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ANNEXURES AND TABLES

1.1 INTRODUCTION

Cooum Sub basin

1.1 INTRODUCTION

1.1.1 General

Agriculture is the dominant sector in the Indian economy. Tamilnadu, which is supposed to be the next state to Rajasthan in average annual rainfall, depends largely on the surface water irrigation as well as ground water irrigation. The state has been utilising the surface and ground water potentials to the maximum extent possible, and hence the future development and expansion depends only on the efficient and economical use of water potential and resources available.

To maximise the water usage efficiency, it is necessary to restore the storage capacity as well as to upgrade the existing conveyance system and also to introduce modern irrigation methods.

With the above objectives, a comprehensive programme has been proposed with Multi disciplinary approach.

1.1.2 Description of the Chennai Basin.

The Chennai basin spreads over parts of Vellore District, Kanchipuram District, Tiruvallur District and Chennai District. This major basin consists of four sub basins namely Araniyar Sub basin, Kosasthalaiyar Sub basin, Cooum Sub Basin, Adyar Sub basin and the isolated Kovalam sub basin which is directly draining into the sea through Buckingham canal.

The Kosasthalaiyar sub basin, Cooum sub basin and Adyar sub basin originates from the surpluses of the system tanks of the Palar Anicut which is constructed across the Palar River in the Palar Basin which lies south of Chennai Basin.

Similarly, the Araniyar sub basin originates from Pitchattur Dam in Andhra Pradesh.

1.1.3 Cooum Sub Basin

The Cooum sub basin, situated in Chennai basin, is sandwiched between Kosasthalaiyar sub basin on the North and Palar Basin and Adayar sub basin in the South. This sub basin spreads in parts of Vellore, Kanchipuram, Thiruvallur Districts and in Chennai City. Geographically the Cooum sub basin is situated between the longitudes 79^{o} 37' 39.64"E to 80^{o} 17' 29.89"E and latitudes 12^{o} 54' 47.69"N to 13^{o} 03' 53.13"N having a total sub basin area of 505 sq km. The surplus waters of Kosasthalaiyar River from Kesavaram Anicut at a distance of 72km west of Chennai city, flows through Old Bangaru Channel for about 7.5km and joins the surplus course of the Cooum and Satharai tanks from where the Cooum river originates. From there the river flows for a distance of 65km towards east and confluences with sea at south of Fort St. George below Napier Bridge in Chennai City.

Before the confluence into sea, the river find its way through the heart of the city for a length of 17.98km (inclusive of 2.04 km long North arm), draining the storm water from 71.00sqkm of the city area through it's tributaries namely Virugambakkam – Arumbakkam drain, Captain cotton Canal, Otteri Nullah and North and Central Buckingham Canal.

The Cooum sub basin acquire its importance because it flows through the heart of the city with complicity in nature like exploitation of major resources like mines, minerals, water, etc., in the rural areas for the sake of rapid development of Chennai city and environmental degradation like untreated raw sewage flow, pollution, health hazard and encroachment in the flow area by means of dumping of solid wastes, debris and putting huts for residential and commercial occupation, etc., in the urban area.

As such the Cooum sub basin was classified as rural area where agriculture is predominant and urban area where there is no agricultural activities.

Accordingly, the sub basin was divided as rural area i.e. from uppermost watershed to Koyambedu Bridge and below this point was earmarked as urban area.

Due to complexity of Cooum Sub Basin it is analysed and the basin boundaries were fixed based on the field observations and walk through surveys as follows.

1.1.4 Present Status of Cooum Sub Basin

According to the present land use, urbanization and drainage pattern, the entire Cooum sub basin is divided into three zones.

The **Upper Zone** (i.e. from the uppermost watershed of the sub basin to watershed draining up to Korattur anicut) is having 54 irrigation tanks of registered ayacut of 6558.34ha. and two anicuts. In this zone, the prevailing agricultural potential has to be stabilized. This part of sub basin is proposed to be restored as per the guidelines contemplated in the TN IAMWARM Project.

The **Middle Zone** (i.e. from watershed draining below Korattur anicut to watershed draining up to Koyambedu bridge) there are 26 tanks with registered ayacut of 3379.20.ha. In this ayacut, for about 80% of the area, the land use pattern has been changed beyond agriculture as this zone is undergoing rapid urbanisation. Also the river portion and tank portions in this zone are subjected to encroachments, illegal mining of sand and earth, dumping of solid wastes and construction debris which leads to reduction of the area and capacity of the water bodies in this zone.

The **Lower Zone** (i.e. from Koyambedu Bridge to Cooum mouth) lies within the Chennai city limits having an area of 71.40 sq km. In this zone, the stretches along the river Cooum and other water bodies act as a sewage carrier in addition to disposal of floods during rainy season. The flood discharging capacity of the river is also affected due to encroachments on the river banks and flood plains .This leads to complicated situation of hydrological, environmental and social issues which are to be sorted out in sustainable manner.

The Cooum Sub basin, is one of the 63 sub basins of the TN IAMWARM Project, assumes importance due to the close proximity to Chennai

metropolitan area and also nearly one third of the river length runs in the midst of Chennai City.

In this Sub Basin, there are 80 tanks having registered ayacut of 9937.55 ha in which only 61 tanks in the rural part of the sub basin have cultivable ayacut of 6629.51ha in Vellore, Kancheepuram and Thiruvallur Districts. The command areas of the remaining 19 tanks which are situated beyond Chennai city limits in Thiruvallur District have been completely urbanised. There are two anicuts (Aranvoyal Anicut and Korattur Anicut) existing acrss Cooum River which are at present not having any irrigation command in the Cooum Sub Basin.

All the tanks of the Cooum Sub Basin, lies in the Upper zone & Middle zone of the sub basin and hence it is termed as **Rural part**. The lower zone is termed as **Urban part,** i.e. within Chennai City limits.

- There are 80 tanks in the Rural Part of the sub basin beyond Chennai city limits.
- It is proposed to take up 60 tanks which are having irrigation potential and one tank without irrigation potential lying in the rural part.
- The remaining 19 tanks lie in proximity to the Urban part and their command areas are fully urbanised, hence they are not taken up for rehabilitation under TN IAMWARM project.
- Out of 61 tanks, 54 tanks are proposed for rehabilitation.
- Six tanks were already rehabilitated under other schemes such as NABARD & WRCP – I and hence only Boundary Pillars are proposed to be provided.
- One tank without ayacut, lying in the rural part, is proposed to be provided with only boundary pillars for protecting the water body from encroachment.

Tanks:

Sl. No	District	Original Command Area		Present Available Ayacut	
		No. of Tanks	Ayacut in ha.	No. of Tanks	Ayacut in ha.
1	Vellore	1	121.68	1	121.68
2	Kancheepuram	34	3683.48	34	3683.48
3	Thiruvallur	45	6132.39	25	2824.36
	Total	80	9937.55	60	6629.52

Anicuts:

Thiruvallur District - 2 Nos.

1. Aranvoyal Anicut
2. Korattur Anicut

1.1.5 Scope of the Project

All the tanks in rural and periurban zones having irrigation potential are proposed to be rehabilitated as per the farmers' demand and as per the assessment made during the joint walk through surveys, so as to avoid the water leakage and retrieve the entire water from the sources and to ensure the controlled out let to irrigation so as to bridge the cultivable gap and to stabilise the ayacut.

Anicuts across Cooum River:

1. Aranvoyal Anicut:

   This anicut is situated at 45.33 km from the mouth of Cooum River. The anicut was constructed originally to feed Thiruninravur tank having registered ayacut of 892.71 ha at left flank and Gudappakkam tank having registered ayacut of 353.30 ha in the right flank, which lies in Adyar Sub basin. The Thiruninravur tank comes under Middle Zone of Cooum Sub Basin. Its ayacut is going on diminishing due to rapid urbanisation. Due to

illegal mining of sand in Cooum River, the Aranvoyal anicut is in fully dilapidated condition. At present the anicut is not serviceable. If the anicut is proposed to make serviceable, the entire anicut has to be reconstructed.

2. Korattur Anicut:
   This anicut is situated at 40.95 km from the mouth of Cooum River. The anicut has been constructed to feed Chembarambakkam tank which lies in the Adayar Sub basin.

The rehabilitation of above anicuts and check dams and provision of new check dams and river training works will be proposed in the ensuing Cooum River Restoration Project.

The rehabilitation of tanks in the Sub basin is sorted out in the convergent table annexed in this report in Annexure II and III. The total cost of rehabilitation under component A of TN-IAMWARM works out to **Rs. 2240.56 Lakhs** (inclusive of environmental component) based on the current schedule of rates for the Year 2010-11.

Cooum Sub Basin

Block wise Ayacut Details

Sl. No.	District	Block	No. of Tanks	Reg. Ayacut	Present Available Ayacut
1	Vellore	Nemili	1	121.68	121.68
		Total	**1**	**121.68**	**121.68**
2	Kanchipuram	Walajabad	22	2795.09	2795.09
		Sriperumbudur	12	888.39	888.39
		Total	**34**	**3683.48**	**3683.48**
3	Thiruvallur	Kadambathur	14	1926.55	1864.03
		Thiruvallur	5	826.64	340.22
		Poonamallee	15	2002.94	620.11
		Villivakkam	11	1376.26	Nil
		Total	**45**	**6132.39**	**2824.36**
		Basin Total	**80**	**9937.55**	**6629.52**

TN IAMWARM - COOUM SUB BASIN - Phase IV

Blockwise Infrastructure Details

Sl. No.	District	Taluk	Block	Name of Tank	TYPE	Reg.Ayacut in ha.	Present Available ayacut in ha.
1	Vellore	Arakkonam	Nemili	Thirumalpur Tank	System	121.68	121.68
				Sub Total		**121.68**	**121.68**
2	Kanchipuram	Kanchipuram	Walajabad	Pudupakkam Peria eri	System	267.93	267.93
3				Pudupakkam Chitheri	System		
4				Periakarumbur tank	System	124.53	124.53
5				Govindavadi Big tank	System	312.63	312.63
6				Govindavadi Chitheri	System	124.33	124.33
7				Veliur Big tank	System	246.14	246.14
8				Veliur Chitheri	System	91.82	91.82
9				Uveri tank	Non Sys	107.91	107.91
10				Putheri tank	Non Sys	63.18	63.18
				Sub Total		**1338.45**	**1338.45**
11				Parandur Big tank	System	301.44	301.44
12				Parandur Andan thangal	System		
13				Parandur Alwar thangal	System		
14				Parandur Chitheri	System		
15				Parandur Buderi	System	31.87	31.87
16				Parandur Kattupattur tank	System	57.92	57.92
17				Parandur Nagapattu Karanthangal	System	77.57	77.57
18				Pondavakkam tank	Non Sys	116.40	116.40
19				Kottavakkam tank	Non Sys	153.60	153.60
20				Pullalure Peria eri	Non Sys	66.10	66.10
21				Pullalure Iyyan eri	Non Sys	209.62	209.62
22				Pallampakkam tank	Non Sys	47.35	47.35
23				Valathur tank	Non Sys	394.78	394.78
				Sub Total		**1456.64**	**1456.64**
24		Sriperumbudur	Sriperumbudur	Edayarpakkam tank	Non Sys	149.75	149.75
25				Kottur tank	Non Sys	71.21	71.21
26				Ekanapuram kali eri	System	69.02	69.02
27				Ekanapuram kadaperi	System	98.52	98.52
28				Ekanapuram vayaleri	Non Sys	61.39	61.39
29				Mahadevimangalam tank	System	111.28	111.28
30				Mahadevimangalam thangal	System		
31				Kannanthangal thangal	System	23.87	23.87
32				Kannanthangal Large tank	System	90.65	90.65
33				Gunagarambakkam tank	System	79.72	79.72
34				Ettikuttimedu tank	System	31.57	31.57
35				Akkamapuram tank	Non Sys	101.41	101.41
				Sub Total		**888.39**	**888.39**
				Vellore & Kanchipuram District Total		**3805.16**	**3805.16**

TN IAMWARM - COOUM SUB BASIN - Phase IV

Blockwise Infrastructure Details

Sl. No.	District	Name of Taluk	Block	Name of Tank	Type	Present Available ayacut in ha.
1	Thiruvallur	Thiruvallur	Kadambathur	Kannur tank	Non Sys	64.10
2				Elambakkam tank	Non Sys	128.80
3				Pudupattu Anumandhai eri	Non Sys	92.23
4				Pudupattu Kommanthangal	System	
5				Pudupattu krishnanthangal	System	
6				Cooum tank	Non Sys	929.58
7				Satharai tank	Non Sys	71.42
8				Adhigathur tank	Non Sys	100.36
9				Melnallathur tank	Non Sys	14.97
10				Kilnallathur tank	Non Sys	71.06
11				Vengathur tank	Non Sys	89.47
12				Aranvoil big tank	Non Sys	100.45
13				Kesavanallathur	Non Sys	100.30
14				Kadambathur	Non Sys	101.28
				Sub Total		**1864.03**
15			Tiruvallur	Selai	Non Sys	25.58
16				Tholur	Non Sys	251.75
17				Thirurkuppam	Non Sys	38.10
18				Putlur	Non Sys	24.79
19				Periakuppam tank	Non Sys	Nil
				Sub Total		**340.22**
20		Poonamalee	Poonamalee	Thiruninravoor Tank	Non-Sys	442.26
21				Thandurai Tank	Non-Sys	24.83
22				Sekkadu Tank	Non-Sys	5.31 (Not Considered)
23				Vilinjiambakkam	Non-Sys	Nil
24				Melmanambedu Tank	Non-Sys	Nil
25				Vayalanallur Tank	Non-Sys	21.17
26				Banavedu Thottam Hissa Thangal	Non-Sys	111.55
27				Mangammal Thangal		
28				Kannapalayam Thamal Eri		
29				Veeraraghavapuram	Non-Sys	Nil
30				Varadharajapuram Tank	Non-Sys	Nil
31				Melpakkam Tank	Non-Sys	15.00
32				Parivakkam Tank	Non-Sys	Nil
33				Sundarasolapuram	Non-Sys	Nil
34				Paruthipattu tank	Non-Sys	Nil
				Sub Total		**614.80**

35	Thiruvallur	Ambattur	Villivakkam	Ayapakkam Tank	Non-Sys	Nil
36				Ambathur Tank	Non-Sys	Nil
37				Korattur Tank	Non-Sys	Nil
38				Kolathur	Non-Sys	Nil
39				Konnur Tank	Non-Sys	Nil
40				Sennerkuppam Tank	Non-Sys	Nil
41				Koladi Tank	Non-Sys	Nil
42				Ayanambakkam Tank	Non-Sys	Nil
43				Madura Voyal tank	Non-Sys	Nil
44				Nerkundram Tank	Non-Sys	Nil
45				Virugambakkam Tank	Non-Sys	Nil
				Sub Total		**0.00**
				Thiruvallur District Total		**2824.37**
				Total for Cooum Sub Basin		**6629.53**

