



# **WATER RESOURCES DEPARTMENT**

**POLICY NOTE  
2024 - 2025**

**DEMAND No. 40**

**Thiru. DURAIMURUGAN**  
**Hon'ble Minister for Water Resources**

©

**Government of Tamil Nadu  
2024**



## INDEX

Sl. No.	Subject	Page No
1.0	Introduction	1
2.0	Inter - State Water Issues	17
3.0	Krishna Water Supply Project	87
4.0	Interlinking of Rivers within the State	89
5.0	Special Desilting Works	100
6.0	Construction of a New Barrage with Head Sluice across Kollidam River in Adhanur and Kumaramangalam Villages in Cuddalore and Mayiladuthurai Districts	104
7.0	Construction of Barrage across the Cauvery River in Nanjai Pugalur	106
8.0	Extension, Renovation and Modernization of the Cauvery Basin Irrigation System (ERM)	107
9.0	Mettur - Sarabanga Lift Irrigation Scheme	112
10.0	Athikadavu Avinashi Pumping Scheme	113

<b>Sl. No.</b>	<b>Subject</b>	<b>Page No</b>
11.0	Augmenting the Storage Capacity of Chennai City Water Supply Resources	114
12.0	Externally Aided Projects	121
13.0	Centrally Sponsored Schemes	138
14.0	River Conservation Project	142
15.0	On-going Schemes (State Fund and NABARD)	148
16.0	Flood Mitigation Works	157
17.0	Other activities	187
18.0	Organisational Arrangements	192
19.0	Creation of Digital Data Base - Pilot Schemes	227
20.0	Schemes under Investigation / Formulation	232
21.0	Chennai City Water Supply Augmentation and Flood Mitigation Resilient to Climate Change	251

**நிலன் நெறிமருங்கின் நீர்நிலை பெருகத்**

**தட்டோரம்ம இவண்தட்டோரே**

**தள்ளாதோர் இவண் தள்ளாதோரே.**

(புறநானூறு 18:28-30)

ஏரிகள், குளங்கள் போன்றவற்றை உருவாக்கி அதன் மூலம் மழைநீரைச் சேகரித்து, அவற்றை சிறந்த பயன்பாட்டிற்கு கொண்டு வந்து தனது நாட்டை வளமாக்கும் மன்னன் என்று தமிழ் புலவர் குடபுலவியனார் நீர் மேலாண்மையின் முக்கியத்துவத்தை குறிப்பிட்டுள்ளார்

## **WATER RESOURCES DEPARTMENT**

### **1.0. Introduction**

#### **1.1. Activities of the Water Resources Department**

"விசும்பிற் றுளிவீழி னல்லான்மற் றாங்கே

பசும்புற் றலைகாண் பரிது"

-திருக்குறள்

The renowned Tamil Poet Thiruvalluvar, celebrated for his timeless wisdom encapsulated in the Thirukkural, sheds light on the significance of rain. He eloquently expresses that without rain, not even a single blade of grass would thrive.

In line with this profound insight, the Water Resources Department of Tamil Nadu endeavours to ensure self-sufficiency in water resources, recognizing water as the essence of existence. To fulfil the diverse water requirements across agriculture, domestic, and industrial sectors, the department focuses on a multifaceted approach.

Water Resources Department emphasises on the construction, maintenance and enhancement of irrigation

infrastructures, including dams, anicuts, check dams, regulators, barrages, subsurface dykes, canals, channels and tanks. Moreover, the department strategize river linking initiatives to optimize surface and subsurface water resources. Concurrently, the department is implementing artificial recharge mechanisms to bolster groundwater quantity and quality.

Furthermore, the department prioritizes flood mitigation strategies to prevent the adverse impacts of heavy rainfall on public safety and property. Necessary proactive measures including the removal of encroachments from watercourses and bodies are undertaken to preserve the water bodies and the water courses, in collaboration with related departments.

This department is taking necessary steps to restore the original storage capacity of water bodies through desilting. Through these comprehensive interventions, the department aims to effectively manage both floods and droughts, ensuring sustainable water management for the well-being of Tamil Nadu's populace and its ecosystems.

## 1.2. Water Resources Potential

“நீரின் றமையா துலகெனின் யார்யார்க்கும்

வானின் றமையா தொழுக்கு”-குறள்

### Surface Water Potential

There are 34 Rivers in the State which have been grouped into 17 major River Basins and 127 Sub-Basins. The normal rainfall in the State is 922 mm. The total surface water potential of the State is 865 T.M.C.ft.

### Ground Water Potential

Conservation and judicious management of Groundwater resources in sustained way are the two prime needs of the hour to attain self-sufficiency and sustainability in the Ground Water Resources Sector in Tamil Nadu. The quantity and quality of the Ground water resources are being continuously monitored and assessed by this Department. Micro Level Dynamic Ground Water Resource Estimation as on March 2023 with Revenue Firkas as a unit has been completed in co-ordination with CGWB, SECR and published by the Government of India, Ministry of Jal Sakthi and notified by the Government of Tamil Nadu vide G.O. (Ms). No.37,



Water Resources (R1), Department, dated: 07.03.2024. Accordingly 1,202 Firkas are categorized into five types: 395 Firkas as Over Exploited, 64 Firkas as Critical, 227 Firkas as Semi-Critical, 482 Firkas as Safe and 34 Firkas as Saline / Poor Quality. Data collection for the year 2024 is about to begin.

Construction of Artificial Recharge Structures such as Check Dams, Bed Dams, Sub surface Dykes, Recharge Shafts and Wells, Percolation Ponds etc., are being carried out to protect, harness and improve the available ground water resource of the State.

**Ground Water Resources Assessment 2023 (GWRA)  
and its comparison with 2022 assessment in Tamil  
Nadu**

<b>Sl. No.</b>	<b>Category of Firkas</b>	<b>Nos. of firkas as per GWRA-2022</b>	<b>Nos. of firkas as per GWRA-2023</b>	<b>GWRA 2022 vs. GWRA 2023</b>
1.	Safe	463	482	(+)19
2.	Semi- Critical	231	227	(-)4
3.	Critical	78	64	(-)14
4.	Over- Exploited	360	395	(+)35
5.	Saline / Poor Quality	34	34	-
6.	Total Number of AUs	1166	1202	(+)36

In 2023 when compared to 2022 assessment, the number of Safe and Over Exploited firkas has been increased and there is a decrease in the number of Semi Critical and Critical firkas. The increase or decrease in

the numbers is based on the factors such as rainfall, stakeholders usage of ground water and ground water level. In this regard, various ground water recharge schemes being carried out by the Government and creating awareness about ground water among the public may lead to improvement in the categorization in future.

### **1.3. Sustainable Development Goals**

17 Sustainable Development Goals and 169 targets are part of the Sustainable Development Goals-2030 Agenda, adopted by 193 Member States at the UN General Assembly Summit.

This Department deals with a fundamental and essential element of nature on which life depends — **Water**. The sustainable management of water is vital and is covered under **Goal 6** and **12** in Sustainable Development Goals. The targets under this Goal pertaining to the Water Resources Department are as follows:-

**Target 6.4:** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawal and supply of fresh water to

address water scarcity and substantially reduce the number of people suffering from water scarcity.

**Target 6.5:** By 2030, implement integrated water resources management at all levels, including through trans-boundary cooperation as appropriate.

**Target 6.6:** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

**Target 6.b:** Support and strengthen the participation of the local communities in improving water and sanitation management.

**Target 12.2:** By 2030, achieve the sustainable management and efficient use of natural resources.

With effective implementation of the various schemes of the Department and taking a new path towards more international cooperation, the water bodies, wetlands, aquifers, lakes and Rivers, which are precious resources of water for future generation are being protected and the State is stepping forward to achieve the status of “Water stress free State” in the country. The

department is also well on the path to accomplish the 2030 agenda of Sustainable Development Goals.

#### **1.4. Tamil Nadu Water Resources (Regulation, Management and Augmentation) Act**

To control, regulate and manage the Ground Water Resources in the State of Tamil Nadu, the Government of Tamil Nadu enacted the Tamil Nadu Ground Water (Development and Management) Act 2003 during March 2003. However, this Act was repealed on 14.09.2013 as there were practical issues in its implementation.

In G.O. (Ms) No. 141, Public Works (R2) Department, dt.19.09.2019, a High Level Committee for framing draft Act and a Technical Committee for preparing an Act and Rules for Ground Water Management and Development have been formed.

Based on the deliberations and suggestions of the Technical Committee, Draft Groundwater (Development and Management) Act has been prepared by taking references from various State's Groundwater Acts and through discussion with line departments.

The views and suggestions of the members of the State Planning Commission have been accepted and incorporated in the draft Bill and the Draft Water Resources (Regulation, Management and Augmentation) Bill has been prepared.

The final draft Bill was placed in the High Level Committee meeting under the chairmanship of Chief Secretary to Government of Tamil Nadu held on 15.03.2024. The suggestions of Secretaries of line departments and Law Department have been called for and are being incorporated in the draft Bill. After incorporating the suggestions, the Bill will be placed in public domain for their views.

### **1.5. Tamil Nadu State Water Policy**

Sustainable Development Goal 6 is to ensure access to water and sanitation for all. Clean and good quality water is one of the greatest challenges of 21<sup>st</sup> century.

The objective of the Tamil Nadu State Water Policy is to understand the present scenario, its

challenges and to propose a water policy to address the State specific concerns and challenges.

The Tamil Nadu State Water Policy focuses on assuring right of access to sufficient quantity of water for all, encourage productivity and efficient use of water in economic aspect and the same time to sustain all life and enhance water governance in the areas of access, utilization and management of water resources.

This policy is inclusive of all departments involved in harnessing and distributing water as well as in regulating water pollution, local bodies, stakeholders and citizens of the state, their issues and strategies for addressing those issues.

The sustainable strategies of the water policy are Sustainable Sectoral allocation, Engagement of Stake holders, Establishment of Tamil Nadu water resource regulatory authority & policy research center, Water resource planning, Integrated Water Resource management (IWRM), Integrated water management plan (IWMP), structural governance reforms in water resource management which includes shift from

fragmented water management to integrated & conjunctive management of surface water, groundwater, reuse of waste water and other conventional water resources, Demand side water management, ensuring water quality and quantity, water use efficiency and productivity in agriculture, protection management and restoration of all water ecosystems etc.

The State Planning Commission and Water Resources Department after interaction with stakeholders are in the process of evolving Tamil Nadu State Water Policy.

### **1.6. Jal Shakti Abhiyan**

National Water Mission, Ministry of Jal Shakti launched a campaign “Catch the rain, where it falls, when it falls” on 22<sup>nd</sup> March 2021 on the World Water Day to urge the states and all stakeholders to create Rain Water Harvesting Structures (RWHS) suitable to the climatic conditions and sub-soil strata, with people’s active participation.

RD&PR was the Nodal Agency from the inception of the programme till March 2022. After March 2022



Water Resources Department is the Nodal Agency. The Engineer in Chief, WRD has nominated the Chief Engineer, State Ground and Surface Water Resources Data Centre, as the Nodal Officer for monitoring, reviewing and reporting the overall activities of the Jal Shakti Abhiyan to the State Nodal Officer of JSA – CTR 2022. This Campaign has been taken up from 29th March 2022 to November 2022 but since Tamilnadu is getting benefited by both South-West and North-East Monsoon, the program is being continued.

In this period a nation-wide campaign has been taken up focusing on saving and conserving rainwater in the pre-monsoon and monsoon periods of 2023, covering both urban and rural areas of all the districts in the country.

Under this campaign, targeted activities were taken up under 5 key areas of Interventions which were Water Conservation & Rainwater Harvesting, Renovation of traditional & other water bodies/tanks, Reuse and Recharge structures, Watershed Development and Intensive afforestation. The above focused interventions

of the campaign will also include Enumerating, Geo tagging and specific improvements of all water bodies, Preparation of scientific plans for water conservation based on the above mentioned areas & Setting up of Jal Shakti Kendras for massive Awareness generation.

The stakeholder departments apart from Water Resources Department are as follows:

- 1) Rural Development & Panchayat Raj Department
- 2) Municipal Administrative & Water Supply Department
- 3) Revenue & Disaster Management Department
- 4) Agriculture - Farmers Welfare Department
- 5) Environment, Climate Change & Forest Department

Under this campaign, Union Government decided to provide a financial assistance of upto Rs. 2.00 Lakh to each district to meet part of the expenditure incurred for GIS Mapping of water bodies and preparation of scientific water conservation plans. National Water Mission has released first instalment of Rs.1.00 Lakh each to 32

Districts of Tamilnadu (Except Madurai, Myladuthurai, Thanjavur, Thiruvallur, Villupuram & Pudukottai)

Second installment of another Rs.1.00 lakh each was received for the 31 Districts out of 38 districts (except Chennai, Madurai, Myladuthurai, Thanjavur, Thiruvallur, Villupuram & Pudukottai) after furnishing utilisation certificate by the State Nodal officer to Union Government.

The status of 5 interventions from 04.03.2023 to 08.03.2024 is as follows.

<b>Sl. No</b>	<b>Interventions</b>	<b>Works Completed (in Nos)</b>	<b>Ongoing Works (in Nos)</b>
1.	Water Conservation & Rainwater Harvesting	99,776	10,989
2.	Renovation of Traditional water bodies / tanks	16,786	2,957
3.	Reuse and Recharge Structures	1,44,474	39,722
4.	Watershed Development	82,154	15,364

5.	Intensive Afforestation	20,752	-
----	----------------------------	--------	---

(Note: Figure for completed and ongoing works is only for activities under MGNREGS).

162 Nos. of Jal Shakti Kendras formed in all the 38 Districts upto Taluk level are functioning as 'Knowledge Centre' for disseminating information related to water conservation techniques and to provide technical guidance to people.

### **Jal Shakti Abhiyan – Catch the Rain 2024**

Jal Shakti Abhiyan – Catch the Rain 2024 has been launched with the new theme “Nari Shakti se Jal Shakti” emphasizing the pivotal role played by women not only in the management and conservation in water but also as primary beneficiaries of Water conservation.

JSA – CTR 2024 would also build upon the progress by ensuring completion of geo-tagging of all water supply sources in the rural areas along with rejuvenation and sustenance of spring sources.

Apart from earlier interventions, JSA: CTR 2024 will also focus on following key aspects:

- I. De-silting and cleaning of water bodies.
- II. Revitalizing Abandoned/Defunct Borewells for groundwater recharge.
- III. Geotagging of water bodies, coupled with meticulous mapping and regular updates in the State's revenue records.
- IV. Intensified afforestation efforts in the catchment areas surrounding water bodies.
- V. Snow harvesting in hilly areas for conserving water (Not applicable to Tamil Nadu)
- VI. Rejuvenation of small Rivers.

## 2.0. Inter - State Water Issues

### 2.1. Cauvery Water Issue

Under Section 5(2) of the Inter-State River Water Disputes Act, 1956, the Cauvery Water Disputes Tribunal delivered its Final Order on 05.02.2007.

After hearing the Appeals filed by States of Karnataka, Kerala and Tamil Nadu against the Final Order of the Tribunal, the Supreme Court delivered its Judgment on 16.2.2018 with the allocation of water as detailed below:-

**(in T.M.C.ft.)**

Karnataka	284.75
Tamil Nadu	404.25
Kerala	30
Pondicherry	7
Environmental Protection	10
Inevitable escapages into sea	4
<b>Total</b>	<b>740</b>

As a consequence of the aforesaid allocation, the Government of Karnataka would be required to make available 177.25 T.M.C.ft. of water to Tamil Nadu at the Inter-State border at Billigundulu. Apart from the modifications effected herein above, no interference has been made with the determination recorded by the Tribunal.

As per the Judgments of the Supreme Court dated 16.02.2018 and 18.05.2018, Union Government constituted the “Cauvery Water Management Scheme, 2018” consisting of Cauvery Water Management Authority (CWMA) and Cauvery Water Regulation Committee (CWRC) and notified it in its Gazette on 01.06.2018.

The Government of Tamil Nadu nominated the Principal Secretary, Public Works (now Water Resources) Department as the Member of Tamil Nadu in the Cauvery Water Management Authority and the Chief Engineer, Water Resources Department, Tiruchirappalli Region as Member of Tamil Nadu in the Cauvery Water Regulation Committee. So far, the Cauvery Water

Management Authority held 30 meetings and the Cauvery Water Regulation Committee held 97 meetings. The last meeting of CWMA was held on 21.05.2024 and that of CWRC was held on 14.06.2024. In the CWMA and CWRC meetings, the views of Government of Tamil Nadu on issues such as, getting stipulated flows due to Tamil Nadu as per the Orders of the Tribunal and as modified by the Supreme Court Judgment, opposing discussion on Mekedatu Project proposed by Karnataka, evolving a formula for sharing of distress, etc., were strongly placed to safeguard the interest of Farmers in the Cauvery basin.

### **Irrigation Year 2023-2024**

Considering the sufficient carryover storage in Mettur and prediction of normal South West Monsoon by India Meteorological Department (IMD) and the flows to be realized at Billigundulu, the Hon'ble Chief Minister, ordered to open Mettur dam for irrigation and accordingly, the dam was opened on 12th June, 2023 for Kuruvai irrigation and preparation for Samba cultivation, and the storage was 69.252 TMC.ft. However, the flows



realized at Billigundulu were 2.833 TMC.ft only against the stipulated quantity of 9.19 TMC.ft in the month of June, 2023. Hence, the Hon'ble Chief Minister in letter dated 19.07.2023 addressed to the Hon'ble Union Minister for Jal Shakti, and in letter dated 04.08.2023 addressed to the Hon'ble Prime Minister of India, requesting to direct Karnataka to ensure the due share of Tamil Nadu. The Hon'ble Minister for Water Resources in his letter dated 03.07.2023 and in the Memorandum presented to the Hon'ble Union Minister for Jal Shakti on 05.07.2023 and when met him on 20.07.2023 requested to advise CWMA to direct Karnataka to ensure the due share of Tamil Nadu. Further, the Chief Secretary to Government of Tamil Nadu in letter dated 03.08.2023 addressed to the Secretary, MoJS and the Additional Chief Secretary, WRD in letters dated 03.07.2023, 27.07.2023 & 02.08.2023 addressed to the Chairman, CWMA, emphasised the request of Tamil Nadu.

The Additional Chief Secretary, WRD / Tamil Nadu Member, in 22<sup>nd</sup> CWMA meeting held on 11.08.2023, strongly objected the decision of CWMA to

reduce the flows of 15,000 cusecs as ordered by CWRC in its 84<sup>th</sup> meeting to 10,000 cusecs, without any scientific reasons. Hence, Tamil Nadu filed a Miscellaneous Application in the Supreme Court on 14.08.2023, praying to direct Karnataka to release 24,000 cusecs immediately, and to make good the shortfall of 28.849 TMC.ft as on 31.07.2023.

In the 23<sup>rd</sup> and 24<sup>th</sup> meetings of CWMA held on 29.08.2023 and 18.09.2023 respectively, Tamil Nadu Member insisted CWMA to direct Karnataka to clear the backlog as determined by the CWMA / CWRC itself, though the methodology to determine the distress percentage, was not acceptable to Tamil Nadu (since it was not as per the mandate of GoI Notification dated 01.06.2018). However, CWMA did not give any direction, with respect to backlog.

In the meanwhile, the Hon'ble Minister for Water Resources, along with leaders of Parliamentary Parties of Tamil Nadu, met the Hon'ble Union Minister for Jal Shakti on 19.09.2023 and handed over a Memorandum,

requesting to advise CWMA to immediately direct Karnataka to release 12,500 cusecs in the next 15 days.

The Supreme Court on 21.09.2023 directed Karnataka to adhere to the directions of CWMA and dismissed all connected Applications. Since Karnataka was not adhering to the direction of CWMA to release even 3000 cusecs, as directed by CWMA in its 25<sup>th</sup> meeting on 29.09.2023, the Additional Chief Secretary, WRD, in letters dated 06.10.2023 & 27.10.2023 and also in the 26<sup>th</sup> and 27<sup>th</sup> meeting of CWMA held on 13.10.2023 and 03.11.2023 respectively, requested the intervention of the Chairman, CWMA.

In the meanwhile, on 09.10.2023, Tamil Nadu Legislative Assembly passed a resolution, unanimously, urging the Union Government to direct the Karnataka Government to release water to Tamil Nadu as determined in the Judgment of the Supreme Court

Further, the Government of Tamil Nadu in letter dated 14.11.2023 informed CWMA that, in the deficit year 2023-2024 the shortfall in flows to be ensured by Karnataka from 01.06.2023 up to 27.10.2023 was

31 TMC.ft. In letters dated 28.11.2023 21.12.2023 and 05.01.2024, the Additional Chief Secretary, WRD insisted the Chairman, CWMA to direct Karnataka to clear the backlog immediately.

When the Hon'ble Union Minister for Jal Shakti in his letter dated 13.12.2023 informed that Karnataka had complied with the directions of CWMA with regard to water releases to Tamil Nadu, the Hon'ble Minister for Water Resources replied in letter dated 19.01.2024 that the backlog of 31 TMC.ft due to Tamil Nadu, as worked out by the State, was not considered by CWRC / CWMA and requested to direct Karnataka to release at least the backlog of 7.61 TMC.ft immediately, as per CWMA / CWRC calculations. This was reiterated by the Tamil Nadu Member, in CWMA 28<sup>th</sup> meeting held on 01.02.2024. However, the Authority did not give any such relief to Tamil Nadu, stating that the monsoon and crop seasons have come to an end.

The Additional Chief Secretary, WRD in letter dated 06.02.2024 to the Chairman, CWMA reiterated to direct Karnataka to release immediately at least the

backlog of 7.61 TMC.ft as assessed by CWMA / CWRC, considering drinking water needs of Tamil Nadu and also to direct Karnataka to ensure flows in the months of Feb, to May, 2024 as per the Judgment of the Supreme Court. Since the flow realised at Billigundulu was meagre and not as per the Judgment, the Additional Chief Secretary, WRD again requested in letters dated 15.02.2024 and 27.02.2024 to direct Karnataka to release water as per the Judgment. In the 29<sup>th</sup> and 30<sup>th</sup> meetings of CWMA held on 04.04.2024 and 21.05.2024, the Member, CWMA / the Additional Chief Secretary, WRD, requested the Authority to direct Karnataka to ensure at least the environmental flows as per the Judgment of the Supreme Court.

Since Karnataka did not ensure environmental flows as stipulated in the Judgment of the Supreme Court, Tamil Nadu has filed an Application in the Supreme Court on 07.05.2024, praying to direct Karnataka to make good the shortfall in environmental flows for the period from 01.02.2024 to 30.04.2024. This Application is yet to be taken up for hearing.

Though in this water year 2023-2024 Tamil Nadu managed to get only 81.42 TMC.ft at Billigundulu on account of distress, with a carryover storage of 69.75 TMC.ft at the beginning of the year, the State could irrigate, against 24.708 lakh acres, 20.862 lakh acres by adopting turn system in an effective manner. Further, about 18 TMC.ft was supplied from Mettur Reservoir for drinking water needs, from 11<sup>th</sup> October, 2023 upto 31<sup>st</sup> May, 2024, on priority basis, by building up the reserve storage, essentially, for domestic and environmental needs.

### **Action taken by Tamil Nadu to prevent Government of Karnataka on its proposal to construct a Dam at Mekedatu**

Tamil Nadu is continuously conveying its strong objections to Karnataka and the Union of India on the proposal of constructing a reservoir at Mekedatu across Cauvery from the time, when Karnataka submitted feasibility report of the Mekedatu project, with a capacity of 67.16 T.M.C.ft., unilaterally. However, the Central Water Commission on 22.11.2018 granted permission to

Karnataka for preparation of Detailed Project Report (DPR). Hence, Tamil Nadu on 30.11.2018 filed a Miscellaneous Application in the Supreme Court to restrain Karnataka from preparation of DPR. A Contempt Petition was also filed by Tamil Nadu on 05.12.2018 against the officials concerned. The above cases are pending before the Supreme Court.

Despite Tamil Nadu's objections, Karnataka approached the Ministry of Environment, Forest & Climate Change for the approval of Terms of Reference (ToR) for Environment Impact Assessment / Environment Management Plan (EIA/EMP) studies. Based on the objections of Tamil Nadu, MoEF & CC has informed Karnataka to get the consensus of Tamil Nadu. Further, based on the strong objections raised by the Tamil Nadu Member in the Cauvery Water Management Authority meetings to defer discussion of the project, as the matter is sub judice, it was not taken up.

In the meanwhile, the National Green Tribunal (Southern Zone) suo moto took up the issue of construction at Mekedatu Project site based on

newspaper report and ordered on 21.05.2021 to constitute a Committee to check on any construction activity without obtaining necessary clearance, which was disposed off by the National Green Tribunal, Principal Bench New Delhi on 17.6.2021, citing that the matter is sub judice. Since Tamil Nadu was not given an opportunity to file its reply, Tamil Nadu filed a Civil Appeal (C.A.No.5608 of 2021) against the above order in the Supreme Court on 11.08.2021. This case is pending.

Further, the Hon'ble Chief Minister of Tamil Nadu and the Hon'ble Minister for Water Resources presented memoranda to the Hon'ble Prime Minister on 17.06.2021 and the Hon'ble Union Minister of Jal Shakti on 06.07.2021, respectively, and requested not to give permission to the proposed Mekedatu reservoir project of Karnataka. A delegation of Leaders of all Legislative Parties of Tamil Nadu headed by the Hon'ble Minister for Water Resources also met the Hon'ble Union Minister of Jal Shakti on 16.7.2021 and urged the Union Government not to accord any clearance to the



Mekedatu Project of Karnataka without the concurrence of co-basin States.

When it was learnt that Karnataka had approached the Ministry of Environment, Forest & Climate Change for the approval of ToR for EIA/EMP studies, Tamil Nadu filed another Miscellaneous Application with additional documents in the Supreme Court on 27.08.2021, praying to direct CWC to reject the DPR for the proposed Mekedatu Project. This case is also pending.

It was also learnt that Karnataka has allocated Rs.1000 Crore in its budget for the year 2022-2023, for the Mekedatu Project. The Tamil Nadu Legislative Assembly, on 21.03.2022, strongly condemned this action of Karnataka and unanimously passed resolutions urging the Union Government and the Cauvery Water Management Authority not to accord any clearance to Mekedatu project. This resolution was forwarded to the Ministry of Jal Shakti on 24.03.2022.

Subsequently, in the Memoranda presented by the Hon'ble Chief Minister to the Hon'ble Prime Minister

on 31.03.2022 and on 26.05.2022 it was inter alia requested to instruct the Ministry of Jal Shakti not to give permission to the proposed Mokedatu Project of Karnataka.

As decided in the 15<sup>th</sup> CWMA meeting held on 11.02.2022, the CWMA sought the legal opinion from the Solicitor General on the power of CWMA to examine new projects. The Solicitor General opined that the CWMA has wide powers and the Authority can take up Mokedatu Project for discussion and in the 16<sup>th</sup> CWMA meeting Mokedatu Project Detailed Project Report was added for discussion. Consequent that Tamil Nadu Government vide letter dated 04.06.2022 and 09.06.2022 addressed CWMA to omit the Mokedatu subject from the discussion list. Hence, Tamil Nadu on 07.06.2022 filed two Applications, praying to implead CWMA as a party and praying to restrain CWMA from deliberating / passing any order or direction in regard to the DPR for the proposed Mokedatu Project pending disposal of the Applications already filed by Tamil Nadu. These Applications are also pending to be decided.

