

DEMAND No. 40
IRRIGATION
(PUBLIC WORKS DEPARTMENT)

POLICY NOTE
2007- 2008

நீர் இன்று அமையாது உலகு
நிச்சயம்; அப்படியே அமையட்டும் - ஆனால்
செருக்களத்து நீராம் செந்நீரும்
உருக்குலைந்த ஏழையின் கண்ணீரும் - அல்லாத
நீர் இன்று அமையாது உலகு - என
அப்பாடல் அமையட்டும்.

-மாண்புமிகு முதலமைச்சர் கலைஞர் மு.கருணாநிதி

PREAMBLE

Tamil Nadu, the southern most State of the Indian Peninsula is spread over 1,30,058 Km² and lies between 08⁰ 05"N and 13⁰ 35" and 76⁰ 15" E and 80⁰20" E. It is surrounded by the States of Andra Pradesh in the North, Kerala in the West, Karnataka on the North West, Indian Ocean on the South and the Bay of Bengal on the East. The population of Tamil Nadu is 6,21,10,839 as per 2001 Census.

The topography of Tamil Nadu broadly consists of coastal plains in the east and uplands and hills on the west, the plains account for more than half the area of the State.

The entire life on the planet "earth" depends on water and without water life cannot exist. This precious planet "earth" is unique in the universe in all respects only by the existence of water over it. Recognising this, the great poet '*Thiruvalluvar*' has ranked the chapter "*rain*" very high in "*Thirukkural*". Such a basic human need, primarily coming from nature plays a critical role in every life transforming the scientific and technological advancements taking place over the period of time.

1. WATER RESOURCES ORGANISATION

The Public Works Department, existing since 1856, has under gone changes a number of times in line with the development taking place all over the country and the globe. During the last decade of the 20th century, the Department was reorganized

into two organizations viz. Water Resources Organisation and Building Organisation. This was done to suit the requirements for implementing the advancements taking place in various wings of the water sector, building construction, Design and Architecture etc. Orders were issued to ensure functional specialization is achieved by bifurcating the professional personnel of the Department into two specialized cadres suitable to the duties performed by the above organizations.

Since the last reorganization made in Public Works Department during 1994, the Water Resources Organisation has been functioning on the basin concept through which the assessment of water resources potential and the demand of water in various sectors are being worked out on the basis of water shed.

The state water policy is being revised in line with the National Water Policy 2002. The entire set up of the technical personnel has been reorganized with one Engineer-in-Chief, four functional Chief Engineers and four Regional Chief Engineers in charge of various River basins, at Chennai, Tiruchirapalli, Madurai and Coimbatore and a Chief Engineer for Institute of Water Studies at Chennai. Apart from these, a Chief Engineer is in charge of the Irrigation Management Training Institute at Tiruchirapalli. There are 45 Superintending Engineers and 151 Executive Engineers in this organization.

1.1 WATER RESOURCES AND IRRIGATION INFRASTRUCTURE IN TAMIL NADU

The irrigation system of the State has been functioning with 34 River Basins, which are grouped into 17 river basins (some of these are groups of several minor basins), all flowing eastwards from the Western Ghats and Deccan Plateau. Tamil Nadu either contains a basin in full or is a downstream riparian to another State. Out of the 17 river basins, many basins are water deficit and some are surplus water river basins. The population and area of Tamil Nadu are 7% and 4% respectively of that of India, but the available water resources are only 3%. Even though the annual average rainfall is in the order of 925 mm there are a number of rain shadow regions receiving less than or around 400 mm rainfall making them drought prone. The occasional flash floods also cause huge damages like those occurred 2005. The surface water potential is about 853 TMC, which includes 261 TMC from neighbouring States; while ground water potential assessed is about 790 TMC. The demand for water is continuously on the rise with the growth of population, industry and agriculture while there is no rise in the availability of water. Surface water resources have been fully harnessed by impounding the available water in 62 large dams, 8 small dams, 5 drinking water reservoirs and 39,202 tanks.

1.2 THE GROUND WATER POTENTIAL

In a state where almost all the surface water potential has been harnessed, the ground water assumes importance in water management, as it is available at the foot of every person owning the land.

Assessment of ground water is being done based on the methodology recommended by the committee constituted by Ministry of Water Resources, Government of India. As per the estimate updated recently, 85% (671 TMC) of the total ground water potential in Tamil Nadu has been developed and being utilized. This development is not uniform and hence 175 revenue blocks out of the total 385 are over exploited and critical. 8 blocks are saline. 105 blocks of semi-critical and 97 blocks safe category are available for developing the left over 15% of the potential.

1.3 AREA UNDER IRRIGATION

The net area irrigated rose from 21.11-lakh hectare in 1950's to 27.75 lakhs hectare in the 1990s and is reported to have come down to 21.48 lakhs hectare during 2004-05. During 2005-2006, it has been increased to 29.20 lakhs hectares. 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 20,26,276 irrigation wells in the State.

1.4 MANAGEMENT OF WATER RESOURCES

Management of water resources in the state of Tamil Nadu has assumed considerable importance due to growing needs and conflicting nature of interests by various sectors.

Many of the river basins are water stressed due to limited supply and ever expanding demands. Apart from the agricultural needs, the state has to supply domestic and drinking water to an increasingly urbanized and industrialized population in addition to the needs of industries, fisheries, environmental flows and community uses.

2. IRRIGATION PROJECTS

a. IAMWARM PROJECT

Taking in to account of the deficit in available water and increase in demand for various uses, the irrigation infrastructure needs to be modernised through capacity building of the institutions at all levels and restoration and rehabilitation of the canal systems, tanks etc. The irrigation service delivery efficiency and accountability are also proposed to be improved. An appropriate combination of modern tools, techniques as well as growth in intensive agriculture is proposed to improve the economic status of the farmers.

For improving water efficiency in irrigated agriculture with aim to increase the agricultural income and alleviation of poverty in the rural sector, Irrigated Agriculture Modernisation and Water Bodies Restoration and Management Project (IAMWARM) involving all the line Departments dealing with water and agriculture has been formulated.

This project has been formulated for 63 sub-basins based on the guidance from the project preparation missions of the World Bank fully supported by a Multi Disciplinary Project Unit of Tamil Nadu Public Works Department and was submitted to the World Bank through Government of India. Negotiations were held in December 2006 and a tripartite Agreement was signed in New Delhi on 12.02.2007. The overall project outlay is Rs.2547 crore (566 M \$) and it is programmed for completion in 6 years.

Under this project, it has been proposed to modernize, the irrigation structure like Anicuts, Canals, Channels and structures in 63 basins. In respect of the tanks lying in these sub-basins, the Government of India has promoted a centrally assisted scheme for Repairs, Renovation and Restoration (RRR) of the traditional water bodies directly linked with agriculture.

Under this Pilot Project, Repairs, Renovation and Restoration (RRR) is already under way at a cost of Rs.10.594 crore in 2 Districts for 46 tanks (8 tanks in Sivagangai and 38 tanks in Villupuram).

In the same lines, based on the guidelines given by the Government of India and World Bank, a specific component has been included in IAMWARM Project for Repair, Restoration and Rehabilitation of 5763 tanks at a cost of about Rs.1086 crore. The cost of the project will be shared by the Government of Tamil Nadu and Government of India in the ratio of 75:25.

In the first year 12 Sub-Basins are proposed to be taken up under IAMWARM in which Detailed Project Reports for 9 Sub-Basins have been finalized. Based on these Detailed Project Reports, 71 Bid documents have been prepared for a value of Rs.399.95 crore. Out of this amount, Rs.160 crore will be spent in the first year i.e. 2007-08. Detailed Project Reports for three other sub-basins (Koundinya, Poiney and Cooum) are under preparation in consultation with the other line Departments. Also action has been initiated to prepare Detailed Project Reports for 51 sub-basins.