List of Tanks taken up under TN IAMWARM Project

Sl. No.	Name of Tank	District	Type	Present Available ayacut in ha.
1	Thirumalpur Tank	Vellore	System	121.68
2	Pudupakkam Peria eri	Kanchipuram	System	267.93
3	Pudupakkam Chitheri	Kanchipuram	System	
4	Periakarumbur tank	Kanchipuram	System	124.53
5	Govindavadi Big tank	Kanchipuram	System	312.63
6	Govindavadi Chitheri	Kanchipuram	System	124.33
7	Veliur Big tank	Kanchipuram	System	246.14
8	Veliur Chitheri	Kanchipuram	System	91.82
9	Uveri tank	Kanchipuram	Non Sys	107.91
10	Putheri tank	Kanchipuram	Non Sys	63.18
11	Parandur Big tank	Kanchipuram	System	301.44
12	Parandur Andan thangal	Kanchipuram	System	
13	Parandur Alwar thangal	Kanchipuram	System	
14	Parandur Chitheri	Kanchipuram	System	
15	Parandur Buderi	Kanchipuram	System	31.87
16	Parandur Kattupattur tank	Kanchipuram	System	57.92
17	Parandur Nagapattu Karanthangal	Kanchipuram	System	77.57
18	Pondavakkam tank	Kanchipuram	Non Sys	116.40
19	Kottavakkam tank	Kanchipuram	Non Sys	153.60
20	Pullalure Peria eri	Kanchipuram	Non Sys	66.10
21	Pullalure Iyyan eri	Kanchipuram	Non Sys	209.62
22	Pallampakkam tank	Kanchipuram	Non Sys	47.35
23	Valathur tank	Kanchipuram	Non Sys	394.78
24	Edayarpakkam tank	Kanchipuram	Non Sys	149.75
25	Kottur tank	Kanchipuram	Non Sys	71.21
26	Ekanapuram kali eri	Kanchipuram	System	69.02
27	Ekanapuram kadaperi	Kanchipuram	System	98.52
28	Ekanapuram vayaleri	Kanchipuram	Non Sys	61.39
29	Mahadevimangalam tank	Kanchipuram	System	111.28
30	Mahadevimangalam thangal	Kanchipuram	System	

31	Kannanthangal thangal	Kanchipuram	System	23.87
32	Kannanthangal Large tank	Kanchipuram	System	90.65
33	Gunagarambakkam tank	Kanchipuram	System	79.72
34	Ettikuttimedu tank	Kanchipuram	System	31.57
35	Akkamapuram tank	Kanchipuram	Non Sys	101.41
36	Kannur tank	Thiruvallur	Non Sys	64.10
37	Elambakkam tank	Thiruvallur	Non Sys	128.80
38	Pudupattu Anumandhai eri	Thiruvallur	Non Sys	92.23
39	Pudupattu Kommanthangal	Thiruvallur	System	
40	Pudupattu Krishnanthangal	Thiruvallur	System	
41	Cooum tank	Thiruvallur	Non Sys	929.58
42	Satharai tank	Thiruvallur	Non Sys	71.42
43	Adhigathur tank	Thiruvallur	Non Sys	100.36
44	Melnallathur tank	Thiruvallur	Non Sys	14.97
45	Kilnallathur tank	Thiruvallur	Non Sys	71.06
46	Vengathur tank	Thiruvallur	Non Sys	89.47
47	Aranvoil big tank	Thiruvallur	Non Sys	100.45
48	Kesavanallathur	Thiruvallur	Non Sys	100.30
49	Kadambathur	Thiruvallur	Non Sys	101.28
50	Selai	Thiruvallur	Non Sys	25.58
51	Tholur	Thiruvallur	Non Sys	251.75
52	Thirurkuppam	Thiruvallur	Non Sys	38.10
53	Putlur	Thiruvallur	Non Sys	24.79
54	Periyakuppam Tank	Thiruvallur	Non Sys	Nil
55	Thiruninravoor Tank	Thiruvallur	Non-Sys	442.26
56	Thandurai Tank	Thiruvallur	Non-Sys	24.83
57	Vayalanallur Tank	Thiruvallur	Non-Sys	21.17
58	Banavedu Thottam Hissa Thangal	Thiruvallur	Non-Sys	111.55
59	Mangalam	Thiruvallur		
60	Kannapalayam Thamal Eri	Thiruvallur		
61	Melpakkam Tank	Thiruvallur	Non-Sys	15.00
	TOTAL			6624.20

COOUM SUB BASIN
CLUSTERWISE / INFRASTRUCTURE WISE / VILLAGE WISE CONVERGENT TABLE

Sl.No	Name of Cluster	Total Ayacut (Ha)				Total Area (Ha)				WRD	Agriculture		Horticulture		Agri. Engg.		TNAU		Agri. Marketing		Animal Husbandry		Fisheries	
		FI	PI	Gap	Pt. Gap	WOP	WP	Gap	Pt. Gap		Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.
	Cluster 1	807.86	460.56	191.71	0.00	1268.42	1460.13	0.00	0.00	No. of tanks - 10 Nos. No. of Anicuts - Nil St Tank Bund - 20230m RC of Sluices - 12Nos. RC of weir - 6No. DS of Channel - 16550m SG shutter to Sluices - 10Nos.	SRI Paddy Maize Pulses Groundnu t Ragi	287 8 32 55 0	AEV	110	DIS SIS FP FM RWH	2 11 6 PT1,ROT1,PTr1 RS-5	SRI Paddy Maize Pulses Groundnu t Ragi	160 0 40 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	5 4 100/Year 75 1 3 1000	F.P. A.I.	6 / 0.6 2 / 70
	Cluster 2	814.43	458.20	184.00	0.00	1272.64	1456.64	0.00	0.00	No. of tanks - 13 Nos. No. of Anicuts - Nil St Tank Bund - 19437m RC of Sluices - 14Nos. RE to weir - 1No. DS of Channel - 17250m SG shutter to Sluices - 13Nos.	SRI Paddy Maize Pulses Groundnu t Ragi	235 5 10 85 0	AEV	35.00	DIS SIS FP FM RWH	5 6 8 PT 3,PTr 2 VT1, MCD4,RS 6	SRI Paddy Maize Pulses Groundnu t Ragi	68 0 36 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G EV	7 4 225/Year 100 1 3 1500 1	F.P A.I ORN	6/0.6 1 / 30 1 / 0.20
	Cluster 3	501.82	271.07	115.50	0.00	772.89	888.39	0.00	0.00	No. of tanks - 12 Nos. No. of Anicuts - Nil St Tank Bund - 15870m RC of Sluices - 14Nos. RC of weir - 3Nos. DS of Channel - 3000m SG shutter to Sluices - 10Nos.	SRI Paddy Maize Pulses Groundnu t Ragi	210 3 21 15 2	AEV	55	DIS SIS FP FM RWH	7 8 4 Ds4,PT2 Vt3,RS10,MJD1,MCD 1	SRI Paddy Maize Pulses Groundnu t Ragi	72 0 28 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	6 4 275/Year 125 2 6 2500	F. P.	3 / 0.3
	Cluster 4	560.82	356.95	296.94	0.00	917.77	1214.71	0.00	0.00	No. of tanks - 6 Nos. No. of Anicut - Nil St Tank Bund - 10251m RC of Sluices - 15No. RC of weir - 4No. RE to weir - 2 No. DS of Channel - 11500m SG shutter to weir & Sluices-	SRI Paddy Maize Pulses Groundnu t Ragi	95 14 22 20 0	AEV	8	DIS SIS FP FM RWH	5 8 5 PT 2, PTr 2 MCD 2	SRI Paddy Maize Pulses Groundnu t Ragi	45 0 14 0 0	IEC / CB D.Y	1 No.	FI CDW FT VSB IEC IC S&G	10 200/Year 75 3 9 2 200	A. I.	1 / 60
	Cluster 5	218.77	128.34	100.62	198.04	347.11	447.73	0.00	198.04	No. of tanks - 7 Nos. No. of Anicut - Nil St Tank Bund - 10301m RC of Sluices - 10No. RC of weir - 4No. DS of Channel - 11700m SG shutter to weir & Sluices- 16Nos.	SRI Paddy Maize Pulses Groundnu t Ragi	125 13 35 37 0	AEV	2	DIS SIS FP FM RWH	0 4 2 ROT 2 0	SRI Paddy Maize Pulses Groundnu t Ragi	55 0 11 0 0	IEC / CB		FI CDW FT VSB IEC IC S&G	20 250/Year 175 2 6 4 2300	A.I.	1 / 40
	Cluster 6	620.11	0.00	0.00	1743.33	620.11	620.11	0.00	1743.33	No. of tanks - 20 Nos. No. of Anicuts - Nil St Tank Bund - 10586 RC of Sluices - 7 RC of weir - 5 SG shutter to Sluices - 7	SRI Paddy Maize Pulses Groundnu t Ragi	247 15 50 30 0	AEV	10	DIS SIS FP FM RWH	0 0 4 0 MJD 1	SRI Paddy Maize Pulses Groundnu t Ragi	50 30 0 0 0	IEC / CB		FI CDW FT VSB IEC IC S&G FD	12 375/Year 150 3 9 10 2000 1	F. P.	3 / 0.3
	Cluster 7	329.73	126.83	85.24	1366.66	456.56	541.80	0.00	1366.66	No. of tanks - 12 Nos. No. of Anicuts - Nil St Tank Bund - 13470m RC of Sluices -15 DS of Channel -5900m RC of weir - 5 SG shutter to Sluices -7	SRI Paddy Maize Pulses Groundnu t Ragi	270 6 203 109 0	AEV	6	DIS SIS FP FM RWH		SRI Paddy Maize Pulses Groundnu t Ragi		IEC / CB		FI CDW FT IEC VSB S&G EV IC FD	18 200/Year 150 6 2 3000 1 2 1	F. P.	
	Total	3853.55	1801.95	974.01	3308.03	5655.50	6629.51	0.00	3308.03	No. of tanks - 80 Nos. No. of Anicuts - Nil St Tank Bund -100145 RC of Sluices - 87 DS of Channel - 49750 RC of weir - 27 Nos. RE to weir - 3Nos. SG shutter to Sluices - 74	SRI Paddy Maize Pulses Groundnu t Ragi	1469 64 33 351 2	AEV	226.00	DIS SIS FP FM RWH	20 37 25 PT 8, PTr 5,ROT 4,DS4 RS 20,MCD 8,VT 5,MJD1	SRI Paddy Maize Pulses Groundnu t Ragi	600 30 172 0 0	IEC / CB D.Y	1 No.	FI CDW FT IEC VSB S&G EV IC FD	75 1625/Yea r 850 42 14 12500 2 35 2	F.P A.I ORN	19 / 1.90 8 / 200 1 / 0.20

Reference

DIS	Drip Irrigation System	IEC / CE	Information Education Communication / Capacity Building
SIS	Sprinkler Irrigation System	IC	Infertility Camp
FP	Farm Pond	FI	Farmers Interaction
FM	Farm Modernisation	CDW	Calf De Worming
RWH	Rain Water Harvesting	FT	Farmers Training
PTr	Paddy Transplanter	VSB	Veterinary Sub Basin Unit
PT	Power Triller	S & G	Sheep & Goat De Worming
DS	Drum Seeder	EV	Exposure Visit
RS	Recharge Shaft	FD	Fodder Development
VT	Village Tank	FP	Farm Pond
MCD	Medium Check Dam	A.I	Aqua Culture in Irrigation tanks
MJD	Major Check Dam	ORN	Ornamental Fish Unit
ROT	Rotovator	AEV	Area Expansion Vegetables

COOUM SUB BASIN
CLUSTERWISE / INFRASTRUCTURE WISE / VILLAGE WISE CONVERGENT TABLE

Sl.No	Name of Cluster / Infrastructure / Village	Total Ayacut (Ha)				Total Area (Ha)				WRD	Agriculture		Horticulture		Agri. Engg.		TNAU		Agri. Marketing		Animal Husbandry		Fisheries	
		F I	P I	Gap	Pt. Gap	WOP	WP	Gap	Pt. Gap		Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.	Activities	Nos. / ha.
I	Cluster-1 (Govindavadi)																							
1	Thirumalpur Tank	67.75	38.11	15.82		105.86	121.68		0.00	St Tank Bund - 1980m RC of Sluices - 2No. DS of Channel - 4300m SG shutter to weir & Sluices - 1no.	SRI Paddy Maize Pulses Groundnut Ragi	32 4 7 10 0	AEV	25	DIS SIS FP FM RWH	0 5 0 PT-1, ROT-1 0	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB				
2	Pudupakkam Peria eri									St Tank Bund - 2623m RC of Sluices - 1No. RC of weir - 1No. DS of Channel - 1100m		50			DIS	0	SRI Paddy	30			IC FI CDW	1 1 50 / Year		
3	Pudupakkam Chitheri	150.31	77.43	40.19		227.74	267.93		0.00	St Tank Bund - 1830m RC of Sluices - 3Nos. RC of weir - 1No. DS of Channel - 1050m	SRI Paddy Maize Pulses Groundnut Ragi	1 10 10 0	AEV	23	SIS FP FM RWH	2 3 0 RS-1	Maize Pulses Groundnut Ragi	0 10 0 0	IEC / CB		FT VSB IEC S&G	0 0 0 0	F.P.	3 / 0.3
4	Periakarumbur tank	66.09	42.25	16.19		108.34	124.53		0.00	St Tank Bund - 1560m RC of Sluices - 1No. SG Shutter - 1 No. RC of weir - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	40 0 0 0 0			DIS SIS FP FM RWH	0 2 0 0 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	24 0 0 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	0 0 0 25 0 0 0		
5	Govindavadi Big tank	174.07	97.91	40.64		271.98	312.63		0.00	St Tank Bund - 3264m RC of Sluices - 2No. RC of weir - 2Nos. DS of Channel - 1500m SG shutter to Sluices - 3 Nos.	SRI Paddy Maize Pulses Groundnut Ragi	40 0 10 10 0	AEV	30			SRI Paddy Maize Pulses Groundnut Ragi	46 0 10 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	0 0 0 0 1 3 1000	A.I.	1 / 30
6	Govindavadi Chitheri	68.15	40.02	16.16		108.17	124.33		0.00	St Tank Bund - 2620m DS of Channel - 7500m SG shutter to Sluices - 2Nos.	SRI Paddy Maize Pulses Groundnut Ragi	40 0 0 0 0	AEV	32	DIS SIS FP FM RWH	1 2 0 0 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	20 0 0 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	1 1 50 / Year 0 0 0 0		
7	Veliur Big tank	129.12	82.55	34.46		211.68	246.14		0.00	St Tank Bund - 2800m RC of Sluices - 2No. DS of Channel - 1100m SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	0 1 5 10 0					SRI Paddy Maize Pulses Groundnut Ragi	40 0 20 0 0	IEC / CB				F.P. A.I.	3 / 0.3 1 / 40
8	Veliur Chitheri	52.91	26.06	12.85		78.97	91.82		0.00	St Tank Bund - 1403m RC of Sluices - 1No. RC of weir - 1No. SG shutter to Sluices - 2No.	SRI Paddy Maize Pulses Groundnut Ragi	30 1 0 5 0			DIS SIS FP FM RWH	1 0 3 PTr-1 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	1 1 0 25 0 0 0		
9	Uveri tank	63.83	34.37	9.71		98.20	107.91		0.00	Already Rehabilitated Under NABARD. Demarcation and Boundary Pillars proposed.	SRI Paddy Maize Pulses Groundnut Ragi	35 1 0 5 0			DIS SIS FP FM RWH	0 0 0 0 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	1 1 0 0 0 0 0		
10	Putheri tank	35.64	21.85	5.69		57.49	63.18		0.00	Already Rehabilitated Under NABARD. Demarcation and Boundary Pillars proposed.	SRI Paddy Maize Pulses Groundnut Ragi	20 0 0 5 0			DIS SIS FP FM RWH	1 0 0 0 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	1 0 0 25 0 0 0		
	Sub Total	807.86	460.56	191.71	0.00	1268.42	1460.13	0.00	0.00	No. of tanks - 10 Nos. No. of Anicuts - Nil St Tank Bund - 20230m RC of Sluices - 12Nos. RC of weir - 6No. DS of Channel - 16550m SG shutter to Sluices - 10Nos.	SRI Paddy Maize Pulses Groundnut Ragi	287 8 32 55 0	AEV	110	DIS SIS FP FM RWH	2 11 6 PT1,ROT1,PTr1 RS-5	SRI Paddy Maize Pulses Groundnut Ragi	160 0 40 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	5 4 100/Year 75 1 3 1000	F.P. A.I.	6 / 0.6 2 / 70