In this regard, the Hon'ble Chief Minister wrote a letter to the Hon'ble Prime Minister on 13.06.2022 emphasizing that the CWMA was formed only to implement the Final Award of the Tribunal as modified by the Supreme Court and requesting to instruct the Ministry of Jal Shakti to direct the CWMA not to take up Mekedatu Project for discussion, as it is in violation of the Judgment of the Supreme Court. Further, as per the orders of the Hon'ble Chief Minister, a delegation of leaders of all Legislative Parties, led by the Hon'ble Minister for Water Resources met the Hon'ble Union Minister of Jal Shakti on 22.06.2022 and urged to advise the CWMA not to take up Mekedatu DPR for discussion.

Karnataka filed its Reply Affidavits to the Applications filed by Tamil Nadu with respect to the powers of CWMA, on 18.07.2022 and 19.07.2022, Sur Rejoinder on 08.08.2022. CWMA filed its Affidavit on 07.09.2022. Tamil Nadu filed its Rejoinder/Response on 23.07.2022, 11.11.2022 and on 22.11.2022.

In the meanwhile, when the CWMA in its 17<sup>th</sup> meeting held on 14.10.2022 decided to include

discussion on Mekedatu Project in its 18<sup>th</sup> meeting, the Hon'ble Minister for Water Resources in his letter dated 29.10.2022 urged the Hon'ble Union Minister of Jal Shakti to omit the item from the Agenda. The same was reiterated in Tamil Nadu's letter dated 02.11.2022. Due to the relentless efforts taken by Tamil Nadu, the CWMA in its 18<sup>th</sup> meeting held on 02.12.2022 and in 19<sup>th</sup> meeting held on 10.02.2023 decided to defer discussion on Mekedatu Project.

The Hon'ble Minister for Water Resources again met the Hon'ble Union Minister for Jal Shakti on 05.07.2023 and presented a Memorandum requesting to advise the Ministry to reject Mekedatu Project proposal.

In the 28<sup>th</sup> CWMA meeting held on 01.02.2024, Tamil Nadu vehemently opposed, stating that the matter is sub-judice. After deliberations, it was decided to return the DPR of the project back to CWC, and accordingly the DPR was returned back to CWC on 09.02.2024.

In the meanwhile, the Additional Chief Secretary, WRD in his letters dated 07.02.2024 requested the Secretary, MoJS and Chairman, CWC not to take any

action on Mekedatu project and instruct concerned Directorates of CWC not to entertain any request for processing or giving clearance to the Project, since the matter is sub judice. On the same day, the Additional Chief Secretary, WRD referring the decision taken in 25<sup>th</sup> EAC meeting held on 19.07.2019 that an amicable solution be arrived at for the reconsideration of grant of ToR, and also citing that the matter is sub judice, requested the Secretary, MoEF&CC to advise the concerned EAC not to entertain any request for grant of ToR. The Chief Secretary to Government also in letter dated 20.02.2024 addressed to the Secretary, MoJS and the Secretary, MoEF & CC reiterated that the project is not to be examined, as the matter is sub judice.

Further, the Hon'ble Minister for Water Resource in letter dated 23.02.2024, requested the Hon'ble Union Minister for Jal Shakti to direct the concerned officers in MoJS and CWC not to consider the DPR of Mekedatu project, till Hon'ble Supreme Court decides the issue.

The Government of Tamil Nadu is taking all necessary action including legal action to prevent

Karnataka from constructing a Dam at Makedatu or any other place, in the Cauvery basin of Karnataka, in violation of the Final Order of the Tribunal and the Judgment of the Supreme Court and to safeguard the rights of Tamil Nadu.

**Suit filed by Karnataka in the Hon'ble Supreme Court against Mettur-Sarabanga LIS, Cauvery – Vaigai – Gundar Link Project & ERM/Modernisation Projects taken up by Government of Tamil Nadu in Cauvery Basin**

The State of Karnataka filed an Original Suit (O.S. No. 3 of 2021) along with an I.A. in the Supreme Court on 19.07.2021 seeking exclusive right to use surplus waters generated in the Cauvery basin up to Inter State border Billigundulu, over and above 483 T.M.C.ft. and also seeking to restrain Tamil Nadu from executing Mettur Sarabanga Lift Irrigation Scheme, Cauvery-South Vellar link (first phase of Cauvery-Gundar link), construction of check dams, dykes and anicuts, barrages across Cauvery and Kollidam, and Extension, Renovation and Modernization (ERM) of 4 systems,

namely, Kattalai High Level Canal System, Rajavoikkal Irrigation System, Noyyal River System and Grand Anicut Canal System in Cauvery basin.

Tamil Nadu filed its Written Statement and Reply to the I.A. on 03.01.2022, replying, inter alia, that these projects are either for modernising the irrigation systems or for increasing the efficiency of the systems, or for better commandability or for flood management and none of these projects involve development of any new ayacut in Cauvery basin of Tamil Nadu. Karnataka filed its Replication to the Written Statement of Tamil Nadu in September, 2022. Union Territory of Puducherry in its Written Statement filed on 21.07.2022 has prayed to dismiss the Suit. Union of India too filed its Counter Affidavit on 17.11.2022 praying that Karnataka's prayer is not liable to be granted and the Suit deserves to be dismissed. The State of Kerala filed its Written Statement on 24.05.2023. In response to this, Karnataka filed Replication on 31.05.2024. In the meanwhile, when the case came up for hearing in the Supreme Court on 07.05.2024, it ordered to be listed on 05.08.2024.

## **Return of non-consumptive use of water drawn for Bangalore water supply sought as per the Judgment of the Supreme Court**

The Cauvery Water Disputes Tribunal (CWDT) considered drinking water requirement of in-basin population only and allocated only 20% of the drinking water drawal as consumptive use. However, the Supreme Court has considered the drinking water requirement of the entire Bangalore city, two-third of which lies outside Cauvery basin and made an additional allocation of 4.75 T.M.C.ft. as consumptive use to Karnataka. Thus, the balance 80% of the drinking water drawal, that is, non consumptive use, should be returned to the Cauvery river system as regenerated flows after necessary treatment.

Karnataka has not ensured return flows after treatment from the Cauvery waters being supplied in the two-third of Bangalore city, which falls outside Cauvery basin. On the contrary, Karnataka contends that the return flows/non-consumptive use of waters belongs to it. This issue was raised before the Cauvery Water



Management Authority (CWMA) and the Cauvery Water Regulation Committee (CWRC) on various occasions. However, the CWMA did not issue any direction to the State of Karnataka for ensuring compliance of the decision of Supreme Court or monitor the actual quantum of return flows or its quantity. Hence, the Government of Tamil Nadu has filed a Miscellaneous Application before the Supreme Court on 30.01.2023, praying inter alia to direct Karnataka to ensure that 80% of the flows drawn from Cauvery river and its tributaries for drinking water supply of Bangalore city as regenerated flows from domestic use is returned after treating the said water, to the Cauvery River system, and CWMA to monitor the quality and quantity of non-consumptive use of drinking water drawn for Bangalore Water Supply returned to Cauvery basin.

Tamil Nadu has filed an Additional Affidavit on 08.05.2024, to place on record the Report filed by Karnataka with regard to Pennaiyar water disputes, wherein it has admitted that Cauvery water supplied to the Bangalore city lying in the South Pennar River Basin

is being diverted to Palar Basin to fill up Minor Irrigation tanks in both Pennaiyar and Palar Basins in Karnataka.

### **Sewage let into Cauvery and Pennaiyar by Karnataka**

In view of huge damage and suffering likely to be caused to Tamil Nadu and its inhabitants because of letting in sewage and industrial effluents from Bengaluru city and its surroundings in Cauvery and Pennaiyar rivers by Karnataka, Tamil Nadu filed an Original Suit (O.S. No. 2 of 2015) in the Supreme Court in the year 2015. According to the data available in the Final Report submitted by the Central Pollution Control Board to the Supreme Court, it is confirmed that due to letting of sewage by Karnataka in the Cauvery and Pennaiyar, these two rivers are polluted. The case is pending in the Supreme Court.

In the meanwhile, Tamil Nadu Pollution Control Board is collecting water samples from Cauvery and Pennaiyar rivers near the inter-State boundary between Karnataka and Tamil Nadu to monitor water quality. Similarly, the Central Water Commission is also collecting

samples and monitoring the water quality of Cauvery River at Billigundulu.

**Suit filed by Tamil Nadu in the Supreme Court against Karnataka claiming compensation for non-release of water due to Tamil Nadu in 2012-2013.**

During the irrigation season 2012-2013, the flows due to Tamil Nadu, as per the Interim Order dated 25.06.1991 of CWDT, were not released by Karnataka. Hence, the State of Tamil Nadu filed a Suit (O.S.No.4/2013) against Karnataka in the Hon'ble Supreme Court of India, claiming damages for the losses caused by Karnataka, to Tamil Nadu due to shortfall in release of stipulated quantity of water, computed as per the pro rata formula, based on the Interim Order of the Tribunal, seeking directions to Karnataka to pay damages of a sum of about Rs.1045.70 crore towards loss of crops, loss of bio mass and loss of power generation, and to pay punitive damages of Rs.1434 crore for deliberate non-compliance of the decision passed by the Tribunal. Cross examination of the 3 witnesses of Tamil Nadu, was over on 28.09.2018.

Cross examination of first witness of Karnataka was completed on 30.04.2019. After the cross examination of second witness of Karnataka, the Suit will be taken up for final arguments.

### **Construction of check dam across Silandhiyar in Pambar (Amaravathy) basin by Kerala**

It has been reported in the media that the Government of Kerala is constructing a check dam across Silandhi river in Amaravathi (Pambar) sub basin of Cauvery basin without obtaining necessary clearances. The Additional Chief Secretary, WRD in his letter dated 22.05.2024 requested the Principal Secretary, WRD, Government of Kerala not to proceed with the work and also sought the details of all Minor Irrigation schemes in Bhavani and Amaravathy (Pambar) sub basins in Kerala. To allay the genuine concerns of the farmers of Amaravathy sub basin, the Hon'ble Chief Minister of Tamil Nadu in letter dated 23.05.2024 has also requested the Hon'ble Chief Minister of Kerala not to proceed with the construction.

The State of Kerala in letter dated 25.05.2024 replied that the proposed annual utilization of 3 MLD (0.0386 TMC.ft) under the above said project is to provide drinking water supply to all households in Vattavada Panchayat under Jal Jeevan Mission, out of which the consumptive use would be 0.00733 TMC.ft only, and it is well within the allocation of 0.02 TMC.ft towards domestic needs in Pambar sub basin.

In the meanwhile, based on the news reports, the National Green Tribunal, Southern Zone (NGT, SZ), has, suo motu, registered a case and taken up the matter on 24.05.2024. The Chief Secretaries of the States of Kerala & Tamil Nadu, are also Respondents. The Tribunal has directed the Water Resources and Forest Departments of Kerala to ensure that all the required approvals for the above said construction are in place and if not, withhold the project till appropriate approvals are granted. It has further directed to list the matter on 23.07.2024. Tamil Nadu would file its response shortly.

## **2.2. Mullai Periyar Dam**

The Periyar Project was executed by virtue of the Lease Deed signed between the Maharaja of Travancore and the Madras Presidency on 29.10.1886. This deed is valid for 999 years with effect from 01.01.1886. About 8,000 acres have been leased for this project. About 2.20 Lakh acres of ayacut area are benefited by this Project in Districts of Theni, Dindigul, Madurai, Sivagangai and Ramanathapuram and in a year on an average 22 T.M.C ft. of water is diverted. Apprehensions were raised about the safety of this Dam by certain people of Kerala in the year 1979, though the dam was safe. However, in order to bring the Dam to modern standards, the Central Water Commission suggested certain remedial measures after which the water level could initially be raised to 145 ft. which was not accepted by Kerala. Since the Government of Kerala held the view that the water level in the Dam should be kept at 136 ft. at all times even after strengthening, the issue went to the Hon'ble Supreme Court.

In the Writ Petitions filed, the Hon'ble Supreme Court pronounced its Judgment on 27.02.2006, which permitted the Government of Tamil Nadu to raise the water level to 142 ft. However, the Government of Kerala amended its Kerala Irrigation and Water Conservation Act, 2003, to thwart the Hon'ble Supreme Court's Order and fixed the FRL of Mullai Periyar Dam as 136 ft. In the Suit (O.S.No.3 of 2006) filed by Government of Tamil Nadu against the amended Act of Kerala, the Hon'ble Supreme Court delivered its Judgment on 07.05.2014 and affirmed the Judgment of 2006 and categorically stated that the dam is Hydrologically, Structurally and Seismically safe. Further, Supreme Court held that the amended Act of Kerala is unconstitutional in so far as Mullai Periyar Dam is concerned. The Court also permitted Tamil Nadu to raise the water level of Mullai Periyar Dam upto 142 ft. and to carry out balance strengthening works, so as to enable Tamil Nadu to restore the FRL + 152 ft. The Hon'ble Supreme Court also stated that the New Dam proposal of Kerala cannot be thrust upon Tamil Nadu. It also ordered to constitute a Supervisory Committee to periodically

inspect the dam to allay the apprehensions of Kerala, though none exists.

Water level in the Mullai Periyar Dam reached 142 ft. on 21.11.2014, after 35 years, and thereafter on 07.12.2015 and 15.08.2018. Further, after the implementation of the Rule Curve as finalized by Central Water Commission, the water level reached (+) 142 ft. on 30.11.2021 for the 4<sup>th</sup> time, since 2014, and remained at that level for 18 days, since then and the Dam was found to be safe. For the 5<sup>th</sup> time, the water level reached +142 ft. on 27.12.2022 and the dam is safe in all respects.

Based on the Order of the Supreme Court dated 08.04.2022 in W.P.No. 880 of 2020 (filed by Dr. Joe Joseph & 2 other individuals of Kerala), the Supervisory Committee was reconstituted with additional two Technical Members, one each from the State of Tamil Nadu and Kerala. So far, 16 meetings and one Interim meeting of the Supervisory Committee were held. The 17<sup>th</sup> meeting of the Supervisory Committee held on 13<sup>th</sup> & 14<sup>th</sup> June, 2024.



## **Special Repair works**

Grouting the dam and treating the upstream face of the Main dam has been recommended by the Empowered Committee (2010-2012) and ordered to be carried out by Hon'ble Supreme Court in its order dated 07.05.2014. Suitable specifications have been obtained from Central Soil and Materials Research Station (CSMRS), Delhi and concurrence obtained from Central Water Commission (CWC). Government of Tamil Nadu has issued an Administrative Sanction for an amount of Rs.9.81 crore for this work on 21.11.2019. However, the works could not be carried out so far, as the State of Kerala has not granted permission, in spite of several requests, since February, 2020 to convey the material and machinery through the forest road for this work. On 28.07.2021 Director, Central Water Commission addressed Additional Chief Secretary of Kerala and requested to get necessary permission from the authority concerned. On receipt of permission, further work would be taken up. In Additional Affidavit (I.A No:154780/2021) filed on 27.11.2021 in Hon'ble Supreme Court, in

Execution Petition (I.A No 28 of 2017), it was prayed to direct the State of Kerala to permit to convey the materials and machinery for grouting work at the Main Dam. In the I.A No: 174262 of 2022 filed on 14.11.2022 & in the Additional Affidavit filed on 07.08.2023 by Tamil Nadu, in W.P No. 880 of 2020, in the Supreme Court, on the above issues, it has been prayed to direct the State of Kerala and its instrumentalities to give necessary permission to Tamil Nadu to convey materials and machinery to the Dam site through Vallakadavu – Mullai Periyar dam site Ghat road. Kerala is being pursued to offer its permission to convey materials through forest road. All measures are being taken to undertake this work.

Subsequent to the Interim meeting of the Supervisory Committee held on 18.08.2022, the Chairman, Supervisory Committee, vide, letter dated 22.08.2022 addressed the Chief Secretaries of both the States (Tamil Nadu & Kerala) and requested to resolve the long pending issues, namely felling 15 trees, carrying out the balance strengthening measures, repair and

maintenance works in the interest of both the States. The Chief Secretary and the Additional Chief Secretary, Water Resources Department addressed their counterparts in Kerala, vide, letters dated 25.08.2022 & 20.10.2022.

In continuation to that, an Inter State meeting at the Chief Secretary level was held at Chennai on 12.12.2022, wherein the Chief Secretary, Government of Kerala stated that he would consider our request and respond early. The Chief Secretary, Government of Tamil Nadu addressed his counterpart in Kerala on 23.12.2022 and requested to arrange to issue necessary permission early to commence the work of the long pending issues without further lapse of time. Subsequently, the Chief Secretary, Tamil Nadu addressed the Chief Secretary of Kerala on 23.12.2022 to arrange to give permission to the long pending issues and reminded again on 22.02.2023. The Additional Chief Secretary, Water Resources Department, Tamil Nadu too addressed the Additional Chief Secretary, Kerala on 22.12.2022 requesting for a mutually convenient date, on which a

meeting either physically or virtually may be held, to settle the issue of felling of 15 trees existing in the downstream of Baby dam. A reminder in this regard was also sent on 20.01.2023.

In the 16<sup>th</sup> Supervisory Committee meeting held at Kumily on 27.03.2023, the long pending issues were discussed and it was informed by the State of Kerala that the proposal is with the Government. The State of Tamil Nadu, informed that it wants to commence the works immediately and programmed to complete them to the maximum extent before the ensuing monsoon season.

In continuation of the same, the Chairman, Supervisory Committee vide letter dated 26.04.2023 addressed the Chief Secretaries of both the States and requested to resolve the long pending issues. The Chief Secretaries of the State of Tamil Nadu & Kerala met at Chennai on 05.05.2023 and held discussions. Further to the Chief Secretary level meeting, the Additional Chief Secretary, Government of Tamil Nadu addressed his counterpart in Kerala on 24.05.2023 requesting to inform the cost estimate to repair the Vallakkadavu Ghat road

and also arrange to issue necessary permission early to Tamil Nadu, so as to commence the works early. After persistent efforts taken by Tamil Nadu, the restoration of the causeway work commenced on 09.02.2024 and completed after payment of Rs.31.24 lakhs deposited by Tamil Nadu in December, 2023.

However, even after the Inter State meetings held at Chennai on 12.12.2022 and 05.05.2023, as directed by the Chairman, Supervisory Committee, there is no positive outcome from the State of Kerala and there is no positive response till date from the Government of Kerala either to convey materials for grouting the Main Dam or giving permission for felling down 15 trees, in spite of repeated requests.

In continuation to the Hon'ble Minister for Water Resources, Tamil Nadu letter dated 28.09.2023, the Chief Secretary, Government of Tamil Nadu, vide letter dated 29.12.2023 again requested the State of Kerala for a convenient date to discuss and find a solution to the long pending issues. Response is awaited.

Further, the Additional Chief Secretary, Government of Tamil Nadu addressed the Chairman, Supervisory Committee on 05.01.2024 & 27.02.2024 and the Secretary to Government of Kerala on 29.01.2024 in connection with the long pending issues.

Further, as suggested by Central Water Commission, for installing Seismograph and Accelerographs in the dam site, a sum of Rs.99.95 lakhs has been sanctioned by Government of Tamil Nadu on 30.06.2020. Installation of the Seismic instruments by National Geophysical Research Institute (NGRI), Hyderabad was completed on 31.05.2023 and the instruments are functioning well.

**Balance strengthening works to be undertaken to raise the water level to the Full Reservoir Level (FRL) +152 ft.**

For raising the water level to its FRL of 152 ft, Central Water Commission and Expert Committee (EC) (constituted in the year 2000) have recommended to carry out balance strengthening works namely, strengthening the Baby dam and Earth dam. Hon'ble

Supreme Court in its Order dated 27.02.2006 has also directed to carry them out. The Empowered Committee (constituted in the year 2010) reiterated the above recommendation of Central Water Commission and Expert Committee and the Supreme Court in its Order dated 07.05.2014, reiterated its order dated 27.02.2006. The Government of Tamil Nadu has accorded Administrative Sanction for an amount of Rs.7.85 crore. In order to strengthen the Baby Dam, 23 trees (now 15 trees) have to be felled down. The works which did not require clearances have been completed.

Though sustained efforts have been taken to obtain necessary clearances to cut these trees, due to the obstructionist attitude of Kerala State, it is getting delayed. In the Memorandum presented by the Hon'ble Chief Minister of Tamil Nadu to the Hon'ble Prime Minister on 17.06.2021, it was requested to instruct Ministry of Environment, Forest and Climate Change to advise Government of Kerala not to delay in giving the required clearances to cut the trees. In the Memorandum presented to Hon'ble Union Minister of Jal Shakti by

Hon'ble Minister of Water Resources, on 06.07.2021, Ministry of Jal Shakti, Union Government was requested to advise State of Kerala to immediately give permission to cut the 23 trees (Now 15 trees) and repair the Ghat road by Kerala for which Tamil Nadu is willing to bear the cost or to give its concurrence to carry out the repair by Tamil Nadu.

Following the Inter-state meeting held on 17.09.2021 through video conferencing at Additional Chief Secretary level, the Deputy Director, Project Tiger, Thekkady, vide letter dated 06.11.2021 conveyed that the Principal Chief Conservator of Forest and Wild Life, Kerala granted permission for felling 15 numbers of trees. However, the Forest and Wildlife Department of Government of Kerala issued a Government Order vide G.O. Ms. No.23 / 2021 / F&WLD Dated 11.11.2021 cancelling the orders issued by the Principal Chief Conservator of Forests and Wild Life, Kerala. Thereafter, in the Execution Petition (I.A.No.28 of 2017), an Additional Affidavit (I.A No: 154780 / 2021) was filed by Tamil Nadu in Hon'ble Supreme Court on 27.11.2021,



praying to direct the State of Kerala to restore the permission granted for felling of trees and permit the completion of strengthening works by Tamil Nadu, among others. In the I.A No: 174262 of 2022 filed on 14.11.2022 and in the Additional Affidavit filed on 07.08.2023 filed by Tamil Nadu in W.P No. 880 of 2020, among others, it has been prayed to direct the State of Kerala to restore the permission to cut 15 trees, to carry out the strengthening of the Baby Dam, which was granted on 05.11.2021 and arbitrarily withdrawn subsequently on 11.11.2021. These are pending in Supreme Court.

Continuous efforts are being taken to obtain Forest Clearance from the Union Government. In the meanwhile, on 03.03.2022, the Hon'ble Minister for Water Resources, Tamil Nadu addressed the Hon'ble Minister for Water Resources, Kerala to revoke the G.O. on cancelling the tree cutting.

This matter was also raised in the Chief Secretary level meeting held on 12.12.2022 and 05.05.2023, as directed by the Chairman, Supervisory

Committee. However, there is no response from the State of Kerala, till date.

When this issue was discussed in the 15<sup>th</sup> Supervisory Committee meeting held on 03.06.2022, it was decided that these works have to be carried out at the earliest and not linked with the safety review of Mullai Periyar Dam.

On receipt of clearances, immediately the work would be undertaken.

Thus, this Government is taking all efforts to complete the balance strengthening works, so as to restore the water level to original FRL +152 ft., thereby to protect the rights of Tamil Nadu and to protect the interests of farmers depending on the waters of Mullai Periyar Dam.

**Construction of a Mega Car Park in the water spread area of Mullai Periyar Dam by the Government of Kerala.**

The proposal of the State of Kerala for construction of a Mega Car Park Complex in water

spread area of Mullai Periyar Dam, the National Green Tribunal (Southern Zone), in its Judgment dated 15.11.2017, ordered that since National Tiger Conservation Authority has granted permission, approval under the Forest Conservation Act is not necessary. Against this Judgment, Government of Tamil Nadu has filed Civil Appeals in Supreme Court. The Hon'ble Court on 04.12.2017 has ordered that no permanent construction should be carried out by Government of Kerala. As Government of Kerala has undertaken construction works of permanent nature, Government of Tamil Nadu on 08.05.2019 filed a Contempt Petition against the concerned officers of Kerala in Supreme Court. These matters are pending before Supreme Court.

Apart from this, Government of Tamil Nadu on 26.09.2014 has filed a Civil Suit in Supreme Court against the proposal of Government of Kerala to construct a Mega Car Park and to remove the encroachments in the leased area.

When this case came up for hearing in the Supreme Court on 18.10.2023, the Court was of the

opinion that this controversy can be resolved by directing to conduct of a joint survey and determination of the precise location of the Mega Car Park. Further, it was ordered directing the parties to take instructions and to file affidavits by 20<sup>th</sup> November, 2023 placing on record what according to them is the description of the land, its areas and boundaries and to list the matter on 28<sup>th</sup> November, 2023.

Accordingly, Compliance Affidavits were filed by the Government of Tamil Nadu on 18.11.2023 and by the Government of Kerala on 24.11.2023 in the Supreme Court.

On 28.11.2023 when the case came up for hearing, it was ordered that the survey as suggested in terms of the order dated 18<sup>th</sup> October, 2023, shall be carried out by the Survey of India or the officers nominated by the Survey of India, with a view to ascertain whether the construction of the Mega Car Park has been made on any part of the property covered by the Periyar Lake Lease Agreement dated 29<sup>th</sup> October, 1886. A period of three months was granted to the

Survey of India to submit its report directly to the Court, from the date on which a copy of the Order is served in its office and the Supreme Court ordered to list the matter for hearing on 11.03.2024.

On 11.03.2024, when the case came up for hearing, the Survey of India submitted its Report in the Supreme Court. The Hon'ble Court ordered the party States to file the affidavits within a period of four weeks and to list the matter on 22.04.2024.

The Response of Tamil Nadu objecting to the Survey Report was filed in the Hon'ble Supreme Court on 16.04.2024.

When the case came up for hearing in the Supreme Court on 22.04.2024, the Hon'ble Court permitted the State of Kerala to file an Affidavit dealing with the said objection, within a period of 4 weeks and ordered to list the matter on 10<sup>th</sup> July, 2024 for settlement of issues.

Thus Government is taking the needed efforts to protect the rights of Tamil Nadu.

## **New Dam proposal of the State of Kerala**

From the public domain, it was learnt that the State of Kerala has made an application to get fresh Terms of Reference for conducting Environment Impact Assessment (EIA) study for constructing a New Mullai Periyar Dam, in lieu of the existing dam, and the proposal has been listed in the Agenda of 11<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) River Valley and Hydroelectric Projects, on 28<sup>th</sup> May, 2024.

The Additional Chief Secretary to Government on 23.05.2024 addressed the Secretary, Ministry of Environment, Forest and Climate Change and communicated the strong objection of the State of Tamil Nadu to the inclusion of this item in the Agenda, which is clearly a violation of the Supreme Court and requested to instruct the concerned officers of the MoEF & CC and Member Secretary of the EAC to drop the Agenda Item.

The Hon'ble Chief Minister in letter dated 24.05.2024 brought the issue to the notice of the Hon'ble Minister of Environment, Forests and Climate Change, Government of India and urged to instruct the concerned

officers of MoEF and the Member Secretary of the EAC to drop the Agenda item during the EAC meeting to be held on 28.05.2024. Due to the above action, the meeting was not held.

This Government will take all needed efforts to protect the interests and rights of Tamil Nadu.

### **2.3. Palar River Water Issue**

The River Palar which is one of the Inter-State rivers, originates in Kolar District in Karnataka, traverses through Andhra Pradesh via Chittoor District and runs through Vellore, Ranipet, Thiruvannamalai, Kancheepuram and Chengalpattu Districts in Tamil Nadu, before confluencing into the Bay of Bengal.

The States of Andhra Pradesh, Karnataka and Tamil Nadu are bound by the Inter State – Madras – Mysore, 1892 Agreement. As per Schedule - A of the Agreement, Palar falls under the list of 15 important Inter - State Rivers.

When the Government of Andhra Pradesh proposed to construct a reservoir with a capacity of 0.6

T.M.C. ft. across Palar at Ganesapuram in Kuppam Taluk in Chittoor District, in violation of the Madras-Mysore Agreement of the year 1892, the Government of Tamil Nadu in the year 2006, filed a Suit in the Supreme Court praying to stop the execution of the said project by Andhra Pradesh.

