

Public Works Department

Policy Note 2006 – 2007

Demand No. 39 (Buildings)

Demand No. 40 (Irrigation)

**நீர்இன்று அமையாது உலகுஎனின் யார்யார்க்கும்
வான்இன்று அமையாது ஒழுக்கு.
திருக்குறள்**

PREAMBLE

Based on the recommendations of the First Public Works Commission, the Madras Public Works Department was formed in the year 1858 under a Chief Engineer. Thus, this Department in Tamil Nadu is nearly two centuries old.

Public Works Department has undergone many reorganizations in the past. The present setup is as per the decision taken by the Government in March 1994. According to the decision the department was bifurcated into Water Resources Organization and Buildings Organization. The objective of this exercise was to work towards functional specialization to the extent possible while keeping the staff in a common cadre.

WATER RESOURCES ORGANISATION

Water is a prime natural resource, a basic human need and a precious National asset. Water plays a crucial role in the rapidly changing phase of our planet brought about by fast development on all

fronts, rising population and fast rate of scientific and technological advancement. Water can no longer be taken for granted, but has to be treated as a valuable resource. Although, it is renewable, it is limited. Available water must therefore be optimally harnessed and used most beneficially under appropriate priorities of use to achieve self-sufficiency in energy and food, which is an important National goal.

The Water Resources Organisation was formed in accordance with the basin concept which requires that a river basin or sub-basin should be the unit for all activities related to water, viz., assessing water potential, assessing water demand for various uses, striking water balance at different locations, planning for further abstraction and managing waters optimally. The present set up consists of one Engineer-in-Chief, four functional Chief Engineers and four Regional Chief Engineers incharge of various River basins, at Chennai, Trichirapalli, Madurai and Coimbatore. Apart from these, a Chief Engineer is incharge of the Irrigation Management Training Institute at Trichirapalli. There are 31 Superintending Engineers and 117 Executive Engineers in this organization.

BUILDINGS ORGANISATION

The Buildings Organisation looks after construction and maintenance of public buildings. The present strength is one Chief Engineer, 16 Superintending Engineers and 51 Executive Engineers. There are seven electrical divisions and two divisions for Research and Design. The workload of this organization is in the range of Rs.650 to Rs.700 crore per year (including construction and maintenance).

1. BUILDINGS

Consequent on the formation of Water Resources Organisation from August 1995 to have focused and specialised Water Resources Management, the Building Wing of the Public Works Department began to function as a separate wing viz., "Building Organisation". Now, the Building Organisation is headed by a Chief Engineer with 12 Circles and 43 Divisions. The Electrical wing of this Organisation with 3 Circles and 7 Divisions is also functioning under the Chief Engineer, Buildings.

1.1. ACTIVITIES OF THE BUILDING ORGANISATION

The building activities of the Government like Planning, Designing and construction of Public Buildings and allied works of various Government Departments of the State Government are undertaken by this organisation.

The services of this organisation are also utilised by the Central Government Undertakings, Corporations and Universities etc.

Capital assets of the State Government like, buildings, monuments, memorials are being maintained by this Building Organisation.

Maintenance of the Inspection Bungalows, Circuit Houses, Raj Bhavan at Chennai and Uthagamandalam, Secretariat, Government Estate, MLAs Hostel, Judges Bungalows, Ministers and other VVIP Bungalows are undertaken by this organisation.

The State Government and Central Government, Local Area Development Schemes funded by the MLAs and MPs are also being executed by this organisation. The works related to valuation of the buildings requested by the Vigilance and Anti-corruption Departments, Judiciary are also being carried out by this organisation. The structural stability of public buildings, assessment of rent reasonableness are the other areas of works undertaken by this organisation. Arrangements related to the VIP and VVIP visits are taken care of by this organisation.

1.2. BUILDING RESEARCH ORGANISATION

To utilise the latest technologies and to evolve solution to problems faced during construction activities, one Division is functioning as Building Research Station at Taramani, Chennai.

The contributions of this division are

- (a) Imparting training to Artisans through PWD Kattida Maiyam.
- (b) Providing consultancy service to the Public, Corporation and other autonomous bodies when requested by them.
- (c) Providing materials testing basic research studies to the needy sectors.
- (d) Giving recommendation for Distress Buildings when approached.
- (e) Usage of Fly ash / Pond ash in Building construction.

To prevent environmental pollution by the Fly Ash generated by Thermal power plants, this organisation is utilising the Fly Ash in the form of Fly Ash Bricks and Pond Ash, in filling the low lying areas and embankments wherever possible as per the Government of India orders. Necessary guidelines have been given to the field staff for utilisation of Fly Ash and Pond Ash to the maximum extent possible. To facilitate the above, rates of Fly Ash Bricks and Pond Ash have been included in the schedule of rates.

1.2.1. Substitute for Sand in Building Constructions

Sand which is the main constituent of building construction, has become very scarce due to its huge utilisation in all building activities. To solve this problem, a substitute for sand has to be identified. The Building Research Station has identified quarry dust as the suitable substitute for sand. Necessary analysis has been done and it has been recommended that 30% of the sand used for construction activities could be substituted by quarry dust, mainly for concrete works.

1.3. NEW WORKS

The Building Organisation has proposed to execute Building works during the financial year 2006-2007 for Rs.790.08 crore as follows:

- ❖ Works pertaining to Buildings Organisation under plan scheme at a cost of Rs.222.97 crore and non plan scheme at a cost of Rs.19.94 crore.
- ❖ Works pertaining to other Government Departments under remittance head at a cost of Rs.312.76 crore.
- ❖ Maintenance of building works relating to Building Organisation and other departments under maintenance head for Rs.216.47 crore.
- ❖ Deposit works of other agencies under deposit head at a cost of Rs.17.94 crore.

1.4. ARCHITECTURAL WORKS

To incorporate good Architectural features in the Buildings constructed by this Organisation, a separate Architect Wing is functioning under the control of the Chief Architect (in the rank of Chief Engineer). Experienced Architects are working in this wing for the preparation of Layout Plan, Plans with internal arrangement and elevation etc.

This wing also develops type designs for buildings such as Primary Health Centre, Health Sub Centres, School Buildings, and Backward Class Hostel Buildings etc.

1.5. DEPARTMENT WISE ONGOING SCHEMES

1.5.1. Health and Family Welfare

a. Medical Colleges

During 2005–06, the Government sanctioned 8 works for Rs.22.75 crore towards Construction of buildings for Thanjavur Medical College Hospital of which 4 works are in progress and the remaining 4 works will be taken up shortly.

During 2004-05, the Government sanctioned Rs.184.51 crore for Construction of additional buildings to the existing Medical College and Hospital at Thoothukudi and Thirunelveli and new buildings in Theni, Vellore and Asaripallam in Kanyakumari District. Out of the 174 works, 12 works in Thoothukudi, 15 works in Thirunelveli, 29 works in Theni, 32 works in Vellore and 21 works in Asaripallam (Total 109 works) have been completed and the remaining works are in progress.

b. Health System Project

During 2005-06, the Government sanctioned a sum of Rs. 45.82 crore for the construction of addition, extension, repairs and renovation in 35 Government Hospitals in 5 Districts i.e. Dharmapuri, Krishnagiri, Theni, Pudukottai and Kanyakumari. The works pertaining to the two Districts i.e. Dharmapuri and Krishnagiri have been taken up. For works pertaining to remaining three districts of Theni, Pudukottai and Kanyakumari, works will be taken up shortly.

1.5.2. Home Department

a. Judicial

The Government sanctioned Rs.4.97 crore for construction of buildings for combined court complex at Tiruppathur in Vellore district. The work is in progress.

The Government sanctioned Rs.2.50 crore for Construction of District Munsiff, Judicial Magistrate Court building and Judicial Magistrate Quarters at Kodaikanal in Phase-I. The Government have also sanctioned Rs.3.61 crores being the land cost. Works will be commenced shortly.

The Government sanctioned a sum of Rs.3.57 crore for construction of subsidiary buildings, Judicial Officer's Quarters, Garages, toilets for General Public, Cycle and Scooter Shed, Lawn Garden etc., for the combined Court Building at Theni. The work will be taken up shortly.

b. Prison

The Government sanctioned a sum of Rs. 17.82 crore under Modernisation of prison with the assistance of Government of India, for Construction of New Jail Building in Virudhunagar and Ramanathapuram Districts and new women's Jail building in Trichy, repairs and renovations to central prisons and 13 sub Jails and modernisation of Kitchen in 116 sub Jails, sanitary and water supply works, construction of quarters of Prison staff at Central Prisons in Trichy, Madurai and Coimbatore. Out of the 262 works, 250 works have been completed, 7 works are in progress and 5 works will be taken up shortly.

1.5.3. Revenue

The works sanctioned under the XI Finance Commission were taken up and most of the works were completed except one work which is in progress.

Construction of Collectorate building at Krishnagiri for Rs.10.00 crore is under progress.

Construction of Taluk Office buildings at Sathiyamangalam, Edappadi, Manamelkudi and Ettayapuram at a cost of Rs.1.15 crore each is in progress.

Construction of New Collectorate building at Tirunelveli at a cost of Rs.6.60 crore is in progress.

1.5.4. Education

The Buildings organisation is undertaking the important task of providing facilities to the existing High schools and Higher secondary schools to provide good environment for learning and to improve the quality of education.

The Government accorded sanction for a sum of Rs. 83.74 crore, for similar proposals under phase-III for construction of buildings for 259 Schools, in 7 northern Districts namely Cuddalore, Vellore, Thiruvallur, Dharmapuri, Thiruvannamalai, Kanchipuram and Villupuram with NABARD Assistance. Works in 240 places have been completed, in 17 places works are in progress and works in 2 places have been dropped.

During the year 2005-2006, the Government have sanctioned Rs.130.11 crores for construction of class rooms, lab, toilet blocks and water supply arrangements to 351 Government High Schools / Higher Secondary Schools in 27 Districts under Phase-IV with NABARD assistance and Government's contribution. Out of this, 193 works have been completed, 136 works are in progress. Remaining works will be commenced shortly.

During the year 2005-2006, the Government have sanctioned Rs.102.03 crore for construction of class rooms, lab, toilet blocks and water supply arrangements to 198 Government High Schools / Higher

Secondary Schools in 17 Districts under Phase-V with NABARD assistance and Government's contribution. Out of this, 71 works have been completed, 116 works are in progress. Remaining works will be commenced shortly.

During the year 2006-2007, the Government have sanctioned Rs.161.32 crore for construction of class rooms, lab, toilet blocks and drinking water supply arrangements to 234 Government High Schools / Higher Secondary Schools in 13 Districts under Phase-VI with NABARD assistance and Government's contribution. This work will be taken up shortly

1.5.5. Agriculture

Construction of buildings for Velan Vilai Porul Perangadi at Oddanchathiram in Dindigul District has been sanctioned at a cost of Rs.3.08 crore. The works will be taken up shortly.

1.5.6. Employment and Training

The Government have sanctioned Rs.61 lakh for the construction of Government Industrial Training Institute for Women at Dindigul and the building work is in progress.

1.5.7. MLAs Office Buildings

Construction of Office Buildings for MLAs in their constituencies at a cost of Rs.4.85 lakh each has been sanctioned. Out of this, 226 works have been completed and handed over. Proposal for land rent has been sent to Government for 4 Places i.e. at Thiagarayanagar, Mylapore, Annanagar and Royapuram and site is to be decided at 4 places at Harbour, Purasaiwakkam, Thiruvallikeni and Egmore.

1.5.8. Backward and Most Backward Welfare

Under Part II Scheme, the work of special repairs to the existing 358 Nos. of MBC and DNC Students Hostels at a cost of Rs. 2.76 crore has been sanctioned. Drinking water facilities and improvements to sanitary arrangements are also included. Works have been completed in 355 places and works are in progress in the remaining 3 places.

During the financial year 2004-2005, the Government have sanctioned Rs.31.50 crore for the construction of 100 hostels for BC / MBC students in 79 MLA constituencies. Works were completed in 82 places and the remaining 18 works are in different stages of construction.

1.5.9. Information and Tourism

The Government have sanctioned Rs.4.32 crore for the Infrastructure and Destination Development of Mamallapuram (Phase-II works) under the Assistance of Government of India. The work will be taken up for execution shortly. The Statue of Kannagi which was removed earlier has been reinstalled in the same place in Marina Beach. Full size statue of Nadigar Thilagam Sivaji Ganesan was installed in Kamarajar Salai over a pedestal constructed at a cost of Rs.4.00 lakh.

1.5.10. Animal Husbandry

During 2005-2006, the Government have sanctioned Rs.40.74 crore for construction of 383 nos. of Veterinary units at different places. Out of this, 127 units have been completed (73 buildings are handed over to the user department). The works are in progress in 195 units and the works of remaining 61 units will be taken up shortly.

1.5.11. Registration

The Government have sanctioned Rs.84.50 lakh for reconstruction of the existing old Sub Registrar Office building at Thiruvallikeni, Chennai and the work is in progress.

1.5.12. Commercial Taxes

Construction of Commercial Tax Office building in Sivakasi at an estimated cost of Rs.1.30 crore has been sanctioned and finishing works are in progress.

The Government have sanctioned Rs.5.50 crore for construction of Office building for the Commissioner of Commercial Taxes at Greams road, Chennai and this will be taken up shortly.

1.6. TSUNAMI

During the year 2005-2006, the Government have allotted Rs.36.54 crore to take up gradation and reconstruction of the buildings belonging to Public Works Department, Revenue, Health, Animal Husbandry and Education departments which were badly affected by Tsunami and the works pertaining to Public Works Department and Revenue department are in progress. For the works related to Health and Animal Husbandry, works are in various stages of progress and tendering. For works related Education Department, it will be taken up shortly.