II	Cluster-2 (Parandur)																							
1	Parandur Big tank									St Tank Bund - 1906m RC of Sluices - 2Nos. RE to weir - 1No. DS of Channel - 1200m SG shutter to Sluices - 4Nos.									IEC / CB				F. P.	2 / 0.2
2	Parandur Andan thangal									St Tank Bund - 430m RC of Sluices - 1No.									IEC / CB					
3	Parandur Alwar thangal									St Tank Bund - 630m RC of Sluices - 1No.									IEC / CB	IC FI	1 1			
4	Parandur Chitheri	167.84	94.41	39.19		262.25	301.44		0.00	St Tank Bund - 870m RC of Sluices - 1No. DS of Channel - 1100m	SRI Paddy Maize Pulses Groundnut Ragi	30 0 0 30 0			DIS SIS FP FM RWH	1 2 3 PTr-1, PT-1 VT-1, MCD 2, RS-2	SRI Paddy Maize Pulses Groundnut Ragi	68 0 36 0 0	IEC / CB	CDW FT VSB IEC S&G EV	0 25 1 3 0 0		
5	Parandur Buderi	18.30	9.43	4.14		27.72	31.87		0.00	St Tank Bund - 1230m SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	10 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G EV	0 0 0 0 0 0 0 1		
6	Parandur Kattupattur tank	32.37	17.43	8.11		49.81	57.92		0.00	St Tank Bund - 1610m SG shutter to Sluices - 2Nos.	SRI Paddy Maize Pulses Groundnut Ragi	15 1 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G EV	0 0 0 0 0 0 1000 0		
7	Parandur Nagapattu Karantha	43.00	25.26	9.31		68.26	77.57		0.00	St Tank Bund - 1670m RC of Sluices - 3No. DS of Channel - 1050m	SRI Paddy Maize Pulses Groundnut Ragi	20 1 5 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G EV	0 0 100/year 0 0 0 0 0		
8	Pondavakkam tank	70.97	34.95	10.48		105.92	116.40		0.00	Already Rehabilitated Under NABARD. Demarcation and Boundary Pillars proposed.	SRI Paddy Maize Pulses Groundnut Ragi	40 1 10 5 0	AEV	10	DIS SIS FP FM RWH	1 0 1 0 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G	1 1 0 0 0 0 0	F. P.	1 / 0.1
9	Kottavakkam tank	90.85	48.92	13.82		139.78	153.60		0.00	St Tank Bund - 2850m DS of Channel - 4000m SG shutter to Sluices - 3 Nos.	SRI Paddy Maize Pulses Groundnut Ragi	50 1 10 5 0			DIS SIS FP FM RWH	1 1 1 PT 1 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G	1 0 50/Year 25 0 0 0	F. P.	1 / 0.1
10	Pullalure Peria eri	32.79	20.09	13.22		52.88	66.10		0.00	St Tank Bund - 1250m RC of Sluices - 2Nos. DS of Channel - 3100m SG shutter to Sluices - 1 No.	SRI Paddy Maize Pulses Groundnut Ragi	25 0 0 0 0	AEV	5			SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G	1 1 0 0 0 0 0	F. P.	3 / 0.3
11	Pullalure Iyyan eri	110.01	61.88	37.73		171.89	209.62		0.00	St Tank Bund - 1416m RC of Sluices - 2Nos. DS of Channel - 1200m SG shutter to Sluices - 1 No.	SRI Paddy Maize Pulses Groundnut Ragi	15 0 10 10 0	AEV	5	DIS SIS FP FM RWH	1 3 3 PTr 1, PT 1 RS-1	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G	1 25 50/Year 0 0 0 500	ORN	1 / 0.2
12	Pallampakkam tank*	24.46	14.37	8.52		38.83	47.35		0.00	St Tank Bund - 1240m RC of Sluices - 2No. DS of Channel - 2200m SG shutter to Sluices - 1 No.	SRI Paddy Maize Pulses Groundnut Ragi	10 0 10 10 0			DIS SIS FP FM RWH	0 0 0 0 RS-2	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G	1 25 0 0 0 0 0	A. I.	1 / 30
13	Valathur tank	223.84	131.46	39.48		355.30	394.78		0.00	Already Rehabilitated Under WRCP - I. Demarcation and Boundary Pillars proposed.	SRI Paddy Maize Pulses Groundnut Ragi	20 1 10 25 0	AEV	15.00	DIS SIS FP FM RWH	1 0 0 0 MCD-2	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0		IC FI CDW	1 1 25/Year		
	Sub Total	814.43	458.20	184.00	0.00	1272.64	1456.64	0.00	0.00	No. of tanks - 13 Nos. No. of Anicuts - Nil St Tank Bund - 19437m RC of Sluices - 14Nos. RC of weir - 1No. DS of Channel - 17250m SG shutter to Sluices - 13Nos.	SRI Paddy Maize Pulses Groundnut Ragi	235 5 10 85 0	AEV	35.00	DIS SIS FP FM RWH	5 6 8 PT 3,PTr 2 VT1, MCD4,RS 6	SRI Paddy Maize Pulses Groundnut Ragi	68 0 36 0 0	IEC / CB	IC FI CDW FT VSB IEC S&G EV	7 4 225/Year 100 1 3 1500 1	F.P AI ORN	6/0.6 1 / 30 1 / 0.20

III	Cluster-3 (Gunagarambakkam																						
1	Edayarpakkam tank	88.17	49.60	11.98		137.77	149.75		0.00	Already Rehabilitated Under NABARD. Demarcation and Boundary Pillars proposed.	SRI Paddy Maize Pulses Groundnut Ragi	45 3 15 7 2	AEV	30	DIS SIS FP FM RWH	1 2 0 DS 2, PT 1 VT 1, RS-2	SRI Paddy Maize Pulses Groundnut Ragi	25 0 10 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	1 1 25/Year 25 1 3 1000		
2	Kottur tank	44.55	20.96	5.70		65.51	71.21		0.00	Already Rehabilitated Under NABARD. Demarcation and Boundary Pillars proposed.	SRI Paddy Maize Pulses Groundnut Ragi	40 0 5 0 0	AEV	25	DIS SIS FP FM RWH	0 0 0 0 RS-2	SRI Paddy Maize Pulses Groundnut Ragi	25 0 10 0 0	IEC / CB					
3	Ekanapuram kali eri	40.54	20.89	7.59		61.43	69.02		0.00	St Tank Bund - 2430m RC of Sluices - 2Nos. SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	3 0 2 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	1 1 50/Year 55 0 0 750	F. P.	2 / 0.2
4	Ekanapuram kadaperi	51.92	31.82	14.78		83.74	98.52		0.00	St Tank Bund - 860m RC of Sluices - 1No. SG shutter to Sluices -2 Nos.	SRI Paddy Maize Pulses Groundnut Ragi	3 0 2 0 0			DIS SIS FP FM RWH	1 1 2 0 VT 2, RS-2	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB					
5	Ekanapuram vayaleri	34.03	19.99	7.37		54.02	61.39		0.00	St Tank Bund - 1200m RC of Sluices - 1No. SG shutter to Sluices - 2Nos.	SRI Paddy Maize Pulses Groundnut Ragi	4 0 2 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB					
6	Mahadevimangalam tank &									St Tank Bund - 2073m RC of Sluices - 2Nos. SG shutter to Sluice & Inlet-1No.					DIS SIS FP FM RWH	1 1 1 0 RS-2			IEC / CB		IC FI CDW FD	1 1 25/Year 0.50		
7	Mahadevimangalamthangal	61.48	33.11	16.69		94.59	111.28		0.00	St Tank Bund - 720m RC of Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	10 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB					
8	Kannanthangal thangal	12.33	7.24	4.30		19.57	23.87		0.00	St Tank Bund - 300m RC of Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	20 0 0 0 0			DIS SIS FP FM RWH	1 2 1 DS 2, PT 1 MJD 1, RS-2	SRI Paddy Maize Pulses Groundnut Ragi	10 0 4 0 0	IEC / CB		FD IC FI FT	0.50 1 1 25		
9	Kannanthangal Large tank	49.66	25.58	15.41		75.24	90.65		0.00	St Tank Bund - 1400m RC of weir - 1No. SG shutter to Sluices - 2Nos.	SRI Paddy Maize Pulses Groundnut Ragi	25 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	12 0 4 0 0	IEC / CB		S&G CDW	750 50/Year		
10	Gunagarambakkam tank	43.53	23.44	12.76		66.96	79.72		0.00	St Tank Bund - 1190m RC of Sluices - 2Nos. RC of weir - 1No. DS of Channel - 1200m SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	20 0 0 8 0			DIS SIS FP FM RWH	1 1 1 0 RS-2, MCD 1	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		IC CDW	1 50/Year	F. P.	1 / 0.1
11	Ettikuttimedu tank	17.17	9.66	4.74		26.83	31.57		0.00	St Tank Bund - 1180m RC of Sluices - 2No. RC of weir - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	20 0 0 0 0			DIS SIS FP FM RWH	1 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		FT CDW	25 25/Year		
12	Akkamapuram tank	58.43	28.78	14.20		87.21	101.41		0.00	St Tank Bund - 1311m RC of Sluices - 2No. SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	20 0 0 0 0			DIS SIS FP FM RWH	1 1 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		VSB IEC IC CDW	1 3 1 50/Year		
	Sub Total	501.82	271.07	115.50	0.00	772.89	888.39	0.00	0.00	No. of tanks - 12 Nos. No. of Anicuts - Nil St Tank Bund - 15870m RC of Sluices - 14Nos. RC of weir - 3 Nos. DS of Channel - 3000m SG shutter to Sluices - 10Nos.	SRI Paddy Maize Pulses Groundnut Ragi	210 3 21 15 2	AEV	55	DIS SIS FP FM RWH	7 8 4 Ds4,PT2 Vt3,RS10,MJD1,MCD 1	SRI Paddy Maize Pulses Groundnut Ragi	72 0 28 0 0	IEC / CB		IC FI CDW FT VSB IEC S&G	6 4 275/Year 125 2 6 2500	F. P.	3 / 0.3

