.94	408.21	73.18	264.27	1120.60	112.05	1008.55	1761.80	0.00	26.00	1787.80	2382.98	0.00	177.26	Over Exploited
266	TAMIL NADU	ERODE	PUNJAI PULIAMPATTI	FIRKA	6423.58	6423.58	236.61	329.84	63.05	226.28	855.78	85.58	770.20	1076.70	37.20	17.30	1131.20	345.38	0.00	146.87	Over Exploited
267	TAMIL NADU	ERODE	SATHYAMANGALAM	FIRKA	13561.35	13561.35	547.34	1075.86	107.95	242.43	1973.58	197.36	1776.22	1438.40	27.80	14.68	1480.88	707.77	295.34	83.37	Semi Critical
268	TAMIL NADU	ERODE	SIRUVALUR	FIRKA	8644.91	8644.91	450.39	802.42	96.62	255.25	1604.68	160.47	1444.21	1684.00	2.70	23.74	1710.44	346.64	0.00	118.43	Over Exploited
269	TAMIL NADU	ERODE	SIVAGIRI(E)	FIRKA	10099.54	10099.54	253.05	1977.26	55.91	268.54	2554.76	255.48	2299.28	1773.80	1.50	5.92	1781.22	382.73	141.25	77.47	Semi Critical
270	TAMIL NADU	ERODE	TALAVADI	FIRKA	21594.30	21594.30	1416.66	401.71	366.93	302.95	2488.25	124.41	2363.84	1567.60	6.30	7.80	1581.70	491.73	298.21	66.91	Safe
271	TAMIL NADU	ERODE	THINGALUR	FIRKA	8562.04	8562.04	389.52	533.40	75.96	195.96	1194.84	119.48	1075.36	1164.20	1.00	7.00	1172.20	246.48	0.00	109.01	Over Exploited
272	TAMIL NADU	ERODE	VANIPUDUR	FIRKA	12390.88	12390.88	349.03	3166.78	110.13	308.63	3934.57	393.46	3541.11	2050.80	3.80	5.50	2060.10	651.95	834.56	58.18	Safe

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TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
273	TAMIL NADU	ERODE	VELLODE	FIRKA	11157.82	11093.70	465.62	862.90	64.96	323.92	1717.40	171.74	1545.66	2034.10	8.00	12.73	2054.83	293.64	0.00	132.94	Over Exploited
274	TAMIL NADU	ERODE	VEMANDAMPALAYAM	FIRKA	7454.13	7454.13	296.40	388.97	23.97	281.91	991.25	99.13	892.12	1464.40	4.30	7.57	1476.27	94.69	0.00	165.48	Over Exploited
275	TAMIL NADU	KALLAKURICHCHI	ALATHUR(K)	FIRKA	12321.76	12321.76	1343.15	1304.46	9.30	552.10	3209.01	320.90	2888.11	1920.71	0.00	21.35	1942.06	75.58	891.82	67.24	Safe
276	TAMIL NADU	KALLAKURICHCHI	ARIYALUR(K)	FIRKA	11690.50	11690.50	1742.28	960.86	22.68	268.66	2994.48	299.44	2695.04	543.02	0.00	40.15	583.18	64.92	2087.09	21.64	Safe
277	TAMIL NADU	KALLAKURICHCHI	AVIKULAPAKKAM	FIRKA	4445.94	4110.50	323.91	786.87	2.93	321.82	1435.53	143.56	1291.97	758.53	1.00	14.36	773.90	35.76	496.67	59.90	Safe
278	TAMIL NADU	KALLAKURICHCHI	CHINNASELAM	FIRKA	18345.35	13070.35	1274.97	889.93	54.48	353.65	2573.03	257.30	2315.73	2346.72	5.30	33.31	2385.33	65.07	51.51	103.01	Over Exploited
279	TAMIL NADU	KALLAKURICHCHI	ELAVANASURKOTTAI	FIRKA	9843.66	8956.32	708.19	1677.98	0.00	740.19	3126.36	312.64	2813.72	3069.73	0.00	49.11	3118.84	49.11	53.82	110.84	Over Exploited
280	TAMIL NADU	KALLAKURICHCHI	ERAIYUR(K)	FIRKA	11972.55	11050.65	1310.68	1710.25	0.00	600.96	3621.89	362.19	3259.70	3567.03	1.00	31.33	3599.36	69.23	4.81	110.42	Over Exploited
281	TAMIL NADU	KALLAKURICHCHI	INDHILI	FIRKA	12859.28	12855.78	1368.04	1526.17	58.45	669.07	3621.73	362.17	3259.56	3734.76	0.00	8.12	3742.88	64.97	51.38	114.83	Over Exploited
282	TAMIL NADU	KALLAKURICHCHI	KALAMARUDHUR	FIRKA	7752.57	7380.25	729.46	941.73	0.00	401.49	2072.68	207.27	1865.41	1314.16	0.60	19.98	1334.74	68.08	482.57	71.55	Semi Critical
283	TAMIL NADU	KALLAKURICHCHI	KALLAKURICHI	FIRKA	7509.22	7474.22	609.65	834.19	12.61	346.70	1803.15	180.32	1622.83	1557.33	9.90	21.19	1588.42	49.11	53.97	97.88	critical
284	TAMIL NADU	KALLAKURICHCHI	KALVARAYAN HILLS	FIRKA	22055.52	5161.52	114.97	34.38	3.44	34.38	187.17	18.72	168.45	149.50	0.00	39.45	188.95	44.45	0.00	112.17	Over Exploited
285	TAMIL NADU	KALLAKURICHCHI	MANALURPETTAI	FIRKA	9661.02	9499.96	963.84	1474.73	6.99	392.60	2838.16	283.81	2554.35	1683.95	0.00	3.96	1687.91	58.16	812.24	66.08	Safe
286	TAMIL NADU	KALLAKURICHCHI	NAGALUR	FIRKA	16942.23	16599.12	2240.64	1655.82	67.03	766.96	4730.45	473.05	4257.40	4643.40	0.00	32.93	4676.33	83.46	34.17	109.84	Over Exploited
287	TAMIL NADU	KALLAKURICHCHI	NAINARPALAYAM	FIRKA	15225.63	12379.13	1317.32	925.41	56.29	413.77	2712.79	271.29	2441.50	3118.13	0.00	6.10	3124.22	53.63	88.53	127.96	Over Exploited
288	TAMIL NADU	KALLAKURICHCHI	RISHIVANTHIYAM	FIRKA	19637.61	18485.83	2009.01	1563.39	35.51	661.49	4269.40	214.00	4055.40	2398.12	0.00	7.54	2405.66	95.48	1561.80	59.32	Safe
289	TAMIL NADU	KALLAKURICHCHI	SANKARAPURAM	FIRKA	5656.89	4083.11	360.62	1497.65	3.08	388.17	2249.52	116.84	2132.68	2300.98	0.00	26.06	2327.04	86.09	78.56	109.11	Over Exploited
290	TAMIL NADU	KALLAKURICHCHI	SENGURICHI	FIRKA	11242.84	10811.84	854.91	1043.15	0.00	419.26	2317.32	231.73	2085.59	1581.88	1.00	23.76	1606.63	49.88	452.84	77.03	Semi Critical
291	TAMIL NADU	KALLAKURICHCHI	THIRUNAVALUR	FIRKA	10557.23	10557.23	1162.58	1321.24	0.00	397.75	2881.57	149.51	2732.06	1380.35	0.00	38.35	1418.71	57.61	1294.09	51.93	Safe
292	TAMIL NADU	KALLAKURICHCHI	THIRUPALAPANDAL	FIRKA	9716.53	9716.53	796.57	1331.96	7.18	389.14	2524.85	252.49	2272.36	1315.48	0.00	13.76	1329.24	62.30	894.58	58.50	Safe
293	TAMIL NADU	KALLAKURICHCHI	THIYAGADURGAM	FIRKA	17060.18	16177.50	2387.12	1568.94	31.08	753.29	4740.43	474.05	4266.38	3855.95	0.00	87.32	3943.27	87.32	323.11	92.43	critical
294	TAMIL NADU	KALLAKURICHCHI	TIRUKKOILUR	FIRKA	11232.10	11098.05	1311.82	1411.79	7.92	568.52	3300.05	330.01	2970.04	2174.35	0.80	34.94	2210.09	46.12	748.77	74.41	Semi Critical
295	TAMIL NADU	KALLAKURICHCHI	ULUNDURPET	FIRKA	11962.22	10989.61	1086.20	1284.45	0.00	527.09	2897.74	289.77	2607.97	2482.76	0.80	58.23	2541.79	58.23	66.18	97.46	critical
296	TAMIL NADU	KALLAKURICHCHI	VADAKKANANDHAL	FIRKA	10358.61	8414.39	1160.02	1346.81	560.06	530.97	3597.86	359.79	3238.07	2729.16	0.00	19.07	2748.23	88.67	420.24	84.87	Semi Critical
297	TAMIL NADU	KALLAKURICHCHI	VADAPONPARPPI	FIRKA	17850.22	16264.22	1668.93	1106.83	12.40	393.84	3182.00	161.83	3020.17	1455.21	0.00	42.12	1497.33	88.67	1476.29	49.58	Safe
298	TAMIL NADU	KALLAKURICHCHI	VELLIMALAI	FIRKA	29645.70	8774.70	195.46	27.83	5.85	15.23	244.37	24.44	219.93	129.35	0.00	4.36	133.71	40.84	49.74	60.80	Safe
299	TAMIL NADU	KANCHEEPURAM	ARUMPULIUR	FIRKA	5829.76	5797.54	861.42	1422.96	0.00	245.98	2530.36	253.04	2277.32	2373.70	0.00	4.38	2378.08	31.27	0.40	104.42	Over Exploited
300	TAMIL NADU	KANCHEEPURAM	GOVINDAVADI	FIRKA	5001.60	5001.60	262.16	1471.73	0.00	237.78	1971.67	197.17	1774.50	1372.14	3.20	3.36	1378.70	22.53	376.63	77.70	Semi Critical
301	TAMIL NADU	KANCHEEPURAM	KALIYAMPOONDI	FIRKA	9147.05	8662.08	695.32	2142.35	0.00	371.25	3208.92	320.90	2888.02	1773.20	2.00	13.75	1788.95	50.34	1062.48	61.94	Safe
302	TAMIL NADU	KANCHEEPURAM	KANCHEEPURAM	FIRKA	5884.84	5884.84	882.18	485.04	0.00	216.71	1583.93	158.39	1425.54	278.20	30.40	8.16	316.76	37.99	1078.95	22.22	Safe
303	TAMIL NADU	KANCHEEPURAM	KOLAPAKKAM	FIRKA	1702.39	1676.14	271.46	84.48	0.00	23.53	379.47	37.95	341.52	139.22	59.24	24.04	222.50	55.89	87.17	65.15	Safe
304	TAMIL NADU	KANCHEEPURAM	KUNDRATHUR	FIRKA	5914.08	5840.58	410.93	800.49	0.00	503.27	1714.69	171.47	1543.21	41.60	129.60	9.10	180.30	21.25	1350.76	11.68	Safe
305	TAMIL NADU	KANCHEEPURAM	KUNNAVAKKAM	FIRKA	7309.42	7089.42	469.30	1836.95	0.00	358.12	2664.37	266.44	2397.93	1114.50	37.20	1.84	1153.54	38.07	1208.16	48.11	Safe
306	TAMIL NADU	KANCHEEPURAM	MADURAMANKALAM	FIRKA	6525.08	6525.08	547.22	2000.12	0.00	266.26	2813.60	281.36	2532.24	844.00	0.00	25.01	869.01	28.28	1659.96	34.32	Safe
307	TAMIL NADU	KANCHEEPURAM	MAGARAL	FIRKA	7849.65	7849.65	632.93	1575.10	0.00	249.40	2457.43	245.75	2211.68	1229.70	3.60	9.24	1242.54	59.16	919.22	56.18	Safe
308	TAMIL NADU	KANCHEEPURAM	MANGADU	FIRKA	3252.75	3242.25	301.72	487.23	0.00	34.16	823.11	82.32	740.79	425.96	43.20	10.17	479.33	13.03	258.60	64.71	Safe
309	TAMIL NADU	KANCHEEPURAM	PARANTHUR	FIRKA	8321.75	8321.75	1570.26	2138.44	0.00	373.52	4082.22	408.22	3674.00	1044.30	0.00	3.48	1047.78	31.95	2597.75	28.52	Safe
310	TAMIL NADU	KANCHEEPURAM	PATAPAI	FIRKA	7850.22	7538.11	627.95	942.91	0.00	119.57	1690.43	169.05	1521.38	339.75	9.60	36.43	385.78	57.53	1114.50	25.36	Safe
311	TAMIL NADU	KANCHEEPURAM	SALAVAKKAM	FIRKA	6312.77	5812.77	536.01	2157.49	0.00	323.09	3016.59	301.66	2714.93	1104.40	3.60	6.16	1114.16	30.01	1576.92	41.04	Safe
312	TAMIL NADU	KANCHEEPURAM	SERAPANANCHERI	FIRKA	9860.51	8950.37	800.03	908.73	0.00	270.95	1979.71	197.97	1781.74	581.60	24.00	25.04	630.64	46.08	1130.06	35.39	Safe
313	TAMIL NADU	KANCHEEPURAM	SIRUKAVERIPAKKAM	FIRKA	7445.18	7445.18	1221.29	1413.88	0.00	231.88	2867.05	286.70	2580.35	1750.25	65.56	12.36	1828.17	61.20	703.34	70.85	Semi Critical
314	TAMIL NADU	KANCHEEPURAM	SITTIAMPAKKAM	FIRKA	6429.31	6429.31	471.79	1475.93	0.00	274.62	2222.34	222.23	2000.11	448.40	5.50	9.00	462.90	42.65	1503.56	23.14	Safe
315	TAMIL NADU	KANCHEEPURAM	SRIPERUMBUDUR	FIRKA	7603.62	7461.11	437.18	1350.62	0.00	245.87	2033.67	203.37	1830.30	169.60	4.80	5.48	179.88	23.09	1632.81	9.83	Safe
316	TAMIL NADU	KANCHEEPURAM	SUNGUVARCHATIRAM	FIRKA	6822.08	6798.19	544.47	1349.38	0.00	366.11	2259.96	225.99	2033.97	692.80	0.00	11.88	704.68	41.03	1300.14	34.65	Safe
317	TAMIL NADU	KANCHEEPURAM	THANDALAM	FIRKA	7874.53	7792.79	1136.87	851.98	0.00	227.07	2215.92	221.59	1994.33	138.80	90.00	4.88	233.68	26.53	1739.00	11.72	Safe
318	TAMIL NADU	KANCHEEPURAM	THENNERI	FIRKA	5897.91	5897.91	502.13	1560.16	0.00	166.37	2228.66	222.87	2005.79	331.40	2.40	5.88	339.68	30.40	1641.59	16.93	Safe
319	TAMIL NADU	KANCHEEPURAM	THIRUPPULIVANAM	FIRKA	6844.52	6248.70	425.78	1848.51	0.00	356.29	2630.58	263.06	2367.52	2296.80	7.45	9.60	2313.85	32.54	30.73	97.73	critical
320	TAMIL NADU	KANCHEEPURAM	THIRUPUKUZHI	FIRKA	5636.47	5636.47	567.24	1532.69	0.00	364.24	2464.17	246.41	2217.76	1633.79	2.00	2.76	1638.55	23.24	558.73	73.88	Semi Critical
321	TAMIL NADU	KANCHEEPURAM	UTHIRAMERUR	FIRKA	8654.33	8581.84	631.21	2812.51	0.00	508.32	3952.04	395.20	3556.84	2535.89	0.00	9.34	2545.23	26.72	994.23	71.56	Semi Critical
322	TAMIL NADU	KANCHEEPURAM	VALLAM(K)	FIRKA	7356.52	7157.66	588.81	760.01	0.00	233.62	1582.44	158.24	1424.20	73.60	27.20	3.70	104.50	35.21	1288.19	7.34	Safe
323	TAMIL NADU	KANCHEEPURAM	WALAJABAD	FIRKA	9152.75	9152.75	948.24	1334.19	0.00	264.75	2547.18	128.06	2419.12	2115.70	117.48	63.46	2296.64	63.46	122.48	94.94	critical
324	TAMIL NADU	KANNIYAKUMARI	ARUMANAI	FIRKA	10044.19	9653.19	563.24	400.75	138.14	40.24	1142.37	114.24	1028.13	7.90	1.46	145.74	155.10	145.74	873.03	15.09	Safe
325	TAMIL NADU	KANNIYAKUMARI	AZHAGIAPANDIPURAM	FIRKA	7567.25	5970.88	334.68	1436.49	35.80	237.99	2044.96	204.50	1840.46	40.20	1.08	15.61	56.90	36.96	1762.21	3.09	Safe
326	TAMIL NADU	KANNIYAKUMARI	BOOTHAPANDI	FIRKA	5224.75	4434.60	269.95	1703.60	61.49	262.24	2297.28	229.73	2067.55	20.90	0.36	15.82	37.08	15.82	2030.47	1.79	Safe
327	TAMIL NADU	KANNIYAKUMARI	COLACHEL	FIRKA	6081.24	6081.24	333.81	1064.42	57.18	221.29	1676.70	167.67	1509.03	313.50	3.23	55.81	372.54	55.81	1136.49	24.69	Safe
328	TAMIL NADU	KANNIYAKUMARI	EDAICODE	FIRKA	4761.48	4761.48	333.68	687.73	71.92	179.33	1272.66	127.26	1145.40	0.00	1.81	92.79	94.60	92.78	1050.80	8.26	Safe
329	TAMIL NADU	KANNIYAKUMARI	KANNIYAKUMARI	FIRKA	6542.74	6542.74	318.52	797.80	48.59	183.30	1348.21	134.82	1213.39	617.50	0.73	37.26	655.49	40.32	554.84	54.02	Safe
330	TAMIL NADU	KANNIYAKUMARI	KULASEKARAM	FIRKA	7979.35	7976.35	824.93	1018.39	203.35	331.38	2378.05	237.80	2140.25	0.00	0.00	25.34	25.34	25.34	2114.91	1.18	Safe
331	TAMIL NADU	KANNIYAKUMARI	KURUNTHANCODE	FIRKA	5121.77	4308.49	264.23	1047.40	60.35	133.47	1505.45	150.54	1354.91	142.40	2.55	42.67	187.62	42.67	1167.29	13.85	Safe
332	TAMIL NADU	KANNIYAKUMARI	MIDALAM	FIRKA	2460.95	2460.95	144.77	392.82	56.77	92.00	686.36	68.63	617.73	68.30	1.59	37.91	107.80	37.91	509.93	17.45	Safe
333	TAMIL NADU	KANNIYAKUMARI	NAGERCOIL	FIRKA	6371.83	6371.83	311.76	1167.99	85.38	310.97	1876.10	187.60	1688.50	532.50	44.77	57.77	635.04	57.77	1053.46	37.61	Safe
334	TAMIL NADU	KANNIYAKUMARI	PAINKULAM	FIRKA	4925.88	4925.88	345.21	694.64	74.40	222.54	1336.79	133.69	1203.10	93.40	1.46	87.34	182.20	125.61	982.63	15.14	Safe
335	TAMIL NADU	KANNIYAKUMARI	RAJAKKAMANGALAM	FIRKA	6601.10	6601.10	305.15	939.39	64.64	224.02	1533.20	153.33	1379.87	1131.10	19.29	42.67	1193.06	98.87	281.64	86.46	Semi Critical
336	TAMIL NADU	KANNIYAKUMARI	SPECIAL MIDALAM ONE	FIRKA	1244.06	1244.06	91.48	174.18	28.70	29.19	323.55	32.36	291.19	8.00	1.59	0.14	9.73	7.22	274.38	3.34	Safe
337	TAMIL NADU	KANNIYAKUMARI	SPECIAL MIDALAM SECOND	FIRKA	2001.96	2001.96	109.89	344.28	18.82	85.80	558.79	55.88	502.91	87.80	0.20	28.53	116.53	28.53	386.38	23.17	Safe
338	TAMIL NADU	KANNIYAKUMARI	SPECIAL PAINKULAM ONE	FIRKA	1313.02	1313.02	92.02	133.92	19.83	32.14	277.91	27.80	250.11	19.70	0.00	21.25	40.94	45.65	184.76	16.37	Safe
339	TAMIL NADU	KANNIYAKUMARI	SPECIAL-NAGERCOIL1	FIRKA	980.07	980.07	59.94	137.30	13.13	12.59	222.96	22.29	200.67	15.40	1.58	8.04	25.02	9.30	174.39	12.47	Safe
340	TAMIL NADU	KANNIYAKUMARI	SUCHINDRUM	FIRKA	8196.33	7401.33	427.68	1894.40	72.48	269.75	2664.31	266.42	2397.89	355.20	2.93	43.96	402.09	43.96	1995.80	16.77	Safe

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024																					Annexure - I
TAMIL NADU																					(in ham)
Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
341	TAMIL NADU	KANNIYAKUMARI	THIRUVATTAR	FIRKA	6799.65	6799.65	446.61	875.17	124.30	185.38	1631.46	163.15	1468.31	16.80	3.28	69.06	89.14	83.97	1364.26	6.07	Safe
342	TAMIL NADU	KANNIYAKUMARI	THIRUVITHANCODE	FIRKA	4915.32	4915.32	390.54	1068.41	88.98	210.73	1758.66	175.87	1582.79	22.70	3.61	67.35	93.67	67.35	1489.12	5.92	Safe
343	TAMIL NADU	KANNIYAKUMARI	THOVALAI	FIRKA	5738.01	5645.48	252.83	1582.93	48.10	359.11	2242.97	224.29	2018.68	256.30	13.83	18.36	288.49	20.72	1727.83	14.29	Safe
344	TAMIL NADU	KANNIYAKUMARI	THUCKALAY	FIRKA	8764.68	8473.98	691.14	1539.18	148.40	318.54	2697.26	269.73	2427.53	21.40	0.60	58.98	80.97	58.98	2346.56	3.34	Safe
345	TAMIL NADU	KANNIYAKUMARI	VILAVANCODE	FIRKA	4181.41	4181.41	293.03	826.66	63.16	274.68	1457.53	145.75	1311.78	30.00	0.80	60.48	91.28	60.48	1220.50	6.96	Safe
346	TAMIL NADU	KARUR	ARAVAKURICHI	FIRKA	18858.09	18858.09	820.76	633.35	107.96	70.02	1632.09	101.51	1530.58	1138.60	3.50	13.69	1155.80	43.41	374.78	75.51	Semi Critical
347	TAMIL NADU	KARUR	CHINNADHARAPURAM	FIRKA	22370.14	22370.14	881.11	712.55	109.15	85.07	1787.88	178.79	1609.09	1411.30	7.70	8.15	1427.15	63.92	375.39	88.69	Semi Critical
348	TAMIL NADU	KARUR	CHINTHALAVADI	FIRKA	9000.85	9000.85	234.96	970.11	46.29	126.25	1377.61	137.75	1239.86	881.69	0.00	14.41	896.10	53.61	409.63	72.27	Semi Critical
349	TAMIL NADU	KARUR	K PARAMATHI	FIRKA	16077.01	16077.01	669.59	450.71	98.06	87.74	1306.10	130.61	1175.49	1426.70	14.70	5.45	1446.85	44.36	124.29	123.08	Over Exploited
350	TAMIL NADU	KARUR	KADAVUR	FIRKA	21380.70	15696.70	622.61	489.34	58.99	96.85	1267.79	126.77	1141.02	1574.78	0.00	24.25	1599.03	63.72	144.40	140.14	Over Exploited
351	TAMIL NADU	KARUR	KARUR	FIRKA	1420.79	1420.79	58.02	56.72	7.13	9.18	131.05	13.11	117.94	32.80	141.20	43.70	217.70	43.70	12.13	184.59	Over Exploited
352	TAMIL NADU	KARUR	KATTALAI	FIRKA	11964.59	11812.59	556.53	1269.52	80.85	284.47	2191.37	219.14	1972.23	1982.40	0.00	22.90	2005.30	55.54	544.00	101.68	Over Exploited
353	TAMIL NADU	KARUR	KULITHALAI	FIRKA	12635.19	12595.75	533.78	2353.35	90.00	98.25	3075.38	307.54	2767.84	1597.60	0.00	40.14	1637.74	66.38	1103.86	59.17	Safe
354	TAMIL NADU	KARUR	MANMANGALAM	FIRKA	10609.33	10609.33	433.26	756.24	53.21	53.86	1296.57	129.66	1166.91	875.80	24.36	17.72	917.88	73.38	517.85	78.66	Semi Critical
355	TAMIL NADU	KARUR	MYLAMPATTI	FIRKA	25806.00	25806.00	1313.08	1221.23	157.17	240.23	2931.71	293.17	2638.54	2912.00	0.00	34.00	2946.00	100.12	130.15	111.65	Over Exploited
356	TAMIL NADU	KARUR	NANGAVARAM	FIRKA	14011.10	14011.10	593.76	3271.96	100.12	299.05	4264.89	426.49	3838.40	2084.00	0.00	28.34	2112.34	68.14	1686.26	55.03	Safe
357	TAMIL NADU	KARUR	PALLAPATTI(K)	FIRKA	24830.56	24536.88	1072.15	545.12	140.47	130.47	1888.21	188.82	1699.39	2121.50	0.00	21.92	2143.41	51.47	95.12	126.13	Over Exploited
358	TAMIL NADU	KARUR	PANJAPATTI	FIRKA	14064.82	14064.82	732.52	327.39	84.30	76.42	1220.63	122.06	1098.57	1242.60	0.00	14.76	1257.36	52.02	58.93	114.45	Over Exploited
359	TAMIL NADU	KARUR	PUGALUR	FIRKA	8746.30	8746.30	313.32	1271.81	43.86	149.32	1778.31	117.53	1660.78	1455.90	0.00	17.27	1473.17	17.27	515.07	88.70	Semi Critical
360	TAMIL NADU	KARUR	THALAPATTI	FIRKA	5699.45	5699.45	232.75	637.60	28.58	65.26	964.19	96.42	867.77	765.34	105.00	21.48	891.82	24.27	290.23	102.77	Over Exploited
361	TAMIL NADU	KARUR	THENNILAI	FIRKA	15479.79	15479.79	644.71	508.52	94.41	81.67	1329.31	132.94	1196.37	1332.80	0.00	4.70	1337.50	32.98	195.79	111.80	Over Exploited
362	TAMIL NADU	KARUR	THOGAMALAI	FIRKA	22434.31	22434.31	769.58	979.48	71.84	139.01	1959.91	196.00	1763.91	2260.30	2.80	16.69	2279.79	92.50	363.28	129.25	Over Exploited
363	TAMIL NADU	KARUR	THORANAKALPATTI	FIRKA	13089.26	13089.26	534.53	286.46	65.65	70.09	956.73	95.67	861.06	1139.75	0.00	16.35	1156.10	32.56	45.99	134.26	Over Exploited
364	TAMIL NADU	KARUR	VANGAL	FIRKA	4102.35	4084.35	166.79	771.38	20.48	145.19	1103.84	110.38	993.46	1422.20	30.50	54.69	1507.39	54.69	337.19	151.73	Over Exploited
365	TAMIL NADU	KARUR	VELLIANNAI	FIRKA	16976.05	16976.05	654.92	727.48	85.14	84.88	1552.42	96.46	1455.96	1380.20	0.00	43.00	1423.20	68.37	339.24	97.75	critical
366	TAMIL NADU	KRISHNAGIRI	ALAPATTI	FIRKA	17176.16	8455.68	448.39	367.85	47.77	460.64	1324.65	132.46	1192.19	1800.40	6.12	36.38	1842.90	64.15	2.74	154.58	Over Exploited
367	TAMIL NADU	KRISHNAGIRI	ANCHETTY	FIRKA	7528.75	5590.50	238.80	49.25	40.95	43.09	372.09	37.20	334.88	79.53	0.00	1.88	81.41	18.02	237.33	24.31	Safe
368	TAMIL NADU	KRISHNAGIRI	ANDEVANAPALLI	FIRKA	12705.07	11604.66	598.75	364.63	45.91	391.45	1400.74	140.08	1260.66	836.15	4.40	3.65	844.20	44.99	375.12	66.96	Safe
369	TAMIL NADU	KRISHNAGIRI	BAGALUR	FIRKA	11504.14	11504.14	560.02	295.69	113.66	243.69	1213.06	121.31	1091.75	782.40	104.06	23.16	909.62	55.42	149.87	83.32	Semi Critical
370	TAMIL NADU	KRISHNAGIRI	BARGUR(K)	FIRKA	23790.05	16751.75	1516.64	872.14	189.24	902.57	3480.59	348.06	3132.53	3083.95	57.74	57.45	3199.14	109.90	1.67	102.13	Over Exploited
371	TAMIL NADU	KRISHNAGIRI	BARUR	FIRKA	6109.32	6022.47	360.43	274.24	40.04	215.45	890.16	89.02	801.14	688.20	0.00	12.71	700.91	46.40	66.54	87.49	Semi Critical
372	TAMIL NADU	KRISHNAGIRI	BERIGAI	FIRKA	17069.57	10719.10	417.44	802.87	84.72	511.51	1816.54	181.65	1634.89	1374.30	49.28	9.00	1432.58	63.05	148.26	87.63	Semi Critical
373	TAMIL NADU	KRISHNAGIRI	DENKANIKOTTAI	FIRKA	16895.71	12045.34	605.84	243.24	134.22	164.97	1148.27	57.70	1090.57	484.60	2.72	7.59	494.91	51.41	551.84	45.38	Safe
374	TAMIL NADU	KRISHNAGIRI	HOSUR	FIRKA	9143.38	9143.38	445.10	665.44	90.34	264.56	1465.44	146.55	1318.89	869.90	141.55	39.26	1050.71	39.26	268.18	79.67	Semi Critical
375	TAMIL NADU	KRISHNAGIRI	HOSUR TOWN	FIRKA	4116.18	4116.18	200.38	124.22	40.67	122.22	487.49	48.75	438.74	270.90	93.84	20.96	385.70	70.21	3.79	87.91	Semi Critical
376	TAMIL NADU	KRISHNAGIRI	KAKKADASAM	FIRKA	17194.76	16004.24	900.05	551.94	152.65	360.03	1964.67	196.47	1768.20	1028.80	0.00	19.51	1048.31	57.98	681.42	59.29	Safe
377	TAMIL NADU	KRISHNAGIRI	KALLAVI	FIRKA	12915.88	9760.27	580.48	471.22	37.62	449.77	1539.09	153.91	1385.18	1781.20	0.00	13.81	1795.01	42.41	1.40	129.59	Over Exploited
378	TAMIL NADU	KRISHNAGIRI	KAVERIPATTINAM	FIRKA	10668.14	10436.14	708.11	328.13	108.24	309.34	1453.82	145.38	1308.44	783.40	3.40	9.44	796.24	71.07	450.57	60.85	Safe
379	TAMIL NADU	KRISHNAGIRI	KELAMANGALAM	FIRKA	11649.15	8613.79	475.98	123.09	106.15	165.04	870.26	43.68	826.58	628.60	19.02	6.64	654.26	42.66	136.30	79.15	Semi Critical
380	TAMIL NADU	KRISHNAGIRI	KRISHNAGIRI	FIRKA	14658.91	7830.01	637.54	669.22	81.21	495.13	1883.10	188.30	1694.80	1453.70	0.00	59.44	1513.14	102.89	138.21	89.28	Semi Critical
381	TAMIL NADU	KRISHNAGIRI	KURUBRAPALLI	FIRKA	11307.53	7237.29	401.00	990.09	75.62	551.93	2018.64	201.86	1816.78	2136.90	5.22	0.84	2142.96	50.83	2.69	117.95	Over Exploited
382	TAMIL NADU	KRISHNAGIRI	MATHIGIRI	FIRKA	12846.48	12593.36	613.04	385.97	124.42	315.16	1438.59	143.86	1294.73	1015.20	0.00	46.73	1061.93	46.73	232.80	82.02	Semi Critical
383	TAMIL NADU	KRISHNAGIRI	MATHUR(K)	FIRKA	6390.76	4980.83	228.69	772.86	30.15	782.22	1813.92	181.39	1632.53	1855.83	4.35	9.92	1870.11	42.30	1.46	114.55	Over Exploited
384	TAMIL NADU	KRISHNAGIRI	NAGARASAMPATTI	FIRKA	10169.04	9000.81	556.86	537.85	68.49	523.89	1687.09	84.41	1602.68	1749.00	0.00	5.84	1754.84	39.43	1.01	109.49	Over Exploited
385	TAMIL NADU	KRISHNAGIRI	PALLEPALLI	FIRKA	14727.17	10099.01	620.01	446.47	114.09	499.79	1680.36	84.15	1596.21	1567.77	38.40	8.57	1614.74	72.03	2.32	101.16	Over Exploited
386	TAMIL NADU	KRISHNAGIRI	PERIYAMUTUR	FIRKA	8861.28	7076.26	466.65	360.43	64.58	208.30	1099.96	110.00	989.96	871.50	0.00	10.12	881.62	61.51	56.95	89.06	Semi Critical
387	TAMIL NADU	KRISHNAGIRI	POCHAMPALLI	FIRKA	10049.88	9223.05	483.60	311.87	61.31	247.59	1104.37	55.33	1049.04	819.00	15.72	9.04	843.76	50.64	163.68	80.43	Semi Critical
388	TAMIL NADU	KRISHNAGIRI	RAYAKOTTAI	FIRKA	16020.18	11210.74	495.40	275.72	63.34	260.85	1095.31	109.53	985.78	745.30	0.00	4.59	749.89	66.21	174.27	76.07	Semi Critical
389	TAMIL NADU	KRISHNAGIRI	SAMALPATTI	FIRKA	11748.81	10878.41	158.05	698.91	99.18	674.13	1630.27	163.03	1467.24	2347.00	0.00	9.72	2356.72	54.55	0.25	160.62	Over Exploited
390	TAMIL NADU	KRISHNAGIRI	SHOOLAGIRI	FIRKA	24144.44	16914.41	872.83	920.87	175.45	312.20	2281.35	228.14	2053.21	1161.80	22.00	6.80	1190.60	74.88	794.53	57.99	Safe
391	TAMIL NADU	KRISHNAGIRI	SINGARAPATAI	FIRKA	13618.51	9620.77	668.23	1120.53	19.54	625.44	2433.74	243.38	2190.36	3322.65	0.00	20.03	3342.68	79.34	2.04	152.61	Over Exploited
392	TAMIL NADU	KRISHNAGIRI	THALLI	FIRKA	14998.99	14626.55	658.05	397.68	139.51	208.92	1404.16	140.41	1263.75	855.30	0.00	8.66	863.96	53.25	355.20	68.36	Safe
393	TAMIL NADU	KRISHNAGIRI	URIGAM	FIRKA	10078.62	7230.47	308.85	70.47	52.96	73.41	505.69	50.58	455.11	154.50	0.87	1.96	157.33	21.36	278.38	34.57	Safe
394	TAMIL NADU	KRISHNAGIRI	UTHANAPALLI	FIRKA	14985.14	10787.48	563.40	633.40	51.32	400.43	1648.55	164.86	1483.69	1020.30	5.86	11.73	1037.89	50.81	406.72	69.95	Safe
395	TAMIL NADU	KRISHNAGIRI	UTHANGARAI	FIRKA	14448.60	9811.41	693.16	970.92	90.79	551.64	2306.51	230.65	2075.86	2758.20	0.00	48.98	2807.17	48.98	1.20	135.23	Over Exploited
396	TAMIL NADU	KRISHNAGIRI	VEPPANAPALLI	FIRKA	20035.78	10473.01	580.29	1232.85	109.42	1021.78	2944.34	294.43	2649.91	2652.80	0.00	2.99	2655.78	55.69	3.99	100.22	Over Exploited
397	TAMIL NADU	MADURAI	A.VALLALAPATTI	FIRKA	7889.02	7889.02	533.42	1459.74	52.58	232.57	2278.31	227.84	2050.47	1202.10	24.78	645.60	1872.48	645.60	177.99	91.32	critical
398	TAMIL NADU	MADURAI	ALANGANALLUR	FIRKA	3090.15	3090.15	207.96	477.82	37.32	211.44	934.54	93.46	841.08	656.30	7.84	22.89	687.03	50.39	126.55	81.68	Semi Critical
399	TAMIL NADU	MADURAI	APPANTHIRUPATHI	FIRKA	1938.02	1938.02	132.17	627.85	16.54	88.09	864.65	86.46	798.05	137.20	0.00	0.84	138.04	1.68	659.17	17.30	Safe
400	TAMIL NADU	MADURAI	ARUMBANUR	FIRKA	2570.52	2570.52	164.65	739.00	17.45	152.90	1074.00	107.41	1000.12	188.10	9.70	2.50	200.30	35.98	766.34	20.03	Safe
401	TAMIL NADU	MADURAI	ATHIPATTI	FIRKA	30107.75	11065.21	847.66	520.59	92.57	522.13	1982.95	198.29	1784.66	1596.35	30.50	12.65	1639.50	21.90	135.91	91.87	critical
402	TAMIL NADU	MADURAI	AVANIAPURAM	FIRKA	4439.36	4439.36	282.70	546.81	37.61	151.71	1018.83	101.88	942.69	227.15	245.54	0.50	473.19	37.20	432.80	50.20	Safe
403	TAMIL NADU	MADURAI	CHATRAPATTI	FIRKA	3233.85	2887.85	195.45	782.11	28.55	230.63	1236.74	123.68	1133.47	614.20	0.00	7.44	621.64	73.80	445.47	54.84	Safe
404	TAMIL NADU	MADURAI	EAST MADURAI	FIRKA	1646.89	1646.89	125.85	136.63	13.95	36.99	313.42	31.34	1132.40	124.20	124.72	1107.50	1356.42	1107.50	850.32	119.78	Over Exploited
405	TAMIL NADU	MADURAI	ELUMALAI	FIRKA	17444.05	12243.59	937.93	816.89	102.42	536.53	2393.77	239.38	2154.39	1675.40	7.35	11.65	1694.40	75.55	396.09	78.65	Semi Critical
406	TAMIL NADU	MADURAI	KALLANDIRI	FIRKA	3375.25	3375.25	230.19	1064.82	28.81	193.58	1517.40	151.74	1419.69	425.70	1.76	3.09	430.56	73.40	918.82	30.33	Safe
407	TAMIL NADU	MADURAI	KALLIGUDI	FIRKA	10136.18	10136.18	503.37	627.44	101.05	275.92	1507.78	150.78	1357.00	587.20	56.01	14.80	658.00	14.80	699.00	48.49	Safe
408	TAMIL NADU	MADURAI	KARUMATHUR	FIRKA	8900.38	8900.38	795.30	605.17	100.59	532.45	2033.51	203.34	1830.17	1556.10	0.00	17.32	1573.42	17.32	256.75	85.97	Semi Critical