1.7. XII FINANCE COMMISSION

As per the recommendation of the XII Finance Commission, additional grant of Rs.60.64 crore for different departments as Grants-in-aid is proposed to be effected during 2006-2007. A sum of Rs.10 crore for the year 2006-2007 for improvement of various Heritage buildings as per the guidelines of XII Finance Commission is also proposed to be effected during 2006-2007.

1.8. PART II SCHEMES

Ongoing Part II Schemes of the year 2005-2006 are listed below

- Construction of Division Office for Executive Engineer, Public Works Department, Buildings (Construction and Maintenance) Division, Theni for a value of Rs.34.10 lakh.
- Construction of Circuit House at Trichy for a value of Rs.96.50 lakh.
- Construction of Quarters for Superintending Engineers, Public Works Department (Construction and Maintenance) Circle, Tirunelveli in Public Works Department staff quarters Campus at Palayamkottai in Tirunelveli district for a value of Rs.15.00 lakh.

The following works are proposed to be taken up during the year 2006-2007

- ❖ Construction of Division Office for Executive Engineer, Public Works Department Buildings (Construction and Maintenance) Division, with one Sub Division Office at Thiruvarur for a value of Rs.39.00 lakh.

- ❖ Construction of Sub-Division Office with One Section each at Virudhachalam, Kumbakonam, Sathyamangalam, Manapparai, Kulithurai at a value of Rs.8.70 lakh each.
- ❖ Construction of Section Office at Papanasam in Thanjavur District for a value of Rs.4.20 lakh.
- ❖ Construction of Additional Circuit House at Salem for a value of Rs.1.16 crore.
- ❖ Construction of VVIP additional 2 Suites in Circuit House Campus at Coimbatore for a value of Rs.44.00 lakh.
- ❖ Construction of 'C' type Quarters for Government Employees (24 Nos) in 4 blocks of three storied building in Todhunter Nagar at Saidapet, Chennai-15 for a value of Rs.1.18 crore.
- ❖ Construction of quarters for Superintending Engineer, Public Works Department, Building (Construction and Maintenance) Circle, at Trichy, Erode, Chennai for a value of Rs. 20 lakh each.
- ❖ Purchase of New Vehicles for 24 Public Works Department Divisions at Rs. 4.00 lakhs each (24 X 4 = 96) 96.00 lakh.
- ❖ Procurement of 20 Numbers of Desktop Computers with one file server and other necessary Peripherals for a value of Rs.14.00 lakh for use in the Secretariat, Public Works Department, Chennai for installing file management system.

The details of the ongoing major building works and the new major works to be taken up during the year 2006 – 2007 are as follows

MAJOR BUILDING WORKS, WHICH ARE IN PROGRESS

(Rs.in Lakh)

Sl. No	Name of Work	Estimate Cost
1	Construction of various buildings in Hospital and in College for the New Medical College at Theni.	4669.55
2	Construction of various buildings in Hospital and in College for the New Medical College at Vellore.	5049.55
3	Construction of various buildings in Hospital and in College for the New Medical College at Asaripallam.	4465.91
4	Construction of various buildings in Hospital and in College for the Medical College at Tirunelveli.	1584.55
5	Construction of various buildings in Hospital and in College for the Medical College at Thoothukudi.	2681.91
6	Construction of additional buildings for Ladies hostel and C.R.R.I. Quarters at Thoothukudi	310.00
7	Construction of 30 bedded ward and X-ray block at 11 places.	456.00
8	Upgradation of Primary Health Centre in 33 places.	1221.00
9	Construction of buildings for Thanjavur Medical College Hospital at Thanjavur.	2275.00
10	Construction of Combined Court at Tiruppathur	497.00
11	Construction of Collectorate building, Collector's Camp office cum residence and Circuit house at Krishnagiri	1000.00
12	Construction of New Collectorate building at Thirunelveli.	660.00
	Total	24870.47

**DETAILS OF MAJOR BUILDING WORKS, WHICH ARE TO BE
TAKEN UP DURING THE YEAR 2006 – 2007**

(Rs. in Lakh)

Sl. No	Name of Work	Estimate Cost
1	Construction of addition, extension, repairs and renovation in 35 Govt. Hospitals.	4562.00
2	Construction of District Munsiff, Judicial Magistrate Court building and Judicial Magistrate Quarters at Kodaikanal in Phase – I	250.00
3	Construction of subsidiary buildings, Judicial Officers Quarters, Garages, toilets for General Public, Cycle and Scooter Shed, Lawn and Garden etc., for the combined Court Building at Theni in Theni District.	357.00
4	Construction of Office building for the Commissioner of Commercial Taxes at Greams road, Chennai	550.00
5	Construction of buildings for Velan Vilai Porul Perangadi at Oddenchathiram in Dindigul District	308.00
6	Infrastructure and Destination Development of Mamallapuram (Phase-II works)	432.00
7	Construction of strengthening of Psychiatric Units in Stanley Medical College at Chennai, Government Chengalpattu Medical College at Chengalpattu, Government Tirunelveli Medical College at Tirunelveli & Government Madurai Medical College at Madurai.	193.00
8	Construction of Memorial Mandapam and Auditorium with 400 Sitting capacity of Vallal Adhiyaman at Adhiyaman Village in Dharmapuri District.	115.00
	Total	6767.00

2. IRRIGATION

2.1. Soil is the womb for all production. But water is an essential ingredient to trigger production and ensure good yield. Both the monsoons, the South West and the North East have influence on the State. But lying in the leeward side of the high ranges of the Western Ghats, this State misses to reap the full benefit of the more dependable intensive rainfall from the South West monsoon, The retreating monsoon, the North East, is the main source for the State, though with frequent breaks, but intensive often triggered by low pressure in the Bay of Bengal. The annual average of rainfall for the State is 925 mm of which 308 mm (33%) occurs during the South West monsoon season, 439 mm (47%) during the North East monsoon season and the rest 178 mm (20%) during the winter and summer seasons.

2.2. Tamil Nadu with 7% of population of the country is endowed with only 3% of water resources of India. The State's water resources are dependent on monsoon rainfall. Taking into account the National Water Policy 2002, the State Water Policy is being re-drafted emphasizing the need for utmost efficiency in water utilization and public awareness of the importance of its conservation.

2.3. SURFACE WATER POTENTIAL

The total water potential of the State including ground water is 46,540 MCM (1643 TMC). The total surface water potential of the State is 24,160 MCM (853 TMC) including the contribution (7391 MCM or 261 TMC) from the neighbouring States, viz., Kerala, Karnataka and Andhra Pradesh.

Sl. No.	Water Potential	MCM	TMC
1	Surface Water Potential		
	Within the State	16769	592
	From neighbouring States	7391	261
	Sub-Total	24160	853
2	Ground Water Potential	22380	790
	Total	46540	1643

2.4. GROUND WATER POTENTIAL

Water is a serious limiting factor as the State has harnessed the available surface water potential. Of the total annual water potential of 46,540 million cubic metres (MCM) in the State, surface flows accounts for nearly half. Of the two major sources of irrigation water in the State namely, surface and ground water, the surface water potential has almost been fully (more than 95%) tapped since late sixties. Ground water resource is, therefore, the only alternative source for further development.

According to the revised Ground Water Estimation Methodology – 1997 recommended by a Committee constituted by Ministry of Water Resources, Government of India, the ground water position is as follows:

(as on January 1998)
(million cubic meter)

Total dynamic ground water resources in Tamil Nadu	23,070
Net annual ground water availability	20,763
Gross draft for irrigation	16,581
Gross draft for domestic and Industrial demand	646
Allocation for domestic and Industrial supply up to next 25 years	879
Net ground water availability for future irrigation	3,303

When this estimate is projected to January 2003, the balance ground water potential available for future development worked out to 3,142.27 M Cum. This balance potential is distributed in 97 safe Blocks, 105 semi-critical Blocks and 37 critical Blocks. 138 Blocks are already over-exploited.

Sl No.	Category of Blocks	No. of Blocks	
		January 1998	Updated for January 2003
1	Safe Blocks	137	97
2	Semi-Critical Blocks	70	105
3	Critical Blocks	35	37
4	Over-exploited Blocks	135	138
5	Saline Blocks	8	8
	Total	385	385

2.5. AREA UNDER IRRIGATION

The net area irrigated rose from 21.11 lakh hectare in 1950's to 27.75 lakh hectare in the 1990s and is reported to have come down to 21.48 lakh hectare during 2004-05. The State's per capita irrigation potential in per capita terms is 0.08 hectare, compared to the All India average of 0.15 hectare. The State is dependent on the ground water resources for providing irrigation to additional acreage and to stabilize the existing area under irrigation.

The three main sources of surface irrigation in the State are rivers, tanks and wells. There are 39,202 tanks, 2295 irrigation main canals and 18,16,434 irrigation wells in the State.

3. IRRIGATION PROJECTS

3.1. THE WATER RESOURCES CONSOLIDATION PROJECT

The Water Resources Consolidation Project was cleared by the World Bank in 1995 at a total cost of Rs. 840.84 crore. The Project was to close on 31.3.2002. The World Bank extended the project period up to 31.03.2004 and subsequently up to 30.09.2004.

To improve the overall efficiency and storage capacity of the State's meager water resources, a follow-on project to the Water Resources Consolidation Project, viz. IAMWARM Project (Irrigated Agriculture Modernisation and Water Resources Management) is contemplated for implementation with World Bank assistance at an estimated cost of about Rs.3900 crore. This successor Project will be planned and executed on an Integrated Approach with participation of the Line Departments using the experience of the pilot project executed in Hanumannathi Sub Basin of Tamiraparani Basin in Tirunelveli District.

3.2. HYDROLOGY PROJECT

The World Bank Aided Hydrology Project for Tamil Nadu is intended to improve institutional and organizational arrangements, technical capabilities and infrastructure available for measurement, validation, collection, analysis, transfer and dissemination of hydrological, hydro-meteorological and water quality data to eligible

users. It also would establish permanent and prolonged hydrological data management system so as to get real time field data of hydro-meteorological observations in perennial river basins, for successful flood forecast and to assist the State in the development of Scientific Data Base consisting of all aspects of Hydrological cycle including surface and ground water in terms of quality and quantity. The project period was originally six years from 1995-2001 and later extended and completed on 31.12.2003. The Hydrology Project Phase II has commenced in April 2006 and will continue for six years. The project estimate is Rs.25.27 crore.

4. DIVERSION OF THE SURPLUS WATER TO TAMIL NADU FROM ADJACENT STATES

4.1. Tamil Nadu is a deficit State in water resources and has almost fully exploited all its surface water potential. The neighbouring States like Karnataka, Kerala and Andhra Pradesh are richly endowed with water resources. For further water resources development, Tamil Nadu has to depend upon inter-basin water transfers from the adjoining basins of the neighbouring States or even to Long Distance Transfers. The National Water Development Agency has identified the surplus and deficit basins and assessed the surplus available in Mahanadhi and Godhavari for transfer to Krishna, Pennar, and Cauvery and Vaigai basins.

According to the proposal, the surplus flows of Mahanadhi and Godhavari River would get diverted to the Krishna and Pennar River in Andhra Pradesh. The diversion from Pennar to Cauvery would be through a link canal 538 Kilo metre long to divert about 8565 Mm³ (303 TMC) of water from Somasila reservoir to the Grand Anicut across river Cauvery. The link canal would provide irrigation and drinking water supply enroute in Andhra Pradesh and Tamil Nadu. Further a quantity of 3855 Mm³ (136.21 TMC) would be delivered at Grand Anicut for use in Cauvery Delta and also in the areas south of Cauvery basin upto Gundar.

The Cauvery-Vaigai-Gundar link is the last leg in the link. This aims at diversion of 2252 Mm³ (79.5 TMC) from the quantity of 3855 Mm³ (136.21 TMC) to the South of Cauvery upto Gundar for irrigation, water supply etc.

This Government is always eager to maintain cordial relationship with neighbouring States to achieve negotiated settlement on inter state water issues. Now, the time is propitious to initiate the dialogue with the States of Andhra Pradesh and Orissa through the Government of India on interlinking of Mahanadhi-Godhavari-Krishna-Pennar with Cauvery and then on with Vaigai and Gundar. This Government will urge the Government of India to take up this project on a priority basis.

4.2. ECONOMIZING THE USE OF IRRIGATION WATER

Since the surface water potential is almost fully utilized, there is hardly any scope for new Major or Medium Irrigation Projects in the State. Conserving the available water by modernization of the existing canal systems and tanks has to be given more attention so that optimum utilization of water could be ensured and wastage avoided. Water thus saved could be utilized for extending irrigation facilities to new areas or for raising additional crops in the same area.

The World Bank funded IAMWARM Project planned from 2006-2007 will aim not only to modernization of the water sources but also increasing the farm income through improved agricultural practices and also by economizing the use of water.

5. IRRIGATION SCHEMES

5.1. PRESENT STAGE OF THE ONGOING IRRIGATION SCHEMES

(1) Nanganjiar Reservoir (Dindigul District)

This scheme is to form a reservoir across Nanganjiyar, a tributary of river Amaravathy near Idayakottai village in Ottanchathiram Taluk, Dindigul District to benefit 2,530 hectares of new ayacut with a stabilisation of 24 hectares of old ayacut in Ottanchathiram Taluk of Dindigul District and Aravakurichi Taluk of Karur District at an estimated cost of Rs.20.70 crore in 1990. The Government have sanctioned the Revised Estimate for Rs.41.68 crore.