IV	Cluster-4 (Cooum)																								
1	Kannur tank*	36.19	17.83	10.08		54.02	64.10		0.00	St Tank Bund - 1128m RC of Sluices - 1No. RC of weir - 1No. DS of Channel - 2050m SG shutter to weir & Sluices - 2Nos.	SRI Paddy Maize Pulses Groundnut Ragi	10 2 5 5 0			DIS SIS FP FM RWH	0 2 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	5 0 3 0 0	IEC / CB		FI CDW FT VSB IEC S&G	2 25/Year 25 1 3 100		
2	Elambakkam tank	57.00	34.93	36.87		91.93	128.80		0.00	St Tank Bund - 1793m RC of Sluices - 3No. RC of weir - 1No. RE to weir - 1No. DS of Channel - 1250m SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	20 2 5 0 0			DIS SIS FP FM RWH	0 2 3 0 0	SRI Paddy Maize Pulses Groundnut Ragi	10 0 3 0 0	IEC / CB		FI CDW FT VSB IEC S&G	2 25/Year 25 0 0 100		
3	Pudupattu Anumandhai eri									St Tank Bund - 850m RC of Sluices - 1No. RC of weir - 1No. SG shutter to weir & Sluices-1No.	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB					
4	Pudupattu Kommanthangal									St Tank Bund - 720m RC of Sluices - 3Nos. RC of weir - 1No. DS of Channel - 2100m	SRI Paddy Maize Pulses Groundnut Ragi	15 5 5 5 0			DIS SIS FP FM RWH	5 2 0 0 MCD 1	SRI Paddy Maize Pulses Groundnut Ragi	10 0 3 0 0	IEC / CB		IC CDW FT VSB IEC FI	1 100/Year 60 1 3 3		
5	Pudupattu krishnanthangal	49.91	25.71	16.61		75.63	92.24		0.00	St Tank Bund - 480m RC of Sluices - 2Nos. DS of Channel - 200m	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB					
6	Cooum tank	417.72	278.48	233.38		696.20	929.58		0.00	St Tank Bund - 5280m RC of Sluices - 5Nos. RE of weir - 1No. DS of Channel - 5000m SG shutter to Sluices-7Nos.	SRI Paddy Maize Pulses Groundnut Ragi	50 5 7 10 0	AEV	8	DIS SIS FP FM RWH	0 2 2 PT 2, PTr 2 MCD 1	SRI Paddy Maize Pulses Groundnut Ragi	20 0 5 0 0	IEC / CB D.Y	1 No.	FI CDW FT VSB IEC IC	3 50/Year 25 1 3 1	A. I.	1 / 60
	Sub Total	560.82	356.95	296.94	0.00	917.77	1214.71	0.00	0.00	No. of tanks - 6 Nos. No. of Anicut - Nil St Tank Bund - 10251m RC of Sluices - 15No. RC of weir - 4No. RE to weir - 2No. DS of Channel - 11500m SG shutter to weir & Sluices-	SRI Paddy Maize Pulses Groundnut Ragi	95 14 22 20 0	AEV	8	DIS SIS FP FM RWH	5 8 5 PT 2, PTr 2 MCD 2	SRI Paddy Maize Pulses Groundnut Ragi	45 0 14 0 0	IEC / CB D.Y	1 No.	FI CDW FT VSB IEC IC S&G	10 200/Year 75 3 9 2 200	A. I.	1 / 60
V	Cluster-5 (Melnallathur)																								
1	Satharai tank	38.51	18.63	14.28		57.14	71.42		0.00	St Tank Bund - 3018m RC of Sluices - 3Nos. RC of weir - 1No. DS of Channel - 3000m SG shutter to weir & Sluices - 4Nos.	SRI Paddy Maize Pulses Groundnut Ragi	10 3 5 5 0			DIS SIS FP FM RWH	0 2 1 0 0	SRI Paddy Maize Pulses Groundnut Ragi	5 0 0 0 0	IEC / CB		FI CDW FT S&G	2 50/Year 25 300		
2	Adhigathur tank	47.84	23.56	28.96		71.40	100.36		0.00	St Tank Bund - 1539m RC of Sluices - 1No. RC of weir - 1No. DS of Channel - 4500m SG shutter to weir & Sluices - 6Nos.	SRI Paddy Maize Pulses Groundnut Ragi	25 0 5 3 0	AEV	2	DIS SIS FP FM RWH	0 2 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	10 0 0 0 0	IEC / CB		FI FT VSB IEC IC S&G	4 25 1 3 1 200		
3	Melnallathur tank*	0.00	14.97		53.10	14.97	14.97		53.10	St Tank Bund - 650m RC of Sluices - 1No. DS of Channel - 450m SG shutter to Sluices -1No.	SRI Paddy Maize Pulses Groundnut Ragi	10 2 5 5 0			DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	5 0 3 0 0	IEC / CB		FI FT FD IC S&G	2 25 1 1 200		
4	Kilnallathur tank	29.93	16.11	25.02		46.04	71.06		0.00	St Tank Bund - 863m RC of Sluices - 2No. SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	10 0 0 0 0			DIS SIS FP FM RWH	0 0 0 ROT 1 0	SRI Paddy Maize Pulses Groundnut Ragi	5 0 3 0 0	IEC / CB		FI FT	2 25		
5	Vengathur tank	46.63	22.26	20.58		68.89	89.47		0.00	St Tank Bund - 2025m RC of Sluices - 2Nos. RC of weir - 1No. DS of Channel - 3100m SG shutter to Sluices - 3Nos.	SRI Paddy Maize Pulses Groundnut Ragi	20 2 0 4 0			DIS SIS FP FM RWH	0 0 1 ROT 1 0	SRI Paddy Maize Pulses Groundnut Ragi	10 0 5 0 0	IEC / CB		FI FT CDW IC S&G	2 25 50/Year 1 500	A.I.	1 / 40
6	Aranvoil big tank	55.86	32.81	11.78		88.67	100.45		0.00	St Tank Bund - 2206m RC of Sluices - 1No. RC of weir - 1No. DS of Channel - 1150m SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	50 6 20 20 0					SRI Paddy Maize Pulses Groundnut Ragi	20 0 0 0 0	IEC / CB		FI CDW FT VSB IEC IC S&G	4 50/Year 25 1 3 1 100		
7	Periakuppam tank*	0.00	0.00		144.94	0.00	0.00		144.94	Rehabilitation not proposed as there is no cultivable ayacut under this tank. Demarcation and Boundary Pillars proposed.												FI FT CDW S&G	4 25 100/Year 1000		
	Sub Total	218.77	128.34	100.62	198.04	347.11	447.73	0.00	198.04	No. of tanks - 7 Nos. No. of Anicut - Nil St Tank Bund - 10301m RC of Sluices - 10No. RC of weir - 4No. DS of Channel - 11700m SG shutter to Sluices-16Nos.	SRI Paddy Maize Pulses Groundnut Ragi	125 13 35 37 0	AEV	2	DIS SIS FP FM RWH	0 4 2 ROT 2 0	SRI Paddy Maize Pulses Groundnut Ragi	55 0 11 0 0	IEC / CB		FI CDW FT VSB IEC IC S&G	20 250/Year 175 2 6 4 2300	A.I.	1 / 40

VI	Cluster-6 (Thiruninravur)																								
1	Thiruninravoor Tank	442.26	0.00		310.28	442.26	442.26		310.28	St Tank Bund - 4816m RC of Sluices - 1No. RC of weir - 1 No. SG shutter to Sluices - 1no.	SRI Paddy Maize Pulses Groundnut Ragi	150 4 20 16 0			DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	25 20 0 0 0	IEC / CB		FI CDW FT VSB IEC IC S&G	2 75/Year 25 1 3 1 300		
2	Thandurai Tank	24.83	0.00		76.77	24.83	24.83		76.77	St Tank Bund - 900m RC of Sluices - 1No. RC of weir - 1No. SG shutter to Sluices - 1no.	SRI Paddy Maize Pulses Groundnut Ragi	23 2 5 2 0	AEV	4	DIS SIS FP FM RWH	0 0 0 0 MJD 1	SRI Paddy Maize Pulses Groundnut Ragi	5 2 0 0 0	IEC / CB		FI CDW FT VSB IEC IC S&G	2 25/Year 25 1 3 1 100		
3	Vayalanallur Tank	21.17	0.00		61.63	21.17	21.17		61.63	St Tank Bund - 900m RC of Sluices - 1No. RC of weir - 1No. SG shutter to Sluices - 1no.	SRI Paddy Maize Pulses Groundnut Ragi	4 2 0 0 0	AEV	4	DIS SIS FP FM RWH	0 0 4 0 0	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		FI FT FD S&G	2 25 1 100	F. P.	3 / 0.3
4	Banaveduthottam Hissathang									St Tank Bund - 1380m RC of Sluices - 2No. RC of weir - 1No. SG shutter to Sluices - 2No.									IEC / CB		IC FI	1 2		
5	Mangammal Tank	111.55	0.00		9.11	111.55	111.55		9.11	St Tank Bund - 1270m SG shutter to Sluices - 1No.				AEV	2				IEC / CB		FI CDW FT IC S&G	2 50/Year 25 1 200		
6	Kannapalayam Thumal Tank									St Tank Bund - 1320m RC of Sluices - 1No. SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	70 7 25 12 0			DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	20 8 0 0 0	IEC / CB					
7	Melpakkam Tank	15.00	0.00		29.00	15.00	15.00		29.00	St Tank Bund - 1845m RC of Sluices - 1No. RC of weir - 1No. SG shutter to Sluices - 1No.	SRI Paddy Maize Pulses Groundnut Ragi	3 0 0 0 0			DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0	IEC / CB		FT IC	25 1		
8	Sekkadu Tank	5.31	0.00	0.00	68.65	5.31	5.31		68.65	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			FI CDW FT IC S&G	2 25/Year 25 1 100		
9	Vilinjiyambakkam Tank	0.00	0.00	0.00	63.39	0.00	0.00		63.39	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			IC	1		
10	Melmanambedu Tank				105.60	0.00	0.00		105.60	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			CDW VSB IEC S&G	50/Year 1 3 500		
11	Veeraragavapuram Tank				66.50	0.00	0.00		66.50	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			CDW IC S&G	50/Year 1 500		
12	Varadarajapuram Tank				115.36	0.00	0.00		115.36	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			IC CDW	1 50/Year		
13	Parivakkam Tank				92.86	0.00	0.00		92.86	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			S&G	100		
14	Sundarasolapuram Tank				23.42	0.00	0.00		23.42	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			S&G	300		
15	Senneerkuppam Tank				120.74	0.00	0.00		120.74	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			CDW IC S&G	50/Year 1 300		
16	Koladi Tank				68.42	0.00	0.00		68.42	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			-	-		
17	Ayanambakkam Tank				85.83	0.00	0.00		85.83	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			-	-		
18	Maduravoyal Tank				212.55	0.00	0.00		212.55	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			-	-		
19	Nerkundram Tank				103.13	0.00	0.00		103.13	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			-	-		
20	Virugambakkam Tank				130.10	0.00	0.00		130.10	Rehabilitation not proposed as there is no cultivable ayacut under this tank	SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0					SRI Paddy Maize Pulses Groundnut Ragi	0 0 0 0 0			-	-		
	Sub Total	620.11	0.00	0.00	1743.33	620.11	620.11	0.00	1743.33	St Tank Bund - 10586 RC of Sluices - 7 RC of weir - 5 SG shutter to Sluices - 7	SRI Paddy Maize Pulses Groundnut Ragi	247 15 50 30 0	AEV	10	DIS SIS FP FM RWH	0 0 4 0 MJD 1	SRI Paddy Maize Pulses Groundnut Ragi	50 30 0 0 0	IEC / CB		FI CDW FT VSB IEC IC S&G FD	12 375/Year 150 3 9 10 2000 1	F. P.	3 / 0.3

VII	Cluster-7																								
1	Kadambathur	47.50	31.67	22.11	0.00	79.17	101.28		0.00	St Tank Bund -2652m RC of Sluices - 2nos. DS of Channel - 1000m RC of weir - 1no. SG shutter to Sluices -2nos.	SRI Paddy Maize Pulses Groundnut Ragi	15 0 0 0 0			DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	10 0 2 0 0	IEC / CB		FI FT VSB IEC EV	3 25 1 3 1		
2	Kesavanallathur	50.90	33.93	15.47	9.42	84.83	100.30		9.42	St Tank Bund -1768 RC of Sluices -2 Nos. DS of Channel - 2000m SG shutter to Sluices-1no.	SRI Paddy Maize Pulses Groundnut Ragi	20 0 3 3 0			DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	10 0 3 0 0	IEC / CB		IC FI FT	1 2 25		
3	Selai	25.58	0.00	0.00	114.03	25.58	25.58		114.03	St Tank Bund -2286 RC of Sluices -3nos. DS of Channel - 700m RC of weir-1 no. SG shutter to Sluices -2Nos.	SRI Paddy Maize Pulses Groundnut Ragi	48 6 5 26 0	AEV	2	DIS SIS FP FM RWH	0 0 0 0 VT 1	SRI Paddy Maize Pulses Groundnut Ragi	30 0 10 0 0	IEC / CB		FI CDW FT FD IC S&G	3 50/Year 25 1 1 300		
4	Tholur	142.86	61.23	47.66	17.89	204.09	251.75		17.89	St Tank Bund -2040m RC of Sluices - 3Nos. DS of Channel - 700m RC of weir-2Nos. SG shutter to Sluices-2Nos.	SRI Paddy Maize Pulses Groundnut Ragi	93 0 15 40 0			DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	80 0 10 0 0	IEC / CB		S&G FI FT	200 3 25		
5	Thirur Hissa	38.10			131.92	38.10	38.10		131.92	St Tank Bund -2804 RC of Sluices -3Nos. RC of weir- 1No. SG shutter to Sluices	SRI Paddy Maize Pulses Groundnut Ragi	59 0 5 30 0	AEV	4	DIS SIS FP FM RWH	0 0 0 0 0	SRI Paddy Maize Pulses Groundnut Ragi	15 0 10 0 0	IEC / CB					
6	Putlur	24.79			77.64	24.79	24.79		77.64	St Tank Bund -1920 RC of Sluices -2 nOs. DS of Channel - 1500m RC of weir - Nil SG shutter to Sluices - Nil	SRI Paddy Maize Pulses Groundnut Ragi	35 0 5 10 0			DIS SIS FP FM RWH	0 0 0 0 VT 1	SRI Paddy Maize Pulses Groundnut Ragi	150 0 43 0 0	IEC / CB		FI S&G	2 500		
7	Paruthipattu				360.27	0.00	0.00		360.27	Rehabilitation not proposed as there is no cultivable ayacut under this tank											FI FT CDW	2 25 50/Year		
8	Ayapakkam				93.50	0.00	0.00		93.50	Rehabilitation not proposed as there is no cultivable ayacut under this tank											-	-		
9	Ambathur				145.75	0.00	0.00		145.75	Rehabilitation not proposed as there is no cultivable ayacut under this tank											-	-		
10	Korattur				302.47	0.00	0.00		302.47	Rehabilitation not proposed as there is no cultivable ayacut under this tank											-	-		
11	Kolathur				71.66	0.00	0.00		71.66	Rehabilitation not proposed as there is no cultivable ayacut under this tank											-	-		
12	Konnur				42.11	0.00	0.00		42.11	Rehabilitation not proposed as there is no cultivable ayacut under this tank											-	-		
	Sub Total	329.73	126.83	85.24	1366.66	456.56	541.80	0.00	1366.66	St Tank Bund - 13470m RC of Sluices -15 DS of Channel -5900m RC of weir - 5 Nos. SG shutter to Sluices -7	SRI Paddy Maize Pulses Groundnut Ragi	270 6 203 109 0	AEV	6	DIS SIS FP FM RWH		SRI Paddy Maize Pulses Groundnut Ragi		IEC / CB		FI CDW FT IEC VSB S&G EV IC FD	18 200/Year 150 6 2 3000 1 2 1	F. P.	
	TOTAL	3853.55	1801.95	974.01	3308.03	5655.50	6629.51	0.00	3308.03	St Tank Bund -100145 RC of Sluices - 87 DS of Channel - 49750 RC of weir - 27 RE to Weir - 3 SG shutter to Sluices - 74	SRI Paddy Maize Pulses Groundnut Ragi	1469 64 33 351 2	AEV	226.00	DIS SIS FP FM RWH	20 37 25 PT 8, PTr 5,ROT 4,DS4 RS 20,MCD 8,VT 5,MJD1	SRI Paddy Maize Pulses Groundnut Ragi	600 30 172 0 0	IEC / CB D.Y	1 No.	FI CDW FT IEC VSB S&G EV IC FD	75 1625/Year 850 42 14 12500 2 35 2	F.P A.I ORN	19 / 1.90 8 / 200 1 / 0.20

1.2 HYDROLOGY

1.2 HYDROLOGY

General

LOCATION

The Cooum sub basin, situated in Chennai basin, is sandwiched between Kosasthalaiyar sub basin on the North and Palar Basin and Adayar sub basin in the South. This sub basin spreads in the parts of Vellore, Kanchipuram, Thiruvallur Districts and in Chennai City. Geographically the Cooum sub basin is situated between the longitudes 79^{o} 37' 39.64"E to 80^{o} 17' 29.89"E and latitudes 12^{o} 54' 47.69"N to 13^{o} 03' 53.13"N having a total sub basin area of 505 sq km. The surplus waters of Kosasthalaiyar River from Kesavaram Anicut at a distance of 72km west of Chennai city, flows through Old Bangaru Channel for about 7.5km and joins the surplus course of the Cooum and Satharai tank from where the Cooum river originates. From there the river flows for a distance of 65km towards east and confluences with sea at south of Fort St. George below Napier Bridge in Chennai City.