The entire IAMWARM project will be executed by the respective Head of the Departments of the line Departments with separate fund allotment. The allotment will be finalized in an integrated manner by the Multi Disciplinary Project Unit (MDPU) Cell, which will approve the action plan and monitor the physical and financial progress. The Steering Committee will approve the integrated Sub-Basin development plans as recommended by the MDPU. The Engineer-in-Chief of WRO will have three cells under him to plan and

monitor the project viz. Procurement cell, Participatory Irrigation Management (PIM) Cell, Management Information System (MIS) Cell and Training Cell.

The WRCP I covered an ayacut of 6 Lakh hectares and for this extent 1566 water Users Association under the Tamil Nadu Farmers Management of Irrigation System Act (TNFMIS Act) were formed. Elections were held democratically to select the President and other office bearers of the Water Users Association (WUA). They were imparted training on PIM. An amount of Rs.100 per hectare as one time payment was given to each WUA as maintenance grant.

The net ayacut that will get benefited under IAMWARM has been estimated to be 6.17 lakh hectares and about 2600 new WUAs will be formed under Participatory Irrigation Management to maintain the systems.

b. HYDROLOGY PROJECT

The World Bank Aided Hydrology Project - I for Tamil Nadu is intended to improve institutional and organizational arrangements, technical capabilities and infrastructure available for collection validation, collection analysis, transfer and dissemination of hydrological, hydro-meteorological, geo hydrological and water quality data to eligible users. After the successful completion of the Hydrology project I on 31.12.2003 the Department continued to collect, validate,

analyse and transfer of Hydrological / hydro-meteorological, geo hydrological Water quality data to various users. ***The successor project in the name of Hydrology Project II has been taken up in the state from April 2006 for a period of 6 years at a cost of Rs.25.27 Crore.***

This project will aim at the following prime components.

1. Consolidation of the Hydrology project I activities.
2. Awareness, Dissemination and knowledge sharing
3. Hydrological Design Aids
4. Development of Decision Support Systems
 - Drought monitoring, assessment and management in Vaippar Basin
 - Flood management in Thambaraparani Sub-Basin.
 - Conjunctive use of Surface and Ground Water in Agniar basin.

5. Purpose Driven Studies

On completion of the Hydrology Project II, the above 'Decision Support Systems' for the said three basins would have been developed with inputs from various agencies. Decision Support Systems are technical tools designed to support the information needs of the policy makers and Water Resource Stakeholders.

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

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 Km long to divert about 8565 Mm³ (303 TMC) of water from Somasila reservoir to the Grand Anicut across river Cauvery. The link canal will 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. The Hon'ble Chief Minister of Tamil Nadu has addressed the Hon'ble Chief Minister of Andhra Pradesh, suggesting that the Ministers in charge of irrigation in both the states can meet and initiate a dialogue whenever there is a proposal of transfer of the surplus water from one river basin to another river basin, so that the farmers of both the states will be benefited.

Further the Hon'ble Chief Minister has also addressed the Government of India in this regard. Action will also be taken to get the co-operation of the upstream states.

4. PRESENT STAGE OF THE ONGOING IRRIGATION SCHEMES

1. Nanganjar Reservoir (Dindigul District)

The Nanganjiyar Reservoir Project across a tributary of river Amaravathy near Idayakkottai 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 was taken up during 1990 at an estimates cost of Rs.20.70 crore. The scheme is nearing completion at a revised cost of Rs.41.68 Crore.

The project has been completed in 2005. But due to the unprecedented rain in November 2005, the head sluice and earthen bund around has failed. Rectification work at a cost of Rs.40.00 lakhs is under progress and it is proposed to complete this repair by September 2007.

2. Irukkankudi Reservoir (Virudhunagar District)

This scheme was formulated for formation of reservoir across Vaippar near Irukkankudi 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 of constructing a road bridge in water spread and a few structures along the canal are under progress. They are programmed for completion by September 2007.

3. Malattar Anicut (Ramanathapuram District)

The Government 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.

The Anicut portion has been completed and the formation of left and right main canal and distributaries are under execution. It is programmed to complete the entire work by September 2007. An amount of Rs.5.50 crore has been provided for 2007-08.

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

Excavation of a high level canal of 27.26 Kilo metre from 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 floodwater 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 constructions of Cross Drainage works are under progress. Canal formation is nearing completion. About 63 % of work has been completed. The project is programmed to be completed by March 2008. An amount of Rs.18.41 crore has been provided for 2007-08.

5. Shenbagathope Reservoir (Thiruvannamalai District)

Formation of a reservoir across Kamandaluru in Shenbagathope village of Polur Taluk in Thiruvannamalai 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 has been completed availing "NABARD" loan assistance. It will be opened for irrigation in the year 2007.

6. 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. Construction works will be taken up during 2007. An amount of Rs.17.00 crore has been provided for 2007-08.

7. Kuppanatham Reservoir (Thiruvannamalai District)

In 1996, a scheme for formation of a reservoir across Cheyyar near Kuppanatham village in Chengam Taluk of Thiruvannamalai District, at an estimated cost of Rs.35.46 crore was sanctioned.

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 Thiruvannamalai and Polur Taluks.

Works at a revised cost of Rs.43.50 Crore is in progress. About 65% of the work has been completed and the remaining work will be completed by October 2007. An amount of Rs.5.00 crore has been provided for 2007-08.

8. 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.

Formation of the dam has been completed and the balance work will be completed by October 2007. A portion of the canal works is under execution.

During 2007-08, an amount of Rs 15.48 lakhs will be spent for completing the remaining works.

9. 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 85% of work has been completed and the scheme will be opened for irrigation during the North East Monsoon 2007. An amount of Rs.14.84

lakhs has been provided in 2007-08 for completing the balance works.

10. 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.

The remaining canal works will be completed before the North East Monsoon of 2007. An amount of Rs. 1.27 crore has been provided for completing the balance item of works in 2007-08.

11. 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 ayacut will be stabilised besides bridging a gap of 57 hectares in Vaniyambadi Taluk.

Clearance of the Government of India for forestland has been received. The work is in

progress with NABARD loan assistance. A sum of Rs.5.16 crore has been provided.

12.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.

About 75% of the work has been completed. The work will be completed by 2008. An amount of Rs.1.00 crore has been provided for completing the remaining works in 2007-08.

13. 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 71% of the work has been completed. The forest concurrence for the Anicut portion of the canal is under finalization. The scheme is expected

to function from September 2008. An amount of Rs.10.83 crore has been provided for completing the work in 2007-08.

14. 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 in April 2007. An amount of Rs. 7.00 crore has been provided for 2007-08

15. 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 Sivagangai District will be bridged. Revised estimate for Rs.19.49 crore has been sanctioned.

The project has been completed except some residual works, which will be completed in 2007-08.

16. 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 was 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 across the channel and the work is in progress.

17. Formation of a Tank across Mathalapallam River (Dharmapuri District)

A scheme for formation of a tank across the river Mathalapallam in Ramakondahalli Village of Pennagaram Taluk was sanctioned by the Government in 2001 at an estimated cost of Rs.14.15 crore in 2001. An ayacut of 445 hectares

will be benefited by this scheme. Land Acquisition work is in progress.

About 60% of work has been completed. Remaining work will be completed by September 2007. An amount of Rs.2.75 crore has been provided for completing the balance work in 2007-08.

18. 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 sanctioned this scheme for Rs.7.00 crore in 2001.

Under this scheme, the surplus water from Badathalav Tank will be conveyed through supply channel to Vennampalli and 10 other tanks upto Kashimpur tank to irrigate direct ayacut of 542 hectares and indirect ayacut of 607 hectares. The work is executed with NABARD loan assistance.

About 80% of the work has been completed. Further work will be completed by September 2007. An amount of Rs.6.00 crore has been provided for completing the work in 2007-08.

19. 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 sanctioned this scheme for Rs.1.25 crore in 2003.

By implementing the scheme 185 hectares of dry land will be converted into wetland. In addition to that ground water level will rise in the surrounding wells.