Though this scheme has been completed in all respects the unprecedented rain in November 2005 has caused failure in the bund.

Now immediate rectification work has been undertaken in consultation with the Design and Research and Construction Support Wing.

This scheme is proposed to be completed before October 2006.

(2) Irukkangudi Reservoir (Virudhunagar District)

This scheme contemplates formation of reservoir across Vaippar near Irukkangudi village, Sattur Taluk, Virudhunagar District at a cost of Rs.28.70 crore in 1992. Subsequently, revised estimate for Rs.62.20 crore has also been approved. The scheme aims at stabilising an extent of 254 hectares, bridging the gap of 255 hectares and giving new irrigation facilities to 3,705 hectares of dry lands in Vilathikulam Taluk of Thoothukudi District.

Overall 94% of works have been completed and the remaining work will be completed shortly.

(3) Malattar Anicut (Ramanathapuram District)

The Government have sanctioned a scheme at an estimated cost of Rs.15.40 crore for the construction of an anicut across Malattar River below the existing Kamudhi regulator and just below the confluence point of Gridhamal and Paralayar Rivers with Malattar near Sengapadi village in Kamudhi Taluk of Ramanathapuram District in 1994. Revised Estimate for Rs.42.00 crore have also been approved.

This scheme will benefit stabilisation of an extent of 1758 hectares besides bridging a gap of 156 hectares under the existing 54 tanks in Kamudhi and Kadaladi Taluks.

About 50% of the work has been completed and is programmed to complete the entire work by March 2007.

(4) Providing Irrigation Facilities to 58 Villages in Usilampatti Taluk (Madurai District)

Under this scheme excavation of a high level canal of 27.26 Kilo metre from the proposed head works on the right flank of the Vaigai Dam at LS 2425 metre from the spillway was sanctioned in the year 1996 to provide irrigation facilities to 58 villages in Usilampatti Taluk by utilizing the surplus flood water from Vaigai Reservoir. It includes

formation of 3 new tanks to get supply from the above high-level canal. The Government have accorded approval for this scheme at an estimated cost of Rs.33.81 crore. Subsequently, revised estimate for Rs.74.60 crore has also been approved.

By implementing this scheme, 570 hectares of wet lands will be stabilised besides bridging a gap of 128 hectares of wet lands under 29 existing tanks and 3 existing ponds in Usilampatti Taluk. Further new dry ayacut of 227 hectares will be brought under irrigation through 3 new tanks.

The work has been programmed to be completed by March 2007.

(5) Andiappanur Odai (Vellore District)

This scheme sanctioned in 1996 is for the formation of a reservoir of 112 M.Cft. capacities across Andiappanur Odai near Andiappanur village in Vaniyambadi Taluk of Vellore District. The revised estimated cost of Rs.27.38 crore has been accorded. An extent of 810 hectares of direct ayacut in Andiappanur and Irunappattu villages in Vaniyambadi Taluk will be benefited for raising double dry crops.

This project is being implemented through the loan assistance from NABARD. Earth Dam, Roadwork, uncontrolled spillway and Drainage works have been completed. Concrete works are in progress.

(6) Shenbagathope Reservoir (Tiruvannamalai District)

Formation of a reservoir across Kamandaluru in Shenbagathope village of Polur Taluk in Tiruvannamalai District at an estimated cost of Rs.21.33 crore was sanctioned in 1996. Revised administrative sanction for Rs.34.00 crore has also been accorded.

This scheme will benefit 2067 hectares by stabilisation and 642 hectares by bridging the gap in Polur, Arani, Arcot, Cheyyar and Vandavasi taluks.

This work is being implemented through "NABARD" loan assistance. 98% of the work has been completed and the balance works will be completed shortly.

(7) Bathalapalli–Malattar Reservoir (Vellore District)

Formation of a reservoir across Malattar River near Bathalapalli village in Gudiyatham Taluk, Vellore District was sanctioned in 1997 at an estimated cost of Rs.29.55 crore.

An extent of 1,064 hectares of ayacut will get stabilized besides bridging the gap of 61 hectares in Gudiyatham Taluk. Drinking water facilities will also be provided to Peranampet town and the wayside villages and for industrial purposes. This scheme will improve the water quality of the wells in the area now affected by pollution from tanneries.

(8) Kuppanatham Reservoir (Tiruvannamalai District)

The Government have sanctioned in 1996 a scheme for formation of a reservoir across Cheyyar near Kuppanatham village in Chengam Taluk of Tiruvannamalai District, at an estimated cost of Rs.35.46 crore.

An extent of 2528 hectares ayacut will get stabilized besides bridging the gap of 580 hectares under 22 tanks fed by 5 anicuts and 2 open off-takes across Cheyyar in Tiruvannamalai and Polur Taluks.

Acquisitions of patta land have been completed and transfers of poramboke lands are in progress. This work is implemented through NABARD loan assistance at a revised cost of Rs.43.50 crore.

Work is in progress. About 38% of the work has been completed and the scheme is expected to come into operation from next year.

(9) Varattar–Vallimadurai Reservoir (Dharmapuri District)

The Government have sanctioned the formation of a reservoir across Varattar near Vallimadurai village in Harur Taluk in Dharmapuri District in 1997 at an estimated cost of Rs.19.20 crore. Revised Estimate of Rs.35.95 crore has been sanctioned for implementation with NABARD assistance.

After completion of the scheme, an extent of 110 hectares of wetlands will be stabilized and an extent of 1047 hectares of single crop

dry lands under Keeraipatti anicut, Ellappudayampatti anicut and Mankuppam Eri in Harur Taluk will also get the benefits.

98% work has been completed.

(10) Tank across Nayodai (Dindigul District)

Formation of a tank across Nayodai a tributary of Mangariyar in Kannivadi village, Dindigul Taluk was sanctioned in the year 1998 at an estimated cost of Rs.3.50 crore. Revised Administrative sanction for this scheme has also been accorded for Rs.7.20 crore.

The scheme will provide irrigation facilities to an extent of 148 hectares in Dindigul Taluk.

About 95% of work has been completed and the balance work will be completed shortly.

(11) Tank across Ramakkal Odai and Anaivilundan Odai (Dindigul District)

In the year 1998 formation of a tank across Ramakkal Odai and Anaivilundan Odai, tributaries of Kodaganar River in A.Vellode village and Keelakottai village in Dindigul Taluk was sanctioned at an estimated cost of Rs.3.55 crore. Revised Administrative sanction has also been accorded for Rs.5.65 crore. An extent of 107.65 hectares of dry lands in Dindigul Taluk will be benefited.

Nearly 81% of work has been completed. Land acquisition works for canal are in progress.

(12) Reservoir across Nallathangal Odai (Erode District)

In the year 1998 formation of a reservoir across Nallathangal Odai near Eswarankoil in Ponnivadi village of Dharapuram Taluk was sanctioned at an estimated cost of Rs.31.01 crore. Revised Administrative sanction has also been accorded for Rs.42.70 crore.

Irrigation facilities will be provided to an extent of 1,919.87 hectares of dry lands in Dharapuram Taluk.

About 95% of work has been completed and the balance work will be completed shortly.

(13) Reservoir across Vellakkal Kanar (Vellore District)

The Government in the year 1998 sanctioned the scheme for formation of a reservoir across Vellakkal Kanar near Vinnamangalam village in Vaniyambadi Taluk of Vellore District at an estimated cost of Rs.7.70 crore.

An extent of 431 hectares of existing ayacuts will be stabilised besides bridging a gap of 57 hectares in Vaniyambadi Taluk.

Clearance of the Government of India for forest land is awaited.

Work will be commenced after obtaining loan assistance from NABARD.

(14) Tank across Sirumalaiyar (Dindigul District)

In 1998, formation of a new tank across Sirumalaiyar near Rajadhani Kottai village in Nilakottai Taluk at an estimated cost of Rs.4.91 crore was sanctioned. Revised estimate for Rs. 8.87 crore has also been sanctioned.

An extent of 128 hectares of dry lands in Oruthattu village in Nilakottai Taluk will be benefited.

(15) Formation of 18th Canal in Uthamapalayam Taluk in Theni District

In the year 1999, formation of 18th Canal in Uthamapalayam Taluk was sanctioned at an estimated cost of Rs.26.52 crore. The Government have also sanctioned the revised estimate for Rs.28.60 crore.

In Uthamapalayam Taluk an extent of 511.16 hectares will get stabilized besides bridging a gap of 73.90 hectares. New area of 22.81 hectares will also get the benefit.

About 66% of the work has been completed. The scheme will come in to function from 2007.

(16) Reservoir across Mambazhathuraiyar (Kanyakumari District)

The Government sanctioned a scheme in the year 1999 for formation of a reservoir across Mambazhathuraiyar near Villukuri village in Kalkulam Taluk at an estimated cost of Rs.9.50 crore. Revised estimate for Rs.14.80 crore has also been sanctioned to stabilise 3.57 hectares to bridge a gap of 25.82 hectares in single crop and 18.14 hectares in second crop and to provide irrigation facilities to an extent of 308.98 hectares in Kalkulam Taluk.

The work will be commenced shortly.

(17) Extension of Nilaiyur Channel (Madurai District)

The scheme for extending the Nilaiyur channel from upstream of Perungudi tank to feed Valayakulam and Kambikudi tank series in Madurai, Virudhunagar and Sivagangai Districts was sanctioned at an estimated cost of Rs.8.94 crore in the year 1999.

An extent of 2686.53 hectares will get stabilized and a gap of 1126.03 hectares in Madurai South Taluk, and Thirumangalam Taluk of Madurai District, Kariyapatti Taluk of Virudhunagar District and Manamadurai Taluk of Sivaganga District will be bridged. Revised estimate for Rs.19.49 crore has been sanctioned.

The work will be completed shortly.

(18) Reservoir across Mirukandanadhi (Tiruvannamalai District)

In the year 1999, formation of a reservoir was sanctioned across Mirukandanadhi near Melsolankuppam village in Polur taluk at an estimated cost of Rs.16.79 crore. Revised administrative sanction for Rs.18.90crore has been sanctioned.

This scheme will stabilise irrigation in an extent of 778.05 hectares and bridge a gap in 81.10 hectares in Polur taluk.

About 90%of the work has been completed.

(19) Diversion of Vaigai floodwater to feed Rajakambeeram Tank and 15 other Tanks (Sivagangai District)

A scheme for diversion of Vaigai floodwaters to feed Rajakambeeram tank and 15 other tanks in Manamadurai taluk has been sanctioned at an estimated cost of Rs.3.09 crore in 1999.

This scheme will stabilise irrigation in an extent of 1039.61 hectares, bridge a gap of 198.99 hectares and provide irrigation facilities to an extent of 8.25 hectares in Manamadurai and Paramakudi taluks.

All works have been completed except the railway bridge crossing the channel. A sum of Rs.33.00 lakhs has already been paid to the railways for completing the bridgework.

(20) Formation of a Tank across Mathalapallam River (Dharmapuri District)

A scheme was sanctioned by the Government at an estimated cost of 14.15 crore for formation of a tank across the river Mathalapallam in Ramakondahalli Village of Pennagaram Taluk in 2001. An ayacut of 445 hectare will be benefited by this scheme. Land Acquisition work is in progress.

About 50% of work has been completed. Remaining work is in progress with a programme to complete it by March 2007.

(21) Excavation of new supply channels from Badathalav tank to feed Vennampalli tank and 10 other lower down tanks upto Kashimpur tank of Krishnagiri Taluk in Krishnagiri District.

The Government have sanctioned the above work for Rs.7.00 crore in 2001.

Under this scheme, the surplus water from Badathalav Tank is proposed to be conveyed through supply channel to Vennampalli and 10 other tanks upto Kashimpur tank to irrigate direct ayacut of 542

hectare and indirect ayacut of 607 hectare. The work is executed with NABARD loan assistance.

About 80% of the work has been completed. Further work is in progress and will be completed by March 2007.

(22) Formation of a pond across Sambarpallam Odai in SF No.18 in Alamarathupatty Village and conversion of defunct Sorakkapatti tank to a pond by linking the surplus of Sambarpallam Pond in Mettur Taluk in Salem District

The Government have accorded sanction for Rs.1.25 crore for the above work in 2003.

By implementing the scheme 185 hectare of dry land will be converted into wetland. In addition, water table will rise in the adjacent wells.

All works except the work in forest land have been completed. Remaining works are programmed to be completed soon on acquiring the forest land.

(23) Formation of a new tank across Periyoothu Odai (Theni District)

Formation of a new tank across Periyoothu Odai near Uthamapalayam Taluk at an estimated cost of Rs.2.02 crore has been sanctioned in 2003.

This scheme will provide irrigation facilities to an extent of 47.55-hectare dry land. About 80% of the work has been completed and remaining work will be completed by December 2006.

(24) Formation of a new tank across Ayyanarkoil Odai (Madurai District)

The Government have sanctioned a scheme for formation of a new tank across Ayyanarkoil Odai in Mallapuram Village in Peraiyur

Taluk at an estimated cost of Rs/3.54 crore in 2004. Revised estimate for Rs.7.50 crore has also been approved.

The scheme will provide irrigation for 294 hectare and will prevent flood damages.

About 63% of the work has been completed. Remaining works are in progress and will be completed shortly.

(25) Reconstruction of Bed Dam in the left arm of the Kosasthalaiyar (Thiruvallur District)

The Government have sanctioned Rs.2.50 crore for reconstruction of a Bed Dam across Kosasthalaiyar river in Edayanchavadi Village and formation of a flood bank on both sides of the upstream and downstream of the river in 2004.