Before the confluence into sea, the river find its way through the heart of the city for a length of 17.98km (inclusive of 2.04 km of North arm), draining the storm water from 71.00sqkm of the city area and joins the sea.

CATCHMENT AREA OF COOUM SUB BASIN

The Catchment area of this Sub basin is 505 sq km. This Sub basin receives rainfall from North-East Monsoon.

HYDROMETOROLOGY

The Hydrometeorology parameters include rainfall, temperature, humidity, wind velocity, evaporation and duration of sun shine which determine the climate of the basin.

RAINFALL

Average annual rainfall of gauging stations influencing this sub basin is as follows.

Influencing Rain gauge Stations of Cooum Sub Basin

Sl. No.	Sub basin	Rain Gauge Station	Sub Basin Area in Sq.km	Weight in %	Annual Average rainfall in mm	Annual average weighted rainfall for the sub basin in mm
1	Cooum	Kesavaram Anicut	78.70	15.60	712.78	111.19
2		Sriperumbudur	41.00	8.11	1245.34	101.00
3		Korattur Anicut	385.30	76.29	1207.97	921.32
					Total	1133.51

CLIMATE

The Cooum Sub Basin lies in a medium rainfall belt having an annual average weighted rainfall of 1133.51mm. South west mansoon contributes 431.46mm while North east mansoon contributes 617.86mm and 14.70mm with winter and 69.49mm in summer. This basin receives a major share of its rainfall during North East mansoon. This mansoon helps to buildup storage in both system and Non system tanks in this sub basin. The system tanks in this sub basin receives and partially filled up its capacity from Palar Anicut built across Palar river near Walajapet of Vellore District.

For the hydrometrological details for this sub basin, there is one weather station at Thiruthani

The weather station considered is furnished below.

Name of Weather Station	Maintained by
Thiruthani	PWD, WRO (SG & SWRDC)

The Climatological values of this river basin are given in the following table.

Climatological Parameters

Sl. No.	Climatological Parameter	Values
1	Maximum Monthly Average Temperature	33.4^0 C (May)
2	Minimum Monthly Average Temperature	24.4^0 C (December)
3	Maximum Wind Velocity (km/hr)	9.1 (June)
4	Minimum Wind Velocity (km/hr)	3.7 (October)
5	Maximum Average Sunshine (hrs/day)	10.0 (April)
6	Minimum Average Sunshine (hrs/day)	5.7 (July)
7	Maximum ETo (mm/Month)	251.1 (May)
8	Minimum ETo (mm/Month)	117.0 (November)
9	Average ETo (mm/Month)	175.7
10	Maximum monthly evaporation (in mm)	277.8 (May)
11	Minimum monthly evaporation (in mm)	105.2 (December)
12	Average monthly evaporation (in mm)	2161

TEMPERATURE

The meteorological features of the basin have been studied from the data collected from Tiruttani weather station. Temperature is one of the factors under climatological features and it is one of the main parameters to calculate the crop water requirement (i.e. evapotranspiration).

SOIL CLASSIFICATION

In this sub basin due to different stages of weathering the soil types are met with in combination of Inceptisol, Alfisol and Entisol. Most prominent type is Inceptisol.

Inceptisol	Red or brown or grey soil with surface horizon more developed than sub surface. They are developing soils, moderately deep, coarse loamy to loam, moderately drained to well drained.	Suited for commonly grown crops with exceptions.
Alfisol	The red or brown soils having accumulation of alleviated clay in sub surface horizon well drained, poor water and nutrient holding capacity.	Annual crops with shallow root system come up well.
Entisol	Reddish brown to red, light to medium textured and mostly non calcareous soils. Dark brown to dark grey soils of fluvial origin. These soils are very deep, freely drained sands having low water holding capacity.	Dry cultivation with millets, pulses and groundnuts are suitable.

LAND HOLDINGS

The details of farm holdings and size classes present in Cooum Sub basin are given below.

Category	Size of Holdings	Numbers	Percentage
Marginal	Below 1.00Ha	13584	62.70
Small	1.00 – 2.00Ha	4641	21.42
Medium	2.00 – 5.00Ha	2849	13.15
Big	5.00Ha & Above	592	2.73
Total		21,666	

Above table revealed that the marginal farmers alone accounted for 62.70% in the sub basin followed by small farmers. Developmental initiatives will need to take the fact into account.

DEMOGRAPHY

Name of Sub basin	Total No. of Blocks	Total No. of Villages	Population (in Millions)		
			2005	2010	2020
Cooum sub basin	9	128	423718	478921	551737

Cooum Sub-basin - Phase IV

Details of Cropping pattern - Cluster wise

District	Cluster	Without Project					With Project					Increas-ing
		FI	PI	RF/G	Pt. Gap	TOTAL	FI	PI	RF/G	Pt. Gap	TOTAL	
Vellore	1	67.75	38.11	15.82	0.00	**121.68**	121.68			0.00	**121.68**	0.00
Total (1)		**67.75**	**38.11**	**15.82**	**0.00**	**121.68**	**121.68**	**0.00**	**0.00**	**0.00**	**121.68**	0.00
KPM	1	740.11	422.45	175.89	0.00	**1338.45**	1338.45			0.00	**1338.45**	0.00
	2	814.44	458.20	184.00	0.00	**1456.64**	1456.64			0.00	**1456.64**	0.00
	3	501.82	271.07	115.50	0.00	**888.39**	888.39			0.00	**888.39**	0.00
Total (2)		**2056.37**	**1151.72**	**475.39**	**0.00**	**3683.48**	**3683.48**	**0.00**	**0.00**	**0.00**	**3683.48**	0.00
TVR	4	560.82	356.95	296.94	0.00	**1214.71**	1214.71			0.00	**1214.71**	0.00
	5	218.77	128.34	100.62	198.04	**645.77**	447.73			198.04	**645.77**	0.00
	6	620.11	0.00	0.00	1743.34	**2363.45**	620.11			1743.34	**2363.45**	0.00
	7	329.73	126.83	85.24	1366.66	**1908.46**	541.80			1366.66	**1908.46**	0.00
Total (3)		**1729.43**	**612.12**	**482.80**	**3308.04**	**6132.39**	**2824.35**	**0.00**	**0.00**	**3308.04**	**6132.39**	0.00
GT (1+2+3)		**3853.55**	**1801.95**	**974.01**	**3308.04**	**9937.55**	**6629.51**	**0.00**	**0.00**	**3308.04**	**9937.55**	**0.00**

CROPPING PATTERN

Name of the sub Basin	**: Cooum**			Fully Irrigated	:	3853.55	Ha
Nodal District	: Thiruvallur			Partially Irrigated	:	1801.95	Ha
Registered Ayacut Area	9937.55	Ha.		Gap	:	4282.05	Ha
				Total Ayacut Area	:	**9937.55**	Ha

Sl. No.	Crop	Without Project				With Project				Increas-ing
		FI	PI	RF/G	TOTAL	FI	PI	RF/G	TOTAL	
I	**Perennial crop**									
1	Coconut	0	21.00	0	**21.00**	26.00	0	0	**26.00**	5.00
2	Mango	40.00	38.00	0	**78.00**	78.00	0	0	**78.00**	0
3	Guava	25.00	14.00	0	**39.00**	39.00	0	0	**39.00**	0
4	Sapota	18.00	3.00	0	**21.00**	21.00	0	0	**21.00**	0
5	Tamarind	0	7.00	0	**7.00**	7.00	0	0	**7.00**	0
6	Fodder Grass	0	0	0	**0.00**	0.50	0	0	**0.50**	0.50
	Total	**83.00**	**83.00**	**0.00**	**166.00**	**171.50**	**0.00**	**0.00**	**171.50**	**5.50**
II	**Annual Crop**									
1	Sugarcane	40.00	8.00	0	**48.00**	48.00	0	0	**48.00**	0
2	Banana	11.00	0	0	**11.00**	11.00	0	0	**11.00**	0
	Total	**51.00**	**8.00**	**0.00**	**59.00**	**59.00**	**0.00**	**0.00**	**59.00**	**0.00**
III	**1st crop**									
1. a	Paddy	3278.59	1603.51	0	**4882.10**	0	0	0	**0.00**	-4882.10
b	Paddy SRI	0	0	0	**0.00**	4660.00	0	0	**4660.00**	4660.00
2	Maize	0	0	0	**0.00**	0	0	0	**0.00**	0
3	Pulses	48.43	12.13	0	**60.56**	532.48	0	0	**532.48**	471.92
4	Groundnut	25.43	77.20	0	**102.63**	531.53	0	0	**531.53**	428.90
5	Gingelly	0	1.61	0	**1.61**	2.00	0	0	**2.00**	0.39
6	Ragi	2.10	2.00	0	**4.10**	20.00	0	0	**20.00**	15.90
7	Chillies	70.00	12.80	0	**82.80**	117.80	0	0	**117.80**	35.00
8	Bhendi	97.00	0.00	0	**97.00**	143.00	0	0	**143.00**	46.00
9	Brinjal	78.00	1.70	0	**79.70**	108.70	0	0	**108.70**	29.00
10	Gourds	5.00	0	0	**5.00**	10.00	0	0	**10.00**	5.00
11	Curryleaf	5.00	0	0	**5.00**	5.00	0	0	**5.00**	0
12	Greens	70.00	0	0	**70.00**	180.00	0	0	**180.00**	110.00
13	Watermelon	3.00	0	0	**3.00**	48.00	0	0	**48.00**	45.00
14	Flowers	36.00	0	0	**36.00**	36.00	0	0	**36.00**	0
15	Fodder Cholam	1.00	0	0	**1.00**	4.50	0	0	**4.50**	3.50
16	Non Agri. purposes	0	0	3308.04	**3308.04**	0	0	3308.04	**3308.04**	0
17	Fallow	0	0	974.01	**974.01**	0	0	0	**0.00**	-974.01
	Total	**3719.55**	**1710.95**	**4282.05**	**9712.55**	**6399.01**	**0.00**	**3308.04**	**9707.05**	**-5.50**
IV	**Grand Total (I+II+III)**	**3853.55**	**1801.95**	**4282.05**	**9937.55**	**6629.51**	**0.00**	**3308.04**	**9937.55**	**0**

	2 nd crop									
1. a	Paddy	3518.16	507.00	0	**4025.16**	0	0	0	**0.00**	-4025.16
b	Paddy SRI	0	0	0	**0.00**	4290.00	0	0	**4290.00**	4290.00
2	Maize	20.00	3	0	**22.50**	430.00	0	0	**430.00**	407.50
3	Pulses	250.00	62.00	0	**312.00**	1165.00	0	0	**1165.00**	853.00
4	Groundnut	467.00	54.12	0	**521.12**	1530.00	0	0	**1530.00**	1008.88
5	Chillies	0	3.00	0	**3.00**	18.00	0	0	**18.00**	15.00
6	Bhendi	15.00	2.00	0	**17.00**	17.00	0	0	**17.00**	0
7	Brinjal	0	2.00	0	**2.00**	12.00	0	0	**12.00**	10.00
8	Greens	40.00	0	0	**40.00**	0	0	0	**0.00**	-40.00
9	Watermelon	30.00	0	0	**30.00**	0	0	0	**0.00**	-30.00
	Total	**4340.16**	**632.62**	**0.00**	**4972.78**	**7462.00**	**0.00**	**0.00**	**7462.00**	**2489.22**
V	**3rd crop**									
1. a	Paddy	1174.91	10.00	0	**1184.91**	0	0	0	**0.00**	-1184.91
b	SRI	0	0	0	**0.00**	1360.00	0	0	**1360.00**	1360.00
2	Maize	10.00	2.00	0	**12.00**	220.00	0	0	**220.00**	208.00
3	Pulses	75.00	2.00	0	**77.00**	560.00	0	0	**560.00**	483.00
4	Groundnut	103.00	5.00	0	**108.00**	520.00	0	0	**520.00**	412.00
	Total	**1362.91**	**19.00**	**0.00**	**1381.91**	**2660.00**	**0.00**	**0.00**	**2660.00**	**1278.09**
	Great Grand Total	**9556.62**	**2453.57**	**4282.05**	**16292.24**	**16751.51**	**0.00**	**3308.04**	**20059.55**	**3767.31**
	Cropping Intensity				**120.86%**				**168.57%**	**47.71%**

CROPPING PATTERN

Name of the sub Basin	**: Cooum**			Fully Irrigated	:	1729.43	Ha
District	: Thiruvallur (Part - 1/3)			Partially Irrigated	:	612.12	Ha
Registered Ayacut Area	6132.39 Ha.			Gap	:	3790.84	Ha
				Total Ayacut Area	:	**6132.39**	Ha