All works except the work in forestland have been completed. Remaining works are programmed to complete soon after acquiring the forestland.

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

The Government sanctioned the scheme for formation of a new tank across Periyoothu Odai near Uthamapalayam Taluk for Rs.2.02 crore in 2003.

This scheme will provide irrigation facilities to an extent of 47.55 hectares dry land. About 80% of the work has been completed. The remaining work will be completed in 2007-08.

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

The Government sanctioned a scheme for formation of a new tank across Ayyanarkoil odai in Mallapuram Village in Peraiyur Taluk for Rs.3.54 crore in 2004.

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

About 63% of the work has been completed. Remaining works are in progress and will be completed in 2007-08.

22. Increasing the carrying capacity of Marudur Melakkal from Marudur Anicut to Kalvoy tank Thoothukudi District

Administrative sanction was accorded, for this scheme for Rs.9.527 crore, in the year 2004, in order to stabilize and bridge the gap of Marudhur Melakkal ayacut and also to give assured supply of 500 cusecs to Kalvoy sadayaneri Channel.

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

As the works could be taken up only during non-irrigation season, now, about 30% of the work has been completed. Further works will be completed in the year 2007-08. An amount of

Rs.2.37 crore has been provided for completing the balance work in 2007-08.

23. Modernisation of Thirukurunkudi Periakulam (Tirunelveli District)

The Government sanctioned a scheme for Modernisation of the Thirukurunkudi Periakulam in Nanguneri taluk of Tirunelveli District for Rs.1.0277 crore in the year 2004. By implementing this scheme, an extent of 335 Hectares will be benefited.

About 30% of work has been completed. The remaining works will be completed in 2007-08.

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

The Government sanctioned a scheme for Rs.2.64 crore for reconstruction of Regulator No.2 of Pasimuthan Odai at LS 10.27 Km. 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 hectares in 13 villages will be benefited. Work is executed under NABARD Loan Assistance.

About 70% of works has been completed. The remaining works will be completed in 2007-08.

25. Formation of a tank across Perumpallam Odai (Salem District)

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

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

About 90% work has been completed. The remaining work will be completed in 2007-08.

26. Formation of a tank across Virumanuthu Odai (Theni District)

The Government sanctioned the scheme for formation of a tank across Virumanuthu odai near Konavaipatti (Ganesapuram) village in Andipatti taluk for Rs.2.05 crore in 2005.

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

About 50 % work of this project has been completed and further work will be completed in 2007-08.

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

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

By implementing the scheme 140 hectares of wetland will get benefited. An amount of Rs.1.00 crore has been provided for 2007-08.

28. 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. The works are in progress. An amount of Rs.8.77 crore has been provided for 2007-08.

29. Restoration of Non-System (Rainfed) Tanks

The Government have accorded sanction for Rs.62.50 crore for the benefit of 34,194 hectares in 25 Districts in part II scheme of 2005-06. The works in 59 tanks have been completed and the remaining works will be completed in 2007-08. An amount of Rs.18.61 crore has been provided for 2007-08.

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

The Government sanctioned an amount of Rs.70.00 lakhs in the year 2005 for the formation of a pond across Odai near Munandipatti village in Andipatti Taluk for benefiting an extent of 35 hectares.

About 40% work has been completed. Further work will be completed in 2007-08.

31. Formation of a new pond across Odai near Dharmathupatti (Theni District)

The Government sanctioned an amount of Rs.34.00 lakhs for the formation of a pond across Odai near Dharmathupatti Village in Andipatti Taluk for benefiting an extent of 29.93 Hectares.

About 25% of work has been completed. The balance work will be completed in 2007-08.

32. Formation of a New Pond across Odai near Kottodaipatti near Pulimankombai Village (Theni District)

The Government sanctioned an amount of Rs.74.00 lakhs for the formation of a new pond across odai near Kottodaipatti of Pulimankombai Village in Andipatti Taluk for benefiting an extent of 72.11 hectares.

About 90% of work has been completed. The balance work will be completed in 2007-08.

33. Formation of a New Tank across Aswamanadhi in Toddappanaickanur Village in Usilampatti Taluk.

The Government sanctioned an amount of Rs.3.44 Crore for the Formation of a New Tank across Aswamanadhi in Toddappanaickanur Village in Usilampatti Taluk.

An extent of 153.44 hectares will be benefited.

About 48% of the works has been completed. The balance work will be completed in 2007-08.

34. Construction of Check dams across Varaganadhi River in Periakulam Taluk

The Government sanctioned an amount of Rs.27.90 Lakhs for the construction of check dam across Varaganadhi River in Periakulam Taluk.

About 65% of work has been completed. The balance work is expected to be completed by September 2007.

35. Formation of a tank across Kurungur (Dindigul District)

The Government sanctioned an amount of Rs.90.00 lakhs, for Formation of a new tank across Kurungur (Arunkattukanmoi) in Poondi Village of Kodaikkanal Taluk, in the year 2005.

An extent of 68 hectares will be benefited.

About 95% of work has been completed. The balance work will be completed in 2007-08.

36. Formation of a tank across Talaimalaivari (Trichy District)

The Government sanctioned an amount of Rs.53.00 lakhs in the year 2005 for the formation of tank across Talaimalaivari near Tholurpatty in Musuri Taluk to benefit an extent of 52 hectares.

About 95% of work has been completed. The balance work will be completed in 2007-08.

37. Construction of an Anicut across Nandiyar Odai near Uttathur Village in Lalgudi Taluk

The Government sanctioned an amount of Rs.36.50 Lakhs in 1998 for the construction of an anicut across Nandiyar Odai near Uttathur Village in Lalgudi Taluk. By implementing this scheme, an extent of 194.75 hectares of land will be stabilised.

About 60% of work has been completed. The balance work will be completed in 2007-08.

38. Formation of Supply Channel from Irundaraipatti Vari to Periyakulam Tank in Pappakudi Village in Iluppur Taluk of Pudukottai District.

The Government sanctioned an amount of Rs.25.50 lakhs in 2005 for formation of a supply channel from Irundaraipatti Vari to Periyakulam Tank in Pappakudi Village in Iluppur Taluk. By implementing this scheme, an extent of 112.40 hectares will be benefited.

About 40% of work has been completed. The balance work will be completed in 2007-08.

39. The Schemes taken for execution under NABARD during the year 2005-06.

(Rs in lakhs)

Sl. 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	85% work completed
2	Construction of an anicut across Markandanadhi near Cigarapalli village of Krishnagiri Taluk of Krishnagiri District.	232.80	45% work completed.
3	Formation of a new tank near Kattarankulam Village in Kovilpatti Taluk in Thoothukudi District.	19.31	35% work completed
4	Construction of an anicut across Nalliuppodai to feed Nambipuram tank in Ettayapuram Taluk of Thoothukudi District.	113.85	70% work completed

5	Rehabilitation of Dhali channel system and Valayapalayam system in Udumalpet Taluk of Coimbatore District.	440.92	82% work completed
6	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Pallivilangal anicut & channel of Parambikulam Aliyar Project in Pollachi Taluk of Coimbatore District.	138.68	62% work completed
7	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Perianai anicut & channels.	180.86	47% work completed
8	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Kariapatti anicut & channels.	210.53	69% work completed
9	Modernisation and Upgrading the standards of Bargur supply channel.	514.70	60% work completed

10	Modernisation and Upgrading the standards of supply channel of Penukondapuram Tank in Sonahalli village of Pochampalli Taluk.	426.88	48% work completed
11	Excavation of supply channel from Alathur channel to Aritharimangalam tank in Tiruvannamalai District.	26.06	35% work completed