Cross-examination of Tamil Nadu witnesses of the Parties were also completed by May 2018. The case is pending in the Supreme Court.

Recently, as there were wide spread reports in the media that the Government of Andhra Pradesh has laid foundation stone for construction of a new dam across river Palar, the Principal Secretary, Water Resources Department, Andhra Pradesh was addressed by Additional Chief Secretary, Water Resources Department, Government of Tamil Nadu in the letter dated 27.02.2024, not to take up any new work across Palar as the matter is sub-judice. The Hon'ble Minister, Water Resources Department, Tamil Nadu in letter dated 28.2.2024 to the Hon'ble Minister, Water Resources Department, Andhra Pradesh, requested to instruct the



concerned officers of Andhra Pradesh to take immediate action to stop all the related activities with reference to the proposal of construction of Dam across the River Palar.

When the Government of Andhra Pradesh started to increase the height of check dams, to repair the existing check dams and to construct new check dams across Palar River at several places in Chittoor District, Government of Tamil Nadu filed another Suit in the year 2016 in the Supreme Court. The Government of Tamil Nadu has also filed Interlocutory Applications (I.A) in the Supreme Court in the years 2017, 2018 and 2019, to restore height of the existing check dams to its original level and to allow natural flow due to Tamil Nadu. This matter is also pending in the Supreme Court.

Government of Tamil Nadu is taking all necessary steps to protect drinking water needs and irrigation needs of farmers of Vellore, Ranipet, Thiruvannamalai, Kancheepuram and Chengalpattu districts who depend on the waters of the Palar river.

## **2.4. Parambikulam Aliyar Project – Review of Agreement**

Parambikulam Aliyar Project, was planned, designed and executed by Government of Tamil Nadu as one of the Second Five Year Plan Projects (1956 - 1961), with the consent and co-operation of Government of Kerala for sharing mutual benefits through the utilization of flows in the west flowing Rivers of Anamalayar, Nirar, Sholayar, Parambikulam and its tributaries Peruvuripallam, Thunakadavu and the Palar and Aliyar flowing in the plains and the streams flowing into them, for generation of Hydro Electric Power, irrigation, drinking water supply, industrial use and other purposes. An Agreement between Governments of Kerala and Tamil Nadu was entered into on 29.5.1970 with retrospective effect from 09.11.1958. Taluks of Pollachi, Palladam, Udumalaipettai and Dharapuram in the Districts of Coimbatore and Tiruppur are benefitted. Palakkad and Trichur Districts of Kerala State are also benefitted. This Agreement was due for review on 09.11.1988 and thereafter once in 30 years. For this, both Governments

exchanged documents and also exchanged their respective views.

For the review of the Agreement, so far 27 Meetings at various levels were held between Tamil Nadu and Kerala. In the last Inter State meeting held through Video Conferencing on 17.9.2021, all the issues related to Parambikulam - Aliyar Project including Anamalayar Project and Nirar-Nallar Project were discussed, which are briefed as below:

### **Diversion of 2.5 T.M.C ft. of water from Anamalayar to Tamil Nadu & Nirar-Nallar Multipurpose Straight Cut Scheme**

There is a provision to divert 2.5 T.M.C ft. of water from Anamalayar, in the Original Agreement. Contending that its Idamalayar Project has not been completed, Kerala has not yet given consent for the above diversion. A Supplementary Agreement will suffice for this purpose. However, after discussion in the Inter-State meetings held on 12.12.2019 at Chennai, 11.09.2020 at Thiruvananthapuram and through Video Conferencing on 17.9.2021, Kerala has expressed its

willingness to consider the proposal of Tamil Nadu for constructing a weir across Italiar, a tributary of Anamalayar for diverting 2.5 T.M.Cft. to Tamil Nadu.

The Nirar-Nallar Multipurpose Straight Cut Scheme envisages formation of a reservoir with 7 T.M.C ft. capacity across Nallar, a tributary of Palar in Bharathapuzha basin, for conveyance of water from Upper Nirar Weir across Nirar river directly to Nallar by means of a tunnel for irrigation and also utilize it for generation of Hydro power. Tamil Nadu is pressing for Nirar – Nallar Multipurpose Straight cut scheme to the present circuitous route i.e., from Upper Nirar to Sholayar reservoir, then to Parambikulam reservoir and then through the contour canal to Thirumurthy reservoir, to reduce water loss. In the Inter-State meetings held on 12.12.2019, 11.09.2020 and on 17.9.2021, the Nirar-Nallar Project was deliberated. Technical details and data pertaining to Nirar - Nallar Scheme proposal of Tamil Nadu were sent to Kerala on 08.02.2021. In Video Conference meeting held on 17.09.2021, Kerala put forth

its demand for an increased share of water, about 2.5 to 3 T.M.C ft. at Manacadavu Weir.

As decided in the Inter State meeting held on 17.09.2021, Tamil Nadu constituted a Technical Sub Committee on 01.10.2021, to deliberate with regard to benefits to both the States and sort out technical issues of both the Projects. Kerala's response is awaited. The matter is under correspondence. The Technical Sub Committee has conducted two meetings, on 20.10.2021 and 03.08.2022 and discussed about the technical issues which are to be sorted with Kerala appropriately.

After getting consent of Kerala, Detailed Project Reports will be prepared and after obtaining the necessary clearances, the Anamalayar and Nirar-Nallar projects would be executed.

Hon'ble Minister for Water Resources, in letter dated 28.09.2023 has informed the Kerala Minister for Water Resources that a meeting may be held at the Chief Secretary level to discuss all the issues and then the Hon'ble Chief Ministers of Kerala and Tamil Nadu may

hold discussion. The response from Government of Kerala is awaited.

The Government of Tamil Nadu is pursuing the issues with the Government of Kerala to complete the review of the PAP Inter State Agreement and to execute the Anamalayar and Nirar-Nallar Projects considering the interest of the farmers of Tamil Nadu.

### **Irrigation year 2023-2024**

In this water year, the deficit in inflow in Aliyar Reservoir for the period from July 2023 to May 2024, was about 34%. Considering the deficit, 5.455 T.M.C ft. was supplied at Manacadavu upto the end of May, against stipulated quantity of 6.750 T.M.C ft. in a normal year. The deficit in inflow in the Sholayar sub-basin reservoirs, for the corresponding period was about 17%. The quantity utilized in the Kerala Sholayar dam was 12.033 T.M.C ft. against 12.30 T.M.C ft in an average year and the Storage in the dam at the end of May was 0.684 T.M.C ft. is in excess of (103%).

## **2.5 Neyyar Irrigation Project**

The Neyyar Irrigation Project was planned by the Travancore-Cochin Government in two stages during the 2<sup>nd</sup> Five-Year Plan (1956–1961) and constructed. Thereafter, due to the States Re-organisation in 1956, a portion of the ayacut localised to be served by this project to the extent of 9,200 acres lying in Vilavancode Taluk was transferred to Tamil Nadu and forms part of Kanniyakumari District. The canal works in Vilavancode area required to feed this ayacut were executed by the Government of Tamil Nadu with the concurrence of the Union Government and the Government of Kerala. The project has been in operation since 1965. The Government of Kerala abruptly stopped the supply of water in March 2004. Even though bilateral discussions were held several times to release water to Tamil Nadu, no solution could be found. Hence, in the year 2012, Government of Tamil Nadu filed an Original Suit in the Hon'ble Supreme Court. The cross-examination of Tamil Nadu's witness is over. The cross-examination of

Kerala's witness is being conducted in the Hon'ble Supreme Court.

Tamil Nadu Government is taking all efforts to get water from Neyyar Dam, to safeguard the interests of the farmers in Vilavancode Taluk and to protect the rights of Tamil Nadu.

## **2.6. Repairs to Shenbagavalli Anicut**

Shenbagavalli Anicut is a diversion Anicut built at the junction of two streams viz., Puliampattithodu and Chokkampattithodu in the head reach of Periyar Basin lying in Kerala State limits just to the west of Tamil Nadu border. This anicut is in existence for more than 200 years and it diverts flows to mainly two tanks namely Kulashekharaperi and Rasingeperi in Sivagiri Taluk of Tenkasi District through a channel, namely, Kanyamathagu channel, which is 4,400 ft. (1341m) long, which supply water to a group of tanks. About 10,924 acres in Tenkasi and Virudhunagar Districts are being irrigated. In order to carry out the repairs to the Shenbagavalli Anicut, the Government of Tamil Nadu is



continuously requesting Government of Kerala, to give its consent.

In the Madurai Bench of Madras High Court, a Writ Petition was filed praying to take steps to repair the Shenbagavalli Anicut and Kanyamathagu channel. The Government of Tamil Nadu, has filed Counter Affidavit for the above Writ Petition. This case is pending.

Government of Tamil Nadu would be taking up the issue again with the Government of Kerala in the ensuing bilateral meeting among other Inter State water issues, to protect the interest of the Farmers affected due to the above issue.

## **2.7. Pennaiyar River**

River Pennaiyar originates at Nandidurg in Karnataka and flows through States of Karnataka, Andhra Pradesh, Tamil Nadu and Union Territory of Puducherry before confluencing into the Bay of Bengal. Pennaiyar River is an Inter-State River and forms part of the Madras-Mysore Agreement of 1892.

Government of Tamil Nadu, in 2018, has filed a Suit (O.S. No. 1 of 2018) and an Interlocutory Application (I.A.No.95384/2019) before the Supreme Court against Government of Karnataka which is undertaking the works of construction of Dam across the Markandeya River, a tributary of Pennaiyar, and diversion structures to divert water from River Pennaiyar in violation of the Madras-Mysore Agreement of 1892. Supreme Court in its order dated 14.11.2019 granted liberty to Tamil Nadu to make an appropriate Application to Union Government for constitution of a Tribunal for adjudication of Pennaiyar River Water Dispute. Government of Tamil Nadu on 30.11.2019 has approached the Union Government, Ministry of Jal Shakti to constitute a Tribunal. Further, Government of Tamil Nadu on 16.12.2019 filed an Interlocutory Application (I.A. No. 193417 of 2019) in the Supreme Court for maintenance of status quo of the projects of Karnataka. The Suit is pending.

In January 2020, Ministry of Jal Shakti, Union Government set up a Negotiation Committee headed by the Chairman, Central Water Commission. No decision

could be reached in the two meetings of the Negotiation Committee. Subsequently, it submitted the Final Report on 31.07.2020, in favour of constitution of the Tribunal.

Tamil Nadu Government since then requested Ministry of Jal Shakti on 21.11.2020, 19.02.2021 and 29.06.2021 for early constitution of Tribunal and reiterated the request in the Memorandum presented by Hon'ble Minister of Water Resources to Hon'ble Union Minister of Jal Shakti on 06.07.2021.

Secretary, Department of Water Resources, Minister of Jal Shakti convened a meeting with Additional Chief Secretaries of basin States, on 1.9.2021 and the issue was discussed. A meeting for mutual discussions between Tamil Nadu and Karnataka along with Minister of Jal Shakti was suggested. Karnataka opposed on 13.10.2021, the constitution of Tribunal. Government of Tamil Nadu reiterated to Ministry of Jal Shakti on 01.11.2021, 20.12.2021, 11.03.2022 and 09.05.2022, to constitute the Tribunal early.

As the constitution of Tribunal by the Union Government, was getting delayed, an Additional Affidavit

was filed in the Hon'ble Supreme Court, by Tamil Nadu, on 15.07.2022.

The Union of India filed an Affidavit on 14.12.2022 requesting for 6 months' time to constitute the Tribunal. The Hon'ble Supreme Court vide its order dated 14.12.2022 directed that the Tribunal be constituted within three months. On 19.01.2023 the Hon'ble Supreme Court reiterated its order passed on 14.12.2022.

Government of Tamil Nadu citing the order of the Hon'ble Supreme Court requested the Ministry of Jal Shakti on 19.02.2023 to constitute the Tribunal early.

The Union Government informed the Hon'ble Supreme Court that the Union Government is considering setting up a Tribunal in the petitions filed in the Supreme Court on 28.03.2023 and in the hearings on 02.05.2023, 04.07.2023 and 03.10.2023.

When the case came up for hearing in the Supreme Court on 23.01.2024, on the request of the Union Government, the Hon'ble Supreme Court directed the Jal Shakti Ministry to set up a new negotiating

committee citing Section 4(1) of the Inter State River Water Disputes Act, 1956 and to submit the Report on the outcome, within 3 months of the constitution of the Committee.

The Ministry of Jal of Shakti, vide, Office Memorandum dated 07.02.2024, constituted the 2<sup>nd</sup> Negotiation Committee, headed by - Chairman, Central Water Commission with Members from the co-basin States and from the Ministry of Agriculture, Ministry of Environment, Forest & Climate Change, Ministry of Jal Shakti. The Committee was directed to submit its Report within 45 days from the date of issue of Office Memorandum.

The 2<sup>nd</sup> Pennaiyar Negotiation Committee held three meetings in physical mode viz., on 21.02.2024, 27.03.2024, 22.04.2024. Tamil Nadu furnished all the details requested periodically vide, Reports dated 08.03.2024, 22.03.2024, 12.04.2024, 06.05.2024 and 28.05.2024. The Government of Karnataka furnished a part of the data sought by the Committee, in its Report dated 20.03.2024 and 19.04.2024. The Government of

Andhra Pradesh furnished available information dated 22.03.2024 and 16.04.2024, and the Union Territory of Puducherry presented available details in the 3<sup>rd</sup> meeting held on 22.04.2024. However, the Committee sought further data citing Terms of Reference. The response to the Reports of Karnataka, Andhra Pradesh & Union Territory of Puducherry was furnished to the Committee on 12.04.2024 and 03.05.2024, respectively.

The Committee held its 4<sup>th</sup> meeting through video conferencing on 22.05.2024, deliberated on the status of data from the basin States and on the proposal of Karnataka regarding site visit of the Committee. Karnataka furnished the details sought on 29.05.2024. The Committee visited Upper Pennaiyar basin area of Karnataka and Tamil Nadu from 8<sup>th</sup> to 10<sup>th</sup> June, 2024.

The Government of Tamil Nadu is taking all necessary actions to protect the interests of the farmers of Pennaiyar basin.

## **2.8. Inter Linking of Rivers**

### **2.8.1. Godavari - Krishna - Pennar - Palar – Cauvery link**

Government of Tamil Nadu is continuously urging Union Government, and the Special Committee for Inter linking of Rivers formed by the Union Government as per the Judgment of the Hon'ble Supreme Court, dated 27.02.2012 to implement the inter-linking of Peninsular Rivers, viz., Mahanadi - Godavari - Krishna - Pennar - Palar - Cauvery - Vaigai – Gundar, for which National Water Development Agency prepared Feasibility Report in 2004.

Anticipating this link project, Government of Tamil Nadu, as early as in 2008, took up the construction of Kattalai Barrage across Cauvery and completed it in 2014. In the meanwhile, as the finalisation of Mahanadi-Godavari link is getting delayed, National Water Development Agency(NWDA) has decided to implement the Godavari-Krishna-Pennar-Cauvery link in Phase-I and prepared Detailed Project Report for the same in April, 2021 and sent to concerned States for their views.

Tamil Nadu has requested for enhancing the quantum of water proposed to be transferred to Tamil Nadu from 84 T.M.Cft. to 200 T.M.Cft. in Phase-I itself, since it is a water deficit State and to take up the link at a higher contour and terminate it at Cauvery (Kattalai Barrage) instead of at Cauvery (Grand Anicut), as it will be helpful to supply water to the needy areas for optimum utilization of water.

In the meanwhile, Hon'ble Chief Minister of Tamil Nadu presented a Memorandum to the Hon'ble Prime Minister on 17.06.2021, among others, requested to finalise the Detailed Project Report for this project incorporating the request of Tamil Nadu and take up the work on priority basis, so that Southern States could be benefited from the inter basin transfer of surplus/flood water which was also reiterated by the Hon'ble Minister for Water Resources, Tamil Nadu in his Memorandum presented to the Hon'ble Union Minister of Jal Shakti on 06.07.2021.

For the implementation of this link, NWDA had consultation meetings with the concerned States for a



consensus building process on 29.10.2021 and 18.02.2022. Whereas, Tamil Nadu made a presentation on the benefits of taking the link canal at a higher contour. Against the observations of the concerned Party States on the availability of surplus water in Godavari, the Central Water Commission opined that about 4000 MCM of water would be available for diversion to the southern basins.

Meanwhile, Union Government in the Budget speech for 2022-2023 has informed that once a consensus is reached among the beneficiary States for this project, it will provide support for implementation.

Therefore, as an interim planning, NWDA has carried out a preliminary Technical study in October 2022 which envisages the diversion of 4000 MCM (141 TMC) of water from Godavari to Krishna, Pennar and Cauvery basin. NWDA conducted a 4<sup>th</sup> Consultation meeting on 18.10.2022 to discuss about the above technical study. In this meeting, the Additional Chief Secretary, Water Resources Department, expressed his concern about the continuous reduction in quantum and also requested to

include the Pennar – Cauvery (Kattalai Barrage) link in the Phase-I itself, instead of Pennar - Cauvery (Grand Anicut) link.

In the 36<sup>th</sup> Annual General meeting of the NWDA Society, held on 13.12.2022 at New Delhi, Hon'ble Minister for Water Resources, Tamil Nadu requested to keep diversion from Godavari as 7000 MCM (247 TMC) as proposed in Detailed Project Report prepared by NWDA in 2021 and take the termination point of the link canal to Kattalai Barrage instead of at Grand Anicut by justifying the need to take up the link canal at a higher contour. Hon'ble Minister for Water Resources, Tamil Nadu further requested to increase the allocation of water from Godavari – Cauvery link project to the State of Tamil Nadu. The Additional Chief Secretary, Water Resources Department also reiterated the views put forth by the Hon'ble Minister for Water Resources, Tamil Nadu. Hon'ble Union Minister for Jal Shakti suggested to conduct a meeting with NWDA officials exclusively to deliberate on these issues and arrive a suitable decision.

On 23.2.2023, the Additional Chief Secretary, Water Resources Department, requested Ministry of Jal Shakti to instruct Central Water Commission and NWDA to keep the diversion from Godavari as 247 T.M.C. ft. and to take all proactive steps to implement the NPP link Phase - I project, early for the benefit of Tamil Nadu, NWDA, was also requested to conduct an exclusive meeting on this, early.

In the 17<sup>th</sup> meeting of Task Force Committee of NWDA held on 6.3.2023, at Hyderabad, Tamil Nadu has requested to enhance diversion of 4000 MCM to 7000 MCM from Godavari and take the termination point of the link canal to Kattalai Barrage instead of at Grand Anicut. The Chairman of Task Force Committee has requested States of Andhra Pradesh and Telangana to give concurrence for Godavari and Cauvery Link Project.

Based on request of Tamil Nadu, NWDA has prepared the Pre Feasibility Report for Pennar – Palar – Cauvery (Kattalai Barrage) link and sent to the concerned States in November, 2022 for offering comments. Government of Tamil Nadu, on 24.3.2023 furnished its

comments to NWDA requesting to prepare the DPR of Pennar (Somasila) -Palar - Cauvery (Kattalai) link project as per the Pre-Feasibility Report (September 2022) as early as possible and incorporate in the DPR of Godavari - Cauvery link under Phase-I itself. 13<sup>th</sup> Standing Committee meeting of Southern Zonal Council was held on 05.05.2023 in Chennai. Tamil Nadu reiterated its views and requested to get the consensus of the concerned States for early implementation of this project.

The Additional Chief Secretary, Government of Tamil Nadu discussed with the Director, NWDA on 18.08.2023 at Chennai regarding the Godavari – Cauvery link and also the proposal to take up link the canal at a higher elevation across the Palar and terminated at the Kattalai Barrage was discussed. NWDA requested Tamil Nadu to furnish the details regarding the link canal terminated at Kattalai barrage early for the preparation of DPR for Somasila – Kattalai link canal. The technical details were furnished by the Chief Engineer, Plan Formulation to NWDA.

NWDA has conducted its 5<sup>th</sup> consultation meeting with the concerned States on 10.11.2023 at Hyderabad. Tamil Nadu requested to get the consent from the concerned Party States for concluding the Memorandum of Understanding to finalize the Detailed Project Report of the Godavari – Cauvery link project.

The 21<sup>st</sup> Special Committee for Interlinking of Rivers meeting was held at New Delhi on 14.12.2023. The Additional Chief Secretary, Water Resources Department, Tamil Nadu conveyed the support of Tamil Nadu for the Godavari – Cauvery link project and asked to obtain consensus from the party States for the early implementation of this link. In the above circumstances, NWDA has prepared the DPR of Godavari - Krishna – Pennar – Manimuktanadhi river link in December 2023 and circulated to the concerned States for comments. As requested by Tamil Nadu, in the revised DPR, the first phase of the project is to take the link canal to a higher contour after crossing the Palar Dusimamandur tank and linked it with Manimuktanadhi which is (south of Cauvery – Kattalai barrage) the tributary of Vellar. Water diverted

from Godavari is 148 TMCft. Allocation to Tamil Nadu is 41 TMCft. Out of this the 1,13,663 hectares (17.2 TMCft) have been allocated to Tamil Nadu for irrigation and 9.4 TMCft for drinking water needs and 12.4 TMCft for industrial use. 10.1 TMCft has been provided to Chennai City for drinking and industrial usage. The Government of Tamil Nadu has sent comments to the National Water Development Agency on 06.03.2024 to terminate the link canal near Ayyar river (upstream of Kattalai Barrage) to benefit the Perambalur district for drinking water and to provide 200 TMC of water to Tamil Nadu during the second and third phase of the Godavari-Cauvery link canal when the diversion from Brahmaputra and Mahanadi link takes place from Mahanadi and Himalayan rivers. NWDA has prepared the draft Memorandum of Agreement for implementation of Godavari (Inchampalli Barrage) – Cauvery Link Project and sent to the concerned States for comments. On 11.6.2024, the Government of Tamil Nadu sent comments to the National Water Development Agency for consideration.

Government of Tamil Nadu is continuously taking all steps to implement this link project through National Water Development Agency and Special Committee on Inter Linking of Rivers and the Union Government, to alleviate water scarcity in the state.

### **2.8.2. Pamba - Achankoil - Vaippar Link**

National Water Development Agency in 1994 prepared a feasibility report for the Pamba – Achankoil - Vaippar Link Project, which envisages diversion of 22 TMC ft. of surplus water of Pamba and Achankoil Rivers of Kerala to Tamil Nadu to irrigate an ayacut of 91,400 hectares in Sankarankoil, Kovilpatti, Sivagiri, Srivilliputhur, Rajapalayam, Sathur and Tenkasi Taluks of Tamil Nadu, which will also help to generate power of 500 MW to Kerala.

Even though the Government of Tamil Nadu gave its concurrence for preparing the Detailed Project Report, Government of Kerala is not in favour of this project. Tamil Nadu has been continuously requesting Ministry of Jal Shakti, Union Government and National Water Development Agency to prepare the Detailed

Project Report for this link project in all meetings of Special Committee constituted for implementing the Inter Linking of Rivers project. Even during the Special Committee meeting, held on 12.11.2021 at New Delhi, Tamil Nadu citing the heavy flood flows in 2021 in Pamba and Achankoil Rivers of Kerala, requested National Water Development Agency to prepare the Detailed Project Report for Pamba – Achankoil – Vaippar Link project, so as to implement this link speedily, as this link is beneficial to Kerala also, in effective flood management.

Government of Tamil Nadu is taking all efforts through the National Water Development Agency, meetings of Special Committee for Inter Linking of Rivers and Union Government for the implementation of this Project.

### **2.9. Pandiyar – Punnampuzha Project**

Pandiyar, Punnampuzha and Cholatipuzha are tributaries of the Inter State River Chaliyar. These tributaries originates from the high peaks of Nilgiris hills



in Tamil Nadu and flows west into Kerala, and empties in to the Arabian Sea .

An understanding was reached between Tamil Nadu and Kerala in the year 1965 to implement the (3x50 MW) Pandiyar-Punnampuzha Hydro Electric Scheme at Karakotapuzha in Tamil Nadu and 105 MW at Putheripallam in Kerala which envisages utilization of 14 TMC ft. water, out of the Annual average yield of 27.6 TMC ft., generated from the catchment area of Pandiyar and Punnampuzha rivers in Tamil Nadu. The Union Planning Commission approved this project in 1968. There was no diversion of water, suggested in this proposal.

Based on the representation from the ryots of Bhavani Sub basin, the Government of Tamil Nadu directed to discontinue the preparation works of the Project and to study the feasibility of diverting the Pandiar-Punnampuzha water eastwards in to the Moyar River and from there to Lower Bhavani Reservoir in Erode District. Accordingly, the above proposal was investigated and found feasible. In 2006, a Project was

prepared by the TANGEDCO and sent to Kerala State Electricity Board (KSEB) for the concurrence of the Government of Kerala. However, Kerala did not give its nod for the modified proposal.

In the inter State meeting held between the Chief Ministers on 25.09.2019 at Thiruvananthapuram, it was decided to constitute a committee comprising of 5 members at the Secretary level of both the States to discuss and advise the respective Governments on implementing the Pandiyar - Punnampuzha Scheme. In continuation of that inter-State meeting was held on 11.09.2020 at Thiruvananthapuram, and a meeting by the Committee was held by Video Conferencing on 17.9.2021.

In the last meeting Kerala indicated to consider Tamil Nadu's proposal and it was decided to constitute a Technical Sub Committee to sort out the technical aspects of the proposal, and the same has been constituted on 01.10.2021.

As announced by the Hon'ble Minister for Water Resources Department during the Demand for Grants for

the year 2021-2022 the Government accorded Administrative Sanction for the work of “Conducting Surveying & Leveling operation for preparation of feasibility report for the multipurpose Pandiyar – Punnampuzha Project” for an amount of Rs.9.00 Lakh. After conducting preliminary investigation and surveying works, feasibility report has been prepared, for pursuing with the State of Kerala in the inter-State meetings.

The Hon'ble Minister for Water Resources, in Letter dated 28.09.2023 has suggested convening a meeting for discussion on inter State water issues, at Chief Secretaries Level followed by discussion at Hon'ble Chief Ministers Level. Kerala Government's response is awaited.

### 3.0. Krishna Water Supply Project

An Agreement was signed among the States of Tamil Nadu, Maharashtra, Karnataka and Andhra Pradesh on 14.04.1976, in which each State agreed to spare 5 T.M.Cft. of water from Krishna basin to supply 15 T.M.Cft. of water to Chennai City through the State of Andhra Pradesh.

As per the Inter-State Agreement signed between the States of Tamil Nadu and Andhra Pradesh on 18.04.1983, the Government of Andhra Pradesh has to deliver 12 T.M.Cft. of water at Tamil Nadu Border every year, excluding evaporation loss of 3 T.M.Cft. of water as below:

1 <sup>st</sup> spell - July to October (4 Months)	:	8 T.M.Cft.
2 <sup>nd</sup> spell - January to April (4 Months)	:	4 T.M.Cft.

Thus, a total of 12 TMC.ft. has to be realized by Tamil Nadu at the Zero point in a water year. Krishna Water is being supplied to Chennai City from 1996. So

far, a total of 112.258 TMC.ft. of water has been realized by Tamil Nadu from 1996 to till date. 2.412 TMC.ft of water realized in the water year 2023-2024.

The expenditure for the project was agreed to be shared on the basis of the share of water between the Government of Andhra Pradesh and the Government of Tamil Nadu.

As per the Government of Andhra Pradesh as on March 2021, the approximate sharable expenditure of the Project is Rs.1261.84 Crore. The Government of Tamil Nadu has so far reimbursed an amount of Rs.1132.57 Crore.

Considering the existing water levels of Chennai city drinking water supply reservoirs, supply of Krishna water is essential to cater the Chennai city drinking water supply, now it is requested the Government of Andhra Pradesh to release the Krishna Water for the 1<sup>st</sup> spell of water year 2024-2025.