S.No.	Crop	Without Project				With Project				Increas-ing
		FI	PI	RF/G	TOTAL	FI	PI	RF/G	TOTAL	
I	**Perennial crop**									
1	Coconut	0	16.00	0	**16.00**	16.00	0	0	**16.00**	0
2	Mango	0	18.00	0	**18.00**	18.00	0	0	**18.00**	0
3	Guava	0	4.00	0	**4.00**	4.00	0	0	**4.00**	0
4	Sapota	0	0	0	**0.00**	0	0	0	**0.00**	0
5	Tamarind	0	0	0	**0.00**	0	0	0	**0.00**	0
6	Fodder Grass	0	0	0	**0.00**	0	0	0	**0.00**	0
	Total	**0.00**	**38.00**	**0.00**	**38.00**	**38.00**	**0.00**	**0.00**	**38.00**	**0.00**
II	**Annual Crop**									
1	Sugarcane	0	0	0	**0.00**	0	0	0	**0.00**	0
2	Banana	0	0	0	**0.00**	0	0	0	**0.00**	0
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
III	**1st crop**									
1. a	Paddy	1674.84	574.12	0	**2248.96**	0	0	0	**0.00**	**-2248.96**
b	Paddy SRI	0	0	0	**0.00**	2200.00	0	0	**2200.00**	**2200.00**
2	Maize	0	0	0	**0.00**	0	0	0	**0.00**	0
3	Pulses	10.06	0	0	**10.06**	300.00	0	0	**300.00**	289.94
4	Groundnut	25.43	0	0	**25.43**	256.35	0	0	**256.35**	230.92
5	Gingelly	0	0	0	**0.00**	0	0	0	**0.00**	0
6	Ragi	2.10	0	0	**2.10**	0	0	0	**0.00**	-2.10
7	Chillies	0	0	0	**0.00**	0	0	0	**0.00**	0
8	Bhendi	7.00	0	0	**7.00**	13.00	0	0	**13.00**	6.00
9	Brinjal	9.00	0	0	**9.00**	13.00	0	0	**13.00**	4.00
10	Gourds	0	0	0	**0.00**	0	0	0	**0.00**	0
11	Curryleaf	0	0	0	**0.00**	0	0	0	**0.00**	0
12	Greens	0	0	0	**0.00**	0	0	0	**0.00**	0
13	Watermelon	0	0	0	**0.00**	0	0	0	**0.00**	0
14	Flowers	0	0	0	**0.00**	0	0	0	**0.00**	0
15	Fodder Cholam	1.00	0	0	**1.00**	4.00	0	0	**4.00**	3.00
16	Non Agri. purposes	0	0	3308.04	**3308.04**	0	0	3308.04	**3308.04**	0
17	Fallow	0	0	482.80	**482.80**	0	0	0	**0.00**	-482.80
	Total	**1729.43**	**574.12**	**3790.84**	**6094.39**	**2786.35**	**0.00**	**3308.04**	**6094.39**	**0.00**
IV	**Grand Total (I+II+III)**	**1729.43**	**612.12**	**3790.84**	**6132.39**	**2824.35**	**0.00**	**3308.04**	**6132.39**	**0.00**

	2 nd crop									
1. a	Paddy	1712.43	507.00	0	**2219.43**	0	0	0	**0.00**	-2219.43
b	Paddy SRI	0	0	0	**0.00**	2500.00	0	0	**2500.00**	2500.00
2	Maize	10.00	0	0	**10.00**	300.00	0	0	**300.00**	290.00
3	Pulses	0	60.00	0	**60.00**	500.00	0	0	**500.00**	440.00
4	Groundnut	17.00	45.12	0	**62.12**	500.00	0	0	**500.00**	437.88
5	Chillies	0	0	0	**0.00**	0	0	0	**0.00**	0.00
6	Bhendi	0	0	0	**0.00**	0	0	0	**0.00**	0
7	Brinjal	0	0	0	**0.00**	0	0	0	**0.00**	0.00
8	Greens	0	0	0	**0.00**	0	0	0	**0.00**	0
9	Watermelon	0	0	0	**0.00**	0	0	0	**0.00**	0
	Total	**1739.43**	**612.12**	**0.00**	**2351.55**	**3800.00**	**0.00**	**0.00**	**3800.00**	**1448.45**
V	**3rd crop**									
1. a	Paddy	400.00	0	0	**400.00**	0	0	0	**0.00**	-400.00
b	SRI	0	0	0	**0.00**	500.00	0	0	**500.00**	500.00
2	Maize	5.00	0	0	**5.00**	180.00	0	0	**180.00**	175.00
3	Pulses	25.00	0	0	**25.00**	400.00	0	0	**400.00**	375.00
4	Groundnut	18.00	0	0	**18.00**	300.00	0	0	**300.00**	282.00
	Total	**448.00**	**0.00**	**0.00**	**448.00**	**1380.00**	**0.00**	**0.00**	**1380.00**	932.00
	Great Grand Total	**3916.86**	**1224.24**	**3790.84**	**8931.94**	**8004.35**	**0.00**	**3308.04**	**11312.39**	**2380.45**
	Cropping Intensity				**83.84%**				**130.53%**	**46.69%**

CROPPING PATTERN

Name of the sub Basin	**: Cooum**	Fully Irrigated	:	2056.37	Ha
District	: Kancheepuram (Part - 2/3)	Partially Irrigated	:	1151.72	Ha
Registered Ayacut Area	3683.48 Ha.	Gap	:	475.39	Ha
		Total Ayacut Area	:	**3683.48**	Ha

S.No.	Crop	Without Project				With Project				Increas-ing
		FI	PI	RF/G	TOTAL	FI	PI	RF/G	TOTAL	
I	**Perennial crop**									
1	Coconut	0	3.00	0	**3.00**	8.00	0	0	**8.00**	5.00
2	Mango	40.00	20.00	0	**60.00**	60.00	0	0	**60.00**	0
4	Guava	25.00	10.00	0	**35.00**	35.00	0	0	**35.00**	0
5	Sapota	18.00	3.00	0	**21.00**	21.00	0	0	**21.00**	0
6	Tamarind	0	7.00	0	**7.00**	7.00	0	0	**7.00**	0
7	Fodder Grass	0	0	0	**0.00**	0.50	0	0	**0.50**	0.50
	Total	**83.00**	**43.00**	**0.00**	**126.00**	**131.50**	**0.00**	**0.00**	**131.50**	**5.50**
II	**Annual Crop**									
1	Sugarcane	40.00	0	0	**40.00**	40.00	0	0	**40.00**	0
2	Banana	11.00	0	0	**11.00**	11.00	0	0	**11.00**	0
	Total	**51.00**	**0.00**	**0.00**	**51.00**	**51.00**	**0.00**	**0.00**	**51.00**	**0**
III	**1st crop**									
1. a	Paddy	1536.00	1029.39	0	**2565.39**	0	0	0	**0.00**	-2565.39
b	Paddy SRI	0	0	0	**0.00**	2400.00	0	0	**2400.00**	2400.00
2	Maize	0	0	0	**0.00**	0	0	0	**0.00**	0
3	Pulses	38.37	9.63	0	**48.00**	227.48	0	0	**227.48**	179.48
4	Groundnut	0	57.70	0	**57.70**	250.00	0	0	**250.00**	192.30
5	Gingelly	0	0	0	**0.00**	0	0	0	**0.00**	0.00
6	Ragi	0	2.00	0	**2.00**	20.00	0	0	**20.00**	18.00
7	Chillies	70.00	10.00	0	**80.00**	105.00	0	0	**105.00**	25.00
8	Bhendi	90.00	0	0	**90.00**	130.00	0	0	**130.00**	40.00
9	Brinjal	69.00	0	0	**69.00**	89.00	0	0	**89.00**	20.00
10	Gourds	5.00	0	0	**5.00**	10.00	0	0	**10.00**	5.00
11	Curryleaf	5.00	0	0	**5.00**	5.00	0	0	**5.00**	0
12	Greens	70.00	0	0	**70.00**	180.00	0	0	**180.00**	110.00
13	Watermelon	3.00	0	0	**3.00**	48.00	0	0	**48.00**	45.00
14	Flowers	36.00	0	0	**36.00**	36.00	0	0	**36.00**	0
15	Fodder Cholam	0	0	0	**0.00**	0.50	0	0	**0.50**	0.50
16	Non Agri. purposes	0	0	0	**0.00**	0	0	0	**0.00**	0
17	Fallow	0	0	475.39	**475.39**	0	0	0	**0.00**	-475.39
	Total	**1922.37**	**1108.72**	**475.39**	**3506.48**	**3500.98**	**0.00**	**0.00**	**3500.98**	**-5.50**
IV	**Grand Total (I+II+III)**	**2056.37**	**1151.72**	**475.39**	**3683.48**	**3683.48**	**0.00**	**0.00**	**3683.48**	**0.00**

	2 nd crop									
1. a	Paddy	1765.73	0	0	**1765.73**	0	0	0	**0.00**	-1765.73
b	Paddy SRI	0	0	0	**0.00**	1750.00	0	0	**1750.00**	1750.00
2	Maize	10.00	0	0	**10.00**	100.00	0	0	**100.00**	90.00
3	Pulses	250.00	0	0	**250.00**	650.00	0	0	**650.00**	400.00
4	Groundnut	450.00	0	0	**450.00**	1000.00	0	0	**1000.00**	550.00
5	Chillies	0	0	0	**0.00**		0	0	**0.00**	0
6	Bhendi	15.00	0	0	**15.00**	0	0	0	**0.00**	-15.00
7	Brinjal	0	0	0	**0.00**		0	0	**0.00**	0
8	Greens	40.00	0	0	**40.00**	0	0	0	**0.00**	-40.00
9	Watermelon	30.00	0	0	**30.00**	0	0	0	**0.00**	-30.00
	Total	**2560.73**	**0.00**	**0.00**	**2560.73**	**3500.00**	**0.00**	**0.00**	**3500.00**	**939.27**
V	**3rd crop**									
1. a	Paddy	774.91	0	0	**774.91**	0	0	0	**0.00**	-774.91
b	SRI	0	0	0	**0.00**	850.00	0	0	**850.00**	850.00
2	Maize	5.00	0	0	**5.00**	20.00	0	0	**20.00**	15.00
3	Pulses	50.00	0	0	**50.00**	150.00	0	0	**150.00**	100.00
4	Groundnut	85.00	0	0	**85.00**	200.00	0	0	**200.00**	115.00
	Total	**914.91**	**0.00**	**0.00**	**914.91**	**1220.00**	**0.00**	**0.00**	**1220.00**	305.09
	Great Grand Total	**5532.01**	**1151.72**	**475.39**	**7159.12**	**8403.48**	**0.00**	**0.00**	**8403.48**	**1244.36**
	Cropping Intensity				**181.45%**				**228.14%**	**46.69%**

CROPPING PATTERN

Name of the sub Basin	**: Cooum**	Fully Irrigated	:	67.75	Ha
District	: Vellore (Part - 3/3)	Partially Irrigated	:	38.11	Ha
Registered Ayacut Area	121.68 Ha.	Gap	:	15.82	Ha
		Total Ayacut Area	:	**121.68**	Ha

S.No.	Crop	Without Project				With Project				Increas-ing
		FI	PI	RF/G	TOTAL	FI	PI	RF/G	TOTAL	
I	**Perennial crop**									
1	Coconut	0	2.00	0	**2.00**	2.00	0	0	**2.00**	0
2	Mango	0	0	0	**0.00**	0	0	0	**0.00**	0
3	Guava	0	0	0	**0.00**	0	0	0	**0.00**	0
4	Sapota	0	0	0	**0.00**	0	0	0	**0.00**	0
5	Tamarind	0	0	0	**0.00**	0	0	0	**0.00**	0
6	Fodder Grass	0	0	0	**0.00**	0	0	0	**0.00**	0
	Total	**0.00**	**2.00**	**0.00**	**2.00**	**2.00**	**0.00**	**0.00**	**2.00**	**0.00**
II	**Annual Crop**									
1	Sugarcane	0	8.00	0	**8.00**	8.00	0	0	**8.00**	0
2	Banana	0	0	0	**0.00**	0	0	0	**0.00**	0
	Total	**0.00**	**8.00**	**0.00**	**8.00**	**8.00**	**0.00**	**0.00**	**8.00**	**0.00**
III	**1st crop**									
1. a	Paddy	67.75	0	0	**67.75**	0	0	0	**0.00**	-67.75
b	Paddy SRI	0	0	0	**0.00**	60.00	0	0	**60.00**	60.00
2	Maize	0	0	0	**0.00**	0	0	0	**0.00**	0.00
3	Pulses	0	2.50	0	**2.50**	5.00	0	0	**5.00**	2.50
4	Groundnut	0	19.50	0	**19.50**	25.18	0	0	**25.18**	5.68
5	Gingelly	0	1.61	0	**1.61**	2.00	0	0	**2.00**	0.39
6	Ragi	0	0	0	**0.00**	0	0	0	**0.00**	0
7	Chillies	0	2.80	0	**2.80**	12.80	0	0	**12.80**	10.00
8	Bhendi	0	0	0	**0.00**	0	0	0	**0.00**	0.00
9	Brinjal	0	1.70	0	**1.70**	6.70	0	0	**6.70**	5.00
10	Gourds	0	0	0	**0.00**	0	0	0	**0.00**	0
11	Curryleaf	0	0	0	**0.00**	0	0	0	**0.00**	0
12	Greens	0	0	0	**0.00**	0	0	0	**0.00**	0
13	Watermelon	0	0	0	**0.00**	0	0	0	**0.00**	0
14	Flowers	0	0	0	**0.00**	0	0	0	**0.00**	0
15	Fodder Cholam	0	0	0	**0.00**	0	0	0	**0.00**	0
16	Non Agri. purposes	0	0	0	**0.00**	0	0	0	**0.00**	0
17	Fallow	0	0	15.82	**15.82**	0	0	0	**0.00**	-15.82
	Total	**67.75**	**28.11**	**15.82**	**111.68**	**111.68**	**0.00**	**0.00**	**111.68**	**0**
IV	**Grand Total (I+II+III)**	**67.75**	**38.11**	**15.82**	**121.68**	**121.68**	**0.00**	**0.00**	**121.68**	**0**

	2 nd crop									
1. a	Paddy	40.00	0	0	**40.00**	0	0	0	**0.00**	-40.00
b	Paddy SRI	0	0	0	**0.00**	40.00	0	0	**40.00**	40.00
2	Maize	0	2.50	0	**2.50**	30.00	0	0	**30.00**	27.50
3	Pulses	0	2.00	0	**2.00**	15.00	0	0	**15.00**	13.00
4	Groundnut	0	9.00	0	**9.00**	30.00	0	0	**30.00**	21.00
5	Chillies	0	3.00	0	**3.00**	18.00	0	0	**18.00**	15.00
6	Bhendi	0	2.00	0	**2.00**	17.00	0	0	**17.00**	15.00
7	Brinjal	0	2.00	0	**2.00**	12.00	0	0	**12.00**	10.00
8	Greens	0	0	0	**0.00**	0	0	0	**0.00**	0
9	Watermelon	0	0	0	**0.00**	0	0	0	**0.00**	0
	Total	**40.00**	**20.50**	**0.00**	**60.50**	**162.00**	**0.00**	**0.00**	**162.00**	**101.50**
V	**3rd crop**									
1. a	Paddy	0	10.00	0	**10.00**	0	0	0	**0.00**	-10.00
b	SRI	0	0	0	**0.00**	10.00	0	0	**10.00**	10.00
2	Maize	0	2.00	0	**2.00**	20.00	0	0	**20.00**	18.00
3	Pulses	0	2.00	0	**2.00**	10.00	0	0	**10.00**	8.00
4	Groundnut	0	5.00	0	**5.00**	20.00	0	0	**20.00**	15.00
	Total	**0.00**	**19.00**	**0.00**	**19.00**	**60.00**	**0.00**	**0.00**	**60.00**	**41.00**
	Great Grand Total	**107.75**	**77.61**	**15.82**	**201.18**	**343.68**	**0.00**	**0.00**	**343.68**	**142.50**
	Cropping Intensity				**152.33%**				**282.45%**	**130.11%**