12	Rehabilitation of Cauvery Regulator at G.A. in Thanjavur district.	1738.83	Overall 90% works have been completed (Among five packages, three packages have been completed. In the balance two packages work is in progress).
13	Rehabilitation of Vennar Regulator at G.A. in Thanjavur district.		
14	Rehabilitation of G.A. Canal Regulator at G.A. in Thanjavur district.		
15	Rehabilitation of Cauvery Regulator at Mile 26/6 at Thirukattupalli in Thanjavur district.		
16	Rehabilitation of Kudamurutti Regulator at Mile 26/6 at Thirukattupalli in Thanjavur district.		
17	Formation of New tank across Viswakudi Kallar Odai in Thondamanthurai Village of Perambalur District.	723.36	Designs to be finalised

18	Replacement of Mudkorambu (Diversion weir) into masonry anicut across Vellar River for providing irrigation facilities to Mumbalai Tank and Vadakkumanalmelkudi Tank in Manalmelkudi Taluk of Pudukottai District.	157.40	RAS is under consideration
19	Formation of New Tank near Ayyappapuram Village in Ottapidaram of Thoothukudi District.	23.39	65% work completed.
20	Construction of Bed Dam across Vaigai River to feed Kanoor Tank in Manamadurai Taluk of Sivagangai District.	76.97	40% work completed
21	Construction of Bed Dam across Vaigai River to feed Milaganoor Kalvoy in Manamadurai Taluk of Sivagangai District.	74.86	80% work completed

22	Construction of Bed Dam across Vaigai River in Keelaperumkarai to feed Koothankal Kalvoy in Paramakudi Taluk of Ramnad District.	92.84	85% work completed
23	Construction of Bed Dam across Vaigai River in Arasodivandal Village to feed Keelanattarkal in Paramakudi Taluk of Ramnad District.	67.89	65% work completed.
24	Construction of an anicut across Peearu River to feed Thiruppalakkudi Tank in Thiruvadanai of Ramnad District.	52.68	90% work completed.

40. THE SCHEMES TAKEN FOR EXECUTION UNDER NABARD IN RIDF – XI DURING THE YEAR 2006-07.

The following schemes have been sanctioned with the assistance of the National Bank

for Agriculture and Rural Development (NABARD)
from the year **2006-2007** onwards.

(Rs in crore)

Sl. No	Name of the scheme	Estimate Amount	Present Stage
1	Rehabilitation of Sholayar Dam in Coimbatore District.	6.4793	Work is in progress
2	Rehabilitation and Standardisation of Lower Bhavani Dam at Bhavani Sagar in Erode District.	7.2941	Work is in progress
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	Work is in progress
4	Formation of a new tank across odai near Seelanayakkanpatti village in Peraiyur Taluk of Madurai District.	1.6968	Work to be commenced.

5	Construction of a check dam across Vachukkal odai in SF No 44 in Modakadu village in Rasipuram Taluk in Namakkal District.	0.2378	Work is in progress.
6	Construction of an anicut across Vilangudi odai in Athur Village to feed Thellur Peria Eri and Vilangudi Eri group in Ariyalur Taluk of Perambalur District.	0.3503	Work is in progress.
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	Work is in progress.
8	Rehabilitation of Ayangudi main channel and its branches feeding tanks at Aranthangi Taluk of Pudukkottai District.	0.7325	Work is in progress.

9	<p>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.</p>	4.2867	Work is in progress.
10	<p>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,</p>	1.3333	Work to be commenced.

	Vattathur tank, Kandiyakottai tank, Vethivayal tank, Muthuvalakudi tank, Selvanenthal, Velivayal tank, Keelkudi and Puthuvayal tanks in Pudukkottai District.		
11	Reaming of drainage shafts from LS 300' to 4540' of Mettur Dam in Salem District.	0.8366	Work is in progress.
12	Formation of a new tank near Bommarajupet village in Pallipattu Taluk in Thiruvallur District.	0.3301	Work is in progress.
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	Work to be commenced.

14	Rehabilitation of anicuts Karaipottanar river in Musiri Taluk of Tiruchy District.	1.0158	Work is in progress.
15	Lining the bed and sides of Manimuthar main canal from LS 0 to 26.845 km of Tambraparani system in Tirunelveli District.	15.3768	Work is in progress.
16	Lining the bed and sides of Kannadian Channel and Improvements to the sluices of Kannadian channel in Ambasamudram Taluk of Tirunelveli District.	17.7874	Work is in progress.
17	Rehabilitation and Improvements to Mettur Canal System	11.3509	Work is in progress.
	Total	71.3487	

41. 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 141 tanks have been completed and works in 14 tanks are nearing completion. Works in two tanks have been dropped. An amount of Rs.11.50 lakhs has been provided for 2007-08.

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 hectares with the loan assistance from NABARD. Works in 22 Tanks have been completed, in 207 Tanks in progress and in another 21 tanks it will be commenced shortly. An amount of Rs.21.08 crore has been provided for 2007-08.

(c) RIDF XI

An amount of Rs.20.59 crore has been sanctioned for modernisation of 96 Non-System Minor irrigation tanks in 16 Districts with a command area of 7909 hectare with the loan assistance from NABARD. The works are in progress. An amount of Rs.9.71 crore has been provided for 2007-08.

42. Integrated Water Resources Management Project in Ramanathapuram District – Phase II

Integrated Water Resources Management Project in Ramanathapuram District has been sanctioned during 2005 for a value of Rs.22.56 Crore by the Government for Rehabilitation of 97 Tanks in Ramanathapuram District. By implementing this scheme, an extent of 12249.73 hectare in 11 Blocks in Ramanathapuram District will be benefited. The works are in progress and will be completed in 2007-08. An amount of Rs.70 Lakhs has been provided for 2007-08.

43. PART II SCHEMES – 2006-07

During 2006-07 the following new schemes at an estimated cost of Rs. 36.62 crore were sanctioned and taken up for execution.

SMIP SCHEMES

(Rs. In lakhs)

Sl. 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 Dindugal District.	16.55
12	Formation of a percolation pond in SF No.378, 379 of Chatrapatti Village of Oddanchatram Taluk of Dindugal 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.	8.00
Total		330.89

44. MINOR IRRIGATION SCHEMES

1	Construction of Bed Dam and dividing wall across Palar near Kavasampattu Village and re grading the existing Goddar river in Vellore Taluk.	650.00
---	---	--------

2	Providing dividing wall below the existing Aqueduct 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.	
4	Formation of a new tank across Karupakoil odai in Konapatti Village in Dindigul Taluk.	272.00
	TOTAL	2001.00

45. ANTI SEA EROSION WORKS

1	Construction of groynes at Therasapuram in Thoothukudi District.	710.00
2	Construction of groynes in Iddinthakarai village in Radhapuram constituency of Tirunelveli District.	620.00
	Total	1330.00
	Grand Total	3661.89

5. FLOOD PROTECTION WORKS IN CHENNAI, TIRUCHIRAPALLI AND MADURAI AND THEIR STAGE.

Realising the importance of flood protection in urban areas this Government announced in the Budget for **2006-07**, the following three **Major flood protection works in Chennai, Tiruchirapalli and Madurai.**

1. CHENNAI

Flood protection works to prevent inundation of houses in low lying areas in Chennai cities during rainy season and to ensure free flow of storm water to the sea through Cooum, Adayar, Kosasthalaiyar, Otteri Nallah, Virugambakkam and Arumbakkam Canals and Pallikaranai swamp. Proposals have been formulated for taking up the works under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and National Cyclone Risk Mitigation Project (NCRMP).

2. TIRUCHIRAPPALI-PUDUKOTTAI

Diversion of flood water of Koraiyar, Kudamurutti river, Ariyar river and Uyyakondan Channels through Canals and Tanks and reroute the surplus water to Agniyar river to benefit dry areas of Pudukottai districts at an estimated cost of Rs. 295.00 crore. Under this scheme, as Phase I to relieve the flood inundation in Trichy town, improvements to Koraiyar Anicut, Kudamuruti and Uyyacondan channels at an estimated cost of Rs.77.20 Crore has been formulated and is under

consideration of NABARD for sanction. Works are expected to be taken up during this year. Meanwhile an amount of Rs.5.00 Crore has been sanctioned for immediate flood protection during the North East Monsoon. In phase II, Diversion of Flood Flows of Ariyaru and Koraiyar to Agniar in Pudukottai District, is being formulated taking into consideration the proposals of the National Water Development Agency. Detailed investigation is under progress in that direction.