The work is executed with NABARD loan assistance

About 65% of work has been completed. Further work is in progress and will be completed before March 2007.

(26) Increasing the carrying capacity of Marudur Melakkal from Marudur Anicut to Kalvoy tank Thoothukudi District

In the year 2004, administrative sanction was accorded for Rs.9.527 crore for the above work to increase the carrying capacity of Marudhur Melakkal in order to stabilize and bridge the gap of Marudhur Melakkal ayacut and also give assured supply of 500 cusecs to Kalvoy sadayeneri Channel separately without affecting the discharge of Marudhur Melakkal (1060 cusecs).

After completion of the above scheme, the existing Marudhur Melakkal ayacut gap of 280 hectare will be bridged and 534 hectare will be stabilized and the tail end tanks will also get assured supply.

About 17% of the work has been completed. Further work will be taken up during non -irrigation season and completed.

(27) Formation of a reservoir across Vandal Odai (Tirunelveli District)

The Government have accorded administrative sanction for Rs.6.14 crore in 2004 for the work of formation of a reservoir across Vandal odai near Pottal Village in Ambasamudram Taluk of Tirunelveli District with NABARD loan assistance.

By implementing the scheme, an extent of 87.51 hectare of gap in Kar and 41.37 hectare of gap in Pishanam will be bridged and an extent of 3.41 hectare in Kar and 33.57 Pishanam will be stabilized under the Manimuthar Main Canal ayacuts. Further 36.82 hectare of new dry ayacut will be brought under cultivation.

Overall 88% of work has been completed. Remaining works are in progress and will be completed shortly.

(28) Modernisation of Thirukurunkudi Periakulam (Tirunelveli District)

Modernisation of the Thirukurunkudi Periakulam in Nanguneri taluk of Tirunelveli District. was sanctioned at an estimated cost of Rs.1.0277 crore in the year 2004.

About 30% of work has been completed.

(29) Reconstruction of Regulator No.2 of Pasimuthan Odai (Cuddalore District)

Administrative sanction for Rs.2.64 crore was accorded for reconstruction of Regulator No.2 of Pasimuthan Odai at LS 10.27 Kilo metre and improvements to the branch channels of Pasimuthan Odai in Chidambaram Taluk in the year 2004.

By improving the branch channels of Pasimuthan Odai, 1582 hectare in 13 villages will be benefited. NABARD has sanctioned a loan of Rs.2.517 crore to this scheme.

About 70% of works has been completed.

(30) Formation of a tank across Perumpallam Odai (Salem District)

The Government accorded sanction for Rs.4.95 crore for formation of a tank across Perumpallam Odai near K.Morur in Kanavaipudur Village of Omalur taluk in the year 2004.

By implementing this scheme 85 hectare of gap will be bridged and 75 hectre will be stabilized.

This work is programmed to be completed by September 2006.

(31) Formation of a tank across Virumanuthu Odai (Theni District)

The Government have accorded sanction for Rs.2.05 crore for formation of a tank across Virumanuthu Odai near Konavaipatti (Ganesapuram) village in Andipatti taluk in 2005.

By implementing the scheme 35 hectare of wetland will be benefited.

About 48 % work of this project has been completed and further work is in progress.

(32) Formation of a tank across Kundampatchi odai (Dindigul District)

The Government have accorded sanction for Rs.3.50 crore for formation of a tank above the existing Kundampatchi tank across Kundampatchi odai near Poomparai village in Kodaikanal taluk in 2005.

By implementing the scheme 99 hectare of wetland will be benefited.

Land acquisitions of forest lands is in progress.

(33) Formation of a tank across Sangulian Koil Odai (Dindugal District)

The Government in 2005 have accorded sanction for Rs.1.90 crore for formation of a tank across Sangulian Koil Odai / Sinnathu odai in Anjukulliapatti village of Dindugal Taluk.

By implementing the scheme 140 hectare of wetland will get benefited.

The work will be taken up shortly.

(34) Reconstruction of 400 Irrigation structures in Cauvery delta and Cauvery fed Districts

The Government have accorded sanction for Rs.20.00 crore for the reconstruction of 400 irrigation structures in the Cauvery delta and Cauvery fed districts in 2006 to be carried out in packages.

The work will be taken up after the current irrigation season.

(35) Restoration of 290 Non-System (Rainfed) Tanks

In 2005, under the Accelerated Restoration Programme of Traditional Irrigation, the Government have accorded sanction for Rs.62.50 crore for the benefit of 34,194 hectares. The works are in progress and will be completed by March 2007.

(36) Formation of a pond across Odai near Munandipatti (Theni District)

A sum of Rs.70.00 lakhs has been sanctioned in the year 2005 for the formation of a pond across Odai near Munandipatti village in Andipatti Taluk benefiting an extent of 35 hectares.

Work is to be commenced shortly.

(37) Formation of a tank across Kurungur (Dindigul District)

In the year 2005, sanction has been accorded for a sum of Rs.90.00 lakh for the formation of a new tank across Kurungur (Arunkattukanmoi) in Poondi Village of Kodaikkanal Taluk.

An extent of 68 hectares will be benefited.

About 15% of works have been completed and programmed to be completed during this year.

(38) Formation of a tank across Talaimalaivari (Trichy District)

The Government in the year 2005 have accorded sanction for Rs.68.00 lakh to benefit an extent of 52 hectares for the formation of tank across Talaimalaivari near Tholuthurpatty in Musuri Taluk.

Acquisition of land is in progress.

(39) Formation of a tank near Senthalaikaradu (Karur District)

Government in 2005 have accorded sanction for Rs.68.00 lakh for the formation of tank near Senthalaikaradu in Palaviduthi village of Kulithalai Taluk. An extent of 33 hectares will be benefited by this scheme.

About 85% of works have been completed.

(40) Formation of a pond in Kalapanaickenpatty (Namakkal District)

The Government in 2005 have accorded Rs.25.00 lakh for the formation of a pond in S.F.No.26 of Kalapanaickenpatty village in Namakkal Taluk. An extent of 12 hectares will be benefited.

Work is to be taken up shortly.

(41) Formation of a pond in Moongil Eri (Krishnagiri District)

The Government in 2005 have accorded sanction for Rs.36.00 lakhs for the formation of a pond in S.F. No.59, 65, 66 and 67 of Moongil Eri in Uthangarai Taluk. An extent of 15 hectares will be benefited. Besides, stabilization of about 6 hectares is contemplated.

The scheme is programmed to be completed during this year.

(42) Formation of a pond in Perumpallam. (Coimbatore District)

The Government in 2005 have accorded sanction for Rs.45.00 lakhs for the formation of a pond in S.F. No.297 of Somavarapatty Village in Udumalpet Taluk. An extent of 17 hectares will be benefited. Besides, stabilization of ayacut of 6 hectares is contemplated.

The work will be taken up shortly.

(43) Formation of a pond across Vari near Arasakavundanur Hamlet (Karur District)

The Government in 2005 have accorded sanction for Rs.17.00 lakhs for the formation of a pond across Vari near Arasakavundanur Hamlet Sembmatham Village in Kulithalai Taluk. An extent of 41 hectares will be benefited.

The work will be taken up shortly.

(44) The Schemes executed under NABARD during the year 2005-2006

(Rs in lakhs)

S. No	Name of the scheme	Estimate Amount	Present stage
1	Extension of right main canal of Krishnagiri Reservoir project to Bommasamudram, Kariamangalam, Thindal tanks in Palacode Taluk of Krishnagiri District.	706.32	50% work completed

2	Construction of an anicut across Markandanadhi near Cigarapalli village of Krishnagiri Taluk of Krishnagiri District.	232.80	Work in progress
3	Formation of a new tank near A.Velayuthapuram Village in Vilathikulam Taluk in Thoothukudi District.	38.44	Work completed
4	Formation of new tank near Chockalingapuram in Chekkarakudi village of Srivaikundam Taluk of Thoothukudi District.	40.75	75% work completed
5	Formation of a new tank across Achankulam village of Kovilpatty Taluk of Thoothukudi District.	52.23	Work completed.
6	Formation of a new tank near Kumara Ettaiyapuram Village in Kovilpatti Taluk in Thoothukudi District.	25.96	Work completed
7	Formation of a new tank near Subbalapuram Village in Vilathikulam Taluk in Thoothukudi District.	50.30	50% work completed
8	Formation of a new tank near Kattarankulam Village in Kovilpatti Taluk in Thoothukudi District.	19.31	Work in progress
9	Formation of a new tank near Melapandiyapuram Village in Ottapidaram Taluk in Thoothukudi District.	17.53	70% work completed
10	Construction of an anicut across Nalliuppodai to feed Nambipuram tank in Ettayapuram Taluk of Thoothukudi District.	113.85	70% work completed
11	Rehabilitation of Dhali channel system and Valayapalayam system in Udumalpet Taluk of Coimbatore District.	440.92	Work in progress

12	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Pavilangal anicut & channel of Parambikulam Aliyar Project in Pollachi Taluk of Coimbatore District.	138.68	35% work completed
13	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Ariyapuram anicut & channels.	124.23	Completed
14	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Perianai anicut & channels.	180.86	40% work completed
15	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Kariapatti anicut & channels.	210.53	40% work completed
16	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Vadakkalur anicut & channels.	120.83	Work completed
17	Modernisation and Upgrading the standards of Bargur supply channel.	514.70	Work in progress
18	Modernisation and Upgrading the standards of supply channel of Penukondapuram Tank in Sonahalli village of Pochampalli Taluk.	426.88	Work in progress
19	Conversion of damaged mud korambu into masonry anicut to make irrigation facilities to the ayacut under Mandhikulam channel of Panaiyur Tank in Panaiyur village of Sankarankovil Taluk of Tirunelveli District.	44.52	Work completed
20	Excavation of supply channel from Alathur channel to Aritharimangalam tank in Tiruvannamalai District.	26.06	Work is in <input type="checkbox"/>

21	Rehabilitation of Cauvery Regulator at G.A. in Thanjavur district.	1738.83	Among these, two packages have been completed. The balance three-package works are in progress.
22	Rehabilitation of Vennar Regulator at G.A. in Thanjavur district.		
23	Rehabilitation of G.A. Canal Regulator at G.A. in Thanjavur district.		
24	Rehabilitation of Cauvery Regulator at Mile 26/6 at Thirukattupalli in Thanjavur district.		
25	Rehabilitation of Kudamurutti Regulator at Mile 26/6 at Thirukattupalli in Thanjavur district.		

**(45) Modernisation and Development of Minor Irrigation.
(a) RIDF IX**

The Government have accorded sanction for Rs.48.43 crore for modernisation of 157 Non-System Minor irrigation tanks under RIDF IX in 17 Districts with the loan assistance from NABARD. Works in 122 tanks have been completed and works in the remaining tanks are nearing completion.

(b) RIDF X

Sanction has been accorded for Rs.68.02 crore for modernisation of 250 Non-System Minor irrigation tanks under RIDF X in 23 Districts with a command area of 26900 hectare with the loan assistance from NABARD. All these tank works are planned to be completed by March 2007.

(c) RIDF XI

A sum of Rs.20.59 crore has been sanctioned for modernisation of 96 Non-System Minor irrigation tanks under RIDF XI in 16 Districts with a command area of 7909 hectare with the loan assistance from NABARD. All these tank works are planned to be completed by March 2007.

6. NEW SCHEMES

It is proposed to execute the following new schemes at an estimated cost of Rs. 39.14 crore in 2006-07

6.1. SMIP SCHEMES

(Rs. In lakh)

S. No	Name of the Schemes	Estimate Amount
1	Formation of a new pond across Ottupallam odai near Mottur Village in Gudiyatham Taluk of Vellore District.	20.00
2	Construction of check dam across Palar near Vaniyambadi Village to feed Udayendram Tank in Vaniyambadi Taluk of Vellore District.	60.95
3	Improvements to the existing check dam at Melmittalam village in Vaniyambadi Taluk of Vellore District.	15.00
4.	Excavating a supply channel from Boraikanar to feed Erakuttai and other tanks in Kothakottai village of Vaniyampadi Taluk of Vellore District.	49.00
5	Construction of a masonry structure in the place of mudkondam across the surplus course of Dusimamandoor tank in Cheyyar Taluk of Tiruvannamalai District.	47.23
6	Formation of a new pond in S.F. 894 of Kasilingapalayam Village near Thottiyanthurai Village in Dharapuram Taluk of Erode District.	27.16
7	Formation of a pond across jungle stream near Baleguli Village in Krishnagiri Taluk and District.	18.50
8	Construction of a check dam across Karimalai Pallam in S.F.No.266 of Bellampalli Village near Baliganur of Krishnagiri Taluk and District.	12.30
9	Formation of a new pond in S.F.No.44 in D.Perumpalayam Village in Salem Taluk and District.	15.70

10	Construction of an anicut across Vellar to feed Nallampillaikulam in Meenaveli Village of Illuppur Taluk of Pudukottai District.	25.20
11	Formation of a new pond in S.F. No.677 across Karadi Odai in Andipatti Village in Palani Taluk of Dindigal District.	16.55
12	Formation of a percolation pond in SF No.378, 379 of Chatrapatti Village of Oddanchatram Taluk of Dindigal District.	15.30
13	Conversion of the existing 1 st check dam across Kattaipulli odai into percolation pond in Palavoor Village in Radhapuram Taluk of Tirunelveli District.	20.00
	Total	342.89

6.2. MINOR IRRIGATION SCHEMES

1	Construction of Bed Dam and dividing wall across Palar near Kavasampattu Village and regrading the existing Goddar river in Vellore Taluk	650.00
2	Providing dividing wall below the existing Aquaduct besides necessary Energy Dissipation arrangements and construction of anicut across Koundanyanadhi near Chitthathur Village in Gudiyatham Taluk in Vellore District	450.00
3	Excavation of supply Channel from Jerthalav canal at L.S.5690 M to feed Thotlampatti tank to Paparapatti tank and other 15 lower down tanks in Palacode and Pennagaram Taluks in Dharmapuri District.	629.00
4	Formation of a new tank across Karupakoil odai in Konapatti Village in Dindigul Taluk.	272.00
	Total	2001.00

(Rs. In lakh)

6.3. ANTI SEA EROSION WORKS

(Rs. In lakh)

1	Construction of groynes at Therasapuramin in Thoothukudi District	710.00
2	Construction of groynes in Iddinthakarai village in Radhapuram constituency of Tirunelveli District	620.00
	Total	1330.00

7. SCHEMES IMPLEMENTED WITH LOAN ASSISTANCE FROM OTHER FINANCIAL INSTITUTIONS

Besides State resources, it has been proposed to take up various schemes by availing external assistance from financial institutions.