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 — **Annexure - I**

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
409	TAMIL NADU	MADURAI	KARUNGALAKKUDI	FIRKA	9832.35	9832.35	664.82	496.03	65.53	555.51	1781.89	178.19	1603.70	1081.00	239.12	13.42	1333.54	39.69	243.89	83.15	Semi Critical
410	TAMIL NADU	MADURAI	KEELAVALAVU	FIRKA	7995.48	7995.48	648.75	1010.56	53.29	295.42	2008.02	200.81	1807.21	438.20	7.06	17.30	462.55	45.62	1316.34	25.59	Safe
411	TAMIL NADU	MADURAI	KOKKULAM	FIRKA	10849.67	10849.67	808.21	851.93	108.16	701.47	2469.77	246.98	2222.79	1660.50	63.36	9.95	1733.81	32.69	466.24	78.00	Semi Critical
412	TAMIL NADU	MADURAI	KOOLAPANDI	FIRKA	2421.14	2421.14	131.09	224.75	23.93	110.23	490.00	49.00	452.02	117.30	67.20	218.52	403.02	218.52	49.00	89.16	Semi Critical
413	TAMIL NADU	MADURAI	KOTTAMPATTI	FIRKA	13066.34	11809.34	798.50	814.45	78.71	734.54	2426.20	242.63	2183.57	1755.00	450.02	28.18	2233.20	31.65	186.46	102.27	Over Exploited
414	TAMIL NADU	MADURAI	KULAMANGALAM	FIRKA	4422.75	4422.75	299.33	891.83	43.72	247.94	1482.82	148.29	1393.51	528.75	49.39	52.15	630.29	52.15	763.22	45.23	Safe
415	TAMIL NADU	MADURAI	KUNNATHUR(M)	FIRKA	4729.47	4729.47	320.08	950.61	46.75	321.99	1639.43	163.94	1536.37	247.50	86.63	43.35	377.48	43.95	1158.29	24.57	Safe
416	TAMIL NADU	MADURAI	KURAIYUR	FIRKA	8196.64	8196.64	610.58	931.89	81.71	198.98	1823.16	182.32	1640.84	495.20	25.92	18.60	539.72	36.14	1083.58	32.89	Safe
417	TAMIL NADU	MADURAI	MADURAI WEST	FIRKA	1520.83	1520.83	116.51	117.85	12.72	48.01	295.09	29.51	433.62	180.00	54.40	524.52	758.92	524.52	168.04	175.02	Over Exploited
418	TAMIL NADU	MADURAI	MELAVALAVU	FIRKA	10001.32	10001.32	676.25	407.31	66.66	336.99	1487.21	148.73	1338.48	750.80	214.82	9.47	975.09	145.68	227.18	72.85	Semi Critical
419	TAMIL NADU	MADURAI	MELUR(M)	FIRKA	6671.60	6671.60	451.11	1389.85	44.47	350.52	2235.95	223.60	2012.35	924.50	40.99	44.90	1010.38	44.90	1001.97	50.21	Safe
420	TAMIL NADU	MADURAI	MOTHAGAM	FIRKA	6767.30	6767.30	429.77	531.17	60.77	224.69	1246.40	124.64	1121.75	452.70	1.23	5.24	459.17	36.44	631.38	40.93	Safe
421	TAMIL NADU	MADURAI	MUDUVARPATTI	FIRKA	5022.63	5022.63	405.62	414.22	60.66	357.28	1237.78	123.77	1114.01	1074.95	2.65	4.31	1081.90	72.39	58.37	97.12	critical
422	TAMIL NADU	MADURAI	NAGAMALAI PUDUKOTTAI	FIRKA	4972.97	4972.97	253.97	414.72	41.60	286.09	996.38	99.64	1190.55	908.50	12.74	37.40	958.64	318.56	293.81	80.52	Semi Critical
423	TAMIL NADU	MADURAI	NEERETHAN	FIRKA	8280.60	7057.64	474.97	1117.47	85.24	330.89	2008.57	200.86	1807.71	1031.65	26.40	179.72	1237.77	179.72	569.94	68.47	Safe
424	TAMIL NADU	MADURAI	OTHAKADAI	FIRKA	3070.36	3070.36	196.67	475.57	20.84	120.87	813.95	81.39	763.93	31.40	565.28	76.71	673.39	76.71	90.54	88.15	Semi Critical
425	TAMIL NADU	MADURAI	PALAMEDU	FIRKA	6561.70	6561.70	529.91	587.57	79.25	466.29	1663.02	166.30	1496.72	1502.70	0.00	35.48	1538.18	35.48	50.95	102.77	Over Exploited
426	TAMIL NADU	MADURAI	PANNIKUNDU	FIRKA	12869.15	12869.15	958.64	3503.64	128.30	573.99	5164.57	516.46	4648.11	2038.40	35.10	16.45	2089.95	37.68	2536.93	44.96	Safe
427	TAMIL NADU	MADURAI	PERAIYUR	FIRKA	11676.74	10663.74	794.36	592.10	106.31	388.30	1881.07	188.10	1692.97	1126.15	22.39	29.21	1177.75	81.00	463.43	69.57	Safe
428	TAMIL NADU	MADURAI	RAJAKOOR	FIRKA	2554.53	2554.53	172.89	666.33	25.25	160.42	1024.89	102.49	970.49	242.10	363.48	30.71	636.29	202.67	162.24	65.56	Safe
429	TAMIL NADU	MADURAI	SAKKIMANGALAM	FIRKA	3872.87	3872.87	262.11	595.49	38.28	197.90	1093.78	109.38	1130.40	60.50	253.43	636.00	949.93	636.00	180.47	84.03	Semi Critical
430	TAMIL NADU	MADURAI	SAMAYANALLUR	FIRKA	3726.95	3726.95	252.23	815.79	36.84	239.61	1344.47	134.44	1246.86	518.10	0.00	5.08	523.18	53.30	675.46	41.96	Safe
431	TAMIL NADU	MADURAI	SATHAMANGALAM	FIRKA	3121.38	3121.38	239.66	147.85	30.85	76.48	494.84	24.75	650.50	75.30	209.92	285.44	570.66	285.44	180.41	87.73	Semi Critical
432	TAMIL NADU	MADURAI	SEDAPATTI	FIRKA	7352.18	7352.18	563.22	449.82	61.50	386.24	1460.78	146.08	1314.70	1092.50	2.45	11.50	1106.45	56.87	162.88	84.16	Semi Critical
433	TAMIL NADU	MADURAI	SHOLAVANDAN	FIRKA	3301.81	3301.81	222.21	854.64	39.88	257.83	1374.56	137.46	1237.10	714.75	31.75	62.06	808.56	62.06	428.54	65.36	Safe
434	TAMIL NADU	MADURAI	SINDUPATTI	FIRKA	7550.26	7550.26	501.18	598.61	85.33	678.20	1863.32	97.92	1765.40	1893.60	0.00	16.58	1910.18	46.52	85.54	108.20	Over Exploited
435	TAMIL NADU	MADURAI	SIVARAKKOTTAI	FIRKA	7349.19	7349.19	512.11	698.45	73.27	311.77	1595.60	88.64	1506.96	425.90	44.20	13.32	483.43	13.32	1023.53	32.08	Safe
436	TAMIL NADU	MADURAI	T. KALLUPATTI	FIRKA	8016.44	8016.44	497.63	294.69	79.92	207.89	1080.13	108.02	972.11	366.25	12.25	28.05	406.55	30.55	563.06	41.82	Safe
437	TAMIL NADU	MADURAI	THANICHAYAM	FIRKA	3317.93	3317.93	264.02	365.15	40.07	157.09	826.33	43.70	782.63	533.10	4.41	4.70	542.21	21.52	223.60	69.28	Safe
438	TAMIL NADU	MADURAI	THENKARAI	FIRKA	6508.60	6508.60	438.02	1648.32	78.61	367.31	2532.26	253.23	2279.03	1134.90	9.70	65.49	1210.09	71.30	1063.13	53.10	Safe
439	TAMIL NADU	MADURAI	THIRUMANGALAM	FIRKA	7121.19	7121.19	378.83	580.82	59.57	358.87	1378.09	79.43	1298.66	703.80	128.77	37.45	870.02	39.50	426.59	66.99	Safe
440	TAMIL NADU	MADURAI	THIRUPPARANKUNDRAM	FIRKA	6921.39	6862.39	349.60	484.31	58.13	280.83	1172.87	117.29	1107.94	617.00	32.39	138.55	787.94	138.55	320.00	71.12	Semi Critical
441	TAMIL NADU	MADURAI	THIRUVATHAVUR	FIRKA	8923.56	8923.56	603.37	1300.03	59.47	423.51	2386.38	238.64	2147.74	698.30	4.41	32.68	735.39	39.06	1405.97	34.24	Safe
442	TAMIL NADU	MADURAI	USILAMPATTI	FIRKA	16516.29	11164.54	997.62	746.54	126.17	631.30	2501.63	250.16	2251.47	2002.50	7.04	32.70	2042.24	74.79	209.23	90.71	critical
443	TAMIL NADU	MADURAI	UTHAPPANAYAKANUR	FIRKA	9324.71	6796.17	433.86	422.57	56.85	270.40	1183.68	118.37	1065.31	986.25	7.04	22.91	1016.20	54.31	158.79	95.39	critical
444	TAMIL NADU	MADURAI	VALANDUR	FIRKA	5453.47	5453.47	389.00	550.33	53.08	413.71	1406.12	140.61	1265.51	1212.40	0.00	13.63	1226.03	27.85	130.42	96.88	critical
445	TAMIL NADU	MADURAI	VALAYANKULAM	FIRKA	4675.00	4675.00	307.21	277.34	39.60	237.98	862.13	43.11	833.75	456.60	46.55	24.67	527.82	74.84	255.76	63.31	Safe
446	TAMIL NADU	MADURAI	VELLALUR	FIRKA	8042.27	8042.27	543.79	974.50	53.60	491.45	2063.34	206.33	1857.01	1428.30	0.00	11.72	1440.02	31.72	396.99	77.55	Semi Critical
447	TAMIL NADU	MADURAI	VIRATHANUR	FIRKA	4317.51	4317.51	219.95	293.61	36.57	203.19	753.32	75.34	778.77	281.80	3.68	21.31	306.78	28.77	464.53	39.39	Safe
448	TAMIL NADU	MAYILADUTHURAI	KUTTALAM	FIRKA	6057.95	6057.95	428.94	1977.12	5.79	28.41	2440.26	244.03	2196.23	2879.26	0.00	137.26	3016.52	204.01	3.30	137.35	Over Exploited
449	TAMIL NADU	MAYILADUTHURAI	MAADHANAM	FIRKA	9798.18	8841.18	626.41	794.07	7.19	39.06	1466.73	146.68	1320.05	1310.34	0.00	149.08	1459.42	221.59	25.35	110.56	Over Exploited
450	TAMIL NADU	MAYILADUTHURAI	MANALMEDU	FIRKA	8021.98	8021.98	422.14	3826.67	11.85	44.31	4304.97	430.50	3874.47	1125.26	0.00	115.18	1240.45	171.19	2578.01	32.02	Safe
451	TAMIL NADU	MAYILADUTHURAI	MANGANALLUR	FIRKA	5151.67	5151.67	274.40	2019.81	7.93	28.56	2330.70	233.08	2097.62	2348.16	0.00	97.38	2445.55	144.74	2.65	116.59	Over Exploited
452	TAMIL NADU	MAYILADUTHURAI	MAYILADUTHURAI	FIRKA	8368.94	8368.94	534.92	2289.66	12.88	21.86	2859.32	285.92	2573.40	3280.24	0.00	195.41	3475.66	290.45	2.74	135.06	Over Exploited
453	TAMIL NADU	MAYILADUTHURAI	MELAIYUR	FIRKA	4439.89	4439.89	280.37	1296.48	6.56	36.01	1619.42	161.94	1457.48	1982.16	0.00	91.88	2074.04	136.57	2.74	142.30	Over Exploited
454	TAMIL NADU	MAYILADUTHURAI	PAALAIYUR	FIRKA	5925.28	5925.28	374.16	2313.45	8.75	52.94	2749.30	274.93	2474.37	3471.33	0.00	106.88	3578.21	158.86	2.74	144.61	Over Exploited
455	TAMIL NADU	MAYILADUTHURAI	PATTAVARTHI	FIRKA	9602.20	9602.20	613.75	2975.13	14.78	41.50	3645.16	364.51	3280.65	4354.87	0.00	164.91	4519.78	245.11	2.74	137.77	Over Exploited
456	TAMIL NADU	MAYILADUTHURAI	PUTHUR(N)	FIRKA	9697.76	9697.76	692.47	2744.45	5.23	113.61	3555.76	355.57	3200.19	4387.82	0.00	0.76	4388.58	279.44	2.74	137.13	Over Exploited
457	TAMIL NADU	MAYILADUTHURAI	SEMBANARKOIL	FIRKA	8235.03	8235.03	433.35	2518.96	12.17	86.15	3050.63	305.06	2745.57	3903.74	0.00	183.23	4086.96	272.34	6.31	148.86	Over Exploited
458	TAMIL NADU	MAYILADUTHURAI	SIRKALI	FIRKA	8465.90	8320.69	589.15	1886.03	7.95	53.29	2536.42	253.64	2282.78	2817.93	0.00	1.04	2818.97	376.93	0.00	123.49	Over Exploited
459	TAMIL NADU	MAYILADUTHURAI	THILLAIYADI	FIRKA	8932.39	8932.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
460	TAMIL NADU	MAYILADUTHURAI	THIRUVENKADU	FIRKA	9340.20	9340.20	661.34	1677.29	8.92	96.95	2444.50	244.45	2200.05	2728.20	0.00	2.36	2730.56	114.87	16.84	124.11	Over Exploited
461	TAMIL NADU	MAYILADUTHURAI	THIRUVILAIYATTAM	FIRKA	6035.71	6035.71	385.79	2312.74	9.29	42.19	2750.01	275.01	2475.00	3396.82	0.00	109.09	3505.91	162.15	4.29	141.65	Over Exploited
462	TAMIL NADU	MAYILADUTHURAI	VAITHEESVARAN KOIL	FIRKA	9285.21	9285.21	657.45	2944.84	8.87	121.00	3732.16	373.22	3358.94	4564.76	0.00	1.20	4565.96	211.16	15.71	135.93	Over Exploited
463	TAMIL NADU	NAGAPATTINAM	KANGALANCHERY	FIRKA	5186.66	5186.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
464	TAMIL NADU	NAGAPATTINAM	KARIAPATTINAM	FIRKA	10120.78	10120.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
465	TAMIL NADU	NAGAPATTINAM	KEEZHAIYUR	FIRKA	8969.33	8969.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
466	TAMIL NADU	NAGAPATTINAM	KILVELUR	FIRKA	7010.45	7010.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
467	TAMIL NADU	NAGAPATTINAM	NAGAPATTINAM	FIRKA	7117.59	7117.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
468	TAMIL NADU	NAGAPATTINAM	NEERMOOLAI	FIRKA	8005.43	8005.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
469	TAMIL NADU	NAGAPATTINAM	THAHATTUR	FIRKA	20293.85	20293.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
470	TAMIL NADU	NAGAPATTINAM	THALANAYAR	FIRKA	10135.89	10135.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
471	TAMIL NADU	NAGAPATTINAM	THERKUPOIGAINALLUR	FIRKA	5725.42	5725.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
472	TAMIL NADU	NAGAPATTINAM	THEVUR	FIRKA	6186.56	6186.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
473	TAMIL NADU	NAGAPATTINAM	THIRUKANNAPURAM	FIRKA	6415.74	6415.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
474	TAMIL NADU	NAGAPATTINAM	THIRUKUVALAI	FIRKA	8141.37	8141.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
475	TAMIL NADU	NAGAPATTINAM	THIURMARUGAL	FIRKA	6745.60	6745.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
476	TAMIL NADU	NAGAPATTINAM	VALIVALAM	FIRKA	4957.96	4957.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 — **Annexure - I**

TAMIL NADU — (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
477	TAMIL NADU	NAGAPATTINAM	VEDARANYAM	FIRKA	34254.50	34254.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
478	TAMIL NADU	NAGAPATTINAM	VEILANKANNI	FIRKA	4576.59	4576.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
479	TAMIL NADU	NAMAKKAL	ALANGANATHAM	FIRKA	7047.13	7047.13	597.20	329.81	144.18	132.72	1203.91	120.39	1083.52	1294.80	0.00	137.13	1431.93	137.13	34.42	132.16	Over Exploited
480	TAMIL NADU	NAMAKKAL	ELACHIPALAYAM	FIRKA	12488.10	12488.10	943.39	283.17	247.26	211.78	1685.60	86.77	1598.83	1251.55	18.70	55.64	1325.89	73.35	255.23	82.93	Semi Critical
481	TAMIL NADU	NAMAKKAL	ERUMAPATTI	FIRKA	9279.26	9279.26	786.36	522.15	189.85	138.32	1636.68	163.67	1473.01	1349.50	0.00	135.16	1484.65	135.16	126.59	100.79	Over Exploited
482	TAMIL NADU	NAMAKKAL	JEDARPALAYAM	FIRKA	13403.48	13403.48	530.78	1999.72	151.86	215.61	2897.97	289.80	2608.17	2103.50	0.00	26.29	2129.79	43.55	461.12	81.66	Semi Critical
483	TAMIL NADU	NAMAKKAL	KALAPPANAICKENPATTI	FIRKA	10051.10	9913.48	760.28	785.18	152.67	379.09	2077.22	207.73	1869.49	2884.50	2.50	15.41	2902.41	46.61	139.47	155.25	Over Exploited
484	TAMIL NADU	NAMAKKAL	KEERAMBUR	FIRKA	7955.86	7955.86	674.21	247.41	162.78	110.83	1195.23	119.52	1075.71	943.41	0.00	191.10	1134.51	191.10	2.28	105.47	Over Exploited
485	TAMIL NADU	NAMAKKAL	KUMARAPALAYAM	FIRKA	7887.51	7887.51	489.34	1984.54	121.47	251.04	2846.39	284.64	2561.75	1749.40	1.20	807.69	2558.29	807.68	355.88	99.86	critical
486	TAMIL NADU	NAMAKKAL	MALLASAMUTHRAM	FIRKA	7719.02	7719.02	618.48	368.26	152.84	174.93	1314.51	131.45	1183.06	1219.00	0.00	21.16	1240.16	32.76	6.02	104.83	Over Exploited
487	TAMIL NADU	NAMAKKAL	MANGALAPURAM	FIRKA	5762.37	5762.37	520.27	466.53	114.09	109.35	1210.24	121.02	1089.22	1213.30	0.00	3.31	1216.60	43.20	105.64	111.69	Over Exploited
488	TAMIL NADU	NAMAKKAL	MANICKAMPALAYAM	FIRKA	12461.59	12461.59	998.47	321.72	246.74	100.41	1667.34	166.73	1500.61	979.60	2.10	13.00	994.70	43.66	475.25	66.29	Safe
489	TAMIL NADU	NAMAKKAL	METTUPATTY	FIRKA	4156.26	4156.26	281.99	641.52	55.78	112.18	1091.47	109.15	982.32	1094.40	0.00	143.40	1237.80	143.40	296.26	126.01	Over Exploited
490	TAMIL NADU	NAMAKKAL	MOHANUR	FIRKA	6841.51	6841.51	464.18	1444.09	91.81	245.99	2246.07	224.61	2021.46	2057.35	11.20	24.10	2092.65	30.04	683.51	103.52	Over Exploited
491	TAMIL NADU	NAMAKKAL	MOLASI	FIRKA	13366.81	13366.81	892.50	504.89	264.66	219.31	1881.36	188.14	1693.22	1331.60	4.00	38.46	1374.06	89.21	268.41	81.15	Semi Critical
492	TAMIL NADU	NAMAKKAL	MULLUKURICHI	FIRKA	8570.84	8470.84	764.82	697.97	167.72	130.11	1760.62	176.06	1584.56	1645.00	0.00	4.36	1649.36	42.93	172.73	104.09	Over Exploited
493	TAMIL NADU	NAMAKKAL	NALLIPALAYAM	FIRKA	6330.11	6330.11	368.31	254.44	129.51	87.08	839.34	44.86	794.48	784.50	0.00	12.32	796.82	12.32	52.07	100.29	Over Exploited
494	TAMIL NADU	NAMAKKAL	NALLUR(N)	FIRKA	11295.88	11295.88	670.97	688.70	127.98	240.60	1728.25	172.83	1555.42	2337.90	0.00	24.69	2362.59	40.86	51.17	151.89	Over Exploited
495	TAMIL NADU	NAMAKKAL	NAMAGIRIPETTAI	FIRKA	10244.54	10244.54	924.96	892.34	202.84	459.37	2479.51	247.95	2231.56	3114.00	0.00	243.90	3357.90	243.90	269.78	150.47	Over Exploited
496	TAMIL NADU	NAMAKKAL	NAMAKKAL	FIRKA	8056.88	8056.88	682.77	329.34	164.84	104.90	1281.85	128.18	1153.67	1138.70	0.00	422.00	1560.70	422.00	2.34	135.28	Over Exploited
497	TAMIL NADU	NAMAKKAL	PALAPATTI(N)	FIRKA	8919.52	8919.52	478.73	1503.14	119.70	187.75	2289.32	159.70	2129.62	1216.00	8.70	14.50	1239.20	51.61	853.31	58.19	Safe
498	TAMIL NADU	NAMAKKAL	PALLIPALAYAM	FIRKA	10816.26	10816.26	671.04	1922.54	166.57	233.82	2993.97	299.40	2694.57	1629.40	7.50	13.90	1650.80	97.00	960.67	61.26	Safe
499	TAMIL NADU	NAMAKKAL	PANDAMANGALAM	FIRKA	8026.79	8026.79	395.84	3735.75	90.94	383.66	4606.19	321.07	4285.12	2447.64	12.00	1361.59	3821.23	1361.59	1633.81	89.17	Semi Critical
500	TAMIL NADU	NAMAKKAL	PARAMATHI	FIRKA	9868.65	9868.65	586.20	985.12	111.81	183.84	1866.97	186.70	1680.27	1882.00	0.00	749.00	2631.00	749.00	224.34	156.58	Over Exploited
501	TAMIL NADU	NAMAKKAL	PUDUCHATRAM	FIRKA	8188.86	8152.55	613.40	451.62	161.42	282.16	1508.60	150.86	1357.74	2004.80	0.00	182.30	2187.10	182.30	18.23	161.08	Over Exploited
502	TAMIL NADU	NAMAKKAL	RASIPURAM	FIRKA	9771.01	9771.01	882.20	863.47	193.47	533.15	2472.29	247.23	2225.06	3919.70	0.00	96.70	4016.40	96.70	4.42	180.51	Over Exploited
503	TAMIL NADU	NAMAKKAL	SELLAPPAMPATTI	FIRKA	7411.50	7411.50	628.08	326.06	151.64	147.88	1253.66	125.36	1128.30	1219.50	0.00	297.60	1517.10	297.60	20.11	134.46	Over Exploited
504	TAMIL NADU	NAMAKKAL	SENDAMANGALAM	FIRKA	7473.92	7473.92	573.19	810.94	115.10	296.24	1795.47	179.54	1615.93	2773.50	0.00	204.40	2977.90	204.40	54.73	184.28	Over Exploited
505	TAMIL NADU	NAMAKKAL	TIRUCHENGODE	FIRKA	10104.34	10104.34	809.60	669.36	200.07	235.38	1914.41	191.45	1722.96	2198.10	11.20	33.97	2243.27	57.92	88.92	130.20	Over Exploited
506	TAMIL NADU	NAMAKKAL	TIRUPULI NADU	FIRKA	8344.83	8344.83	604.10	336.54	128.51	0.00	1069.15	70.29	998.86	0.00	0.00	3.26	3.26	21.73	977.13	0.33	Safe
507	TAMIL NADU	NAMAKKAL	VAIYAPPAMALAI	FIRKA	9425.29	8307.16	750.04	437.36	164.48	140.63	1492.51	149.25	1343.26	1372.00	0.00	23.96	1395.97	37.15	44.15	103.92	Over Exploited
508	TAMIL NADU	NAMAKKAL	VALAVANTHI NADU	FIRKA	12481.56	12481.56	769.47	176.45	192.22	0.00	1138.14	65.72	1072.42	0.00	1.20	4.33	5.53	36.07	1035.15	0.52	Safe
509	TAMIL NADU	NAMAKKAL	VALAYAPATTI	FIRKA	8617.51	8617.51	487.23	701.30	115.65	334.77	1638.95	163.89	1475.06	2486.90	0.00	148.80	2635.70	148.80	142.33	178.68	Over Exploited
510	TAMIL NADU	NAMAKKAL	VENNANDUR	FIRKA	11843.60	11834.27	1068.49	927.45	234.32	467.27	2697.53	269.75	2427.78	3473.60	4.50	265.30	3743.40	265.30	150.97	154.19	Over Exploited
511	TAMIL NADU	PERAMBALUR	CHETTIKULAM	FIRKA	16582.49	14482.12	712.66	648.59	58.62	384.45	1804.32	180.43	1623.89	3728.00	0.00	20.90	3748.90	82.10	67.80	230.86	Over Exploited
512	TAMIL NADU	PERAMBALUR	KELAPULIYUR	FIRKA	16326.39	15274.81	926.90	1505.94	77.11	22.47	2532.42	253.25	2279.17	2453.28	0.00	20.96	2474.24	65.16	1142.43	108.56	Over Exploited
513	TAMIL NADU	PERAMBALUR	KOLAKKANATHAM	FIRKA	12737.60	12649.85	622.49	791.38	51.21	113.59	1578.67	157.86	1420.81	769.28	0.00	19.23	788.51	33.55	617.98	55.50	Safe
514	TAMIL NADU	PERAMBALUR	KOOTHUR	FIRKA	11520.11	11508.00	528.86	459.84	46.58	102.33	1137.61	62.11	1075.50	799.68	0.60	21.49	821.77	49.81	225.41	76.41	Semi Critical
515	TAMIL NADU	PERAMBALUR	KURUMBALUR	FIRKA	12487.02	10022.64	608.19	690.10	50.59	295.26	1644.14	164.42	1479.72	2880.60	0.40	63.36	2944.36	63.36	211.91	198.98	Over Exploited
516	TAMIL NADU	PERAMBALUR	PASUMBALUR	FIRKA	15514.15	14059.50	853.15	1364.04	70.97	353.48	2641.64	264.17	2377.47	2416.60	0.00	8.04	2424.64	51.26	779.90	101.98	Over Exploited
517	TAMIL NADU	PERAMBALUR	PERAMBALUR	FIRKA	19589.53	18734.49	1136.84	1201.24	94.57	482.85	2915.50	291.55	2623.95	3289.72	30.30	219.54	3539.56	219.54	438.35	134.89	Over Exploited
518	TAMIL NADU	PERAMBALUR	VADAKKALUR	FIRKA	11224.82	11224.82	567.62	1377.28	56.66	184.25	2185.81	218.58	1967.23	627.20	0.00	60.67	687.87	70.79	1269.24	34.97	Safe
519	TAMIL NADU	PERAMBALUR	VALLIKANDAPURAM	FIRKA	17288.92	16520.49	1002.49	1435.91	83.40	484.88	3006.68	300.67	2706.01	3157.00	0.60	13.01	3170.61	76.85	730.26	117.17	Over Exploited
520	TAMIL NADU	PERAMBALUR	VARAGUR	FIRKA	15299.46	15299.46	913.92	778.76	77.23	81.81	1851.72	125.80	1725.92	560.86	0.00	25.88	586.74	75.06	1090.00	34.00	Safe
521	TAMIL NADU	PERAMBALUR	VENGALAM	FIRKA	20125.69	19677.63	1194.07	2163.12	99.33	566.11	4022.63	402.26	3620.37	3857.02	1.00	17.65	3875.67	67.64	1000.49	107.05	Over Exploited
522	TAMIL NADU	PUDUKKOTTAI	ALANGUDI(P)	FIRKA	12460.18	12345.85	1366.91	1606.90	74.26	136.04	3184.11	318.41	2865.70	1327.20	46.40	25.95	1399.55	67.69	1424.41	48.84	Safe
523	TAMIL NADU	PUDUKKOTTAI	ARANTHANGI	FIRKA	8892.18	8883.57	982.08	1669.94	51.97	52.89	2756.88	275.69	2481.18	516.00	4.80	56.27	577.07	56.27	1904.11	23.26	Safe
524	TAMIL NADU	PUDUKKOTTAI	ARASAMALAI	FIRKA	11341.21	11011.61	622.73	1242.33	40.43	144.77	2050.26	205.03	1845.23	1412.40	0.00	30.80	1443.19	34.09	398.75	78.21	Semi Critical
525	TAMIL NADU	PUDUKKOTTAI	ARASARKULAM	FIRKA	6241.65	6241.65	794.20	1119.54	42.97	128.68	2085.39	208.55	1876.84	1264.20	0.00	11.41	1275.61	42.03	570.61	67.97	Safe
526	TAMIL NADU	PUDUKKOTTAI	ATHANI(P)	FIRKA	3676.81	3676.81	318.82	736.50	35.63	26.14	1117.09	111.72	1005.37	255.00	0.00	5.06	260.06	25.88	724.49	25.87	Safe
527	TAMIL NADU	PUDUKKOTTAI	AVUDAIYARKOIL	FIRKA	10189.76	10189.76	1015.51	2710.71	104.55	30.54	3861.31	386.14	3475.17	226.00	0.00	0.55	226.55	32.78	3216.39	6.52	Safe
528	TAMIL NADU	PUDUKKOTTAI	EMBAL	FIRKA	9205.77	9205.58	917.43	1989.17	94.45	0.58	3001.63	300.16	2701.47	0.00	0.00	0.45	0.45	21.99	2679.48	0.02	Safe
529	TAMIL NADU	PUDUKKOTTAI	GANDARVAKOTTAI	FIRKA	12188.59	11952.75	1535.95	441.76	55.40	77.41	2110.52	211.05	1899.47	719.80	7.20	16.80	743.80	43.20	1129.27	39.16	Safe
530	TAMIL NADU	PUDUKKOTTAI	ILLUPUR	FIRKA	11655.72	11655.72	550.90	1543.69	54.83	140.53	2289.95	229.00	2060.95	1371.00	6.80	19.85	1397.65	47.95	635.20	67.82	Safe
531	TAMIL NADU	PUDUKKOTTAI	KALLAKOTTAI	FIRKA	8755.11	8305.72	889.42	1187.41	38.50	164.41	2279.74	227.97	2051.77	1604.00	11.60	11.85	1627.45	40.25	395.92	79.32	Semi Critical
532	TAMIL NADU	PUDUKKOTTAI	KARAIYUR	FIRKA	10722.56	10083.96	1099.20	1065.24	41.90	155.51	2361.85	236.19	2125.66	1517.74	0.00	17.00	1534.74	51.04	556.88	72.20	Semi Critical
533	TAMIL NADU	PUDUKKOTTAI	KARAMBAKUDI	FIRKA	10375.34	10375.34	1140.52	1457.61	124.04	150.92	2873.09	287.31	2585.78	1281.20	6.80	22.32	1310.32	60.15	1237.63	50.67	Safe
534	TAMIL NADU	PUDUKKOTTAI	KEELANILAI	FIRKA	10672.62	10236.31	1240.21	1655.24	83.07	93.79	3072.31	307.24	2765.07	822.00	0.00	18.00	840.00	35.43	1907.64	30.38	Safe
535	TAMIL NADU	PUDUKKOTTAI	KEERAMANGALAM	FIRKA	8990.56	8990.56	995.42	731.69	54.08	158.47	1939.66	193.97	1745.69	1546.00	0.00	22.95	1568.95	54.52	195.09	89.88	Semi Critical
536	TAMIL NADU	PUDUKKOTTAI	KEERANUR	FIRKA	12215.18	12134.56	588.09	1156.77	50.29	132.00	1927.15	192.71	1734.44	1370.20	0.00	29.73	1399.93	34.26	329.98	80.71	Semi Critical
537	TAMIL NADU	PUDUKKOTTAI	KILLUKKOTTAI	FIRKA	12000.95	11897.48	679.68	1007.79	476.95	136.22	2300.64	230.07	2070.57	1390.50	18.40	17.90	1426.80	34.01	627.66	68.91	Safe
538	TAMIL NADU	PUDUKKOTTAI	KODUMPALUR	FIRKA	12949.74	12949.74	706.50	529.43	30.35	101.24	1367.52	136.75	1230.77	979.20	0.00	13.50	992.70	48.86	202.71	80.66	Semi Critical
539	TAMIL NADU	PUDUKKOTTAI	KOTTAIPATTINAM	FIRKA	5972.70	5972.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
540	TAMIL NADU	PUDUKKOTTAI	KOTTUR(P)	FIRKA	6736.86	6039.34	301.15	823.80	14.64	41.31	1180.90	118.10	1062.80	384.40	2.40	15.93	402.73	35.15	640.85	37.89	Safe
541	TAMIL NADU	PUDUKKOTTAI	KUDUMIYANMALAI	FIRKA	11826.22	11343.87	634.35	1146.23	33.58	96.66	1910.82	191.08	1719.74	943.00	13.20	17.12	973.32	52.88	710.66	56.60	Safe
542	TAMIL NADU	PUDUKKOTTAI	KUNNANDARKOIL	FIRKA	13834.89	13834.89	790.36	1530.86	554.61	166.15	3041.98	304.20	2737.78	1621.00	17.60	23.90	1662.50	54.85	1044.33	60.72	Safe
543	TAMIL NADU	PUDUKKOTTAI	MALAIYUR(P)	FIRKA	16614.59	16422.08	1680.72	2240.15	1052.57	331.82	5305.26	530.53	4774.73	3191.60	5.50	19.41	3216.51	84.81	1492.82	67.37	Safe
544	TAMIL NADU	PUDUKKOTTAI	MANAMELKUDI	FIRKA	9621.48	9420.19	1039.42	2170.91	140.74	21.77	3372.84	337.28	3035.56	212.40	2.00	6.15	220.55	62.64	2758.52	7.27	Safe

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 **Annexure - I**

TAMIL NADU

(in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
545	TAMIL NADU	PUDUKKOTTAI	MATHUR	FIRKA	10927.69	10856.63	592.30	580.57	25.45	81.17	1279.49	127.95	1151.54	804.40	92.40	37.52	934.32	38.00	216.74	81.14	Semi Critical
546	TAMIL NADU	PUDUKKOTTAI	MEEMISAL	FIRKA	12911.26	12911.26	1424.63	3579.66	192.89	6.89	5204.07	520.40	4683.67	67.20	0.00	0.75	67.95	51.62	4564.85	1.45	Safe
547	TAMIL NADU	PUDUKKOTTAI	NAGUDI	FIRKA	5684.62	5684.62	466.08	1066.45	27.80	38.34	1598.67	159.86	1438.81	374.00	0.80	4.58	379.38	31.21	1032.80	26.37	Safe
548	TAMIL NADU	PUDUKKOTTAI	NARTHAMALAI	FIRKA	9054.92	9051.92	438.69	791.77	37.51	67.69	1335.66	133.57	1202.09	660.40	14.50	13.60	688.50	39.84	487.35	57.28	Safe
549	TAMIL NADU	PUDUKKOTTAI	NEERPALANI	FIRKA	7109.84	7106.47	323.09	781.75	16.66	97.17	1218.67	121.87	1096.80	948.00	1.60	13.43	963.04	15.59	219.92	87.80	Semi Critical
550	TAMIL NADU	PUDUKKOTTAI	PERUMARUTHOOR	FIRKA	5094.75	5094.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
551	TAMIL NADU	PUDUKKOTTAI	PONNAMARAVATHI	FIRKA	11223.94	10243.21	579.27	1476.73	37.61	188.72	2282.33	228.23	2054.10	1524.00	0.00	50.62	1574.61	55.38	474.73	76.66	Semi Critical
552	TAMIL NADU	PUDUKKOTTAI	PONPETHI	FIRKA	10330.43	10330.43	1029.53	2468.60	105.99	0.46	3604.58	360.46	3244.12	4.50	0.00	0.33	4.83	23.01	3216.61	0.15	Safe
553	TAMIL NADU	PUDUKKOTTAI	POOVATHAKUDI	FIRKA	9890.70	9770.13	1296.10	1366.93	57.16	262.16	2982.35	298.24	2684.12	2159.40	0.00	21.00	2180.40	56.79	467.93	81.23	Semi Critical
554	TAMIL NADU	PUDUKKOTTAI	PUDHUNAGAR	FIRKA	12249.31	12249.31	1183.10	687.35	97.20	149.94	2117.59	211.75	1905.84	1459.00	15.60	13.45	1488.05	31.12	400.12	78.08	Semi Critical
555	TAMIL NADU	PUDUKKOTTAI	PUDUKKOTTAI	FIRKA	9906.60	9906.60	408.25	456.89	41.92	55.90	962.96	96.29	866.67	545.40	84.00	83.16	712.56	83.16	154.11	82.22	Semi Critical
556	TAMIL NADU	PUDUKKOTTAI	SENKEERAI	FIRKA	11436.89	11353.45	1273.79	1667.83	51.60	105.74	3098.96	309.89	2789.07	1031.60	3.60	20.65	1055.85	51.91	1701.96	37.86	Safe
557	TAMIL NADU	PUDUKKOTTAI	SILATUR	FIRKA	10114.60	9680.92	1026.52	1289.43	66.65	142.80	2525.40	252.54	2272.86	1393.20	0.00	15.48	1408.68	54.38	825.28	61.98	Safe
558	TAMIL NADU	PUDUKKOTTAI	SINGAVANAM	FIRKA	3719.76	3719.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
559	TAMIL NADU	PUDUKKOTTAI	SITHANNAVASAL	FIRKA	8711.14	8678.54	427.05	824.45	27.84	95.35	1374.69	137.47	1237.22	930.20	13.00	24.10	967.30	24.10	269.92	78.18	Semi Critical
560	TAMIL NADU	PUDUKKOTTAI	THIRUMAYAM	FIRKA	11814.75	10870.77	559.71	1030.50	83.14	75.48	1748.83	174.88	1573.95	618.60	7.00	35.66	661.26	61.86	886.49	42.01	Safe
561	TAMIL NADU	PUDUKKOTTAI	VALLANADU(P)	FIRKA	7648.14	7648.14	380.48	527.66	24.54	83.27	1015.95	57.95	958.00	812.40	12.80	20.00	845.20	65.12	128.77	88.23	Semi Critical
562	TAMIL NADU	PUDUKKOTTAI	VARAPPUR(P)	FIRKA	16693.57	16693.57	944.05	1626.25	61.30	206.33	2837.93	283.79	2554.14	1914.99	15.20	25.71	1955.90	60.78	563.16	76.58	Semi Critical
563	TAMIL NADU	PUDUKKOTTAI	VEERAPPATTI	FIRKA	9787.56	9787.56	462.60	750.01	46.04	98.73	1357.38	135.74	1221.64	963.20	1.20	18.85	983.25	29.69	227.55	80.49	Semi Critical
564	TAMIL NADU	PUDUKKOTTAI	VENNAVALKUDI	FIRKA	7579.27	7579.27	699.30	1329.97	45.59	135.47	2210.33	221.04	1989.29	1313.60	5.20	10.43	1329.23	41.50	628.99	66.82	Safe
565	TAMIL NADU	PUDUKKOTTAI	VIRACHILAI	FIRKA	8816.30	7777.28	400.44	627.50	59.48	46.00	1133.42	113.35	1020.07	448.80	0.00	16.62	465.42	39.06	532.21	45.63	Safe
566	TAMIL NADU	PUDUKKOTTAI	VIRALIMALAI	FIRKA	12629.59	12629.59	676.91	766.45	120.54	101.83	1665.73	166.58	1499.15	995.65	136.40	67.15	1199.21	68.65	361.89	79.99	Semi Critical
567	TAMIL NADU	RAMANATHAPURAM	ABIRAMAM	FIRKA	12510.01	12510.01	79.21	461.56	620.21	404.11	1565.09	156.51	1408.58	165.80	0.00	2.37	168.17	54.60	1188.18	11.94	Safe
568	TAMIL NADU	RAMANATHAPURAM	ANANDUR	FIRKA	10064.86	10047.86	105.65	135.37	1150.89	40.80	1432.71	143.27	1289.44	8.00	0.00	0.36	8.36	32.53	1248.91	0.65	Safe
569	TAMIL NADU	RAMANATHAPURAM	APPANUR	FIRKA	8645.51	8645.51	2.42	313.72	792.78	219.97	1328.89	132.89	1196.00	28.50	0.00	7.40	35.89	34.44	1133.07	3.00	Safe
570	TAMIL NADU	RAMANATHAPURAM	BOGALUR	FIRKA	11853.48	11853.48	226.57	360.35	1152.53	229.03	1968.48	196.85	1771.63	162.90	1.20	14.51	178.61	67.47	1540.06	10.08	Safe
571	TAMIL NADU	RAMANATHAPURAM	DEVIPATTINAM	FIRKA	14199.62	14199.62	17.04	205.24	1930.68	115.93	2268.89	226.89	2042.00	46.00	0.00	53.59	99.59	53.59	1942.41	4.88	Safe
572	TAMIL NADU	RAMANATHAPURAM	KADALADI(R)	FIRKA	8397.87	8397.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
573	TAMIL NADU	RAMANATHAPURAM	KAKKOOR	FIRKA	6371.00	6371.00	61.76	236.76	599.94	171.80	1070.26	107.02	963.24	92.30	0.00	37.62	129.92	38.83	832.11	13.49	Safe
574	TAMIL NADU	RAMANATHAPURAM	KAMUTHI EAST	FIRKA	11256.72	11256.72	133.65	202.25	1046.40	182.35	1564.65	156.47	1408.18	42.30	0.00	1.92	44.22	46.70	1319.18	3.14	Safe
575	TAMIL NADU	RAMANATHAPURAM	KAMUTHI WEST	FIRKA	13006.04	13006.04	82.36	252.64	644.81	209.42	1189.23	118.92	1070.31	192.00	0.00	1.88	193.88	82.51	795.80	18.11	Safe
576	TAMIL NADU	RAMANATHAPURAM	KEELAKARAI	FIRKA	12146.76	12146.76	0.00	208.93	815.21	173.17	1197.31	119.73	1077.58	268.50	1.20	26.07	295.76	26.07	781.82	27.45	Safe
577	TAMIL NADU	RAMANATHAPURAM	KEELATHOOVAL	FIRKA	9390.03	9390.03	58.25	214.52	471.59	117.40	861.76	86.18	775.58	217.50	0.00	32.66	250.17	33.72	524.35	32.26	Safe
578	TAMIL NADU	RAMANATHAPURAM	KILIYUR	FIRKA	10931.06	10931.06	174.11	344.53	1062.84	232.77	1814.25	181.42	1632.83	69.60	7.20	19.56	96.35	40.72	1515.32	5.90	Safe
579	TAMIL NADU	RAMANATHAPURAM	KOVILANGULAM	FIRKA	10617.99	10617.99	126.06	272.13	987.02	235.15	1620.36	162.04	1458.32	244.00	0.00	2.30	246.30	27.57	1186.75	16.89	Safe
580	TAMIL NADU	RAMANATHAPURAM	MANDAPAM	FIRKA	9934.79	9934.79	0.00	158.79	1313.35	158.79	1630.93	163.09	1467.84	398.50	1.50	97.40	497.39	97.40	970.45	33.89	Safe
581	TAMIL NADU	RAMANATHAPURAM	MANGALAGUDI	FIRKA	12450.49	12450.49	0.00	73.51	0.00	0.00	73.51	7.35	66.16	0.00	0.00	0.00	0.00	0.00	66.16	0.00	salinity
582	TAMIL NADU	RAMANATHAPURAM	MANJUR	FIRKA	9804.66	9804.66	187.41	360.56	953.32	291.27	1792.56	179.26	1613.30	118.70	13.60	8.61	140.91	72.09	1408.91	8.73	Safe
583	TAMIL NADU	RAMANATHAPURAM	MELAKODUMALUR	FIRKA	6473.68	6473.68	62.75	233.43	609.61	187.60	1093.39	109.34	984.05	56.40	0.00	0.75	57.15	58.05	869.60	5.81	Safe
584	TAMIL NADU	RAMANATHAPURAM	MELASELVANUR	FIRKA	10089.91	10089.91	0.00	69.93	0.00	0.00	69.93	6.99	62.94	0.00	0.00	0.00	0.00	0.00	62.94	0.00	salinity
585	TAMIL NADU	RAMANATHAPURAM	MUDHUKULATHUR SOUTH	FIRKA	8461.39	8461.39	0.00	288.25	0.00	225.25	513.50	51.36	462.14	0.00	0.00	0.00	0.00	0.00	462.14	0.00	salinity
586	TAMIL NADU	RAMANATHAPURAM	MUDUKULATHUR NORTH	FIRKA	8438.36	8438.36	81.80	272.44	794.62	207.00	1355.86	135.58	1220.28	43.90	0.00	9.47	53.37	40.44	1135.94	4.37	Safe
587	TAMIL NADU	RAMANATHAPURAM	NAINARKOVIL	FIRKA	13273.93	13273.93	211.43	335.01	1290.64	263.90	2100.98	210.09	1890.89	106.90	7.20	17.00	131.10	58.19	1718.60	6.93	Safe
588	TAMIL NADU	RAMANATHAPURAM	PARAMAKUDI	FIRKA	12069.78	12069.78	230.70	395.90	1173.56	334.10	2134.26	213.43	1920.83	164.30	19.40	63.17	246.87	63.17	1673.96	12.85	Safe
589	TAMIL NADU	RAMANATHAPURAM	PARTHIBANUR	FIRKA	15863.11	15863.11	263.20	736.58	1372.48	512.93	2885.19	288.52	2596.67	209.10	6.00	23.40	238.49	27.88	2353.70	9.18	Safe
590	TAMIL NADU	RAMANATHAPURAM	PERUNALI	FIRKA	10456.25	10456.25	124.14	169.17	971.99	121.97	1387.27	138.73	1248.54	48.40	0.00	1.30	49.70	35.38	1164.76	3.98	Safe
591	TAMIL NADU	RAMANATHAPURAM	PERUNGULAM(R)	FIRKA	9898.38	9898.38	11.88	240.81	1345.85	240.81	1839.35	183.94	1655.41	557.50	0.00	117.39	674.88	117.39	980.53	40.77	Safe
592	TAMIL NADU	RAMANATHAPURAM	PULLUR	FIRKA	11324.60	11324.60	161.21	512.65	1132.51	355.06	2161.43	216.15	1945.28	25.60	0.00	1.72	27.32	46.00	1873.68	1.40	Safe
593	TAMIL NADU	RAMANATHAPURAM	RAJASINGAMANGALAM	FIRKA	11134.22	11134.22	117.07	268.28	1275.32	135.20	1795.87	179.59	1616.28	15.30	0.00	1.48	16.78	25.54	1575.44	1.04	Safe
594	TAMIL NADU	RAMANATHAPURAM	RAMANATHAPURAM	FIRKA	15889.37	15889.37	19.07	424.81	2160.43	198.05	2802.36	280.24	2522.12	109.50	0.00	68.64	178.13	68.64	2343.99	7.06	Safe
595	TAMIL NADU	RAMANATHAPURAM	RAMESWARAM	FIRKA	9040.99	7715.99	0.00	14.00	939.00	14.00	967.00	96.70	870.30	152.50	3.00	52.34	207.83	52.34	662.47	23.88	Safe
596	TAMIL NADU	RAMANATHAPURAM	S.THARAIKUDI	FIRKA	12508.82	12508.82	0.00	59.55	0.00	0.00	59.55	5.96	53.59	0.00	0.00	0.00	0.00	0.00	53.59	0.00	salinity
597	TAMIL NADU	RAMANATHAPURAM	SAYALGUDI	FIRKA	11821.73	11821.73	0.00	49.66	0.00	0.00	49.66	4.97	44.69	0.00	0.00	0.00	0.00	0.00	44.69	0.00	salinity
598	TAMIL NADU	RAMANATHAPURAM	SHOLANDUR	FIRKA	12928.07	12800.07	107.67	275.30	1466.13	67.60	1916.70	191.67	1725.03	16.40	0.00	1.28	17.68	32.36	1676.27	1.02	Safe
599	TAMIL NADU	RAMANATHAPURAM	SIKKAL	FIRKA	6408.48	6408.48	0.00	56.85	0.00	0.00	56.85	5.69	51.16	0.00	0.00	0.00	0.00	0.00	51.16	0.00	salinity
600	TAMIL NADU	RAMANATHAPURAM	THERIRUVELI	FIRKA	8947.94	8947.94	86.74	272.63	842.60	172.40	1374.37	137.44	1236.93	112.30	0.00	1.75	114.05	31.73	1092.90	9.22	Safe
601	TAMIL NADU	RAMANATHAPURAM	THIRUPULLANI	FIRKA	12760.59	12760.59	0.00	26.75	0.00	0.00	26.75	2.68	24.07	0.00	0.00	0.00	0.00	0.00	24.07	0.00	salinity
602	TAMIL NADU	RAMANATHAPURAM	THIRUUTTARAKOSAMANGAI	FIRKA	6027.87	6027.87	0.00	120.33	520.22	64.14	704.69	70.47	634.22	98.50	0.00	11.20	109.69	52.71	483.02	17.30	Safe
603	TAMIL NADU	RAMANATHAPURAM	THIRUVADANAI	FIRKA	11221.58	11221.58	159.75	313.15	1122.21	220.48	1815.59	181.56	1634.03	10.00	2.00	1.88	13.88	19.05	1602.98	0.85	Safe
604	TAMIL NADU	RAMANATHAPURAM	THONDI	FIRKA	12337.20	12337.20	0.00	144.38	0.00	0.00	144.38	14.44	129.94	0.00	0.00	0.00	0.00	0.00	129.94	0.00	salinity
605	TAMIL NADU	RANIPET	ARAKKONAM NORTH	FIRKA	9470.06	9470.06	837.17	325.27	0.00	220.86	1383.30	138.33	1244.97	919.65	43.20	6.40	969.25	168.33	113.79	77.85	Semi Critical
606	TAMIL NADU	RANIPET	ARAKKONAM SOUTH	FIRKA	10716.77	10716.77	871.10	443.30	0.00	462.94	1777.34	88.90	1688.44	1017.90	64.00	357.04	1438.94	357.04	249.50	85.22	Semi Critical
607	TAMIL NADU	RANIPET	ARCOT	FIRKA	4525.06	4525.06	378.22	175.28	15.26	262.55	831.31	83.14	748.17	1122.00	72.85	49.03	1243.89	49.73	0.22	166.26	Over Exploited
608	TAMIL NADU	RANIPET	BANAVARAM	FIRKA	9090.10	9090.10	621.66	286.86	9.36	196.23	1114.11	111.42	1002.69	783.65	68.60	8.00	860.25	48.92	101.52	85.79	Semi Critical
609	TAMIL NADU	RANIPET	KALAVAI	FIRKA	9312.86	9312.86	792.98	557.33	7.38	408.60	1766.29	176.64	1589.65	1389.75	6.36	10.32	1406.43	32.31	161.23	88.47	Semi Critical
610	TAMIL NADU	RANIPET	KAVERIPAKKAM	FIRKA	9871.40	9871.40	939.59	515.63	1.27	301.77	1758.26	175.82	1582.44	1344.20	40.10	13.30	1397.60	52.37	145.77	88.32	Semi Critical
611	TAMIL NADU	RANIPET	MAMBAKKAM(R)	FIRKA	11619.23	11619.23	989.36	391.47	9.20	331.59	1721.62	172.16	1549.46	1296.50	11.20	9.64	1317.34	34.87	206.89	85.02	Semi Critical
612	TAMIL NADU	RANIPET	NEMILI(R)	FIRKA	12933.09	12933.09	1090.58	927.59	11.01	877.01	2906.19	145.36	2760.83	2016.85	106.95	5.84	2129.64	35.75	601.28	77.14	Semi Critical