3. MADURAI

Permanent Restoration of Flood protection works to Sellur tank, Sathiyar Odai from Thirupalai tank to Vandhiyur tank in Madurai District at an estimated cost of Rs.12 crore is proposed. The scheme is under consideration of NABARD for approval.

6. NEW SCHEMES: 2007-08

a. PART II SCHEMES

It is proposed to execute the following new schemes at an estimated cost of Rs.8.49 crore in 2007-08 under Part II schemes.

(Rupees in crore)

Sl. No	Name of Scheme	Amount
	MINOR IRRIGATION SCHEME	
1	Construction of grade wall across Vennar at mile 42/1 to feed A-47 Rangunatha Cauvery Channel in Thanjavur District.	1.75

SPECIAL MINOR IRRIGATION SCHEMES		
2	Construction of check dam across Pukkathurai odai near Kilvalam Village in Maduranthagam taluk of Kancheepuram District.	0.45
3	Construction of anicut across Mukthanadhi to feed Kumarapalayam supply channel in Karadi Chithur Village in Villupuram District.	0.26
4	Construction of a check dam across Muthalaimuthuvari at LS 7800 M of Thanjavur Taluk and District.	0.14
5	Construction of a check dam across Cholagampatti Vari at LS 4000 M Thanjavur taluk and District.	0.20
6	Construction of a grade wall across Veeracholan River at mile 118.00 Km in Komal village of Mayilduthurai taluk of Nagapattinam District.	0.40
7	Construction of an anicut across Mattankulam vari to feed Kalarankulam in Kuttampatti H/o Vadakkuveli Village in Thuraiyur Taluk of Trichy District.	0.15
8	Construction of a check dam across Perumpallam in SF No 54 of Thekkampatti Village in Mettupalayam Taluk of Coimbatore District.	0.22

9	Construction of dividing dam across Gridhumal River to feed Ambalathadi, Mangudi etc tanks in Manamadurai Taluk of Sivaganga District.	0.41
10	Construction of an anicut cum check dam across Valliyar in Eraniel Village in Kanyakumari District.	0.60
11	Construction of Retaining wall to avoid the outflanking of Valiyar river water near Kalpady yela in Thalakulam in Kalkulam Taluk of Kanyakumari District.	0.22
12	Construction of a check dam /Recharge Shaft Check Dam at Ammapalayam village in Attur block in Attur taluk in Salem District.	0.17
13	Construction of a check Dam/ Recharge shaft at Vannikonendal village of Melaneelithanallur block in Tirunelveli District.	0.03
14	Construction of a check Dam/ Recharge shaft at Kulasekharanallur in Ottapidaram taluk of Thoothukudi District.	0.04
	OTHER SCHEMES	
15	Study of Ground water Assessment Based on Mini Water Sheds in Selected Districts of Tamil Nadu.	0.60

16	Renovation of Inspection Bungalows at Sriperumbuthur Taluk of Kancheepuram District.	0.10
17	Construction of an additional suite in the Inspection Bungalow at Baluchetty Chatram in Kancheepuram Taluk and District.	0.15
18	Renovation of Project House at Upper Nirar in Valparai taluk of Coimbatore District.	0.20
19	Providing Infrastructure facilities and improvements to the Park Areas in the five Dam sites.	1.70
20	Improvements to Nelvoy Maduvu from Nelvoy Maduvu anicut in Kozhiyalam village to Madurantakam tank in Madurantakam Taluk of Kancheepuram District.	0.70
Total		8.49

b. SCHEMES APPROVED BY NABARD

(Rs in crore)

Sl. 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.	0.68

2	Extension, Renovation and Modernisation of Vetharampatti tank in Vetharampatti Village of Harur Taluk in Dharmapuri District (Innovative Proposal).	0.15
3	Formation of a new pond across Kannimar odai (Nochi Odai) in Kavanuthu Village in Dindigul District	0.10
4	Formation of a new pond across Panchanhangi Odai in S.F. No.602 in Sendurai Village of Natham Taluk in Dindigul District.	0.39
5	Rehabilitation of check dam across Kodaganar near Nagampalli village in Aravakuruchi Taluk of Karur District.	0.78
6	Formation of a new pond across Lavaluthu odai in Vallanadhi Village in Andipatti Taluk of Theni District.	0.20
7	Rehabilitation of supply channel from Reddiyapatti to Karikali – Uddandampatti and chain of anicuts in Rudrakoha Kombaiyar in Musiri Taluk of Tiruchirapalli District.	1.98
8	Artificial recharge schemes - 21 Schemes.	3.06
9	Modernisation of R.S. Mangalam Big Tank in Tiruvadana Taluk of Ramnad District.	5.28

10	Formation of a tank across Sunnambukkal Odai near Polivakkam Village in Tiruvallur Taluk of Thiruvallur District.	0.68
11	Formation of a new pond near Krishnakuppam Mailarvada village in Pallipattu taluk in Tiruvallur District.	0.16
	TOTAL	13.46

c. Proposals under consideration by NABARD
(Rs in crore)

Sl. No.	Name of the scheme	Estimate Amount
1	Construction of an anicut across Thenar to feed Kappalur etc., tanks in Devakottai Taluk in Sivagangai District.	0.22
2	Rehabilitation of the Chitrakudi Vari and providing field inlets to provide submersion relief of the adjoining fields in Thanjavur Taluk and District.	0.31
3	Construction of checkdam across Varattar in Vada Veerappanaikan patti SF17 No 1678 in Lakshmipuram Village in Periyakulam taluk in Theni District.	0.12
4	Construction of an anicut across Ayyar to feed Chithambur Eri in Chithambur Village of Musiri Taluk in Tiruchirapalli District.	0.94

5	Permanent restoration of the flood damages 2005 – Permanent protection to Cauvery, Coleroon banks in Karur, Tiruchirapalli and Perambalur Districts.	207.64
6	Rehabilitation of GA canal from 58.680 Km to 92.200 Km in Orathanadu and Pattukottai Taluk in Thanjavur District.	26.00
7	Diversion of surplus water of Ramanadhi Reservoir to Command area of Jambunadhi System in Tenkasi and Ambasamudram Taluks of Tirunelveli District.	3.60
8	Rehabilitation of Kalingarayan Channel from Mile 0/0 to 56/5.5 in Erode Taluk of Erode District.	12.00
TOTAL		250.83

The Government is closely following up the sanction of these schemes so that execution of these schemes can be taken up early to give benefit to new ayacut and to ensure relief from flood inundation.

d. REPAIRS TO PUTHEN DAM IN KANYAKUMARI DISTRICT

Puthen Dam, in Kalkulam Taluk of Kanyakumari District, has been damaged due to flood during October 2006. For urgent repairs of Puthen dam an estimate is under preparation for Rs.1.5 crore and the work will be taken up at the earliest. The interest of the ayacutdars of 31971 hectares in Agastheswaram, Thovalai and Kalkulam taluk of Kanyakumari District will be safeguarded.

e. FORMATION OF A FLOOD CARRIER CANAL FROM KANADIAN CANAL IN AMBASAMUDRAM TALUK OF TIRUNELVELI DISTRICT TO DIVERT THE EXCESS FLOOD WATERS OF TAMIRABARANI RIVER TO DRY AREAS OF SATHANKULAM IN TUTICORIN DISTRICT AND THISAYANVILAI IN TIRUNELVELI DISTRICT