7.1. The following schemes are proposed to be taken up with the assistance of National Bank for Agriculture and Rural Development (NABARD) from the year **2006-2007** onwards.

(Rs in crore)

S. No	Name of the scheme	Estimate Amount
1	Rehabilitation of Sholayar Dam in Coimbatore District.	6.4793
2	Rehabilitation and Standardisation of Lower Bhavani Dam at Bhavani Sagar in Erode District.	7.2941
3	Construction of an anicut across Bargur river near Kuttur Village of Krishnagiri Taluk to feed G.D. Kuppam tank in Uthangarai Taluk of Krishnagiri District.	0.3056
4	Formation of a new tank across odai near Seelanayakkanpatti village in Peraiyur Taluk of Madurai District.	1.6968
5	Constructions of a check dam across Vachukkal odai in SF No 44 in Modakadu village in Rasipuram Taluk in Namakkal District.	0.2378

6	Construction of an anicut across Vilangudi odai in Athur Village to feed Thelur Peria Eri and Vilangudi Eri group in Ariyalur Taluk of Perambalur District.	0.3503
7	Conversion of existing mudkorambu into masonry anicut across Maharajasamudram river to feed Sengamedu periakulam and other tanks in Sengamedu village of Alangudi Taluk in Pudukkottai District.	0.9265
8	Rehabilitation of Ayangudi main channel and its branches feeding tanks at Aranthangi Taluk of Pudukkottai District.	0.7325
9	Modernisation of Kalakkamangalam main channel from LS 0 to 9.386 km, Kalakkamangalam No.I Branch Channel from LS 0 to 2.068 km, Kalakkamangalam No.II Branch Channel from LS 0 to 4.749 km, Kambarkoil Distributory, Namarangore Distributory, Athambur Distributory and its benefited tanks, Vedyangudi tank, Koothanur tank, Neervilangulam tank, Gopalapuram tank, Namarangore tank and other 23 tanks in Pudukkottai District.	4.2867
10	Modernisation of Sirumaruthur main channel from L.S. 0 km to 4.136 km, Sirumaruthur No.I channel from L.S. 0 km to 2.587 km and Modernisation of its benefited tanks – Sirumaruthur tank, Vattathur tank, Kandiyakottai tank, Vethinivayal tank, Muthuvalakudi tank, Selvanenthal, Velivayal tank, Keelkudi and Puthuvayal tanks in Pudukkottai District.	1.3333
11	Reaming of drainage shafts from LS 300' to 4540' of Mettur Dam in Salem District.	0.8366
12	Formation of a new tank near Bommarajupet village in Pallipattu Taluk in Thiruvallur District.	0.3301
13	Construction of an anicut across the surplus course of Kannankottai Issa Rajaneri (Tank) below the infall of Thervoy Peria Eri surplus in Thervoy Kandigai Village of Gummidipoondi Taluk in Tiruvallur District.	1.0082
14	Excavation of a new supply channel to feed Kayamozhi tank and improvements to Kayamozhi tank in Thoothukudi District.	0.9246

15	Rehabilitation of anicuts Karaipottanar river in Musiri Taluk of Tiruchy District.	1.0158
16	Lining the bed and sides of Manimuthar main canal from LS 0 to 26.845 km of Tambraparani system in Tirunelveli District.	15.3768
17	Lining the bed and sides of Kannadian Channel and Improvements to the sluices of Kannadian channel in Ambasamudram Taluk of Tirunelveli District.	17.7874
18	Rehabilitation and Improvements to Mettur Canal System	11.3509
	Total	72.2733

7.2. Realising the seriousness of the urban flooding the State Government announced in the Budget for **2006 -2007**, the following three **Major flood protection works in Chennai, Madurai and Trichirapalli** with assistance from NABARD

- ✓ Flood protection works to prevent inundation of houses in low lying areas in Chennai cities during rainy season and to ensure freeflow of storm water to the sea through Cooum, Adayar, Kosasthalaiyar, Otteri Nallah, Virumbakkam and Arumbakkam Cannals and Pallikaranai swamp at an estimated cost of Rs.279.01 crore.
- ✓ Diversion of flood water of Koraiyaru, Kudamurutti river, Ariyar river and Uyyakondan Channels through Cannals and Tanks and reroute the surplus water to Agniyar river to benefit dry areas of Pudukottai districts at an estimated cost of 295 crore.
- ✓ Desilting, Strengthening and rising the Bunds of the existing flood carrying canals running along the railway line in Madurai city to make the free flow of flood water to drain in to Vaigai river at an estimated cost of Rs. 12 crore.

8. SCHEMES UNDER ACTIVE CONSIDERATION OF NABARD – RIDF XII.

(Rs in crore)

S. No.	Name of the scheme	Estimate Amount
1	Rehabilitation of feeder canal of tank fed by Anguti Sunai from Jawadhu hills in Uthangarai Taluk of Dharmapuri District.	0.6826
2	Extension, Renovation and Modernisation of Vetharampatti tank in Vetharampatti Village of Harur Taluk in Dharmapuri District (Innovative Proposal)	0.1522
3	Formation of a new pond across Kannimar odai (Nochi Odai) in Kavanuthu Village in Dindigul District	0.0993
4	Formation of a new pond across Panchanthangi Odai in S.F. No.602 in Sendurai Village of Natham Taluk in Dindigul District.	0.3886
5	Rehabilitation of check dam across Kodaganar near Nagampalli village in Aravakuruchi Taluk of Karur District	0.7798
6	Formation of a new pond across Lavaluthu odai in Vallanadhi Village in Andipatti Taluk of Theni District.	0.2002
7	Rehabilitation of supply channel from Reddiyapatti to Karikali –Uddandampatti and chain of anicuts in Rudrakoha Kombaiyar in Musiri Taluk of Tiruchirapalli District.	1.9841
8	Artificial recharge schemes - 21 Schemes	3.0613
	Total	7.3481

9. PRPOSALS SENT TO NABARD

(Rs in crore)

S. No.	Name of the scheme	Estimate Amount
1	Rehabilitation of Ayyacholai Kattuvari Anicut and its feeding tanks near Varpattu Village in Thirumayam Taluk of Pudukkottai District	0.5500
2	Construction of an anicut across Vellar River to feed Nallanpillai Kulam in Meenaveli Village of Iluppur Taluk in Pudukkottai District	0.2490
3	Modernisation of R.S. Mangalam Big Tank in TiruvadanaI Taluk of Ramnad District	5.2800
4	Formation of a tank across Ponnir near Chokkanur Agraharam Village in Gangavalli Taluk of Salem District	4.5500
5	Construction of an anicut across Thenar to feed Kappalur etc., tanks in Devakottai Taluk in Sivagangai District	0.2167
6	Rehabilitation of the Chitrakudi Vari and providing field inlets to provide submersion relief of the adjoining fields in Thanjavur Taluk and District	0.3050
7	Formation of a percolation pond near Veerappa Ayyanar Koil in Allinagaram Village in Theni Taluk and District	0.2100
8	Formation of a reservoir across Pambar near Kumbakarai falls in Periyakulam Taluk of Theni District	53.0000
9	Construction of checkdam across Varattar in Vada Veerappanaikan patti SF17 No 1678 in Lakshmiapuram Village in Periyakulam taluk in Theni District	0.1190
10	Formation of a tank across Sunnambukkal Odai near Polivakkam Village in Thiruvallur Taluk of Thiruvallur District.	0.7350
11	Formation of a new pond near Krishnakuppam Mailarvada village in Pallipattu taluk in Thiruvallur District	0.1704
12	Construction of an anicut across Ayyar to feed Chithambur Eri in Chithambur Village of Musiri Taluk in Tiruchirapalli District	0.9400

13	Permanent restoration of the flood damages 2005 – Permanent protection to Cauvery, Coleroon banks in Karur, Tiruchirapalli and Perambalur Districts	230.00
	Total	296.3251

10. IRRIGATED AGRICULTURE MODERNISATION AND WATER RESOURCES MANAGEMENT (IAMWARM) PROJECT

In a predominantly Agricultural State like Tamil Nadu, there is a need for intensifying all efforts to improve agricultural productivity, quality and income. Long-term growth in agriculture depends mostly on increasing the efficiency in use of water. An urgent need in this area are strengthening and integrating institutional structures, which can help small and marginal farmers to a great extent.

The Expert Committee on “Development and Management of Water Resources” constituted by the Government of Tamil Nadu during July 2000 has observed that bringing additional area into cultivation is remote but the challenge is how best to bridge the gap in cultivation by reducing demand and by effective water management and adoption of modern agricultural techniques (Micro Irrigation etc.) and recommended Integrated Water Resources Management Project involving Line Departments for development and management of water resources in Tamil Nadu as the desired option.

With Agriculture sector facing major constraints, due to dilapidated irrigation infrastructure, coupled with water scarcity (both quantity and quality) and also due to growing demands from industry and domestic users. Long term growth in agriculture and rural income depends in large part on increasing efficiency in the use of water-intensive products. Increased agricultural diversification and private investments in higher value processing are likely to generate new rural non-farm employment opportunities and raise rural incomes. Increased availability of water and greater efficiency of water use through widespread adoption of drip and sprinkler irrigation would enable cultivation of crops throughout the year. Providing employment in agricultural production and processing will benefit the rural poor.

It is important to realise that the ultimate outcome of irrigated agriculture is food security and improved farm incomes alleviating poverty among rural agriculturists and landless agricultural families.

It is in this back ground the Water Resources Consolidation Project- Phase II proposal at an estimated cost of Rs.3900 crore was sent to World Bank now renamed as Irrigated Agriculture Modernisation and Water Resources Management (IAMWARM) is under preparation.

The new Project (IAMWARM) is developed with a Concept of

- ❖ Achieving higher productivity of water (more crops, cash and jobs per drop of water through a combination of means-Economic, Institutional, Agronomic, Hydrological and Ecological Methods).
- ❖ Increasing the efficiency of use of water.
- ❖ Diversified agriculture as found suitable for different agro climatic conditions prevalent in Tamil Nadu.
- ❖ Increasing farm income through Aquaculture and Animal Husbandry.
- ❖ Assist in ensuring better prices for agriculture produce with better marketing strategy and Information Technologies Intervention.

It has also Project Development Objectives to improve irrigation service delivery and productivity of irrigated agriculture with effective integrated water resources management in a river basin / sub-basin frame work in Tamil Nadu. The proposed project would consist of two components.

The proposed project would consist of the following two Primary components with main focus of the convergence of activities of all departments, stakeholders and increasing of farm income through fisheries and livestock improvements.

10.1. COMPONENT I: IRRIGATED AGRICULTURE MODERNISATION

This component is intended to improve the productivity of irrigated agriculture. Project supported activities include

- ❖ Irrigation Systems Modernisation in a Sub-basin framework.
 - Participatory and sustainable modernisation of water storages (including revival and restoration of traditional water bodies), distribution systems and related infrastructure covering about 1 million hectares, and
- ❖ Institutional Modernisation for Irrigated Agriculture.
 - Closer integration of Water Resources Organization, Agriculture, Horticulture, Agricultural Engineering, Animal Husbandry, Fisheries, Dairy Development, Information Technology Department etc.
- ❖ Sustainable Agriculture Modernisation
 - Cropping systems diversification with Horticulture crops
 - Management to improve water conservation
 - Integrated Pest and Nutrient Management
 - Public-Private partnership for Extension

10.2. COMPONENT II: WATER RESOURCES MANAGEMENT

This component is intended to strengthen the policy and institutional framework for improved sustainable management of water resources in the State. These activities would include.

- i) State level
 - (a) Creation of State Water Resources Agency (SWARA)
 - (b) Establishment of Water Regulator
 - (c) Development of appropriate policy to promote flexible water management,
- ii) Basin Level:
 - (a) Strengthening, empowering and expanding river Basin Development and Management Boards,

- (b) Developing strategic social and environmental assessments to develop basin/ Sub-basin development plans etc.
 - (c) Strengthening and expanding Participatory Irrigation Management (PIM) with formation of WUAs for the entire irrigation command in the State.
- iii) WRRF: Expanding activity like awareness rising, applied research, partnership with relevant Universities to improve local participation etc.