#### 4.0. Interlinking of Rivers within the State

“காவிரி தென்பெண்ணை பாலாறு – தமிழ்

கண்டதோர் வையை பொருநை நதி – என

மேவியாறு பலவோடத் – திரு

மேனி செழித்த தமிழ்நாடு”- மகாகவி பாரதியார்

#### 4.1. Cauvery - Agniyar - South Vellar - Manimuthar - Vaigai - Gundar Link Canal Scheme

It has been proposed to form a new canal for a total length of 262.19 km, taking off from Kattalai (Mayanur) Barrage, constructed across river Cauvery, to link the rivers Agniyar, South Vellar, Manimuthar, Vaigai and Gundar in 3 phases viz.

**Phase I-** Cauvery (Kattalai Barrage) to South Vellar (L.S. 0 Km – LS 118.45 Km)

**Phase II-** South Vellar to Vaigai River (L.S.118.45 Km – 228.145 km)

**Phase III-** Vaigai River to Gundar River (L.S.228.145 Km – 262.19 Km)

As the first phase of this project, the Government have given "in-principle" approval for a sum of

Rs.6941 crore for the formation of a new canal from Kattalai Barrage to South Vellar (LS 0 Km - 118.45 Km).

### **Phase-I**

The Government have accorded Revised Administrative Sanction to form flood carrier canal for a length of 4.10 km in Karur District for an amount of Rs.177.03 crore (Slice 1) and 5.355 km length in Trichy and Pudukottai Districts(part of Slice IV and Slice V) for an amount of Rs.169.68 crore. In these works, 86% have been completed as detailed below and remaining works are in progress.

<b>Sl. No.</b>	<b>Name of the Cross Masonry and Cross Drainage works</b>	<b>Slice</b>	<b>Present Stage</b>
1	Aqueduct @ LS. 59.930 Km	V	Completed
2	Cross Regulator @ LS. 59.880 Km SBC @ LS 1.780km	IV,I	Wearing Coat works completed. LS 1.780km Shutter work is in Progress.

<b>Sl. No.</b>	<b>Name of the Cross Masonry and Cross Drainage works</b>	<b>Slice</b>	<b>Present Stage</b>
3	Escape Regulator @ LS. 59.850 Km	IV	Completed
4	Under Tunnel @ LS. 59.375 Km	IV	Completed
5	Road Bridge (7 Nos.) Ls.57.820 Km and Ls. 58.430 Km	I, IV	Completed
6	Cut & Cover @ Ls.55.710 Km	IV	Completed

For implementation of this scheme, land acquisition process is being taken up in Karur, Tiruchirappalli and Pudukottai Districts by formation of Land Acquisition Units.

Due to the integrated approach of Land Administration and Water Resources Departments and as the result of the monthly review meetings the issues in



land acquisition are being solved then and there. This results in the speedy process of land acquisition for this scheme.

In Karur District 389.91 Hectare, in Trichy District 114.41 Hectare and in Pudukottai District 258.95 Hectare of patta lands have been acquired. Remaining land acquisition process, in Karur District 37.90 Hectare, in Trichy District 43.83 Hectare and in Pudukottai District 183.02 Hectare are in progress.

Further Phase-II and Phase-III of this project, Detailed Project Report is under preparation.

On implementation of Cauvery – Agniyar - South Vellar – Manimuthar - Vaigai- Gundar Link Canal Scheme, the total command area to an extent of 52,332.63 Hectare which includes 45,810.84 Hectare for stabilization and 6,521.79 Hectare for bridging gap, lying in between Cauvery and Gundar basin would get benefitted.

#### **4.2. Inter - linking of Thamirabarani - Karumeniyar - Nambiyar Rivers**

This scheme is proposed to divert 2,765 Mc.ft. of flood surplus water of Thamirabarani River from its average annual flood surplus quantum of 13,758 Mc.ft. by formation of Flood carrier canal for a length of 75.175 km with carrying capacity of 3,200 cusecs from Kannadian Channel at Vellankuzhi Village of Ambasamudram Taluk to M.L. Theri of Santhankulam Taluk by interlinking Thamirabarani, Karumeniyar and Nambiyar Rivers in Tirunelveli and Thoothukudi Districts. Administrative sanction was accorded for this project for Rs.369.00 crore on 12.06.2008. The works have been commenced in the year 2009 and is under implementation in four stages. Revised Administrative Sanction has been accorded for an amount of Rs.1060.76 crore on 02.03.2024.

For this scheme, 1048.26 hectares (2590.31acre) of land in Tirunelveli District and 162.23 hectares (400.88 acre) of land in Thoothukudi District are to be acquired. In total, 1,210.49 hectares (2991.19acre) of land to be acquired for this project. About 99% land

acquisition has been completed. Speedy action is taken to acquire remaining land required.

By implementation of this scheme, an extent of 13,481 hectares (33,312.28 acre) of ayacut in Tirunelveli District and 9,559 hectares (23,620.80 acre) of ayacut in Thoothukudi District, totally 23,040 hectares (56,933.08 acre) of ayacut will be benefited.

**Present stage of the works:-**

<b>Stage</b>	<b>Total Packages</b>	<b>Completed</b>	<b>Under Implementation</b>	<b>Percentage of Completion</b>
I	18	18	-	100%
II	18	18	-	100%
III	18	18	-	100%
IV	16	12	4	95%

The Investment Clearance was accorded by the Ministry of Jal Shakti, Union Government for an amount of Rs.872.45 crore.

### **4.3. River links under investigation**

#### **4.3.1. Pennaiyar (Sathanur Dam) – Cheyyar link**

This scheme was proposed to divert 5.87 T.M.Cft. of flood surplus water from foreshore of Sathanur Dam by excavating a canal to feed en-route tanks and augmenting supply to 36 Nos. of tanks under Nandan canal system and also to link Pennaiyar River with Palar River through Cheyyar River.

After analyzing the total availability of water at Sathanur reservoir and by considering the existing and new proposals on the upstream side of Sathanur reservoir, it has been found that the available surplus water is 0.767T.M.Cft. only. Under the present circumstances the above work has been proposed to be implemented in two phases.

**In Phase- I**, it is proposed to excavate a main canal from Sathanur reservoir, feeder canal and branch canals to divert 500 cusecs of water for 11 days to feed 22 Nos. of en-route tanks in Tiruvannamalai District and

augmenting Nandan canal system through which 36 Nos. of tanks would get water.

By this scheme, 2,609.04 acre of ayacut in Tiruvannamalai District and 6,653.34 acre of ayacut of Nandan canal would get benefited. For implementing the first phase, 276.34 acre of patta land, 35.30 acre of poromboke land and 34.37 acre of Forest land are required.

By implementation of this scheme, 33 Villages in Tiruvannamalai District and 24 Villages in Villupuram District would get benefited. Surveying and levelling operations and Geological investigations for the scheme have been completed.

The Detailed Project Report for Phase-I- "Excavation of link canal to feed 22 tanks in Tiruvannamalai District and augmenting supply to Nandan canal" for an estimated amount of Rs.322.50 crore (2023-2024 price value) is under consideration.

Further, based on the dependability, the Technical Feasibility will be studied to inter-connect the main canal with the Cheyyar River in Phase-II.

#### **4.3.2. Pennaiyar (Nedungal anicut) – Palar link**

This scheme aims to divert 3 T.M.C. ft. of flood water of River Pennaiyar from Nedungal Anicut (located on the downstream of Krishnagiri Reservoir) to Kallar, which is a tributary of Palar. The Detailed Project Report for this scheme at an estimated cost of Rs.648.23 crore (2017-2018) was prepared by the National Water Development Agency and received by the Government of Tamil Nadu during the year 2018.

As on date, the dependency on Hydrology needs to be verified on consideration of the on-going projects and projects under consideration in Pennaiyar basin.

Revised Detailed Project Report has to be prepared in accordance with the dependable hydrology, for which detailed investigation needs to be carried out.

Hence, Administrative Sanction has been accorded for Rs.0.96 crore for investigation of the above work and is in progress.

By implementing this scheme, it is possible to recharge open wells and bore wells to stabilize 24,329 acre of existing command area in Pochampalli, Krishnagiri Taluks of Krishnagiri District and Vaniyambadi, Tirupathur Taluks of Tirupathur District.

#### **4.3.3 Excavation of a new link canal from Mettur Dam to Sarabanganadhi, Ponnar, Thirumanimuthar and Ayyar Rivers**

The aim of the scheme is to divert the flood surplus water of the Mettur dam to irrigate the lakes benefitting from rivers Sarabanganadhi, Ponnar, Thirumanimuthar, Karaipottanar and Ayyar rivers by linking through new canal.

The first reach of the canal alignment, from Mettur dam to Pavithiram Eri in Namakkal District i.e., 0 Km to 132.30 Km had been investigated and DPR was

prepared for an amount of Rs. 8049 crore during 2018-2019.

The Second Reach of the canal alignment, from Pavithiram eri to Keerambur eri Near Thuraiyur of Trichy District i.e., 132.30 Km to 169.30 Km had been investigated and the DPR was prepared for an amount of Rs. 1060 crore during 2020-2021.

The included tanks of the Sarabanga basin of this proposed scheme is also benefited through the ongoing scheme of the Mettur – Sarabanga lift Irrigation scheme and in the first slice in the first reach i.e., 0.0 Km to 37.60 Km of the proposal involves acquisition of 283.13 acres of Reserve Forest land and also construction of major Syphon across river Cauvery. To avoid the Syphon construction, alignment may be altered by pumping (0 Km to 37.60 Km) and the remaining link canal, connecting the Sarabanga – Thirumanimuthar-Ayyar is proposed as gravity canal and the prefeasibility report of the alternative alignment in the first slice is under preparation.



## 5.0. Special Desilting Works

### 5.1. Cauvery Delta Desilting

"ஊருணி நீர்நிறைந் தற்றே உலகவாம்  
பேரறி வாளன் திரு"- திருக்குறள்

The Cauvery Delta desilting works are carried out to ensure the water released from Mettur dam reaches the irrigation canals in the Cauvery delta Districts till the tail end areas without any hindrance and for quick drainage during floods. The desilting of water bodies in Cauvery Delta areas to the designed bed level, removal of shoals and thorny bushes in Canals / Channels, Branch Canals / Drains / Supply Channels etc., are executed on war footing basis with the involvement of "Uzhavar Kuzhu" (Farmers Association). Monitoring committees are formed to ensure that desilting works are carried out efficiently.

During the year 2023-2024, 691 desilting works in Rivers, Canals and Supply Channels for the length of 4,773.13 km in Cauvery Delta Districts viz., Salem, Namakkal, Karur, Tiruchirappalli, Perambalur, Ariyalur, Thanjavur, Tiruvarur, Nagapattinam, Mayiladuthurai,

Pudukkottai and Cuddalore for an amount of Rs.90 crore were taken up and the works were completed well in time enabling delta farmers to fully reap benefits of timely release of water from Mettur on 12.06.2023.

For the year 2023, the desiltation has benefitted 5.22 Lakh acres in the delta areas in the Kar-Kuruvai acreage.

For the year 2024-2025, 919 Nos of desilting works are taken up to desilt Rivers, Canals and Supply Channels in 13 delta districts viz., Salem, Namakkal, Erode, Trichy, Karur, Ariyalur, Perambalur, Thanjavur, Thiruvarur, Nagapattinam, Mayiladuthurai, Pudukkottai and Cuddalore District of 57 Constituencies for a length of 5338.68 km. As on 31.05.2024, 91% of the works were completed and remaining works are in the completion stage.

## **5.2. Special Desilting Works in Madurai Region**

During the year 2023-2024, Special Desilting works at an estimate cost of Rs.4.00 crore have been carried out in 6 basins (Upper Vaigai, Lower Vaigai, Gundar, Vaippar, Tamirabarani and Nambiyar) of

Madurai Region to restore the carrying capacity of the channels in order to ensure irrigation water to farmers in timely manner.

Further, due to the continuous rainfall during the South- West and North- East Monsoons and also due to the enormous flood in the rivers, canals, channels, tanks and surplus courses siltation occurred in the water bodies. Hence, based on the need and necessity, 59 works for a length 232.215k.m in the 8 basins (Vaigai, Pambar-Kottakaraiyar, Vaippar, Gundar, Thamirabarani, Nambiyar, Kallar and Kodayar) of Madurai Region during the year 2024-25 for an amount of Rs.4.00 crore have been taken up and works are in progress.

### **5.3. Special Desilting Works in Coimbatore Region**

Desilting the bed of water bodies to the designed bed level, removal of bushes, fallen earth & debris in Canal / Channel, Branch Canals, Supply Channels, etc, are carried in every year before monsoon period to restore the storage capacity in water bodies, ensure the flow of irrigation water to tail end and avoid the flood inundation.

During 2023-2024, 94 special desilting works at a cost of Rs.4.00 crore in Bhavani sub basin, Amaravathi Sub basin and Parambikulam Aliyar Basin in Coimbatore, Erode, Karur and Tiruppur Districts were completed and 3,35,109 Acres of ayacut areas were benefited.

Similarly, during 2024-2025, 26 desilting works are taken up in Parambikulam Aliyar Basin, Amaravathy Sub Basin and Lower Bhavani Sub-Basin at an amount of Rs.1.00 crore to ensure equitable and free flow of irrigation water to tail end. By implementing this works, 38,496 Acres of ayacut will be benefited.

## **6.0. Construction of a New Barrage with Head Sluice across Kollidam River in Adhanur and Kumaramangalam Villages in Cuddalore and Mayiladuthurai Districts**

Construction of a Barrage with head sluice across the River Kollidam, in Adhanur and Kumaramangalam Villages of Cuddalore and Mayiladuthurai Districts is under implementation at an estimated cost of Rs.496.77 crore. The Project Cost is Rs.465.42 crore and Land Acquisition cost is Rs.31.35 crore.

This barrage is proposed with a capacity of 0.334 T.M.Cft. and the total usable annual storage works out to 1.072 T.M.Cft. adopting 4 fillings. The total benefitting ayacut would be 31,221 acre, out of which 26,810 acre through stabilisation and 4,411 acre by recharging of existing nearby wells in Cuddalore and Mayiladuthurai Districts. Water stored by this scheme will be utilised for supplying Drinking Water to Greater Chennai Corporation through the Veeranam Tank. Villages on both the banks of the River Kollidam will be linked by a bridge over the Barrage.

Construction of a Barrage with Head Sluice and Two lane bridges over the Barrage are nearing completion. Strengthening of bund, Approach road and other works are in progress. So far, 98% of works have been completed. Land Acquisition is also in progress.

## **7.0. Construction of Barrage across the Cauvery River in Nanjai Pugalur**

Construction of a Barrage across River Cauvery at about 107 km from Mettur dam i.e. 200 m downstream of Vangal Head work arrangement in Nanjai Pugalur Village of Pugalur Taluk in Karur District under NABARD Infrastructure Development Assistance (NIDA) sanctioned for Rs.406.50 crore as deposit work is under implementation.

By implementing this scheme, about 800 Mc.ft. of water can be stored. An ayacut of 1,458 acre of Vangal Channel and 2,583 acre of Mohanur Channel will be benefitted. A total ayacut of 4,041 acre will be benefitted in addition to catering the water requirement of Tamil Nadu Newsprint and Papers Limited. So far 75% of works have been completed.

## **8.0. Extension, Renovation and Modernization of the Cauvery Basin Irrigation System (ERM)**

The existing irrigation system in Cauvery Delta were planned with unlined canals for traditional Cropping pattern and assumed irrigation efficiencies. Hence, the Government planned to update and improve the components of the existing Irrigation system in Cauvery Basin viz., Grand Anicut Canal System, Cauvery Sub-basin, Lower Bhavani Project System, Kattalai High Level Canal Irrigation System, Noyyal Sub-basin and Rajavoikkal Irrigation System to meet modern day concepts on safety and present day demand of water for irrigation by improving its irrigation efficiency under ERM Scheme.

The works includes standardisation of Canals, Channels, Reconstruction / Repair of Irrigation Infrastructures such as Head sluices, Pipe Sluices, Regulators, Drops, Syphon Aqueduct, Under Tunnel, strengthening of protection works etc.



## **ICONIC Project (ERM) Works**

### **i. Cauvery Sub Basin Project**

Extension Renovation and Modernization of Irrigation Infrastructure of Cauvery Sub-Basin Project are being executed as deposit work at an estimated cost of Rs.3,384 crore in 33 packages through Tamil Nadu Water Resources Conservation and River Restoration Corporation with loan assistance from NABARD Infrastructure Development Assistance (NIDA).

By implementing the above scheme, 3,54,147 acre of ayacut in Thanjavur, Nagapattinam, Pudukkottai, Mayiladuthurai and Tiruvarur Districts will be benefitted.

33 packages at an Revised Administrative Sanction amount of Rs.3607.30 crore are in various stages of implementation. Overall 85 % work completed and remaining works are in progress.

### **ii. Grand Anicut Canal System**

ERM scheme is implemented in Grand Anicut Canal System project to restore the original full water supply level of 4,200 cusecs in Grand Anicut Canal, to

increase the conveyance efficiency from present 45% to 61.60%, to enhance production by bridging gap area of 67,500 acre and to benefit total ayacut of 2,27,472 acre in Thanjavur and Pudukkottai Districts.

Innovations such as Canal Automation Network and introduction of Supervisory Control and Data Acquisition (SCADA) to control the flow and to ensure the quantum of water as per the requirement is released into the field, Decision Support System (DSS) for efficient water management in canal command areas are contemplated in this project.

The Government accorded sanction for “Extension, Renovation and Modernization of Grand Anicut Canal system in Cauvery Basin for efficient water management in Tamil Nadu” in 16 Packages at an estimated cost of Rs.2,639.15 crore.

5 packages at a Revised Administrative Sanction amount of Rs.1082.31 crore are taken up for implementation. In which, 3 packages are completed and balance 2 packages are nearing completion. Further, the

Government on 15.03.2024 accorded financial sanction for an amount of Rs.447 Crore for another 6 packages in Phase –II. Preliminary works are in progress.

### **Other Extension, Renovation and Modernization (ERM) Project**

ERM works in Kattalai High Level Canal Irrigation System, Noyyal Sub-basin and Rajavoikkal Irrigation System at an estimated amount of Rs. 749.50 crore have been completed.

#### **i. Lower Bhavani Project System**

Extension Renovation and Modernization of Irrigation Infrastructure of Lower Bhavani Project System are being executed as deposit work at an estimated cost of Rs.933.10 crore in 6 packages through Tamil Nadu Water Resources Conservation and River Restoration Corporation with loan assistance from NABARD Infrastructure Development Assistance (NIDA) and the works are in progress.

By implementing the above scheme 2,47,247 acre of ayacut in Erode, Karur and Tiruppur Districts will

be benefited. Out of 6 Packages, the Package 5 & 6 viz., ERM works of Kalingarayan Channel, Thadappalli and Arakkankottai Channels are fully completed.

The Packages from 1 to 4 viz., works were commenced on 01.05.2021 and executed only in few selective segments. Due to strong opposition from the group of farmers for cement concrete lining. 65% of works only were completed as on 31.05.2024 in all four packages. Hence, Revised Administrative Sanction has been accorded for carrying out Rehabilitation, Reconstruction of Cross masonry structures and Construction of canal protection walls only at vulnerable segments at an estimated cost of Rs.706.15 crore. The balance ERM works in the LBP planned to be completed on or before 15<sup>th</sup> August 2024.

## **9.0. Mettur - Sarabanga Lift Irrigation Scheme**

This scheme envisages diverting 555Mc.ft.surplus water from the Mettur Dam to the dry tanks in Sarabanga Basin in Salem District by Lift Irrigation at an estimated cost of Rs.673.8835 crore. By implementing this scheme, a total ayacut of 4061.66 acre through 79 tanks will be benefited.

As per Revised Administrative Sanction, the Government have approved the linking of New tanks Sekkan Eri, Kothikuttai Eri, P.N.patti Eri through pipe line and the work is in progress.

Formation of the canal from the Left flank of the Mettur Reservoir water spread area to the pumping station and construction of Main Pumping Station in Thippampatti Village (Gonur) have been completed. The pumped water will be taken to two Tank Groups by two outlets, i.e, Mecheri Tank Group which starts from Kalipatti Tank and Nangavalli Tank Group which starts from Nangavalli Tank. So far 96% of works completed. Land acquisition works are in progress and pipeline for the total length of 33.50km has been completed.

## **10.0. Athikadavu Avinashi Pumping Scheme**

Athikadavu - Avinashi Scheme as Irrigation, Ground Water recharge and Drinking Water supply scheme at a revised estimated cost of Rs.1,916.417 Crore under State fund on Design, Build, Operate and Transfer (DBOT) basis is under implementation. This Scheme involves pumping of 1.5 TMCft. of surplus water of the Bhavani River from the downstream of the Kalingarayan Anicut to feed 32 Water Resources Department tanks, 42 Panchayat Union tanks and 971 Ponds in Coimbatore, Tiruppur and Erode Districts. By implementing this scheme, an extent of 24,468 Acres of ayacut will be benefited. The project work was started on 25.12.2019. 99% of work has been completed. Work is being carried out to provide the compensation amount to the private land owners towards Right of Use through Perpetual lease.

The trial run for the project had commenced on 20.02.2023 and water has reached all the 1045 Nos. of Tanks/ponds. It is planned to inaugurate the scheme during the ensuing Southwest monsoon period when sufficient surplus water is available at the intake point.

## **11.0. Augmenting the Storage Capacity of Chennai City Water Supply Resources**

Augmenting the storage capacity of Chennai City Water Supply Tanks viz., Cholavaram Tank and Poondi Reservoir in Thiruvallur District and Chembarampakkam Tank in Kancheepuram District by desilting at an estimated cost of Rs.20.44 crore are under implementation. Further desilting of Red hills Tank in Thiruvallur District at an estimated cost of Rs.9.90 crore is to be taken up shortly. By desilting the above 4 city water supply tanks, it is aimed to restore total capacity of about 1.904 T.M.Cft.

Formation of New Reservoir by upgrading the capacity of Kattur and Thattamanji twin tanks in Thiruvallur District at an estimated cost of Rs.62.36 crore is completed. This Reservoir may augment water resource to Greater Chennai and provide irrigation facility to 5,804.38 acre of ayacut. This work includes Strengthening the Kattur and Thattamanji Tank Bunds and Desilting the tanks, thereby raising the storage

capacity of Tanks from 58.27 Million Cubic Feet to 350 million cubic feet of water.

By implementation of the scheme, the sub soil water table in the command area will be raised and thus the drinking water problems in these areas will be considerably addressed.

Reclaiming and Rejuvenating the Kolavoy Lake in Chengalpattu District for augmenting drinking water supply to the extended Chennai urban and Chengalpattu area has been taken up for an amount of Rs.60.00 crore and the work is in progress. The main aim of this project is to increase the capacity of tank from 477 Mcft. to 650 Mcft.

The Supply Channel Standardization, Tank Bund Strengthening and Weir Reconstruction works are completed in Melamaiyur Tank. Recreational Amenities like Watch tower & Amphitheatre are under progress. So far about 22% of work completed in this project. The desilting of Tank Bed, Foreshore Reclamation and Reconstructing the Kolavoy Tank Weir, Raising the Full



Tank Level of the tank and Regulator can be executed only after draining out the highly polluted water from the Tank through the proposed Cut & Cover Drain at the Railway Bridge (Bridge No 165 Km 57/788 – 833 between CGL / SKL Section) for which the permission is awaited from the Southern Railways. Meanwhile, the Foreshore reclamation work was partially carried out by convincing the land holders at the Foreshore of this Tank and in the case of Construction of the Weir and Regulator, the design approval for the proposed Weir and Regulator has been accorded now, hence the work will be taken up for execution immediately.

The land to be utilized for Construction of Recreational Amenities like Cafeteria, Interpretation Centre, lavatories and Walking Track is under the control of Government Children Home for Boys. Hence necessary permission has been requested from the Government Children Home for Boys.

Aftermath of the permission from the Southern Railway the construction of Cut & Cover will be carried out for draining out the heavily polluted water from the

Tank. In continuation, the major components like Desilting and Standardization of Tank Bund including Foreshore Reclamation, Formation of Approach Road, Recreational Island, Coffor Dam & Sludge removal, Reconstruction of Kolavoy Tank Weir and Regulator works can be executed.

Construction of a Bed dam across Chembarambakkam tank surplus course at LS 750m and diverting the water from the Bed dam through cut and cover to feed into the Chikkarayapuram abandoned quarry in Kundrathur Taluk of Kancheepuram District at an estimate cost of Rs.35.00 Crore is to be taken up for implementation.

The Hon'ble Chief Minister, in a meeting held on 03.08.2022, has given in-principle approval to take up and investigate the following projects for augmenting Greater Chennai drinking water supply source:-

<b>Sl. No.</b>	<b>Name of Work</b>	<b>Estimate Amount (Rs. in crore)</b>	<b>Benefits</b>
----------------	---------------------	---------------------------------------	-----------------

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Benefits
1	Desilting and increasing FTL of Pillaipakkam Tank in Sriperumbudhur Taluk of Kancheepuram District	21.50	Capacity will increase from 120 Mc.ft. to 190 Mc.ft. thereby 72 MLD water will be utilized
2	Desilting and increasing FTL of Sriperumbudhur Tank in Sriperumbudhur Taluk of Kancheepuram District	20.00	Capacity will increase from 170 Mc.ft. to 220 Mc.ft. thereby 200 MLD water will be utilized
3	Improvement to supply channel and to feed water to Chembarambakkam Tank from Nemam Tank in Poonamalli Taluk of Thiruvallur District	50.00	Capacity will increase from 350 Mc.ft. to 600 Mc.ft. thereby increase storage capacity to

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Benefits
			1.20 T.M.CFT. in Two fillings
4	Desilting and increasing FTL of Thiruniravur Tank in Thiruvallur District	100.00	Capacity will increase from 200 Mc.ft. to 500 Mc.ft. thereby to supply drinking water to Avadi Corporation and ULB
The proposals for according Administrative Sanction for the above are under consideration.			
5	Desilting and increasing FTL of Madhavaram Retteri Tank in Chennai District	40.00	Capacity will increase from 32 Mc.ft. to 62 Mc.ft. thereby to supply drinking

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Benefits
			water to Chennai city
<ul style="list-style-type: none"> <li>Administrative Sanction accorded vide G.O. (Ms) No.42, Water Resources (S1) Department, Dated 20.06.2023 for an amount of Rs.43.19 Crore. 30% of work completed. Remaining works are in Progress.</li> </ul>			

## 12.0. Externally Aided Projects

"மறைப்பேன்மன் யானி:தோ நோயை இறைப்பவர்க்கு  
ஊற்றுநீர் போல மிகும்"- திருக்குறள்.

### 12.1. World Bank Assisted Tamil Nadu Irrigated Agriculture Modernization Project (TNIAMP)

Tamil Nadu Irrigated Agriculture Modernisation Project (TNIAMP) has been planned for implementation in 66 sub basins of the State. It covers for an extent of 5.43 lakh Hectare over a period of 7 years starting from 2018 with an outlay of Rs.2,962 crore. This is the follow-on project of the successfully completed IAMWARM Project. Revised outlay for the project is enhanced to 3249.12 Crore.

The Project is being implemented by the Water Resources Department in co-ordination with 6 line departments, Tamil Nadu Agriculture University, Tamil Nadu Veterinary and Animal Sciences University and Tamil Nadu Fisheries University. In this Project, it has been planned to take up rehabilitation of 4,778 Tanks, 477 Anicuts, and Artificial Recharge Wells in the water spread area of tanks. In addition to this, improving

drainage cum Irrigation Channels in Cauvery Delta and other Sub-Basins at an outlay of Rs.2,131.34 crore and earmarked for Water Resources Department in 4 phases. Revised outlay for Water Resources Department is sanctioned as Rs.2562.48 Crore.