An estimate for a value of Rs.198 crore for formation of a flood carrier canal with a carrying capacity of 3200 cusecs from Kanadian canal in Ambasamudram taluk of Tirunelveli district to divert the excess flood waters of Tamarabarani river to dry areas of Sathankulam in Thoothukudi District and Thisayanvilai in Tirunelveli district has been prepared. By implementing this scheme, 19710 hectares lands of Pachaiyaru, Manimutharu, Karumerriyaru, Nambiyaru basins would be benefited. Further, 36 villages in Tirunelveli and Tuticorin districts would benefit through ground water re-charge. For execution of this scheme, 47.98 hectares wet land, 494.66 hectares dry land and 79.95 hectares Poramboke land are to be acquired. After completion of land acquisition, the scheme will be taken up for execution. This scheme would prevent the Tammiraparani surplus going into the sea.

f. REHABILITATION OF WELLINGTON RESERVOIR

Wellington Reservoir is situated in Keelacheruvai village of "Tittagudi taluk in Cuddalore District 240 Kms south west of Chennai. The Reservoir is located in Vellar Basin across a distributor stream, Peria odai of Vellar River. It receives regulated supply, diverted from Vellar River at Tholudur regulator besides getting full supply from its own catchment area of 129.50 sq.km. The dam was constructed during 1913 to 1923 and irrigates an ayacut of 11,198 Hectare. The capacity of the Dam is 70.40 Mcum (2486 Mctt). The Government have now allocated a budget provision of Rs.20.00 crore for Rehabilitation of the Wellington Reservoir during the year 2007-08. It has been proposed to form a Technical Committee and based on the recommendations of the Technical Committee; restoration works will be taken up during the coming year.

7. IRRIGATED AGRICULTURE MODERNISATION AND WATER BODIES RESTORATION AND 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 is 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 the committee recommended Integrated Water Resources Management Approach involving Line Departments for development and management of water resources in Tamil Nadu as the desired option.

It is in this background the Irrigated Agriculture Modernisation and Water Bodies Restoration and Management (IAMWARM at an estimated cost of Rs.2547 crore was approved by the World Bank for the development of 63 sub-basins.

Project Objective:

The IAMWARM project aims to improve the service delivery and productivity of irrigated agriculture with effective integrated water resources management in a sub-basin framework in Tamilnadu

The specific components of the project include:

Irrigation systems modernisation in a sub-basin framework (Base cost Rs.1273 crore)

This component seeks to improve the bulk water delivery through modernisation of irrigation systems and service delivery and management of schemes in about 63 selected project sub-basins over an area of 6.17 lakh hectares. Activities will be carried out under two sub-components; first involving tank system modernisation by restoring & repairing water bodies and the second, improving canal irrigation system through repairs, linings and rehabilitation of control structures.

Agricultural Intensification and Diversification (Base cost Rs. 748 crore)

This component seeks to build on the improved bulk water delivery of above component to increase the productivity of agriculture-related activities through improved agricultural intensification, diversification micro irrigation, animal husbandry & fisheries in the 63 selected sub-basins. Agriculture and allied Departments will implement this component.

Institutional Modernisation for Irrigated Agriculture (Base cost Rs. 237 crore)

This component seeks to improve the institutional capacity for modern, efficient and accountable irrigation service delivery. The scope of this activity is statewide. These activities will be implemented through the WRO and the Water User

Associations (WUAs). The activities are expected to substantially scale-up the institutional capacity of the WRO to design, monitor, maintain and modernize their assets in an environmentally and socially sustainable manner using appropriate state-of-art techniques, and to more effectively interact with much stronger WUAs. The WUAs would be utilized to implement Participatory Irrigation Management by involving farmers.

Water Resources Management (Base cost Rs. 22.50 crore)

The objective of this component is to improve the institutional arrangements and capacity for sustainable water resources management in the State. This will include the creation of a State Water Resources Management Agency (SWaRMA), amalgamating the existing Institute for Water Studies and the State Ground and Surface Water Resources Data Centre and formation of Basin Boards. These activities are to be implemented by the SWaRMA (and its predecessor institutions till this is formed), the WRO, and Basin Boards. These investments should make Tamil Nadu one of the best examples of operationalising modern sustainable Water Resources Planning and Management concept in a basin framework in India.

Project Management Support (Base cost Rs.37.50 crore)

This component will support the management and co-ordination efforts related to

this project. This component will be implemented by the Multi-Disciplinary Project Unit (MDPU). It is expected that the project activities would help MDPU improve its institutional coordination function, remain on top of the status of project activities, and undertake corrective measures as required.

Project Implementation

The Project will be implemented over a period of 6 years. The main implementing agencies will be the Water Resources Organisation (WRO), Agricultural Engineering, Agriculture, Horticulture, Tamil Nadu Agricultural University, Agricultural Marketing, Animal Husbandry and Fisheries Departments with management support and co-ordination provided by the Multi Disciplinary Project Unit (MDPU). It is proposed to commence the implementation of the project from financial year 2007-2008 onwards. The total project outlay including physical and price contingencies is assessed as Rs. 2547 crore.

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

The Government of India sanctioned a pilot project with a 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.

District Level Implementation Committee under the Chairmanship of the respective Collectors with nomination of NGO has been constituted to monitor the project under this project 38 Tanks benefiting an ayacut of 4462.89 Hectares in Villupuram District and 8 Tanks benefiting 702.42 Hectares in Sivagangai Districts. The works in all the tanks were started belatedly due to water storage and now the works are nearing completion. Government of India have been requested to give extension of time up to June 2007.

9. ANTI SEA EROSION

To protect the coastal areas, prone for erosion, Government of Tamil Nadu have sanctioned schemes in accordance with the recommendations of experts. In severely affected areas like Royapuram in Chennai Ramanathapuram, Thoothukudi, Tirunelveli and in Kanyakumari Districts, in 34 locations, RMS walls and groynes have been constructed. Except construction of groynes in Enayam East in Kanyakumari District, which is in progress, all the other works have been completed.

The two works, viz.

1. Construction of RMS wall at Periathalai in Thoothukudi District,
2. Construction of RMS wall at Alanthalai in Thoothukudi District

have been dropped due to objections.

Subsequently construction of groyne at Periathalai village 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, and the work has been completed.

People living in the coastal areas of Kanyakumari District have been representing for more number of coastal protection works to prevent sea erosion in their areas. Responding to their request, Government of Tamil Nadu have formed a committee to inspect the coastal areas and to suggest remedial measures to safe guard the lives and properties of the people in the coastal areas of Kanyakumari District. After getting the report of the committee, necessary coastal protection works will be taken up in these areas.

10. CHENNAI CITY WATERWAYS

A multi pronged approach is required to keep the City Waterways clean and free from pollution. Various agencies and institutions have under- taken studies and development works over the years to improve the waterways. The Chennai City River Conservation Project at an out lay of Rs.1700 Crore as approved by the Ministry of Environment and Forest, Government of India was also taken up in the year 2000. 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 by the PWD have been classified into packages as below:

(Rs. in crore)

Package No.	Name of Work	Revised Cost	Present Stage
II	Improvements to Buckingham Canal	30.81	Completed
III	Adayar River Improvements	46.06	58% Completed
IV	Flood defences and resectioning of other major drains in Chennai Metropolitan area (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	10.46	completed.
	Drainage relief to Velachery area.	0.85	completed.
		6.30	85% completed
VI	Improvements to Cooum River		
	From Periyar Bridge to Sea Mouth	2.20	Completed
	Periyar Bridge to Koyambedu bridge.	17.45	To be taken up
	Total	170.34	

Though the above works have brought some improvements in the waterways, concerted and coordinated efforts are required to keep the rivers and canals running through the length and breadth of the city to an extent of about 88 Kms, free from encroachments and pollution. This Government will undertake a major development project to improve the environs of the City waterways in a multi-disciplinary approach with the assistance of World Bank and other financial institutions.

11. KRISHNA WATER SUPPLY PROJECT

To meet the drinking water requirements of Chennai city, the Krishna Water Supply Scheme was formulated for supply of 15 TMC ft. of water annually from Srisailam reservoir, constructed across the River Krishna by Andhra Pradesh.