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 — **Annexure - I**

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
613	TAMIL NADU	RANIPET	PALLUR	FIRKA	5553.33	5553.33	494.96	109.64	3.97	80.80	689.37	68.94	620.43	469.90	33.06	3.92	506.88	60.21	57.26	81.70	Semi Critical
614	TAMIL NADU	RANIPET	PANAPAKKAM	FIRKA	10989.61	10989.61	1060.41	366.89	9.35	344.30	1780.95	89.08	1691.87	1293.20	69.60	10.16	1372.96	34.74	294.33	81.15	Semi Critical
615	TAMIL NADU	RANIPET	PARANJI	FIRKA	10988.27	10988.27	819.37	622.99	9.38	659.13	2110.87	211.09	1899.78	1229.60	110.40	13.08	1353.08	50.23	509.55	71.22	Semi Critical
616	TAMIL NADU	RANIPET	PUDUPADI	FIRKA	9549.26	9549.26	820.36	274.72	11.55	344.86	1451.49	145.15	1306.34	1510.10	34.40	15.32	1559.82	134.87	0.51	119.40	Over Exploited
617	TAMIL NADU	RANIPET	RANIPET	FIRKA	10287.69	10287.69	928.35	157.24	36.31	207.68	1329.58	132.96	1196.62	908.60	75.20	65.11	1048.91	69.50	143.32	87.66	Semi Critical
618	TAMIL NADU	RANIPET	SHOLINGUR	FIRKA	10996.17	10996.17	752.01	803.19	11.32	612.69	2179.21	217.92	1961.29	1274.05	72.00	74.68	1420.73	74.68	540.56	72.44	Semi Critical
619	TAMIL NADU	RANIPET	THIMIRI	FIRKA	11847.13	11847.13	1008.77	444.21	9.38	381.36	1843.72	184.37	1659.35	1579.20	80.00	19.95	1679.15	32.77	0.58	101.19	Over Exploited
620	TAMIL NADU	RANIPET	VELAM	FIRKA	8698.23	8698.23	594.86	253.29	8.96	129.70	986.81	98.68	888.13	582.25	0.00	7.48	589.73	82.54	223.34	66.40	Safe
621	TAMIL NADU	RANIPET	VISHARAM	FIRKA	7146.79	7146.79	497.79	242.05	24.10	217.38	981.32	98.14	883.18	651.70	111.20	24.72	787.62	77.26	43.02	89.18	Semi Critical
622	TAMIL NADU	RANIPET	WALAJAH	FIRKA	12005.98	12005.98	1022.39	324.63	8.21	374.04	1729.27	172.93	1556.34	1683.75	85.15	76.71	1845.61	81.67	1.75	118.59	Over Exploited
623	TAMIL NADU	SALEM	ALAGAPURAM	FIRKA	4118.39	3472.48	208.70	117.58	0.00	31.10	357.38	35.74	321.64	445.20	0.00	25.44	470.64	25.44	13.93	146.33	Over Exploited
624	TAMIL NADU	SALEM	ARUNUTHUMALAI	FIRKA	1923.46	1900.97	92.73	16.54	11.70	5.06	126.03	12.61	113.42	81.00	0.00	1.08	82.08	6.18	26.24	72.37	Semi Critical
625	TAMIL NADU	SALEM	ATTUR	FIRKA	14756.82	14232.74	1062.60	1137.25	8.77	218.61	2427.23	242.73	2184.50	2946.00	20.00	42.45	3008.46	59.74	426.04	137.72	Over Exploited
626	TAMIL NADU	SALEM	BELUR	FIRKA	7208.40	7208.40	449.60	542.14	32.70	83.44	1107.88	110.79	997.09	1190.90	0.20	8.32	1199.42	38.94	253.05	120.29	Over Exploited
627	TAMIL NADU	SALEM	EDAPPADY	FIRKA	7525.80	7525.80	307.87	346.21	51.10	116.66	821.84	82.19	739.65	1109.75	7.20	25.98	1142.93	48.89	85.76	154.52	Over Exploited
628	TAMIL NADU	SALEM	ERNAPURAM	FIRKA	12559.64	12559.64	559.15	452.64	96.71	111.73	1220.23	122.02	1098.21	1678.10	0.00	23.44	1701.54	73.61	87.82	154.94	Over Exploited
629	TAMIL NADU	SALEM	GANGAVALLI	FIRKA	25272.78	24862.14	1292.31	2468.47	67.53	488.57	4316.88	431.69	3885.19	7207.80	86.80	48.10	7342.69	62.07	729.15	188.99	Over Exploited
630	TAMIL NADU	SALEM	KADAYAMPATTI	FIRKA	14290.55	13323.41	529.53	930.19	62.89	148.24	1670.85	167.08	1503.77	2002.80	0.00	6.12	2008.92	62.56	413.66	133.59	Over Exploited
631	TAMIL NADU	SALEM	KALRAYAN HILLS	FIRKA	20262.00	15609.87	772.75	511.31	48.45	68.79	1401.30	140.13	1261.17	949.40	1.40	6.16	956.96	45.23	304.21	75.88	Semi Critical
632	TAMIL NADU	SALEM	KARIPATTY	FIRKA	11643.62	10504.37	546.01	666.22	28.53	110.51	1351.27	135.12	1216.15	1698.00	36.60	20.48	1755.08	89.19	260.83	144.31	Over Exploited
633	TAMIL NADU	SALEM	KARUPUR	FIRKA	8692.63	8544.88	475.45	403.59	56.46	89.24	1024.74	102.47	922.27	876.90	6.00	19.88	902.78	100.00	221.60	97.89	critical
634	TAMIL NADU	SALEM	KATTUKOTAI	FIRKA	12727.52	12713.99	472.04	914.68	24.67	217.63	1629.02	162.90	1466.12	3538.70	9.00	35.46	3583.16	64.19	109.24	244.40	Over Exploited
635	TAMIL NADU	SALEM	KOLATHUR(S)	FIRKA	19461.04	19359.76	884.08	1294.15	13.65	240.07	2431.95	243.20	2188.75	2171.45	1.20	38.80	2211.45	78.98	835.61	101.04	Over Exploited
636	TAMIL NADU	SALEM	KONDALAMPATTY	FIRKA	1936.96	1936.96	81.00	95.14	8.43	18.00	202.57	20.26	182.31	249.00	4.00	23.60	276.60	23.60	15.61	151.72	Over Exploited
637	TAMIL NADU	SALEM	KONGANAPURAM	FIRKA	11927.89	11927.89	486.84	416.53	82.58	103.32	1089.27	108.92	980.35	1140.60	7.60	28.20	1176.40	96.57	53.50	120.00	Over Exploited
638	TAMIL NADU	SALEM	MALLIYAKARAI	FIRKA	12433.70	12433.70	461.64	1648.20	24.12	251.36	2385.32	238.53	2146.79	4016.60	13.60	46.19	4076.40	63.23	657.09	189.88	Over Exploited
639	TAMIL NADU	SALEM	MECHERY	FIRKA	9062.43	9062.43	442.36	209.91	21.63	64.67	738.57	73.86	664.71	986.59	0.00	39.87	1026.45	74.85	1.97	154.42	Over Exploited
640	TAMIL NADU	SALEM	METTUR TOWN	FIRKA	11428.87	10496.63	512.37	1260.75	25.06	330.66	2128.84	212.88	1915.96	1781.75	6.40	28.04	1816.19	65.95	604.30	94.79	critical
641	TAMIL NADU	SALEM	NANGAVALLI	FIRKA	8975.45	8792.19	429.17	323.99	20.99	91.79	865.94	86.59	779.35	1402.50	0.00	48.92	1451.41	58.04	25.95	186.23	Over Exploited
642	TAMIL NADU	SALEM	OMALUR	FIRKA	6926.72	6926.72	385.41	490.72	45.77	104.80	1026.70	102.67	924.03	946.05	0.00	44.14	990.19	88.13	231.06	107.16	Over Exploited
643	TAMIL NADU	SALEM	PACHAMALAI	FIRKA	2321.26	2285.53	77.85	46.75	6.71	17.65	148.96	14.90	134.06	123.48	0.00	0.84	124.32	8.74	1.84	92.73	critical
644	TAMIL NADU	SALEM	PALAMALAI	FIRKA	3560.79	2675.96	94.38	34.65	0.00	14.85	143.88	14.39	129.49	198.00	0.00	4.60	202.60	11.78	0.00	156.46	Over Exploited
645	TAMIL NADU	SALEM	PANAMARATHUPATTI	FIRKA	9201.05	8769.68	586.80	572.02	61.04	199.78	1419.64	141.97	1277.67	1422.50	31.00	16.48	1469.98	87.38	209.30	115.05	Over Exploited
646	TAMIL NADU	SALEM	PETHANAICKENPALAYAM	FIRKA	8644.98	8592.99	319.04	842.96	16.67	121.32	1299.99	130.00	1169.99	1815.50	6.00	35.66	1857.16	42.95	346.48	158.73	Over Exploited
647	TAMIL NADU	SALEM	POOLAMPATTI	FIRKA	12359.71	11735.73	479.00	1213.09	81.25	163.65	1936.99	193.70	1743.29	2425.60	1.60	25.28	2452.48	59.59	483.24	140.68	Over Exploited
648	TAMIL NADU	SALEM	POTANERY	FIRKA	10554.96	10506.33	611.06	596.41	82.66	81.41	1371.54	137.16	1234.38	1293.10	2.00	27.65	1322.76	60.31	292.60	107.16	Over Exploited
649	TAMIL NADU	SALEM	PUTHUR(S)	FIRKA	5349.43	5296.40	251.83	45.09	31.17	2.35	330.44	33.05	297.39	36.48	0.00	3.92	40.40	16.53	244.38	13.58	Safe
650	TAMIL NADU	SALEM	SALEM TOWN	FIRKA	7681.34	7542.89	315.44	418.62	32.81	90.89	857.76	85.78	771.98	1365.70	3.80	49.31	1418.81	49.31	107.97	183.79	Over Exploited
651	TAMIL NADU	SALEM	SANKAGIRI WEST	FIRKA	10331.20	10257.32	517.56	253.17	89.94	82.78	943.45	94.34	849.11	1096.20	21.60	22.96	1140.76	43.96	8.48	134.35	Over Exploited
652	TAMIL NADU	SALEM	SANKARI EAST	FIRKA	10865.15	8722.35	385.10	379.58	66.92	117.15	948.75	94.88	853.87	1679.60	2.40	9.60	1691.60	34.75	2.63	198.11	Over Exploited
653	TAMIL NADU	SALEM	SEMMANDAPATTI	FIRKA	12264.35	12238.48	680.97	461.31	80.87	128.75	1351.90	135.19	1216.71	1646.80	0.20	10.28	1657.28	107.83	65.65	136.21	Over Exploited
654	TAMIL NADU	SALEM	SURAMANGALAM	FIRKA	3272.37	3272.37	218.96	219.42	22.78	50.72	511.88	51.18	460.70	653.40	0.00	25.12	678.51	25.12	44.50	147.28	Over Exploited
655	TAMIL NADU	SALEM	THALAIVASAL	FIRKA	10645.72	10645.72	553.36	1090.70	28.91	242.99	1915.96	191.60	1724.36	3918.00	9.60	37.61	3965.21	58.12	178.25	229.95	Over Exploited
656	TAMIL NADU	SALEM	THARAMANGALAM	FIRKA	13510.71	13432.19	749.42	547.60	88.57	113.88	1499.47	149.96	1349.51	1412.70	1.60	62.50	1476.80	110.18	171.96	109.43	Over Exploited
657	TAMIL NADU	SALEM	THEVOOR	FIRKA	8763.36	8600.21	316.42	1490.09	65.98	104.69	1977.18	197.72	1779.46	1581.80	0.00	7.04	1588.84	32.10	190.62	89.29	Semi Critical
658	TAMIL NADU	SALEM	THIRUMALAIGIRI	FIRKA	5745.38	3935.56	164.59	178.19	17.12	54.78	414.68	41.47	373.21	804.60	0.00	17.53	822.13	30.18	0.56	220.29	Over Exploited
659	TAMIL NADU	SALEM	VALAPADY	FIRKA	10719.75	9810.11	535.38	822.82	38.94	177.71	1574.85	157.49	1417.36	2735.10	20.80	18.56	2774.46	55.17	223.49	195.75	Over Exploited
660	TAMIL NADU	SALEM	VALASAIYUR	FIRKA	6535.07	6486.17	271.25	594.24	28.21	94.64	988.34	98.84	889.50	1471.00	0.00	8.00	1479.00	72.00	220.55	166.27	Over Exploited
661	TAMIL NADU	SALEM	VEERAGANUR	FIRKA	11056.11	11056.11	376.59	855.76	32.45	185.71	1450.51	145.05	1305.46	3019.70	2.80	21.95	3044.45	26.81	158.33	233.21	Over Exploited
662	TAMIL NADU	SALEM	VEERAPANDY	FIRKA	5781.27	5781.27	241.77	536.35	25.15	100.89	904.16	90.41	813.75	1295.00	6.60	26.44	1328.04	40.46	121.05	163.20	Over Exploited
663	TAMIL NADU	SALEM	VELLAKADAI	FIRKA	5569.04	5308.55	315.51	57.36	31.24	4.68	408.79	40.88	367.91	75.28	0.00	3.76	79.04	13.04	279.59	21.48	Safe
664	TAMIL NADU	SALEM	VEMBADITHALAM	FIRKA	3816.42	3816.42	223.44	145.23	23.24	39.85	431.76	43.18	388.58	461.20	23.50	48.26	532.96	49.30	20.25	137.16	Over Exploited
665	TAMIL NADU	SALEM	YERCAUD TOWN	FIRKA	4551.20	4451.76	211.67	20.14	26.20	0.60	258.61	25.86	232.75	9.12	0.00	3.36	12.48	27.27	196.36	5.36	Safe
666	TAMIL NADU	SALEM	YETHAPUR	FIRKA	11191.33	6233.03	231.42	1228.59	12.09	110.39	1582.49	158.25	1424.24	1637.30	4.00	9.16	1650.46	36.36	781.13	115.88	Over Exploited
667	TAMIL NADU	SIVAGANGAI	DEVAKOTTAI	FIRKA	12663.34	12066.74	1005.10	929.73	70.80	37.39	2043.02	204.30	1838.72	456.00	11.40	32.72	500.12	32.72	1338.60	27.20	Safe
668	TAMIL NADU	SIVAGANGAI	ILAYANKUDI	FIRKA	7057.15	7057.15	431.81	759.04	56.65	30.32	1277.82	127.78	1150.04	369.80	0.00	16.69	386.50	23.36	756.87	33.61	Safe
669	TAMIL NADU	SIVAGANGAI	ILAYATHANKUDI	FIRKA	14170.05	13754.55	765.41	476.32	83.19	25.09	1350.01	135.00	1215.01	305.97	0.40	17.76	324.13	20.77	887.87	26.68	Safe
670	TAMIL NADU	SIVAGANGAI	KALAIYARKOVIL	FIRKA	12655.97	12513.98	1009.87	924.04	80.34	84.67	2098.92	105.06	1993.86	1032.60	1.80	19.48	1053.88	50.91	908.55	52.86	Safe
671	TAMIL NADU	SIVAGANGAI	KALLAL	FIRKA	15896.65	13477.70	1119.35	935.85	121.46	11.59	2188.25	218.83	1969.42	141.37	0.60	28.58	170.55	48.35	1779.10	8.66	Safe
672	TAMIL NADU	SIVAGANGAI	KANDADEVI	FIRKA	12196.10	11803.97	983.21	1008.52	69.26	33.98	2094.97	209.50	1885.47	414.33	11.80	23.28	449.41	35.75	1423.59	23.84	Safe
673	TAMIL NADU	SIVAGANGAI	KANNANKUDI	FIRKA	9690.43	8227.55	685.31	1330.60	48.27	2.66	2066.84	206.68	1860.16	32.48	0.00	3.77	36.25	24.99	1802.69	1.95	Safe
674	TAMIL NADU	SIVAGANGAI	KARAIKUDI	FIRKA	13198.36	12449.53	827.17	478.88	112.20	4.62	1422.87	142.28	1280.59	56.37	9.60	639.31	705.28	639.31	575.31	55.07	Safe
675	TAMIL NADU	SIVAGANGAI	KONTAGAI	FIRKA	8829.26	8829.26	782.68	820.18	88.58	50.02	1741.46	174.15	1567.31	610.00	31.70	14.20	655.90	45.12	880.49	41.85	Safe
676	TAMIL NADU	SIVAGANGAI	MADAGUPATTI	FIRKA	10572.37	9955.30	439.71	603.13	50.25	43.63	1136.72	113.67	1023.05	532.04	3.40	14.56	550.00	39.34	448.27	53.76	Safe
677	TAMIL NADU	SIVAGANGAI	MALLAL	FIRKA	11099.83	10751.33	834.09	1067.49	69.02	37.39	2007.99	200.80	1807.19	456.00	0.00	8.99	464.99	30.80	1320.39	25.73	Safe
678	TAMIL NADU	SIVAGANGAI	MANAMADURAI	FIRKA	11866.89	11866.89	1017.61	1265.10	126.17	25.37	2434.25	243.42	2190.83	309.33	10.00	28.56	347.89	40.80	1830.70	15.88	Safe
679	TAMIL NADU	SIVAGANGAI	MARAVAMANGALAM	FIRKA	7684.01	7414.55	575.22	1128.97	47.60	17.20	1768.99	176.90	1592.09	209.80	0.40	4.39	214.59	21.71	1360.18	13.48	Safe
680	TAMIL NADU	SIVAGANGAI	MITHRAVAYAL	FIRKA	8604.70	8604.70	714.64	917.54	77.55	11.07	1720.80	172.08	1548.72	135.00	1.20	4.44	140.64	20.21	1392.31	9.08	Safe

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 — **Annexure - I**

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
681	TAMIL NADU	SIVAGANGAI	MUTHANENTHAL	FIRKA	9661.72	9661.72	828.51	1260.88	102.72	34.36	2226.47	222.65	2003.82	419.08	0.00	10.87	429.95	38.10	1546.64	21.46	Safe
682	TAMIL NADU	SIVAGANGAI	NACHIYAPURAM	FIRKA	10071.71	9466.96	526.82	602.64	57.26	6.45	1193.17	119.31	1073.86	78.60	0.00	15.46	94.06	16.58	978.68	8.76	Safe
683	TAMIL NADU	SIVAGANGAI	NATARASANKOTTAI	FIRKA	14160.98	13159.85	1020.94	1145.79	84.49	78.38	2329.60	232.97	2096.63	955.80	0.00	9.26	965.06	30.61	1110.22	46.03	Safe
684	TAMIL NADU	SIVAGANGAI	NERKUPPAI	FIRKA	9727.24	9173.66	510.50	748.83	55.48	14.09	1328.90	132.89	1196.01	171.88	0.60	9.71	182.19	28.16	995.37	15.23	Safe
685	TAMIL NADU	SIVAGANGAI	OKKUR	FIRKA	12305.29	12305.29	543.50	712.26	62.12	53.23	1371.11	137.12	1233.99	649.12	2.80	13.37	665.29	56.69	525.38	53.91	Safe
686	TAMIL NADU	SIVAGANGAI	PALLATHUR	FIRKA	11037.25	10202.35	677.86	407.55	91.94	14.79	1192.14	119.21	1072.93	180.42	17.00	189.02	386.44	189.02	686.49	36.02	Safe
687	TAMIL NADU	SIVAGANGAI	PERIYAKOTTAI	FIRKA	11504.11	11504.11	508.11	1911.88	58.07	39.23	2517.29	251.73	2265.56	478.41	3.60	17.96	499.97	47.74	1735.81	22.07	Safe
688	TAMIL NADU	SIVAGANGAI	PULIYAL	FIRKA	10135.05	10135.05	844.20	997.11	59.46	16.54	1917.31	191.74	1725.57	201.68	0.00	3.37	205.05	29.58	1494.31	11.88	Safe
689	TAMIL NADU	SIVAGANGAI	S.S.KOTTAI	FIRKA	10886.01	10104.26	477.33	684.27	30.31	51.10	1243.01	124.30	1118.71	623.18	1.60	17.12	641.90	37.07	456.86	57.38	Safe
690	TAMIL NADU	SIVAGANGAI	SAKKOTTAI	FIRKA	11332.86	10931.98	907.92	496.21	98.52	24.28	1526.93	152.69	1374.23	296.15	78.20	49.35	423.70	49.35	950.53	30.83	Safe
691	TAMIL NADU	SIVAGANGAI	SALAIGRAMAM	FIRKA	9985.18	9985.18	637.94	610.43	80.16	19.77	1348.30	67.42	1280.88	241.12	0.00	7.62	248.74	33.18	1006.58	19.42	Safe
692	TAMIL NADU	SIVAGANGAI	SARUGANI	FIRKA	12931.21	12839.20	1069.44	1960.59	75.33	29.37	3134.73	313.47	2821.26	358.17	1.60	6.78	366.55	41.52	2419.97	12.99	Safe
693	TAMIL NADU	SIVAGANGAI	SEIKALATHUR	FIRKA	11338.85	10302.32	883.44	794.50	109.53	17.74	1805.21	180.53	1624.68	216.39	7.20	14.10	237.69	74.97	1326.12	14.63	Safe
694	TAMIL NADU	SIVAGANGAI	SILUKKAPATTI	FIRKA	6951.01	6921.01	536.93	1055.38	44.43	25.12	1661.86	166.19	1495.67	306.40	0.00	4.23	310.63	20.24	1169.03	20.77	Safe
695	TAMIL NADU	SIVAGANGAI	SINGAMPUNARI	FIRKA	11765.82	11214.38	529.77	702.78	33.64	41.42	1307.61	130.77	1176.84	505.17	5.00	18.09	528.26	56.01	610.66	44.89	Safe
696	TAMIL NADU	SIVAGANGAI	SIVAGANGAI	FIRKA	12877.03	12430.96	988.29	880.09	94.13	49.63	2012.14	201.22	1810.92	605.28	6.80	36.06	648.14	45.32	1153.52	35.79	Safe
697	TAMIL NADU	SIVAGANGAI	SOORANAM	FIRKA	9659.02	9659.02	591.02	637.22	77.54	31.17	1336.95	133.69	1203.26	380.16	0.00	12.61	392.77	31.14	791.96	32.64	Safe
698	TAMIL NADU	SIVAGANGAI	THAMARAKKI	FIRKA	11810.43	11810.43	521.64	655.41	59.62	39.04	1275.71	127.57	1148.14	476.12	4.60	73.04	553.76	73.04	594.38	48.23	Safe
699	TAMIL NADU	SIVAGANGAI	THAYAMANGALAM	FIRKA	7178.65	7178.65	292.83	1094.30	38.42	24.35	1449.90	144.99	1304.91	296.96	0.40	8.72	306.08	24.19	983.36	23.46	Safe
700	TAMIL NADU	SIVAGANGAI	THIRUKOSTIYUR	FIRKA	5286.75	5286.75	294.20	547.45	31.97	26.29	899.91	90.00	809.91	320.60	0.00	12.37	332.97	24.95	464.36	41.11	Safe
701	TAMIL NADU	SIVAGANGAI	THIRUPATTUR	FIRKA	9031.86	9031.86	502.60	541.48	54.62	13.51	1112.21	111.22	1000.99	164.80	2.60	20.70	188.10	29.11	804.48	18.79	Safe
702	TAMIL NADU	SIVAGANGAI	THIRUPPACHETTHI	FIRKA	9851.32	9851.32	696.14	924.41	98.83	84.51	1803.89	93.55	1710.34	1030.60	0.40	20.80	1051.80	51.98	627.36	61.50	Safe
703	TAMIL NADU	SIVAGANGAI	THIRUPPUVANAM	FIRKA	9937.14	9937.14	734.08	1045.70	99.69	63.42	1942.89	194.29	1748.60	773.38	10.40	16.10	799.88	41.41	923.41	45.74	Safe
704	TAMIL NADU	SIVAGANGAI	THIRUVUDAIYARPURAM	FIRKA	7265.63	7265.63	444.57	795.88	58.33	30.14	1328.92	132.90	1196.02	367.56	0.40	10.01	377.97	32.76	795.30	31.60	Safe
705	TAMIL NADU	SIVAGANGAI	VARAPPUR	FIRKA	16023.00	14129.28	667.47	649.38	42.39	60.34	1419.58	141.96	1277.62	735.80	0.00	9.65	745.45	72.75	469.07	58.35	Safe
706	TAMIL NADU	TENKASI	ALANGULAM(T)	FIRKA	10242.04	9493.24	532.38	635.32	124.79	135.40	1427.89	142.79	1285.10	973.00	11.60	30.00	1014.60	30.00	270.50	78.95	Semi Critical
707	TAMIL NADU	TENKASI	ALWARKURICHI	FIRKA	6077.29	6077.29	253.51	2605.12	33.33	331.39	3223.35	322.33	2901.02	345.80	0.00	6.60	352.39	6.60	2548.63	12.15	Safe
708	TAMIL NADU	TENKASI	AYIKUDI	FIRKA	8486.63	8394.29	301.27	1494.30	77.68	233.21	2106.46	135.06	1971.40	1608.60	4.00	15.96	1628.56	15.96	535.34	82.61	Semi Critical
709	TAMIL NADU	TENKASI	CUDDALOR(T)	FIRKA	8303.39	8303.39	460.19	1313.02	120.83	110.86	2004.90	200.49	1804.41	1465.00	0.80	5.72	1471.52	5.72	632.18	81.55	Semi Critical
710	TAMIL NADU	TENKASI	ELATHUR(T)	FIRKA	4301.34	4154.07	140.72	545.91	49.39	17.15	753.17	47.23	705.94	157.50	16.00	3.92	177.42	3.92	528.52	25.13	Safe
711	TAMIL NADU	TENKASI	KADAYAM	FIRKA	8200.18	8200.18	338.28	1819.21	63.90	198.51	2419.90	241.99	2177.91	616.00	3.60	3.40	622.99	3.40	1554.92	28.60	Safe
712	TAMIL NADU	TENKASI	KADAYANALLUR	FIRKA	17414.93	12058.05	469.38	2854.99	94.99	425.30	3844.66	384.46	3460.20	2482.40	22.80	46.80	2552.00	46.80	1041.60	73.75	Semi Critical
713	TAMIL NADU	TENKASI	KALLURANI	FIRKA	8909.20	8909.20	431.58	1520.19	209.18	233.49	2394.44	239.44	2155.00	1806.00	29.20	58.16	1893.36	58.16	411.88	87.86	Semi Critical
714	TAMIL NADU	TENKASI	KARISALKULAM	FIRKA	13536.08	13536.08	605.53	1276.77	148.03	474.68	2505.01	250.50	2254.51	3163.00	0.00	6.20	3169.20	6.20	509.33	140.57	Over Exploited
715	TAMIL NADU	TENKASI	KARIVALAMVANTHANALLUR	FIRKA	11350.41	11350.41	455.58	1277.89	117.00	148.08	1998.55	199.86	1798.69	2082.00	6.00	225.00	2313.00	225.00	744.67	128.59	Over Exploited
716	TAMIL NADU	TENKASI	KARUVANTHA	FIRKA	6287.45	6287.45	305.05	215.75	66.99	91.29	679.08	67.91	611.17	980.00	0.40	16.00	996.40	16.00	16.06	163.03	Over Exploited
717	TAMIL NADU	TENKASI	KEEZHAPAVOOR	FIRKA	5938.79	5938.79	282.75	984.91	66.28	229.80	1563.74	156.38	1407.36	1655.50	22.40	46.80	1724.70	46.80	158.37	122.55	Over Exploited
718	TAMIL NADU	TENKASI	KURUKKALPATTI	FIRKA	9860.15	9860.15	440.82	664.16	107.77	132.07	1344.82	134.48	1210.35	1727.20	2.80	4.64	1734.64	4.64	333.12	143.32	Over Exploited
719	TAMIL NADU	TENKASI	NETTUR	FIRKA	5024.97	4874.63	233.35	1282.04	54.70	374.70	1944.79	194.48	1750.31	1514.00	10.34	16.80	1541.14	16.80	566.02	88.05	Semi Critical
720	TAMIL NADU	TENKASI	PANPOLI	FIRKA	6928.93	6487.56	372.88	1191.05	84.21	66.17	1714.31	171.43	1542.88	305.20	10.80	4.16	320.16	4.16	1222.72	20.75	Safe
721	TAMIL NADU	TENKASI	PAZHANKOTTAI	FIRKA	10530.73	10530.73	463.14	1042.58	79.37	476.89	2061.98	206.20	1855.78	3288.00	0.00	22.00	3310.00	22.00	297.37	178.36	Over Exploited
722	TAMIL NADU	TENKASI	PUDUPATTI	FIRKA	5402.50	5402.50	281.22	213.72	71.63	46.16	612.73	34.12	578.61	283.50	0.00	1.92	285.42	1.92	293.19	49.33	Safe
723	TAMIL NADU	TENKASI	PULIANGUDI	FIRKA	23421.18	9872.58	437.14	1799.39	97.65	244.11	2578.29	257.83	2320.46	2331.28	1.20	26.88	2359.36	26.88	601.68	101.68	Over Exploited
724	TAMIL NADU	TENKASI	SANKARANKOVIL	FIRKA	9312.93	9312.93	480.14	784.59	127.16	260.96	1652.85	165.29	1487.56	1258.40	8.80	24.00	1291.20	24.00	213.37	86.80	Semi Critical
725	TAMIL NADU	TENKASI	SERNTHAMANGALAM	FIRKA	9272.09	9272.09	391.88	879.75	95.80	125.98	1493.41	149.34	1344.07	1300.62	0.00	1.64	1302.26	1.64	401.30	96.89	critical
726	TAMIL NADU	TENKASI	SHENCOTTAI	FIRKA	9821.55	5655.44	315.61	1888.82	77.55	331.98	2613.96	261.39	2352.57	150.50	0.40	5.00	155.91	5.00	2196.66	6.63	Safe
727	TAMIL NADU	TENKASI	SIVAGIRI	FIRKA	16056.43	9070.97	283.00	2590.29	96.74	134.76	3104.79	310.48	2794.31	1425.20	0.00	31.16	1456.36	31.16	1337.95	52.12	Safe
728	TAMIL NADU	TENKASI	SURANDAI	FIRKA	5477.57	5477.57	294.83	966.55	103.38	176.30	1541.06	154.11	1386.95	955.50	19.20	214.50	1189.20	214.50	217.55	85.74	Semi Critical
729	TAMIL NADU	TENKASI	TENKASI	FIRKA	15015.04	8498.04	324.45	2347.17	95.88	267.18	3034.68	303.47	2731.21	786.80	0.80	23.68	811.28	23.68	1919.93	29.70	Safe
730	TAMIL NADU	TENKASI	THIRUVENGADAM	FIRKA	11087.08	11087.08	514.76	647.62	88.21	96.81	1347.40	134.74	1212.66	644.70	0.00	6.84	651.54	6.84	561.12	53.73	Safe
731	TAMIL NADU	TENKASI	UTHUMALAI	FIRKA	10925.46	9630.52	447.85	1106.66	79.46	144.88	1778.85	177.89	1600.96	1449.00	0.40	8.96	1458.36	8.96	742.55	91.09	critical
732	TAMIL NADU	TENKASI	VASUDEVANALLUR	FIRKA	12604.48	8054.16	218.54	1799.50	73.98	127.94	2219.96	222.00	1997.96	1236.90	2.00	56.00	1294.90	56.00	703.06	64.81	Safe
733	TAMIL NADU	TENKASI	VEERAKERALAMPUDUR	FIRKA	4570.50	4570.50	148.30	1680.85	41.71	330.96	2201.82	220.19	1981.63	1077.30	6.00	9.80	1093.11	9.80	888.52	55.16	Safe
734	TAMIL NADU	TENKASI	VEERASIGAMANI	FIRKA	8678.85	8678.85	366.46	408.68	89.59	96.49	961.22	96.12	865.10	1052.00	0.00	6.12	1058.12	6.12	149.70	122.31	Over Exploited
735	TAMIL NADU	TENKASI	VENKADAMPATTI	FIRKA	5205.74	5205.74	283.57	470.76	44.64	132.37	931.34	93.13	838.21	931.20	0.00	4.08	935.28	4.08	5.14	111.58	Over Exploited
736	TAMIL NADU	THANJAVUR	AANDIKKADU	FIRKA	6992.08	6992.08	1495.98	413.66	137.41	79.95	2127.00	212.71	1914.29	1576.10	12.00	448.00	2036.10	448.00	93.22	106.36	Over Exploited
737	TAMIL NADU	THANJAVUR	AAVANAM	FIRKA	6208.97	6208.97	1110.72	454.55	88.39	168.38	1822.04	182.21	1639.83	878.40	18.00	787.08	1683.48	787.08	81.36	102.66	Over Exploited
738	TAMIL NADU	THANJAVUR	ADIRAMPATTINAM	FIRKA	5802.80	5802.80	1241.53	297.93	114.04	108.16	1761.66	176.17	1585.49	1217.28	21.60	349.20	1588.08	349.20	34.80	100.16	Over Exploited
739	TAMIL NADU	THANJAVUR	ADUTHURAI	FIRKA	5386.08	5381.01	1147.01	642.43	67.74	17.06	1874.24	187.42	1686.82	1680.00	4.80	3.70	1688.50	54.87	21.26	100.10	Over Exploited
740	TAMIL NADU	THANJAVUR	AGARAPPETTAI	FIRKA	5419.63	5419.63	915.97	631.69	66.64	70.80	1685.10	168.51	1516.59	1568.00	0.00	120.00	1688.00	120.00	129.86	111.30	Over Exploited
741	TAMIL NADU	THANJAVUR	AMMAPETTAI(T)	FIRKA	6855.51	6855.51	1134.60	1284.38	45.10	123.65	2587.73	258.78	2328.95	1168.98	0.00	1196.60	2365.58	1196.60	81.59	101.57	Over Exploited
742	TAMIL NADU	THANJAVUR	AYYAMPETTAI	FIRKA	6461.44	6461.44	891.15	732.97	42.50	64.85	1731.47	173.14	1558.33	683.60	0.00	901.00	1584.60	901.00	104.78	101.69	Over Exploited
743	TAMIL NADU	THANJAVUR	BUDALUR	FIRKA	10125.46	10125.46	133.92	990.82	9.10	64.65	1198.49	119.85	1078.64	811.80	9.60	65.76	887.16	65.76	191.48	82.25	Semi Critical
744	TAMIL NADU	THANJAVUR	CHOZHANMALIGAI	FIRKA	5673.64	5673.64	1099.23	550.45	4.68	40.91	1695.27	169.53	1525.74	51.20	12.80	1241.70	1305.70	1241.70	220.04	85.58	Semi Critical
745	TAMIL NADU	THANJAVUR	DEVANCHERI	FIRKA	5577.64	5577.64	864.50	721.76	4.60	17.80	1608.66	160.87	1447.79	173.50	0.00	2022.00	2195.50	2022.00	186.38	151.64	Over Exploited
746	TAMIL NADU	THANJAVUR	EACHANKOTTAI	FIRKA	5716.30	5716.30	1276.38	767.89	28.03	116.19	2188.49	218.85	1969.64	1024.57	0.00	248.00	1272.56	248.00	697.08	64.61	Safe
747	TAMIL NADU	THANJAVUR	KABISTHALAM	FIRKA	7101.44	7101.44	1526.58	1406.73	25.58	74.83	3033.72	303.37	2730.35	2510.12	1.60	166.32	2678.04	166.32	241.66	98.08	critical
748	TAMIL NADU	THANJAVUR	KANDIYUR	FIRKA	5066.99	5066.99	711.47	604.97	39.61	97.61	1453.66	77.11	1376.55	1387.20	0.00	79.16	1466.36	79.16	79.63	106.52	Over Exploited