### **Rehabilitation of Flood Affected Tanks and Irrigation Channels:-**

Administrative Sanction has been accorded for the rehabilitation of flood affected 59 tank systems, consisting of 57 tanks and 2 Main Irrigation Channels grouped into 16 packages under funding of the World Bank in TNIAMP, for Rs.43.63 crore. Works have been completed in all 16 packages.

### **Phase - I Works**

Administrative Sanction has been accorded for the rehabilitation of 1,325 Tanks, 107 Anicuts and 42 Artificial Recharge Wells in 18 Sub Basins grouped into 204 packages at an estimated cost of Rs.743.57 crore, including 18 Packages of environmental management component at an estimated cost of Rs.1.86 crore.

Rehabilitation works have been completed in 185 Packages and 1 Package works have been dropped. Works in 18 environment packages are in progress.

### **Phase - II Works**

Administrative Sanction has been accorded for the Rehabilitation of 903 Tanks and 181 Anicuts and Construction of 37 Artificial Recharge Wells, grouped into 57 packages in 16 sub-basins at an estimated cost of Rs.649.55 crore. These 57 packages were grouped into 45 packages.

Rehabilitation works have been completed in 27 packages and works are in progress in 2 packages. Further, environment works are in progress in 16 packages.

### **Phase - III Works**

Administrative Sanction has been accorded for the rehabilitation of 329 Tanks and 56 Anicuts and Construction of 16 Artificial Recharge Wells in 9 sub basins grouped into 25 packages at an estimated cost of Rs.189.81 crore, including 9 packages of environmental component at an estimated cost of Rs.0.77 crore.



Rehabilitation works have been completed in 7 packages, works are in progress in 8 packages and works are yet to commence in 1 package. Further, environment works are in progress in 9 packages.

### **Phase - IV Works**

Administrative Sanction has been accorded for the rehabilitation of 12 Tanks, 11 Anicuts / Bed Dam, 231.77 km Channel and 11 Canals in 9 sub basins grouped into 23 packages at an estimated cost of Rs.346.48 crore, including 8 packages of environmental management component at an estimated cost of Rs.0.286 crore.

Rehabilitation works have been completed in 5 packages, works are in progress in 10 packages. Further, environment works are in progress in 8 packages.

### **Participatory Irrigation Management (PIM)**

Tamil Nadu is one among the pioneering State in promoting Participatory Irrigation Management. “The Tamil Nadu Farmers’ Management of Irrigation Systems Act, 2000 (TNFMIS) (TN Act 7/2001)” has been enacted

and brought into force under management of the Water Resources Department.

The Project Appraisal Document (PAD) of the World Bank for Tamil Nadu for the PIM activities has envisaged “For establishing and strengthening the Water Users’ Associations (WUAs), including operationalising the Water Users’ Associations (WUAs) to undertake Operation and Maintenance (O&M) of the field Channels and equitable water distribution within their command areas”.

For implementing the Participatory Irrigation Management (PIM) activities, an overall amount of Rs.79.92 crore has been allocated under TNIAMP.

The functions of the PIM Cell are as under

- (i) To monitor implementation of the Participatory Irrigation Management concept in the State.
- (ii) To lead the efforts in formation of Water Users’ Associations (WUAs), Distributary Committees, Project Committees and Apex Committee as per the

Tamil Nadu Farmers' Management of Irrigation Systems Act, 2000.

(iii) Capacity building of the Water Users' Associations (WUAs) and Competent Authorities in the project area.

2nd term election for 2774 Water Users' Associations (WUAs) already formed in the 61 Sub Basins under the IAMWARM Project Command Area and 1st term election to approximately 1500 Water Users' Associations (WUAs) which have to be formed in the 43 Sub Basins under TNIAMP are under progress.

So far, 2nd term election for 613 Water Users' Associations (WUAs) and 1st term election for 328 Water Users' Associations (WUAs) have been conducted completely in 14 districts namely 1) Tiruppur 2) Karur 3) Perambalur 4) Mayiladuthurai 5) Theni 6) Tirunelveli 7) Krishnagiri 8) Tirupathur 9) Vellore 10) Ramanathapuram 11) Thoothukudi 12) Virudhunagar 13) Ranipet 14) Cuddalore.

Also, 2nd term election for 1638 Water Users' Associations (WUAs) and 1st term election for 659 Water

Users' Associations (WUAs) have been conducted partially in 19 districts namely 1) Trichy 2) Chengalpattu 3) Sivagangai 4) Tenkasi 5) Villupuram 6) Madurai 7) Dindigul 8) Salem 9) Pudukottai 10) Erode 11) Tiruvarur 12) Namakkal 13) Coimbatore 14) Dharumapuri 15) Ariyalur 16) Thiruvannamalai 17) Tiruvallur 18) Kallakurichi 19) Kanchipuram. Action is being pursued for completing elections for the remaining Water Users' Associations (WUAs) in these districts early.

Also, especially in Thanjavur district, 2<sup>nd</sup> term election for a total of 35 Water Users' Associations (WUAs) and 1st term election for a total of 78 Water Users' Associations (WUAs) will be completed shortly.

## **12.2. Dam Rehabilitation and Improvement Project-II (DRIP-II)**

Dam Rehabilitation and Improvement Project- II is being implemented in Tamil Nadu, to ensure the strength, safety and to improve the operational performance of the existing Dams in a sustainable manner, with the loan assistance from World Bank (IBRD

– International Bank for Reconstruction and Development) and AIIB (Asian Infrastructure Investment Bank) for a project cost of Rs.610.26 crore (Tamil Nadu Water Resources Department: Rs.582.31 crore & Agricultural Engineering Department: Rs.27.95 crore) and also accorded permission to incur the expenditure of DRIP I spill over works pertaining to Water Resources Department for an amount of Rs.28.12 crore from the project cost. The project period is 6 years commencing from April 2021. The funding pattern for the project is 35 (IBRD): 35 (AIIB): 30 (GOTN)).

The components of the DRIP-II are as follows:-

1. Rehabilitation and Management planning of Dams and associated appurtenances.
2. Dam Safety Institutional Strengthening.
3. Risk Informed Asset Management and Innovative Financing for sustainable operation and maintenance of Dams.
4. Project Management.

In DRIP-II proposal, Rehabilitation for 37 Tamil Nadu Water Resources Department Dams has been

proposed viz., Rehabilitation works in 33 Dams by Tamil Nadu Water Resources Department, Rehabilitation works and catchment area treatment work in 3 Dams by both Tamil Nadu Water Resources Department & Agriculture Engineering Department and Catchment area treatment work alone in 1 Dam by Agriculture Engineering Department.

### **Water Resources Department**

Under DRIP-II, the Dams Safety Review Panel (DSRP) inspection has been completed in 35 WRD dams and their recommendations are obtained. The Project Screening Template (PST) has been approved by World Bank for a cost of Rs.290.96 crore pertaining to six Water Resources Department Dams.

Out of the 6 approved PST's ,the Administrative sanction has been accorded for rehabilitation of 5 dams namely Sathanur (Rs.90.00 crore), Sholayar (Rs. 106.30 crore), Upper Nirar (Rs.14.55 crore), Kelavarapalli dam (Rs.30.52 crore) and Bhavanisagar dam (Rs. 19.89 crore) in which the works are in Progress for 4 dams except Bhavanisagar Dam. From the ongoing

4 dams, Hydro-mechanical work packages of Sathanur dam (Package 1 & 2), Sholayar dam, Upper Nirar dam and Kelavarappalli Dam and basic facilities package of Sholayar Dam are completed for an amount of Rs.96.42 crore.

With regard to the spillover works Installation of Real time instruments in 17 DRIP dams for an amount of Rs 19.30 Crore, the installation of the instruments have been completed and the validation of data & maintenance works are in progress. The consultancy services for the seismic monitoring of Mettur & Sholayar dams by CSIR-National Geophysical Research Institute (NGRI) is under implementation at a cost of Rs.2.22 crore.

A two-day workshop was conducted on February 8 & 9, 2023 in New Delhi by the World Bank and CWC as part of the on-going implementation of the DRIP – II. During the workshop, it was informed that the project cost of DRIP-II is of Rs.303.00 crore & DRIP –III is of Rs.307.00 crore against the state allocation of Rs.610.00 crore.

In continuation during the World Bank mid-term review mission held at Surat from 28th to 31st January 2024, the Central Water Commission (CWC) has stated that the proposed reallocation of funds to TNWRD for DRIP-II is Rs.442.00 Crore and for DRIP-III is Rs.168.00 Crore. The Government of Tamil Nadu have accepted for the reallocated project cost of Rs. 442.00 crore (DRIP-II) and the same was informed to Central Water Commission (CWC).

Based on the reallocation, rehabilitation for Bhavanisagar Dam (Rs.19.89 crore) and Mettur Dam (Rs.29.70 crore) will be taken up during this year for which the Project Screening Template (PST) approval have been obtained from the World Bank. Action is being taken for the preparation of PSTs for the remaining dams based on Dam Safety Review Panel (DSRP) recommendation.

### **Agricultural Engineering Department**

The PST for Catchment area treatment works of Vaigai Dam at a cost of Rs 22 crore has been approved by the World Bank and works will be taken up. The PST



for Catchment area treatment works of Mettur Dam at a cost of Rs 4.51 crore has been sent to the World Bank for approval.

### **12.3. National Hydrology Project (NHP)**

The National Hydrology Project is a Central Sector Scheme with World Bank assistance with the objective to improve the extent, quality and accessibility of Water Resources, to create Decision Support Systems for floods, Basin Level Resources Assessment / Planning for water resources institutions. The State Ground and Surface Water Resources Data Centre (SG & SWRDC) wing is the nodal agency for the implementation of the National Hydrology Project. (NHP)

Initially, the duration of the project was eight years from 2016-17 to 2023-24. Now, Project has been extended up to September, 2025. A sum of Rs.103.72 crore has been allotted to the following four components of NHP as per the approved Revised Project Implementation Plan – November 2022.

(Rs.in crore)

Sl. No.	Name of Component	Allocation
1.	Hydro meteorological Data Acquisition System	94.47
2.	Water Resources Information System	1.30
3.	Water Resources Operation Managing System	0.30
4.	Institutional Capacity Enhancement	7.65
	<b>Total</b>	<b>103.72</b>

Till now, grant of Rs.42.562 crore have been received out of which Rs.42.559 crore have been spent.

**The Major achievements under this project are:**

1. Installation of 846 Nos. of Digital Water Level Recorders (DWLRs) transmitting Ground Water Levels in piezometers four times a day have been completed at a cost of Rs.8.87 crore under Ground Water Real

Time Data Acquisition System (GWRTDAS) phase-I & II.

2. Installation of 45 Nos. of Automatic Weather Stations, 100 Nos. of Telemetric Automatic Rain gauge Stations and 49 Nos. of Automatic Water Level Recorders under Surface Water Real Time Data Acquisition System (SWRTDAS) at a cost of Rs.10.50 crore have been completed.
3. The agreement has been entered for Installations of 561 Nos. of Digital Water Level Recorders in piezometers under Ground Water Real Time Data Acquisition System (GWRTDAS) phase-III.
4. Topographic survey for collecting levels of all water bodies using DGPS was taken up for Agniar, Thamiraparani, Varahanadhi and Vaigai basins Phase-I have been completed.
5. State-of-the Art Water Quality Equipment, 4 Nos. of mobile water quality labs, Geo Physical equipment and Discharge

measuring Equipment have been procured and put to use.

#### **12.4. Asian Development Bank (ADB) Assisted Climate Change Adaptation Programme in the Cauvery Delta – Phase-II**

The Climate Adaptation in Vennar Sub Basin in Cauvery Delta Project, with the loan assistance of Asian Development Bank (ADB) aims to protect coastal Districts from cyclones, reduce flood risks made worse by climate change, improve the distribution of water for irrigation and to prevent seawater intrusion in Vennar Sub Basin in Cauvery Delta at a cost of Rs.1,560.00 crore, out of which the assistance of Asian Development Bank (ADB) will be Rs.1,092.00 crore and the State Share will be Rs.468.00 crore. The project is being implemented in the ratio of not more than 70% loan assistance from ADB and not less than 30% from State share.

The project comprises of works such as Construction of additional tail end regulators, re-

construction / rehabilitation of all the existing tail end regulators and improving the drains by widening and desilting on the upstream to bring them to standards.

As a first phase of this project, works in Rivers / Drains viz., Harichandranathi, Adappar, Vellaiyar, Pandavaiyar, Valavanar Drain, Vedharanyam Canal and Uppanar Drain, and 13 various pumping schemes in parts of Lower Vennar system in Cauvery Delta pertaining to Tiruvarur and Nagappattinam Districts at a revised estimated cost of Rs.1,110.17 crore to benefit an ayacut of 78,000 Hectare has been completed during 2016-2022.

As a follow - up project, in the Phase-II of Climate Adaptation in Vennar Sub Basin in Cauvery Delta Project, with the loan assistance of Asian Development Bank (ADB), the Preliminary Project Report for works in 6 Rivers viz., Vennar, Paminiyar, Koraiyar, Kaduvaiyar, Marakkakoraiyar, Manankondanar and 6 pumping schemes for an amount of Rs.1,825 crore (US \$ 250 Million) was sent to the Department of Economic Affairs, Government of India on 22.09.2021 by online mode.

Reply submitted for the Comments / Observations of the Department of Economic Affairs on 10.01.2022, 17.02.2022 and 21.09.2022 in the web portal and through email. Approval of the Project is anticipated from the Department of Economic Affairs. Continuous action is being taken for obtaining the approval.

### **13.0. Centrally Sponsored Schemes**

#### **13.1. Repair, Renovation and Restoration (RRR) of water bodies under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY - HKKP)**

Repair, Renovation and Restoration (RRR) of Water bodies is being implemented under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) – Har Khet Ko Pani (HKKP) as a Union Government – State Government shared Scheme.

Objective of the Scheme is comprehensive improvement of selected water bodies in water conservation including catchment area treatment and its command area development, increase in storage capacity of the water bodies, ground water recharge, promotion of conjunctive use of surface and ground water, improvement in agricultural productivity and increasing the availability of drinking water as per requirement.

As per the new Guidelines of the PMKSY effective from January 2022, the funding pattern for Tamil Nadu is 60 (Union) : 40 (State).

## **Phase I to V**

Under Phase-I, II, III, IV & V, 245 works at an estimated cost of Rs.128.79 crore were completed to benefit an ayacut of 47,353 acre.

## **Phase VI to VIII**

115 tanks under Phase-VI and 85 tanks under Phase-VII are taken up for implementation.

**Under Phase-VI**, 115 tanks pertaining to Cuddalore (1), Dharmapuri (6), Kallakurichi (2), Krishnagiri (4), Madurai (1), Pudukottai (27), Ramanathapuram (10), Ranipet (3), Sivagangai (24), Tenkasi (1), Theni (1), Tiruchirappalli (5), Thiruvallur (3), Tiruvannamalai (4), Thoothukudi (7), Vellore (9), Vilupuram (6) and Virudhunagar (1) Districts at an estimated cost of Rs.75.00 crore are taken up for implementation to benefit an ayacut of 28,260 acre. So far, works in 88 tanks have been completed. Works in the remaining 27 tanks are under progress.

**Under Phase-VII**, 85 tanks pertaining to Chengalpattu (6), Cuddalore (6), Kancheepuarm (3),



Pudukottai (25), Ranipet (8), Sivagangai (30), Thiruvallur (2), Tiruvannamalai (1) and Virudhunagar (4) Districts at an estimated cost of Rs.90.08 crore are taken up for implementation to benefit an ayacut of 24,505 acre. So far, works in 38 tanks have been completed. Works in the remaining 47 tanks are under progress.

**Under Phase-VIII**, 100 tanks in Dharmapuri (4), Kallakurichi (3), Krishnagiri (8), Pudukkottai (30), Ramanathapuram (27), Ranipet (4), Sivagangai (17), Thiruvallur (1) and Tiruvannamalai (6) Districts at an estimated cost of Rs.92.83 crore are taken up for implementation to benefit an ayacut of 20,902 acre. So far, works in 34 tanks have been completed. Works in the remaining 66 tanks are under progress.

**Under Phase-IX**, 100 tanks in Kallakurichi (11), Ramanathapuram (39), Sivagangai (49) and Virudhunagar (1) Districts at an estimated cost of Rs.111.48 crore are under various stage of implementation taken up to benefit an ayacut of 15,517 acre.

**Under Phase-X**, 123 tanks in Cuddalore (5), Dharmapuri (3), Dindigul(4), Kancheepuram (2), Karur (9), Krishnagiri (2), Madurai (11), Pudukkottai (3), Ramanathapuram (9), Ranipet (2), Sivagangai (9), Tenkasi (5), Theni (2), Thirupathur (2), Thiruvallur (4), Thoothukudi (6), Tirunelveli (8), Tiruvannamalai (5), Trichy (16), Vellore (2), Villupuram (5) &Virudhunagar (9)Districts at an estimated cost of Rs.100.07 crore are proposed to be taken up to benefit an ayacut of 24558 acre. After the receipt of Central assistance, works will be taken up.

## **14.0. River Conservation Project**

### **14.1. Chennai Rivers Restoration Works**

#### **I. Adyar River**

During 2018, for restoring Adyar River from Origin to Sea Mouth, 56 short-term sub projects were taken up under Chennai Rivers Restoration Trust Fund (CRRT) by 7 Departments for an amount of Rs.555.46 crore. For 7 Restoration works from Thiruneermalai to Adyar mouth, an amount of Rs.104.31 crore has been allotted to Water Resources Department. Out of this, 5 works (Reach-2 to 6) at an estimated cost of Rs.73.13 crore have been completed.

For Reach-1 i.e. Widening and Desilting the Adyar River from mouth to downstream of Thiru Vi Ka Bridge (Chainage 0m to 1963m) in Chennai District at an estimated cost of Rs.21.63 crore, the Coastal Regulation Zone (CRZ) clearance obtained and all the works are completed.

For Reach-7 i.e. cut open the Adyar River Mouth in Chennai at an estimated cost of Rs.9.55 crore, the CRZ clearance has been obtained and revised

Administrative sanction has been obtained for an amount of Rs. 12.56 crore. Works commenced and nearing completion.

## **II. Cooum River**

Under Integrated Cooum River Eco Restoration Project, 60 short-term sub projects were taken up for an amount of Rs.604.77 crore through Chennai Rivers Restoration Trust (CRRT) funds. For 7 Restoration works from Paruthipattu Anicut to confluence point for a length of about 27 km, an amount of Rs.135.57 crore has been allotted to Water Resources Department. 6 works (Reach 2 to 7) at an estimated cost of Rs.79.93 crore were completed.

For Reach-1 Cooum River mouth to Napier Bridge (Chainage 0m – 700m for revised estimated cost of Rs.70 crore) CRZ clearance has been obtained on 15.09.2022. 95% of work completed.

## **III. Buckingham Canal**

The Government in Municipal Administration & Water Supply Department has accorded Administrative sanction for the work of comprehensive restoration &

rejuvenation of Buckingham Canal & its associated drains and major drains draining into Adyar & Coovam River in Chennai City at an estimated cost of Rs. 1281.88 crore with funding assistance of Chennai Rivers Restoration Trust (CRRT). Out of which an amount of Rs.1,014.28 crore has been allocated to Water Resources Department. Based on the CRRT approval, out of 35 works tenders have been finalized for 30 works and the works have been commenced. But considering the recent floods in the first week of December, 2023 and the recommendations of the Advisory Committee on Mitigation and Management of Flood Risk in Chennai Metro, it has been decided to review the detailed project reports and consequently keep these works on hold. Now CRRT has informed that on detailed review, works will be taken up depending on fund availability.

Tenders for 5 works for an amount of Rs.160.73 Crore have not been called for due to Resettlement and Rehabilitation issues.

#### **IV. Demarcation of River Adyar, River Cooum and Buckingham Canal Boundaries.**

Preparation of feasibility report at an amount of Rs.3.87 crore for the work Demarcation of Adyar, Cooum (Reach-I) and Buckingham Canal Boundaries using Digital Global Positioning System under Chennai River Restoration Trust fund is in progress.

Besides, the work of Demarcation of Buckingham Canal boundaries at an amount of Rs.11.93 crore approved by the Chennai River Restoration Trust is under progress.

#### **14.2. Nandanthal Vaazhi Cauvery Project**

The prime objective of Nandanthal Vaazhi Cauvery Project is to Conserve, rejuvenate and to effectively curb sewage polluting the Cauvery River and its tributaries. “Rejuvenation of River Cauvery and its tributaries – Nandanthal Vaazhi Cauvery project in Tamil Nadu Reach” is prepared based on the footsteps of Namami Gange Programme.

The Preliminary Project Report for this scheme for an amount of Rs.11,250.00 crore has been submitted to Ministry of Jal Shakti, Union Government for in-principle approval on 21.10.2019 and Union Government communicated the observations on 10.02.2020.

Preparation of Detailed Project Reports works has been entrusted to WAPCOS Limited. The project has been planned to implement in two phases viz., in Phase I- Cauvery Main River from downstream of Mettur dam to upto Trichy and in phase II – Cauvery River from Trichy to confluence point with sea near Poompuhar.

As per Consultation with National River Conservation Directorate, the detailed project Report for Phase-I of Nadanthaai Vaazhi Cauvery project was prepared and sent to Environmental protection Training and Research Institute (EPTRI), Hyderabad for getting Technical approval.

In continuation of above, the NRCD had conducted meeting on 16.10.2023 with state Government and submitted observations on detailed project Report.

The NRCD has approved a cost of Rs.934.301 crore for (i) Sewage Management (Rs.577.151 crore), (ii) Riverfront Development Activities (Rs.176.98 crore), (iii) River Surface Cleaning (Rs.27.00 crore), (iv) Solid Waste Management (Rs.30.89 crore), (v) Cauvery Village - People Participation and creating awareness (Rs.6.00 crore), (vi) Rehabilitation &

Resettlement for High Risk area, Flood Prone Zone and Intervention required area - Survey component, Real Time Monitoring System for ensure the water quality (Rs.27.58 crore), (vii) Museum at Grand Anicut (Kallanai) (Rs. 36.70 crore) and for (viii) Bio-Diversity (Rs.52.00 crore) with central government share of 60% (Rs. 560.581 crore) and State Govt Share of 40% (Rs. 373.720 crore).

Proposal seeking approval for the State share at 40% (amount of Rs.373.72 crore) and amount of Rs.377.979 Crore for Maintenance and Rehabilitation works is under consideration.



## **15.0. On-going Schemes (State Fund and NABARD)**

### **15.1. Creation of New Irrigation Infrastructures**

- i. Formation of Reservoir across Marudaiyaru River at an estimated cost of Rs.149.40 crore to benefit an ayacut of 4,194 acre in Perambalur District
- ii. Construction of 3 Nos. of Tail End regulators at an estimated cost of Rs.43.99 crore to benefit an ayacut of 1207 acre and for ground water recharge and to prevent sea water intrusion in Mayiladuthurai and Nagapattinam District.
- iii. Construction of a Regulator across Sholingur Branch Channel near Parabayangarapuram Village at an estimated cost of Rs.8.46 crore in R.K.Pet Taluk of Thiruvallur District.

Construction of a Barrage with Head Sluices across the river Coleroon at 74/3 mile in Adhanur and Kumaramangalam Villages at an estimate cost of Rs.463.25 Crore to benefit ayacut of 27045 acre in Cuddalore and Nagapattinam Districts.

- iv. Construction of 4 Nos. of Anicuts at an estimated cost of Rs.49.10 crore to benefit an ayacut of 1592.31 acre in Kancheepuram (2 works), Thanjavur and Dindigul Districts.
- v. Formation of New Tank across Ponni Odai in Chokkanur Agrahara village at an estimated cost of Rs.33.32 crore to benefit an ayacut of 446 acre in Gangavalli Taluk of Salem District.
- vi. Formation of New canals at an estimated cost of Rs.387.81 crore to benefit an ayacut of 16459.3 acre in Chengalpattu & Kancheepuram (1), Dharmapuri & Krishnagiri (5), Kanniyakumari (1), Tenkasi (3), Tirunelveli (1), Virudhunagar (2) Districts.
- vii. Construction of 31 Nos. of Check dams at an estimated cost of Rs.220 crore to benefit an ayacut of 9863.54 acre and for Ground water recharge in Coimbatore (2), Dindigul (5), Kanniyakumari (1) Krishnagiri (1), Perambalur (3), Salem (2), Theni (1), Tirupathur (1), Thiruvallur (1), Tiruvannamalai (3), Thoothukudi

(1), Tiruchirappalli (2), Tiruppur (2), Vellore (5) and Virudhunagar (1) Districts.

- viii. Construction of Tail End Bed Dam at an estimated cost of Rs.4.37 crore to benefit an ayacut of 417.30 acre in Thanjavur District.

Construction of 2 Nos. of Bed dams at an estimated cost of Rs.87.48 crore to benefit an ayacut of 1379.49 acre in Kancheepuram and Vellore Districts.

Construction of Vented Causeway across Koundanya Mahandhi River at an estimated cost of Rs.13.70 crore in Vellore District.

- ix. Construction of 2 Nos. of Sub surface Dyke across Palar River and 1 No. of Artificial Recharge Structure across Malattar River at an estimated cost of Rs.72.72 crore to benefit an ayacut of 4533.05 acre in Ranipet, Vellore and Villupuram Districts.

- x. Construction of a Dividing dam at an estimated cost of Rs. 3.49 crore to benefit an ayacut of 1253.26 acre in Perambalur District.
- xi. Formation of road on the right bank from Thalayatham to Sempalli road and providing Walking track on the left bank of Koundanya Mahanadhi River at an estimated cost of Rs.33.11 crore in Gudiyattam Town of Vellore District.
- xii. Construction of an office building for Quality Control Division, Trichy with Head Quarters Sub Division at an estimated cost of Rs.1.75 crore in Trichy District.

Construction of Quarters in Vengambur Village at an estimated cost of Rs.1.62 crore in Kodumudi Taluk of Erode District.

- xiii. Preparation of 13 Nos. of Detailed Project Report for various new / rehabilitation structures at an estimated cost of Rs.47.23 crore in Ariyalur, Coimbatore, Cuddalore, Kanniyakumari,

Mayiladuthurai, Nagapattinam, Ranipet, Tenkasi, Thanjavur, Tirunelveli, Tiruppur, Tiruvarur, Trichy Districts.

- xiv. Flood Protection / Mitigation works at an estimated cost of Rs.47.95 crore in Coimbatore, Cuddalore, Mayiladuthurai, Thoothukudi and Vellore Districts.

## **15.2. Rehabilitation of Irrigation Infrastructure and systems**

### **Rehabilitation of Reservoirs (other than DRIP)**

- i. Rehabilitation and Improvements works in Mullai Periyar dam in Idukki District in Kerala at an estimated cost of Rs.21.00 crore.
- ii. Rehabilitation & Improvements of dam structures and Renewal of Hydro – mechanical works in Gomukhi Dam & Manimukthanadhi Dam (Kallakurichi District), Sathyamoorthy Sagar Dam (Thiruvallur District), Chittar Dam I & II (Kanniyakumari District), Parambikulam Dam (Palaghat District), Sathaiyar Dam (Madurai

District), Vaigai Dam (Theni District), Manimuthar Dam (Tirunelveli District), Amaravathi Dam (Tiruppur District), Vaniyar Dam (Dharmapuri District), Pambar Dam (Krishnagiri District), Stanley Reservoir/ Mettur Dam (Salem District), Anaikuttam Dam (Virudhunagar District), Gadana Dam & Ramanadhi Dam (Tenkasi District), Sholayar Dam (Coimbatore District), Thervoykandigai Reservoir (Thiruvallur District) and Shenbagathope Reservoir (Thiruvannamalai District) at an estimated cost of Rs. 147.90 crore.