COOUM SUB BASIN - CHENNAI BASIN

Combined Crop water Requirement without Project

S. No.	Name of Crop	Area in Ha	Crop Water Requirement in mm	Total Crop Water Requirement in Mcm	Irrigation Water Requirement at source in Mcm (Eff=0.43)	Total Irrigation Water Requirement in Mcm
I	**Perennial Crop**					
1	Coconut	21.00	1001	0.21	0.49	0.49
2	Mango	78.00	402	0.31	0.73	0.73
3	Guava	39.00	256	0.10	0.23	0.23
4	Sapota	21.00	526	0.11	0.26	0.26
5	Tamarind	7.00	292	0.02	0.05	0.05
6	Fodder Grass	0.00	438	0.00	0.00	0.00
	Total	**166.00**		**0.75**	**1.75**	**1.75**
II	**Annual Crop**					
1	Sugarcane	48.00	951	0.46	1.06	1.06
2	Banana	11.00	811	0.09	0.21	0.21
	Total	**59.00**		**0.55**	**1.27**	**1.27**
III	**1st Crop**					
1.a	Paddy	4882.10	612	29.88	69.48	69.48
b	Paddy SRI	0.00	428	0.00	0.00	0.00
2	Maize	0.00	329	0.00	0.00	0.00
3	Pulses	60.56	300	0.18	0.42	0.42
4	Groundnut	102.63	417	0.43	1.00	1.00
5	Gingelly	1.61	232	0.00	0.01	0.01
6	Ragi	4.10	434	0.02	0.04	0.04
7	Chillies	82.80	583	0.48	1.12	1.12
8	Bhendi	97.00	462	0.45	1.04	1.04
9	Brinjal	79.70	464	0.37	0.86	0.86
10	Gourds	5.00	268	0.01	0.03	0.03
11	Curry leaf	5.00	330	0.02	0.04	0.04
12	Greens	70.00	187	0.13	0.30	0.30
13	Watermelon	3.00	250	0.01	0.02	0.02
14	Flowers	36.00	509	0.18	0.43	0.43
15	Fodder Cholam	1.00	300	0.00	0.01	0.01
	Total	**5430.50**		**32.16**	**74.80**	**74.80**
	Grand Total (I+II+III)	**5655.50**		**33.47**	**77.83**	**77.83**

IV	**2nd Crop**					
1.a	Paddy	4025.16	231	9.30	21.62	21.62
b	Paddy SRI	0.00	162	0.00	0.00	0.00
2	Maize	23.00	329	0.08	0.18	0.18
3	Pulses	312.00	382	1.19	2.77	2.77
4	Groundnut	521.12	417	2.17	5.05	5.05
5	Chillies	3.00	583	0.02	0.04	0.04
6	Bhendi	17.00	462	0.08	0.18	0.18
7	Brinjal	2.00	464	0.01	0.02	0.02
8	Greens	40.00	187	0.07	0.17	0.17
9	Watermelon	30.00	250	0.08	0.17	0.17
	Total	**4973.28**		**12.99**	**30.22**	**30.22**
V	**3rd Crop**					
1.a	Paddy	1184.91	231	2.74	6.37	6.37
b	Paddy SRI	0.00	162	0.00	0.00	0.00
2	Maize	12.00	329	0.04	0.09	0.09
3	Pulses	77.00	300	0.23	0.54	0.54
4	Groundnut	108.00	417	0.45	1.05	1.05
	Total	**1381.91**		**3.46**	**8.04**	**8.04**
	Great Grand Total	**12010.69**		**49.92**	**116.09**	**116.09**

COOUM SUB BASIN - CHENNAI BASIN					
Water Potential without Project					
Surface Water Potential		=	82.68	Mcm	
Ground Water Potential		=	127.35	Mcm	
Total Potential		=	**210.03**	Mcm	
Water Demand without Project					
Domestic		=	137.33	Mcm	
Livestock		=	13.54	Mcm	
Industrial		=	246.00	Mcm	
Irrigation	WRO	=	116.09	Mcm	
	PU & GW	=	16.31	Mcm	
Total Water Demand		=	**529.27**	Mcm	
Water Balance		=	**-319.24**	Mcm	

COOUM SUB BASIN - CHENNAI BASIN

Combined Crop water Requirement with Project

S. No.	Name of Crop	Area in Ha	Crop Water Requirement in mm	Total Crop Water Requirement in Mcm	Irrigation Water Requirement at source in Mcm (Eff=0.53)	Total Irrigation Water Requirement in Mcm
I	**Perennial Crop**					
1	Coconut	26.00	1001	0.26	0.49	0.49
2	Mango	78.00	402	0.31	0.59	0.59
3	Guava	39.00	256	0.10	0.19	0.19
4	Sapota	21.00	526	0.11	0.21	0.21
5	Tamarind	7.00	292	0.02	0.04	0.04
6	Fodder Grass	0.50	438	0.00	0.00	0.00
	Total	**171.50**		**0.81**	**1.52**	**1.52**
II	**Annual Crop**					
1	Sugarcane	48.00	951	0.46	0.86	0.86
2	Banana	11.00	811	0.09	0.17	0.17
	Total	**59.00**		**0.55**	**1.03**	**1.03**
III	**1st Crop**					
1.a	Paddy	0.00	612	0.00	0.00	0.00
b	Paddy SRI	4660.00	428	19.94	37.63	37.63
2	Maize	0.00	329	0.00	0.00	0.00
3	Pulses	532.48	300	1.60	3.01	3.01
4	Groundnut	531.53	417	2.22	4.18	4.18
5	Gingelly	2.00	232	0.00	0.01	0.01
6	Ragi	20.00	434	0.09	0.16	0.16
7	Chillies	117.80	583	0.69	1.30	1.30
8	Bhendi	143.00	462	0.66	1.25	1.25
9	Brinjal	108.70	464	0.50	0.95	0.95
10	Gourds	10.00	268	0.03	0.05	0.05
11	Curry leaf	5.00	330	0.02	0.03	0.03
12	Greens	180.00	187	0.34	0.64	0.64
13	Watermelon	48.00	250	0.12	0.23	0.23
14	Flowers	36.00	509	0.18	0.35	0.35
15	Fodder Cholam	4.50	300	0.01	0.03	0.03
	Total	**6399.01**		**26.40**	**49.81**	**49.81**
	Grand Total (I+II+III)	**6629.51**		**27.75**	**52.36**	**52.36**

IV	**2nd Crop**					
1.a	Paddy	0.00	231	0.00	0.00	0.00
b	Paddy SRI	4290.00	162	6.95	13.11	13.11
2	Maize	430.00	329	1.41	2.67	2.67
3	Pulses	1165.00	382	4.45	8.40	8.40
4	Groundnut	1530.00	417	6.38	12.04	12.04
5	Chillies	18.00	583	0.10	0.20	0.20
6	Bhendi	17.00	462	0.08	0.15	0.15
7	Brinjal	12.00	464	0.06	0.11	0.11
8	Greens	0.00	187	0.00	0.00	0.00
9	Watermelon	0.00	250	0.00	0.00	0.00
	Total	**7462.00**		**19.43**	**36.67**	**36.67**
V	**3rd Crop**					
1.a	Paddy	0.00	231	0.00	0.00	0.00
b	Paddy SRI	1360.00	162	2.20	4.16	4.16
2	Maize	220.00	329	0.72	1.37	1.37
3	Pulses	560.00	300	1.68	3.17	3.17
4	Groundnut	520.00	417	2.17	4.09	4.09
	Total	**2660.00**		**6.78**	**12.78**	**12.78**
	Great Grand Total	**16751.51**		**53.96**	**101.81**	**101.81**

COOUM SUB BASIN - CHENNAI BASIN

Water Potential with Project					
Surface Water Potential		=	82.68	Mcm	
Ground Water Potential		=	127.35	Mcm	
Total Potential		=	**210.03**	Mcm	
Water Demand with Project					
Domestic		=	137.33	Mcm	
Livestock		=	13.54	Mcm	
Industrial		=	246.00	Mcm	
Irrigation	WRO	=	101.81	Mcm	
	PU & GW	=	16.31	Mcm	
Total Water Demand		=	**514.99**	Mcm	
Water Balance		=	**-304.96**	Mcm	

Note:

1.The demands for domestic and industries are met out from the sources from other basins.

2.Out of 246 Mcum for the Industries, Industrial WaterDemand for Chennai corporation is 183 Mcum which includes industries like Educational Institutions,Hotels

COOUM SUB BASIN

Write up for Substantiating the Shortfall in Water Demand of the Sub Basin

Water demand for irrigation WRO	-	101.81 MCM	
PU & GW	-	16.31 MCM	
		118.12 MCM	118.12 MCM
Water demand for Live stock			13.54 MCM
Water demand for Domestic (Rural)			12.10 MCM
Water demand for (Municipalities & Town Panchayats)			26.20 MCM
Water demand for (Chennai City)			99.03 MCM
Water demand for Industrial (City area)		183 MCM	
Water demand for (Rural area)		63 MCM	
		246 MCM	246.00 MCM

Demand of water in rural area

Irrigation	-	118.12 MCM	
Live stock	-	13.54 MCM	
Domestic (Rural & Municipalities)	-	12.10 MCM	
Industrial (Rural)	-	63.00 MCM	
Total		232.96 MCM	232.96 MCM

Demand of water in city area

Water demand for Domestic	-	99.03 MCM	
Water Demand for Industrial	-	183.00 MCM	
Total	-	282.03 MCM	282.03 MCM

Water Potential available – Surface water potential	-	82.68 MCM
Ground water potential	-	127.38MCM
Total Potential Available	-	210.03 MCM

It is found that the water potential available at rural portion of sub basin is found as a meager shortfall of about (232.96 – 210.03) 22.93 MCM is being met out from the inter basin transfer from adjoining basins namely

1. Palar Basin and
2. Kosasthlaiyar Sub basin.

From Palar Basin

In the upper region of the sub basin, there are 25 system tanks directly fed by the Govindavadi channel of Palar Anicut System and 17 tanks are partially filled with and thereby it is retrieved a quantity of about 23.56 MCM. This will satisfy partially the irrigation, domestic and live stock need of the upper area of the sub basin and also enhance the ground water potential of Cooum Sub basin

From Kosasthalaiyar Sub Basin

Whenever the Poondi Reservoir reaches its FRL, the inflow is being diverted into Cooum sub basin through Kesavaram Anicut at the rate of 650 Cusecs for the period of 75 to 90 days. The quantum water received from the inter basin transfer works out to 51.68 MCM. This will enhance the ground water potential as well as partially satisfying the irrigation, domestic and livestock need of Cooum Sub basin.

The Demand of water for domestic and industrial in city portion of Cooum sub basin is found 282.03 MCM. The entire demand is being met out from inter basin transfer from the basins as follows.

1. Cauveri basin through Veeranam tank.
2. Krishna basin through Kandaleru reservoir of Andrapradesh @ 12 TMC / annum.
3. From Desalination plant.

Hence, the water potential available in the rural areas of the Sub basin is quite adequate for building storage in tanks, raising Crops and recharging the groundwater.

1.3 HYDRAULICS OF COMPONENTS

Hydraulic Particulars of Infrastructure including Supply Channels

SYSTEM AND NON SYSTEM TANKS (Tanks having Cultivable Command Area)