The project was conceived and the agreements were executed between Tamil Nadu and Andhra Pradesh in 1983. After completion of the canal works adequately, water was released from Kandaleru reservoir 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 Andhra 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	2.292
1998-1999	2.812
1999-2000	1.830
2000-2001	6.688
2001-2002	3.861
2002-2003	--
2003-2004	0.210
2004-2005	2.717
2005- 2006	2.090
2006-2007	5.183

The concrete lining work for about 80 Kilo Metre of Sathya Sai Canal from Kandaleru reservoir 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 a further length of 49 Kilometers will be completed before August 2007.

Within Tamil Nadu limits, due to poor soil condition slips had occurred in many stretches of the canal. Action has been taken periodically to arrest the slips as and when needed. It has been proposed to provide concrete lining to the canal from the year 2007-08 onwards in a phased manner.

12. DECLARATION OF BUCKINGHAM CANAL AS AN INLAND NATIONAL WATERWAY

The Parliament has introduced a Bill (No.93 of 2006), declaring Kakinada – Puducherry Stretch of Canals (1095 km) comprising of Kakinada canal, Eluru canal, Commamur canal, Buckingham canal and the Kaluvelly tank, Bhadrachalam – Rajahmundry stretch of river Godhavari and Wazirabad – Vijayawada stretch of river Krishna in the States of Andhra Pradesh, Tamil Nadu and the union territory of Puducherry as National Waterway and to regulate and develop the stretch of rivers and canals for shipping and Navigation. The Government of India will provide necessary financial assistance for the development of Buckingham canal as on Inland waterway.

The proposed National Waterway passes through the States of Andhra Pradesh (907 km) Tamil Nadu (186 km) and Puducherry (2 km).

The delineation survey in Buckingham Canal for 100 m width has been conducted to mark the corridor along the sides of canal over the length of 170 Km. The development work of the Buckingham Canal will be undertaken after getting necessary fund from Government of India.

13. 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 into Vadavar channel, bringing 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 an ayacut of 18045 hectares will be stabilized besides supply of drinking water to Chennai City. Revised estimate for Rs.130.00 crore has also been sanctioned. These works are nearing completion and expected to be completed shortly.

Government have accorded administrative sanction for Rs.12.37 crore in February 2004 for construction of Check Dams across Adyar river near Nandambakkam, Manapakkam, Cowl Bazaar and Anakaputhur in Kancheepuram District.

By implementing this scheme, rainwater could be harvested in the river Adayar and used for replenishing and recharging the Ground water in the nearby area. Locations have been chosen 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 has been taken up under Phase-I. About 85% of the work has been completed. The balance work will be completed in 2007-08.

Construction of a Check Dam near Manappakkam at a cost of Rs.3.47 crore has been taken up and is in progress. The work will be completed in 2007-08. Based on the performance of the Check dams at Nandambakkam and Manappakkam, construction of Check dams at Cowl Bazaar and Anakaputhur will be taken up.

14. TSUNAMI

After the devastation caused by Tsunami, the Government of Tamil Nadu have undertaken major development programmes to protect the coastline and the people living near the coast.

The Indian Institute of Technology Madras along with Public Works and Revenue Departments after conducting a joint detailed survey of the coastline along with Public Works Department & Revenue departments has identified vulnerable spots and recommended measures for safeguarding the coastal line from sea erosion.

Based on this project report 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 Coastal protection works.

The High Level Committee has selected the following 30 Works and prioritized for Anti Sea Erosion Works based on the report given by 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 at Thengaipattinam 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 Periyavilathurai 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 Vellankanni	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

Out of 30 works, 9 works have been completed and 21 works are in progress.

EMERGENCY TSUNAMI RECONSTRUCTION PROJECT

The Government 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 Koraitthithu, 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

After the irrigation season is over, the above works have been resumed and are progressing well and expected to be completed by September 2007.

15. CAUVERY WATER ISSUE

The Cauvery Water Disputes Tribunal after deliberating for over 16 years through filing of Statements of the case, counters and rejoinders and voluminous technical data, putting up of Expert Witnesses and cross examination of them by the Party States, finally culminating in the arguments, were all over by April 2006.

On 5th February 2007, the Tribunal gave its final order. In it, the Tribunal has allocated 419 TMC to Tamil Nadu out of the total yield in the river of 740 TMC accepting the yield estimation made by CFFC (Cauvery Fact Finding Committee) in 1972. Further, the order states that 192 TMC has to be ensured by Karnataka at Billigundulu or any other site on common border, which includes 10 TMC provided for environmental protection. Apart from this, the Tribunal has also ordered that out of 30 TMC allocated to Kerala, the unutilised water from the Kerala's share shall be used by Tamil Nadu till such time Kerala uses its share. It has also clearly indicated that the use of Ground Water shall not be reckoned as use of water of the river Cauvery.

The Tribunal in its order has also suggested constitution of an Implementation Machinery, viz., Cauvery Management Board and Cauvery Water Regulation Committee, by the Government of India.

It has also indicated the composition and guidelines for action by the proposed Implementation Machinery.

The Tribunal has further safeguarded the interests of the lower down States by stating in the order that “any upper riparian States shall not take any action so as to affect the scheduled deliveries of water to the lower riparian States.”

In the All Party Meeting held on 19.02.2007, it was resolved that Tamil Nadu may file a petition before the Cauvery Water Disputes Tribunal under Section 5 (3) of the Inter-State River Water Disputes Act, 1956 seeking explanation or guidance after listing out the areas that need explanation / guidance in consultation with Advocates and Technical Officers.

The Government have taken immediate steps to finalise the petition seeking explanation or guidance from the Tribunal in consultation with Advocates and also taking into consideration the views of the Farmers Associations. The petition will be filed before the Tribunal within the time limit of three months prescribed i.e. before 05.05.2007.

The Interim Order of the Tribunal Dated.25.06.1991 and the implementation Machinery viz. The Cauvery River Authority and the Monitoring Committee will continue to be in force until the final orders of the Tribunal are notified in the Official Gazette of the Government of India after

the submission of the further Report by the Tribunal to the Central Government.

This Government will take all necessary steps to safeguard the interest of the farmers of Tamil Nadu who are dependent on Cauvery.

16. PALAR

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 to the people in Tamil Nadu. The use of water from Palar River is governed under the 1892 Mysore-Madras Agreement. The Government of Tamil Nadu on 1.2.2006 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 the river downstream.

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 the Hon'ble Chief Minister of Andhra Pradesh on 5.8.2006 at Hyderabad, to request early release of water from Kandaleru reservoir for Chennai Water Supply, the apprehension of the

people of Tamil Nadu on the proposed construction across Palar by Andhra Pradesh was conveyed to him. 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 interests of the people of Tamil Nadu, or against law. The Hon'ble Chief Minister took up the matter with the Hon'ble Chief Minister of Andhra Pradesh on 01.02.2007. In response to this, the Hon'ble Chief Minister of Andhra Pradesh has again assured in his letter dated.5.2.2007 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.

17. 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 both the 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 Inter State 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 Project 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 it 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.

The Government of Tamil Nadu will continue to press the Government of Kerala to complete the

first review of Parambikulam Aliyar Project agreement.

18. RAISING THE WATER LEVEL IN MULLAI PERIYAR DAM

The Supreme Court of India in its order Dated 27.02.2006 permitted the Government of Tamil Nadu to raise the water level in Mullai Periyar Dam initially to 142 ft. from the temporarily brought down level of 136 ft. It also permitted the Government of Tamil Nadu to carry out the further strengthening measures in Mullai Periyar Dam. It has further ordered that the State of Kerala and its officials should co-operate with the Government of Tamil Nadu in carrying out the strengthening measures and that the officials of Kerala are restrained from causing obstructions to the strengthening works to be carried out by the Government of Tamil Nadu. Also, after the completion of the strengthening works to the satisfaction of Central Water Commission, independent experts would examine the safety aspects before the water level is permitted to be raised to FRL 152 ft.