**Other Rehabilitation structures under implementation**

- iii. Rehabilitation of 3 Nos. of Regulators at an estimated cost of Rs. 22.33 crore in Nagapattinam, Trichy and Villupuram Districts.
- iv. Rehabilitation of Shutters and hoisting arrangements for Vent No. 1 to 41 in Upper Barrage across Cauvery in Trichy District at an estimated cost of Rs. 16.81 crore.

- v. Rehabilitation of Check Dam / Anicuts at an estimated cost of Rs. 164.83 crore in Coimbatore(2), Dharmapuri(1), Dindigul(1), Kallakurichi(1), Krishnagiri(1), Ramanathapuram (1), Tenkasi (1), Thanjavur(1), Thoothukudi(1) and Villupuram(5) Districts.
- vi. Rehabilitation of the left out reaches and Hoisting Arrangements of Contour Canal at an estimated cost of Rs.77.84 crore in Coimbatore and Tiruppur Districts.
- vii. Rehabilitation and Renovation of canal / channel and its masonry structures (43 works) at an estimated cost of Rs.327.80 crore in Coimbatore (2), Cuddalore (2), Dindigul (2), Erode (1), Karur (7), Madurai (4), Namakkal(1), Perambalur (1), Ramanathapuram (1), Salem(1), Sivagangai (2), Tenkasi (1), Tiruppathur (1), Thiruvallur(2), Thoothukudi(4), Tiruppur (4), Tiruchirappalli (1), Vellore (2), Villupuram & Kallakurichi (2) and Virudhunagar (2) Districts.

- viii. Reconstruction of Bridge across the Kodagan Channel in North Ariyanayagipuram Village in Tirunelveli District at an estimated cost of Rs.1.56 Crore.
- ix. Providing Landscaping arrangements, sitting benches, Fountain pathway, Children Play equipments, Gazebo, Statue and other works in Andiyappanur odai Reservoir in Vellore District and Improvements to park at an estimated cost of Rs.4.67 crore.
- x. Renovation of Dormitory Block - II at Thekkady at an estimated cost of Rs.0.50 crore in Idukki District.
- xi. Standardisation / Rehabilitation / Renovation / Restoration of Rivers (4 works) at an estimated cost of Rs.104.78 crore in Cuddalore (2), Thoothukudi (1) and Vellore (1) Districts.
- xii. Rehabilitation / renovation of 37 tanks (other than PMKSY - RRR scheme and TNIAMP) at an estimated cost of Rs.478.54 crore in Chengalpattu (3), Cuddalore (1), Dindigul (3),



Kancheepuram (1), Perambalur (2), Pudukottai (6), Ranipet(2), Salem(6), Thanjavur (1), Theni (1), Tiruppathur (1), Thiruvallur(2), Thoothukudi(2), Tiruppur (1), Tiruchirappalli (2), Vellore (1), and Villupuram (2) Districts.

### **15.3. Coastal Protection Works**

- i. Extension of Groynes G1, G2 at Keelavaippar village at an estimated cost of Rs.15.80 Crore in Vilathikulam Taluk of Thoothukudi District.
- ii. Extension of Groyne at Kovalam Hamlet at an estimated cost of Rs.11.59 Crore in Agasteeswaram Taluk of Kanyakumari District.

## 16.0. Flood Mitigation Works

### 16.1. Long Term Flood Mitigation Works

In 2022-2023, the Government have accorded Sanction for Rs.250.00 crore to carry out 8 flood mitigation works for widening of Adyar and Kosasthalaiyar, Improvements of water ways and formation of Drains for protecting the highly flood vulnerable areas in Varatharajapuram, Old perungulathur, Mudichur, Pallikaranai, Rayappanagar, Nandhivaram, Guduvanchery, Manali, Vellivoiyal, Kolathur and in Chennai and Kancheepuram Districts 7 works completed and 1 work is in progress as detailed below:

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
1	Widening of Adayar River from Chembarambakkam Surplus Course Confluence Point to	70.00	100%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	Anakaputhur Bridge in Kundrathur Taluk of Kancheepuram District.		
2	Improvement to Porur Tank Surplus Course and Regulator Arrangements in Porur Tank in Kancheepuram District.	34.00	100%
3	Providing additional Box culverts at NHAI Bypass in Kundrathur Taluk Of Kancheepuram District	9.70	100%
4	Construction of new cut and cover channel from Thanthikal Channel to Porur surplus course, Koluthuvancheri road in Kundrathur Taluk of Kancheepuram District.	16.70	100%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
5	Construction of new sluice and cut and cover Channel from Porur tank to Ramapuram tank in Alanthur Taluk of Chennai District.	39.60	100%
6	Restoration and reformation of River Bund and regradation of river bed in Kosasthalaiyar River right bank from L.S. 125.60 km to 126.60 km in Vellivoyal Village, Ponneritaluk of Thiruvallur District and L.S.128.00 km to L.S.132.00 km in Edayanchavadi and Sadayankuppam Villages at Manali New Town and in Kosasthalaiyar River Left Bank from	15.00	100%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	L.S.128.00 km to L.S.130.00 km at Edayanchavadi Village in Thiruvotriyur Taluk in Chennai District.		
7	Restoration of bank and deepening of existing tank bed and improvements to its surplus course of Kolathur tank in Aynavaram Taluk of Chennai District.	7.30	100%
8	Formation of Cut & Cover Macro Drain from Pallikaranai Anai Eri to Pallikaranai Swamp in Sholinganallur Taluk of Chennai District.	57.70	88%

The Government have accorded sanction for Rs.184.22 crore to carry out 4 works in Highly flood

vulnerable areas in Chennai and Chengalpattu Districts and all the works have been completed as detailed below:-

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
I	<p><b><u>Main Work</u></b>            Providing Emergency Network of flood carrier channel between Ottiyambakkam Channel and Madurapakkam Drain to Pallikaranai Swamp in Semmenchery and Perumpakkam Area in Chennai and Chengalpattu Districts.</p>		
1	Slice A – Providing Emergency network of flood carrier Macro drain from Madurapakkam Odai through DLF Campus road at L.S. 0m to L.S.500m in Sholinganallur Taluk of Chennai District.	21.70	100%
2	Slice B – Providing Emergency network of flood carrier Macro drain from Madurapakkam Odai	26.50	100%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	through DLF Campus road at L.S. 500m to L.S.970m in Vandaloortaluk of Chengalpattu District.		
3	Slice - C Construction of Cut and Cover Macro Drain-From Madurapakkam Odai to Existing Channel (Northern Side of DLF) and Construction of Retaining wall on both side of open channel at Northern side of DLF from LS 0m - 600m in Tambaram Taluk of Chengalpattu District.	24.00	100%
4	Slice D - Construction of Retaining Wall at both side of existing drain in Perumbakkam and Semmanchery village in Tambaram and Sholinganallur Taluk of Chengalpattu and Chennai District.	24.30	100%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
II	<b><u>Main Work:</u></b> Providing macro drain cut & cover for missing link of Ottiyambakkam Tank to Arasankalani Tank and link to Pallikkaranaï swamp in Tambaram Taluk of Chengalpattu District.		
5	Slice - A Construction of Cut & Cover Macro Drain from Arasankalanivelanthangal Tank to Swamp in Tambaram Taluk of Chengalpattu District.	29.00	100%
6	Slice - B Construction of Cut & Cover Macro Drain from Ottiyambakkam Surplus course Missing link to Arasankalanivelanthangal Tank in Tambaram Taluk of Chengalpattu District.	39.82	100%
7	Standardisation of OkkiyumMaduvu by dredging and regrading of existing drain upto Buckingham canal near KCG College of Technology premises in	5.00	100%



Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	Sholinganallur Taluk of Chennai District.		
8	Modernisation of Link channel between Adambakkam tank to VeerangalOdai in Alandur Taluk of Chennai District.	13.90	100%

### Other Works

Also, Providing Emergency Flood Relief (By constructing flood mitigation structures) to the people residing in and around the flood plain of Adyar River near Tambaram in Kancheepuram and Chengalpattu Districts at an estimated cost of Rs.70.05 Crore has been completed.

The Government sanctioned a sum of Rs.70 crore for carrying out 325 Permanent Restoration works in Kodayar system of Kanniyakumari and Tirunelveli Districts to rehabilitate the structures damaged during the

Northeast Monsoon 2021. 80% of works are completed. Remaining works are in progress.

Further, permanent restoration works at a cost of Rs.280.00 crore have been sanctioned for Kanniyakumari, Tirunelveli, Tenkasi, Thoothukudi, Ramanathapuram and Virudhunagar districts to restore the flood damages caused by heavy rains during December 2023 and the works are in progress.

During 2023–2024, sanction has been accorded for an amount of Rs.463.714 crore for 25 essential flood protection works in Chennai, Kancheepuram, Thiruvallur, Chengalpattu, Vellore & Cuddalore Districts and the works are in progress as detailed below:-.

<b>Sl. No.</b>	<b>Name of Work</b>	<b>Estimate Amount (Rs. in crore)</b>	<b>Physical Progress in (%)</b>
1	Construction of Open Channel and Cut & Cover channel in Thanikachalam Nagar Drain in Madhavaram and	91.36	35%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
	Ayanavaram Taluks in Chennai District		
2	Construction of Retaining Wall and Widening and desilting the Kolapakkam Channel – II @ Dharmarajapuram in Manapakkam Village in Alandur Taluk of Chennai District	8.74	80%
3	Construction of Retaining Wall and Widening and desilting the Manapakkam Channel in Manapakkam Village in Alandur Taluk of Chennai District	6.74	50%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
4	Improvements to Gerugambakkam Channel from LS 160m to LS 1500m in Gerugambakkam Village in Kundrathur Taluk of Kancheepuram District	19.16	60%
5	Improvements to Gerugambakkam Channel from LS 1500m to LS 2300m in Gerugambakkam Village in Kundrathur Taluk of Kancheepuram District	15.29	75%
6	Construction of Retaining Wall and Widening and desilting the	23.28	88%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
	Kolapakkam Channel - I in Kolapakkam Village in Kundrathur Taluk of Kancheepuram District.		
7	Construction of New Cut & Cover Channel from Kolapakkam Channel - I to Link Odai along Kolapakkam - Pozhichalur Road in Kundrathur Taluk of Kancheepuram District.	11.72	100%
8	Conversion of Madhavaram Retteri into drinking water source by deepening the Bed and Providing Regulator	43.19	35%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
	arrangements and improvements to foreshore area of tank in Madhavaram taluk of Chennai District.		
9	Providing flood Regulator arrangements in Korattur Tank Left Weir in Ambathur Taluk of Chennai District.	0.98	100%
10	Providing flood Regulator arrangements in both Weirs of Ambathur Tank in Ambathur Taluk of Chennai District.	0.98	100%
11	Providing flood	0.98	100%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
	Regulator arrangements in Ayyapakkam Tank Weir in Avadi Taluk of Thiruvallur District.		
12	Providing flood Regulator arrangements in Ayanambakkam Tank Weir in Poonamallee Taluk of Thiruvallur District	0.95	100%
13	Providing flood Regulator arrangements in Paruthipattuu Tank Weir in Avadi Taluk of Thiruvallur District.	0.98	100%
14	Construction of Out-Let Regulator (Emergency Escape)	4.73	95%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
	in Katturungal Maduvu near Left side of Kattur Weir in Ponneri Taluk of Thiruvallur District.		
15	Providing Flood regulator in Perumbakkam Tank in Tambaram Taluk of Chengalpattu District	0.96	100%
16	Providing Flood regulator in Ottiyambakkam Tank in Tambaram Taluk of Chengalpattu District	0.96	100%
17	Permanent Flood Protection works to Vellar river near Murugangudi village in Tittagudi Taluk of	9.74	95%



Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
	Cuddalore District.		
18	Strengthening and Improvements to banks of Pazhavar Odai in Tittagudi Taluk of Cuddalore District	4.79	65%
19	Formation of Cut & Cover macro drain from Irumbuliyur Tank to GST Road, Peerkankaranai Flood Regulator to Irumbuliyur Macro Drain, link drain from GST Road under tunnel to the Mudichur Road Cut and Cover junction in Tambaram Taluk of Chengalpattu District	96.50	15%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
20	Permanent Protective measures to the left Flood Bank of Kollidam River in Keezhathirukkazhipalai & Chinnakamedu Villages in Chidambaram Taluk of Cuddalore District	14.50	75%
21	Construction of Flood Protection Wall along the left bank of Palar River at Kamarajapuram Village (Virinjipuram) in K.V. Kuppam Taluk of Vellore District	4.25	100%
22	Construction of flood protection in Palar River right bank in Kilmonavur Village in Vellore Taluk of	2.75	75%

<b>Sl. No.</b>	<b>Name of Work</b>	<b>Estimate Amount (Rs. in crore)</b>	<b>Physical Progress in (%)</b>
	Vellore District		
23	Regrading the bed of Lower Paravanar and formation of a new flood diversion canal from Aruvalmooku stretch in Kurinjipadi Taluk of Cuddalore District	81.13	Work to be Commenced. CRZ clearance awaited from the Gol
24	Providing Flood Monitoring Road at Kollidam River Left Bank Bund in between from LS 127.270 km to 139.400 km in Kattumannarkoil Taluk of Cuddalore District	9.10	65%
25	Providing Flood Monitoring Road at	9.95	Work

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Physical Progress in (%)
	Kollidam River Left Bank Bund in between from LS 139.400 km to 152.655 km in Kattumannarkoil Taluk of Cuddalore District		Completed

Due to the Cyclonic Storm “Michaung” on 3rd December 2023 and the consecutive unprecedented heavy rainfall in Chennai, Thiruvallur, Chengalpattu and Kancheepuram Districts, the reservoirs / tanks of the Araniyar, Kosasthalaiyar, Cooum, Adayar Basins and Kovalam minor Basin were heavily affected.

The Government have accorded administrative sanction for additional flood mitigation works in and around Chennai, Chengalpattu, Kancheepuram and Thiruvallur Districts based on the vulnerability met during

2021 & 2023 floods for an amount of Rs.350.00 crore and the works are in progress as detailed below:-.

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	<b>Flood Mitigation Works</b>		
1	Providing Retaining wall for Existing Channel and Formation of Cut & Cover macro drain under the Existing Road from Sembakkam Tank surplus course to Nanmangalam Tank in Tambaram Taluk of Chengalpattu District.	26.00	5%
2	Construction of cut & cover macro drain from Moovarasampet tank to Keelkatalai channel in Tambaram	34.00	Work commenced

<b>Sl. No.</b>	<b>Name of Work</b>	<b>Estimate Amount (Rs. in crore)</b>	<b>Percentage of Work</b>
	Taluk of Chengalpattu District		
3	Construction of additional double vent cut and cover macro drain from Narayanapuram tank to Pallikaranai swamp in Sholinganallur Taluk of Chennai District.	44.00	Work commenced
4	Construction of Cut and Cover along the Dargas road from Pappan channel to Adyar river in Tambaram village & Taluk of Chengalpattu District.	12.00	Work commenced
5	Rehabilitation of Nemam Tank Surplus	15.00	5%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	regulator shutters and strengthening of Tank Bund damaged due to Cyclone Michaung in Nemam Tank in Poonamallee Taluk of Thiruvallur District.		
6	Construction of Double Vent Inlet in the right bank of Kosasthalaiyar River @ LS 124000 m in Vitchoor Village in Ponneri Taluk of Thiruvallur District	0.35	15%
7	Construction of Double Vent Inlet in the right bank of Kosasthalaiyar River @ LS 115300 m in Jayarampuram Village in Ponneri Taluk of	0.35	55%

<b>Sl. No.</b>	<b>Name of Work</b>	<b>Estimate Amount (Rs. in crore)</b>	<b>Percentage of Work</b>
	Thiruvallur District		
8	Construction of Single Vent Inlet in the Left bank of Kosasthalaiyar River @ LS 116200 m in Kuthiraipallam Village in Ponneri Taluk of Thiruvallur District.	0.20	40%
9	Construction of Regulator arrangements and improvements to surplus course in Sekkadu Tank in Sekkadu Village in Avadi Taluk of Thiruvallur District.	5.00	2%
10	Dismantling Old Causeway in Adayar River at Cowl Bazar	1.00	68%



Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	Bridge in Gerugambakkam Village in Kundrathur Taluk of Kancheepuram District.		
11	Construction of Flood protection wall and Inlet in Redhills Tank Surplus course in krishnanagar at Puzhal village in Madhavaram Taluk of Chennai District	12.00	Work just commenced
12	Construction of Flood protection wall and Inlet in Redhills Tank Surplus course in Naravarikuppum village in Ponneri Taluk of Thiruvallur	10.00	30%

<b>Sl. No.</b>	<b>Name of Work</b>	<b>Estimate Amount (Rs. in crore)</b>	<b>Percentage of Work</b>
	District		
13	Rehabilitation of Inlet & Outlet Regulators from LS 112.800 km to 124.800 km and Strengthening the overwashed portion of Flood Bank from LS 117.500 km to 119.700 km & 126.700km to 126.970km in Araniyar River of Ponneri Taluk in Thiruvallur district	22.50	20%
14	Rehabilitation of North Buckingham Canal from LS 16200m to Point of Confluence with Kosasthaliyar River at LS 17300m in Thiruvottiyur Taluk	4.50	10%

<b>Sl. No.</b>	<b>Name of Work</b>	<b>Estimate Amount (Rs. in crore)</b>	<b>Percentage of Work</b>
	of Chennai District.		
15	Rehabilitation of North Arm of Coovum River from LS 0m to LS 2040m in Purasaivakkam Taluk of Chennai District.	18.00	10%
	<b>Flood Protection Works</b>		
16	Rehabilitation of Flood Damaged KWSP Link Canal during Cyclone Michaung in Thiruvallur and Poonamallee Taluk of Thiruvallur District.	12.00	60%
17	Rehabilitation and Reformation of Cholavaram Tank bund from LS 1350m - 2900m including the	40.00	10%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	distressed bund portion from LS 2600 m to 2800 m, Reconstruction of Parapet Wall in Upstream & Downstream of Cholavaram Tank in Ponneri Taluk of Thiruvallur District.		
18	Strengthening of Earthen bund on either side of Adayar river from Airport Runway to MIOT Bridge, Construction of Retaining wall & Rain water collection swamp and providing watertight shutters for inlets at manapakkam village in Alandur Taluk of Chennai	24.80	35%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
	District.		
19	Strengthening and formation of Flood Bank with River Training Works that was damaged due to Cyclone Michaung in Araniyar River from LS 69.135 km to 103.600 km in Thiruvallur District	23.65	50%
20	Strengthening and formation of Left Flood Bank with River Training Works that was damaged due to Cyclone Michaung in Araniyar River from LS 119.700 km to 123.900 km in Thiruvallur District	19.00	20%

Sl. No.	Name of Work	Estimate Amount (Rs. in crore)	Percentage of Work
21	Strengthening and formation of Flood Bank with River Training Works that was damaged due to Cyclone Michaung in Araniyar River from LS 124.150 km to 126.100 km in Thiruvallur District	16.55	50%
22	Strengthening and formation of Flood Bank with River Training Works that was damaged due to Cyclone Michaung in Kosasthalaiyar River from L.S. 119.10 Km to L.S.127.60 Km in Ponneri Taluk of Thiruvallur District.	9.10	65%

Further, based on the Flood damages occurred due to excessive rain in December 2023, the Government have accorded administrative sanction for Permanent Restoration works for an amount of Rs 280.00 crore in Tirunelveli, Tenkasi, Tuticorin, Kanniyakumari, Ramanathapuram and Virudhunagar Districts and the works are in various stages of implementation

## **17.0. Other activities**

### **17.1. Removal of Seemai Karuvel (Prosopis Juliflora) Trees in water bodies**

The Hon'ble High Court of Madras in its Order dated 28.04.2017 in W.P.No.10614 of 2017 has directed that the matter has been referred to a Larger Bench. No further action shall be taken by the official with regard to removal of "Seemai Karuvelam" trees, until further orders of the Larger Bench.

The Government, vide G.O. (D) No. 121, Environment and Forests (FR.14) Department, dated 10.05.2017, constituted a Committee with the Principal Chief Conservator of Forests as the Chairman to undertake a comprehensive scientific study on Seemai Karuvel trees with regard to its ill effects on environment as well as the utility of the tree, if any and offer recommendation and submit a detailed report within a period of 3 months.

Further, in the above case in Order dated 11.05.2017 it has been directed to expand the Committee by including 4 more Experts as Members to make



scientific study on the ill-effects of the Seemai Karuvel Trees as well as the utility there of and submit an interim report within 45 days. Based on the above directions, orders have been issued in G.O. (D). No.135, Environment and Forests (FR.14) Department, Dated 23.05.2017.

Based on the report of the Committee, the Hon'ble High Court of Madras in its orders dated 28.07.2017, has directed to work out a plan to implement the removal of Seemai Karuvel trees across the water bodies of the State in a phased manner in order to facilitate free flow of water and also plant the alternate species, so as to avoid ecological imbalance.

Total extent of Seemai Karuvel Trees in water bodies of the Water Resources Department was assessed as 1,93,030.43 Hectare. Out of which, Seemai Karuvel Trees have been removed in 77,742.94 Hectare. Water Resources Department is taking continuous efforts in removing the Seemai Karuvel trees to restore the storage capacity of water bodies.

## **17.2. Free Issue of Vandal**

The storage capacity of water bodies in the State has considerably reduced due to silting up over a period of time. Restoration of the lost capacity of the water bodies can be achieved by allowing the farmers to take silt from the water bodies at free of cost to the requirement. Both the restoration of the tank capacity and the desilted sediments would be beneficial to the farmers.

According to this, clay, silt, savudu and gravel can be taken from the water bodies, such as Tank beds, Channels and Reservoirs, notified in the District Gazette, in their Villages or adjoining Villages for the above purposes after obtaining prior permission from the concerned District Administration.

The quantity of silt and clay allowed for agricultural purposes shall not exceed 75 cubic metre per acre for wetlands and 90 cubic metre per acre for dry lands, once in 2 years. The quantity of earth, savudu and gravel for domestic purposes shall not exceed 30 cubic metre. The quantity of clay proposed to be removed for pottery shall not exceed 60 cubic metre.

In G.O. (Ms) No.14 Natural Resource (MMC-1) Department, dated 12.06.2024 in order to simplify the process by delegating powers vested with District Collector to the Tahsildars of concerned jurisdiction, to provide for granting a longer period i.e., 30 days for removal of clay and silt to ensure effective de-silting, to reduce the time in processing the genuine requests of the farmers for enriching their agricultural fields, improvement of the storage capacity of the tanks, and to make the process of application and verification online, the Government have permitted to amend Rule 12(2) (a) and (b) of the Tamil Nadu Minor Mineral Concession Rules, 1959.

The entire process will be in online, i.e. starting from receiving application, verification and to till issue order.

### **17.3. Sand Quarry**

Since 2003, Water Resources Department has been vested with the authority to quarry and sell river sand to the Public in the State of Tamil Nadu. From 2017-2018 Mining and Monitoring Circle at Chennai and five Mining and Monitoring Divisions at Villupuram, Chennai, Trichy, Thanjavur and Madurai are functioning exclusively to streamline the sand quarrying operations across the State.

Since July 2017, several reformatory measures have been introduced in sand quarrying operations in compliance with the “Sustainable Sand Mining Management Guidelines, 2016”. Online system of booking of sand and online mode of payment through web portal ([www.tnsand.in](http://www.tnsand.in)) and Mobile Application (TNsand app) have been introduced and under implementation from July 2017.

The Government on 06.01.2022 introduced new measures to give importance to the General Public, in sand booking in a hassle free manner. The existing Information Technology enabled web/mobile application

has been updated and preference given to the general public in sand booking, based on the approved building plan for sand sale.

## **18.0. Organisational Arrangements**

The Government on 07.06.2021 have established independent Water Resources Department detaching from the Public Works Department to study the cause and impact of recent natural calamities including floods, drought etc., and focus on relief and remedial measures and to implement suitable Schemes to augment the available water and assure continuous irrigation for Agriculture.

The Engineer-in-Chief, Water Resources Department monitors and coordinates the functions of 11 Chief Engineers and acts as the Technical Head of the Department.

The Water Resources Department functions on the River Basin framework. The Water Resources Department has been divided into 4 Regions, each headed by a Chief Engineer, located in Chennai, Trichy, Madurai and Coimbatore. These Regional Chief

Engineers are the Basin Managers for the defined basin boundaries in their jurisdiction.

In addition, there are 7 functional wings and 2 special wings as indicated below:-

### **Functional Wings**

1. Plan Formulation
2. Design Research and Construction Support
3. Operation and Maintenance
4. State Ground and Surface Water Resources Data Centre
5. Institute for Water Studies, Hydrology and Quality Control
6. Irrigation Management Training Institute
7. State Water Resources Management Agency

### **Special Wings**

1. Cauvery Technical Cell cum Inter-State Waters Wing
2. Tamil Nadu Water Resources Conservation and Rivers Restoration Corporation Ltd.

## **18.1. Activities of Functional Wings of Water Resources Department**

### **18.1.1. Plan Formulation**

The Plan Formulation wing plays a vital role in the development and augmentation of water resources in the State. Pre-feasibility studies through investigations are being conducted in order to formulate and develop Major, Medium, and Minor Irrigation Schemes, River Inter-Linking Schemes, etc., For technically feasible schemes Detailed Project Report are being prepared. This wing recommends detailed estimates to the Government for the works proposed by the Regional Chief Engineers, as required.

In addition, this wing acts as a Nodal Agency to obtain funds under National Agricultural Bank for Rural Development (NABARD), National Agriculture Development Programme (NADP), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) etc.

Furthermore, environmental activities related to TNIAMP and State funded schemes are also being carried out by the three Environmental Cell divisions,

functioning under the control of the Plan Formulation Circle, Salem.

### **18.12 Design Research and Construction Support**

Design Research and Construction Support wing acts as a Nodal Agency for the following schemes: -

- Repair, Renovation and Restoration of water bodies
- Desilting of Dams in the State
- Coastal Protection Works under Integrated Coastal Zone Management Project

The Design Circle functioning under this wing evolves design and drawings for irrigation structures such as Reservoir, Canal, Tank, Anicut, Regulator, Check Dam etc. Design Circle also recommends necessary remedial measures for the problems like cracks, seepage, leakage, distress etc. that may occur in the irrigation structures.

The Soil Mechanics & Research Division functioning under this wing acts as a Central Quality Control Laboratory at Chennai conducting Field and



Laboratory tests for soil, concrete and construction materials.

The Institute of Hydraulics and Hydrology established in 1944 at Poondi engaged in carrying out Basic Research for Irrigation and Model studies in the field of Hydraulics, Hydrology, Coastal Engineering in addition to Monitoring of shore line oscillations of certain selected points along the Eastern and Western coast of Tamil Nadu. Also carries out Sedimentation studies in Reservoirs / Tanks for arriving at up-to-date reduction in capacity due to sedimentation, assess the useful life of reservoirs and to suggest the remedial watershed management measures that can be taken up in order to reduce the entry of sediments into reservoirs from the watershed.

### **18.1.3. Operation and Maintenance and State Dam Safety Organisation**

The Operation and Maintenance wing collects and compiles water level data of 15 Major Reservoirs, 6 Drinking water Reservoirs for Chennai city in the State, and 4 Reservoirs of Karnataka in the Cauvery Basin and

Daily flow data at Billigundulu Gauge and Discharge Station of Central Water Commission and furnishes report to the Government on daily basis.

In the office of the Chief Engineer, Operation and Maintenance and State Dam Safety Organisation, a Hydrometric data cell functioning round the clock has been setup during the North East Monsoon period for monitoring the daily water level of all the Dams / Reservoirs of the State and coordinates with State Emergency Operation Centre. Participatory Irrigation Management in Water Resources consolidation project command areas are being monitored and consolidated reports are prepared.