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TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
749	TAMIL NADU	THANJAVUR	KATHIRAMANGALAM	FIRKA	5251.36	5251.36	1119.37	1529.41	66.11	33.09	2747.98	274.80	2473.18	2993.10	3.20	9.25	3005.55	52.30	83.86	121.53	Over Exploited
750	TAMIL NADU	THANJAVUR	KAVALIPATTI	FIRKA	7653.77	7653.77	1315.24	308.39	76.28	248.66	1948.57	194.85	1753.72	1717.93	0.00	504.00	2221.93	504.00	59.86	126.70	Over Exploited
751	TAMIL NADU	THANJAVUR	KUMBAKONAM	FIRKA	5407.68	5407.68	1257.24	449.56	4.46	8.60	1719.86	171.99	1547.87	16.00	56.00	1694.20	1766.20	1694.20	33.90	114.11	Over Exploited
752	TAMIL NADU	THANJAVUR	KURICHI(T)	FIRKA	6084.27	6084.27	1301.75	581.71	119.57	145.03	2148.06	214.80	1933.26	1050.60	36.80	252.40	1339.80	252.40	593.46	69.30	Safe
753	TAMIL NADU	THANJAVUR	KURUVIKKARAMBAI	FIRKA	8088.05	8088.05	1446.86	731.91	115.14	350.42	2644.33	264.43	2379.90	2854.44	0.00	47.35	2901.80	51.29	65.30	121.93	Over Exploited
754	TAMIL NADU	THANJAVUR	MADUKKUR	FIRKA	6891.50	6880.67	1328.71	551.00	105.31	194.94	2179.96	218.00	1961.96	2003.70	30.00	61.42	2095.12	61.42	50.70	106.79	Over Exploited
755	TAMIL NADU	THANJAVUR	MILATTUR	FIRKA	6624.00	6624.00	1096.28	1046.42	43.57	102.99	2289.26	228.93	2060.33	1017.38	0.00	1114.00	2131.38	1114.00	66.20	103.45	Over Exploited
756	TAMIL NADU	THANJAVUR	MURUKKANGUDI	FIRKA	5553.29	5550.29	1290.40	733.86	4.58	130.14	2158.98	215.90	1943.08	2170.00	0.00	19.55	2189.55	44.53	89.61	112.68	Over Exploited
757	TAMIL NADU	THANJAVUR	NACHIYARKOVIL	FIRKA	5377.50	5209.29	1211.12	624.80	4.30	108.12	1948.34	194.84	1753.50	1750.58	8.00	2.75	1761.33	68.33	61.16	100.45	Over Exploited
758	TAMIL NADU	THANJAVUR	NADUCAUVERY	FIRKA	4320.00	4320.00	719.88	710.27	38.69	90.63	1559.47	155.94	1403.53	1409.04	0.00	47.87	1456.91	47.87	57.07	103.80	Over Exploited
759	TAMIL NADU	THANJAVUR	NAMBIVAYAL	FIRKA	6632.03	6632.03	1418.95	532.26	130.34	120.60	2202.15	220.21	1981.94	1459.62	8.40	406.80	1874.82	406.80	107.12	94.60	critical
760	TAMIL NADU	THANJAVUR	NANJIKOTTAI	FIRKA	11071.64	11071.64	2196.69	233.90	54.90	4.57	2490.06	249.01	2241.05	1875.20	8.40	858.80	2742.40	858.80	69.86	122.37	Over Exploited
761	TAMIL NADU	THANJAVUR	ORATHANAD	FIRKA	7450.07	7450.07	1386.26	871.93	36.53	198.05	2492.77	249.28	2243.49	1478.34	20.00	84.00	1582.34	84.00	661.15	70.53	Semi Critical
762	TAMIL NADU	THANJAVUR	PANTHALLUR	FIRKA	5616.16	5616.16	1197.13	724.65	70.70	21.68	2014.16	201.42	1812.74	1922.97	0.00	6.35	1929.32	51.82	95.81	106.43	Over Exploited
763	TAMIL NADU	THANJAVUR	PAPANASAM	FIRKA	3591.40	3591.40	594.38	359.50	23.62	33.93	1011.43	101.14	910.29	222.40	0.00	800.00	1022.40	800.00	34.91	112.32	Over Exploited
764	TAMIL NADU	THANJAVUR	PATTUKOTTAI	FIRKA	9092.04	9092.04	1945.27	471.85	178.68	222.46	2818.26	281.82	2536.44	2676.80	108.00	6.15	2790.95	44.30	92.91	110.03	Over Exploited
765	TAMIL NADU	THANJAVUR	PERAMBUR(T)	FIRKA	4928.48	4928.48	1064.78	638.69	52.20	33.59	1789.26	178.93	1610.33	550.00	0.00	181.00	731.00	181.00	879.33	45.39	Safe
766	TAMIL NADU	THANJAVUR	PERAVURANI	FIRKA	6940.26	6940.26	1146.97	551.36	70.24	307.15	2075.72	207.57	1868.15	990.80	70.40	584.00	1645.20	584.00	222.95	88.07	Semi Critical
767	TAMIL NADU	THANJAVUR	PERIYAKKOTTAI	FIRKA	6247.01	6247.01	91.39	607.57	8.69	149.50	857.15	85.72	771.43	766.86	7.20	26.60	800.66	40.12	44.41	103.79	Over Exploited
768	TAMIL NADU	THANJAVUR	PERUMAGALUR	FIRKA	7204.44	7204.44	1288.80	592.35	102.56	136.18	2119.89	211.99	1907.90	444.20	0.00	300.80	745.00	300.80	1162.90	39.05	Safe
769	TAMIL NADU	THANJAVUR	RAMAPURAM	FIRKA	4505.31	4505.31	893.88	556.17	22.34	81.91	1554.30	155.43	1398.87	1268.50	0.00	256.50	1525.00	256.50	70.15	109.02	Over Exploited
770	TAMIL NADU	THANJAVUR	SALIYAMANGALAM	FIRKA	8112.83	8112.83	1342.69	1421.60	53.37	90.20	2907.86	290.79	2617.07	691.00	5.40	1548.00	2244.40	1548.00	372.67	85.76	Semi Critical
771	TAMIL NADU	THANJAVUR	SENGIPATTI	FIRKA	12040.23	12040.23	1751.74	397.28	118.99	85.55	2353.56	235.36	2118.20	612.00	110.00	110.00	832.00	110.00	1286.20	39.28	Safe
772	TAMIL NADU	THANJAVUR	SILLATHUR	FIRKA	7658.30	7658.30	1052.81	581.28	76.32	100.27	1810.68	181.07	1629.61	1713.60	0.00	387.00	2100.60	387.00	112.26	128.90	Over Exploited
773	TAMIL NADU	THANJAVUR	THAMBIKKOTTAI	FIRKA	10154.41	10154.41	2399.93	255.56	197.57	84.94	2938.00	293.80	2644.20	1210.00	6.00	760.00	1976.00	760.00	668.20	74.73	Semi Critical
774	TAMIL NADU	THANJAVUR	THANJAVUR	FIRKA	6748.65	6748.65	1338.98	387.99	33.47	27.61	1788.05	178.80	1609.25	447.00	38.40	706.05	1191.45	706.05	417.80	74.04	Semi Critical
775	TAMIL NADU	THANJAVUR	THEKKUR	FIRKA	6900.56	6900.56	1540.81	1195.05	33.84	169.54	2939.24	293.93	2645.31	1379.81	0.00	288.00	1667.81	288.00	977.50	63.05	Safe
776	TAMIL NADU	THANJAVUR	THIRUCHITRAMBALAM	FIRKA	6589.57	6589.57	1178.80	374.91	93.81	52.87	1700.39	170.05	1530.34	1284.80	44.80	256.00	1585.60	256.00	45.41	103.61	Over Exploited
777	TAMIL NADU	THANJAVUR	THIRUKKATTUPALLI	FIRKA	5771.31	5771.31	961.73	670.92	51.69	123.96	1808.30	180.84	1627.46	1648.00	4.00	147.00	1799.00	147.00	82.43	110.54	Over Exploited
778	TAMIL NADU	THANJAVUR	THIRUPPANANDAL	FIRKA	6155.98	6155.98	1093.50	773.67	77.49	129.36	2074.02	207.41	1866.61	2120.00	0.00	9.75	2129.75	46.94	54.38	114.10	Over Exploited
779	TAMIL NADU	THANJAVUR	THIRUVAIYARU	FIRKA	6598.93	6598.93	1212.91	743.89	51.58	126.72	2135.10	213.51	1921.59	2396.16	3.20	51.95	2451.32	55.26	64.20	127.57	Over Exploited
780	TAMIL NADU	THANJAVUR	THIRUVIDAIMARUTHUR	FIRKA	4772.46	4771.46	1017.08	639.57	60.06	31.80	1748.51	174.86	1573.65	2972.78	0.00	1.70	2974.49	32.84	143.97	189.02	Over Exploited
781	TAMIL NADU	THANJAVUR	THONDARAMPATTU	FIRKA	7391.05	7391.05	1298.12	484.28	1081.77	229.78	3093.95	309.40	2784.55	2647.40	8.00	558.50	3213.90	558.50	151.80	115.42	Over Exploited
782	TAMIL NADU	THANJAVUR	THURVARANKURICHI	FIRKA	6791.62	6791.62	1453.09	345.06	133.47	136.00	2067.62	206.77	1860.85	2215.57	8.00	18.30	2241.87	47.77	10.13	120.48	Over Exploited
783	TAMIL NADU	THANJAVUR	TIRUMANGALAKKOTTAI	FIRKA	6985.91	6985.91	1349.04	711.50	106.92	257.14	2424.60	242.46	2182.14	2846.16	0.00	11.70	2857.86	37.40	39.87	130.97	Over Exploited
784	TAMIL NADU	THANJAVUR	ULUR	FIRKA	8792.41	8792.41	1636.04	1546.24	43.12	199.38	3424.78	342.47	3082.31	2088.20	0.00	511.20	2599.40	511.20	482.91	84.33	Semi Critical
785	TAMIL NADU	THANJAVUR	VALLAM	FIRKA	11275.73	11275.73	1512.31	361.83	3.08	132.88	2010.10	201.02	1809.08	2501.13	19.60	32.64	2553.36	35.80	30.11	141.14	Over Exploited
786	TAMIL NADU	THE NILGIRIS	CHERAMBADI	FIRKA	10210.00	7091.00	1288.61	9.65	0.00	0.20	1298.46	129.84	1168.62	0.00	2.00	3.40	5.40	165.85	1000.77	0.46	Safe
787	TAMIL NADU	THE NILGIRIS	COONOOR	FIRKA	5890.29	4359.64	394.97	5.64	105.93	1.71	508.25	50.82	457.43	11.90	0.00	5.00	16.90	71.63	373.90	3.69	Safe
788	TAMIL NADU	THE NILGIRIS	DEVERSHOLAI	FIRKA	27332.74	3585.30	968.03	8.76	0.00	1.20	977.99	97.80	880.19	0.00	0.00	11.60	11.60	38.60	841.59	1.32	Safe
789	TAMIL NADU	THE NILGIRIS	GUDALUR(TN)	FIRKA	23305.58	14494.03	2145.64	16.03	27.77	2.80	2192.24	219.22	1973.02	0.00	4.00	16.55	20.55	556.99	1412.03	1.04	Safe
790	TAMIL NADU	THE NILGIRIS	ITHALAR	FIRKA	20821.76	6291.63	461.72	14.58	80.11	11.43	567.84	56.78	511.06	69.30	0.00	3.96	73.26	87.11	354.65	14.33	Safe
791	TAMIL NADU	THE NILGIRIS	KETTY	FIRKA	6130.22	5922.42	473.27	23.63	100.15	12.96	610.01	61.00	549.01	90.30	0.00	2.00	92.30	147.39	311.32	16.81	Safe
792	TAMIL NADU	THE NILGIRIS	KIL KOTAGIRI	FIRKA	11565.25	6236.18	509.94	13.36	176.02	0.00	699.32	69.93	629.39	0.00	4.00	66.07	70.07	100.40	524.99	11.13	Safe
793	TAMIL NADU	THE NILGIRIS	KOTAGIRI	FIRKA	9652.39	8374.45	584.70	56.12	178.59	16.41	835.82	83.58	752.24	8.40	24.00	0.10	32.50	191.85	527.99	4.32	Safe
794	TAMIL NADU	THE NILGIRIS	KUNDAH	FIRKA	10940.25	5999.37	429.08	19.21	74.52	16.24	539.05	53.91	485.14	37.10	0.00	1.85	38.95	103.69	344.35	8.03	Safe
795	TAMIL NADU	THE NILGIRIS	MELUR(T)	FIRKA	10862.93	8494.29	795.35	15.35	210.51	4.52	1025.73	102.58	923.15	31.50	0.00	4.95	36.44	104.83	786.83	3.95	Safe
796	TAMIL NADU	THE NILGIRIS	NEDUGULA	FIRKA	18447.56	4850.96	369.18	32.88	79.90	13.26	495.22	49.53	445.69	92.40	8.00	58.43	158.83	88.80	256.49	35.64	Safe
797	TAMIL NADU	THE NILGIRIS	PANDALUR	FIRKA	11324.00	9370.00	1298.02	15.80	38.44	6.35	1358.61	135.86	1222.75	34.00	10.40	21.90	66.30	139.75	1038.60	5.42	Safe
798	TAMIL NADU	THE NILGIRIS	SHOLUR	FIRKA	48526.88	12377.77	2110.42	44.20	0.00	23.68	2178.30	217.84	1960.46	104.30	0.00	0.75	105.05	195.53	1660.63	5.36	Safe
799	TAMIL NADU	THE NILGIRIS	THUNERI	FIRKA	20593.27	8971.36	669.63	57.55	202.13	38.42	967.73	96.78	870.95	124.60	0.00	1.00	125.60	197.24	549.11	14.42	Safe
800	TAMIL NADU	THE NILGIRIS	UDHAGAI TOWN	FIRKA	18881.86	5489.87	374.80	26.87	76.58	8.48	486.73	48.67	438.06	46.90	0.00	1.70	48.60	572.92	389.46	11.09	Safe
801	TAMIL NADU	THENI	AUNDIPATTI	FIRKA	15752.88	15052.20	492.69	1067.65	293.12	215.11	2068.57	206.85	1861.72	1442.80	0.63	46.28	1489.72	56.12	378.49	80.02	Semi Critical
802	TAMIL NADU	THENI	BODINAYAKANUR	FIRKA	8622.45	8541.97	220.84	1139.10	147.86	184.50	1692.30	169.23	1523.07	590.92	18.30	54.92	664.14	54.92	858.93	43.61	Safe
803	TAMIL NADU	THENI	CHINNAMANUR	FIRKA	6264.04	6215.31	208.91	866.20	140.82	71.73	1287.66	128.77	1158.89	403.80	3.79	7.70	415.29	49.74	701.56	35.84	Safe
804	TAMIL NADU	THENI	CUMBUM	FIRKA	7176.19	7176.19	316.75	1874.50	191.00	123.49	2505.74	250.58	2255.16	1187.65	12.62	40.12	1240.39	46.71	1008.18	55.00	Safe
805	TAMIL NADU	THENI	DEVATHANAPATTI	FIRKA	23585.50	23585.50	1087.88	2345.10	472.28	507.27	4412.53	441.25	3971.28	2683.35	1.55	26.40	2711.30	26.40	1259.98	68.27	Safe
806	TAMIL NADU	THENI	ERASAKKANAICKANUR	FIRKA	39809.04	13636.63	448.32	175.02	251.83	321.43	1196.60	119.67	1076.93	1704.00	0.00	8.88	1712.88	10.03	14.55	159.05	Over Exploited
807	TAMIL NADU	THENI	KANDAMANUR	FIRKA	5131.14	4401.87	144.63	421.33	81.59	224.32	871.87	87.19	784.68	977.50	0.00	18.38	995.89	18.38	130.81	126.92	Over Exploited
808	TAMIL NADU	THENI	KODANGIPATTI	FIRKA	6584.29	6555.86	171.50	920.50	95.39	166.18	1353.57	135.36	1218.21	858.96	13.25	41.70	913.92	41.70	304.29	75.02	Semi Critical
809	TAMIL NADU	THENI	KODIVILARPATTI	FIRKA	9441.49	9441.49	557.90	697.35	258.60	80.85	1594.70	159.48	1435.22	626.90	0.00	10.30	637.19	35.19	773.14	44.40	Safe
810	TAMIL NADU	THENI	MARKAYANKOTTAI	FIRKA	6300.83	6300.83	207.15	793.73	116.36	140.70	1257.94	125.80	1132.14	910.80	0.00	4.40	915.20	33.90	187.44	80.84	Semi Critical
811	TAMIL NADU	THENI	MYLADUMPARAI	FIRKA	9585.59	7810.83	313.67	705.48	186.62	171.50	1377.27	137.73	1239.54	1197.11	0.00	130.29	1327.40	130.29	201.83	107.09	Over Exploited
812	TAMIL NADU	THENI	RAJATHANI	FIRKA	11999.41	11999.41	394.27	619.79	222.43	201.32	1437.81	143.78	1294.03	1479.40	0.63	8.94	1488.97	34.96	109.92	115.06	Over Exploited
813	TAMIL NADU	THENI	RASINGAPURAM	FIRKA	19037.71	18970.22	595.50	310.29	276.03	154.41	1336.23	133.62	1202.61	747.40	2.21	1.65	751.26	76.85	376.15	62.47	Safe
814	TAMIL NADU	THENI	THENI	FIRKA	51217.41	15524.01	462.49	1040.84	337.88	201.07	2042.28	204.23	1838.05	1259.40	30.60	34.16	1324.17	88.86	459.18	72.04	Semi Critical
815	TAMIL NADU	THENI	THENKARAI(T)	FIRKA	16048.31	16048.31	616.85	2388.66	321.35	353.98	3680.84	368.08	3312.76	2133.68	3.16	109.70	2246.54	109.70	1066.22	67.81	Safe
816	TAMIL NADU	THENI	THEVARAM	FIRKA	8941.03	8941.03	364.75	288.43	161.85	231.76	1046.79	104.67	942.11	1374.75	1.96	55.24	1431.95	63.88	41.34	151.99	Over Exploited

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024																					Annexure - I
TAMIL NADU																					(in ham)
Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
817	TAMIL NADU	THENI	UTHAMAPALAYAM	FIRKA	12156.81	9215.65	475.25	1261.19	320.35	187.24	2244.03	224.40	2019.63	1349.35	3.41	17.15	1369.91	34.79	632.08	67.83	Safe
818	TAMIL NADU	THIRUVARUR	AALANGUDI	FIRKA	6389.37	6389.37	318.27	424.15	7.73	7.27	757.42	75.74	681.68	757.89	0.50	0.00	758.40	0.00	72.02	111.25	Over Exploited
819	TAMIL NADU	THIRUVARUR	AALATHAMBADI	FIRKA	4137.60	4137.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
820	TAMIL NADU	THIRUVARUR	AAVUR	FIRKA	7808.74	7808.74	305.57	584.08	10.23	54.68	954.56	95.45	859.11	1274.20	1.35	122.05	1397.61	181.66	83.17	162.68	Over Exploited
821	TAMIL NADU	THIRUVARUR	AKARATHIRUMAALAM	FIRKA	5707.70	5707.70	306.20	428.92	11.73	45.82	792.67	79.27	713.40	1164.00	0.20	122.05	1286.26	181.66	84.92	180.30	Over Exploited
822	TAMIL NADU	THIRUVARUR	EDAIYUR	FIRKA	10444.62	10444.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
823	TAMIL NADU	THIRUVARUR	KAMALAPURAM	FIRKA	4228.33	4228.33	181.93	465.28	7.21	21.85	676.27	67.63	608.64	562.30	0.65	63.96	626.91	95.19	99.74	103.00	Over Exploited
824	TAMIL NADU	THIRUVARUR	KOOTHANALLUR	FIRKA	5108.86	5108.86	204.81	1257.82	12.21	9.31	1484.15	148.41	1335.74	227.00	0.50	1.24	228.75	158.66	949.57	17.13	Safe
825	TAMIL NADU	THIRUVARUR	KORADACHERI	FIRKA	4996.26	4996.26	199.23	351.38	6.65	21.56	578.82	57.88	520.94	571.40	0.45	14.70	586.55	137.75	118.57	112.59	Over Exploited
826	TAMIL NADU	THIRUVARUR	KOTTUR(T)	FIRKA	9711.83	9711.83	343.74	1130.50	24.72	64.98	1563.94	156.40	1407.54	147.00	2.20	132.98	282.18	197.92	1060.42	20.05	Safe
827	TAMIL NADU	THIRUVARUR	KUDAVASAL	FIRKA	8156.64	8156.64	326.67	515.19	9.99	60.86	912.71	91.27	821.44	1016.00	0.90	94.02	1110.92	139.93	94.27	135.24	Over Exploited
828	TAMIL NADU	THIRUVARUR	KUNNIYUR	FIRKA	6820.64	6820.64	365.90	449.36	14.02	4.82	834.10	83.40	750.70	10.00	1.30	1.20	12.50	184.44	554.96	1.67	Safe
829	TAMIL NADU	THIRUVARUR	MANNARGUDI	FIRKA	7562.05	7562.05	201.07	770.54	29.42	35.14	1036.17	103.62	932.55	387.00	2.90	0.60	390.50	138.31	404.34	41.87	Safe
830	TAMIL NADU	THIRUVARUR	MUTHUPETTAI	FIRKA	13980.72	11528.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
831	TAMIL NADU	THIRUVARUR	NANNILAM	FIRKA	7184.55	7184.55	321.19	537.23	14.76	37.87	911.05	91.10	819.95	504.00	0.35	82.46	586.81	122.73	192.87	71.57	Semi Critical
832	TAMIL NADU	THIRUVARUR	NEDAMANGALAM	FIRKA	8342.69	8342.69	357.30	1290.93	0.00	25.46	1673.69	167.37	1506.32	217.00	0.45	11.28	228.73	173.85	1115.02	15.18	Safe
833	TAMIL NADU	THIRUVARUR	PALAIYUR(T)	FIRKA	9190.57	9190.57	474.56	722.36	43.47	4.61	1245.00	124.50	1120.50	145.00	0.00	102.35	247.35	152.33	823.17	22.07	Safe
834	TAMIL NADU	THIRUVARUR	PERALAM	FIRKA	6922.84	6922.84	297.86	531.77	11.80	27.58	869.01	86.90	782.11	711.00	0.00	101.77	812.77	151.47	111.44	103.92	Over Exploited
835	TAMIL NADU	THIRUVARUR	SANNANALLUR	FIRKA	4755.00	4755.00	255.09	291.21	9.77	13.14	569.21	56.92	512.29	188.50	0.55	57.49	246.54	85.57	237.67	48.13	Safe
836	TAMIL NADU	THIRUVARUR	SELLUR	FIRKA	3225.93	3225.93	107.20	256.48	4.29	22.98	390.95	39.10	351.85	326.00	0.15	42.63	368.79	63.45	47.18	104.81	Over Exploited
837	TAMIL NADU	THIRUVARUR	THALAYAMANGLAM	FIRKA	9856.73	9856.73	350.80	937.50	28.49	32.40	1349.19	134.92	1214.27	341.00	0.75	0.16	341.91	190.97	681.55	28.16	Safe
838	TAMIL NADU	THIRUVARUR	THIRUKKANNAMANGAI	FIRKA	6813.37	6813.37	304.59	501.20	14.00	51.70	871.49	87.15	784.34	975.00	0.75	135.45	1111.20	201.60	122.62	141.67	Over Exploited
839	TAMIL NADU	THIRUVARUR	THIRUTHURAIPOONDI	FIRKA	11201.07	11201.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		salinity
840	TAMIL NADU	THIRUVARUR	THIRUVARUR	FIRKA	7956.36	7956.36	426.83	434.40	16.35	8.29	885.87	88.59	797.28	11.00	3.50	0.64	15.14	202.24	580.54	1.90	Safe
841	TAMIL NADU	THIRUVARUR	THIRUVEZHIMIZHALAI	FIRKA	6840.13	6840.13	277.91	585.73	25.54	50.03	939.21	93.93	845.28	884.80	0.35	118.78	1003.93	176.79	131.83	118.77	Over Exploited
842	TAMIL NADU	THIRUVARUR	ULLIKOTTAI	FIRKA	11819.14	11819.14	510.26	917.64	31.76	48.27	1507.93	150.79	1357.14	593.00	1.05	34.36	628.41	216.40	546.69	46.30	Safe
843	TAMIL NADU	THIRUVARUR	VADAPATHIMANGALAM	FIRKA	7212.55	7212.55	386.92	292.57	14.82	22.71	717.02	71.70	645.32	779.40	0.30	28.16	807.86	172.21	118.63	125.19	Over Exploited
844	TAMIL NADU	THIRUVARUR	VADUVUR	FIRKA	7208.94	7208.94	295.56	1031.79	16.50	47.52	1391.37	139.13	1252.24	288.00	0.10	25.60	313.70	182.62	781.52	25.05	Safe
845	TAMIL NADU	THIRUVARUR	VALANGAIMAN	FIRKA	6126.01	6126.01	287.43	438.69	7.13	47.49	780.74	78.08	702.66	878.00	0.70	65.96	944.66	98.17	74.47	134.44	Over Exploited
846	TAMIL NADU	THOOTHUKUDI	ALWARTHIRUNAGARI	FIRKA	9034.98	9034.98	603.60	3221.00	110.02	717.85	4652.47	465.24	4187.23	864.40	8.00	29.52	901.92	34.98	3279.85	21.54	Safe
847	TAMIL NADU	THOOTHUKUDI	ARUMUGAMANGALAM	FIRKA	7120.49	7120.49	240.42	1745.36	45.09	432.18	2463.05	246.31	2216.74	175.20	39.20	22.92	237.32	54.34	1948.00	10.71	Safe
848	TAMIL NADU	THOOTHUKUDI	AUTHOOR	FIRKA	9383.25	9383.25	800.03	2131.96	90.52	253.34	3275.85	327.57	2948.27	345.00	14.00	68.75	427.75	68.75	2520.52	14.51	Safe
849	TAMIL NADU	THOOTHUKUDI	CHETTIKURICHI	FIRKA	11044.10	11044.10	453.18	394.85	98.81	188.16	1135.00	56.87	1078.13	618.00	0.00	1.48	619.48	24.32	435.81	57.46	Safe
850	TAMIL NADU	THOOTHUKUDI	CHOLAPURAM(T)	FIRKA	6755.86	6755.86	222.27	527.91	36.24	353.79	1140.21	114.02	1026.19	253.68	0.38	10.92	264.98	11.08	761.05	25.82	Safe
851	TAMIL NADU	THOOTHUKUDI	DEIVASEYALPURAM	FIRKA	11296.80	11161.48	477.23	747.22	72.49	274.81	1571.75	157.18	1414.57	140.40	2.10	1.12	143.62	37.31	1234.76	10.15	Safe
852	TAMIL NADU	THOOTHUKUDI	EPPODUMVENDRAN	FIRKA	13323.85	13323.85	285.31	569.81	24.59	352.36	1232.07	80.33	1151.74	102.80	4.00	11.52	118.32	29.48	1015.46	10.27	Safe
853	TAMIL NADU	THOOTHUKUDI	ETTAYAPURAM	FIRKA	12254.00	12254.00	536.88	470.10	53.11	249.51	1309.60	130.96	1178.64	344.00	0.43	23.51	367.93	23.85	810.37	31.22	Safe
854	TAMIL NADU	THOOTHUKUDI	ILLAYARASANENDAL	FIRKA	11669.59	11669.59	690.32	290.61	87.94	56.24	1125.11	112.51	1012.60	874.92	1.02	8.22	884.16	34.11	128.44	87.32	Semi Critical
855	TAMIL NADU	THOOTHUKUDI	KADALAIYOOR	FIRKA	8398.09	8398.09	367.94	401.32	36.40	171.32	976.98	97.69	879.29	325.00	3.90	3.11	332.01	18.44	531.95	37.76	Safe
856	TAMIL NADU	THOOTHUKUDI	KADALKUDI	FIRKA	16125.96	16125.96	525.14	465.65	61.69	292.67	1345.15	134.52	1210.63	6.92	0.00	2.36	9.28	25.52	1178.19	0.77	Safe
857	TAMIL NADU	THOOTHUKUDI	KADAMBUR	FIRKA	14356.55	13109.55	672.70	478.58	112.97	188.94	1453.19	145.31	1307.88	933.60	8.00	2.52	944.12	20.09	346.19	72.19	Semi Critical
858	TAMIL NADU	THOOTHUKUDI	KALUGUMALAI	FIRKA	15240.70	15229.70	624.69	712.88	100.60	409.47	1847.64	184.77	1662.87	567.00	14.00	2.89	583.89	51.52	1030.35	35.11	Safe
859	TAMIL NADU	THOOTHUKUDI	KAMANAYAKKANPATTI	FIRKA	10462.16	10462.16	540.11	510.83	65.75	255.40	1372.09	137.22	1234.87	668.00	2.00	1.76	671.76	25.74	539.13	54.40	Safe
860	TAMIL NADU	THOOTHUKUDI	KAYATHAR	FIRKA	12539.20	12539.20	575.72	1248.86	80.62	486.85	2392.05	239.21	2152.84	1482.60	16.00	13.80	1512.40	34.65	643.60	70.25	Semi Critical
861	TAMIL NADU	THOOTHUKUDI	KEELATHATTAPARAI	FIRKA	9450.09	9450.09	222.57	390.73	42.94	284.11	940.35	94.04	846.31	97.60	1.28	5.56	104.44	23.45	723.98	12.34	Safe
862	TAMIL NADU	THOOTHUKUDI	KOVILPATTI	FIRKA	8597.54	8597.54	398.21	387.47	67.80	219.68	1073.16	107.32	965.84	383.00	0.71	2.42	386.13	63.45	518.68	39.98	Safe
863	TAMIL NADU	THOOTHUKUDI	KULATHUR	FIRKA	11700.55	11700.55	604.90	514.79	51.82	275.51	1447.02	144.70	1302.32	215.60	0.49	1.05	217.13	31.39	1054.85	16.67	Safe
864	TAMIL NADU	THOOTHUKUDI	MANIYACHI	FIRKA	10987.03	10987.03	481.25	338.48	39.35	158.65	1017.73	101.78	915.94	127.88	4.00	1.88	133.76	19.09	764.97	14.60	Safe
865	TAMIL NADU	THOOTHUKUDI	MUDIVAITHANENDAL	FIRKA	9610.50	9610.50	410.91	415.86	62.41	240.71	1129.89	113.00	1016.89	333.80	1.53	7.57	342.90	36.28	645.28	33.72	Safe
866	TAMIL NADU	THOOTHUKUDI	MUTHULAPURAM	FIRKA	14245.73	14245.73	624.99	471.14	53.56	340.70	1490.39	149.04	1341.35	394.80	4.00	3.77	402.57	31.36	911.19	30.01	Safe
867	TAMIL NADU	THOOTHUKUDI	OTTAPIDARAM	FIRKA	13791.57	13335.48	471.12	321.91	60.60	115.57	969.20	96.92	872.28	427.16	16.00	15.28	458.44	47.89	381.23	52.56	Safe
868	TAMIL NADU	THOOTHUKUDI	PADARNDAPULI	FIRKA	10550.06	10550.06	402.23	467.16	45.73	364.94	1280.06	70.31	1209.75	87.60	0.00	1.24	88.84	14.79	1107.36	7.34	Safe
869	TAMIL NADU	THOOTHUKUDI	PALLAKKURICHI	FIRKA	13491.14	12840.19	820.95	390.56	334.87	112.92	1659.30	165.94	1493.36	1657.95	11.25	36.24	1705.44	67.32	28.50	114.20	Over Exploited
870	TAMIL NADU	THOOTHUKUDI	PARIVALLIKOTTAI	FIRKA	11910.37	11910.37	519.91	478.84	56.04	208.82	1263.61	126.35	1137.25	869.00	0.00	5.40	874.40	25.25	243.00	76.89	Semi Critical
871	TAMIL NADU	THOOTHUKUDI	PASUVANDANAI	FIRKA	10930.11	10293.20	363.64	548.55	46.77	278.52	1237.48	123.75	1113.73	440.80	4.00	1.56	446.36	33.28	635.65	40.08	Safe
872	TAMIL NADU	THOOTHUKUDI	PERUNGULAM(T)	FIRKA	7250.77	7250.77	258.35	1786.67	47.09	205.44	2297.55	229.75	2067.80	222.80	2.78	8.72	234.30	20.22	1822.00	11.33	Safe
873	TAMIL NADU	THOOTHUKUDI	PUDUCOTTAI(T)	FIRKA	6281.55	5795.54	195.68	951.11	36.70	251.59	1435.08	143.51	1291.57	83.40	26.00	4.85	114.25	34.50	1147.67	8.85	Safe
874	TAMIL NADU	THOOTHUKUDI	PUDUR	FIRKA	15914.42	15914.42	698.20	281.36	59.84	203.11	1242.51	124.25	1118.26	359.60	4.00	2.77	366.37	41.02	713.64	32.76	Safe
875	TAMIL NADU	THOOTHUKUDI	SATTANKULAM	FIRKA	11557.70	11302.66	527.07	1034.41	84.14	431.92	2077.54	207.76	1869.78	1359.40	2.00	14.64	1376.04	28.45	479.93	73.59	Semi Critical
876	TAMIL NADU	THOOTHUKUDI	SEIDUNGANALLUR	FIRKA	11010.03	11010.03	392.29	1679.14	71.50	638.08	2781.01	278.10	2502.91	536.80	8.00	1.20	546.00	49.31	1908.80	21.81	Safe
877	TAMIL NADU	THOOTHUKUDI	SIVAGNANAPURAM	FIRKA	12844.90	12844.90	339.99	365.38	56.91	219.97	982.25	98.23	884.02	37.80	0.00	1.62	39.42	19.11	827.11	4.46	Safe
878	TAMIL NADU	THOOTHUKUDI	SRIVAIKUNDAM	FIRKA	10015.11	10003.45	356.43	2107.02	64.97	545.97	3074.39	307.44	2766.95	551.80	5.03	0.44	557.27	35.57	2174.55	20.14	Safe
879	TAMIL NADU	THOOTHUKUDI	SRIVENKATESWARAPURAM	FIRKA	11292.96	11292.96	526.61	1286.70	84.06	511.04	2408.41	240.84	2167.57	1383.20	2.02	10.00	1395.22	38.59	743.76	64.37	Safe
880	TAMIL NADU	THOOTHUKUDI	THOOTHUKUDI	FIRKA	6095.48	6095.48	323.22	26.59	47.96	10.95	408.72	40.88	367.83	8.20	43.70	7.19	59.09	87.55	228.38	16.06	Safe
881	TAMIL NADU	THOOTHUKUDI	TIRUCHENDUR	FIRKA	9497.74	9497.74	955.13	1747.81	101.14	282.34	3086.42	308.63	2777.79	1034.40	6.00	32.37	1072.77	32.73	1704.66	38.62	Safe
882	TAMIL NADU	THOOTHUKUDI	UDANGUDI	FIRKA	14539.35	14539.35	1223.28	374.79	347.13	224.47	2169.67	216.97	1952.70	1682.11	9.28	25.16	1716.55	85.75	175.56	87.91	Semi Critical
883	TAMIL NADU	THOOTHUKUDI	VALLANADU(T)	FIRKA	10833.22	10833.14	395.43	1103.38	38.80	169.38	1706.99	170.71	1536.28	472.00	1.28	41.98	515.26	42.59	1020.41	33.54	Safe
884	TAMIL NADU	THOOTHUKUDI	VEDANATHAM	FIRKA	12296.73	12296.73	282.81	720.32	44.73	474.40	1522.26	152.22	1370.04	27.36	37.60	6.56	71.52	32.46	1272.62	5.22	Safe