To achieve this goal a Multi Disciplinary Project Unit (MDPU) for preparation, implementation and impact analysis was formed. This is headed by the Secretary, Public Works Department and coordinated by an independent Project Director with officers drawn from various line departments, linked with water as given below:

- Public Works
- Agriculture
- Agricultural Engineering
- Animal Husbandry
- Agricultural University
- Agricultural Marketing
- Horticulture
- Fisheries
- Social Welfare
- Information Technology
- Pollution Control Board
- Environment and Forest

10.3. PRESENT STATUS

There are about 127 Sub-basins in 17 River basins. In consultation with the stakeholders of each Sub-basin and in association with the Line Departments, preliminary project estimate for 42 Sub-basins was prepared and sent to World Bank. World Bank has suggested to prepare Detailed Project Report as a Pilot Project for 10 Sub-basins to commence implementation in the first year at the rate of one Sub-basin for each Basin (excluding Cauvery) simultaneously with preparation of Detailed Project Report for rest of the basins involving the Plan Formulation wing so that the project could be launched

immediately from 2007-08, spreading over 5 years. The finalization of the project components and its size is subject to the economic analysis depending on the extent of benefits directly by bridging the gap area, stabilization of existing ayacut and the indirect value addition that would be created under the project. The Project will be implemented through line departments monitored by the Project Director, Multi Disciplinary Project Unit IAMWARM.

11. PILOT PROJECT FOR RENOVATION & RESTORATION OF WATER BODIES WITH CENTRAL ASSISTANCE

A pilot project with a Government of India grant of 75 % for "Repairs, Renovation and Restoration of Water Bodies" in Villupuram and Sivagangai districts to a value of Rs.9.37 crore and Rs.1.222 crore has been approved and financial sanction has been given by the Ministry of Water Resources, Government of India.

District Level Implementation Committee under the Chairmanship of the respective Collectors with nomination of NGO has been constituted to monitor the project.

An additional project proposal for 23 Tanks in Sivagangai District has been prepared for Rs.8.06 crore and sent to Central Water Commission for onward transmission to Government of India.

The Project duration period is two years. This project is programmed to be completed by March 2007.

12. NATIONAL FRAMEWORK ON REPAIRS, RENOVATION OF WATER BODIES DIRECTLY LINKED TO AGRICULTURE WITH WORLD BANK ASSISTANCE

The Government of India have announced a scheme for repair, renovation and restoration of water bodies directly linked to agriculture under World bank Assistance for various States in India. Tamil Nadu being the foremost State in tank irrigation was a part of the above National Project, which contemplates restoration of the Traditional Water Bodies, based on a National Framework finalized by the Government of India. The total cost of the project is to be shared on a 75:25 basis between the State and Central Government. The

Government of India will provide a grant of 25% and arrange for a loan assistance of 75% through the World Bank. The entire project proposal for Rs.2600 crore has been forwarded to the Government of India under the above arrangement. These projects will not only cover 10540 irrigation tanks both System and Non-System (feeding more than 40 hectares of irrigated area) maintained by Public Works Department, but also around 8600 tanks maintained by the Rural Development Department (which are feeding between 20 and 40 hectares of irrigated area).

13. ANTI SEA EROSION

Tamil Nadu has a coastline of about 1076 Km. The Eastern coast is prone to considerable sea erosion, which has reached alarming proportions in recent years. To alleviate this problem, the Government is undertaking various protection measures.

The seashore along the Ennore Express Way from fishing Harbour at Royapuram has been severely affected by Sea erosion for a length of 9.20 Km. Protecting the coastline and safeguarding the Ennore Express way by providing Rubble Mound Sea wall (RMS wall) has been completed.

The Government of Tamil Nadu have accorded sanction for Rs 57.69 crore for execution of coastal protection works in four districts i.e. Ramanathapuram, Thoothukudi, Tirunelveli and Kanniyakumari with an assistance from HUDCO. The works are under progress.

The National Coastal Protection Project (NCP) proposal for Anti Sea Erosion works covering 29 hot spots to a length of 13.824 Km in 7 Districts has been revised to a cost of Rs.169 crore as per the guidelines of the Central Water Commission, and forwarded to CWC in September 2002. This project was included in Phase I of the National Coastal Protection Project and sent to Ministry of Water Resources by the Central Water Commission to seek External Assistance during February 2003.

Periathalai, one of the hotspots in Thoothukudi District proposed under the National Coastal Protection Project was sanctioned under Centrally Sponsored Scheme at a cost of Rs.6.00 crore with central share of Rs.2.32 crore and state share of Rs.3.68 crore respectively. The work has been completed.

14. CHENNAI CITY WATERWAYS

The ten waterways of Chennai City to a total length of 87.80 Km are polluted by discharges of untreated sewerage and disposal of solid waste thereby causing environment and health hazard to the public. The formation of sand bars in the river mouths silting of waterways and encroachment severely reduce the carrying capacity of the waterways leading to inundation of low laying areas during heavy rains.

To alleviate the problems faced by the Chennai City Waterways, the Government of India, Ministry of Environment and Forest approved Chennai City River Conservation Project at an outlay of Rs. 1700 crore. The State Government approved a comprehensive scheme for improving the waterways and drainage system in Chennai Metropolitan Area (CMA) at a total cost of Rs.300.00 crore in 1998. The Chennai Metropolitan Development Authority was appointed as the Nodal Agency for the purpose of obtaining loan assistance from HUDCO and implementation of the works through Public Works Department, Tamil Nadu Slum Clearance Board and Corporation of Chennai. The works envisaged at macro and micro Drainage Networks have been classified into packages as below:

(Rs. in crore)

Package No.	Name of Work	Revised Cost	Present Stage
I	Cooum, Virugambakkam–Arumbakkam drain, Otteri Nullah	0.90	Completed
II	North, Central and South Buckingham Canal	30.81	Completed
III	Adayar Improvements	46.06	58% Completed
IV	Flood defences and resectioning of other major drainages in Chennai Metropolitan Authority (Ambattur, Korattur, Madhavaram, Red Hills and Chembarambakkam tank surplus courses and land acquisition charges)	56.21	60% Completed

V	Improvements to Virugambakkam –Arumbakkam Drain, Otteri Nullah and Drainage relief to Velachery area.	10.46	85% Completed.
VI	a) From Periyar Bridge to Sea Mouth	2.20	Completed
	b) Periyar Bridge to Koyambedu	17.45	To be taken up
Total		164.09	

15. KRISHNA WATER SUPPLY PROJECT

The Krishna Water Supply Scheme envisages supply of 15 TMC ft. of water annually from Srisailem reservoir, constructed across the River Krishna by Andhra Pradesh, to meet the drinking water requirements of Chennai city. The water released from Srisailem is diverted for about 400 kilometer through Vellugodu, Somaseela and Kandaleru reservoirs and channels. The realization of water at Tamil Nadu border shall be 12 TMC ft. excluding transmission losses.

The project was conceived and the agreements executed between Tamil Nadu and Andhra Pradesh in 1983. After completion of the canal works adequately water was released from Kandalereu resevoir to Chennai city in the year 1996. The Government of Tamil Nadu as its share has paid Rs.512 crore up to the year 1996 to the Government of Andra Pradesh for this project. The realization of water from Kandaleru reservoir at Tamil Nadu border since 1996 is as follows:

(in TMC ft.)	
Year	Water realized at Tamil Nadu Border
1996-1997	0.076
1997-1998	2.290
1998-1999	2.810
1999-2000	1.830
2000-2001	6.688
2001-2002	0.400
2002-2003	3.262

2003-2004	0.210
2004-2005	2.717
2005- 2006	2.090
2006-2007 (From 20.8.06 to 28.8.06)	0.254

Within the Andhra Pradesh limits in about 400 Kilo Metre lengths of canals concrete lining work is under progress. The water conveyed from Kandaleru reservoir to Tamil Nadu border in about 80 Kilo Metre of Sathya Sai Canal concrete lining work has been completed during the year 2005. During the current year in the Sathya Sai Canal concrete lining for about 23 Kilometers has been taken up and is in progress. Andhra Pradesh has assured this Government that the concrete lining work for the length of 58 Kilometers will be completed before August 2007.

Within Tamil Nadu limits, due to poor soil condition slips had occurred in many structures of the canal. Action has been taken periodically to arrest the slips as and when needed.

On the directions of Hon'ble Chief Minister of Tamil Nadu, Minister (Local Administration) and Minister (Higher Education) accompanied by the officials called on the Hon'ble Chief Minister, Andhra Pradesh on 5.8.2006 at Hyderabad and apprised him of the urgent need for the release of water from Kandaleru reservoir to meet the drinking water requirements

Chennai city. The Government of Andhra Pradesh has since released water from 15.8.2006. This could be possible because of the cordial neighbourly relationship between Andhra Pradesh and Tamil Nadu.

16. IMPROVEMENTS TO THE BUCKINGHAM CANAL AS INLAND NATIONAL WATERWAY IN TAMILNADU

The Inland Waterway Authority of India has requested the Government of Tamil Nadu to improve the Buckingham Canal as an Inland waterway. The Inland Waterway Authority of India has also requested the Government of Tamil Nadu to initiate action to instruct the District Collectors for survey of 100 M width and delineate the land corridor along the side in North and South Buckingham Canal and submit the report to Inland Water way Authority of India.

Accordingly action has been taken for carrying out the survey from Arangam to Marakkanam for improving the Canal and converting into Inland Waterway.

After completion of delineation survey, necessary proposal will be evolved and forwarded to Government of India for sanction of financial assistance.

17. CHENNAI CITY WATER SUPPLY AUGMENTATION PROJECT-II

Under the Chennai city water supply scheme the Government have sanctioned Rs.60.00 crore for improvements to source works comprising improvements in to Vadavar channel, which brings water from Lower Anicut to Veeranam, removal of shoals in the Veeranam tank and raising the Full Tank Level (FTL) by 2 feet to increase the existing capacity of 935 Mcft to 1485 Mcft. After completion of this work of an ayacut of 18045 hectares will be stabilized besides supply of drinking water to Chennai City. Revised estimate for Rs.110.95 crore has also been sanctioned. These works are expected to complete by March 2007.

Government have accorded Administrative Sanction for Rs.12.37 crore in February 2004 for construction of Check Dams across Adyar river near Nandambakkam, Manappakkam, Gowli Bazaar and Anakaputhur in Kancheepuram District.

By implementing this scheme, rainwater could be harvested and used for replenishing and recharging the Ground water in the nearby area. Locations have been planned based on the availability of rechargeable aquifer nearby.

Construction of a Check Dam across Adayar near Nandambakkam for an amount of Rs.3.25 crore is being taken up under Phase-I and is in progress. 60% of the work has been completed.

Construction of a Check Dam near Manappakkam will be taken up shortly. Based on the performance of the Checkdams at Nandambakkam and Manappakkam, construction of Checkdams at Gowli Bazaar and Anakaputhur will be taken up.

Two numbers of old anicuts across river Cooum near Paruthipattu and Kannappalayam were taken up for Rehabilitation at a cost of Rs. 1.33 crore and works are nearing completion. These two structures will enhance the Ground water potential in Avadi, Kannappalayam, Paruthippattu and Thiruverkkadu in Thiruvallur District.

18. TSUNAMI

18.1. "Tsunami" struck the Tamil Nadu coast on 26th December 2004. The coastal areas of Chennai, Tiruvallur, Kancheepuram, Villupuram, Cuddalore, Nagapattinam, and Kanniyakumari Districts were heavily damaged.

Public Works Department made necessary arrangements for the supply of poclains, JCBs, Tippers, etc., for rescue operations. The Public Works Department officials extended co-operation to the district officials and assisted in the rehabilitation works successfully.

Tamil Nadu has a coastline of 1076 Kilo Metre out of which 1016 Kilo Metre is along the Bay of Bengal and 60 Kilo Metre is along Arabian Sea. This coastal line is prone to considerable sea erosion/damage due to various natural calamities like cyclone, storm, depression, etc. To protect the coastal areas from sea erosion action has been initiated for construction of Rubble Mound Sea Wall, Groynes, Retaining wall, etc., in the coastal area.

A number of East Flowing Rivers are confluencing in the Bay of Bengal. Apart from this, for a distance of 435 Kilo Metres, Lagoons, Mangroves, Backwaters, Major and Medium Ports and Fishing harbours, etc., are situated all along the coastal line. Leaving the distance of 435 Kilo Metres from the total distance of 1076 Kilo Metres, a distance of 641 Kilo Metres has to be protected from the natural calamities. In the above 641 Kilo Metres Rubble Mound Sea Wall, Groynes and Retaining Walls were constructed for 40 Kilo Metres. Hence protection works have to be carried out for the remaining 601 Kilo Metres.

The Indian Institute of Technology, Madras after conducting a detailed survey of the coastline has identified vulnerable spots and

recommended measures for safeguarding the coastal line from sea erosion.

Based on this, proposals to the tune of Rs.695.99 crore have been prepared and sent to Government of India and Union Planning Commission for assistance. **The Twelfth Finance Commission has allotted Grants-in-Aid of Rs.50.00 crore for Costal protection works for the period 2006-2010.**

The High Level Committee has selected the following 30 Works and prioritized for Anti Sea Erosion Works based on the report of the Indian Institute of Technology, Madras.