Soon after the Supreme Court pronounced its orders, on 15.3.2006 the Government of Kerala brought out amendments to their Kerala Irrigation and Water Conservation Act, 2003, according to which, among others, the FRL of Mullai Periyar Dam is fixed as 136 ft. This was done only with a view to thwart the implementation of the Supreme Court order.

The Government of Tamil Nadu had 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 along with the Suit, it has been prayed that an exparte “stay” of operation of the aforesaid Act, in so far as the Mullai Periyar Dam is concerned 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 ft and carrying out the repair works as per the orders of the Supreme Court of India dated 27.2.2006 may be granted.

The Supreme Court on 25.09.2006 observed that the two Governments independently or with the intervention of Government of India may try to sort out, if possible, the dispute. In the All party meeting convened by the Hon’ble Chief Minister on 23.11.2006, it was resolved that as a measure of goodwill, Tamil Nadu may hold talks with Kerala under the auspices of Government of India.

As desired by the Supreme Court of India, on 29.11.2006, a meeting between the Hon’ble Chief Ministers of Tamil Nadu and Kerala in the presence of Hon’ble Union Minister of Water Resources was held at New Delhi. In furtherance to this, a meeting at the Ministers level was also held

on 18.12.2006, in the presence of the Hon'ble Union Minister of Water Resources, New Delhi.

The talks held could not lead to a solution to the dispute. Hence, the Government of Tamil Nadu has placed before the Supreme Court what all had happened subsequent to its observation and prayed for Justice to Tamil Nadu. This Suit is pending before the Supreme Court of India.

19. 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.

The Tamil Nadu Electricity Board on 29.11.2006 has forwarded a modified proposal of the Pandiyar Punnampuzha Hydro Electric Project to the Kerala State Electricity Board for its concurrence.

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

20. PENINSULAR RIVERS LINK

As early as 1980, the Government of India in the Ministry of Water Resources prepared a National Perspective Plan for water resources development. In 1982, the National Water Development Agency was created which has done extensive work on feasibility studies on many of the inter-links for inter-basin water transfer proposals.

The expected overall surplus from Mahanadhi and Godavari upto a quantity of 925 TMC of water is proposed to be utilized for various purposes like irrigation, drinking water, industrial use etc. under the Peninsular Component. They

have assessed the benefits that would have accrued as about 3 Million hectares of additional irrigation and substantial additional hydro power besides several other intangible benefits.

Under the proposed scheme Tamil Nadu is expected to get about 214 TMC and the additional area that could benefit by this scheme is estimated as 7.90 lakh hectares.

The UPA Government have included this project in their Common Minimum Program and has been pursuing the same. This Project, which is essential for the integrated water resources management of this country should be looked upon as a National project.

Tamil Nadu has given a suggestion for enhancing the quantum of water proposed to be transferred to Tamil Nadu. Tamil Nadu has further suggested that creation of storages like Manibadra on Mahanadhi and Polavaram on Godavari may be accorded highest priority and executed, as the creation of storages are part of inter linking program.

Considering the importance and urgency of implementing the peninsular component viewed in a National Perspective, Tamil Nadu is of the firm view that a dialogue among all the Chief Ministers of the States involved is to be initiated under the leadership of the Hon'ble Prime Minister, so as to start the implementation of the project. Tamil Nadu has accordingly requested for convening the

meeting of the Chief Ministers concerned in this regard.

The Hon'ble Chief Minister of Tamil Nadu in the 52nd Meeting of the National Development Council held on New Delhi on 09.12.2006, and in the discussion with the Vice-Chairman, Planning Commission at New Delhi on 05.02.2007 has emphasized the urgency to interlink the Peninsular Rivers in order to augment the water resources, so as to re-vitalize the agricultural sector by providing funds for the interlinking of rivers project during the XIth Five Year Plan starting from the year 2007-08.

The Government of Tamil Nadu has requested the Ministry of Water Resources, Government of India in its letter dated.28.02.2007 to take up the issue with the Union Planning Commission for provision of adequate funds in the XIth Five Year Plan for implementing the scheme.

21. 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 Rivers 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 Tamil Nadu is a part of the Peninsular Rivers 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 Tamil Nadu. The project proposal contemplates 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 Tamil Nadu, 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.

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 Chief Minister of Tamil Nadu on 05.09.2006 has addressed the Prime Minister with a request to prevail upon the Government of Kerala for giving its concurrence so that the Pamba-Achankoil-Vaippar Link project which is beneficial to both the States could be taken up for implementation. The Government of Tamil Nadu is actively pursuing the matter with the Government of India for implementation of this Project.

Strengthening Interstate unit for the Water Resources Department

In view of the continued problems creeping up is regard to inter state river issues like Cauvery besides Mullai Periyar Dam, Palar, Parambikulam Aliyar Project etc., this Government has proposed to organise and strengthen an Inter State Water Unit (ISW unit) in the Water Resources Department and also continue to maintain the Liaison office at New Delhi to deal with issues and render necessary assistance to Government as well as to the Legal Experts to sort out the issues at Government level and before the Legal forum.

22. DAM SAFETY

It is proposed to rehabilitate 22 dams under Dam Rehabilitation and improvements project with assistance from World Bank for which proposals for Rs.70.90 crore has been sent to Central Water Commission. The World Bank's Technical Expert have selected the following six dams for taking up in the first year of the project.

- (1) Gomukhi (2) Manimuthar (3) Pechiparai
- (4) Amaravathy (5) Parambikulam
- (6) Vaigai dam.

Participatory Irrigation Management (Pim) Programme

The participatory Irrigation Management (PIM) aims to ensure farmers participation in the Operation and Maintenance of the distribution

system of irrigation. The Government of Tamil Nadu have enacted the TNFMIS Act 2000 for this purpose and this has been brought into force in 20 districts covering 6.00 lakhs hectares of command area. 1566 Water Users Association have been formed and functioning.

Under the **IAMWARM** Project, it is proposed to bring another 6.17 lakhs Ha of command area under PIM. Further, creation of awareness among the farmers about this Act, election to about 2500 WUAs covering 63 Sub-Basins and providing basic infrastructure facilities to WUAs are proposed to be taken up. Necessary documentation work including development of a data base for PIM activities, creation of an exclusive web site for this purpose and publication of regular "**NEWS LETTERS**" on PIM activities are also proposed to be undertaken.

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

23. STATE GROUND AND SURFACE WATER RESOURCES DATA CENTRE

Ground water has become a valuable resource for meeting the drinking water requirements industrial needs and for agricultural development. Tamil Nadu having almost fully utilized the surface water resources has now turned to the only alternative source viz., ground water 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, the assessment of ground water potential based on mini water shed basis at a cost of Rs.68.85 lakhs in the blocks falling in Vellore, Villupuram and Dindigul Districts has been taken up during 2006-2007.

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.

24. 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.

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.

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
9. Team Building for Managerial Efficiency.
10. Bench Marking of Irrigation System.

Computerised Approach in Irrigation Planning and Design

A full-fledged computer center 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

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.

25. INSTITUTE FOR WATER STUDIES

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.

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.

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.

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.

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, Land use, Water level, Drainage, Geomorphology, Soil depth to bed rock, Physiography, Lineament/Structure, Water Quality, Hydrogeology and Digital Elevation Model.

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.

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.

26. DIRECTORATE OF BOILERS

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

The Directorate of Boilers is incharge of implementing the provisions of the Directorate of Boilers 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 Directorate 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 Directorate 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 Directorate is responsible for detecting and curbing the operation of the unregistered and uncertified Boilers.

27. 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 aquifer, 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.

To meet the sand requirement of the construction sector, 89 quarries are now functioning in the state and on an average, about 1,70,000 loads of sand per month are being supplied. The sand is supplied by the Department at the rate of Rs.626/- including taxes for two units (one load). Since inception of this scheme on 3.10.2003, till now Rs. 446.31 crore has been collected by selling sand. During 2006-07 the Government have received Rs. 128.11 crore as revenue.

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 AND LAW