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 **Annexure - I**

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
885	TAMIL NADU	THOOTHUKUDI	VEMBAR	FIRKA	12945.54	12945.54	284.23	490.06	31.85	405.15	1211.29	121.13	1090.16	116.00	0.80	3.20	120.00	34.31	939.05	11.01	Safe
886	TAMIL NADU	THOOTHUKUDI	VILATHIKULAM	FIRKA	16955.97	16955.97	673.21	489.83	75.12	286.53	1524.69	152.46	1372.23	249.60	0.26	0.95	250.81	32.03	1090.34	18.28	Safe
887	TAMIL NADU	TIRUCHIRAPPALLI	AMOOR	FIRKA	6847.77	6818.63	265.62	1611.03	45.58	104.67	2026.90	202.69	1824.21	729.40	0.00	4.79	734.19	236.79	858.02	40.25	Safe
888	TAMIL NADU	TIRUCHIRAPPALLI	ANDANALLUR FIRKA	FIRKA	5366.47	5347.48	216.17	1499.42	18.90	95.14	1829.63	182.96	1646.67	663.00	0.00	8.85	671.85	239.64	744.03	40.80	Safe
889	TAMIL NADU	TIRUCHIRAPPALLI	ELURPATTI	FIRKA	11297.60	11220.60	487.85	1303.16	29.53	120.83	1941.37	194.14	1747.23	982.37	0.00	4.81	987.18	329.27	783.37	56.50	Safe
890	TAMIL NADU	TIRUCHIRAPPALLI	ERAGUDI	FIRKA	5665.30	5665.30	255.60	615.65	24.63	306.76	1202.64	120.26	1082.38	1316.65	0.00	6.24	1322.89	155.87	300.07	122.22	Over Exploited
891	TAMIL NADU	TIRUCHIRAPPALLI	KALLAKKUDI	FIRKA	13455.89	13455.89	2174.40	471.07	127.59	70.72	2843.78	284.37	2559.41	492.80	0.00	15.14	507.94	166.09	1900.52	19.85	Safe
892	TAMIL NADU	TIRUCHIRAPPALLI	KANNANUR	FIRKA	14438.65	12901.90	641.02	1105.86	56.25	320.69	2123.82	212.38	1911.44	2210.96	0.00	4.87	2215.83	271.57	315.23	115.92	Over Exploited
893	TAMIL NADU	TIRUCHIRAPPALLI	KARIYAMANIKKAM	FIRKA	17801.46	16621.22	707.63	421.22	35.52	239.34	1403.71	140.38	1263.33	1675.24	0.00	0.20	1675.44	332.21	53.80	132.62	Over Exploited
894	TAMIL NADU	TIRUCHIRAPPALLI	KATTUPUTHUR	FIRKA	7293.13	7293.13	264.24	1202.86	19.20	161.89	1648.19	164.82	1483.37	1110.80	0.00	6.00	1116.80	179.23	193.34	75.29	Semi Critical
895	TAMIL NADU	TIRUCHIRAPPALLI	KEELANBIL	FIRKA	6520.56	6520.56	877.07	3892.66	36.44	158.94	4965.11	496.52	4468.59	1107.60	0.00	31.15	1138.75	260.67	3100.32	25.48	Safe
896	TAMIL NADU	TIRUCHIRAPPALLI	KOPPAMPATTI	FIRKA	10345.03	9212.47	415.63	723.95	40.05	266.84	1446.47	144.65	1301.82	1859.50	0.00	7.43	1866.93	282.59	247.72	143.41	Over Exploited
897	TAMIL NADU	TIRUCHIRAPPALLI	KULUMANI FIRKA	FIRKA	3876.70	3876.70	156.72	1298.35	13.70	96.62	1565.39	156.54	1408.85	569.00	3.20	6.65	578.85	236.83	599.82	41.09	Safe
898	TAMIL NADU	TIRUCHIRAPPALLI	LALGUDI	FIRKA	5547.26	5547.26	236.94	3433.75	7.88	248.40	3926.97	392.70	3534.27	1290.40	0.00	22.95	1313.35	221.73	2022.14	37.16	Safe
899	TAMIL NADU	TIRUCHIRAPPALLI	MANAPPARAI	FIRKA	13867.16	13867.16	637.05	287.54	44.56	228.08	1197.23	119.72	1077.51	1202.90	0.00	26.97	1229.87	154.72	26.04	114.14	Over Exploited
900	TAMIL NADU	TIRUCHIRAPPALLI	MANIKANDAM FIRKA	FIRKA	9133.16	9133.16	418.81	1327.02	24.87	256.31	2027.01	202.70	1824.31	1699.78	236.40	260.07	2196.25	328.11	477.35	120.39	Over Exploited
901	TAMIL NADU	TIRUCHIRAPPALLI	MANNACHANALLUR	FIRKA	11860.68	11492.27	407.72	1265.82	24.56	162.46	1860.56	186.05	1674.51	1114.80	0.00	2.60	1117.40	191.78	367.93	66.73	Safe
902	TAMIL NADU	TIRUCHIRAPPALLI	MARUNGAPURI	FIRKA	13716.90	11159.45	512.66	653.79	35.86	271.26	1473.57	147.36	1326.21	1539.10	0.00	9.03	1548.13	257.14	225.79	116.73	Over Exploited
903	TAMIL NADU	TIRUCHIRAPPALLI	MUSIRI	FIRKA	7483.38	7483.38	271.14	944.43	19.70	120.56	1355.83	135.59	1220.24	827.40	0.00	11.55	838.95	237.27	381.29	68.75	Safe
904	TAMIL NADU	TIRUCHIRAPPALLI	NAVALPATTU	FIRKA	11753.68	11753.68	443.86	2469.51	20.31	14.12	2947.80	294.77	2653.03	52.20	0.00	0.35	52.55	135.71	2465.12	1.98	Safe
905	TAMIL NADU	TIRUCHIRAPPALLI	PANNAPATTY	FIRKA	13894.02	13891.02	638.15	1162.47	44.63	571.42	2416.67	241.66	2175.01	3982.00	0.00	23.50	4005.50	77.57	294.04	184.16	Over Exploited
906	TAMIL NADU	TIRUCHIRAPPALLI	PERUVALAPPUR	FIRKA	14930.67	14511.38	721.92	282.20	43.78	181.10	1229.00	67.48	1161.52	940.80	0.00	14.93	955.73	357.00	205.79	82.28	Semi Critical
907	TAMIL NADU	TIRUCHIRAPPALLI	PULIVALAM	FIRKA	19342.36	18337.50	611.21	786.07	47.24	189.18	1633.70	163.37	1470.33	1792.06	2.80	13.07	1807.93	186.65	134.64	122.96	Over Exploited
908	TAMIL NADU	TIRUCHIRAPPALLI	PULLAMBADI	FIRKA	10456.18	10415.54	444.88	3635.11	14.79	43.02	4137.80	413.78	3724.02	298.03	0.00	19.30	317.33	331.64	3094.35	8.52	Safe
909	TAMIL NADU	TIRUCHIRAPPALLI	SENGATTUPATTI	FIRKA	12064.26	10503.10	521.84	737.96	45.79	282.93	1588.52	158.85	1429.67	1959.80	0.00	1.88	1961.68	289.08	174.75	137.21	Over Exploited
910	TAMIL NADU	TIRUCHIRAPPALLI	SIRUGAMBUR	FIRKA	8955.41	8949.06	317.50	1077.62	19.13	180.99	1595.24	159.52	1435.72	940.20	0.00	4.72	944.92	193.39	302.13	65.82	Safe
911	TAMIL NADU	TIRUCHIRAPPALLI	SOMARASAMPETTAI FIRKA	FIRKA	8091.24	8091.24	309.19	959.03	22.03	45.85	1336.10	133.61	1202.49	316.20	0.00	21.60	337.80	366.37	519.92	28.09	Safe
912	TAMIL NADU	TIRUCHIRAPPALLI	SRIRANGAM FIRKA	FIRKA	4993.33	4967.32	0.00	1043.79	0.00	65.44	1109.23	110.92	998.31	456.00	0.00	9.10	465.10	324.01	533.21	46.59	Safe
913	TAMIL NADU	TIRUCHIRAPPALLI	T.PET	FIRKA	11804.17	11470.19	467.68	468.67	50.90	418.65	1405.90	140.60	1265.30	2281.80	0.00	13.65	2295.45	111.33	38.07	181.42	Over Exploited
914	TAMIL NADU	TIRUCHIRAPPALLI	THIRUVERAMBUR	FIRKA	8981.12	8917.12	365.03	2479.01	25.47	12.08	2881.59	288.16	2593.43	45.00	6.00	14.55	65.55	264.35	2278.08	2.53	Safe
915	TAMIL NADU	TIRUCHIRAPPALLI	THOTTIAM	FIRKA	9211.27	9211.27	333.74	1906.86	24.24	179.24	2444.08	244.41	2199.67	1261.89	0.00	12.32	1274.21	205.49	732.29	57.93	Safe
916	TAMIL NADU	TIRUCHIRAPPALLI	THUMBALAM	FIRKA	10785.93	10634.85	433.62	798.33	47.20	413.83	1692.98	169.30	1523.68	2883.80	0.00	12.03	2895.83	283.28	152.14	190.05	Over Exploited
917	TAMIL NADU	TIRUCHIRAPPALLI	THURAIYUR	FIRKA	11079.00	11079.00	550.45	978.23	48.30	236.40	1813.38	181.34	1632.04	1647.40	0.00	6.10	1653.50	200.72	210.35	101.31	Over Exploited
918	TAMIL NADU	TIRUCHIRAPPALLI	THUVARANKURUCHI	FIRKA	18193.17	13870.77	637.22	751.80	44.57	434.18	1867.77	186.79	1680.99	2302.40	1.20	12.87	2316.47	321.61	309.57	137.80	Over Exploited
919	TAMIL NADU	TIRUCHIRAPPALLI	TRICHY NORTH	FIRKA	1461.08	1461.08	0.00	199.70	0.00	1.93	201.63	20.16	181.47	0.00	0.00	20.00	20.00	89.42	92.05	11.02	Safe
920	TAMIL NADU	TIRUCHIRAPPALLI	TRICHY SOUTH	FIRKA	5522.32	5522.32	0.00	527.38	0.00	17.66	545.04	54.51	490.53	111.90	2.40	16.85	131.15	116.04	260.19	26.74	Safe
921	TAMIL NADU	TIRUCHIRAPPALLI	TRICHY-NORTH	FIRKA	1323.67	1323.67	0.00	167.34	0.00	0.74	168.08	16.80	151.28	1.00	0.00	4.01	5.01	11.91	138.37	3.31	Safe
922	TAMIL NADU	TIRUCHIRAPPALLI	TRICHY-SOUTH	FIRKA	2838.67	2838.67	0.00	141.98	0.00	6.14	148.12	14.81	133.31	42.50	0.00	16.36	58.86	24.38	66.43	44.15	Safe
923	TAMIL NADU	TIRUCHIRAPPALLI	UPPILLIYAPURAM	FIRKA	6960.45	6960.45	314.03	915.00	30.26	205.63	1464.92	146.49	1318.43	1396.44	0.80	8.52	1405.76	128.96	398.54	106.62	Over Exploited
924	TAMIL NADU	TIRUCHIRAPPALLI	V.PERIAPATTY	FIRKA	16018.10	15739.18	792.73	646.70	56.85	351.81	1848.09	184.82	1663.27	2562.00	0.30	9.85	2572.15	128.96	90.60	154.64	Over Exploited
925	TAMIL NADU	TIRUCHIRAPPALLI	VAIYAMPATTI	FIRKA	10723.51	10435.46	525.60	650.48	37.69	227.38	1441.15	144.11	1297.04	1562.00	3.20	9.01	1574.21	312.27	290.56	121.37	Over Exploited
926	TAMIL NADU	TIRUCHIRAPPALLI	VALADI	FIRKA	8019.70	7425.63	317.17	3340.10	10.55	227.68	3895.50	389.54	3505.96	1551.10	0.00	14.95	1566.05	276.64	1678.22	44.67	Safe
927	TAMIL NADU	TIRUCHIRAPPALLI	VALAIYADUPPU	FIRKA	8961.89	8820.95	359.66	785.39	39.15	287.96	1472.16	147.22	1324.94	2000.00	0.00	9.95	2009.95	346.60	309.67	151.70	Over Exploited
928	TAMIL NADU	TIRUCHIRAPPALLI	VALANADU	FIRKA	13817.33	12955.19	495.96	791.41	41.63	217.57	1546.57	154.65	1391.92	1202.63	0.00	11.73	1214.36	179.08	177.56	87.24	Semi Critical
929	TAMIL NADU	TIRUCHIRAPPALLI	VENGUR	FIRKA	6077.75	5907.72	246.10	2536.95	14.93	19.06	2817.04	281.70	2535.34	10.80	4.00	8.85	23.65	237.50	2283.04	0.93	Safe
930	TAMIL NADU	TIRUNELVELI	AMBASAMUDRAM	FIRKA	42522.00	8754.00	1606.53	3210.36	395.68	606.87	5819.44	581.95	5237.49	140.75	2.40	16.73	159.88	31.68	5062.66	3.05	Safe
931	TAMIL NADU	TIRUNELVELI	CHERANMAHADEVI	FIRKA	11032.87	8617.59	1124.84	2749.40	145.88	725.36	4745.48	474.56	4270.92	415.00	1.80	2.66	419.47	34.85	3819.26	9.82	Safe
932	TAMIL NADU	TIRUNELVELI	ERUVADI	FIRKA	11262.87	10972.46	892.97	2047.88	220.85	491.33	3653.03	365.31	3287.72	2006.25	2.65	5.32	2014.23	44.91	1233.90	61.27	Safe
933	TAMIL NADU	TIRUNELVELI	GANGAIKONDAN	FIRKA	10616.68	10053.75	856.91	648.85	349.79	120.02	1975.57	106.90	1868.67	440.00	0.00	26.28	466.28	26.28	1402.39	24.95	Safe
934	TAMIL NADU	TIRUNELVELI	KALAKAD	FIRKA	34738.41	12379.94	907.92	1619.20	434.68	397.88	3359.68	335.97	3023.71	1640.25	1.60	4.91	1646.76	33.90	1347.96	54.46	Safe
935	TAMIL NADU	TIRUNELVELI	LEVINJIPURAM	FIRKA	9152.18	9152.18	1402.17	497.16	284.74	214.09	2398.16	239.81	2158.35	1458.75	1.10	13.25	1473.11	55.56	642.93	68.25	Safe
936	TAMIL NADU	TIRUNELVELI	MANUR	FIRKA	13378.04	13378.04	1517.52	663.36	279.98	303.22	2764.08	276.41	2487.67	1602.50	0.40	32.24	1635.15	36.08	848.68	65.73	Safe
937	TAMIL NADU	TIRUNELVELI	MATHAVAKURICHI	FIRKA	8967.94	8967.94	1368.78	513.28	283.32	151.27	2316.65	231.67	2084.98	958.50	0.00	21.79	980.29	30.32	1096.16	47.02	Safe
938	TAMIL NADU	TIRUNELVELI	MELAPATTAM	FIRKA	7970.66	7514.16	955.74	746.29	237.39	57.35	1996.77	199.68	1797.09	161.25	0.00	23.22	184.47	46.11	1589.73	10.26	Safe
939	TAMIL NADU	TIRUNELVELI	MELASEVAL	FIRKA	8974.46	8974.46	1171.42	2099.69	151.92	365.52	3788.55	378.85	3409.70	1108.00	1.51	40.21	1149.71	40.21	2259.99	33.72	Safe
940	TAMIL NADU	TIRUNELVELI	MOOLAKARAIPATTI	FIRKA	14121.68	14121.68	1247.41	1210.54	495.84	478.63	3432.42	179.57	3252.85	2080.95	3.20	11.09	2095.24	32.11	1136.59	64.41	Safe
941	TAMIL NADU	TIRUNELVELI	MUKKUDAL	FIRKA	4725.56	4725.56	616.82	1333.53	79.99	41.26	2071.60	207.17	1864.43	180.00	0.00	8.08	188.08	90.81	1593.62	10.09	Safe
942	TAMIL NADU	TIRUNELVELI	MUNNEERPALLAM	FIRKA	7530.61	7530.61	686.73	991.02	268.03	148.76	2094.54	209.46	1885.08	521.25	4.08	24.65	549.98	24.65	1335.10	29.18	Safe
943	TAMIL NADU	TIRUNELVELI	NANGUNERI	FIRKA	12959.59	12959.59	1200.73	1107.89	455.04	296.95	3060.61	167.65	2892.96	1286.00	4.23	14.37	1304.61	76.23	1526.49	45.10	Safe
944	TAMIL NADU	TIRUNELVELI	NARANAMMALPURAM	FIRKA	6726.83	6726.83	684.48	627.59	212.51	102.09	1626.67	162.67	1464.00	396.00	6.50	11.25	413.75	30.86	1030.64	28.26	Safe
945	TAMIL NADU	TIRUNELVELI	PALAYAMKOTTAI	FIRKA	7541.69	7541.69	1059.01	489.80	238.26	64.02	1851.09	100.24	1750.85	248.75	0.80	31.41	280.96	31.41	1469.89	16.05	Safe
946	TAMIL NADU	TIRUNELVELI	PANAGUDI	FIRKA	10000.76	10000.76	912.93	1100.58	155.13	252.67	2421.31	242.13	2179.18	1215.50	3.91	37.25	1256.68	37.25	922.50	57.67	Safe
947	TAMIL NADU	TIRUNELVELI	PAPPAKUDI	FIRKA	6126.22	6126.22	369.58	758.70	144.33	251.66	1524.27	152.43	1371.84	347.50	0.00	2.12	349.62	2.12	1022.22	25.49	Safe
948	TAMIL NADU	TIRUNELVELI	PAZHAVOOR	FIRKA	10963.12	10963.12	1000.78	668.25	170.06	215.93	2055.02	205.50	1849.52	1281.35	0.00	4.95	1286.30	66.83	501.34	69.55	Safe
949	TAMIL NADU	TIRUNELVELI	POOLAM	FIRKA	10119.27	10119.27	615.83	666.00	156.97	177.06	1615.86	161.59	1454.27	710.15	5.96	6.33	722.44	29.53	708.63	49.68	Safe
950	TAMIL NADU	TIRUNELVELI	RADHAPURAM	FIRKA	15500.84	15500.84	1705.19	396.22	544.27	245.85	2891.53	289.15	2602.38	1914.00	0.00	45.06	1959.05	45.06	643.33	75.28	Semi Critical
951	TAMIL NADU	TIRUNELVELI	SAMUGARENGAPURAM	FIRKA	15097.66	15097.66	1378.21	1054.23	234.19	377.93	3044.56	304.45	2740.11	1538.00	0.56	70.32	1608.88	70.32	1131.23	58.72	Safe
952	TAMIL NADU	TIRUNELVELI	SINGAMPATTI	FIRKA	28749.04	5770.84	1059.06	2894.38	260.84	106.77	4321.05	432.10	3888.95	266.25	0.60	34.19	301.04	35.19	3586.91	7.74	Safe

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 — Annexure - I

TAMIL NADU — (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
953	TAMIL NADU	TIRUNELVELI	SIVANTHIPATTI	FIRKA	8265.97	7922.73	866.99	514.00	281.99	218.53	1881.51	188.14	1693.37	971.25	0.60	15.21	987.06	40.96	680.56	58.29	Safe
954	TAMIL NADU	TIRUNELVELI	THALAIYUTHU	FIRKA	10791.28	10206.08	1116.86	1038.09	363.25	351.41	2869.61	286.97	2582.64	1750.50	2.21	17.03	1769.74	19.53	810.40	68.52	Safe
955	TAMIL NADU	TIRUNELVELI	TIRUNELVELI	FIRKA	8851.98	8851.98	870.96	2095.10	307.98	212.82	3486.86	348.69	3138.17	842.50	28.31	41.42	912.24	41.42	2225.93	29.07	Safe
956	TAMIL NADU	TIRUNELVELI	TISAYANVILAI	FIRKA	14013.40	14013.40	1279.23	382.30	217.38	163.73	2042.64	204.26	1838.38	1148.50	11.20	92.42	1252.12	92.42	586.26	68.11	Safe
957	TAMIL NADU	TIRUNELVELI	VALLIYOOR	FIRKA	12646.67	12646.67	1154.47	947.42	196.18	390.01	2688.08	268.81	2419.27	856.80	0.00	18.58	875.37	18.58	1543.90	36.18	Safe
958	TAMIL NADU	TIRUNELVELI	VANNIKONENDAL	FIRKA	12664.71	12664.71	1328.64	733.70	547.93	400.76	3011.03	301.10	2709.93	2638.90	0.00	43.03	2681.93	43.03	260.36	98.97	critical
959	TAMIL NADU	TIRUNELVELI	VIJAYANARAYANAM	FIRKA	12132.54	12132.54	1107.54	1196.22	188.20	379.27	2871.23	287.12	2584.11	1813.50	3.60	7.00	1824.11	7.00	760.00	70.59	Semi Critical
960	TAMIL NADU	TIRUPATHUR	ALANGAYAM	FIRKA	10302.09	9876.72	348.93	101.65	17.73	89.81	558.12	55.81	502.31	694.85	0.00	59.40	754.25	113.23	0.00	150.16	Over Exploited
961	TAMIL NADU	TIRUPATHUR	AMBALUR	FIRKA	6104.36	5393.81	211.64	250.59	9.91	282.72	754.86	75.48	679.38	583.23	0.80	6.69	590.72	64.41	30.94	86.95	Semi Critical
962	TAMIL NADU	TIRUPATHUR	AMBUR	FIRKA	6235.75	6124.54	480.62	123.73	22.51	97.93	724.79	72.48	652.31	738.90	20.80	135.24	894.94	323.09	0.00	137.20	Over Exploited
963	TAMIL NADU	TIRUPATHUR	AMMANANGOIL	FIRKA	8845.17	8766.95	315.81	154.91	31.19	96.91	598.82	59.88	538.94	851.00	0.06	5.80	856.86	93.54	0.00	158.99	Over Exploited
964	TAMIL NADU	TIRUPATHUR	ANDIYAPPANUR	FIRKA	8159.58	8159.58	634.19	156.26	32.23	233.25	1055.93	105.60	950.33	1269.80	0.50	104.02	1374.32	104.02	0.00	144.62	Over Exploited
965	TAMIL NADU	TIRUPATHUR	JOLARPET	FIRKA	6346.65	5870.03	191.12	61.88	20.98	47.87	321.85	32.18	289.67	231.20	3.15	18.40	252.75	112.64	36.92	87.25	Semi Critical
966	TAMIL NADU	TIRUPATHUR	KANDILI	FIRKA	10878.76	10735.80	396.04	251.94	29.75	179.20	856.93	85.69	771.24	1569.85	0.91	13.52	1584.28	115.27	0.00	205.42	Over Exploited
967	TAMIL NADU	TIRUPATHUR	KORATTI	FIRKA	13120.07	13111.11	886.71	355.18	79.93	242.33	1564.15	156.42	1407.73	1885.80	0.38	1.04	1887.22	127.67	0.00	134.06	Over Exploited
968	TAMIL NADU	TIRUPATHUR	MADHANUR	FIRKA	3177.26	2796.89	498.77	44.02	15.08	47.77	605.64	60.57	545.07	522.00	30.50	4.72	557.22	62.73	0.00	102.23	Over Exploited
969	TAMIL NADU	TIRUPATHUR	MELSANANGKUPPAM	FIRKA	5465.48	5465.48	428.90	92.83	20.09	160.68	702.50	70.25	632.25	816.00	0.00	12.56	828.56	44.41	0.00	131.05	Over Exploited
970	TAMIL NADU	TIRUPATHUR	NATRAMPALLI	FIRKA	8049.35	6549.00	226.79	35.53	17.15	65.47	344.94	34.49	310.45	459.90	6.50	21.01	487.41	87.54	0.00	157.00	Over Exploited
971	TAMIL NADU	TIRUPATHUR	PUDURNADU	FIRKA	5980.26	5768.19	212.16	52.48	16.04	34.62	315.30	31.53	283.77	212.45	0.00	3.96	216.41	23.12	48.20	76.26	Semi Critical
972	TAMIL NADU	TIRUPATHUR	THIRUPATHUR	FIRKA	11758.57	11758.57	361.47	75.41	32.58	111.11	580.57	58.06	522.51	690.80	5.38	19.76	715.94	307.13	0.00	137.02	Over Exploited
973	TAMIL NADU	TIRUPATHUR	THUTHIPET	FIRKA	4518.73	4518.73	354.61	126.58	16.61	81.48	579.28	57.93	521.35	780.61	2.72	60.52	843.84	149.74	0.00	161.86	Over Exploited
974	TAMIL NADU	TIRUPATHUR	VANIYAMBADI	FIRKA	7238.74	5985.34	234.85	154.86	11.00	72.76	473.47	47.35	426.12	668.40	0.00	62.84	731.24	231.52	0.00	171.60	Over Exploited
975	TAMIL NADU	TIRUPPUR	ALANGIYAM-DUP	FIRKA	14806.14	14674.75	356.96	1928.50	99.13	304.44	2689.03	268.91	2420.12	1452.00	0.80	14.85	1467.65	63.16	904.16	60.64	Safe
976	TAMIL NADU	TIRUPPUR	AVANASHI EAST	FIRKA	8430.46	8430.46	283.26	223.16	66.09	180.56	753.07	75.31	677.76	524.50	14.80	14.40	553.69	81.33	57.14	81.69	Semi Critical
977	TAMIL NADU	TIRUPPUR	AVINASHI WEST	FIRKA	12751.01	12751.01	514.12	306.76	99.97	222.97	1143.82	114.38	1029.44	1183.00	11.20	21.15	1215.35	73.19	0.00	118.06	Over Exploited
978	TAMIL NADU	TIRUPPUR	DHARAPURAM	FIRKA	12999.00	12999.00	378.71	1562.76	136.67	217.97	2296.11	229.61	2066.50	1293.00	6.80	21.35	1321.15	79.15	687.55	63.93	Safe
979	TAMIL NADU	TIRUPPUR	GUDIMANGALAM	FIRKA	15277.75	15277.75	455.15	1908.94	121.49	923.22	3408.80	340.88	3067.92	2698.50	8.32	34.52	2741.34	60.91	300.19	89.36	Semi Critical
980	TAMIL NADU	TIRUPPUR	KANGEYAM	FIRKA	18267.92	18246.28	597.90	701.68	124.02	494.14	1917.74	191.78	1725.96	2443.00	18.80	22.05	2483.85	92.52	0.00	143.91	Over Exploited
981	TAMIL NADU	TIRUPPUR	KANNIVADI	FIRKA	16299.87	16299.87	508.38	471.00	93.90	161.19	1234.47	123.45	1111.02	894.50	1.60	22.60	918.69	53.64	161.29	82.69	Semi Critical
982	TAMIL NADU	TIRUPPUR	KARADIVAVI	FIRKA	7275.05	7275.05	211.01	175.68	51.08	133.25	571.02	57.10	513.92	673.50	4.00	13.05	690.56	29.07	0.00	134.37	Over Exploited
983	TAMIL NADU	TIRUPPUR	KUNDADAM	FIRKA	26402.38	26402.38	769.21	1532.32	277.59	958.51	3537.63	353.76	3183.87	2701.94	0.00	37.12	2739.06	58.15	423.78	86.03	Semi Critical
984	TAMIL NADU	TIRUPPUR	KUNNUTHUR	FIRKA	11198.80	11198.80	451.54	568.12	87.80	445.06	1552.52	155.26	1397.26	1452.50	0.00	30.31	1482.80	66.07	0.00	106.12	Over Exploited
985	TAMIL NADU	TIRUPPUR	KURICHIKOTTAI	FIRKA	18352.84	18352.84	610.10	2928.16	130.91	947.15	4616.32	461.64	4154.68	1344.50	0.00	0.50	1344.99	92.11	2718.08	32.37	Safe
986	TAMIL NADU	TIRUPPUR	MADATHUKULAM	FIRKA	10894.15	10894.15	272.47	2768.24	79.54	512.88	3633.13	363.31	3269.82	2104.50	0.00	0.30	2104.79	69.11	1096.22	64.37	Safe
987	TAMIL NADU	TIRUPPUR	MOOLANUR	FIRKA	30807.54	30158.20	940.61	765.24	173.74	554.35	2433.94	243.40	2190.54	2697.00	0.40	23.90	2721.30	73.17	0.00	124.23	Over Exploited
988	TAMIL NADU	TIRUPPUR	NALLUR(T)	FIRKA	6489.33	6489.33	196.73	80.09	43.56	60.70	381.08	38.11	342.97	222.50	6.40	4.45	233.34	79.36	34.72	68.04	Safe
989	TAMIL NADU	TIRUPPUR	NATHAKADAYUR	FIRKA	16649.96	16649.96	454.66	576.62	113.17	189.82	1334.27	133.43	1200.84	944.50	14.40	25.08	983.98	56.81	185.13	81.94	Semi Critical
990	TAMIL NADU	TIRUPPUR	PALLADAM	FIRKA	12025.38	12025.38	348.80	364.29	84.43	264.03	1061.55	106.16	955.39	1591.50	36.80	37.48	1665.77	82.19	0.00	174.35	Over Exploited
991	TAMIL NADU	TIRUPPUR	PEDDAPPAMPATTI	FIRKA	15692.57	15692.57	467.51	2527.07	124.79	953.58	4072.95	407.30	3665.65	2984.00	0.80	25.38	3010.18	68.94	611.91	82.12	Semi Critical
992	TAMIL NADU	TIRUPPUR	PERIAVALAVADI	FIRKA	11657.44	11657.44	416.76	1167.69	92.70	628.30	2305.45	230.55	2074.90	2057.60	0.00	0.77	2058.37	70.01	16.53	99.20	critical
993	TAMIL NADU	TIRUPPUR	PERUMANALLUR	FIRKA	7233.19	7233.19	225.39	151.06	56.71	123.47	556.63	27.83	528.80	438.00	14.80	13.50	466.30	41.93	34.07	88.18	Semi Critical
994	TAMIL NADU	TIRUPPUR	PONGALORE	FIRKA	19079.85	19079.85	515.00	1025.92	151.72	533.96	2226.60	222.66	2003.94	1683.84	9.75	35.01	1728.60	65.12	245.23	86.26	Semi Critical
995	TAMIL NADU	TIRUPPUR	PONNAPURAM	FIRKA	16711.29	16711.29	486.87	492.95	175.70	214.63	1370.15	137.01	1233.14	1068.00	0.40	12.70	1081.10	42.01	122.73	87.67	Semi Critical
996	TAMIL NADU	TIRUPPUR	SAMALAPURAM	FIRKA	10458.64	10458.64	303.35	316.37	73.43	228.08	921.23	92.12	829.11	1293.50	24.80	10.90	1329.20	75.66	0.00	160.32	Over Exploited
997	TAMIL NADU	TIRUPPUR	SANGARANDAMPALAYAM	FIRKA	19238.94	19238.94	672.61	421.85	202.28	168.84	1465.58	146.56	1319.02	913.50	4.00	13.75	931.25	38.38	363.14	70.60	Semi Critical
998	TAMIL NADU	TIRUPPUR	SEVUR	FIRKA	16248.68	16248.68	520.98	397.42	114.54	301.89	1334.83	133.48	1201.35	1116.00	10.00	19.85	1145.85	83.36	55.50	95.38	critical
999	TAMIL NADU	TIRUPPUR	SOUTH AVANASHIPALAYAM	FIRKA	15943.10	15943.10	482.64	1067.43	126.78	476.35	2153.20	107.66	2045.54	2179.00	5.60	19.65	2204.25	55.20	0.00	107.76	Over Exploited
1000	TAMIL NADU	TIRUPPUR	THUNGAVI	FIRKA	11801.54	11801.54	295.17	2599.42	86.16	627.98	3608.73	360.87	3247.86	2360.50	0.00	0.35	2360.84	67.60	819.77	72.69	Semi Critical
1001	TAMIL NADU	TIRUPPUR	TIRUPPUR NORTH	FIRKA	4542.19	4542.19	137.70	48.00	30.49	40.13	256.32	25.63	230.69	125.00	9.60	4.95	139.55	90.53	5.56	60.49	Safe
1002	TAMIL NADU	TIRUPPUR	TIRUPPUR SOUTH	FIRKA	5892.20	5892.20	178.63	110.31	39.55	120.24	448.73	44.87	403.86	354.73	27.20	11.95	393.88	686.88	9.98	97.53	critical
1003	TAMIL NADU	TIRUPPUR	UDUMALAIPETTAI	FIRKA	13072.91	13072.91	389.47	1838.67	103.96	698.28	3030.38	303.03	2727.35	1190.00	0.00	9.25	1199.25	200.92	1336.43	43.97	Safe
1004	TAMIL NADU	TIRUPPUR	UHIYUR	FIRKA	14763.15	14409.15	393.47	294.21	97.94	147.23	932.85	93.29	839.56	620.00	1.60	6.05	627.65	33.68	184.28	74.76	Semi Critical
1005	TAMIL NADU	TIRUPPUR	UTHUKKULI	FIRKA	11692.70	11610.70	390.12	498.46	91.03	383.57	1363.18	136.32	1226.86	962.00	0.00	22.80	984.80	81.93	182.93	80.27	Semi Critical
1006	TAMIL NADU	TIRUPPUR	VELAMPALAYAM	FIRKA	4708.81	4708.81	142.75	54.28	31.61	66.83	295.47	29.54	265.93	276.44	19.98	14.70	311.12	130.79	0.00	116.99	Over Exploited
1007	TAMIL NADU	TIRUPPUR	VELLAKOIL	FIRKA	34964.46	34964.46	778.06	1609.48	144.16	571.26	3102.96	310.29	2792.67	2071.50	43.20	27.85	2142.54	161.78	516.20	76.72	Semi Critical
1008	TAMIL NADU	TIRUVALLUR	AMMANAMBAKKAM	FIRKA	5942.67	5297.28	1275.38	347.08	0.00	155.72	1778.18	177.82	1600.36	868.40	5.60	4.15	878.15	99.08	627.28	54.87	Safe
1009	TAMIL NADU	TIRUVALLUR	ARANI	FIRKA	5384.91	5378.01	1732.93	316.98	0.00	201.53	2251.44	225.14	2026.30	1096.00	10.00	43.97	1149.97	69.63	850.67	56.75	Safe
1010	TAMIL NADU	TIRUVALLUR	AVADI	FIRKA	3144.30	3144.30	538.49	57.84	0.00	39.30	635.63	63.56	572.07	261.60	102.00	97.22	460.82	97.22	111.25	80.55	Semi Critical
1011	TAMIL NADU	TIRUVALLUR	BALAPURAM	FIRKA	6164.59	5299.38	628.24	293.26	0.00	136.32	1057.82	105.78	952.04	707.00	0.00	5.48	712.48	33.26	211.78	74.84	Semi Critical
1012	TAMIL NADU	TIRUVALLUR	CHERUKKANUR	FIRKA	8849.68	8399.99	829.84	212.25	0.00	230.56	1272.65	127.27	1145.38	1007.50	4.60	16.03	1028.13	135.10	117.25	89.76	Semi Critical
1013	TAMIL NADU	TIRUVALLUR	ELAVUR	FIRKA	10778.65	10250.45	2622.97	343.97	0.00	220.00	3186.94	318.69	2868.25	1032.20	8.80	65.97	1106.98	111.82	1715.42	38.59	Safe
1014	TAMIL NADU	TIRUVALLUR	ERUMBI	FIRKA	4680.54	4120.54	417.59	335.74	0.00	110.22	863.55	86.35	777.20	611.00	0.00	9.15	620.15	34.97	131.23	79.79	Semi Critical
1015	TAMIL NADU	TIRUVALLUR	GNAYIRU	FIRKA	7318.93	7318.93	1731.89	389.42	0.00	241.33	2362.64	118.29	2244.35	594.42	7.20	64.18	665.80	89.08	1553.65	29.67	Safe
1016	TAMIL NADU	TIRUVALLUR	GUMMIDIPOONDI	FIRKA	8487.07	8171.80	2091.06	772.26	0.00	177.20	3040.52	304.06	2736.46	1031.00	15.90	21.42	1068.32	107.35	1582.21	39.04	Safe
1017	TAMIL NADU	TIRUVALLUR	KADAMBATHUR	FIRKA	8858.24	8559.28	1910.92	412.88	0.00	345.67	2669.47	133.62	2535.85	1566.92	2.40	25.76	1595.08	151.10	815.43	62.90	Safe
1018	TAMIL NADU	TIRUVALLUR	KANAGAMMACHATRAM	FIRKA	8067.51	7988.12	1290.49	156.40	0.00	191.34	1638.23	82.04	1556.19	1075.20	3.60	11.16	1089.96	58.35	419.04	70.04	Semi Critical
1019	TAMIL NADU	TIRUVALLUR	KANNIGAIPER	FIRKA	7269.99	7269.99	1408.62	550.90	0.00	196.52	2156.04	215.60	1940.44	1179.15	28.00	7.04	1214.19	152.00	581.29	62.57	Safe
1020	TAMIL NADU	TIRUVALLUR	KATTUR	FIRKA	10930.33	9486.83	1270.30	467.99	0.00	140.78	1879.07	94.06	1785.01	796.90	0.00	14.72	811.62	88.09	900.02	45.47	Safe

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 | **Annexure - I**

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
1021	TAMIL NADU	TIRUVALLUR	KOLUR	FIRKA	9539.61	9539.61	1067.33	759.24	0.00	176.71	2003.28	200.33	1802.95	898.00	0.00	24.93	922.93	98.30	806.65	51.19	Safe
1022	TAMIL NADU	TIRUVALLUR	MADHARPAKKAM	FIRKA	13099.57	12022.53	717.83	1022.02	0.00	155.94	1895.79	189.58	1706.21	987.30	10.10	37.45	1034.85	92.73	616.08	60.65	Safe
1023	TAMIL NADU	TIRUVALLUR	MANAVUR	FIRKA	4624.01	4587.91	792.88	350.80	0.00	280.69	1424.37	142.44	1281.93	873.00	1.50	17.56	892.06	39.30	368.13	69.59	Safe
1024	TAMIL NADU	TIRUVALLUR	MAPPEDU	FIRKA	8430.47	8291.52	1983.62	1105.10	0.00	437.45	3526.17	176.34	3349.83	2338.00	23.50	18.71	2380.21	61.53	926.80	71.05	Semi Critical
1025	TAMIL NADU	TIRUVALLUR	MINJUR	FIRKA	7267.26	6918.76	0.00	5.88	0.00	0.00	5.88	0.59	5.29	0.00	0.00	0.00	0.00	0.00	5.29	0.00	salinity
1026	TAMIL NADU	TIRUVALLUR	MORAI	FIRKA	2917.51	2917.51	538.37	790.85	0.00	132.30	1461.52	146.15	1315.37	766.00	0.00	63.24	829.24	63.24	486.13	63.04	Safe
1027	TAMIL NADU	TIRUVALLUR	NEMAM	FIRKA	2333.95	2136.95	562.00	306.83	0.00	120.92	989.75	98.97	890.78	706.90	17.20	4.80	728.90	26.47	140.21	81.83	Semi Critical
1028	TAMIL NADU	TIRUVALLUR	PALLIPATTU	FIRKA	7896.23	6472.57	460.92	726.36	0.00	128.40	1315.68	131.57	1184.11	732.00	0.00	13.90	745.90	69.66	382.45	62.99	Safe
1029	TAMIL NADU	TIRUVALLUR	PANDUR	FIRKA	7861.89	6903.70	1591.72	217.65	0.00	98.16	1907.53	190.76	1716.77	525.30	0.00	3.12	528.42	58.12	1133.35	30.78	Safe
1030	TAMIL NADU	TIRUVALLUR	PENNALURPETTAI	FIRKA	10163.16	8239.20	1750.85	415.26	0.00	118.96	2285.07	114.57	2170.50	779.00	1.75	5.36	786.11	51.01	1338.74	36.22	Safe
1031	TAMIL NADU	TIRUVALLUR	PERIAPALAYAM	FIRKA	5614.64	5406.35	1404.40	766.44	0.00	138.61	2309.45	230.95	2078.50	802.94	19.80	2.85	825.59	124.68	1131.08	39.72	Safe
1032	TAMIL NADU	TIRUVALLUR	PODATHURPETTAI	FIRKA	8745.77	6670.44	676.01	615.84	0.00	140.28	1432.13	143.22	1288.91	592.40	0.00	12.41	604.81	60.88	635.63	46.92	Safe
1033	TAMIL NADU	TIRUVALLUR	PONNERI	FIRKA	6093.09	6093.09	1636.12	402.43	0.00	92.72	2131.27	213.13	1918.14	617.00	0.00	52.06	669.06	55.26	1245.88	34.88	Safe
1034	TAMIL NADU	TIRUVALLUR	POONAMALLEE	FIRKA	2522.97	2522.97	398.11	49.17	0.00	60.58	507.86	50.79	457.07	220.80	143.10	42.50	406.40	42.50	50.67	88.91	Semi Critical
1035	TAMIL NADU	TIRUVALLUR	POONDI	FIRKA	8701.46	7086.18	726.34	484.82	0.00	404.01	1615.17	80.92	1534.25	980.72	0.20	24.29	1005.21	84.79	468.54	65.52	Safe
1036	TAMIL NADU	TIRUVALLUR	POONIMANGADU	FIRKA	6066.72	5587.74	662.42	125.61	0.00	107.65	895.68	89.58	806.10	664.40	0.90	8.89	674.19	20.92	119.88	83.64	Semi Critical
1037	TAMIL NADU	TIRUVALLUR	POOVALAMBEDU	FIRKA	10471.63	9382.03	1100.34	1593.50	0.00	195.36	2889.20	288.92	2600.28	1013.10	4.20	32.43	1049.73	120.24	1462.74	40.37	Safe
1038	TAMIL NADU	TIRUVALLUR	PUZHAL(T)	FIRKA	3267.64	3267.64	683.97	336.10	0.00	17.84	1037.91	103.79	934.12	94.80	76.40	68.56	239.76	73.45	689.47	25.67	Safe
1039	TAMIL NADU	TIRUVALLUR	R K PETTAI	FIRKA	6326.30	5742.92	388.01	477.64	0.00	226.01	1091.66	109.16	982.50	845.90	5.60	7.53	859.03	39.76	91.24	87.43	Semi Critical
1040	TAMIL NADU	TIRUVALLUR	SOLAVARAM	FIRKA	6484.70	6387.70	1296.60	926.14	0.00	140.06	2362.80	236.29	2126.51	822.25	4.80	36.72	863.77	75.15	1224.31	40.62	Safe
1041	TAMIL NADU	TIRUVALLUR	THIRUMAZHISAI	FIRKA	3905.87	3905.87	882.85	270.03	0.00	147.17	1300.05	65.00	1235.05	674.70	21.50	20.71	716.91	34.42	504.43	58.05	Safe
1042	TAMIL NADU	TIRUVALLUR	THIRUMULLAIVOYAL	FIRKA	6123.06	6123.06	644.13	50.86	0.00	48.22	743.21	74.32	668.89	243.00	92.40	439.27	774.67	439.27	0.00	115.81	Over Exploited
1043	TAMIL NADU	TIRUVALLUR	THIRUNINDRAVUR	FIRKA	3799.51	3470.51	598.34	317.17	0.00	223.33	1138.84	113.88	1024.96	782.50	28.00	91.84	902.34	91.84	122.62	88.04	Semi Critical
1044	TAMIL NADU	TIRUVALLUR	THIRUPALAIVANAM	FIRKA	11368.85	11368.85	3052.78	424.44	0.00	210.49	3687.71	368.77	3318.94	1104.96	0.00	23.45	1128.41	97.31	2116.67	34.00	Safe
1045	TAMIL NADU	TIRUVALLUR	THIRUR	FIRKA	6868.32	6868.32	1820.79	318.82	0.00	232.41	2372.02	237.20	2134.82	1160.80	7.90	39.13	1207.83	115.14	850.98	56.58	Safe
1046	TAMIL NADU	TIRUVALLUR	TIRUTTANI	FIRKA	9196.44	8194.56	971.46	741.55	0.00	631.56	2344.57	234.46	2110.11	1395.90	27.40	67.31	1490.62	78.82	607.98	70.64	Semi Critical
1047	TAMIL NADU	TIRUVALLUR	TIRUVALANGADU	FIRKA	8646.16	8421.49	2183.09	456.06	0.00	354.05	2993.20	299.33	2693.87	892.38	3.90	16.24	912.52	35.09	1762.50	33.87	Safe
1048	TAMIL NADU	TIRUVALLUR	TIRUVALLUR	FIRKA	7197.68	7143.77	1893.81	819.78	0.00	837.19	3550.78	355.08	3195.70	1310.00	18.20	31.67	1359.87	46.41	1821.09	42.55	Safe
1049	TAMIL NADU	TIRUVALLUR	UTHUKOTTAI	FIRKA	6204.10	6113.67	1377.12	564.02	0.00	484.82	2425.96	242.60	2183.36	1484.94	8.40	61.60	1554.94	195.21	494.81	71.22	Semi Critical
1050	TAMIL NADU	TIRUVALLUR	VANAGARAM	FIRKA	1532.80	1532.80	264.06	371.55	0.00	255.22	890.83	44.54	846.29	155.80	85.20	35.05	276.05	195.21	410.08	32.62	Safe
1051	TAMIL NADU	TIRUVALLUR	VAYALANALLUR	FIRKA	1969.25	1969.25	421.57	30.02	0.00	10.95	462.54	46.25	416.29	131.40	277.90	23.64	432.94	27.00	2.19	104.00	Over Exploited
1052	TAMIL NADU	TIRUVALLUR	VELAGAPURAM	FIRKA	6972.23	6597.96	1521.23	583.06	0.00	330.43	2434.72	243.47	2191.25	1173.50	0.00	8.04	1181.54	102.62	915.13	53.92	Safe
1053	TAMIL NADU	TIRUVALLUR	VELLANUR	FIRKA	2595.99	2595.99	555.73	48.14	0.00	30.19	634.06	63.41	570.65	234.43	10.80	261.91	507.14	261.91	63.51	88.87	Semi Critical
1054	TAMIL NADU	TIRUVALLUR	VELLIYUR	FIRKA	5039.78	5039.78	1269.92	552.61	0.00	336.06	2158.59	108.18	2050.41	1229.50	36.31	15.93	1281.74	99.83	684.77	62.51	Safe
1055	TAMIL NADU	TIRUVALLUR	VENGATHUR	FIRKA	8229.03	8010.94	991.06	181.56	0.00	77.42	1250.04	125.01	1125.04	619.40	43.20	95.88	758.48	95.88	366.56	67.42	Safe
1056	TAMIL NADU	TIRUVANNAMALAI	AGARAPALAYAM	FIRKA	10328.50	10328.50	603.05	1287.99	12.04	414.84	2317.92	115.89	2202.03	1167.75	1.80	519.60	1689.15	519.60	512.88	76.71	Semi Critical
1057	TAMIL NADU	TIRUVANNAMALAI	ANNAKAVOOR	FIRKA	12938.49	12629.12	741.82	1703.34	0.00	731.17	3176.33	317.64	2858.69	1912.50	0.00	105.39	2017.90	105.39	840.79	70.59	Semi Critical
1058	TAMIL NADU	TIRUVANNAMALAI	ARNI	FIRKA	7993.54	7993.54	420.89	1240.86	9.32	421.84	2092.91	209.30	1883.61	1188.20	21.90	128.86	1338.96	137.08	536.43	71.08	Semi Critical
1059	TAMIL NADU	TIRUVANNAMALAI	CHENGAM	FIRKA	10708.90	10708.90	559.79	554.71	20.01	462.36	1596.87	159.69	1437.18	1846.80	0.00	155.61	2002.41	155.61	27.13	139.33	Over Exploited
1060	TAMIL NADU	TIRUVANNAMALAI	CHEYYAR	FIRKA	7807.61	7807.61	392.98	2138.38	0.00	322.97	2854.33	285.43	2568.90	1057.50	32.70	587.50	1677.68	587.50	891.22	65.31	Safe
1061	TAMIL NADU	TIRUVANNAMALAI	DESUR	FIRKA	9331.94	9331.94	639.07	787.01	0.00	373.75	1799.83	179.99	1619.84	1988.58	0.00	155.90	2144.48	155.90	0.00	132.39	Over Exploited
1062	TAMIL NADU	TIRUVANNAMALAI	DEVIGAPURAM	FIRKA	9177.62	9177.62	544.80	1485.75	0.97	401.32	2432.84	243.28	2189.56	1364.25	9.60	140.90	1514.75	140.90	674.81	69.18	Safe
1063	TAMIL NADU	TIRUVANNAMALAI	DUSI	FIRKA	7788.87	7788.87	960.43	2939.46	0.00	564.72	4464.61	446.46	4018.15	1631.55	28.70	136.88	1797.13	136.88	2221.02	44.73	Safe
1064	TAMIL NADU	TIRUVANNAMALAI	ERAIYUR(T)	FIRKA	10884.43	10884.43	568.96	1174.61	20.34	807.94	2571.85	257.19	2314.66	2606.00	0.00	176.40	2782.40	176.40	40.45	120.21	Over Exploited
1065	TAMIL NADU	TIRUVANNAMALAI	KADALADI(T)	FIRKA	6382.53	6382.53	323.68	1804.78	8.59	523.53	2660.58	266.05	2394.53	1629.18	2.70	102.35	1734.23	102.35	660.30	72.42	Semi Critical
1066	TAMIL NADU	TIRUVANNAMALAI	KALASAPAKKAM	FIRKA	8844.36	8844.36	448.53	2632.93	11.90	574.85	3668.21	366.83	3301.38	2079.30	0.00	292.48	2371.78	292.48	929.60	71.84	Semi Critical
1067	TAMIL NADU	TIRUVANNAMALAI	KANNAMANGALAM	FIRKA	7131.86	7131.86	404.89	1186.04	15.65	416.44	2023.02	202.30	1820.72	1479.70	13.50	111.28	1604.47	111.28	216.25	88.12	Semi Critical
1068	TAMIL NADU	TIRUVANNAMALAI	KELUR	FIRKA	10005.26	10005.26	406.43	1341.11	8.93	483.24	2239.71	223.97	2015.74	1967.37	0.00	50.41	2017.77	50.41	21.63	100.10	Over Exploited
1069	TAMIL NADU	TIRUVANNAMALAI	KETTAVARAMPALAYAM	FIRKA	6954.88	6954.88	235.14	1347.81	6.24	588.48	2177.67	217.77	1959.90	2277.60	9.30	100.85	2387.75	100.85	10.06	121.83	Over Exploited
1070	TAMIL NADU	TIRUVANNAMALAI	KILKODUNGALUR	FIRKA	8797.21	8797.21	401.63	1389.52	0.00	855.19	2646.34	264.64	2381.70	2278.50	1.50	264.11	2544.11	264.11	15.90	106.82	Over Exploited
1071	TAMIL NADU	TIRUVANNAMALAI	KILPENNATHUR	FIRKA	15609.61	15609.61	881.89	1104.98	9.71	691.91	2688.49	268.85	2419.64	2633.80	2.70	122.59	2759.09	122.59	0.00	114.03	Over Exploited
1072	TAMIL NADU	TIRUVANNAMALAI	KOLAPPALUR	FIRKA	9043.82	9043.82	549.63	1157.30	0.79	699.91	2407.63	240.77	2166.86	1821.50	0.00	72.28	1893.77	72.28	273.09	87.40	Semi Critical
1073	TAMIL NADU	TIRUVANNAMALAI	MANDAKOLATHUR	FIRKA	8129.54	8127.18	412.67	2627.19	10.88	619.60	3670.34	367.03	3303.31	1658.28	0.00	115.13	1773.41	115.13	1529.90	53.69	Safe
1074	TAMIL NADU	TIRUVANNAMALAI	MANGALAM(T)	FIRKA	6771.77	6771.77	292.06	1075.64	0.86	284.36	1652.92	83.14	1569.78	1435.20	0.30	90.30	1525.80	90.30	43.98	97.20	critical
1075	TAMIL NADU	TIRUVANNAMALAI	MAZHAIYUR(T)	FIRKA	8099.85	8096.41	554.46	967.86	0.00	588.83	2111.15	211.11	1900.04	1922.50	0.00	265.50	2187.99	265.50	0.00	115.15	Over Exploited
1076	TAMIL NADU	TIRUVANNAMALAI	MELPALLIPATTU	FIRKA	11428.29	11428.29	597.39	621.61	21.36	425.50	1665.86	166.59	1499.27	2072.50	0.00	70.62	2143.10	70.64	30.07	142.94	Over Exploited
1077	TAMIL NADU	TIRUVANNAMALAI	MODAIYUR	FIRKA	4442.09	4442.09	150.37	1869.43	3.97	611.22	2634.99	263.50	2371.49	2084.40	4.50	58.83	2147.74	58.83	223.75	90.57	critical
1078	TAMIL NADU	TIRUVANNAMALAI	MULLIPATTU	FIRKA	5501.93	5501.93	166.60	845.36	4.28	350.29	1366.53	69.34	1297.19	1166.94	16.20	125.00	1308.14	125.00	18.27	100.84	Over Exploited
1079	TAMIL NADU	TIRUVANNAMALAI	NAIDUMANGALAM	FIRKA	8870.53	8866.44	299.76	2072.73	7.96	674.53	3054.98	305.50	2749.48	2394.75	2.10	84.62	2481.47	84.62	268.01	90.25	critical
1080	TAMIL NADU	TIRUVANNAMALAI	NAMMIYEMPATTU	FIRKA	4668.60	4662.84	280.59	208.92	6.50	155.18	651.19	65.12	586.07	458.40	0.00	40.96	499.35	40.96	86.72	85.20	Semi Critical
1081	TAMIL NADU	TIRUVANNAMALAI	NATTERI	FIRKA	6417.10	6417.10	373.24	1459.44	0.00	292.50	2125.18	212.52	1912.66	985.10	0.00	36.55	1021.64	36.55	891.02	53.41	Safe
1082	TAMIL NADU	TIRUVANNAMALAI	NEDUNGUNAM	FIRKA	7047.55	7047.55	334.68	797.47	0.50	367.82	1500.47	150.04	1350.43	1160.00	0.00	39.91	1199.91	40.23	150.20	88.85	Semi Critical
1083	TAMIL NADU	TIRUVANNAMALAI	OSUR	FIRKA	7183.63	7183.63	491.95	922.66	0.00	468.08	1882.69	188.27	1694.42	1319.50	0.60	172.00	1492.10	172.00	202.32	88.06	Semi Critical
1084	TAMIL NADU	TIRUVANNAMALAI	PACHAL	FIRKA	10774.19	10774.19	372.72	1359.51	10.97	495.64	2238.84	223.88	2014.96	1803.20	0.30	70.69	1874.20	72.04	139.41	93.01	critical
1085	TAMIL NADU	TIRUVANNAMALAI	PERANAMALLUR	FIRKA	9825.26	9825.26	508.52	1191.58	0.00	560.42	2260.52	113.02	2147.50	1523.00	0.00	111.60	1634.60	111.60	512.90	76.12	Semi Critical
1086	TAMIL NADU	TIRUVANNAMALAI	PERUNGATTUR	FIRKA	8736.01	8736.01	1130.06	1654.03	0.00	425.61	3209.70	320.97	2888.73	1106.30	0.00	25.70	1132.00	51.06	1731.37	39.19	Safe
1087	TAMIL NADU	TIRUVANNAMALAI	POLUR	FIRKA	7079.14	7034.81	357.21	1868.79	9.42	495.33	2730.75	273.08	2457.67	1383.79	1.50	134.82	1520.11	134.82	937.56	61.85	Safe
1088	TAMIL NADU	TIRUVANNAMALAI	PUDUPALAYAM	FIRKA	9297.55	9297.55	486.01	522.71	17.37	403.85	1429.94	142.99	1286.95	1335.74	7.50	497.20	1840.44	497.20	15.85	143.01	Over Exploited