(Rs. in crore)

Sl. No	Details of works	Cost
1.	Construction of Groynes at Ratchager Street in Kanyakumari District	4.80
2.	Construction of RMS Wall at Neerodithurai in Kanyakumari District	1.50
3.	Construction of RMS Wall at Morthandam thurai in Kanyakumari District	0.80
4.	Construction of RMS Wall at Vallavilai in Kanyakumari District	0.80
5.	Construction of RMS Wall at Chinnathurai in Kanyakumari District	0.30
6.	Construction of RMS Wall at Iraviputhan thurai in Kanyakumari District	0.30
7.	Construction of RMS Wall at Thoothur in Kanyakumari District	0.23
8.	Construction of RMS Wall at Poothurai in Kanyakumari District	0.33
9.	Construction of RMS Wall at Irayumanthurai in Kanyakumari District	0.22
10.	Construction of RMS Wall atThengaipattinam and Mullurthurai in Kanyakumari District	0.60
11.	Construction of RMS Wall at Kodimunai in Kanyakumari District	0.33
12.	Construction of RMS Wall at Periyavilaiturai in Kanyakumari District	0.27

13.	Construction of RMS Wall at Periyakadu in Kanyakumari District	0.32
14.	Construction of RMS Wall at Kovalam in Kanyakumari District	0.20
15.	Construction of RMS Wall from Thazhankuppam to Nettukuppam	2.30
16.	Construction of Groynes at Thanthiriyankuppam	2.62
17.	Construction of curved path structure at L.S. 126 to L.S.946 in Kottakappam Village in Vannur Taluk of Villupuram District	0.99
18.	RMS Wall to prevent Sea water intrusion at Annai Sivakami Nagar Kuppam to Indira Nagar Kuppam in North Chennai	0.99
19.	RMS Wall to protect Sea Coast at Thazhankuda to Devanampattinam in Cuddalore District	3.00
20.	Extension of Groynes at Periyacadu	4.75
21.	Construction of Groynes (2x200=400m) at Manakudi	6.00
22.	Construction of Groynes for 240m at Innayamputhanthurai	3.50
23.	Construction of RMS Wall at Ariyanattur	1.44
24.	Construction of RMS Wall at Vellankannai	0.53
25.	Construction of RMS Wall at Poompukar	1.78
26.	Construction of RMS Wall at Tharangampadi	3.05
27.	Construction of Retaining Wall at Kaduvaiyaru and Kallaru rivers	3.20
28.	Construction of Groynes on the northern side of the existing sand jelly for sustained opening of the River Coovum mouth unto (+) 4.200 m	1.32
29.	Raising the South Groynes from (+) 2.500m to (+) 4.200m for preventing sand by passing into River mouth	0.90
30.	Removing sand shoals in River Coovum mouth and at bridge points unto Munroe bridge for easy passage of flood flow and tidal exchange of Seawater.	0.60
	Total	47.97

18.2. EMERGENCY TSUNAMI RECONSTRUCTION PROJECT

The Government in October 2005 have accorded administrative sanction for Rs. 19.271 crore for desilting and strengthening various canal banks in Nagapattinam District, with World Bank assistance for execution of the following works.

(Rs.in crore)

Sl. No	Details of works	Cost
1	Desilting, widening and strengthening the banks of Vedaranyam Canal Reach from. L.S. 0 KM to 14.800 KM in Nagapattinam District	1.822
2	L.S. 14.800 KM to 31.200 Km in Nagapattinam District	2.019
3	L.S. 31.200 KM to 56.800 Km in Nagapattinam District	3.151
4	Desilting, and strengthening the banks of South Buckingham Canal (2.30 KM), Manjalar drain 3.6 KM to sea (3 KM). Strengthening the banks of Veera Cholan drain (0.8 KM) and Nandalar drain RB 0 to 1.8 KM, LB 0 KM to 4.45 KM and Straight cut from Mahimalaiyar River (2.20 KM) in Nagapattinam District.	2.440
5	Strengthening Tsunami affected Coleroon diversion banks Koraihitthu, Padianthittu and Kattur (6 KM) in Nagapattinam District.	1.230
6	Desilting and Strenghtening the Nathikanni Manniar drain (12 KM) and strengthening Vellapallam Uppanar drain from L.S. 19.00 KM to sea (5 KM) in Nagapattinam District.	1.808
7	Desilting and Strengthening the Vellaiyar straight cut from L.S. 3.50 KM to sea (1KM), Chakkiliyan Voikal straight cut from L.S 5.5 KM to sea (1.5 KM), Law Ford straight cut from L.S 3 KM to sea (1 KM), Nallar Straight cut from L.S. 8.2 KM to sea (1KM), Adappar straight cut L.S. 1.5 KM to sea (1KM), Mulliyar straight cut from L.S 0 KM to 1.5 KM to sea (1KM), and Valavanar straight cut from LS 0 to 1.5 KM (1.5 KM) in Nagapattinam District.	2.445

8	Widening and Strengthening the banks of Kaduvayar drain from L.S. 5.30 KM to sea (6 KM) in Nagapattinam District.	1.726
9	Strengthening and Widening the North Buckingham Canal 13 KM and Reconstruction of Mudavanar drainage regulator in Nagapattinam District.	2.630
	Total	19.271

19. CAUVERY ISSUE

The use of Cauvery water is governed by the Inter State Agreements of 1892 and 1924.

The Cauvery Water Disputes Tribunal was constituted by the Government of India, Ministry of Water Resources in June 1990 to adjudicate the disputes that have arisen among the basin States on the use of the waters.

The Tribunal by its order dated 25.6.1991, directed as follows: -

- a) Karnataka is to release water from its reservoirs in Karnataka so as to ensure 205 TMC ft. to Tamil Nadu's Mettur Reservoir annually in a monthly / weekly pattern stipulated.
- b) Tamil Nadu is to deliver 6 TMC ft. of water to the Karaikkal Region of the Union Territory of Pondicherry.
- c) Karnataka shall not exceed its ayacut of 11.2 lakh acres as averred by them in May 1991.

These orders shall take effect from 1.7.1991 and will remain in force till the date of passing of the final award by the Tribunal.

Ever since the aforesaid order was pronounced, Karnataka never came forward to comply with and honour these orders. This forced Tamil Nadu to file a Suit in the Supreme Court of India in May 1992 and on the promise made by the Government of India, while the Suit was pending, the Government of India in 11.8.1998 constituted the Cauvery River Authority (CRA), which is to be assisted by the Cauvery Monitoring Committee (CMC). The Authority is headed by the Prime

Minister with the Chief Ministers of the 4 Basin States as Members. The Cauvery Monitoring Committee is presided over by the Secretary, Ministry of Water Resources, Government of India with the Chief Secretaries of 4 Basin States and Chief Engineers in charge of Irrigation as Members. The Cauvery River Authority has so far met six times and the Cauvery Monitoring Committee has met 22 times.

As the Cauvery River Authority is not in a position to prevail upon Karnataka to implement the orders of the Cauvery Water Disputes Tribunal as well as the decision of the Authority and in as much as the Cauvery River Authority is not clothed with adequate powers, the Government of Tamil Nadu reviewed the entire position and filed 2 Suits, one on 19.9.2001 and another on 10.7.2002 in the Supreme Court of India. In the Suit filed in July 2002, among others, Tamil Nadu has prayed for issuing directions to the Government of India to modify / substitute the present scheme and also suggested a comprehensive effective scheme for the implementation of the interim orders of the Tribunal. These Suits are still pending in the Supreme Court of India.

The State of Tamil Nadu in its arguments on the issue relating to "Allocation of Waters" has made a plea that Tamil Nadu's requirements is 566 TMC ft. and has also urged that the Tribunal in its award itself should spell out an implementation machinery for effective implementation of its own orders. As per the amended Inter State Water Disputes Act, 2002 Tribunal's orders will be deemed to have the same force of a decree of the Supreme Court.

On 10.5.2006 the Tribunal ordered that the Reports of the two Assessors shall be furnished to the party States and the party States have to file the in response on the report of the Assessors within five weeks and counter response if any after three weeks. The response of the State, on the report of the Assessors was filed in the Tribunal on 15.6.2006. Counter response to the response of Kerala and Karnataka was filed before the Tribunal. On 10.7.2006, Tamil Nadu urged the Tribunal to give its final award without further delay.

The Tribunal in its last sitting on 27.7.2006 has reserved their Award.

20. PALAR ISSUE

The proposal of the Government of Andhra Pradesh to construct a reservoir across the river Palar near Ganeshapuram of Kuppam Taluk of Chittoor District and to divert water to its territory has caused grave concern in Tamil Nadu. The utilization of water from Palar River is governed under the 1892 Mysore-Madras Agreement. The Government of Tamil Nadu has requested the Government of India to interfere in the matter and advise the Government of Andhra Pradesh not to proceed with the construction of check dam, which will affect the flow of Palar River.

The Government of Tamil Nadu on 10.2.2006 filed a Suit before the Supreme Court of India to give direction to the Government of Andhra Pradesh not to proceed with the construction of check dam across Palar or in its tributaries. When the delegation comprising of Minister (Local Administration) and Minister (Higher Education) called on Hon'ble Chief Minister of Andhra Pradesh on 5.8.2006 at Hyderabad, the apprehension of the people of Tamil Nadu on the proposed construction across Palar by Andhra Pradesh was conveyed. During the discussion the Hon'ble Chief Minister of Andhra Pradesh assured that the Government of Andhra Pradesh would not take any step detrimental to the interest of the people of Tamil Nadu, or against law. Further the Hon'ble Chief Minister of Andhra Pradesh has assured that the details of the project will be furnished to Tamil Nadu and only after ascertaining the views of the State, Andhra Pradesh will proceed with the Project.

21. PARAMBIKULAM ALIYAR PROJECT - REVIEW OF AGREEMENT

An agreement between the Government of Tamil Nadu and Kerala was entered into on 29.05.1970 with retrospective effect from 09.11.1958 for utilization of flows in the rivers of Anamalayar, Nirar, Sholayar, Parambikulam, Palar and Aliyar and the streams flowing into them for generation of hydro electric power, irrigation, drinking water supply, industrial use in the two States. The arrangements embodied in the agreement are open for review in the light of experience gained and to such modification as may be mutually agreed upon as a result of such review at the expiry of 30 years from 9.11.1958 and once in every 30 years thereafter. The agreement was due for review on 9.11.1988.

Accordingly, both the Governments exchanged the documents for review on 21.09.1989 and held several InterState level discussions. An Inter State Committee comprising the Officials of both Tamil Nadu and Kerala was constituted among others to present a comprehensive report on the review of the Parambikulam Aliyar Agreement. The Committee meeting was held at Thiruvananthapuram and Attakatti, but no consensus was reached.

In the Minister level meeting held between Government of Kerala and Government of Tamil Nadu on 10.06.2002 at Chennai, it was decided that a Technical Committee comprising of Engineers from each state be constituted to identify the areas where amendments are required in the Agreement. Accordingly a Technical Committee was constituted and submitted its report to the respective Governments.

The report was discussed in the Minister level meeting held on 10.11.2003 at Chennai and on 4th January 2004 at Thiruvananthapuram and the differences between two states have been narrowed down to considerable extent.

Followed by that discussion was held between Tamilnadu and Kerala on 6.11.2004, 27.11.2004 and 18.12.2004.

The Government of Tamil Nadu will continue to press Government of Kerala to complete the first review of Parambikulam Aliyar Project agreement.

22. RAISING THE IMPOUNDED WATER LEVEL IN MULLAI PERIYAR DAM

The Periyar Project was executed as per the Lease Deed executed between the then Maharaja of Travancore and the then Madras Presidency in the year 1886. The Project was completed in the year 1895. The Government of Tamil Nadu and the Government of Kerala in the year 1970 executed two supplemental agreements. The full reservoir level (FRL) is 152 feet. Due to certain apprehensions raised by the Government of Kerala in 1979, Tamil Nadu Government on the suggestion of the Central Water Commission and with the full knowledge of Kerala Government carried out the strengthening measures and the water level was temporarily brought down from the FRL 152 feet to 136 feet to facilitate carrying out certain strengthening

work. However, the Kerala Government insisted that the water level shall be kept at 136 feet even after completing all the strengthening work.

In the Writ Petition filed by the Mullai Periyar Environmental Protection Forum and transfer petition filed by the Tamil Nadu Government in December 1998, the Supreme Court of India after transferring the petitions pending in the High Court of Kerala and Madras. On 8.4.2002, heard the cases and pronounced the orders on 27.2.2006.

The Supreme Court of India has held that, (1) the Government of Tamil Nadu can store water upto the level of 142 feet. (2) the State of Tamil Nadu be permitted to carry out further strengthening measures as suggested by Central Water Commission and that the State of Kerala and its officers are restrained from causing any obstruction and (3) after the completion of the strengthening works to the satisfaction of Central Water Commission, independent experts would examine the safety angle before the water level is permitted to be raised to 152 feet.

The Government of Kerala on 15.3.2006 has brought out amendments to the Kerala Irrigation and Water Conservation Act 2003. According to which among others the FRL of Mullai Periyar Dam has been fixed as 136 feet. This is with a view thwart the Supreme Court order.

The Government of Tamil Nadu on 31.3.2006 filed a Suit in the Supreme Court of India among others, to declare the Kerala Irrigation and Water Conservation (Amendment) Act of 2006 passed by the Kerala legislature as unconstitutional in its application to and effect on Mullai Periyar Dam. In the Interlocutory Application filed, it has been prayed that an exparte stay of operation of the aforesaid act in so far as the Mullai Periyar Dam is concerned may be granted and also that an ad interim injunction restraining the Government of Kerala from interfering with or obstructing Government of Tamil Nadu from increasing the water level to 142 feet and carrying out the repair works as per the orders of the Supreme Court of India dated 27.2.2006.

The Government of Tamil Nadu is committed to protect and safeguard the interest of the agriculturists dependent on the Periyar

Vaigai Rivers and is taking all necessary steps to have the orders of the Supreme Court implemented.

23. PANDIYAR-PUNNAMPUZHA PROJECT

Pandiyar – Punnampuzha is an Inter State river with its origin in Tamil Nadu, joining Chaliyar River in Kerala. The west flowing rivers of Pandiyar – Punnampuzha having their origin in high peaks of Nilgiris join at about 5km west of Guddalore Town and the river beyond the confluence is called Punnampuzha. This joins Chaliyar River in Kerala State near Nilambur. Ultimately, this drains into Arabian sea near Baypore. This project area is proposed to be located in the Udagamandalam – Mysore road.