Periodical monsoon inspection of Dams is carried out and reports are compiled by the State Dam Safety Organisation under the control of this wing. The consolidated Health Status Report for all the Dams (Annual Consolidated Report) based on the pre-monsoon and post-monsoon inspections are prepared and sent to the Central Water Commission.

The State Project Management Unit under this Wing is the Nodal Agency for implementation of Dam Rehabilitation and Improvement Project. In this Project Rehabilitation works in dams /Reservoirs are being carried out, under World Bank assistance.

The Public Works Workshop & Stores procures new vehicles, condemns old vehicles, unserviceable machineries, obsolete spares of various machineries. Further, preparing estimates for Hydro Mechanical component and shutters in dams, Reservoirs, Sluices & weirs and scrutinizing estimates received from the Regional offices.

### **Dam Safety Organization**

The Dam Safety Act, 2021 has been notified by the Union Government on 14.12.2021 and its provisions have come into force with effect from 30.12.2021 vide notification dated 28.12.2021.

To implement the Dam Safety Act, 2021 in the State, the Government of Tamil Nadu have issued notification for the Constitution of State Committee on Dam Safety (SCDS) and State Dam Safety Organisation

(SDSO) in G.O. (Ms) No.56, Water Resources (WR-2) Department dated 30.06.2022.

The four main features of the Dam Safety Act, 2021 are as follows.

### **1. National Committee on Dam Safety**

The National Committee on Dam safety meets twice in a year. This committee will form or evolve policies and recommend regulations regarding dam safety standards.

Representative of State Government at the level of Engineer-in-Chief & Chief Engineer (General), Water Resources Department or equivalent will be selected as a Member by rotation basis to attend the National Committee on Dam Safety Meeting.

### **2. National Dam Safety Authority**

The Union Government have established National Dam Safety Authority with 6 members for standardising safety-related data and practices with State-Level dam safety organisations and owners of dams.

National Dam Safety Authority will implement the policies and provide technical assistance to State Dam Safety Organisations, resolving matters between State Dam Safety Organisations of States or between a State Dam Safety Organisations and any dam owner in that State.

For the 4 dams of Tamilnadu viz., MullaiPeriyar, Parambikulam, Thunacadavu and Peruvuripallam located in the State of Kerala, the National Dam Safety Authority acts as State Dam Safety Organisation.

### **3. State Committee on Dam Safety**

State Committee on Dam Safety has been reconstituted as per Dam Safety Act, 2021 in G.O. (Ms) No.56, Water Resources (WR-2) Department, Dated 30.06.2022. This Committee shall meet twice in a year and one meeting shall be held before the onset of monsoon. The Committee has to be reconstituted for every 3 years thereafter. The Committee comprises of 16 members and 8 Special Invitees.

The First Meeting of State Committee on Dam Safety was held on 26.05.2023 and the Second Meeting was held on 09.01.2024 at Chennai.

#### **4. State Dam Safety Organisation**

Dam Safety Act, 2021, mandates that, the State Dam Safety Organisation shall be headed by an officer not below the rank of Chief Engineer, if the number of specified dams in the State exceeds 30.

As the number of Specified dams in Tamil Nadu is 128 (90 WRD + 38 TANGEDCO), the Government have issued Notification for Establishment of State Dam Safety Organisation as per Dam Safety Act, 2021 vide G.O.(Ms) No.56 Water Resources (WR2) Department dated 30.06.2022.

The Chief Engineer, Water Resources Department, Operation & Maintenance is re-designated as Chief Engineer, Water Resources Department, Operation & Maintenance and State Dam Safety Organisation to look after the activities of State Dam Safety Organisation.

As per the Dam Safety Act, 2021 and guidelines/recommendations of National Dam Safety Authority, the works are being carried out in State Dam Safety Organisation.

The major works which are in various stages of implementation are furnished below:-

1. Submission of Periodical Health Status Reports based on Post Monsoon Inspection Reports viz., Pre-monsoon (10th April – 14th June), Monsoon I (15th June – 15th August), Monsoon II (16th August – 14th November) and Post Monsoon (15th November -9th April) Inspection Reports.

2. The Annual Report is Prepared and submitted for approval, based on the Periodical Health Status Reports.

3. Phase I safety inspection is being carried out for 128 dams (90 WRD + 38 TANGEDCO) once in five years by the following State Level five Member Multidisciplinary Committee headed by the Superintending Engineer, State Dam Safety Organisation.

- Superintending Engineer, SDSO - Chairman
- Superintending Engineer (Designs) - Member
- Executive Engineer (Soil Mechanics and Research Division) - Member
- General Superintendent, P.W.Workshop & Stores - Member
- A representative from the Geological Survey of India - Member

So far, 71 dams (59 WRD + 12 TANGEDCO) inspection were completed and Inspection Reports are being sent to the concerned Superintending Engineers and Executive Engineers to take necessary action for rectifying the deficiencies given in the report.

4. Dam Safety Units formed for 128 dams

5. Preparation of Operation & Maintenance Manual for each dam.

6. Ensuring Maintenance of Log book or database by the Dam Safety Unit.

7. Conservation of Technical documents.



8. To assist the Dam data Manager (Inspecting Officer) in Dam safety Units to upload the data of dam in DHARMA Portal and to monitor the same and also approving the monsoon inspection reports in DHARMA portal.

9. To carry out other tasks as directed by the National Dam Safety Authority.

#### **18.1.4. State Ground and Surface Water Resources Data Centre**

This Wing investigates and assesses the Ground water potential, surface water and water quality of the State periodically by maintaining and observing the State – wide monitoring network. The following works are carried out by this wing for the purpose of Planning, Development and Management of Ground water resources of the State of Tamil Nadu:-

- ❖ Groundwater investigation and periodic Assessment of Ground water potential for the State by Scientific methods.
- ❖ Continuous monitoring of Hydrological, Hydro meteorological and Water quality of Ground Water.
- ❖ Monitor, Collect, process, analyse and consolidate the Ground Water level and Quality Data and Surface water details to evaluate the condition for development. In order to get more realistic and accurate

Ground Water Level data, 386 Digital Water Level recorders (DWLR) have been installed across the State.

- ❖ Develop a suitable plan for judicial development and optimal utilization of Ground Water.
- ❖ Protecting Ground Water resources against over exploitation and quality deterioration.
- ❖ Improving Ground Water storage through construction of various types of artificial recharge structures and Rain water harvesting structures wherever possible.
- ❖ Consultancy services to Public, Agriculturalists, Government Departments and Private sector for selection of suitable site for sinking of bore wells / dug wells on cost basis.
- ❖ Issuing Ground water clearance (No Objection Certificate) for water based and

non – water based Industries in safe and semi – critical firkas of the State.

- ❖ Special studies for monitoring sea water intrusion into fresh water aquifer along the 1,076 km coastline of the State.
- ❖ Render assistance for formulation of National and State water policies.

This Wing is the Implementing Agency for implementation of World Bank assisted National Hydrology Project.

### **National Water Mission**

State Ground & Surface Water Resources Data Centre prepares the report for National Water Mission.

The Main objective of the National Water Mission is conservation of Water, minimizing wastage and ensuring its more equitable distribution both across and within states through integrated water resources development and management.

The State Ground and Surface Water Resources Data Centre wing of the Water Resources Department was assigned with the task of preparation of the following reports.

1. Status report on Water Resources
2. Interim Report
3. State Specific Action Plan

In this connection, the Union Ministry of Water Resources has planned to allot Rs.0.50 crore in Tamil Nadu for preparing the above reports and out of which Rs.0.20 crore only was allotted.

The Revised Status Report of State Specific Action Plan was approved by the Steering Committee on 13.07.2023.

In the SSAP Progress Review meeting held by Mission Director, NWM on 18.04.2024, Tamil Nadu State has sought exemption from the regular NWM process under NERIWALM and opted out of funding process. This was done because a full-fledged TNWRIMS is under development which would act as the Single source of

realistic and unified database for all Water Resources Project implementation.

### **Strengthening of Groundwater Monitoring Network**

The State Ground and Surface Water Resources Data Centre has a monitoring network of 3495 open wells and 1567 piezometers. 386 piezometers are already equipped with Ground Water Real Time Data Acquisition System while additional 460 Ground Water Real Time Data Acquisition System is under installation and further a proposal for 561 Ground Water Real Time Data Acquisition System is under the process of tendering.

### **Managed Aquifer Recharge to control Sea water intrusion under India – Denmark Green Strategic Partnership**

Based on the concept of Aquifer Protection against Saltwater Intrusion in coastal areas, pilot project on Managed Aquifer Recharge in Minjur Block of Thiruvallur District has been planned to carry out as a Joint Demonstration project between Tamil Nadu and Denmark under India-Denmark Green Strategic

Partnership. The estimate for the above demonstration project and capacity building program is Rs.8.50 Crores which is under consideration.

### **e-Governance - Development of Web portal for applying and processing of No Objection Certificate for Drawl of Groundwater**

The State Ground & Surface Water Resources Data Centre has tied up with Tamil Nadu e-Governance agency for the development of web portal for applying and processing of No Objection Certificate for drawal of groundwater.

Now, final approval is given to the e-Governance team for creation of e-sevai portal for online processing and issuance of No Objection Certificate for commercial extraction of Groundwater. The online portal will be extended for renewal applications in future, so that, the workload of the department will come down in future which will result in paperless system.

## **Chennai Real Time Flood Forecasting and Spatial Decision Support System**

The Commissionerate of Revenue Administration and Disaster Management of TamilNadu Government has initiated this project which is implemented under the Project Development Grant Fund managed by the Tamil Nadu Urban Infrastructure Financial Services Limited funded by the World Bank.

The Administrative Sanction was accorded for the work of “Setting up of Real Time Data Acquisition System, Hydro Modelling Flood Control Room at Ezhilagam and Flood Monitoring Centres for Water Resources Department Headquarters at Chepauk and four Collectrates” for a value of Rs.71.21 Crore by the Government in Municipal Administration and Water Supply Department.

The Capital Expenditure of the project is Rs.49.66 crores funded as a grant from Project Development Grant Fund under the World Bank assisted Tamil Nadu Sustainable Urban Development Project and the Operational Expenditure is Rs. 21.55 crores (for 5 years)



funded by the Commissionerate of Revenue Administration and Disaster Management of Tamil Nadu Government.

The role of the State Ground & Surface Water Resources Data Centre is to facilitate tendering process for the Procurement and Installation of Real Time Data Acquisition System equipments such as Telemetric Automatic Rain Gauge, Automatic Weather Station, Automatic Water Level Recorders, Gate Sensors and setting of up Control rooms with full technical and site supervisory assistance from the Project Management Consultant .

The following are the Objectives of this Project.

1. To set up a web based Realtime Flood forecasting System.
2. To develop a Lake and reservoir Operations Guidance System.
3. To set up a Hydro modeling cum Flood Modeling Control room at State Emergency Operations Centre, Ezhilagam, Chennai.

4. To set up a Nearline Disaster Recovery Centre and Flood Monitoring Centre at Water Resources Department Head Quarters at Chennai.
5. To set up Flood Monitoring Centers in Kancheepuram, Tiruvallur, Chengalpet and Ranipet District Collectorates and feed to Control Room.
6. Development of Spatial Decision Support System and Dissemination of warnings.
7. Handholding and Capacity Building.

The Real Time Data Acquisition System consists of the field equipment which collects the rainfall, weather and water level data and telemetrically transfers to the Control Room. The Control Room is to receive the data sent by the field equipment, process the data with Hydrological Modelling and issue Flood Alerts over a Web- Decision Support System.

The contract agreement for the project has been entered and the project is under implementation.

### **18.15. Institute for Water Studies, Hydrology and Quality Control**

The Government of Tamil Nadu established this Institute for Water Studies to plan, assess and manage the Water Resources of Tamil Nadu in the year 1974. In the year 2018, the Quality Control Divisions have been attached with this Institute and renamed as Institute for water studies, Hydrology & Quality Control.

The Institute for water studies, Hydrology & Quality Control operates a remote sensing center which oversees the terrestrial water resources of the river basins and their associated geographical data through satellite-based maps, and plans to report their details to the line departments.

The Institute for water studies, Hydrology & Quality Control is engaged in the task of evaluating the water resources in the river basins of Tamil Nadu on the basis of scientifically sophisticated research, planning and managing for future needs. Currently, research work for the year 2023-2024 is being carried out on the micro level re-evaluation and study preparation required for

water resources management and planning in the Chennai Basin.

The Technical library is functioning under Institute for water studies, Hydrology & Quality Control. The library is useful for conducting technical research and conducting appropriate training classes for higher education students.

The four quality control divisions are functioning with head quarters at Chennai, Tiruchirapalli, Madurai and Coimbatore for controlling quality of works executed by water resources department.

Currently the following web portals are being developed.

- Tamil Nadu Water Resources Information and Management System
- Satellite Based Water Bodies Information, Monitoring and Protection System
- Development of Decision Support System in Tamil Nadu Irrigated Agriculture Modernization Project Area

These web portals will be completed within the year 2024-25.

### **18.1.6. State Water Resources Management Agency**

State Water Resources Management Agency is under Water Resources Department which is prerequisite for the Tamil Nadu Irrigated Agriculture Modernization Project as suggested by the World Bank established during 2017 with objectives to improve the institutional arrangements and capacity for sustainable Water Resources Management in the State and to develop and manage the water resources of the State in a holistic way in a River basin framework.

The functions of this wing are as follows:-

- The State Water Resources Management Agency had developed the web enabled “Tamil Nadu Water Resources Information System” to aid efficient Integrated Water Resources Management and Regulation.
- Developing of Decision Implementation Support for Basins and assessment of surface water potential for River Basins.

- Developing Reservoir Flood Modelling
- Institutional Strengthening & Capacity Building for Water Resources Department Engineers by conducting Trainings, Workshops, Meetings, Seminars etc.,
- Updation and Maintenance of Tamil Nadu Water Resources Information System
- Preparation of Water Auditing for Irrigation System

#### **Task Carried out in 2023-2024**

- Conducted Water Audit Study for Vidur Reservoir Project for assessing the performance of Reservoir & Irrigation System and study report published
- Conducted Water Audit Study for Gomukhi Reservoir Project for assessing the performance of Reservoir & Irrigation System and study report published
- Conducted Training Programme for Farmers on “Water Conservation Strategies in agricultural field for Sustainable Water Resources Management”

- Collection of data & Updation in the “Tamil Nadu Water Resources Information System” which developed to aid efficient integrated water resources management.
- Updation of Full Climate data and sunshine data till year 2022.
- Calculation of Average Annual Rainfall for Rainfall station till year 2022.
- Collection of Industrial Water Consumption details till year 2022.
- Collection of data for Mirugandanadhi Reservoir for conducting Water Auditing
- Collection of data for Gomukhi Reservoir for running Reservoir Flood modelling using MIKE HYDRO BASIN Software
- Collection of Agricultural & Statistical data for studying the performance of Vidur and Gomuki Reservoirs.

## **Task to be Carried out in 2024-2025**

- Command area mapping for reservoir using GIS and Remote sensing
- Water Auditing studies for reservoirs in Chennai, Madurai & Trichy Region
- Water conservation strategies and Sustainable Water Resources Management trainings for farmers, Capacity Building for Water Resources Department Engineers by conducting Trainings, Workshops, meetings & Seminars etc.,

### **18.1.7. Irrigation Management Training Institute**

The Irrigation Management Training Institute was registered as a Society in the year 1984 under the Tamil Nadu Society Registration Act, 1975.

The institute is governed by Governing Council headed by the Additional Chief Secretary to Government, Water Resources Department as its Chairman, Engineer-in-Chief, Water Resources Department as its Vice-Chairman and 10 members comprising the secretaries from Finance, Agriculture and Co-operation, Food &



Consumer Protection etc., The Director General is the head of the institute and Member-Secretary of the Governing Council drawn from Water Resources Department in the cadre of Chief Engineer and assisted by an inter disciplinary team of faculty members from various departments viz: Water Resources, Agriculture and Agricultural Engineering Departments.

Irrigation Management Training Institute is imparting training programmes to the engineers and officers of multidisciplinary departments and farmers. In the financial year 2024 - 2025, it has been proposed to conduct around 50 training programmes on various irrigation topics including Irrigation Management, Water Resources Management, GIS, latest survey techniques, intra and interstate study tours, Human Resources Development topics, planning and design of Irrigation structures etc., for engineers and officers of Water Resources Department.

For officers of Agriculture, Horticulture, Agri marketing, Seed certification and Agriculture Engineering Department trainings in the area of latest innovated

technologies by central, state universities and research institutions are planned.

In the financial year 2024 - 2025, It has been proposed to conduct around 60 farmers training programmes for 2000 farmers on need basis by grouping the districts into five zones. Based on cropping pattern and intensity in the districts, training topics are formulated in the areas of millets, oil seeds, pulses, plantation crops, cash crops, horticulture crops and integrated farming systems. A village adoption programme has also been planned. Further the landless labourers, self-help groups, Farmer Producer Organization are programmed to be trained in the areas like value addition, mushroom cultivation, honeybee rearing etc. Regarding research activities, 3 numbers of on-farm trails are planned in the field of water saving technologies.

## **18.2. Activities of Special Wings of Water Resources Department**

### **1821. Cauvery Technical Cell cum Inter – State Waters Wing**

The Cauvery Technical Cell cum Inter – State Waters Wing is assisting the Government in dealing with all the Inter – State Water sharing disputes / issues. This Wing has been functioning since 1990 and provides all Technical inputs / data / information required to file Petitions in the Water Disputes Tribunal / Supreme Court and participates in the periodic meeting of the River Water Management Authority, Regulation Committee of Inter State River basin in which Tamil Nadu is a riparian State or stakeholder. This Wing is also dealing with Bills / Acts, Rules and policies related to Water Resources proposed by Union Government and schemes for Inter-linking of Inter-State Rivers and participates in various Committees of the Union Government on these subjects and with the Union Government departments / agencies, viz., National Water Development Agency (NWDA) and Central Water Commission (CWC), Ministry of Jal Shakti, Union Government, etc. This wing prepares reports on the water resource development of the State.

Some of the important issues handled by this Wing are Sharing of Cauvery waters, establishing the

rights of the State in the Mullai Periyar Dam, obtaining the rightful share of waters from the Parambikulam Aliyar Project (PAP), defending the rights of the State in Neyyar River water sharing, Pennaiyar River water, Shenbagavalli issue and Palar River water issues. This wing prepares the affidavits, documents, statements, and maps required for cases pending before the Supreme Court and the High Courts in consultation with the Tamil Nadu Counsel and submits to the Government. Further, issues relating to the Schemes such as Godavari – Cauvery Link, Pamba – Achankoil – Vaippar link and Pandiyar – Punnampuzha Scheme are also dealt with by this wing.

### **1822 Tamil Nadu Water Resources Conservation and Rivers Restoration Corporation Limited**

The Tamil Nadu Water Resources Conservation and Rivers Restoration Corporation has been registered with the Registrar of Companies, Chennai and incorporated with effect from 25.12.2019. The main objective of the Corporation is to promote water conservation, reclamation of lakes, rivers and modernize the existing irrigation infrastructures. The Corporation will

also focus on interconnecting flood surplus canals and interlinking of rivers and river basins. Promotion of climate resilient infrastructure with special emphasis on prevention of sea water intrusion, wet land conservation and flood mitigation will be the other priority areas for the Corporation. The Corporation will also promote convergence of different activities to fulfill the objectives of the water mission launched by the Government. The Corporation is functioning under the administrative control of the Water Resource Department. The Chairman cum Managing Director for the Corporation has been appointed.

An Action Plan to implement 21 new Projects at an estimated cost of Rs.7144.55 crore has been approved by the Board of Directors in the 14th Board of Directors Meeting of Tamil Nadu Water Resources Conservation and Rivers Restoration Corporation held on 24.01.2023. The Government of Tamil Nadu vide their Letter No.2613/WR1/2023, dated 10.10.2023 had directed Tamil Nadu Water Resources Conservation and Rivers Restoration Corporation to prepare detailed

project reports for the said scheme. The above Action Plan is prepared based on the directions of the Government of Tamil Nadu vide Additional Chief Secretary to Government, Finance Department D.O. Letter No.5792/Finance (BPE) dated 12.02.2022.

Based on the above direction, to achieve the prime objective like promotion of climate resilient infrastructure, a special project, i.e., the revival of waterbodies @ aerial distance of 25 km from Coastal Line of Tamil Nadu to mitigate flood and prevent sea-water intrusion by recharging ground water at a cost of Rs.240 Crores is under preparation. Necessary preliminary works are initiated for other works.

A letter of Intent for strengthening sustainable water resource management through bilateral cooperation has been signed between the Danish Environmental Protection Agency under the Ministry of Environment, Government of Denmark and the Chairman and Managing Director, Tamil Nadu Water Resources Conservation and Rivers Restoration Corporation Limited, Chennai. Multiple number of online/offline

meetings were conducted on various issues and challenges of Water Resources Domain.

## **19.0. Creation of Digital Data Base - Pilot Scheme**

### **19.1. Tamil Nadu Water Resources Information and Management System**

The Government have accorded sanction for Implementation of Tamil Nadu Water Resources Information and Management System at an estimated cost of Rs.30.00 crore under loan assistance of NABARD. The Government have also formed (i) An Apex Committee, (ii) Executive Committee and (iii) an Expert Committee to review, to coordinate and to guide for implementation. The objective is to collect and collate all the existing data from various stakeholders for creation of a Portal. After formation, this portal should serve as single source of truth for water related database for formulation of future proposal from any stake holder department.

The development of Tamil Nadu Water Resources Information and Management System began on 26.10.2022. On November 14, 2022, the system's Real-time Dashboards modules went live with a beta version, bringing real-time information by integrating data from Central Water Commission, Indian Meteorological



Department, ISRO, Global Data Set, and State Data. Real-Time Dashboard consists of 7 modules such as Rainfall, Reservoir, Irrigation tanks, Ground Water, River Gauge, Soil Moisture and Evapotranspiration were developed. Major modules on Ground Water Information & Management System, Village Water Budget, Inflow Forecasting, Reservoir Operations Optimization, Water Audit, Deficit Water Indent were also completed.

Modules on Inter Basin Transfer, Water Conservation and Project Management are under progress. The entire system will be launched in July 2024.

## **19.2. Tamil Nadu - Satellite Based Water Bodies Information, Monitoring and Protection System**

The Government have sanctioned an amount of Rs.3.55 Crore for Creation of new IT Application as Pilot study using Artificial Intelligence and Satellite to monitor encroachment and water quality in water bodies in and around Chennai City.

The scope of the work is to create a digital platform Satellite Based Water Bodies Information, Monitoring and Protection System (TN-SWIP) through integration of the data / information available on existing IT systems with Tamil Nadu e-Governance Agency, Indian Institute of Remote Sensing, Rural Development and Panchayat Raj etc., to create a single umbrella IT solution.

The proposed web based GIS enabled IT Solution will have a Portal and Mobile Application. The proposal has two primary modules, one is water bodies health monitoring and other is encroachment detection.

The system will have two logins viz., Citizen and Admin logins. It is proposed to have three types of users in Mobile application i.e., Authorized Government users, Authorized Non-Government users and Citizens.

Historical open-source satellite data will be used and processed using Artificial Intelligence algorithms in the Encroachment module to detect changes in the water bodies defined area from revenue files and actual area. This module will detect capacity loss due to changes in

area. When changes in the water bodies are detected, this module will send alerts to department users for field validation and activate the encroachment removal workflow.

A sensor is being installed in Chembarambakkam lake to monitor real-time water quality in the Water Body health monitoring module.

In the future, TN-SWIP will be integrated with the geo portal of the Tamil Nadu Water Resources Information and Management System.

### **19.3. Implementation of e-office**

The Government of Tamil Nadu have announced that the e-office application developed by the National Informatics Center, New Delhi would be implemented in all Government Departments for processing all files electronically in lieu of manual file processing system and to use the IFHRMS application for all HR/Office Procedure related activities in electronic form.

It is proposed to implement an e-office project for the Water Resources Department which envisages removing the manual file movement in all the offices of

Water Resources Department with co-ordination of Tamil Nadu e-Governance Agency (TNeGA). Accordingly, a proposal for “Purchase of computers and Accessories for implementation of e– office application in all the offices of Water Resources Department” for an amount of Rs.12.50 crore is under consideration.

Bulk email id creation has been done for all the officers of Water Resources Department dealing with the file correspondences. For effective implementation of the e-office in the Water Resources Department, training for “Master Trainers” and an “Awareness Training programme on TNGIS for Project Monitoring Database creation” has been conducted by TNeGA.

As suggested by TNeGA, preparation of the revised Stage I,II & IV format for e-office implementation in the prescribed formats will be sent soon.

## **20.0. Schemes under Investigation / Formulation**

### **20.1. Formation of Reservoir across Koraiyar River in V.K. Puram Village of Ambasamudram Taluk in Tirunelveli District**

Koraiyar River is a tributary of Thamirabarani River. Administrative Sanction for an amount of Rs.0.24 crore was accorded for preparation of Detailed Project Report for formation of a Reservoir across Koraiyar River in V.K. Puram Village of Ambasamudram Taluk in Tirunelveli District.

The proposed capacity of this reservoir is 1 T.M.Cft. An extent of 254.44 acre of sanctuary reserve forest land, 59.85 acre of patta land and 79.37 acre of poramboke land are required for this project. On implementation of this scheme, an extent of 9,091.59 acre of land under Thamirabarani system would be benefitted.

Administrative sanction for detailed investigation including sub soil investigation obtained and works are in progress.

**20.2. Construction of Tail End Regulator across Kollidam River to prevent Sea Water intrusion between Thirukazhipalai Village in Chidambaram Taluk of Cuddalore District and Alakudy Village in Sirkali Taluk of Mayiladuthurai District**

The Proposed site is located at a distance of 8 km upstream from the Bay of Bengal across the Kollidam River. The left bank of the proposed structure is situated in Thirukazhipalai Village in Chidambaram Taluk of Cuddalore District and the right bank is situated in Alakudy Village in Sirkali Taluk of Mayiladuthurai District.

The storage capacity is estimated as 366 Mc.ft. By implementing this scheme sea water intrusion into the land and agriculture fields on either side of the Kollidam River would be prevented through storage of flood water thereby improving quality of ground water.

Administrative Sanction has been accorded for Rs.0.95 crore for conducting surveying and investigation

and the works have been completed and model studies for the scheme is under progress.

Based on the design obtained from IIT-Madras, Detailed Project Report has been prepared and is under the consideration.

**20.3. Construction of Sub-Surface Dyke across River Kollidam between Mathirivelur Village in Sirkazhi Taluk of Mayiladuthurai District and Nallamputhur Village in Kattumannar Koil Taluk of Cuddalore District.**

Proposed site of Sub surface Dyke is located across the River Kollidam in between Nallamputhur Village in Kattumannar Koil Taluk of Cuddalore District and Mathirivelur Village, Sirkazhi Taluk of Mayiladuthurai District.

By implementing this scheme, the groundwater will get recharged and the quality and quantity of ground water level in surrounding areas will be increased. Drinking water resources will also improve. Increase in the groundwater level will result in recharging the deep bore wells in the surrounding areas and thus, the drinking

water needs of the people, increase in food production with high yield and drinking water needs of livestock will be met.

Detailed Design Drawings are being prepared after which detailed project report will be formulated.

Since there is no direct irrigation facility in this area, studies for "Sub surface Dyke" had been taken up to avoid land acquisition and to obtain similar benefits as Barrage.