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 — Annexure - I

TAMIL NADU — (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
1089	TAMIL NADU	TIRUVANNAMALAI	PULIYUR	FIRKA	7642.26	7316.36	262.12	145.64	27.44	121.66	556.86	55.69	501.17	315.00	0.00	35.40	350.40	35.40	150.77	69.92	Safe
1090	TAMIL NADU	TIRUVANNAMALAI	S.V.NAGARAM	FIRKA	7400.19	7400.19	311.72	1444.49	8.63	427.98	2192.82	219.28	1973.54	1191.40	6.60	63.22	1261.22	63.22	712.32	63.91	Safe
1091	TAMIL NADU	TIRUVANNAMALAI	SANTHAVASAL	FIRKA	10806.23	10806.23	1170.51	477.31	27.12	375.73	2050.67	205.07	1845.60	1701.45	0.00	81.79	1783.24	87.52	56.63	96.62	critical
1092	TAMIL NADU	TIRUVANNAMALAI	SENNAVARAM	FIRKA	6254.56	6254.56	190.37	1015.13	0.00	446.20	1651.70	165.17	1486.53	1350.51	3.30	194.60	1548.41	194.60	13.88	104.16	Over Exploited
1093	TAMIL NADU	TIRUVANNAMALAI	SOMASIPADI	FIRKA	8739.08	8739.08	493.73	1342.57	5.44	410.20	2251.94	225.19	2026.75	1628.50	0.00	89.95	1718.44	89.95	308.31	84.79	Semi Critical
1094	TAMIL NADU	TIRUVANNAMALAI	THACHCHAMPADI	FIRKA	6819.95	6819.95	294.08	1124.02	0.48	414.25	1832.83	92.05	1740.78	1693.08	0.00	55.96	1749.04	55.96	7.28	100.47	Over Exploited
1095	TAMIL NADU	TIRUVANNAMALAI	THANDARAMPET	FIRKA	12932.60	12932.60	696.45	957.99	33.76	425.63	2113.83	211.39	1902.44	1792.20	1.80	58.31	1852.31	79.50	50.13	97.36	critical
1096	TAMIL NADU	TIRUVANNAMALAI	THANIPADI	FIRKA	13879.39	13879.39	692.80	507.92	19.64	331.12	1551.48	155.15	1396.33	1666.90	3.30	111.04	1781.24	111.04	39.44	127.57	Over Exploited
1097	TAMIL NADU	TIRUVANNAMALAI	THATCHAMPATTU	FIRKA	7525.97	7525.97	424.24	490.95	9.45	328.78	1253.42	125.34	1128.08	1387.90	0.00	59.01	1446.91	59.01	24.57	128.26	Over Exploited
1098	TAMIL NADU	TIRUVANNAMALAI	THELLAR	FIRKA	12302.74	12281.22	841.04	1237.81	0.00	299.02	2377.87	237.78	2140.09	1605.00	0.00	115.51	1720.51	115.51	419.58	80.39	Semi Critical
1099	TAMIL NADU	TIRUVANNAMALAI	THETHURAI	FIRKA	13151.97	12963.59	652.49	2874.33	0.00	1001.21	4528.03	452.81	4075.22	2193.10	0.00	151.80	2344.90	151.80	1730.32	57.54	Safe
1100	TAMIL NADU	TIRUVANNAMALAI	THURINJAPURAM	FIRKA	8237.97	8230.12	382.17	920.83	1.05	379.38	1683.43	168.34	1515.09	1356.80	0.60	106.15	1463.55	106.15	51.54	96.60	critical
1101	TAMIL NADU	TIRUVANNAMALAI	TIRUVANNAMALAI(NORTH)	FIRKA	9436.04	9436.04	511.95	428.98	4.89	186.30	1132.12	113.21	1018.91	364.32	3.30	362.36	729.98	362.36	288.93	71.64	Semi Critical
1102	TAMIL NADU	TIRUVANNAMALAI	TIRUVANNAMALAI(SOUTH)	FIRKA	7435.91	7435.91	403.43	990.46	3.85	413.82	1811.56	181.16	1630.40	1129.17	0.00	40.41	1169.58	53.23	448.00	71.74	Semi Critical
1103	TAMIL NADU	TIRUVANNAMALAI	VADATHANDALAM	FIRKA	9576.30	9576.30	548.04	1632.44	13.99	439.09	2633.56	132.89	2500.67	1480.50	14.70	348.60	1843.80	348.60	656.87	73.73	Semi Critical
1104	TAMIL NADU	TIRUVANNAMALAI	VAKKADAI	FIRKA	8128.16	8128.16	444.00	1226.65	0.00	488.25	2158.90	109.53	2049.37	1152.00	1.50	338.40	1491.90	338.40	557.47	72.80	Semi Critical
1105	TAMIL NADU	TIRUVANNAMALAI	VANAPURAM	FIRKA	12663.86	12566.69	708.38	570.12	15.78	415.44	1709.72	170.97	1538.75	1382.57	0.90	87.10	1470.57	87.10	68.18	95.57	critical
1106	TAMIL NADU	TIRUVANNAMALAI	VANDAVASI	FIRKA	7158.09	7158.09	326.80	994.57	0.00	457.47	1778.84	177.88	1600.96	852.30	34.90	512.60	1399.80	512.60	201.16	87.44	Semi Critical
1107	TAMIL NADU	TIRUVANNAMALAI	VEMBAKKAM	FIRKA	9781.40	9781.40	2503.27	1662.65	0.00	516.65	4682.57	468.25	4214.32	1401.20	0.30	47.51	1449.01	47.51	2765.31	34.38	Safe
1108	TAMIL NADU	TIRUVANNAMALAI	VERAIYUR	FIRKA	3225.61	3225.61	151.52	1043.20	4.05	163.98	1362.75	136.28	1226.47	590.30	0.00	16.09	606.39	16.09	620.08	49.44	Safe
1109	TAMIL NADU	TIRUVANNAMALAI	VETTAVALAM	FIRKA	12304.78	12304.78	695.18	1114.67	7.66	462.11	2279.62	227.97	2051.65	1951.30	0.00	82.79	2034.09	82.79	17.56	99.14	critical
1110	TAMIL NADU	VELLORE	AGARAM	FIRKA	4987.93	4987.93	231.59	99.78	5.85	150.43	487.65	48.77	438.88	733.65	22.50	55.55	811.70	55.55	0.09	184.95	Over Exploited
1111	TAMIL NADU	VELLORE	ANAICUT	FIRKA	6364.95	6364.95	246.27	374.90	7.46	417.82	1046.45	104.65	941.80	1545.30	2.30	116.07	1663.67	116.07	0.06	176.65	Over Exploited
1112	TAMIL NADU	VELLORE	GUDIYATHAM EAST	FIRKA	9547.45	9547.45	414.01	225.70	16.96	350.28	1006.95	100.69	906.26	1522.50	1.80	126.55	1650.85	142.91	0.42	182.16	Over Exploited
1113	TAMIL NADU	VELLORE	GUDIYATHAM WEST	FIRKA	9236.78	9236.78	480.64	207.17	19.69	255.46	962.96	96.30	866.66	1053.85	27.00	2.10	1082.95	87.53	0.70	124.96	Over Exploited
1114	TAMIL NADU	VELLORE	K V KUPPAM	FIRKA	7536.65	7536.65	326.81	99.07	13.39	98.28	537.55	53.76	483.79	626.35	0.00	66.60	692.95	66.60	0.34	143.23	Over Exploited
1115	TAMIL NADU	VELLORE	KANIYAMBADI	FIRKA	6274.48	6274.48	97.11	281.78	2.94	309.68	691.51	69.15	622.36	525.40	0.60	23.44	549.44	84.51	11.85	88.28	Semi Critical
1116	TAMIL NADU	VELLORE	KATPADI	FIRKA	6490.14	6490.14	601.65	201.06	17.21	107.01	926.93	92.69	834.24	554.10	16.50	47.88	618.48	180.26	83.38	74.14	Semi Critical
1117	TAMIL NADU	VELLORE	MELPADI	FIRKA	11646.38	11646.38	703.20	500.81	17.87	487.04	1708.92	170.89	1538.03	1253.10	0.00	85.16	1338.25	85.16	199.78	87.01	Semi Critical
1118	TAMIL NADU	VELLORE	MELPATTI	FIRKA	6422.71	6422.71	365.80	121.49	35.06	186.69	709.04	35.46	673.58	819.00	2.02	61.63	882.65	63.69	0.13	131.04	Over Exploited
1119	TAMIL NADU	VELLORE	ODUGATHUR	FIRKA	7222.47	7222.47	279.45	111.42	8.46	171.19	570.52	57.05	513.47	795.80	0.00	46.58	842.38	74.66	0.02	164.06	Over Exploited
1120	TAMIL NADU	VELLORE	PALLIKONDA	FIRKA	6028.67	6028.67	522.84	383.45	21.41	415.10	1342.80	134.28	1208.52	1346.90	1.50	115.60	1464.00	124.13	0.39	121.14	Over Exploited
1121	TAMIL NADU	VELLORE	PENNATHUR	FIRKA	6233.52	6233.52	289.42	161.08	7.31	177.98	635.79	63.58	572.21	428.75	3.50	69.06	501.31	91.74	48.22	87.61	Semi Critical
1122	TAMIL NADU	VELLORE	PERNAMBUT	FIRKA	7023.30	7023.30	584.47	100.30	38.34	143.69	866.80	86.68	780.12	600.70	17.60	48.60	666.90	138.79	23.03	85.49	Semi Critical
1123	TAMIL NADU	VELLORE	SATHUVACHARI	FIRKA	4857.87	4857.87	451.11	215.39	11.39	146.69	824.58	82.46	742.12	471.60	3.04	679.08	1153.72	894.59	0.40	155.46	Over Exploited
1124	TAMIL NADU	VELLORE	THIRUVALAM	FIRKA	8690.66	8690.66	661.17	367.95	11.20	168.35	1208.67	120.88	1087.79	832.50	65.12	79.32	976.95	86.71	103.45	89.81	Semi Critical
1125	TAMIL NADU	VELLORE	USSOOR	FIRKA	3910.38	3910.38	151.30	245.65	4.58	87.07	488.60	48.87	439.73	291.60	0.00	44.42	336.03	47.46	100.66	76.42	Semi Critical
1126	TAMIL NADU	VELLORE	VADUGANTHANGAL	FIRKA	9232.96	9232.96	560.52	487.54	22.96	443.36	1514.38	151.44	1362.94	1931.85	0.00	145.36	2077.21	145.36	0.62	152.41	Over Exploited
1127	TAMIL NADU	VELLORE	VALATHUR(V)	FIRKA	7529.76	7529.76	272.10	381.08	13.37	467.47	1134.02	113.39	1020.63	866.50	11.20	32.98	910.68	69.14	73.79	89.23	Semi Critical
1128	TAMIL NADU	VELLORE	VELLORE NORTH	FIRKA	614.00	614.00	38.01	30.95	1.44	30.87	101.27	10.13	91.14	0.00	88.00	17.50	105.50	169.54	0.07	115.76	Over Exploited
1129	TAMIL NADU	VELLORE	VELLORE SOUTH	FIRKA	2172.78	2172.78	201.77	10.04	5.09	17.43	234.33	23.43	210.90	91.30	72.60	140.20	304.10	140.20	0.07	144.19	Over Exploited
1130	TAMIL NADU	VILLUPURAM	ANNIYUR	FIRKA	10608.15	10608.15	1185.99	1777.34	0.00	500.68	3464.01	346.40	3117.61	3510.44	0.00	54.94	3565.38	81.06	0.00	114.36	Over Exploited
1131	TAMIL NADU	VILLUPURAM	ARAKANDANALLUR	FIRKA	11241.11	11241.11	994.49	1377.31	7.65	363.16	2742.61	137.13	2605.48	1605.80	1.20	19.81	1626.81	108.18	890.30	62.44	Safe
1132	TAMIL NADU	VILLUPURAM	ARASUR(V)	FIRKA	7656.90	7474.76	1019.65	1269.48	0.00	289.21	2578.34	257.83	2320.51	2244.80	0.00	108.73	2353.53	108.73	0.00	101.42	Over Exploited
1133	TAMIL NADU	VILLUPURAM	AVALAURPET	FIRKA	13429.79	13429.79	1043.43	1505.21	0.00	479.95	3028.59	151.43	2877.16	2945.40	0.00	267.96	3213.36	267.96	0.00	111.69	Over Exploited
1134	TAMIL NADU	VILLUPURAM	AVANIPUR	FIRKA	6772.84	6772.84	333.47	1013.41	2.24	257.83	1606.95	160.70	1446.25	986.70	0.00	141.84	1128.53	141.84	317.72	78.03	Semi Critical
1135	TAMIL NADU	VILLUPURAM	BRAMMADESAM	FIRKA	4856.42	4851.22	606.75	745.42	0.00	210.39	1562.56	156.26	1406.30	1348.80	0.00	26.80	1375.60	95.92	30.70	97.82	critical
1136	TAMIL NADU	VILLUPURAM	DEEVANUR	FIRKA	10106.25	10097.25	736.44	1113.22	7.40	479.08	2336.14	233.62	2102.52	926.98	0.00	13.60	940.58	61.26	1114.28	44.74	Safe
1137	TAMIL NADU	VILLUPURAM	GINGEE	FIRKA	12742.23	12742.23	1351.75	2119.93	0.00	458.63	3930.31	196.51	3733.80	2714.58	1.20	78.14	2793.93	104.96	913.05	74.83	Semi Critical
1138	TAMIL NADU	VILLUPURAM	KANAI	FIRKA	11280.93	11280.93	908.07	1612.27	0.00	354.46	2874.80	287.48	2587.32	1207.50	0.60	32.27	1240.37	118.20	1261.02	47.94	Safe
1139	TAMIL NADU	VILLUPURAM	KANDAMANGALAM	FIRKA	10834.64	10834.64	2422.63	1863.71	0.00	298.36	4584.70	458.47	4126.23	3248.40	0.00	128.28	3376.68	132.33	745.50	81.83	Semi Critical
1140	TAMIL NADU	VILLUPURAM	KANJANUR	FIRKA	11526.18	11526.18	1288.63	1584.47	0.00	580.61	3453.71	345.37	3108.34	3336.20	0.00	37.02	3373.22	96.39	0.00	108.52	Over Exploited
1141	TAMIL NADU	VILLUPURAM	KILIYANUR	FIRKA	11926.14	11926.14	1465.17	1236.66	0.00	498.07	3199.90	319.99	2879.91	2414.75	0.00	37.73	2452.48	59.03	406.13	85.16	Semi Critical
1142	TAMIL NADU	VILLUPURAM	MAILAM	FIRKA	8894.83	8842.38	748.49	949.90	0.00	328.36	2026.75	202.68	1824.07	773.60	0.00	9.45	783.05	70.11	980.36	42.93	Safe
1143	TAMIL NADU	VILLUPURAM	MARAKKANAM	FIRKA	13905.57	13843.34	1920.24	808.57	0.00	281.95	3010.76	301.08	2709.68	1887.40	2.40	31.07	1920.87	51.23	768.65	70.89	Semi Critical
1144	TAMIL NADU	VILLUPURAM	MEL OLAKKUR	FIRKA	15091.13	15091.13	1187.87	2081.66	0.00	670.84	3940.37	394.03	3546.34	4639.20	0.00	42.46	4681.66	87.59	0.00	132.01	Over Exploited
1145	TAMIL NADU	VILLUPURAM	MELMALAIYANUR	FIRKA	10503.30	10503.30	773.44	1533.30	0.00	421.00	2727.74	272.77	2454.97	3282.66	0.00	22.76	3305.42	73.39	0.00	134.64	Over Exploited
1146	TAMIL NADU	VILLUPURAM	MUGAIYUR	FIRKA	12495.87	12495.87	1494.83	1663.93	0.00	369.16	3527.92	352.80	3175.12	2021.40	0.00	18.67	2040.07	130.88	1022.84	64.25	Safe
1147	TAMIL NADU	VILLUPURAM	NEMILI	FIRKA	8914.41	8914.41	1288.78	957.79	0.00	254.04	2500.61	250.06	2250.55	2010.35	0.90	19.01	2030.27	61.01	178.28	90.21	critical
1148	TAMIL NADU	VILLUPURAM	OLAKKUR	FIRKA	7401.40	7401.40	364.42	946.83	2.44	255.48	1569.17	156.92	1412.25	1261.86	0.00	21.77	1283.63	129.22	21.17	90.89	critical
1149	TAMIL NADU	VILLUPURAM	RETTANAI	FIRKA	10304.57	10304.57	744.12	973.77	7.48	284.17	2009.54	200.95	1808.59	940.30	0.00	10.68	950.98	60.24	808.05	52.58	Safe
1150	TAMIL NADU	VILLUPURAM	SATHAMPADI	FIRKA	10440.97	10440.97	821.84	802.92	0.00	300.09	1924.85	192.49	1732.36	1245.20	0.00	10.47	1255.67	61.40	425.76	72.48	Semi Critical
1151	TAMIL NADU	VILLUPURAM	SATHIYAMANGALAM	FIRKA	17609.77	17609.77	1386.12	3525.01	0.00	855.34	5766.47	576.64	5189.83	5563.25	0.20	52.44	5615.89	122.01	0.00	108.21	Over Exploited
1152	TAMIL NADU	VILLUPURAM	SIRUVADI	FIRKA	10867.02	9901.49	1399.40	996.03	0.00	289.36	2684.79	268.48	2416.31	2637.80	0.00	14.68	2652.48	69.46	0.00	109.77	Over Exploited
1153	TAMIL NADU	VILLUPURAM	SITHALAMPATTU	FIRKA	12793.27	12793.27	1816.47	1299.54	0.00	452.10	3568.11	356.81	3211.30	2810.00	0.31	60.44	2870.75	136.01	264.98	89.40	Semi Critical
1154	TAMIL NADU	VILLUPURAM	SITHALINGAMADAM	FIRKA	8732.06	8324.59	720.33	1081.61	24.94	373.58	2200.46	220.04	1980.42	1848.50	0.00	488.00	2336.50	488.00	0.00	117.98	Over Exploited
1155	TAMIL NADU	VILLUPURAM	THIRUVENNAINALLUR	FIRKA	8071.24	7818.62	1075.17	1930.98	0.00	331.25	3337.40	333.75	3003.65	2812.20	1.00	62.01	2875.21	63.17	127.28	95.72	critical
1156	TAMIL NADU	VILLUPURAM	TINDIVANAM	FIRKA	16994.00	16993.95	1227.18	2078.18	12.34	599.09	3916.79	391.68	3525.11	2016.80	0.00	46.65	2063.45	64.24	1444.07	58.54	Safe

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024 — Annexure - I

TAMIL NADU (in ham)

Sl. No	State	District	Assessment Unit Name	Assessment Unit Type	Total Area of Assessment Unit (Ha)	Recharge Worthy Area(Ha)	Recharge from Rainfall-Monsoon Season	Recharge from Other Sources-Monsoon Season	Recharge from Rainfall-Non Monsoon Season	Recharge from Other Sources-Non Monsoon Season	Total Annual Ground Water Recharge (Ham)	Total Natural Disharges (Ham)	Annual Extractable Ground Water Resource (Ham)	Ground Water Extraction for Irrigation Use (Ham)	Ground Water Extraction for Industrial Use (Ham)	Ground Water Extraction for Domestic Use (Ham)	Total Extraction (Ham)	Annual GW Allocation for Domestic Use as on 2025 (Ham)	Net Ground Water Availability for future use (Ham)	Stage of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
1157	TAMIL NADU	VILLUPURAM	UPPUVELUR	FIRKA	11359.08	11359.08	1390.90	945.96	0.00	397.54	2734.40	273.44	2460.96	2322.95	0.00	20.20	2343.15	52.37	85.64	95.21	critical
1158	TAMIL NADU	VILLUPURAM	VADASIRUVALUR	FIRKA	11764.19	11760.19	1273.85	2111.79	8.54	462.19	3856.37	385.63	3470.74	2716.80	0.00	47.71	2764.52	101.46	652.47	79.65	Semi Critical
1159	TAMIL NADU	VILLUPURAM	VALAVANUR	FIRKA	10743.85	10743.85	1873.81	902.60	0.00	228.71	3005.12	300.51	2704.61	2297.05	0.62	43.57	2341.24	107.37	299.57	86.56	Semi Critical
1160	TAMIL NADU	VILLUPURAM	VALLAM(V)	FIRKA	14396.92	14396.92	1178.55	1968.81	0.00	557.79	3705.15	370.52	3334.63	4104.35	0.00	53.47	4157.82	104.62	0.00	124.69	Over Exploited
1161	TAMIL NADU	VILLUPURAM	VANUR	FIRKA	13287.39	13287.39	2958.22	407.17	0.00	182.49	3547.88	354.79	3193.09	1641.85	6.60	20.37	1668.82	92.53	1452.11	52.26	Safe
1162	TAMIL NADU	VILLUPURAM	VIKKIRAVANDI	FIRKA	11462.19	11462.19	1307.10	1297.16	0.00	470.03	3074.29	307.43	2766.86	2464.12	1.00	74.82	2539.95	98.77	202.96	91.80	critical
1163	TAMIL NADU	VILLUPURAM	VILLUPURAM	FIRKA	10154.82	10154.82	1426.59	1357.69	0.00	312.79	3097.07	154.85	2942.22	1603.10	3.60	56.52	1663.23	125.50	1210.01	56.53	Safe
1164	TAMIL NADU	VIRUDHUNAGAR	A MUKKULAM	FIRKA	14202.63	14202.63	579.51	1520.12	61.26	362.88	2523.77	252.37	2271.40	153.01	0.00	6.19	159.20	6.19	2112.20	7.01	Safe
1165	TAMIL NADU	VIRUDHUNAGAR	ALANGULAM(V)	FIRKA	13733.13	13733.13	538.81	497.90	123.29	213.54	1373.54	71.93	1301.61	1103.40	0.00	7.59	1110.99	7.59	190.62	85.36	Semi Critical
1166	TAMIL NADU	VIRUDHUNAGAR	AMATHUR	FIRKA	9296.85	9296.85	468.21	338.86	85.90	212.95	1105.92	57.39	1048.53	888.30	0.40	3.38	892.08	3.38	156.45	85.08	Semi Critical
1167	TAMIL NADU	VIRUDHUNAGAR	ARUPPUKOTTAI	FIRKA	3963.90	3963.90	137.70	68.63	29.72	33.12	269.17	26.91	242.26	42.00	0.30	3.21	45.51	3.21	196.75	18.79	Safe
1168	TAMIL NADU	VIRUDHUNAGAR	AYANKOLLANKONDAN	FIRKA	7567.48	7241.58	250.98	1680.16	86.82	415.45	2433.41	243.35	2190.06	1752.30	0.00	12.11	1764.41	12.11	425.65	80.56	Semi Critical
1169	TAMIL NADU	VIRUDHUNAGAR	CHOLAPURAM	FIRKA	7449.35	7449.35	258.18	1238.65	89.31	531.88	2118.02	211.80	1906.22	1964.70	6.40	17.11	1988.21	17.11	107.99	104.30	Over Exploited
1170	TAMIL NADU	VIRUDHUNAGAR	EALAYERAMPANNAI	FIRKA	9837.45	9837.45	476.37	401.04	88.32	230.48	1196.21	119.62	1076.59	687.60	0.00	13.69	701.29	13.69	375.30	65.14	Safe
1171	TAMIL NADU	VIRUDHUNAGAR	KALKURICHI	FIRKA	7365.75	7365.75	255.88	606.03	55.22	224.49	1141.62	114.16	1027.46	520.90	0.70	2.64	524.24	2.64	503.22	51.02	Safe
1172	TAMIL NADU	VIRUDHUNAGAR	KARIAPATTI	FIRKA	13543.33	13543.33	588.10	3791.84	101.53	580.13	5061.60	506.17	4555.43	1239.70	2.30	6.16	1248.16	6.16	3307.27	27.40	Safe
1173	TAMIL NADU	VIRUDHUNAGAR	KEELARAJAKULARAMAN	FIRKA	7328.50	7328.50	354.87	853.63	65.79	457.97	1732.26	173.23	1559.03	1826.10	0.00	9.22	1835.32	9.22	110.42	117.72	Over Exploited
1174	TAMIL NADU	VIRUDHUNAGAR	KOTTAIYUR	FIRKA	8502.44	8502.17	411.24	1516.81	107.23	318.89	2354.17	235.42	2118.75	1335.60	0.00	19.27	1354.87	19.27	763.88	63.95	Safe
1175	TAMIL NADU	VIRUDHUNAGAR	MALLANKINAR	FIRKA	8923.11	8923.11	309.98	396.87	66.90	216.60	990.35	99.03	891.32	792.00	0.80	2.28	795.08	2.28	96.24	89.20	Semi Critical
1176	TAMIL NADU	VIRUDHUNAGAR	MALLI	FIRKA	21435.15	10082.66	364.82	1511.22	122.08	437.75	2435.87	243.59	2192.28	1377.00	0.60	27.65	1405.25	27.65	787.03	64.10	Safe
1177	TAMIL NADU	VIRUDHUNAGAR	MANDAPASALAI	FIRKA	17055.96	17055.96	839.62	410.87	127.56	254.30	1632.35	82.46	1549.89	753.00	2.40	4.03	759.43	4.03	790.46	49.00	Safe
1178	TAMIL NADU	VIRUDHUNAGAR	MANGALAM(V)	FIRKA	14357.02	14357.02	701.49	1262.94	134.92	529.59	2628.94	262.90	2366.04	2032.20	0.00	15.69	2047.89	15.69	318.15	86.55	Semi Critical
1179	TAMIL NADU	VIRUDHUNAGAR	MUDUKKANKULAM	FIRKA	10062.81	10062.81	436.97	2153.62	75.44	367.17	3033.20	303.32	2729.88	429.80	0.00	2.99	432.79	2.99	2297.09	15.85	Safe
1180	TAMIL NADU	VIRUDHUNAGAR	NALLI	FIRKA	10875.84	10875.84	422.48	363.61	100.22	180.72	1067.03	61.27	1005.76	613.80	3.00	2.72	619.52	2.72	386.24	61.60	Safe
1181	TAMIL NADU	VIRUDHUNAGAR	NARIKUDI	FIRKA	12619.08	12619.08	514.89	5370.75	54.43	561.78	6501.85	650.18	5851.67	209.40	0.00	5.50	214.91	5.50	5636.76	3.67	Safe
1182	TAMIL NADU	VIRUDHUNAGAR	NATHAMPATTI	FIRKA	7900.86	7900.86	305.72	2001.82	99.64	506.67	2913.85	291.39	2622.46	2966.00	0.00	10.65	2976.65	10.65	70.55	113.51	Over Exploited
1183	TAMIL NADU	VIRUDHUNAGAR	NENMENI	FIRKA	11347.68	11347.68	417.31	1688.80	104.57	152.61	2363.29	236.33	2126.96	843.30	0.00	1.84	845.14	1.84	1281.82	39.73	Safe
1184	TAMIL NADU	VIRUDHUNAGAR	ONDIPULINAICKANUR	FIRKA	10230.37	10230.37	365.78	279.19	94.52	137.23	876.72	47.16	829.56	633.60	0.00	4.18	637.78	4.18	191.78	76.88	Semi Critical
1185	TAMIL NADU	VIRUDHUNAGAR	PADANTHAL	FIRKA	10341.20	10341.20	304.24	652.35	95.30	108.82	1160.71	116.07	1044.64	348.30	0.00	14.88	363.18	14.88	681.46	34.77	Safe
1186	TAMIL NADU	VIRUDHUNAGAR	PALAYAMPATTI	FIRKA	12471.07	12471.07	546.56	317.33	93.49	196.79	1154.17	59.49	1094.67	668.70	8.60	10.92	688.22	10.92	406.45	62.87	Safe
1187	TAMIL NADU	VIRUDHUNAGAR	PANDALGUDI	FIRKA	16345.71	16345.71	567.83	588.57	122.54	181.59	1460.53	146.05	1314.48	363.70	0.00	2.95	366.65	2.95	947.83	27.89	Safe
1188	TAMIL NADU	VIRUDHUNAGAR	PARALACHI	FIRKA	13368.37	13368.37	556.85	1453.39	99.98	255.58	2365.80	236.59	2129.21	678.00	0.00	1.20	679.20	1.20	1450.01	31.90	Safe
1189	TAMIL NADU	VIRUDHUNAGAR	PILLAIYARKULAM	FIRKA	9086.24	8651.72	391.31	2144.81	104.75	649.63	3290.50	329.05	2961.45	2741.44	0.00	26.40	2767.84	26.40	193.61	93.46	critical
1190	TAMIL NADU	VIRUDHUNAGAR	RAJAPALAYAM	FIRKA	22306.76	9655.10	418.29	2180.85	115.76	637.35	3352.25	335.22	3017.03	2603.78	11.40	31.53	2646.71	31.53	370.32	87.73	Semi Critical
1191	TAMIL NADU	VIRUDHUNAGAR	SALWARPATTI	FIRKA	7093.84	7093.84	346.61	160.32	66.66	78.25	651.84	65.18	586.66	499.50	1.50	4.06	505.06	4.06	81.60	86.09	Semi Critical
1192	TAMIL NADU	VIRUDHUNAGAR	SATTUR	FIRKA	8931.74	8931.74	328.47	623.51	82.31	122.59	1156.88	115.69	1041.19	427.50	8.10	22.33	457.93	22.33	583.26	43.98	Safe
1193	TAMIL NADU	VIRUDHUNAGAR	SEITHUR	FIRKA	17921.16	10428.63	451.80	4187.34	125.03	585.06	5349.23	534.92	4814.31	2396.73	0.30	17.95	2414.98	17.95	2399.33	50.16	Safe
1194	TAMIL NADU	VIRUDHUNAGAR	SIVAKASI	FIRKA	11548.28	11548.28	564.25	237.93	108.53	187.65	1098.36	109.84	988.52	729.38	16.56	18.92	764.86	18.92	223.66	77.37	Semi Critical
1195	TAMIL NADU	VIRUDHUNAGAR	SRIVILLIPUTTUR	FIRKA	4699.24	4699.24	212.54	996.91	56.90	314.85	1581.20	158.12	1423.08	1113.30	0.00	41.18	1154.48	41.18	268.60	81.13	Semi Critical
1196	TAMIL NADU	VIRUDHUNAGAR	THIRUTHANGAL	FIRKA	13659.70	13659.70	473.80	344.91	128.37	136.87	1083.95	61.12	1022.83	328.44	0.00	20.44	348.88	20.44	673.95	34.11	Safe
1197	TAMIL NADU	VIRUDHUNAGAR	TIRUCHULI	FIRKA	9327.60	9327.60	361.71	2460.67	56.43	537.45	3416.26	341.63	3074.63	830.50	1.60	2.99	835.09	2.99	2239.54	27.16	Safe
1198	TAMIL NADU	VIRUDHUNAGAR	VATCHAKARAPATTI	FIRKA	12480.47	12480.47	628.74	608.12	115.31	259.95	1612.12	161.22	1450.90	1225.00	0.40	4.16	1229.56	4.16	227.56	84.74	Semi Critical
1199	TAMIL NADU	VIRUDHUNAGAR	VEERACHOLAN	FIRKA	15102.60	15102.60	616.23	2723.67	65.14	531.54	3936.58	393.66	3542.92	772.80	0.00	7.10	779.90	7.10	2763.02	22.01	Safe
1200	TAMIL NADU	VIRUDHUNAGAR	VEMBAKKOTTAI	FIRKA	6938.51	6938.51	335.99	348.72	62.29	141.53	888.53	88.85	799.68	921.60	0.00	6.87	928.47	6.87	41.87	116.11	Over Exploited
1201	TAMIL NADU	VIRUDHUNAGAR	VIRUDHUNAGAR	FIRKA	3775.65	3775.65	178.12	108.26	41.66	55.42	383.46	20.04	363.42	138.92	0.00	45.40	184.32	45.40	179.10	50.72	Safe
1202	TAMIL NADU	VIRUDHUNAGAR	WATRAP	FIRKA	9944.31	9449.58	457.06	1880.24	119.17	436.47	2892.94	289.29	2603.65	2196.71	0.00	30.00	2226.71	30.00	376.94	85.52	Semi Critical
			Grand Total (ham)		**11776489.21**	**10861335.40**	**741940.23**	**1018007.75**	**120093.50**	**271283.27**	**2151324.75**	**207378.79**	**1946153.06**	**1350597.74**	**14353.43**	**80351.37**	**1445302.67**	**144507.21**	**676081.87**	**74.26**	
			Grand Total (bcm)		**117.76**	**108.61**	**7.42**	**10.18**	**1.20**	**2.71**	**21.51**	**2.07**	**19.46**	**13.51**	**0.14**	**0.80**	**14.45**	**1.45**	**6.76**	**74.26**	

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2024														Annexure - II
														(in bcm)
S. No.	States / Union Territories	Ground Water Recharge					Total Natural Discharges	Annual Extractable Ground Water Resource	Current Annual Ground Water Extraction				Annual GW Allocation for for Domestic Use as on 2025	Net Ground Water Availability for future use	Stage of Ground Water Extraction (%)
		Monsoon Season		Non-monsoon Season		Total Annual Ground Water Recharge			Irrigation	Industrial	Domestic	Total			
		Recharge from rainfall	Recharge from other sources	Recharge from rainfall	Recharge from other sources										
1	Tamil Nadu	7.42	10.18	1.20	2.71	21.51	2.07	19.46	13.51	0.14	0.80	14.45	1.45	6.76	74.26
Grand Total		**7.42**	**10.18**	**1.20**	**2.71**	**21.51**	**2.07**	**19.46**	**13.51**	**0.14**	**0.80**	**14.45**	**1.45**	**6.76**	**74.26**

DYNAMIC GROUND WATER RESOURCES OF INDIA, 2024															Annexure - III
TAMIL NADU															
S. No.	Name of District	Ground Water Recharge					Total Natural Discharges	Annual Extractable Ground Water Resource	Current Annual Ground Water Extraction				Annual GW Allocation for for Domestic Use as on 2025	Net Ground Water Availability for future use	Stage of Ground Water Extraction (%)
		Monsoon Season		Non-monsoon Season		Total Annual Ground Water Recharge			Irrigation	Industrial	Domestic	Total			
		Recharge from rainfall	Recharge from other sources	Recharge from rainfall	Recharge from other sources										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	ARIYALUR	17210.13	18042.90	529.40	1938.82	37721.25	3381.47	34339.78	16653.40	53.34	1219.86	17926.61	1326.88	16475.09	52.20
2	CHENGALPATTU	18796.31	40567.26	5.33	3419.08	62787.98	6204.12	56583.85	37533.40	322.95	781.81	38638.20	1459.25	17348.75	68.28
3	CHENNAI	8083.42	1276.81	0.00	857.66	10217.89	921.36	9296.52	175.90	1137.20	10296.87	11609.99	10458.56	835.15	124.89
4	COIMBATORE	21677.03	27401.17	2546.08	8759.61	60383.89	5961.97	54421.92	45128.29	404.57	1647.61	47180.46	5832.98	22168.41	86.69
5	CUDDALORE	38344.96	42474.47	19177.00	11828.45	111824.88	10884.23	100940.65	63909.12	80.29	1594.02	65583.44	3360.27	41022.47	64.97
6	DHARMAPURI	21538.17	10569.37	2744.22	12959.21	47810.97	4781.12	43029.84	40307.49	30.80	736.59	41074.89	1522.35	5615.47	95.46
7	DINDIGUL	24410.90	24598.03	2890.51	10266.73	62166.17	6078.47	56087.70	60130.57	349.60	1694.77	62174.95	4055.24	10109.55	110.85
8	ERODE	14311.16	46688.32	3360.73	9245.65	73605.86	7236.18	66369.68	52781.09	411.91	931.96	54124.99	18347.45	12329.27	81.55
9	KALLAKURICHCHI	27040.34	28226.82	957.28	10907.10	67131.54	6097.12	61034.42	50210.55	20.40	676.85	50907.82	1542.74	12474.78	83.41
10	KANCHEEPURAM	16343.90	34743.88	0.00	6832.73	57920.51	5665.41	52255.09	24849.30	668.03	318.50	25835.83	929.45	25936.36	49.44
11	KANNIYAKUMARI	7205.09	19927.85	1583.91	4216.68	32933.53	3293.35	29640.18	3801.00	106.75	1032.85	4940.63	1201.76	24681.68	16.67
12	KARUR	11838.73	18240.32	1543.66	2393.28	34015.99	3220.82	30795.17	29038.26	329.76	463.61	29831.63	1102.41	7663.58	96.87
13	KRISHNAGIRI	17062.06	16330.06	2653.56	12357.14	48402.82	4516.53	43886.28	40979.08	574.55	527.39	42081.02	1748.36	5690.73	95.89
14	MADURAI	22674.30	36893.58	2970.90	16166.92	78705.70	7546.15	73366.74	40779.15	3634.35	4706.21	49119.70	6197.55	25741.91	66.95
15	MAYILADUTHURAI	6974.64	31576.70	128.16	805.84	39485.34	3948.54	35536.80	42550.88	0.00	1355.66	43906.57	2989.41	2666.16	123.55
16	NAGAPATTINAM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Saline
17	NAMAKKAL	21286.89	26608.88	5034.78	6850.17	59780.72	5563.71	54217.01	55115.15	84.80	5718.74	60918.67	6186.03	9966.44	112.36
18	PERAMBALUR	9067.19	12416.20	766.27	3071.48	25321.14	2421.10	22900.04	24539.24	32.90	490.73	25062.87	855.12	7573.77	109.44
19	PUDUKKOTTAI	34481.46	53460.42	4476.72	4527.29	96945.89	9651.00	87294.89	42923.38	546.00	895.98	44365.37	1943.50	42144.78	50.82
20	RAMANATHAPURAM	2891.90	9080.72	30558.74	6102.45	48633.81	4863.43	43770.38	3781.20	62.30	679.01	4522.44	1437.11	38489.85	10.33
21	RANIPET	14519.93	7221.58	186.01	6413.49	28341.01	2511.03	25829.98	21072.85	1084.27	770.71	22927.83	1477.79	3394.42	88.76
22	SALEM	19180.42	26896.35	1722.66	5196.36	52995.79	5299.63	47696.16	68596.25	337.50	1056.53	69990.28	2324.63	9705.83	146.74
23	SIVAGANGAI	27427.23	34507.81	2800.34	1303.27	66038.65	6344.83	59693.81	15893.92	225.50	1463.10	17582.53	2249.61	41324.77	29.45
24	TENKASI	10874.16	38307.56	2681.82	6195.87	58059.41	5675.13	52384.29	39052.10	179.54	932.74	40164.38	932.74	21602.95	76.67
25	THANJAVUR	60999.97	33798.42	4218.78	5745.08	104762.25	10408.06	94354.19	74142.80	684.20	20290.11	95117.13	20705.93	11705.60	100.81
26	THE NILGIRIS	12873.36	359.63	1350.65	157.66	14741.30	1474.14	13267.16	650.70	52.40	199.27	902.35	2762.58	10372.71	6.80
27	THENI	7079.35	16915.16	3875.36	3536.86	31406.73	3140.69	28266.03	20927.78	92.11	616.23	21636.12	912.42	8504.09	76.54
28	THIRUVARUR	7406.89	15146.72	372.59	766.34	23692.54	2369.25	21323.29	12958.49	19.95	1359.90	14338.38	3605.92	9087.18	67.24
29	THOOTHUKUDI	20368.15	33087.00	3130.67	12143.36	68729.18	6715.74	62013.40	20861.18	305.05	448.01	21614.22	1501.92	39666.84	34.85
30	TIRUCHIRAPPALLI	18793.81	52296.67	1334.26	8061.50	80486.24	7993.20	72493.05	51991.65	260.30	739.35	52991.30	9581.47	29826.46	73.10
31	TIRUNELVELI	32066.25	35001.03	8302.60	8309.02	83678.90	7890.31	75788.59	31938.90	87.24	722.37	32748.55	1215.21	42779.56	43.21
32	TIRUPATHUR	5782.61	2037.85	372.78	1843.91	10037.15	1003.72	9033.43	11974.79	71.69	529.48	12575.96	1960.06	116.06	139.22
33	TIRUPPUR	14146.09	31482.15	3526.64	12854.86	62009.74	6065.50	55944.24	45914.55	296.05	572.52	46783.04	3104.66	11072.52	83.62
34	TIRUVALLUR	54634.50	21864.32	0.00	9768.65	86267.47	7611.83	78655.65	39680.30	1158.26	2095.22	42933.82	4401.00	33663.11	54.58
35	TIRUVANNAMALAI	28596.19	67544.24	401.79	25057.49	121599.71	11453.55	110146.16	82925.18	228.60	8121.39	91275.12	8196.43	23841.22	82.87
36	VELLORE	7479.24	4606.61	281.98	4631.89	16999.72	1664.55	15335.17	16290.75	335.28	2003.69	18629.72	2864.60	647.47	121.48
37	VILLUPURAM	41734.19	47839.63	73.03	13447.78	103094.63	9669.54	93425.09	79391.09	19.63	2174.35	81585.10	3726.44	15622.90	87.33
38	VIRUDHUNAGAR	16739.31	49971.26	3534.29	12343.59	82588.45	7852.01	74736.43	41148.01	65.36	487.38	41700.76	487.38	34213.98	55.80
	Total(Ham)	**741940.23**	**1018007.75**	**120093.50**	**271283.27**	**2151324.75**	**207378.79**	**1946153.06**	**1350597.74**	**14353.43**	**80351.37**	**1445302.67**	**144507.21**	**676081.87**	**74.26**
	Total(Bcm)	**7.42**	**10.18**	**1.20**	**2.71**	**21.51**	**2.07**	**19.46**	**13.51**	**0.14**	**0.80**	**14.45**	**1.45**	**6.76**	**74.26**