As per 1965 understanding between Tamil Nadu and Kerala, Pandiyar-Punnampuzha Hydro Electric Project envisages utilization of the west flowing waters of Pandiyar and Punnampuzha rivers from the total catchment area of 171.38 Sq.Km (66.20 Sq.miles) with an average annual yield of 14 TMC for power generation with a gross head of 500.50m (1642 feet) and with an installed capacity of 100 MW (2X50MW) for the first stage and 150MW in the next stage. The average annual generation would be 409 Million Unit. The Planning Commission approved the proposal in 1968.

Subsequently, on representation from the ryots of Coimbatore district, the possibility of diverting the waters of Pandiyar-Punnampuzha lying within Tamil Nadu to Moyar arm, of Bhavani River for use by Tamil Nadu was investigated and this was also found feasible. TamilNadu wanted diversion of at least 7 TMC of water eastward to Tamil Nadu.

This subject was discussed between the Irrigation Ministers of Kerala and Tamil Nadu on 28.11.1996 and no conclusion was arrived at. Later, the above subject was discussed in the Minister Level Meeting between the Government of Kerala and the Government of Tamil Nadu held on 10.06.02 at Chennai. It was decided in the meeting that the TNEB will furnish the Project Report to KSEB and thereafter a meeting between Chairman of the Electricity Boards may be held to arrive at a solution.

In accordance with this, the TNEB has prepared a modified proposal for equitable sharing of water by the States of Kerala and Tamil Nadu on annual basis. Fifty per cent of the water that flows into Kerala will be utilized by Tamil Nadu for power generation at Karakottapuzha P.H. (2X30 MW) and other 50% that will be diverted to Tamil Nadu will be conveyed to Moyar for ultimate discharge into Lower Bhavani Reservoir.

The Government will pursue with the Government of Kerala for implementation of the Pandiyar Punnambuzha scheme.

24. PAMBA-ACHANKOIL-VAIPPAR LINK

The National Water Development Agency is entrusted with the task of investigation and preparation of Project proposals for peninsular river links under the Peninsular River Development component of the National Perspective Plan formulated by the Government of India. Diversion of surplus water of the West flowing Rivers of Kerala to Tamilnadu is a part of the Peninsular River Development Component.

The National Water Development Agency has formulated the Pamba-Achankoil-Vaippar link project which envisages diversion of surplus water of Pamba and Achankoil Rivers of Kerala to Tamilnadu. The project proposals contemplate diversion of 22 TMC of water to Tamil Nadu to irrigate an ayacut of 91,400 Hectares in Sankarankoil, Kovilpatti, Sivagiri, Srivilliputhur, Rajapalayam, Sathur and Tenkasi Taluks of Tamil Nadu. Besides providing irrigation to Tamilnadu, the proposal will also help to generate peak power of 500 MW per year. The quantum of 22 TMC to be diverted by this link amounts to only about 20% of the surplus water available in Pamba-Achankoil rivers (as per NWDA studies).

The Government of Tamil Nadu has given its acceptance to the proposal. The Government of Kerala is not in favour of the Pamba-Achankoil-Vaippar Link project. The Government of Tamil Nadu is actively pursuing the matter with Government of India for implementation of this project.

25. STATE GROUND AND SURFACE WATER RESOURCES DATA CENTRE

25.1 Ground water has become a valuable resource for meeting the drinking water requirements and for agricultural development. Tamil Nadu having almost fully utilized the surface water resources has now turned to other sources for further requirement.

Ground water, though a renewable natural resource, its occurrence and movement is controlled by the hydro meteorological and hydro geological environs which are not uniform in the State of Tamil Nadu. As a result in the State of Tamil Nadu, variation in the quantitative and qualitative distribution of this valuable resource has occurred and hence it requires continuous monitoring.

The State Ground and Surface Water Resources Data Centre engaged in the hydro geological mapping of geo resource, through its extensive monitoring surveys and exploration activities have generated a wealth of scientific data with a view to disseminating this information to user agencies.

Apart from the above, it is proposed to take up mini water shed basis ground water potential assessment at a cost of Rs.68.85 lakhs in the blocks falling in Vellore, Villupuram and Dindigul Districts during 2006-2007.

25.2 TAMIL NADU GROUND WATER (DEVELOPMENT & MANAGEMENT) ACT 2003

To protect the Ground Water potential and to manage the vital and scarce resource the "Tamil Nadu Ground Water (Development & Management) Act 2003" has been enacted. To administer the Act, "Tamil Nadu Ground Water Authority" will be formed. The Government has planned to frame the necessary Rules for effective implementation.

25.3 HYDROLOGY PROJECT PHASE II

Hydrology Project I has established Hydrological information System with facilities to collect, store and disseminate Hydrological, Hydro meteorological and Hydro geological data. To transform the

available data into technical information for the use of policy makers and planners, Hydrology Project II with a cost of Rs.25.27 crore has been taken up. The World Bank loan amount is Rs.20.65 crore and the balance is funded by the State Government.

The Government of Tamil Nadu have given its concurrence for this project. The Project proposal consists of the following.

1. Consolidation of Hydrology Project Phase-I activities.
2. Creation of awareness about water resources, dissemination of data to users, and sharing of knowledge in water resource among the water users.
3. Development of Hydrological Design aids for Surface water and Groundwater development projects.
4. Development of Decision Support Systems for three Basins to optimize the use of available water resources among all the sectors like irrigation, drinking and industrial use.
5. Purpose driven studies like pollution of water sources, artificial recharge of groundwater etc. in a basin as required by the State during the course of the project.

Project agreement has already been signed and the project has commenced and will be implemented in six years from April 2006.

The project will be of immense use for the long-term water planning of the State.

26. IRRIGATION MANAGEMENT TRAINING INSTITUTE

Irrigation Management Training Institute, Tiruchirapalli is one of the 11 Institutes established under USAID in India. It was established in 1984. At present, this Institute is functioning under the funds provided by the State Government as Grant-in-Aid. It is imparting training to farmers, field level staff and officials of WRO, Agricultural Engineering and Agriculture Departments to enrich their knowledge in the field of irrigation management and to enhance their skill for better performance under the following fields.

26.1. TRAINING

1. Irrigation Management, computerised approach in Irrigation planning and design.

2. Managerial Aspects in irrigation
3. Farmers Organisation and Turnover of irrigation system maintenance.

26.2. IRRIGATION MANAGEMENT

This institute is imparting training for the officials, who are related with the Irrigation management on the following topics.

1. Participatory Irrigation Management
2. Modern Irrigation Methods
3. On farm water budgeting
4. Command Area Development
5. Rain Water Harvesting
6. Broad based agriculture
7. Quality control in irrigation structures
8. Flow measurement

26.3. COMPUTERISED APPROACH IN IRRIGATION PLANNING AND DESIGN

A full-fledged computer centre is functioning at this institute and offering the following Computer training for the officials of Water Resources Organisation, Public Works Department, Agriculture and Agricultural Engineering Departments.

1. MS Office
2. MS Access & Visual Basic
3. Geographical Information System
4. Auto CAD

26.4. MANAGERIAL ASPECTS IN IRRIGATION

In order to help the departmental officials in enhancing their day-to-day performance, Team building & Communication skills, course is offered.

26.5. FARMERS ORGANISATION AND TURNOVER OF IRRIGATION SYSTEM MAINTENANCE

To assist the farmers in forming farmers associations and for participatory irrigation management the following courses are offered for the benefit of farmers.

1. Formation and functioning of farmers organization
2. Awareness programme of Tamilnadu Farmers Management of Irrigation System
3. Training on Irrigation Management

For the year 2006-2007, it is proposed to conduct 114 training courses and the programme will cover 2500 farmers and 2000 officers in Irrigation Management.

27. INSTITUTE FOR WATER STUDIES

27.1. WATER PLANNING

The Institute for Water Studies established in 1974 has been carrying out research studies especially on Water Resources Management by Remote Sensing and latest GIS techniques.

Micro level studies of PAP basin, Pambar-Kottakarayar, Agniar and Paravanar river basins are proposed to be taken up and completed during 2006- 2007.

27.2. TAMIL NADU STATE WATER POLICY

Tamil Nadu State Water Policy was formulated in the year 1994 based on National Water Policy 1987. The National Water Policy has been updated and adopted by the National Water Resources Council in April 2002. Based on this and to suit the present day scenario, Tamil Nadu Water Policy is under revision in line with the National Water Policy 2002.

27.3. WATER RESOURCE RESEARCH FUND AND RESEARCH STUDIES

Under World Bank assisted, Water Resource Consolidation Project, 38 nos. of research studies were completed. One-third amount incurred for these research studies given by the Government of Tamilnadu was deposited in the bank. The interest amount incurred will be utilized for continuing the research studies.

27.4. SPECIAL STUDIES

This Institute has taken up the following project study funded by the State Planning Commission: -

- Managing floods in Tamil Nadu River Basins by arresting run-off, groundwater recharging or inter basin transfer.
- Preparation of thematic maps for 16 sub basins for IAMWARM Project

For IAMWARM project the following Thematic maps are being generated Index map, Administrative map, Boundry map, Geology, Geomorphology, Land use, Soil map, Drainage, Irrigation system categorisation map and Road network map.

27.5. REMOTE SENSING AND GIS ACTIVITIES

The Remote Sensing wing of this Institute is recognized as the Tamil Nadu State Centre for Remote Sensing application. The main function of the Tamil Nadu State Centre for Remote Sensing Application is to prepare various thematic maps derived from satellite data and aerial photographs on different scales for overlay analysis for surface and groundwater potential assessment, land use study, crop pattern study, waste land identification etc. The Remote Sensing Centre is to extend assistance for basin wise micro level water planning in terms of preparing, analysing and making suggestions on Geology, Landuse, Water level, Drainage, Geomorphology, Soil depth to bed rock, Physiography, Lineament/Structure, Water Quality, Hydrogeology and Digital Elevation Model.

27.6. WATER RESOURCES CONTROL AND REVIEW COUNCIL (WRCRC)

A Water Resources Control and Review Council to formulate policy to use the available water resources by the water users has been constituted under the Chairmanship of Hon'ble Chief Minister with 35 members from water user Department/Agencies.

A Sub Committee with Chief Secretary as Chairman has been constituted to scrutinize the proposals to be placed before WRCRC for taking policy decisions.

27.7. RIVER BASIN MANAGEMENT AND DEVELOPMENT BOARD

For an integrated planning Monitoring Management and Development of Water and Land Resource with active involvement of all the line departments and the stake holders and for improving the livelihood of millions of small farmers the River Basin Management Development Board for Palar and Tamiraparani River basins has been formed with the River Basin Management Committees and a common Technical Secretariat.

The Board met thrice for both Palar and Tamiraparani River Basins and discussed about various issues in each basin. The Basin Management Committee met twice for each basin and analysed various issues. The next Basin Management Committee meeting will be held during this year.

A common Technical Secretariat was formed based on the advise of the World Bank with the Chief Engineer and Director, Institute for Water Studies as Chairman, and with a core team of 13 Specialists. Generally, the Technical Secretariat is engaged in addressing the issues encountered in Palar and Tamiraparani river basins and also in other basins to be formed in future.

28. TAMIL NADU BOILER INSPECTORATE

The Tamil Nadu Boiler Inspectorate is the enforcing authority of the Indian Boilers Act, 1923, a Central Act administered by the State as concurrent subject for the safe operation of the boilers and to ensure safety of the public life and the property.

The Inspectorate plays a crucial role in the phenomenal development of Boilers and Boiler Ancillary Industries in the State of Tamil Nadu.

The Tamil Nadu Boiler Inspectorate is incharge of implementing the provisions of the Tamil Nadu Boiler Attendants' Rules, 1964 and the Tamil Nadu Boiler Operation Engineers' Rules, 1965 to ensure the Boilers used in the industries are operated by certified Boiler Operation Engineers and Boiler Attendants.

The Inspectorate conducts Tamil Nadu Boiler Attendants Examination for I-Class, II-Class & III-Class certificate of competency and the Tamil Nadu Boiler Operation Engineers' Examination and tests to high pressure welders employed in Boiler manufacturing units.

Tamil Nadu Boiler Inspectorate ensures that the Boiler and Boiler components are designed and manufactured as per the provisions of the Indian Boiler Regulations, 1950.

The Tamil Nadu Boiler Inspectorate is responsible for detecting and curbing the operation of the unregistered and uncertified Boilers.

29. SAND QUARRY

The Government reviewed the system of supply of sand to the Public for construction activities. To pluck the loophole in the system, to arrest loss of revenue to Government and with a view to protect the environmental and ground water acquifer, the Government has decided to carryout sand quarrying operations through the Public Works Department which is the custodian of the river system. To meet the growing demand for sand, due to increase in construction activities, powers have been delegated to the District Collectors to approve new sand quarries identified by the Public Works Department.

Considering the Ecological and Environmental damages caused by the sand offenders, loss of lives suffered by the officials when they try to apprehend the persons involved in the illicit quarrying, transportation, storage of sand and considering the loss of revenue suffered by the Government, illicit mining of sand has been included under the provision of the Tamil Nadu Prevention of Dangerous Activities of Bootleggers, Drug-offenders, Forest-offenders, Goondas, Immoral Traffic Offenders, Slum-grabbers and Video Pirates Act, 1982, to effectively deal with the offenders.

DURAI MURUGAN
MINISTER FOR PUBLIC WORKS