#### **20.4. Construction of New Regulator across the Northern and Southern arms of the Kollidam River on the downstream side of the existing regulator at Anaikarai (Lower Anicut) between Ariyalur and Thanjavur Districts**

Proposed site for the construction of the regulator is located on the downstream side of the existing regulator at L.S. 108.210 km across the Northern and Southern arms of River Kollidam in Vembukudi Village on left bank of Kollidam which is in Udayarpalayam Taluk of Ariyalur District and the right bank is located in



Vinayagantheru Village which is in Thiruvudaimarudhur Taluk of Thanjavur District.

The estimated storage capacity works out to 200 Mc.ft. approximately. By considering 3 times of fillings in a year, the total estimated quantity of annual storage water will be 600 Mc.ft.

By the construction of this new regulator, irrigation supply for 30,352 hectares of ayacut would be stabilized. Further, it is proposed to increase the height of shutters by 2 feet by which additional quantity of water can be diverted to Veeranam Tank which is supplying drinking water to Chennai through this regulator. By implementing this scheme all the existing ayacut irrigation facility would get stabilized.

More than 500 tube wells and 30 Tamil Nadu Water Supply and Drainage Board infiltration wells functioning around the proposed site of this regulator will be continuously recharged.

Approximately 17.196 acre of Patta and Poromboke lands are required for this project.

Administrative Sanction for an amount of Rs.1.01 crore was accorded for conducting Surveying, Levelling and Soil Investigation works. The investigation works have been completed and Detailed Project Report is under preparation.

**20.5. Recharging Groundwater in areas Surrounding Koraiyar and Malattar by diverting the excess flood water coming from Pennaiyar River near Andrayanallur Village in Thiruvannainallur Taluk of Vilupuram District during floods**

Malattar branches out from Pennaiyar River near Andrayanallur Village. Since the river bed of Pennaiyar is lower than the river bed of Malattar, water of Pennaiyar could not flow into Malattar. It is proposed to construct a barrier across Pennaiyar near Arcadu Village to divert the excess flood water from Pennaiyar River to Malattar River. This will rejuvenate the water recharge zone of Malattar and ground water level in around 67 Villages in Cuddalore District and 20 Villages in Vilupuram District will increase.

Also, by constructing a regulator at Paiyur Village across Koraiyar and a barrage near Arcadu Village across Malattar & Thenpennaiyar and a Surplus weir in Edaiyan Anicut the ground water level in Paiyur, Sirumadurai and Marangiyur Villages will increase. Administrative Sanction for an amount of Rs.8.00 Lakh for conducting detailed Surveying and Levelling operations for the above scheme has been accorded. Due to floods in river Pennaiyar, the profile of the river bed has changed drastically and hence revised investigation is required. Detailed investigation works are in progress.

**20.6. Pumping the flood surplus water of Pennaiyar River from Eachambadi Anicut Constructed across River Pennaiyar at Eachambadi Village in Karimangalam Taluk of Dharmapuri District to feed Tanks and Ponds in the Harur, Pappireddipatti and Morapur, Taluks.**

Eachampadi Anicut was constructed across Pennaiyar River in Eachampadi Village in Karimangalam Taluk of Dharmapuri District. It is proposed to pump the

flood surplus water from the anicut to possible Tanks in Pothiyampallam Tank group, Kambainallur Tank Group, Echampadi Tank group, Navalai Tank Group and other adjacent tanks which consists 60 tanks and ponds.

Administrative Sanction has been accorded for Rs.0.10 crore for conducting Surveying and levelling operations for detailed investigation.

The Water requirement for this pumping scheme is about 181 Mc.ft. which will be used to fill up the tanks and ponds in 15 days at the rate of 140 cusecs. The ayacut benefited by this entire scheme is 1,915.50 acre. For implementing this scheme, 162.42 acre of patta lands and 124.29 acre of poromboke lands are to be acquired. Detailed Project Report has been prepared for an amount of Rs.401.00 crore (2020-2021) and is under consideration. A proposal for an amount of Rs.2.90 crore for obtaining in principle approval & approved designed drawings for the project from the TWAD Board is under consideration.

## **20.7. Construction of a small dam across Kalpadai**

**River and a small dam across Pottiyam River to create additional water storage on the upstream side of Gomukhi Dam in Chinna Salem Taluk of Kallakurichi District.**

The Gomukhi dam is situated at the foot of Kalvarayan hills near Kachirapalayam of Kallakurichi District. It receives water from the Pottiyam River, Malligaipadi and Kalpadai Rivers. Among the three Rivers, the Kalpadai and Pottiyam Rivers are the major contributors to the Gomukhi dam. The Kalpadai River is on the left arm and the Pottiyam River is on the right arm with respect to the Gomukhi dam. At present, the capacity of Gomukhi dam is 560 Mc.ft. which is found to be insufficient to cater the entire command area of 5000 acre of old ayacut and 5000 acre of new ayacut.

Therefore, it is proposed to construct a small structure each across Kalpadai and Pottiyam rivers. The proposed scheme will create additional water storage to act as a buffer storage to Gomuki dam.

Administrative Sanction has been accorded for an amount of Rs.14.65 lakh for conducting detailed

Surveying and Levelling operations. The investigation work has been completed and Detailed Project Report is under preparation.

**20.8. Feasibility study to feed Pennaiyar River water by pumping from Kodiyalam anicut in Hosur Taluk of Krishnagiri District to the elevated tanks**

Kodiyalam anicut is the first anicut which is constructed across Pennaiyar River. Majority of the rain-fed tanks close to the Pennaiyar River are elevated above the river's bed level. Due to inadequacy of rainfall, the tanks are not receiving enough water.

Therefore, it is proposed to take water by pumping from the River Pennaiyar to feed 26 elevated tanks on the right side of the Kodiyalam anicut and 24 elevated tanks on the left side.

The quantity of water required for the scheme would be 156 Mc.ft. for providing irrigation facility to an extent of 1,406 acre land.

Administrative Sanction has been accorded for Rs.2.50 Lakh for conducting Surveying and Levelling Operations including Soil investigation and preparation of Detailed Project Report. This anicut receives huge waste water from Bangalore City. Hence, studies are going on to make the water fit for irrigation and to execute it as a pumping scheme. Based on the study results, the Detailed Project Report will be prepared.

**209. Diversion of surplus flood water from the River Cauvery to Thathamapalyam Eri, Aathupaalayam Anai, Velliyani Eri, Jagathambikulam, Upidamangalam Eri and Veeraraakiyam Eri by pumping in Karur District.**

Thathamapalyam Eri, Aathupaalayam Anai, Velliyani Eri, JagathambiKulam, Upidamangalam Eri, and Veeraraakiyam Eri in Karur District experience poor rainfall and the farmers are suffering with severe water shortage for irrigation and drinking needs. Hence, it is proposed to divert surplus flood water from the River Cauvery. Since the above reservoir and tanks are

situated at a higher level than the bed level of River Cauvery, water could be supplied only by pumping.

Sanction has been accorded for an amount of Rs.15 Lakh to carry out investigation and preparation of Detailed Project Report. After conducting preliminary investigation, a pre-feasibility report is under preparation.

**20.10. Diverting surplus flood water from Thiruvengadanathapuram Barrage by pumping system to the Tanks in Manur and Pallamadai areas in Tirunelveli District.**

It is proposed to divert surplus flood water by pumping from the proposed barrage across Thamirabarani River in Thiruvengadanathapuram Village in Palayamkottai Taluk of Tirunelveli District, through a proposed flood carrier canal to the drought prone area of Chittar System ayacut in Manur and Pallamadai and its surrounding area to alleviate water deficit.

By this scheme, an ayacut of 554.23 Hectares of the 12 tanks in the downstream of Pallikottai Anicut would be benefited.



Sanction has been accorded for an amount of Rs.40 Lakh to carry out investigation and preparation of Detailed Project Report.

Works for drilling pits for subsoil investigation are in progress. Other investigation works are in progress.

**20.11. Diversion of surplus flood water from River Amaravathi to Vattamalaikarai odai Reservoir in Tiruppur District.**

The Vattamalaikarai odai Reservoir with the capacity of 268.04 Mc.ft. was constructed in the year 1981 for the benefit of 6,040 acre of land. Since 28 years, this reservoir has not reached its maximum capacity due to inadequate rainfall in the catchment area.

Therefore, it has been proposed to transfer surplus flood water of the River Amaravathy to Vattamalaikarai Odai Reservoir either by pumping or by gravity in order to ensure the supply of water to the ayacut of the reservoir.

Sanction has been accorded for an amount of Rs.10 Lakh to carry out investigation and preparation of

Detailed Project Report. Preliminary investigation works have been completed and preparation of Detailed Project Report is under progress.

**20.12 Increasing the Full Reservoir Level (FRL) of Poondi Sathyamoorthy Sagar Reservoir by two feet to augment its capacity.**

The Sathyamoorthy Sagar Reservoir, popularly known as Poondi Reservoir across the Kosasthalaiyar River is one of the five drinking water sources, which cater the drinking water needs of Chennai City and its adjoining areas. Investigation to impound the flood water was carried out in the year 1940 and the project was executed in 1944. The catchment area of the Poondi Reservoir is 1,968 sq.k.m. and its capacity is 2.750 T.M.Cft. Poondi Reservoir receives water from Kosasthalaiyar River, Nagariyar River and Kandaleru – Poondi Canal (Krishana Water Supply) (through an Inter-State water agreement).

Under Krishna Water Supply Project, the capacity of the Reservoir was increased from 2.750 T.M.C.ft. to 3.231 T.M.C.ft. by raising its FRL from 33 feet to 35 feet,

during the year 1990 – 1996 by adhering to the standards of Central Water Commission.

To meet out the drinking water requirement of the growing population of Chennai city, it is the need of the hour to find feasible solution to increase the storing capacity of the water bodies; One of the options is to increase the storage capacity the Poondi reservoir.

It is proposed to find the feasibility to increase the FRL further by 2 feet, due to which storage capacity may increase from 3.231 T.M.Cft. to 3.971 T.M.Cft. This leads to additional storage of 0.74 T.M.Cft. In view of the above, Government have accorded Sanction for an amount of Rs.48.00 Lakh to conduct investigation and to prepare the Detailed Project Report. The Surveying & Levelling works have been completed and preparation of Detailed design & drawing is in progress.

### **Integrated Rehabilitation of Irrigation Structure**

Conducting the following detailed investigation for preparation of Detailed Project Reports for Comprehensive rehabilitation of

Irrigation Infrastructures and to provide automated community micro irrigation in Kodayar and Kollidam Basins, Vennar and Parambikulam-Aliyar sub basins.

**i) Kodayar Basin in Kanniyakumari District - Estimate Amount - Rs.2.596 crore**

The Kodayar system receives supply both in South West and North East Monsoon. Normally the irrigation period extends up to nine months in every year. Due to continuous supply, the age old structure gets deteriorated and they have been repaired and maintained with the available maintenance grant then and there. The conveyance efficiency has also been drastically reduced. To address the above problems, considering the effects of Climate Change, to come up with a sustainable and climate resilient modernisation project for the effective function of the system in near future a comprehensive Detailed Project Report preparation has been initiated.

**ii) Kollidam basin in Tiruchirappalli, Ariyalur, Thanjavur, Mayiladuthurai and Cuddalore district- Estimate Amount- Rs. 9.983 crore**

After serving for a period of many centuries, the Kollidam River system is in urgent need for comprehensive rehabilitation. The Canals, Channels, Drainage Inlets, Sluices, Regulators etc., which are in dilapidated condition, needs to be rehabilitated to reduce the losses and to improve the irrigation efficiency. Hence, it is essential to conduct a detailed investigation with new advanced technology in Kollidam Basin spreading over Tiruchirapalli, Ariyalur, Thanjavur, Mayiladuthurai and Cuddalore Districts for a sustainable and climate resilient modernization project.

**iii) Vennar Sub Basin in Thanjavur, Thiruvarur and Nagapattinam Districts - Estimate Amount - Rs. 9.80 crore**

The rivers namely Vennar from L.S.27.260 km to 55.510 km based on the requirement are

now proposed for rehabilitation in the Vennar Sub Basin of Cauvery Basin. The reaches taken up under Asian Development Bank assisted Climate Adaptation of Vennar Sub basin of Cauvery Delta Project Phase I (6 Rivers) and proposed Phase- II (5 Rivers), Vettar and Odambogiyar, except 'A' class Channels of all rivers under Vennar Sub Basin under Extension, Renovation and Modernization Project of Vennar Sub Basin in Cauvery Delta.

Hence, it is necessary to conduct a detailed investigation for preparation of the Detailed Project Report for rehabilitation of the above river systems and to provide automated community Micro Irrigation as per the Central Water Commission guidelines and also to obtain the necessary investment clearance and approval of the various Directorates of Central Water Commission, Government of India.

**iv) Parambikulam - Aliyar Sub Basin in Coimbatore and Tiruppur Districts - Estimate Amount- Rs. 7.08 crore**

In order to restore the canals to its designed and original standards, to upkeep the Canal fit for carrying the designed discharge, to minimize the conveyance losses and to increase the Canal efficiency, it has been proposed to rehabilitate the Canals. Reconstruction of Cross Masonry Structures are also proposed to ensure the structural stability. Further the Parambikulam - Aliyar project system is more suitable to implement automated community irrigation for equitable distribution of water and for efficient irrigation water management. Hence, it is necessary to conduct the detailed investigation for preparation of the Detailed Project Report for rehabilitation of the Parambikulam - Aliyar Project System.

## **21.0. Chennai City Water Supply Augmentation and Flood Mitigation Resilient to Climate Change**

It is very imperative to protect Chennai City from recurrent flooding and drinking water problems. Short-term and Long-term flood mitigation works are proposed to be taken up to avoid recurring flooding in Chennai City.

At present, 6 Reservoirs viz., Cholavaram, Chembarambakkam, Poondi, Redhills, Kannankottai-Thervaikandigai and Veeranam with a combined capacity of 13.222 T.M.Cft. caters the needs of drinking water requirements of Chennai City as against the annual demand of drinking and industrial requirement about 22 T.M.Cft. at present and which may raise to 32 T.M.Cft. by 2035 with the projected population growth.

At present, serious impact of Climate Change has been observed on tropical climatic areas causing unprecedented flash floods in many parts of Chennai, Kancheepuram, Chengalpattu and Thiruvallur Districts. Hence, with an aim to bridge the gap between present water demand and supply rate and also to create a flood



resilient urban Infrastructure, the project “Chennai City Water Supply Augmentation and Flood Mitigation Resilient to Climate Change” is being formulated.

The objective of the proposal is flood mitigation and rainwater conservation for deficit years in and around Chennai City. The Comprehensive proposal comprises enhancing the rain water storage capacity in the upstream of Chennai city by creation of new storage structures, increasing the storage capacity of existing water bodies, improving the conveyance efficiency and interconnecting the feasible water bodies. The proposal aims to create an additional storage capacity of 20.50 T.M.Cft. to meet the drinking water requirements of Chennai City and to find permanent mitigation measures to a maximum extent for the flood vulnerable areas in and around Chennai City. This scheme has formulated at an estimated cost of Rs.22,004 crore tentatively.

The Hon'ble Minister for Water Resources has announced in the Floor of Assembly on 06.04.2022 during the debate on the demand of grants for Water Resources Department for the year 2022-2023 that a

Pilot scheme to supply additional water flood mitigation and to adopt for Climate Changes to Chennai City at an estimated cost of Rs.5.12 crore will be implemented.

The Government have accorded Administrative Sanction for Preparation of Detailed Project Evaluation for a Pilot Project in Chennai Flood Mitigation, Climate Change and supply of additional water to Chennai City at an estimated cost of Rs.5.02 crore and identified the consultancy service for preparation of Detailed Project Evaluation Report for a Pilot Project in Chennai Flood Mitigation, Climate Change and supply of additional water to Chennai City. Out of 4 deliverable (inception report, Hydrology/Water balance report, Draft Final Detailed Project Evaluation Report, Final Detailed Project Evaluation Report) 3 deliverable were completed with total physical progress of 70%.

**DURAIMURUGAN**  
Minister for Water Resources



Tiruchirapalli District – Vathalai Village (Upper Anicut– Mukkombu) – New Regulator across Kollidam River-  
Estimate Amount Rs. 414.00 crore



Tamil Nadu State Project Management Unit / Dam Rehabilitation and Improvement Project has received the prestigious "Excellence Award for Institutional Strengthening Initiative in Dam Safety" at the World Water Awards 2023-24 organized by Water Digest Water Awards



Cuddalore District – Kattumannar Koil Taluk - Andipalayam Regulator Rehabilitation work- Veeranam Tank –  
TNIAMP Phase –II (package-I) Estimate Amount: Rs.55.05 Crore



Cuddalore District – Kattumannar Koil Taluk– Sengal Odai – I – Regulator Rehabilitation work- TNIAMP Phase –II  
(package-I)- Veeranam Tank – Estimate Amount: Rs.55.05 Crore



Cuddalore District– Kurinjipadi Taluk - Augmenting the storage capacity of Perumal Tank –  
Estimate Amount : Rs.119.77 Crore



Tirupathur District - Tirupathur Taluk - Construction of Check dam across the Pambar river near Jondrampalli Village –  
Estimate Amount : Rs 3.33 Crore





Tirupathur District - Tirupathur Taluk - Construction of Check Dam across Pambar River near Matrapalli Village - Estimate Amount : 3.80 Crore



Villupuram District - Marakanam Taluk - Reclaiming Kazhuveli Tank for storage of fresh water and sea water intrusion control measures and recharge shaft Well/ Shafts – Estimate Amount : 166.75 Crore



Villupuram District - Tiruvannainallur Taluk – Rehabilitation of Amoor Channel  
Estimate Amount:Rs.5.0 Crore



Viluppuram District - Vikkiravandi Taluk - V.Mathur Village - Renovation of V.Mathur Anicut across Pambai Channel-  
Estimate Amount : Rs.6.64 Crore



Viluppuram District & Taluk- Mandagapattu Village - Renovation of Mandagapattu Anicut across the Chellangal Odai  
- Estimate Amount:Rs.4.27 Crore



Cuddalore District - Chinnasalem Taluk - Vadakananthal Village- Replacement, Fabrication and Erection of Vertical Shutter in Old Existing Spillway vent 1 & 2 with hoisting arrangements in Gomukhi Dam– Estimate Amount :Rs.12.40 Crore



Erode District - Nambiyur Taluk - Athikadavu Avinashi Pumping Scheme, Pumping station V- Emmampoondi Village - Estimate Amount Rs.1916.417 Crore



Coimbatore District - Annur Taluk - Athikadavu Avinashi Pumping Scheme, Pumping station VI - Annur Village -  
Estimate Amount Rs.1916.417 Crore





Erode, Tiruppur and Karur District – Extension, Renovation and Modernisation - Protection wall at Mile 53/3 in LBP Main Canal (Package no – 3) Estimate Amount - Rs.197.75 Crore



Tiruppur District - Udumalpet Taluk - Rehabilitation of Parambikulam Main Canal From L.S 1.200 km to 2.000 km and Reconstruction Of Under tunnel At L.S. 1.270 km – Estimate Amount Rs. 2.75 Crore



Tiruppur District, Udumalpet Taluk - Rehabilitation of Parambikulam Main Canal from L.S 3.000 km To 3.300 km –  
Estimate Amount Rs. 5.46 Crore



Coimbatore District - Anaimalai Taluk- Construction of Bridge across Panappallam odai and Special Repair to Aqeduct at L.S 4.120 km of Karaipatti Channel – Estimate Amount Rs.1.56 Crore



Coimbatore District, Anaimalai Taluk - Rehabilitation and Modernisation of Kulapathukulam Tank, 5 nos Anicuts & Anicut Channels and Vettaikaranpudur Canal and its Distributaries of Aliyar sub basin – Estimate Amount Rs. 34.19 Crore



Erode, Coimbatore and Tiruppur District - Athikadavu Avinashi Pumping Scheme, Outlet Management System (OMS) in Pond - Estimate Amount Rs.1916.417 Crore

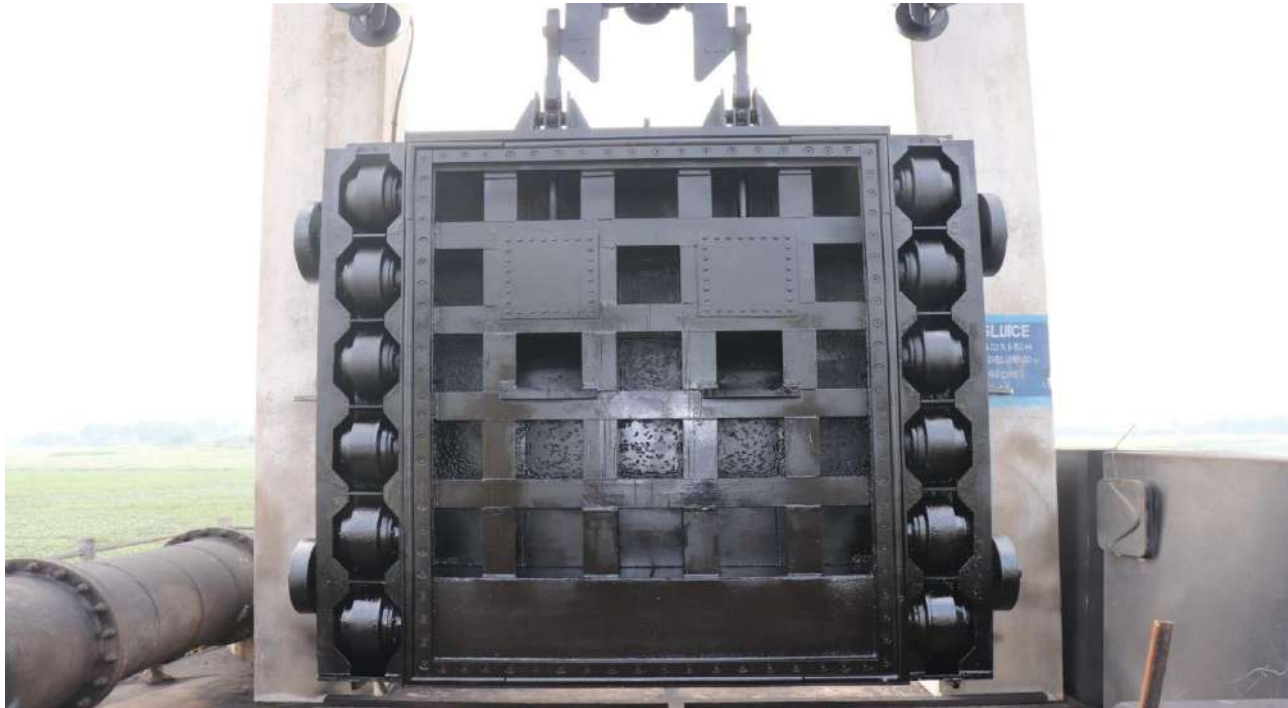


Coimbatore District - Valparai Taluk - Rehabilitation and Improvements to Upper Nirar weir (Tunnel Leading Channel Shotcrete Work)- Estimate Amount : Rs. 14.55 Crore



Coimbatore District - Valparai Taluk - Rehabilitation and improvement of Sholayar Dam - DRIP- Phase II (Racking and pointing in upstream face RR Joints at under water) - Estimate Amount : Rs.106.30 Crore





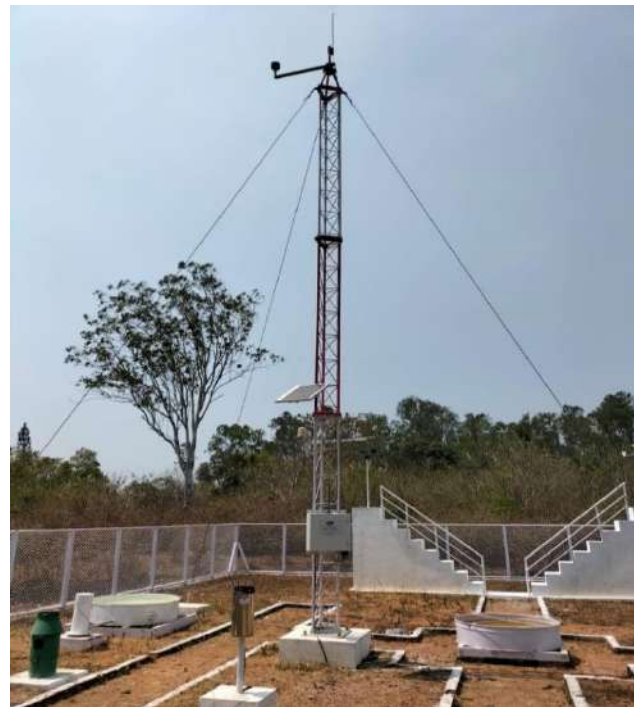
Krishnagiri District - Hosur Taluk - Rehabilitation and improvement of Kelavrapalli Dam - DRIP- Phase II (River Sluice Emergency Shutter ) - Estimate Amount: Rs.30.52 Crore



Coimbatore District – Valparai Taluk – Rehabilitation and improvement of Upper Nirar weir DRIP- Phase II (Stilling Basin ) – Estimate Amount : Rs.14.55 Crore



Krishnagiri District and Taluk – K.R.P Village-  
Automatic Weather Station



Chengalpattu District – Maduranthagam Taluk-  
Karungkuli Village- Automatic Weather Station



Thiruvallur District - Construction of 2 Nos of Artificial Recharge well Structures in Nandhiyar Sub basin – TNIAMP-II - Thadur Big Tank - Estimate Amount: Rs.91.90 lakh



Mayiladuthurai District – ERM - Reconstruction of Thiruchitrambalam regulator across Manniyar River at mile 76/4 (Package -23) – Estimate Amount: Rs.107.26 Crore



Thanjavur District – ERM - Reconstruction of Edaiyanur Regulator across Palavar river at mile 16/6 (Package -27) - Estimate Amount: Rs.115.26 Crore



Salem District - Gangavalli Taluk - Gangavalli Village - Construction of Checkdam across Swetha nadhi at Kanavai Kadu in - Estimate Amount : Rs. 3.80 crore



Karur District - Thirukampuliyur Village - Cauvery (Kattalai) – Vaigai – Gundar Flood Carrier Canal Project, Reach-1 of Slice-1 Canal lining at L.S 3800 m - Estimate Amount: Rs.177.03 Crore - **Before**





Karur District - Thirukampuliyur Village - Cauvery (Kattalai) – Vaigai – Gundar Flood Carrier Canal Project, Reach-1 of Slice-1 Canal lining at L.S 3800 m - Estimate Amount: Rs.177.03 Crore - **After**



Karur District - Pugalur Taluk - Construction of Barrage across River Cauvery in Nanjai Pugalur Village  
Estimate Amount: Rs.406.50 Crore – Before



Karur District - Pugalur Taluk - Construction of Barrage across River Cauvery in Nanjai Pugalur Village  
Estimate Amount: Rs.406.50 Crore – Present Stage



Dindigul District - Authoor and Natham Taluks & Blocks - Repair, Renovation and Restoration of 9 Tanks - RRR  
Phase V Scheme- Estimate Amount: Rs.4.23Crore



Virudhunagar District - Watrap Taluk -S.Kodikulam Village - Construction of Road Bridges (2 Nos.) across Periyar River near Pattupoochi and across Kovilar River near Kilavankoil (Kovilar)– Estimate Amount: Rs.282.93 Lakh



Virudhunagar District - Watrap Taluk - S.Kodikulam Village - Construction of Road Bridge across Kovilar River at LS 1600m - Estimate Amount: Rs.221.79 Lakh



Thoothukudi District - Ottapidaram Taluk - Mullur Muthukumarapuram Village - Construction of new Regulator across Malattar Odai - Estimate amount :Rs.425.11 Lakh



Thoothukudi District - Kalankarai Village -Temporary restoration to Tank bund breached in Korampallam Tank for a length of 132m - **Before**





Thoothukudi District - Kalankarai Village -Temporary restoration to Tank bund breached in Korampallam Tank for a length of 132m - **After**