CATEGORIZATION OF BLOCKS/ MANDALS/ TALUKAS IN INDIA (2024)												Annexure - IV
S.No.	State/Union Territories	Total No. of Assessed Units	Safe		Semi-Critical		Critical		Over-Exploited		Saline	
	States		Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
1	Tamil Nadu	1202	481	40.0	239	19.9	56	4.7	392	32.6	34	2.83

DYNAMIC GROUND WATER RESOURCES OF INDIA, 2024												Annexure - V
TAMIL NADU												
S.No	Name of District	Total No. of Assessed Units	Safe		SemiCritical		Critical		OverExploited		Saline	
			No.	%	No.	%	No.	%	No.	%	No.	%
1	ARIYALUR	**15**	11	73.33	3	20.00	1	6.67	0	0.00	0	0.00
2	CHENGALPATTU	**40**	20	50.00	16	40.00	2	5.00	2	5.00	0	0.00
3	CHENNAI	**51**	2	3.92	3	5.88	0	0.00	46	90.20	0	0.00
4	COIMBATORE	**38**	6	15.79	5	13.16	5	13.16	22	57.89	0	0.00
5	CUDDALORE	**32**	15	46.88	3	9.38	3	9.38	11	34.38	0	0.00
6	DHARMAPURI	**23**	4	17.39	5	21.74	2	8.70	12	52.17	0	0.00
7	DINDIGUL	**40**	5	12.50	8	20.00	1	2.50	26	65.00	0	0.00
8	ERODE	**35**	12	34.29	9	25.71	2	5.71	12	34.29	0	0.00
9	KALLAKURICHCHI	**24**	9	37.50	4	16.67	3	12.50	8	33.33	0	0.00
10	KANCHEEPURAM	**25**	18	72.00	4	16.00	2	8.00	1	4.00	0	0.00
11	KANNIYAKUMARI	**22**	21	95.45	1	4.55	0	0.00	0	0.00	0	0.00
12	KARUR	**20**	2	10.00	5	25.00	1	5.00	12	60.00	0	0.00
13	KRISHNAGIRI	**31**	9	29.03	11	35.48	0	0.00	11	35.48	0	0.00
14	MADURAI	**51**	26	50.98	14	27.45	6	11.76	5	9.80	0	0.00
15	MAYILADUTHURAI	**15**	1	6.67	0	0.00	0	0.00	13	86.67	1	6.67
16	NAGAPATTINAM	**16**	0	0.00	0	0.00	0	0.00	0	0.00	16	100.00
17	NAMAKKAL	**32**	5	15.63	4	12.50	1	3.13	22	68.75	0	0.00
18	PERAMBALUR	**11**	3	27.27	1	9.09	0	0.00	7	63.64	0	0.00
19	PUDUKKOTTAI	**45**	25	55.56	17	37.78	0	0.00	0	0.00	3	6.67
20	RAMANATHAPURAM	**38**	29	76.32	0	0.00	0	0.00	0	0.00	9	23.68
21	RANIPET	**18**	1	5.56	13	72.22	0	0.00	4	22.22	0	0.00
22	SALEM	**44**	3	6.82	3	6.82	3	6.82	35	79.55	0	0.00
23	SIVAGANGAI	**39**	39	100.00	0	0.00	0	0.00	0	0.00	0	0.00
24	TENKASI	**30**	11	36.67	8	26.67	2	6.67	9	30.00	0	0.00
25	THANJAVUR	**50**	6	12.00	8	16.00	2	4.00	34	68.00	0	0.00
26	THE NILGIRIS	**15**	15	100.00	0	0.00	0	0.00	0	0.00	0	0.00
27	THENI	**17**	8	47.06	4	23.53	0	0.00	5	29.41	0	0.00
28	THIRUVARUR	**28**	11	39.29	1	3.57	0	0.00	12	42.86	4	14.29
29	THOOTHUKUDI	**41**	34	82.93	6	14.63	0	0.00	1	2.44	0	0.00
30	TIRUCHIRAPPALLI	**43**	22	51.16	3	6.98	0	0.00	18	41.86	0	0.00
31	TIRUNELVELI	**30**	27	90.00	2	6.67	1	3.33	0	0.00	0	0.00
32	TIRUPATHUR	**15**	0	0.00	3	20.00	0	0.00	12	80.00	0	0.00
33	TIRUPPUR	**33**	7	21.21	14	42.42	3	9.09	9	27.27	0	0.00
34	TIRUVALLUR	**48**	31	64.58	14	29.17	0	0.00	2	4.17	1	2.08
35	TIRUVANNAMALAI	**54**	12	22.22	18	33.33	9	16.67	15	27.78	0	0.00
36	VELLORE	**20**	0	0.00	8	40.00	0	0.00	12	60.00	0	0.00
37	VILLUPURAM	**34**	9	26.47	9	26.47	6	17.65	10	29.41	0	0.00
38	VIRUDHUNAGAR	**39**	22	56.41	12	30.77	1	2.56	4	10.26	0	0.00
Total		**1202**	**481**	**40.02**	**239**	**19.88**	**56**	**4.66**	**392**	**32.61**	**34**	**2.83**

ANNUAL EXTRACTABLE RESOURCE OF ASSESSMENT UNITS UNDER DIFFERENT CATEGORIES IN INDIA(2024)										Annexure - VI
S.No.	State/Union Territories	Total Annual Extractable Resource of Assessed Units (in mcm)	Safe		Semi-Critical		Critical		Over-Exploited	
			Total Annual Extractable Resource (in mcm)	%	Total Annual Extractable Resource (in mcm)	%	Total Annual Extractable Resource (in mcm)	%	Total Annual Extractable Resource (in mcm)	%
1	**Tamil Nadu**	19461.53	9041.39	46.46	3939.48	20.24	1118.75	5.75	5352.91	27.51
Grand Total		**19461.53**	**9041.39**	**46.46**	**3939.48**	**20.24**	**1118.75**	**5.75**	**5352.91**	**27.51**

DYNAMIC GROUND WATER RESOURCES OF INDIA, 2024										Annexure - VII
TAMIL NADU										
S.No	Name of District	Total Annual Extractable Resource of Assessed Units (in Mcm)	Safe		Semi-Critical		Critical		Over-Exploited	
			Annual Extractable Resource (in Mcm)	%	Annual Extractable Resource (in Mcm)	%	Annual Extractable Resource (in Mcm)	%	Annual Extractable Resource (in Mcm)	%
1	ARIYALUR	**343.40**	286.22	83.35	47.45	13.82	9.73	2.83	0.00	0.00
2	CHENGALPATTU	**565.84**	220.83	39.03	277.15	48.98	59.20	10.46	8.65	1.53
3	CHENNAI	**92.97**	8.34	8.97	21.14	22.74	0.00	0.00	63.48	68.29
4	COIMBATORE	**544.22**	131.84	24.22	43.93	8.07	107.59	19.77	260.86	47.93
5	CUDDALORE	**1009.41**	600.22	59.46	66.51	6.59	62.10	6.15	280.58	27.80
6	DHARMAPURI	**430.30**	99.92	23.22	98.22	22.83	37.76	8.78	194.40	45.18
7	DINDIGUL	**560.88**	63.81	11.38	97.24	17.34	11.51	2.05	388.32	69.23
8	ERODE	**663.70**	278.62	41.98	180.69	27.22	54.12	8.15	150.27	22.64
9	KALLAKURICHCHI	**610.34**	217.29	35.60	101.59	16.64	84.97	13.92	206.49	33.83
10	KANCHEEPURAM	**522.55**	350.62	67.10	101.29	19.38	47.87	9.16	22.77	4.36
11	KANNIYAKUMARI	**296.40**	282.60	95.34	13.80	4.66	0.00	0.00	0.00	0.00
12	KARUR	**307.95**	66.06	21.45	72.07	23.40	14.56	4.73	155.26	50.42
13	KRISHNAGIRI	**438.86**	110.19	25.11	121.26	27.63	0.00	0.00	207.41	47.26
14	MADURAI	**733.67**	383.66	52.29	184.58	25.16	95.31	12.99	70.12	9.56
15	MAYILADUTHURAI	**355.37**	38.74	10.90	0.00	0.00	0.00	0.00	316.62	89.10
16	NAGAPATTINAM	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	NAMAKKAL	**542.17**	83.96	15.49	101.85	18.79	25.62	4.72	330.74	61.00
18	PERAMBALUR	**229.00**	51.14	22.33	10.76	4.70	0.00	0.00	167.11	72.97
19	PUDUKKOTTAI	**872.95**	593.32	67.97	279.63	32.03	0.00	0.00	0.00	0.00
20	RAMANATHAPURAM	**437.70**	428.76	97.96	0.00	0.00	0.00	0.00	0.00	0.00
21	RANIPET	**258.30**	8.88	3.44	196.72	76.16	0.00	0.00	52.70	20.40
22	SALEM	**476.96**	8.98	1.88	31.54	6.61	29.72	6.23	406.72	85.27
23	SIVAGANGAI	**596.94**	596.94	100.00	0.00	0.00	0.00	0.00	0.00	0.00
24	TENKASI	**523.84**	209.77	40.04	153.01	29.21	29.45	5.62	131.62	25.13
25	THANJAVUR	**943.54**	121.85	12.91	166.69	17.67	47.12	4.99	607.88	64.43
26	THE NILGIRIS	**132.67**	132.67	100.00	0.00	0.00	0.00	0.00	0.00	0.00
27	THENI	**282.66**	168.79	59.71	60.50	21.40	0.00	0.00	53.37	18.88
28	THIRUVARUR	**213.23**	121.87	57.15	8.20	3.85	0.00	0.00	83.17	39.00
29	THOOTHUKUDI	**620.13**	510.87	82.38	94.33	15.21	0.00	0.00	14.93	2.41
30	TIRUCHIRAPPALLI	**724.93**	418.89	57.78	40.37	5.57	0.00	0.00	265.68	36.65
31	TIRUNELVELI	**757.89**	678.92	89.58	51.86	6.84	27.10	3.58	0.00	0.00
32	TIRUPATHUR	**90.33**	0.00	0.00	12.53	13.87	0.00	0.00	77.81	86.13
33	TIRUPPUR	**559.44**	152.12	27.19	260.99	46.65	36.80	6.58	109.53	19.58
34	TIRUVALLUR	**786.56**	601.87	76.52	173.78	22.09	0.00	0.00	10.85	1.38
35	TIRUVANNAMALAI	**1101.46**	313.30	28.44	353.73	32.11	175.59	15.94	258.84	23.50
36	VELLORE	**153.35**	0.00	0.00	68.95	44.96	0.00	0.00	84.40	55.04
37	VILLUPURAM	**934.25**	237.64	25.44	260.15	27.85	133.01	14.24	303.46	32.48
38	VIRUDHUNAGAR	**747.36**	461.91	61.80	186.97	25.02	29.61	3.96	68.87	9.22
Total		**19461.53**	**9041.39**	**46.46**	**3939.48**	**20.24**	**1118.75**	**5.75**	**5352.91**	**27.51**

AREA OF ASSESSMENT UNITS UNDER DIFFERENT CATEGORIES IN INDIA (2024)													Annexure - VIII	
S.No.	States/Union Territories	Total Recharge Worthy Area of Assessed Units (in sq.km)	Safe		Semi-Critical		Critical		Over-Exploited		Saline			
			Recharge Worthy Area (in sq.km)	%	Recharge Worthy Area (in sq.km)	%	Recharge Worthy Area (in sq.km)	%	Recharge Worthy Area (in sq.km)	%	Recharge Worthy Area (in sq.km)	%		
1	TAMIL NADU	108613.35	43886.57	40.41	22663.35	20.87	5517.20	5.08	33375.93	30.73	3170.30	2.92		
	Grand Total	108613.35	43886.57	40.41	22663.35	20.87	5517.20	5.08	33375.93	30.73	3170.30	2.92		

DYNAMIC GROUND WATER RESOURCES OF INDIA, 2024												Annexure - IX
TAMIL NADU												
S.No	Name of District	Total Recharge Worthy Area of Assessed Units (in sq.km)	Safe		Semi-Critical		Critical		Over-Exploited		Saline	
			Recharge Worthy Area of Assessed Units (in sq.km)	%	Recharge Worthy Area of Assessed Units (in sq.km)	%	Recharge Worthy Area of Assessed Units (in sq.km)	%	Recharge Worthy Area of Assessed Units (in sq.km)	%	Recharge Worthy Area of Assessed Units (in sq.km)	%
1	ARIYALUR	**1926.59**	1450.65	75.30	389.08	20.20	86.85	4.51	0.00	0.00	0.00	0.00
2	CHENGALPATTU	**2424.15**	1101.22	45.43	1072.14	44.23	181.56	7.49	69.23	2.86	0.00	0.00
3	CHENNAI	**446.28**	38.37	8.60	86.15	19.30	0.00	0.00	321.77	72.10	0.00	0.00
4	COIMBATORE	**3604.51**	548.56	15.22	360.13	9.99	536.31	14.88	2159.51	59.91	0.00	0.00
5	CUDDALORE	**3636.73**	1662.17	45.70	401.72	11.05	391.81	10.77	1181.04	32.48	0.00	0.00
6	DHARMAPURI	**2856.00**	657.90	23.04	696.65	24.39	238.40	8.35	1263.05	44.22	0.00	0.00
7	DINDIGUL	**4877.41**	647.80	13.28	837.23	17.17	104.06	2.13	3288.32	67.42	0.00	0.00
8	ERODE	**3463.40**	1220.51	35.24	803.21	23.19	269.44	7.78	1170.24	33.79	0.00	0.00
9	KALLAKURICHCHI	**2579.23**	1014.21	39.32	377.05	14.62	346.41	13.43	841.56	32.63	0.00	0.00
10	KANCHEEPURAM	**1667.94**	1189.30	71.30	266.65	15.99	154.01	9.23	57.98	3.48	0.00	0.00
11	KANNIYAKUMARI	**1130.45**	1064.44	94.16	66.01	5.84	0.00	0.00	0.00	0.00	0.00	0.00
12	KARUR	**2833.70**	266.07	9.39	695.85	24.56	169.76	5.99	1702.02	60.06	0.00	0.00
13	KRISHNAGIRI	**3103.61**	1052.40	33.91	980.52	31.59	0.00	0.00	1070.69	34.50	0.00	0.00
14	MADURAI	**3256.47**	1545.34	47.45	946.33	29.06	473.91	14.55	290.89	8.93	0.00	0.00
15	MAYILADUTHURAI	**1162.56**	80.22	6.90	0.00	0.00	0.00	0.00	993.02	85.42	89.32	7.68
16	NAGAPATTINAM	**1538.44**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1538.44	100.00
17	NAMAKKAL	**2928.10**	530.24	18.11	472.85	16.15	78.88	2.69	1846.14	63.05	0.00	0.00
18	PERAMBALUR	**1594.54**	391.74	24.57	115.08	7.22	0.00	0.00	1087.72	68.22	0.00	0.00
19	PUDUKKOTTAI	**4427.94**	2489.61	56.23	1790.46	40.44	0.00	0.00	0.00	0.00	147.87	3.34
20	RAMANATHAPURAM	**4074.87**	3122.51	76.63	0.00	0.00	0.00	0.00	0.00	0.00	952.36	23.37
21	RANIPET	**1756.01**	86.98	4.95	1289.75	73.45	0.00	0.00	379.27	21.60	0.00	0.00
22	SALEM	**3948.48**	150.57	3.81	261.11	6.61	213.27	5.40	3323.53	84.17	0.00	0.00
23	SIVAGANGAI	**4032.62**	4032.62	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	TENKASI	**2442.44**	772.58	31.63	668.23	27.36	189.03	7.74	812.61	33.27	0.00	0.00
25	THANJAVUR	**3394.70**	428.74	12.63	639.98	18.85	137.33	4.05	2188.65	64.47	0.00	0.00
26	THE NILGIRIS	**1119.08**	1119.08	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	THENI	**1894.17**	991.95	52.37	434.33	22.93	0.00	0.00	467.90	24.70	0.00	0.00
28	THIRUVARUR	**2072.57**	883.33	42.62	71.85	3.47	0.00	0.00	744.28	35.91	373.12	18.00
29	THOOTHUKUDI	**4597.12**	3718.01	80.88	750.71	16.33	0.00	0.00	128.40	2.79	0.00	0.00
30	TIRUCHIRAPPALLI	**4036.10**	1585.47	39.28	347.60	8.61	0.00	0.00	2103.03	52.11	0.00	0.00
31	TIRUNELVELI	**3043.87**	2640.89	86.76	276.33	9.08	126.65	4.16	0.00	0.00	0.00	0.00
32	TIRUPATHUR	**1108.81**	0.00	0.00	170.32	15.36	0.00	0.00	938.49	84.64	0.00	0.00
33	TIRUPPUR	**4713.91**	810.25	17.19	2338.02	49.60	337.98	7.17	1227.65	26.04	0.00	0.00
34	TIRUVALLUR	**3042.19**	2155.99	70.87	736.09	24.20	0.00	0.00	80.92	2.66	69.19	2.27
35	TIRUVANNAMALAI	**4783.95**	957.76	20.02	1538.28	32.15	876.95	18.33	1410.96	29.49	0.00	0.00
36	VELLORE	**1320.24**	0.00	0.00	577.99	43.78	0.00	0.00	742.25	56.22	0.00	0.00
37	VILLUPURAM	**3772.29**	1046.98	27.75	1018.57	27.00	518.07	13.73	1188.66	31.51	0.00	0.00
38	VIRUDHUNAGAR	**4001.89**	2432.12	60.77	1187.09	29.66	86.52	2.16	296.17	7.40	0.00	0.00
Total		**108613.35**	**43886.57**	**40.41**	**22663.35**	**20.87**	**5517.20**	**5.08**	**33375.93**	**30.73**	**3170.30**	**2.92**

CATEGORIZATION of ASSESSMENT UNITS, 2024							Annexure - X
TAMIL NADU							
S. No	**Name of District**	**S. No**	**Name of Semi-Critical Assessment Units**	**S. No**	**Name of Critical Assessment Units**	**S. No**	**Name of Over-Exploited Assessment Units**
1	**ARIYALUR**	1	ANDIMADAM	1	SENDURAI(A)		
		2	KOVAGAM				
		3	KUNDAVELI				
2	**CHENGALPATTU**	1	ATCHARAPPAKKAM	1	ORATHI	1	APPUR
		2	GUDUVANCHERI	2	THIRUKKALUKUNDRAM	2	CHENGALPATTU
		3	JAMEEN ENDATHUR				
		4	KARUMPAKKAM				
		5	KATTANKOLATHUR				
		6	KAYAPAKKAM				
		7	KODUR				
		8	L ENDATHTHUR				
		9	MAMALLAPURAM				
		10	NERUMPUR				
		11	OONAMPAKKAM				
		12	P.V.KALATHUR				
		13	PERUMPAKKAM				
		14	SINGAPERUMAL KOVIL				
		15	SITHAMOOR				
		16	VANDALUR				
3	**CHENNAI**	1	ALANDUR			1	ADYAR
		2	MADHAVARAM			2	AMBATTUR
		3	PALLIKARANAI			3	AMINJIKARAI
						4	ANNA NAGAR
						5	ASHOK NAGAR
						6	AYANAVARAM
						7	BESANT NAGAR
						8	CHINTADRIPET
						9	EGMORE (EGMORE SOUTH)
						10	EKKATUTHANGAL
						11	ERUKANCHERY
						12	KILPAUK (EGMORE NORTH)
						13	KODUNGAIYUR
						14	KOLATHUR(C)
						15	KONNUR
						16	KORATTUR
						17	KORRUKUPET
						18	KOTTUR(C)
						19	KOYAMBEDU
						20	MADURAVOYAL
						21	MAMBALAM
						22	MANALI
						23	MYLAPORE (SOUTH)
						24	NUNGAMBAKKAM
						25	OLD WASHERMANPET
						26	OTTERI (PURASAWALKAM WEST)
						27	PERAMBUR(C)
						28	PERAVALLUR
						29	PORUR
						30	PURASAWALKAM (EAST)
						31	ROYAPETTAH (MYLAPORE NORTH)
						32	ROYAPURAM
						33	SALIGRAMAM
						34	SEMBIUM
						35	THARAMANI
						36	THIRUVANMIYUR
						37	THIRUVOTTIYUR
						38	THYAGARAYA NAGAR
						39	TONDIARPET
						40	TRIPLICANE
						41	V.O.C NAGAR
						42	VADAPALANI
						43	VELACHERY
						44	VEPERY
						45	VILLIVAKKAM
						46	VIRUGAMBAKKAM
4	**COIMBATORE**	1	POLLACHI NORTH	1	KARAMADAI	1	ALANTHURAI
		2	POLLACHI SOUTH	2	MADUKARAI	2	ANNUR NORTH
		3	SULUR	3	PERIYANEKAMAM	3	ANNUR SOUTH
		4	THUDIYALUR	4	PERUR	4	ANUPAR PALAYAM
		5	VADAVALLI	5	VALPARAI	5	COIMBATORE
						6	GANAPATHY
						7	KARUMATHAMPATTY
						8	KINATHUKADAVU
						9	KOLARPATTY
						10	KOVILPALAYAM
						11	MADAMPATTY
						12	METTUPALAYAM

CATEGORIZATION of ASSESSMENT UNITS, 2024							Annexure - X
TAMIL NADU							
S. No	Name of District	S. No	Name of Semi-Critical Assessment Units	S. No	Name of Critical Assessment Units	S. No	Name of Over-Exploited Assessment Units
						13	OTHAKALMANDAPAM
						14	PERIANAICKENPALAYAM
						15	RAMAPATTINAM
						16	SARAVANAM PATTY
						17	SARKAR SAMAKULAM
						18	SELAKARICHAL
						19	SINGANALLUR
						20	THONDAMUTHUR
						21	VAARAPATTY
						22	VADASITHUR
5	**CUDDALORE**	1	KURINJIPADI	1	KADAMPULIYUR	1	KAMMAPURAM
		2	MANJAKKUPPAM	2	PANRUTI	2	KAVANUR
		3	SIRUPAKKAM	3	TITAGUDI(WEST)	3	NELLIKUPPAM(C)
						4	PENNADAM
						5	RETTICHAVADI
						6	THIRUVANTHIPURAM
						7	THOZHUDUR
						8	TITAGUDI(EAST)
						9	VEPPUR
						10	VRIDHACHALAM NORTH
						11	VRIDHACHALAM SOUTH
6	**DHARMAPURI**	1	HARUR	1	INDUR	1	BOMMIDI
		2	MORAPPUR	2	KRISHNAPURAM	2	KADATHUR
		3	PALACODE			3	KAMBAINALLUR
		4	PAPPIREDDIPATTI			4	KARIMANGALAM
		5	PAUPARAPATTY			5	MARANDAHALLI
						6	PALAYAM(D)
						7	PENNAGARAM
						8	PERIYANAHALLI
						9	PERUMBALAI
						10	PULIKARAI
						11	THENKARAIKOTTAI
						12	VELLICHANTHAI
7	**DINDIGUL**	1	DHARMATHUPATTI	1	KAMBILIYAMPATTI	1	ATHOOR
		2	KORIKKADAVU			2	AYYAKUDI
		3	NATHAM			3	AYYALUR
		4	NEIKKARAPATTI			4	AYYAMPALAYAM
		5	ORUTHATTU			5	CHINNAKKAMPATTI
		6	PILLAIYAR NATHAM			6	CHINNALAPATTI
		7	REDDIAPATTI			7	DEVATHUR
		8	SENDURAI			8	DINDIGUL EAST
						9	DINDIGUL WEST
						10	ERIODU
						11	KALLIMANTHAYAM
						12	KOTTANATHAM
						13	KOVILUR
						14	NILAKKOTTAI
						15	ODDENCHATRAM
						16	PALAYAM(DI)
						17	PALLAGANUTHU
						18	PULIURNATAM
						19	REDIYARCHATIRAM
						20	SANARPATTI
						21	SILUVATHUR
						22	THOPPAMPATTI
						23	VADAMADURAI
						24	VATHALAKUNDU
						25	VEDASANDUR
						26	VIRUVEEDU
8	**ERODE**	1	AMMAPETTAI(E)	1	ANTHIYUR	1	ARASUR(E)
		2	ARACHALUR	2	MODAKKURICHI	2	ATHANI(E)
		3	AVAL POONDURAI			3	BHAVANISAGAR
		4	ERODE EAST			4	CHENNIMALAI
		5	ERODE NORTH			5	ELATHUR(E)
		6	KILAMPADI			6	NAMBIYUR
		7	KODUMUDI			7	PERUNDURAI
		8	SATHYAMANGALAM			8	PUNJAI PULIAMPATTI
		9	SIVAGIRI(E)			9	SIRUVALUR
						10	THINGALUR
						11	VELLODE
						12	VEMANDAMPALAYAM
9	**KALLAKURICHCHI**	1	KALAMARUDHUR	1	KALLAKURICHI	1	CHINNASELAM
		2	SENGURICHI	2	THIYAGADURGAM	2	ELAVANASURKOTTAI
		3	TIRUKKOILUR	3	ULUNDURPET	3	ERAIYUR(K)
		4	VADAKKANANDHAL			4	INDHILI

CATEGORIZATION of ASSESSMENT UNITS, 2024							Annexure - X
TAMIL NADU							
S. No	Name of District	S. No	Name of Semi-Critical Assessment Units	S. No	Name of Critical Assessment Units	S. No	Name of Over-Exploited Assessment Units
						5	KALVARAYAN HILLS
						6	NAGALUR
						7	NAINARPALAYAM
						8	SANKARAPURAM
10	**KANCHEEPURAM**	1	GOVINDAVADI	1	THIRUPPULIVANAM	1	ARUMPULIUR
		2	SIRUKAVERIPAKKAM	2	WALAJABAD		
		3	THIRUPUKUZHI				
		4	UTHIRAMERUR				
11	**KANNIYAKUMARI**	1	RAJAKKAMANGALAM				
12	**KARUR**	1	ARAVAKURICHI	1	VELLIANNAI	1	K PARAMATHI
		2	CHINNADHARAPURAM			2	KADAVUR
		3	CHINTHALAVADI			3	KARUR
		4	MANMANGALAM			4	KATTALAI
		5	PUGALUR			5	MYLAMPATTI
						6	PALLAPATTI(K)
						7	PANJAPATTI
						8	THALAPATTI
						9	THENNILAI
						10	THOGAMALAI
						11	THORANAKALPATTI
						12	VANGAL
13	**KRISHNAGIRI**	1	BAGALUR			1	ALAPATTI
		2	BARUR			2	BARGUR(K)
		3	BERIGAI			3	KALLAVI
		4	HOSUR			4	KURUBRAPALLI
		5	HOSUR TOWN			5	MATHUR(K)
		6	KELAMANGALAM			6	NAGARASAMPATTI
		7	KRISHNAGIRI			7	PALLEPALLI
		8	MATHIGIRI			8	SAMALPATTI
		9	PERIYAMUTUR			9	SINGARAPATAI
		10	POCHAMPALLI			10	UTHANGARAI
		11	RAYAKOTTAI			11	VEPPANAPALLI
14	**MADURAI**	1	ALANGANALLUR	1	A.VALLALAPATTI	1	EAST MADURAI
		2	ELUMALAI	2	ATHIPATTI	2	KOTTAMPATTI
		3	KARUMATHUR	3	MUDUVARPATTI	3	MADURAI WEST
		4	KARUNGALAKKUDI	4	USILAMPATTI	4	PALAMEDU
		5	KOKKULAM	5	UTHAPPANAYAKANUR	5	SINDUPATTI
		6	KOOLAPANDI	6	VALANDUR		
		7	MELAVALAVU				
		8	NAGAMALAI PUDUKOTTAI				
		9	OTHAKADAI				
		10	SAKKIMANGALAM				
		11	SATHAMANGALAM				
		12	SEDAPATTI				
		13	THIRUPPARANKUNDRAM				
		14	VELLALUR				
15	**MAYILADUTHURAI**					1	KUTTALAM
						2	MAADHANAM
						3	MANGANALLUR
						4	MAYILADUTHURAI
						5	MELAIYUR
						6	PAALAIYUR
						7	PATTAVARTHI
						8	PUTHUR(N)
						9	SEMBANARKOIL
						10	SIRKALI
						11	THIRUVENKADU
						12	THIRUVILAIYATTAM
						13	VAITHEESVARAN KOIL
16	**NAMAKKAL**	1	ELACHIPALAYAM	1	KUMARAPALAYAM	1	ALANGANATHAM
		2	JEDARPALAYAM			2	ERUMAPATTI
		3	MOLASI			3	KALAPPANAICKENPATTI
		4	PANDAMANGALAM			4	KEERAMBUR
						5	MALLASAMUTHRAM
						6	MANGALAPURAM
						7	METTUPATTY
						8	MOHANUR
						9	MULLUKURICHI
						10	NALLIPALAYAM
						11	NALLUR(N)
						12	NAMAGIRIPETTAI
						13	NAMAKKAL
						14	PARAMATHI

CATEGORIZATION of ASSESSMENT UNITS, 2024							Annexure - X
TAMIL NADU							
S. No	**Name of District**	**S. No**	**Name of Semi-Critical Assessment Units**	**S. No**	**Name of Critical Assessment Units**	**S. No**	**Name of Over-Exploited Assessment Units**
						15	PUDUCHATRAM
						16	RASIPURAM
						17	SELLAPPAMPATTI
						18	SENDAMANGALAM
						19	TIRUCHENGODE
						20	VAIYAPPAMALAI
						21	VALAYAPATTI
						22	VENNANDUR
17	**PERAMBALUR**	1	KOOTHUR			1	CHETTIKULAM
						2	KELAPULIYUR
						3	KURUMBALUR
						4	PASUMBALUR
						5	PERAMBALUR
						6	VALLIKANDAPURAM
						7	VENGALAM
18	**PUDUKKOTTAI**	1	ARASAMALAI				
		2	KALLAKOTTAI				
		3	KARAIYUR				
		4	KEERAMANGALAM				
		5	KEERANUR				
		6	KODUMPALUR				
		7	MATHUR				
		8	NEERPALANI				
		9	PONNAMARAVATHI				
		10	POOVATHAKUDI				
		11	PUDHUNAGAR				
		12	PUDUKKOTTAI				
		13	SITHANNAVASAL				
		14	VALLANADU(P)				
		15	VARAPPUR(P)				
		16	VEERAPPATTI				
		17	VIRALIMALAI				
19	**RANIPET**	1	ARAKKONAM NORTH			1	ARCOT
		2	ARAKKONAM SOUTH			2	PUDUPADI
		3	BANAVARAM			3	THIMIRI
		4	KALAVAI			4	WALAJAH
		5	KAVERIPAKKAM				
		6	MAMBAKKAM(R)				
		7	NEMILI(R)				
		8	PALLUR				
		9	PANAPAKKAM				
		10	PARANJI				
		11	RANIPET				
		12	SHOLINGUR				
		13	VISHARAM				
20	**SALEM**	1	ARUNUTHUMALAI	1	KARUPUR	1	ALAGAPURAM
		2	KALRAYAN HILLS	2	METTUR TOWN	2	ATTUR
		3	THEVOOR	3	PACHAMALAI	3	BELUR
						4	EDAPPADY
						5	ERNAPURAM
						6	GANGAVALLI
						7	KADAYAMPATTI
						8	KARIPATTY
						9	KATTUKOTAI
						10	KOLATHUR(S)
						11	KONDALAMPATTY
						12	KONGANAPURAM
						13	MALLIYAKARAI
						14	MECHERY
						15	NANGAVALLI
						16	OMALUR
						17	PALAMALAI
						18	PANAMARATHUPATTI
						19	PETHANAICKENPALAYAM
						20	POOLAMPATTI
						21	POTANERY
						22	SALEM TOWN
						23	SANKAGIRI WEST
						24	SANKARI EAST
						25	SEMMANDAPATTI
						26	SURAMANGALAM
						27	THALAIVASAL
						28	THARAMANGALAM
						29	THIRUMALAIGIRI
						30	VALAPADY
						31	VALASAIYUR

CATEGORIZATION of ASSESSMENT UNITS, 2024							Annexure - X
TAMIL NADU							
S. No	**Name of District**	**S. No**	**Name of Semi-Critical Assessment Units**	**S. No**	**Name of Critical Assessment Units**	**S. No**	**Name of Over-Exploited Assessment Units**
						32	VEERAGANUR
						33	VEERAPANDY
						34	VEMBADITHALAM
						35	YETHAPUR
21	**TENKASI**	1	ALANGULAM(T)	1	SERNTHAMANGALAM	1	KARISALKULAM
		2	AYIKUDI	2	UTHUMALAI	2	KARIVALAMVANTHANALLUR
		3	CUDDALOR(T)			3	KARUVANTHA
		4	KADAYANALLUR			4	KEEZHAPAVOOR
		5	KALLURANI			5	KURUKKALPATTI
		6	NETTUR			6	PAZHANKOTTAI
		7	SANKARANKOVIL			7	PULIANGUDI
		8	SURANDAI			8	VEERASIGAMANI
						9	VENKADAMPATTI
22	**THANJAVUR**	1	BUDALUR	1	KABISTHALAM	1	AANDIKKADU
		2	CHOZHANMALIGAI	2	NAMBIVAYAL	2	AAVANAM
		3	ORATHANAD			3	ADIRAMPATTINAM
		4	PERAVURANI			4	ADUTHURAI
		5	SALIYAMANGALAM			5	AGARAPPETTAI
		6	THAMBIKKOTTAI			6	AMMAPETTAI(T)
		7	THANJAVUR			7	AYYAMPETTAI
		8	ULUR			8	DEVANCHERI
						9	KANDIYUR
						10	KATHIRAMANGALAM
						11	KAVALIPATTI
						12	KUMBAKONAM
						13	KURUVIKKARAMBAI
						14	MADUKKUR
						15	MILATTUR
						16	MURUKKANGUDI
						17	NACHIYARKOVIL
						18	NADUCAUVERY
						19	NANJIKOTTAI
						20	PANTHALLUR
						21	PAPANASAM
						22	PATTUKOTTAI
						23	PERIYAKKOTTAI
						24	RAMAPURAM
						25	SILLATHUR
						26	THIRUCHITRAMBALAM
						27	THIRUKKATTUPALLI
						28	THIRUPPANANDAL
						29	THIRUVAIYARU
						30	THIRUVIDAIMARUTHUR
						31	THONDARAMPATTU
						32	THURVARANKURICHI
						33	TIRUMANGALAKKOTTAI
						34	VALLAM
23	**THENI**	1	AUNDIPATTI			1	ERASAKKANAICKANUR
		2	KODANGIPATTI			2	KANDAMANUR
		3	MARKAYANKOTTAI			3	MYLADUMPARAI
		4	THENI			4	RAJATHANI
						5	THEVARAM
24	**THIRUVARUR**	1	NANNILAM			1	AALANGUDI
						2	AAVUR
						3	AKARATHIRUMAALAM
						4	KAMALAPURAM
						5	KORADACHERI
						6	KUDAVASAL
						7	PERALAM
						8	SELLUR
						9	THIRUKKANNAMANGAI
						10	THIRUVEZHIMIZHALAI
						11	VADAPATHIMANGALAM
						12	VALANGAIMAN
25	**THOOTHUKUDI**	1	ILLAYARASANENDAL			1	PALLAKKURICHI
		2	KADAMBUR				
		3	KAYATHAR				
		4	PARIVALLIKOTTAI				
		5	SATTANKULAM				
		6	UDANGUDI				
26	**TIRUCHIRAPPALLI**	1	KATTUPUTHUR			1	ERAGUDI
		2	PERUVALAPPUR			2	KANNANUR
		3	VALANADU			3	KARIYAMANIKKAM
						4	KOPPAMPATTI

CATEGORIZATION of ASSESSMENT UNITS, 2024							Annexure - X
TAMIL NADU							
S. No	**Name of District**	**S. No**	**Name of Semi-Critical Assessment Units**	**S. No**	**Name of Critical Assessment Units**	**S. No**	**Name of Over-Exploited Assessment Units**
						5	MANAPPARAI
						6	MANIKANDAM FIRKA
						7	MARUNGAPURI
						8	PANNAPATTY
						9	PULIVALAM
						10	SENGATTUPATTI
						11	T.PET
						12	THUMBALAM
						13	THURAIYUR
						14	THUVARANKURUCHI
						15	UPPILLIYAPURAM
						16	V.PERIAPATTY
						17	VAIYAMPATTI
						18	VALAIYADUPPU
27	**TIRUNELVELI**	1	RADHAPURAM	1	VANNIKONENDAL		
		2	VIJAYANARAYANAM				
28	**TIRUPATHUR**	1	AMBALUR			1	ALANGAYAM
		2	JOLARPET			2	AMBUR
		3	PUDURNADU			3	AMMANANGOIL
						4	ANDIYAPPANUR
						5	KANDILI
						6	KORATTI
						7	MADHANUR
						8	MELSANANGKUPPAM
						9	NATRAMPALLI
						10	THIRUPATHUR
						11	THUTHIPET
						12	VANIYAMBADI
29	**TIRUPPUR**	1	AVANASHI EAST	1	PERIAVALAVADI	1	AVINASHI WEST
		2	GUDIMANGALAM	2	SEVUR	2	KANGEYAM
		3	KANNIVADI	3	TIRUPPUR SOUTH	3	KARADIVAVI
		4	KUNDADAM			4	KUNNUTHUR
		5	NATHAKADAYUR			5	MOOLANUR
		6	PEDDAPPAMPATTI			6	PALLADAM
		7	PERUMANALLUR			7	SAMALAPURAM
		8	PONGALORE			8	SOUTH AVANASHIPALAYAM
		9	PONNAPURAM			9	VELAMPALAYAM
		10	SANGARANDAMPALAYAM				
		11	THUNGAVI				
		12	UHIYUR				
		13	UTHUKKULI				
		14	VELLAKOIL				
30	**TIRUVALLUR**	1	AVADI			1	THIRUMULLAIVOYAL
		2	BALAPURAM			2	VAYALANALLUR
		3	CHERUKKANUR				
		4	ERUMBI				
		5	KANAGAMMACHATRAM				
		6	MAPPEDU				
		7	NEMAM				
		8	POONAMALLEE				
		9	POONIMANGADU				
		10	R K PETTAI				
		11	THIRUNINDRAVUR				
		12	TIRUTTANI				
		13	UTHUKOTTAI				
		14	VELLANUR				
31	**TIRUVANNAMALAI**	1	AGARAPALAYAM	1	MANGALAM(T)	1	CHENGAM
		2	ANNAKAVOOR	2	MODAIYUR	2	DESUR
		3	ARNI	3	NAIDUMANGALAM	3	ERAIYUR(T)
		4	KADALADI(T)	4	PACHAL	4	KELUR
		5	KALASAPAKKAM	5	SANTHAVASAL	5	KETTAVARAMPALAYAM
		6	KANNAMANGALAM	6	THANDARAMPET	6	KILKODUNGALUR
		7	KOLAPPALUR	7	THURINJAPURAM	7	KILPENNATHUR
		8	NAMMIYEMPATTU	8	VANAPURAM	8	MAZHAIYUR(T)
		9	NEDUNGUNAM	9	VETTAVALAM	9	MELPALLIPATTU
		10	OSUR			10	MULLIPATTU
		11	PERANAMALLUR			11	PUDUPALAYAM
		12	SOMASIPADI			12	SENNAVARAM
		13	THELLAR			13	THACHCHAMPADI
		14	TIRUVANNAMALAI(NORTH)			14	THANIPADI
		15	TIRUVANNAMALAI(SOUTH)			15	THATCHAMPATTU
		16	VADATHANDALAM				
		17	VAKKADAI				
		18	VANDAVASI				

CATEGORIZATION of ASSESSMENT UNITS, 2024								Annexure - X
TAMIL NADU								
S. No	Name of District	S. No	Name of Semi-Critical Assessment Units	S. No	Name of Critical Assessment Units	S. No	Name of Over-Exploited Assessment Units	
32	**VELLORE**	1	KANIYAMBADI			1	AGARAM	
		2	KATPADI			2	ANAICUT	
		3	MELPADI			3	GUDIYATHAM EAST	
		4	PENNATHUR			4	GUDIYATHAM WEST	
		5	PERNAMBUT			5	K V KUPPAM	
		6	THIRUVALAM			6	MELPATTI	
		7	USSOOR			7	ODUGATHUR	
		8	VALATHUR(V)			8	PALLIKONDA	
						9	SATHUVACHARI	
						10	VADUGANTHANGAL	
						11	VELLORE NORTH	
						12	VELLORE SOUTH	
33	**VILLUPURAM**	1	AVANIPUR	1	BRAMMADESAM	1	ANNIYUR	
		2	GINGEE	2	NEMILI	2	ARASUR(V)	
		3	KANDAMANGALAM	3	OLAKKUR	3	AVALAURPET	
		4	KILIYANUR	4	THIRUVENNAINALLUR	4	KANJANUR	
		5	MARAKKANAM	5	UPPUVELUR	5	MEL OLAKKUR	
		6	SATHAMPADI	6	VIKKIRAVANDI	6	MELMALAIYANAUR	
		7	SITHALAMPATTU			7	SATHIYAMANGALAM	
		8	VADASIRUVALUR			8	SIRUVADI	
		9	VALAVANUR			9	SITHALINGAMADAM	
						10	VALLAM(V)	
34	**VIRUDHUNAGAR**	1	ALANGULAM(V)	1	PILLAIYARKULAM	1	CHOLAPURAM	
		2	AMATHUR			2	KEELARAJAKULARAMAN	
		3	AYANKOLLANKONDAN			3	NATHAMPATTI	
		4	MALLANKINAR			4	VEMBAKKOTTAI	
		5	MANGALAM(V)					
		6	ONDIPULINAICKANUR					
		7	RAJAPALAYAM					
		8	SALWARPATTI					
		9	SIVAKASI					
		10	SRIVILLIPUTTUR					
		11	VATCHAKARAPATTI					
		12	WATRAP					

ABSTRACT

Total No. of Assessed Units	Number of Semicritical Assessment Units	Number of Critical Assessment Units	Number of Over Exploited Assessment Units
1202	239	56	392

QUALITY PROBLEMS IN ASSESSMENT UNITS, 2024							Annexure - XI
TAMIL NADU							
S. No	Name of District	S. No	Name of Assessment Units affected by Fluoride	S. No	Name of Assessment Units affected by Arsenic	S. No	Name of Assessment Units affected by Salinity
1	COIMBATORE	1	SARAVANAMPATTI				
2	CUDDALORE	1	THOZHUDUR				
3	DHARMAPURI	1	BOMMIDI				
		2	DHARMAPURI				
		3	HARUR				
		4	INDUR				
		5	KARIMANGALAM				
		6	MARANDAHALLI				
		7	MORAPPUR				
		8	NALLAMPALLI				
		9	PALACODE				
		10	PAPPIREDDIPATTY				
		11	PENNAGARAM				
		12	PULIKARAI				
		13	THEERTHAMALAI				
4	DINDIGUL	1	VATLAGUNDU				
5	ERODE	1	AMMAPETTAI				
		2	SATHYAMANGALAM				
		3	VANIPUTHUR				
6	KALLAKKURICHI	1	THIRUKOILUR				
7	KARUR	1	CHINNADHARAPURAM				
		2	K.PARAMATHY				
		3	PUGALUR				
8	KRISHNAGIRI	1	BAGALUR				
		2	BARGUR				
		3	BARUR				
		4	HOSUR				
		5	KELAMANGALAM				
		6	KRISHNAGIRI				
		7	MATHUR				
		8	POCHAMPALLI				
		9	SHOOLAGIRI				
		10	UTHANGARAI				
		11	VEPPANAPALLI				
9	MADURAI	1	MELUR				
		2	NEERATHAN				
		3	OTHAKKADAI				
		4	T.KALLUPATTI				
		5	THIRUMANGALAM				
10	NAMAKKAL	1	NALLIPALAYAM				
		2	NAMAKKAL				
		3	PARAMATHI				
11	NAGAPATTINAM					1	VALIVALAM
						2	THALAINAYAR
						3	NAGAPPATTINAM
						4	NIRMULAI
						5	THILLAYADI
						6	THIRUKANNAPURAM
						7	THIRUKKUVALAI
						8	KARIYAPATTINAM
						9	THAGATUR
						10	KILVELUR
						11	KANGALANCHERI
						12	THIRUMARUGAL
						13	KEELAIYUR
						14	THERKUPOIGAINALLUR
						15	THEVOOR
						16	VEDARANYAM
						17	VELANGANNI

QUALITY PROBLEMS IN ASSESSMENT UNITS, 2024							Annexure - XI
TAMIL NADU							
S. No	Name of District	S. No	Name of Assessment Units affected by Fluoride	S. No	Name of Assessment Units affected by Arsenic	S. No	Name of Assessment Units affected by Salinity
12	PERAMBALUR	1	VARAGUR				
13	PUDUKOTTAI	1	KARAIYUR			1	PERUMARUTHUR
						2	KOTTAIPATTINAM
						3	SINKAVANAM
14	RANIPET	1	RANIPET				
15	RAMANATHAPURAM	1	KEELAKKARAI			1	THIRUPULLANI
						2	KADALADI
						3	SIKKAL
						4	MANGALAKUDI
						5	MUDUKULATHUR SOUTH
						6	MELACHELVANUR
						7	THONDI
						8	SAYALKUDI
						9	S.THARAIKUDI
16	SALEM	1	EDAPPADI				
		2	ERNAPURAM				
		3	GANGAVALLI				
		4	KADAYAMPATTI				
		5	KARIPPATTI				
		6	KONGANAPURAM				
		7	METTUR				
		8	SALEM TOWN				
		9	VEERAPANDI				
		10	VEMBADITHALAM				
17	SIVAGANGA	1	KALLAL				
		2	PALLATHUR				
		3	SIVAGANGAI				
18	TENKASI	1	ALANKULAM				
19	TIRUPATHUR	1	ALANGAYAM				
		2	ANDIYAPPANUR				
		3	TIRUPATHUR				
		4	VANIYAMBADI				
20	THENI	1	CUMBAM				
		2	DEVATHANAPATTI				
21	THIRUVALLUR					1	MINJUR
22	THIRUVARUR					1	MUTHUPET
						2	THIRUTHURAIPOONDI
						3	EDAIYUR
						4	ALATHAMPADI
23	TIRUCHIRAPALLI	1	TRICHY WEST TALUK-TR				
		2	TRICHY WEST TALUK-TR				
24	TIRUPPUR	1	AVINASHIPALAYAM(S)				
		2	KANGEYAM				
		3	MULANUR				
		4	NALLUR				
		5	TIRUPPUR (S)				
		6	VELLAKOIL				
25	TIRUVANNAMALAI	1	MELPALLIPATTU				
26	VILLUPURAM	1	ARASUR				
		2	AVANIPUR				

ABSTRACT

Total No. of Assessed Units	Number of Assessment Unit	Number of	Number of Assessment Unit
1202	77	0	34

State-Wise Summary Of Assessmet Units Improved Or Deteriorated From 2024 To 2023 Assessment - Tamil Nadu						Annexure - XII	
S. No.	**Name of States / Union Territories**	**Total Number of Asssessed Units**	**Number of Assessment Units Improved**	**Number of Assessment Units Deteriorated**	**Number of Assessment Units With No Change**	**Number of Assessment Units Newly formed or Previous Assessment Units Reorganized**	**Remarks**
1	Tamil Nadu	1202	55	42	1105	0	

COMPARISON OF CATEGORIZATION OF ASSESSMENT UNITS (2024 AND 2023)									Annexure - XIII
TAMIL NADU									
S. No	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2023	Categorization 2023	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2024	Categorization 2024	Remark
Improved									
1	CHENGALPATTU	NERUMPUR	93.26	Critical	CHENGALPATTU	NERUMPUR	87.85	Semi Critical	Improved
2	CHENGALPATTU	ORATHI	102.58	Over Exploited	CHENGALPATTU	ORATHI	93.30	Critical	Improved
3	COIMBATORE	KOTTUR(CBE)	70.11	Semi Critical	COIMBATORE	KOTTUR(CBE)	60.48	Safe	Improved
4	COIMBATORE	THIRUMALAYAMPALAYAM	79.54	Semi Critical	COIMBATORE	THIRUMALAYAMPALAYAM	65.15	Safe	Improved
5	COIMBATORE	VALPARAI	107.15	Over Exploited	COIMBATORE	VALPARAI	93.73	Critical	Improved
6	CUDDALORE	BHUVANAGIRI	71.64	Semi Critical	CUDDALORE	BHUVANAGIRI	58.74	Safe	Improved
7	DHARMAPURI	INDUR	115.47	Over Exploited	DHARMAPURI	INDUR	95.53	Critical	Improved
8	DINDIGUL	DHARMATHUPATTI	93.00	Critical	DINDIGUL	DHARMATHUPATTI	88.33	Semi Critical	Improved
9	DINDIGUL	ORUTHATTU	91.00	Critical	DINDIGUL	ORUTHATTU	87.48	Semi Critical	Improved
10	ERODE	ANTHIYUR	102.57	Over Exploited	ERODE	ANTHIYUR	95.63	Critical	Improved
11	ERODE	TALAVADI	71.07	Semi Critical	ERODE	TALAVADI	66.91	Safe	Improved
12	KANCHEEPURAM	KALIYAMPOONDI	71.92	Semi Critical	KANCHEEPURAM	KALIYAMPOONDI	61.94	Safe	Improved
13	KANCHEEPURAM	MANGADU	73.62	Semi Critical	KANCHEEPURAM	MANGADU	64.71	Safe	Improved
14	KANCHEEPURAM	THIRUPPULIVANAM	108.69	Over Exploited	KANCHEEPURAM	THIRUPPULIVANAM	97.73	Critical	Improved
15	KARUR	PUGALUR	93.01	Critical	KARUR	PUGALUR	88.70	Semi Critical	Improved
16	MADURAI	MUDUVARPATTI	101.83	Over Exploited	MADURAI	MUDUVARPATTI	97.12	Critical	Improved
17	MADURAI	NEERETHAN	80.40	Semi Critical	MADURAI	NEERETHAN	68.47	Safe	Improved
18	MADURAI	PERAIYUR	71.63	Semi Critical	MADURAI	PERAIYUR	69.57	Safe	Improved
19	MADURAI	VALAYANKULAM	72.19	Semi Critical	MADURAI	VALAYANKULAM	63.31	Safe	Improved
20	NAMAKKAL	ELACHIPALAYAM	92.45	Critical	NAMAKKAL	ELACHIPALAYAM	82.93	Semi Critical	Improved
21	NAMAKKAL	KUMARAPALAYAM	104.50	Over Exploited	NAMAKKAL	KUMARAPALAYAM	99.86	Critical	Improved
22	NAMAKKAL	MANICKAMPALAYAM	74.66	Semi Critical	NAMAKKAL	MANICKAMPALAYAM	66.29	Safe	Improved
23	NAMAKKAL	PANDAMANGALAM	97.82	Critical	NAMAKKAL	PANDAMANGALAM	89.17	Semi Critical	Improved
24	TENKASI	AYIKUDI	90.94	Critical	TENKASI	AYIKUDI	82.61	Semi Critical	Improved
25	TENKASI	SANKARANKOVIL	92.73	Critical	TENKASI	SANKARANKOVIL	86.80	Semi Critical	Improved
26	TENKASI	SERNTHAMANGALAM	101.04	Over Exploited	TENKASI	SERNTHAMANGALAM	96.89	Critical	Improved
27	THANJAVUR	EACHANKOTTAI	73.76	Semi Critical	THANJAVUR	EACHANKOTTAI	64.61	Safe	Improved
28	THANJAVUR	KABISTHALAM	163.97	Over Exploited	THANJAVUR	KABISTHALAM	98.08	Critical	Improved
29	THENI	DEVATHANAPATTI	71.50	Semi Critical	THENI	DEVATHANAPATTI	68.27	Safe	Improved
30	THENI	MARKAYANKOTTAI	96.71	Critical	THENI	MARKAYANKOTTAI	80.84	Semi Critical	Improved
31	THENI	THENKARAI(T)	76.11	Semi Critical	THENI	THENKARAI(T)	67.81	Safe	Improved
32	THOOTHUKUDI	ILLAYARASANENDAL	90.38	Critical	THOOTHUKUDI	ILLAYARASANENDAL	87.32	Semi Critical	Improved
33	TIRUCHIRAPPALLI	MUSIRI	79.39	Semi Critical	TIRUCHIRAPPALLI	MUSIRI	68.75	Safe	Improved
34	TIRUNELVELI	LEVINJIPURAM	74.33	Semi Critical	TIRUNELVELI	LEVINJIPURAM	68.25	Safe	Improved
35	TIRUNELVELI	PAZHAVOOR	83.01	Semi Critical	TIRUNELVELI	PAZHAVOOR	69.55	Safe	Improved
36	TIRUNELVELI	THALAIYUTHU	72.96	Semi Critical	TIRUNELVELI	THALAIYUTHU	68.52	Safe	Improved
37	TIRUNELVELI	TISAYANVILAI	87.15	Semi Critical	TIRUNELVELI	TISAYANVILAI	68.11	Safe	Improved

S. No	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2023	Categorization 2023	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2024	Categorization 2024	Remark
38	TIRUNELVELI	VANNIKONENDAL	102.71	Over Exploited	TIRUNELVELI	VANNIKONENDAL	98.97	Critical	Improved
39	TIRUPPUR	KUNDADAM	93.80	Critical	TIRUPPUR	KUNDADAM	86.03	Semi Critical	Improved
40	TIRUPPUR	MADATHUKULAM	71.70	Semi Critical	TIRUPPUR	MADATHUKULAM	64.37	Safe	Improved
41	TIRUPPUR	PEDDAPPAMPATTI	95.48	Critical	TIRUPPUR	PEDDAPPAMPATTI	82.12	Semi Critical	Improved
42	TIRUPPUR	PERIAVALAVADI	101.91	Over Exploited	TIRUPPUR	PERIAVALAVADI	99.20	Critical	Improved
43	TIRUPPUR	TIRUPPUR SOUTH	105.26	Over Exploited	TIRUPPUR	TIRUPPUR SOUTH	97.53	Critical	Improved
44	TIRUVALLUR	PALLIPATTU	73.32	Semi Critical	TIRUVALLUR	PALLIPATTU	62.99	Safe	Improved
45	TIRUVALLUR	POONAMALLEE	90.24	Critical	TIRUVALLUR	POONAMALLEE	88.91	Semi Critical	Improved
46	TIRUVALLUR	R K PETTAI	98.01	Critical	TIRUVALLUR	R K PETTAI	87.43	Semi Critical	Improved
47	TIRUVALLUR	THIRUNINDRAVUR	90.53	Critical	TIRUVALLUR	THIRUNINDRAVUR	88.04	Semi Critical	Improved
48	TIRUVALLUR	VELLANUR	92.82	Critical	TIRUVALLUR	VELLANUR	88.87	Semi Critical	Improved
49	TIRUVANNAMALAI	PACHAL	104.06	Over Exploited	TIRUVANNAMALAI	PACHAL	93.01	Critical	Improved
50	TIRUVANNAMALAI	POLUR	71.25	Semi Critical	TIRUVANNAMALAI	POLUR	61.85	Safe	Improved
51	TIRUVANNAMALAI	PULIYUR	70.22	Semi Critical	TIRUVANNAMALAI	PULIYUR	69.92	Safe	Improved
52	VELLORE	PERNAMBUT	93.65	Critical	VELLORE	PERNAMBUT	85.49	Semi Critical	Improved
53	VILLUPURAM	NEMILI	105.05	Over Exploited	VILLUPURAM	NEMILI	90.21	Critical	Improved
54	VILLUPURAM	THIRUVENNAINALLUR	105.04	Over Exploited	VILLUPURAM	THIRUVENNAINALLUR	95.72	Critical	Improved
55	VILLUPURAM	VALAVANUR	97.21	Critical	VILLUPURAM	VALAVANUR	86.56	Semi Critical	Improved

COMPARISON OF CATEGORIZATION OF ASSESSMENT UNITS (2024 AND 2023)

TAMIL NADU

S. No	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2023	Categorization 2023	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2024	Categorization 2024	Remark
				Deteriorated					
1	CUDDALORE	VEPPUR	98.09	Critical	CUDDALORE	VEPPUR	115.16	Over Exploited	Deteriorated
2	DHARMAPURI	HARUR	69.23	Safe	DHARMAPURI	HARUR	77.86	Semi Critical	Deteriorated
3	DINDIGUL	DINDIGUL EAST	93.35	Critical	DINDIGUL	DINDIGUL EAST	109.28	Over Exploited	Deteriorated
4	DINDIGUL	NATHAM	66.32	Safe	DINDIGUL	NATHAM	82.19	Semi Critical	Deteriorated
5	DINDIGUL	SENDURAI	64.60	Safe	DINDIGUL	SENDURAI	82.16	Semi Critical	Deteriorated
6	KALLAKURICHCHI	ERAIYUR(K)	91.45	Critical	KALLAKURICHCHI	ERAIYUR(K)	110.42	Over Exploited	Deteriorated
7	KALLAKURICHCHI	KALVARAYAN HILLS	92.45	Critical	KALLAKURICHCHI	KALVARAYAN HILLS	112.17	Over Exploited	Deteriorated
8	KALLAKURICHCHI	NAGALUR	90.84	Critical	KALLAKURICHCHI	NAGALUR	109.84	Over Exploited	Deteriorated
9	KALLAKURICHCHI	SENGURICHI	67.75	Safe	KALLAKURICHCHI	SENGURICHI	77.03	Semi Critical	Deteriorated
10	KARUR	CHINTHALAVADI	69.43	Safe	KARUR	CHINTHALAVADI	72.27	Semi Critical	Deteriorated
11	KARUR	MANMANGALAM	60.04	Safe	KARUR	MANMANGALAM	78.66	Semi Critical	Deteriorated
12	KRISHNAGIRI	PALLEPALLI	93.63	Critical	KRISHNAGIRI	PALLEPALLI	101.16	Over Exploited	Deteriorated
13	MADURAI	ATHIPATTI	84.45	Semi Critical	MADURAI	ATHIPATTI	91.87	Critical	Deteriorated

S. No	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2023	Categorization 2023	Name of District	Name of Assessment Unit	Stage of Ground Water Extraction (%) in 2024	Categorization 2024	Remark
14	MADURAI	EAST MADURAI	99.22	Critical	MADURAI	EAST MADURAI	119.78	Over Exploited	Deteriorated
15	MADURAI	KOTTAMPATTI	98.82	Critical	MADURAI	KOTTAMPATTI	102.27	Over Exploited	Deteriorated
16	MADURAI	THIRUPPARANKUNDRAM	53.14	Safe	MADURAI	THIRUPPARANKUNDRAM	71.12	Semi Critical	Deteriorated
17	MADURAI	USILAMPATTI	72.32	Semi Critical	MADURAI	USILAMPATTI	90.71	Critical	Deteriorated
18	MADURAI	UTHAPPANAYAKANUR	89.84	Semi Critical	MADURAI	UTHAPPANAYAKANUR	95.39	Critical	Deteriorated
19	MADURAI	VALANDUR	81.84	Semi Critical	MADURAI	VALANDUR	96.88	Critical	Deteriorated
20	PUDUKKOTTAI	SITHANNAVASAL	65.77	Safe	PUDUKKOTTAI	SITHANNAVASAL	78.18	Semi Critical	Deteriorated
21	RANIPET	ARAKKONAM NORTH	68.65	Safe	RANIPET	ARAKKONAM NORTH	77.85	Semi Critical	Deteriorated
22	RANIPET	PALLUR	63.22	Safe	RANIPET	PALLUR	81.70	Semi Critical	Deteriorated
23	SALEM	ARUNUTHUMALAI	65.44	Safe	SALEM	ARUNUTHUMALAI	72.37	Semi Critical	Deteriorated
24	SALEM	KALRAYAN HILLS	59.72	Safe	SALEM	KALRAYAN HILLS	75.88	Semi Critical	Deteriorated
25	SALEM	KARUPUR	87.36	Semi Critical	SALEM	KARUPUR	97.89	Critical	Deteriorated
26	SALEM	KOLATHUR(S)	95.51	Critical	SALEM	KOLATHUR(S)	101.04	Over Exploited	Deteriorated
27	SALEM	METTUR TOWN	89.86	Semi Critical	SALEM	METTUR TOWN	94.79	Critical	Deteriorated
28	THANJAVUR	PERIYAKKOTTAI	98.62	Critical	THANJAVUR	PERIYAKKOTTAI	103.79	Over Exploited	Deteriorated
29	THENI	KODANGIPATTI	65.00	Safe	THENI	KODANGIPATTI	75.02	Semi Critical	Deteriorated
30	THENI	MYLADUMPARAI	98.26	Critical	THENI	MYLADUMPARAI	107.09	Over Exploited	Deteriorated
31	THENI	THENI	65.50	Safe	THENI	THENI	72.04	Semi Critical	Deteriorated
32	THOOTHUKUDI	KADAMBUR	67.23	Safe	THOOTHUKUDI	KADAMBUR	72.19	Semi Critical	Deteriorated
33	TIRUVANNAMALAI	ANNAKAVOOR	68.65	Safe	TIRUVANNAMALAI	ANNAKAVOOR	70.59	Semi Critical	Deteriorated
34	TIRUVANNAMALAI	ARNI	68.18	Safe	TIRUVANNAMALAI	ARNI	71.08	Semi Critical	Deteriorated
35	TIRUVANNAMALAI	KADALADI(T)	66.58	Safe	TIRUVANNAMALAI	KADALADI(T)	72.42	Semi Critical	Deteriorated
36	TIRUVANNAMALAI	TIRUVANNAMALAI(NORTH)	57.15	Safe	TIRUVANNAMALAI	TIRUVANNAMALAI(NORTH)	71.64	Semi Critical	Deteriorated
37	TIRUVANNAMALAI	TIRUVANNAMALAI(SOUTH)	56.18	Safe	TIRUVANNAMALAI	TIRUVANNAMALAI(SOUTH)	71.74	Semi Critical	Deteriorated
38	TIRUVANNAMALAI	VADATHANDALAM	56.81	Safe	TIRUVANNAMALAI	VADATHANDALAM	73.73	Semi Critical	Deteriorated
39	TIRUVANNAMALAI	VAKKADAI	53.83	Safe	TIRUVANNAMALAI	VAKKADAI	72.80	Semi Critical	Deteriorated
40	VELLORE	KATPADI	63.73	Safe	VELLORE	KATPADI	74.14	Semi Critical	Deteriorated
41	VILLUPURAM	AVALAURPET	97.55	Critical	VILLUPURAM	AVALAURPET	111.69	Over Exploited	Deteriorated
42	VILLUPURAM	OLAKKUR	88.44	Semi Critical	VILLUPURAM	OLAKKUR	90.89	Critical	Deteriorated

ABSTRACT

Water Resources Department – Constitution of a Permanent State Level Committee for assessment of groundwater resources as on March 2023 and subsequently for every year for the State of Tamil Nadu - Orders – Issued.

Water Resources (R1) Department

G.O. (Ms.) No.64 **Dated. 02.09.2023**

சோபகிருது, ஆவணி-16,
திருவள்ளுவர்ஆண்டு 2054

Read:

1. G.O. (Ms.) No. 24, Public Works Department, dated 20.01.2011
2. Government Letter No.15676/R2/2017-3, Public Works Department, dated 27.10.2017
3. Government Letter No.544/R1/2022-2, Water Resources Department, dated 11.02.2022
4. From the Regional Director, Central Ground Water Board, South Eastern Coastal Region, Rajaji Bhavan, Besant Nagar, Chennai No. T/8/22-283, Dated 01.03.2023
5. From the Chief Engineer, Water Resources Department, State Ground and Surface Water Resources Data Centre, Tharamani, Chennai Letter No. DD(G)/GWRA-2023/2022-12, Dated 21.03.2023.

ORDER:

The Dynamic Ground Water Resource Assessment (GWRA) of each State / Union Territory is being carried out jointly by Central Ground Water Board and State Nodal / Ground Water Department as per GEC Methodology under the guidance of the respective State / Union Territory Level Committees (SLCs) and overall supervision of Central Level Expert Group.

2. In the Government Order first read above, orders were issued for the constitution of a State Level Committee for re-estimation of Ground Water Assessment as on March 2009 in Tamil Nadu. Since, the task of assessment of groundwater is similar in nature, in the Government letters 2nd and 3rd read above, the Government decided to continue the State Level Committee with the same members of various water-using departments mentioned in the Government order first read above and issued orders / instructions for the groundwater re-assessment as on March 2017 and as on March 2022 respectively.

3. In the letter fourth read above, the Regional Director, Central Ground Water Board, South Eastern Coastal Region, Chennai requested to assess the Ground Water Resources as on March, 2023 and subsequently for every year and also to constitute a Permanent State Level Committee (SLC) to assess the Groundwater resources of the State of Tamil Nadu for the year 2023 and subsequent years.

4. In the letter fifth read above, the Chief Engineer, Water Resources Department, State Ground and Surface Water Resources Data Centre, Tharamani, Chennai has sent proposal to the Government to constitute a State Level

Committee (SLC) on a permanent basis or minimum duration of five years period with the chairmanship of the Secretary of Government, Water Resources Department and with members of line departments/agencies to coordinate and guide the assessment of groundwater resources of the State.

5. The Government after careful examination, have decided to accept the proposal of the Chief Engineer, Water Resources Department, State Ground and Surface Water Resources Data Centre, Tharamani, Chennai. Accordingly, the Government constitute a Permanent State Level Committee comprising the following members from all related departments / agencies for assessment of groundwater resources as on March, 2023 and subsequently for every year for the State of Tamil Nadu:-

i.	Additional Chief Secretary to Government	Water Resources Department	Chairman
ii.	Additional Chief Secretary to Government	Industries Investment Promotion and Commerce Department	Member
iii.	Principal Secretary to Government	Municipal Administration and Water Supply Department	Member
iv.	Principal Secretary to Government	Rural Development and Panchayat Raj Department	Member
v.	Principal Secretary to Government	Finance Department	Member
vi.	Agricultural Production Commissioner and Secretary to Government	Agriculture and Farmers Welfare Department	Member
vii.	Chairman	Cauvery Technical Cell-cum-Inter State Waters Wing	Member
viii.	Chairman and Managing Director	SIPCOT	Member
ix.	Chairman	Tamil Nadu Pollution Control Board	Member
x.	Engineer-in-Chief and Chief Engineer (General)	Water Resources Department	Member
xi.	Regional Director	Central Ground Water Board, Chennai	Member
xii.	Head of Department of Civil Engineering	I.I.T. Chennai	Member
xiii.	Head of Department, Geology	Anna University, Chennai	Member
xiv.	Director	Department of Economics & Statistics	Member
xv.	General Manager	NABARD	Member
xvi.	Chief Engineer	Institute for Water Studies, Hydrology and Quality Control	Member
xvii.	Engineering Director	Tamil Nadu Water Supply and Drainage Board	Member
xviii.	Commissioner	Agriculture Department	Member
xix.	Chief Engineer (Agricultural Engineering)	Agricultural Engineering Department	Member
xx.	Chief Engineer	State Ground and Surface Water Resources Data Centre	Member Secretary

xxi.	Special Invitees (if necessary)	-	Member

(By Order of the Governor)

Sandeep Saxena,
Additional Chief Secretary to Government

To

The Secretary, Government of India, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, New Delhi.

The Additional Chief Secretary to Government, Water Resources Department. Secretariat, Chennai-9.

The Additional Chief Secretary to Government, Industries Investment Promotion and Commerce Department. Secretariat, Chennai-9

The Principal Secretary to Government, Municipal Administration and Water Supply Department. Secretariat, Chennai-9.

The Principal Secretary to Government, Rural Development and Panchayat Raj Department. Secretariat, Chennai-9.

The Principal Secretary to Government, Finance Department, Secretariat, Chennai-9.

The Agricultural Production Commissioner and Secretary to Government, Agriculture and Farmers Welfare Department, Secretariat, Chennai-9.

The Commissioner, Agriculture Department, Chepauk, Chennai-5

The Chairman and Managing Director, SIPCOT, Egmore, Chennai -8.

The Chairman, Tamil Nadu Pollution Control Board, Guindy, Chennai -32.

The Engineer-in-Chief and Chief Engineer (General), Water Resources Department, Chennai-5.

The Chief Engineer, Water Resources Department, State Ground and Surface Water Resources Data Centre, Tharamani, Chennai-113.

The Chief Engineer, Institute for Water Studies, Hydrology and Quality Control, Water Resources Department, Chennai-113.

The Regional Director, Central Ground Water Board, South Eastern Coastal Region, Rajaji Bhavan, Besant Nagar, Chennai - 90.

The Chairman, Cauvery Technical Cell-cum-Inter State Waters Wing, Egmore, Chennai-8.

The Head of Department of Civil Engineering, I.I.T. Madras, Chennai- 36

The Head of Department, Geology, Anna University, Chennai- 25.

The Director, Department of Economics & Statistics, Chennai-6.

The General Manager, NABARD, Chennai-35.

The Engineering Director, Tamil Nadu Water Supply and Drainage Board, 31, Kamarajar Salai, Chepauk,Chennai-5.

The Chief Engineer (Agricultural Engineering), Agricultural Engineering Department, 487, Anna Salai, Nandanam, Chennai - 35.

Copy to-

The Special Personal Assistant to Hon'ble Minister (Water Resources), Secretariat, Chennai-9.

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// Forwarded / By Order //

02.09.2023

Section Officer

2/9/2023

Minutes of 2nd State Level Committee meeting for approval of Dynamic Groundwater Resources Assessment (GWRA) of the State of Tamil Nadu as on March 2024

Date – 07.10.2024

Venue – Water Resources Department, Conference Hall,

5th Floor, Secretariat, Chennai-600 009.

In Chair:

The Additional Chief Secretary to Government,

Water Resources Department

Agenda of the meeting

Approval for the results of Dynamic Ground Water Resources Assessment - 2024.

Officers Present:

List of participants is enclosed as annexure.

The Chairman, State Level Committee and Additional Chief Secretary to Government, Water Resources Department welcomed all the State Level Committee members.

The Member Secretary and Chief Engineer, State Ground and Surface Water Resources Data Centre, Water Resources Department, provided an over-view of the current scenario of Ground Water Resources in Tamil Nadu and about the annual ground water potential assessment conducted by the Ministry of Jal Shakti, Government of India. She also expressed gratitude to the various line departments for sharing the data on time to complete the present re-assessment of GWRA-2024 within the timeline set by the Central Ground Water Board (CGWB) and requested the members to offer their comments and valuable suggestions for further development in the methodology of the annual groundwater resources estimation. The Chief Engineer, State Ground and

Surface Water Resources Data Centre requested the Deputy Director, State Ground and Surface Water Resources Data Centre, Water Resources Department, to present the outcome of Dynamic Groundwater Resource Assessment (GWRA),2024.

The Deputy Director, (Geology) (I/c), State Ground and Surface Water Resources Data Centre, Water Resources Department presented the details about the assessment, it's methodology, results of GWRA - 2024, comparison of assessment data from the year 2011 onwards, data received from various line departments like Well details, Crop area details, Tank details, Water level and Rainfall data which are used as input data in IN-GRES software and requested for final approval of GWRA-2024 from all members.

Miss. D. Dhayamalar, Scientist-D from Central Ground Water Board thanked the Chairman of the Committee for his guidance and convening the meeting on short notice and informed that in the State of Tamil Nadu, Over exploited, Critical & Semi-Critical (OCS) categories (57%) are significantly higher than the National average of 27% and irrigation extraction is also above the national average of 84%. So, she requested WRD and other line departments in the State to focus on improving the water conservation measures and efficient irrigation practices. Henceforth, the Ministry of Jal Shakthi has planned to carryout GWRA on annual basis and requested the line departments to share the data on time so as to complete the assessment as per the time schedule set by the Chairman, Central Ground Water Board (CGWB), New Delhi.

The Special Secretary from Industries Investment Promotion and Commerce Department expressed concern about extracting more groundwater for Agriculture. The Chairman stated that the extraction details of irrigation, domestic, and industries mentioned is based on data received from various departments. Further, he explained the reasons for water scarcity in the State and more groundwater extraction in the Agricultural sector are due to the absence of perennial rivers, un even rainfall throughout the State, farmers cultivating water-intensive crops throughout the year, and not switching over to less water intensive options.

The Senior Hydro-geologist, Chennai Metro Water Supply & Sewage Board (CMWSSB) has emphasized, conducting village-level assessment in the future, would be more useful. The Chairman replied that Tamil Nadu is the only State assessing, the groundwater resources on the Firka level. Earlier, the assessment was done at the block level. Assessing the groundwater resources at the village level needs data including Village-wise water level, and rainfall data and it may take a time to achieve that goal.

The Chairman emphasized that the groundwater resources should be assessed by Aquifer systems, and understanding the aquifers will be more helpful in managing the groundwater resources in the State. He insisted that a comparison of five-year assessment data should be presented in the groundwater-related meetings to track the changes in the categorization.

The Chairman requested the Regional Director, Central Ground Water Board (CGWB), Chennai to share the soft copy of aquifer mapping details of the State to other line departments which will be helpful as a guide while constructing Artificial Recharge Structures in the State. Mr. J. Sivaramakrishnan, Scientist-D from Central Ground Water Board informed that Central Ground Water Board shared the aquifer mapping data and the District Recharge Plan to upload in the TN-WRIMS portal.

The Chairman also stressed the need for an effective monitoring mechanism for the water conservation/ recharge proposals. Henceforth, all the recharge proposals should include the construction of the monitoring well to assess the effectiveness of structures, with site specific hydro-geological feasibility report. The Chairman also stressed that categorization should not be the single yardstick for the execution of recharge structures.

The Chairman enquired about the different colours represented on the categorization map for the year 2024. The Deputy Director informed that the blue represents Saline Firkas, and the firka is categorized as 'Saline' based on high salinity in nature, due to the presence of marine sediments and typically found in Ramanathapuram, Nagapattinam, and Myladuthurai Districts. However, the Minjur firka in Tiruvallur District is categorized as Saline and it is man-made saline firka due to over-exploitation of groundwater in these areas, the seawater intruded into the freshwater aquifer.

Dr. M. Senthil Kumar, Scientist-D from Central Ground Water Board emphasized the need for real-time quantity and quality monitoring of groundwater resources in the State. The Chairman added that, groundwater quality also plays a vital role in the future; it should be included as one of the components in the groundwater assessment.

The Deputy Director, State Ground and Surface Water Resources Data Centre, Water Resources Department has informed the members that the Central Ground Water Board has completed the National Aquifer Mapping in the State under NAQUIM 1.0 with 1:50000 Scale and planning to do the Aquifer mapping under NAQUIM 2.0 in 1:10000 scale in micro level / firka-level, which will be useful to sustain the groundwater resources in the State and line departments will also utilize the data for its recharge proposals. The Scientists, Central Ground Water Board reported that the aquifer mapping data is shared with all District Collectors in the State and insisted to use the data while planning for the construction of Artificial Recharge Structures in their Jurisdiction.

The Chairman enquired with Tamil Nadu Water Supply and Drainage Board (TWAD) officials regarding the implementation of Rainwater Harvesting in urban areas. The Hydro-geologist, Tamil Nadu Water Supply and Drainage Board (TWAD) has replied that for plan approval, the construction of Rainwater Harvesting structure is one of the requirements. The Chairman insisted that the construction of RWH should be effectively implemented and monitored in urban areas.

The Hydro-geologist, Tamil Nadu Water Supply and Drainage Board informed that in urban areas like Chennai, due to the presence of clay, constructing recharge shafts for harvesting rooftop rainwater structures will be more effective. He also expressed that Ramanathapuram District has been categorized as "Safe", but the schemes could not be implemented due to water scarcity prevailing in the district.

The Senior Hydro-geologist, Chennai Metro Water Supply & Sewage Board (CMWSSB) emphasized that recycling water and reuse of treated water should be made mandatory in multi-storeyed buildings, so that abstraction of fresh groundwater will be reduced by these alternate methods.

The Chief Engineer, Rural Development and Panchayat Raj Department has conveyed that the greater number of over-exploited categories is found in the 6 districts. The Chairman, State Level Committee replied that the groundwater is extracted more in these districts for cultivating wet crops like paddy, sugarcane & banana and emphasized the Rural Development and Panchayat Raj department to concentrate in the construction of more recharge structures in these areas. Miss. D. Dhayamalar, Scientist-D, Central Ground Water Board (CGWB) informed that district-wise geo – tagging locations for the construction of various recharge structures have been shared with the Rural Development and Panchayat Raj Department and requested to utilize the data and also ready to share the data again, if needed.

The Chairman and the members in the State Level Committee approved the Re-estimation of Ground Water Resources as on March – 2024.

At the end of the meeting, the Chairman of the State Level Committee appreciated the efforts of the Chief Engineer, State Ground and Surface Water Resources Data Centre, Water Resources Department, the Regional Director, Central Ground Water Board, and their team for the completion of Ground Water Resources Assessment – 2024 within the stipulated timeline fixed by the Ministry of Jal Shakti, New Delhi and thanked the participants of the 2nd State Level Committee meeting.

K.Manivasan,
Additional Chief Secretary to Government

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09.10.2024
Section Officer

9/10/24

Annexure - I

List of delegates

Sl. No	Name of the Member/Member's Representative	Designation	Department
1.	Dr.K.Manivasan, I.A.S	Additional Chief Secretary to Government (Chairman)	Water Resources Department, Secretariat
2.	Special Secretary to Government	Represented for the Additional Chief Secretary to Government	Industries Investment Promotion and Commerce Department, Secretariat
3.	Deputy Secretary	Represented for the Secretary to Government	Finance Department, Secretariat
4.	Er.T.Thamizhselvi	Chief Engineer, (Member Secretary)	State Ground and Surface Water Resources Data Centre, Water Resources Department, Chennai.
5.	Thiru.A.G. Sethuraman	Chief Engineer, (RD&PR)	Department of Rural Development and Panchayat Raj Department.
6.	Miss.D.Dhayamalar	Scientist-D	Central Ground Water Board, South Eastern Coastal Region, Chennai.
7.	Er.S.Poorani	Member Secretary for Cauvery Technical Cell	Cauvery Technical Cell-Cum Inter State waters Wing.
8.	Thiru.S.Sridhar	Joint Director (I/c)	Institute for Water Studies, Hydrology and Quality Control
9.	Ms.P.G.Srividya	Deputy Director of Agriculture.	Agricultural Department, Chennai.
10.	Thiru.G.Amuthan	Superintending Engineer O/o the Chief Engineer	Agricultural Engineering Department
11.	Thiru A. Abdul Rasheed.	Represented for IWC	SIPCOT
12.	Er.R.Sarasvathi	Joint Chief Engineer	Tamil Nadu Pollution Control Board.
13.	Ms.K.Jayagandhi	Joint Director	Department of Economics & Statistics.
14.	Thiru.J.Sivarama Krishnan.	Scientist -D	Central Ground Water Board, South Eastern Coastal Region, Chennai.

15.	Dr. M. Senthil Kumar	Scientist -D	Central Ground Water Board, South Eastern Coastal Region, Chennai.
16.	Dr.Ganapathi Subramanian	Hydro-geologist	Tamil Nadu Water Supply and Drainage Board.
17.	Thiru.C.Lakshmanan	Deputy Hydrologist	Tamil Nadu Water Supply and Drainage Board.
18.	Dr.C.Muthukani	Joint Chief Engineer	Tamil Nadu Pollution Control Board, Chennai.
19.	Tmt.V.Manjula	Deputy Director	Department Economics and Statistics.
20.	Er. V.Meera	Asst. Executive Engineer	Cauvery Technical Cell-Cum Inter State waters Wing.
21.	Thiru.P.Subramanian	Hydro-geologist - Consultant	Chennai Metro Water Supply & Sewage Board, Chennai.
22.	Thiru. S. Sridhar	Deputy Director (Geology) (I/c)	O/o Chief Engineer, SG&SWRDC, WRD. Tharamani, Chennai-113.
23.	Thiru. S.Lenin	Assistant Director (Geology)	O/o Chief Engineer, SG&SWRDC, WRD. Tharamani, Chennai-113.
24.	Dr. S. Suganthi.	Assistant Geologist	O/o Chief Engineer, SG&SWRDC, WRD. Tharamani, Chennai-113.
25.	Dr. T. Magendran	Assistant Geologist	Ground Water Division, WRD, Tharamani, Chennai-113.
26.	Thiru.C.Premavathi.	Under Secretary to Government	Municipal Administration and Water Supply Department, Secretariat.
27.	Thiru.R.Krishnavel.	Under Secretary to Government	Water Resources Department, Secretariat.

K. Manivasan,
Additional Chief Secretary to Government

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09.11.2024
Section Officer

Contributors' page

State Ground & Surface Water Resources Data Centre Water Resources Department Government of Tamil Nadu Chennai	Central Ground Water Board South Eastern Coastal Region Ministry of Water Resources, RD & GR Government of India, Chennai
Guidance	
Smt. T. Thamizhselvi, Chief Engineer SG&SWRDC, Tharamani, Chennai	**Sh. M. Sivakumar,** Regional Director CGWB, SECR, Chennai
Supervision	
Sh. S. Sridhar, Deputy Director (Geology) **Sh. S. Lenin,** Assistant Director (Geology) **Sh. K. Anandraj,** Assistant Director (Geology)	**Ms. D Dhayamalar,** Scientist – D **Dr. M. Senthil Kumar,** Scientist-D
Principal Contributors	
All Deputy Directors (Geology) All Assistant Directors (Geology) **Dr. S. Suganthi,** Assistant Geologist **Sh. Sugan,** Assistant Geologist **Sh. K. Karthik,** Assistant Geologist **Sh. M. Pushpharajan,** Assistant Geologist All Assistant Geologists	**Sh. J. Sivaramakrishnan,** Scientist-D **Dr. K. Paramasivam,** Scientist-B **Sh. G. Vengatajalapathi,** Scientist-B

Contact Details

Office of the Regional Director
CENTRAL GROUND WATER BOARD
South Eastern Coastal Region
E-1, C-Block, Rajaji Bhavan
Besant Nagar
Chennai – 600090
Email: rdsecr-cgwb@nic.in
Telephone: 044-24914334