Sl.No	District	Taluk	Block	Name of Tank	TYPE	Latitide	Longitude	Reg.Ayacut in ha.	Capacity in Mft.	Yeild in Mft	Number of Fillings	Free Catchment in Sqkm	Intercepted Catchment in Sqkm	Combined Catchment in Sqkm	Max.Discharge in Cumecs	Waterspread area(Sqkm)	FTL in m	MWL in m	No. of Sluices	Deep Sill	Depth of Water in m	Weir Details		Discharge in Cumecs	Length of bund (m)	Length of Supply Channel (m)	Upper Source	Lower Tank
																						No.	Length in m					
1	Vellore	Arakkonam	Nemili	Thirumalpur Tank	System	12° 55' 38.06"	79° 39' 2.34"	121.68	25.43	50.85	2.00	0.70	0.00	0.70	5.89	0.34	96.100	96.620	3	92.670	3.430	1	18.9	11.72	1980	4300	Govindavadi Channel	Pudupakkam Peria Eri
2				Pudupakkam Peria eri	System	12° 55' 38.06"	79° 39' 2.34"		20.84	20.84	1.00	1.64	0.70	2.34	12.05	1.79	97.140	97.600	1	92.640	4.500	1	9.35	13.42	2623	1100	Thirumalpur & Kambakkal	Pudupakkam Chitheri
3				Pudupakkam Chitheri	System	12° 54' 59.69"	79° 39' 47.51"	267.93	7.77	11.65	1.50	1.50	1.64	3.14	14.02	1.48	94.390	95.000	4	91.700	2.690	1	11	15.79	1830	1050	Pudupakkam Peria eri & Kambakkal	Veliyur Big Tank
4				Periakarumbur tank	System	12° 54' 36.08"	79° 40' 14.71"	124.525	10.24	10.24	1.00	0.90		0.90	6.97	1.86	92.500	93.000	2	89.700	2.800	1	14.5	8.478	1560		Kambakkal	Veliyur Big Tank
5				Govindavadi Big tank	System	12° 55' 57.28"	79° 40' 28.41"	312.625	65.33	98.00	1.50	9.25	4.17	13.42	38.72	8.18	90.370	90.750	5	86.550	3.820	2	120	46.48	3264	1500	Govindavadi Chitheri	Uveri tank & Pullalore
6				Govindavadi Chitheri	System	12° 55' 56.67"	79° 31' 47.40"	124.33	24.72	37.08	1.50	4.17	2.81	6.98	24.52	2.98	84.320	84.950	2	81.620	2.700	2	39.70	32.83	2620	7500	Govindavadi Channel	Govindavadi Big tank
7				Veliur Big tank	System	12° 55' 0.40"	79° 41' 27.88"	246.135	57.56	86.35	1.50	1.75	3.14	4.89	18.45	1.76	89.140	89.590	3	86.370	2.770	1	13	18.64	2800	1100	Kambakkal, Pudupakkam & Periakarambur	Parandur Big tank
8				Veliur Chitheri	System	12° 55' 49.31"	79° 41' 46.53"	91.82	14.83	22.25	1.50	0.90		0.90	6.97	1.53	89.360	89.670	3	86.370	2.990	1	32	9.134	1403		Veliur Big tank	Parandur Big tank
9				Uveri tank	Non Sys	12° 55' 36.11"	79° 41' 10.57"	107.91	11.30	11.30	1.00	3.21		3.21	16.35	2.51	50.000	50.500	2	48.700	1.300	1	9.9	5.788	1000		Govindavadi Big	Putheri tank
10				Putheri tank	Non Sys	12° 56' 35.84"	79° 41' 31.36"	63.175	14.48	14.48	1.00	4.04	0.93	4.97	20.49	2.33	85.000	85.300	3	82.500	2.500	2	25.1	6.82	1150		Uveri Tank	Parandur
11		Kanchipuram	Walajabad	Parandur Big tank	System	12° 56' 21.27"	79° 43' 55.70"		81.22	121.84	1.50	26.29	14.10	40.39	80.37	1.84	79.090	79.630	6	74.060	5.030	2	127	83.34	1901	1200	Kambakkal & Veliyur Big	Cooum Tank
12				Parandur Andan thangal	System	12° 56' 13.85"	79° 44' 46.91"	301.44	11.30	11.30	1.00	0.10		0.10	1.60	0.39	83.110	83.340	1	80.510	2.600	1	11	2.006	430	200	Kammbakkal	Parandur Alwar thangal
13				Parandur Alwar thangal	System	12° 56' 1.38"	79° 44' 30.18"		15.19	22.78	1.50	0.34		0.34	3.61	0.49	84.940	85.090	1	82.070	2.870	1	30	2.882	630	450	Parandur Andan thangal	Cooum Tank
14				Parandur Chitheri	System	12° 56' 21.32"	79° 43' 55.70"		4.24	4.24	1.00	0.41	0.60	1.01	6.49	1.42	69.120	69.720	1	67.120	2.000	1	19	14.6	870	1100	Parandur Big Tank	Cooum Tank
15				Parandur Buderi	System	12° 55' 32.69"	79° 43' 51.14"	31.865	5.30	5.30	1.00	0.51		0.51	4.77	1.55	84.940	85.240	2	81.640	3.300	1	18	4.891	1230	300	Kambakkal	Parandur Big tank
16				Parandur Kattupattur tank	System	12° 55' 58.39"	79° 42' 51.50"	57.915	10.59	10.59	1.00	0.85		0.85	6.71	1.09	85.120	85.430	2	81.670	3.450	1	25	7.136	1610	950	Kambakkal	Parandur Big tank
17				Parandur Nagapattu Karanthangal	System	12° 56' 30.28"	79° 45' 43.39"	77.57	13.07	13.07	1.00	2.41		2.41	13.49	1.55	69.120	69.720	3	66.220	2.900	1	18	13.83	1670	1050	Kambakkal	Cooum Tank
18				Pondavakkam tank	Non Sys	12° 57' 17.70"	79° 43' 2.04"	116.4	6.36	6.36	1.00	1.80		1.80	11.10	1.84	81.400	81.800	2	78.150	3.250	1	20	8.367	1270		Kottavakkam tank	Valathur tank
19				Kottavakkam tank	Non Sys	12° 56' 32.40"	79° 43' 9.21"	153.6	24.72	24.72	1.00	2.65		2.65	14.38	2.93	59.630	60.130	3	56.580	3.050	1	18	14.82	2850	4000	Govindavadi Big tank	Valathur tank
20				Pullalure Peria eri	Non Sys	12° 57' 16.49"	79° 41' 40.20"	66.1	12.36	12.36	1.00	2.41	0.28	2.69	13.89	2.64	100.000	100.600	2	96.700	3.300	1	20	15.37	1650	3100	Govindavadi Big tank	Pullalure Iyyan eri
21				Pullalure Iyyan eri	Non Sys	12° 57' 31.72"	79° 42' 29.55"	209.62	5.30	5.30	1.00	2.38	0.23	2.61	13.68	2.98	93.610	94.310	2	90.400	3.210	1	15.3	14.82	1416	1200	Pullalure Peria eri	Valathur tank
22				Pallampakkam tank	Non Sys	12° 57' 36.71"	79° 43' 48.46"	47.35	13.42	13.42	1.00	1.10		1.10	7.98	1.45	75.000	75.450	2	72.310	2.690	1	16.7	8.336	1640	2200	Free Catchment	Valathur tank
23				Valathur tank	Non Sys	12° 57' 45.62"	79° 44' 42.76"	394.775	64.63	64.63	1.00	3.34	6.19	9.53	28.82	3.08	77.570	78.020	4	74.070	3.500	1	80	39.94	3540	1500	Kottavakkam tank	Cooum Tank
24		Sriperumbudur	Sriperumbudur	Edayarpakkam tank	Non Sys	12° 58' 55.24"	79° 46' 54.32"	149.75	24.37	60.92	2.50	4.30		4.30	19.88	15.02	35.360	35.890	6	32.200	3.160	1	19.82	44.54	990			Cooum Tank
25				Kottur tank	Non Sys	12° 59' 43.93"	79° 47' 48.45"	71.21	5.65	11.30	2.00	1.90		1.90	11.50	15.85	35.020	35.470	3	32.600	2.420	1	20	9.984	2216			Cooum Tank
26				Ekanapuram kali eri	System	12° 57' 2.68"	79° 46' 31.42"	69.02	2.12	5.30	2.50	1.01		1.01	7.53	4.66	38.785	39.090	3	35.680	3.105	1	9	9.17	2430	200	Kambakkal	Ekanapuram kadaperi
27				Ekanapuram kadaperi	System	12° 56' 51.60"	79° 45' 57.63"	98.52	17.30	43.26	2.50	1.47		1.47	9.69	13.34	69.890	70.200	3	67.590	2.300	1	36	10.28	860		Ekanapuram kali eri	Cooum Tank
28				Ekanapuram vayaleri	Non Sys	12° 57' 43.88"	79° 46' 5.62"	61.39	4.59	11.48	2.50	0.65		0.65	5.59	4.82	37.180	37.490	3	35.720	1.460	1	61	11.12	1200			Akkamapuram tank
29				Mahadevimangalam tank	System	12° 58' 0.46"	79° 47' 46.95"		13.07	32.67	2.50	1.92		1.92	11.57	15.64	68.360	68.750	4	66.280	2.080	1	23	12.02	2073		Kambakkal	Mahadevimangalam thang
30				Mahadevimangalam thangal	System	12° 57' 58.96"	79° 47' 17.90"	111.28	1.06	2.65	2.50	0.21		0.21	2.61	2.20	67.260	67.570	1	66.050	1.210	1	7	2.63	720	700	Mahadevimangalam tank	
31				Kannanthangal thangal	System	12° 58' 7.65"	79° 48' 45.52"	23.87	0.35	1.06	3.00	0.28		0.28	3.23	5.23	71.630	71.930	1	70.040	1.590	1	12	3.261	300	500	Kambakkal	Kannanthangal Large tank
32				Kannanthangal Large tank	System	12° 58' 11.28"	79° 49' 9.89"	90.65	8.12	20.31	2.50	2.82		2.82	15.00	6.58	73.150	73.610	3	70.650	2.500	1	14.3	20.53	1400	400	Kannanthangal thangal	Gunagarambakkam tank
33				Gunagarambakkam tank	System	12° 58' 32.38"	79° 48' 43.96"	79.72	6.36	15.89	2.50	1.01	1.71	2.72	12.49	4.40	66.750	67.050	3	64.040	2.710	1	22.5	12.74	1190	1200	Kannanthangal Large tank	Cooum Tank
34				Ettikuttimedu tank	System	12° 58' 40.61"	79° 49' 8.36"	31.57	3.18	7.95	2.50	0.32	0.12	0.44	3.96	3.24	67.000	67.300	2	65.220	1.780	1	15.9	4.32	1180		Kambakkal	Gunagarambakkam tank
35				Akkamapuram tank	Non Sys	12° 58' 2.73"	79° 46' 6.58"	101.41	10.95	27.37	2.50	0.70	0.80	1.50	8.53	8.47	37.185	37.470	3	35.990	1.195	1	16	10.02	1311		Ekanapuram vayaleri	Cooum Tank

36			Kadambathur	Kannur tank	Non Sys	12^0 58' 33.79"	79^0 50' 37.60"	64.10	3.18	4.77	1.50	2.82		2.82	14.99	1.84	21.340	21.950	3	18.140	3.200	2	19.35	15.24	1128	2050		Elambakkam tank*
37				Elambakkam tank	Non Sys	12^0 58' 42.11"	79^0 49' 36.99"	128.80	13.77	27.55	2.00	1.76	6.11	7.87	24.78	0.47	15.240	15.850	4	11.730	3.510	2	36.25	28.56	1793	1250	Kannur tank & Pudupattu	Cooum Tank
38				Pudupattu Anumandhai eri	Non Sys	12^0 58' 13.26"	79^0 49' 28.69"		12.01	30.02	2.50	0.56		0.56	5.07	6.66	70.790	71.220	2	68.400	2.390	1	11	5.129	850	500		Pudupattu Kommanthanga
39				Pudupattu Kommanthangal	System	12^0 58' 13.26"	79^0 49' 28.69"		1.41	3.53	2.50	0.28		0.28	3.19	1.48	71.540	71.840	3	69.450	2.090	1	12	3.261	720	2100	Kambakkal	Pudupattu krishnanthanga
40				Pudupattu krishnanthangal	System	12^0 58' 19.36"	79^0 50' 2.90"	92.23	1.06	2.65	2.50	0.19		0.19	2.46	1.11	70.100	70.400	2	69.120	0.980	1	10	2.717	480	600	Pudupattu Kommanthangal	Elambakkam tank*
41				Cooum tank	Non Sys	13^0 0' 33.74"	79^0 49' 4.80"	929.58	183.28	274.93	1.50	49.47	64.49	113.96	154.29	3.37	63.250	63.780	12	58.630	4.620	4	118	295.3	5280	5000	Elambakkm&Parandur maduv	Satharai tank
42				Satharai tank	Non Sys	13^0 2' 53.70"	79^0 51' 15.57"	71.42	40.61	101.53	2.50	4.30	8.36	12.66	34.78	1.27	30.790	31.390	5	28.220	2.570	1	50	38.43	3018	2500	Cooum tank	Cooum River
43				Adhigathur tank	Non Sys	13^0 5' 32.64"	79^0 53' 0.88"	100.36	42.02	63.04	1.50	2.98		2.98	15.55	1.14	15.240	16.030	5	12.980	2.260	1	44.7	51.9	1539	4500	Cooum River	Vengathur tank
44				Melnallathur tank	Non Sys	13^0 5' 38.48"	79^0 54' 10.57"	68.07	9.54	14.30	1.50	2.19		2.19	12.65	0.16	30.000	30.450	2	28.200	1.800	1	30	14.98	650	450		Vengathur tank
45				Kilnallathur tank	Non Sys	13^0 5' 32.39"	79^0 54' 46"	71.06	3.53	5.30	1.50	0.52	0.19	0.71	5.45	0.10	30.780	31.090	3	28.700	2.080	1	20	5.708	863			
46				Vengathur tank	Non Sys	13^0 6' 14.92"	79^0 59' 16.63"	89.47	16.60	24.90	1.50	4.00	8.95	12.95	35.12	1.27	45.720	46.180	5	42.120	3.600	1	75	38.69	2025	3100	Adhigathur tank	Aranvoil big tank
47				Aranvoil big tank	Non Sys	13^0 6' 9.40"	79^0 56' 30.95"	100.45	36.37	36.37	1.00	3.29		3.29	16.62	0.62	30.470	30.920	3	26.880	3.590	1	34.5	17.22	2206	1150	Vengathur tank	Cooum River
48				Kesavanallathur	Non Sys	13^0 7' 4.34"	79^0 55' 16.96"	109.72			1.50	0.85		0.85	3.13	0.25	52.730	53.040	3	50.760	1.970	1	11.22	3.202	1768	2000	Cooum River	VenmanamBudhur
49				Kadambathur	Non Sys	13^0 6' 14.92"	79^0 59' 16.63"	101.28	16.60	24.90	1.50	0.52		0.52	4.83	0.18	51.200	51.750	4	48.880	2.320	1	7.3	4.924	2652	1000	Cooum river	
50				Selai	Non Sys	13^0 5' 32.39"	79^0 54' 46.00"	139.61		5.30	1.50	1.17		1.17	8.31	0.22	46.860	47.400	5	44.850	2.010	1	13.4	8.793	2286	700		
51				Tholur	Non Sys	13^0 5' 38.48"	79^0 54' 10.57"	269.64	26.84	14.30	1.50	3.44		3.44	17.12	0.80	40.100	40.540	5	37.250	2.850	2 (L=1	36	17.38	2040	700	Putlur	Pakkam periya Eri
52				Thirurkuppam	Non Sys	13^0 5' 32.64"	79^0 53' 0.88"	170.02	59.78	63.04	1.50	5.93		5.93	24.66	0.55	30.500	30.950	3	27.920	2.580	1	45.72	22.82	2804		Cooum River	Pakkam periya Eri,
53				Putlur	Non Sys	13^0 2' 53.70"	79^0 51' 15.57"	102.43	12.36	101.53	1.50	3.79	0.00	3.79	18.27	0.52	43.960	44.420	3	41.930	2.490	1	39.40	20.33	1920	1500	Cooum river & Balanthangal.	Thaneerkulam tank
54				Thiruninravoor Tank	Non Sys	13^0 6' 42.74"	80^0 1' 5.98"	752.54	4.24	8.48	2.00	9.32	1.69	11.01	35.21	3.50	33.560	34.400	2	29.910	3.650	1	26.52	33.76	4816			
55				Thandurai Tank	Non Sys	13^0 6' 51.83"	80^0 3' 24.93"	101.59	0.42	0.84	2.00	2.54	0.83	3.37	15.57	16.85	27.120	27.530	2	25.760	1.360	1	27.44	11.91	900			
56				Vayalanallur Tank	Non Sys	13^0 6' 24.94"	80^0 4' 36.53"	82.79											1						900			
57				Banaveduthottam Hissathangal	Non Sys	13^0 4' 28.67"	80^0 5' 10.71"		0.50	1.00	2.00	6.68	2.02	8.70	29.49	18.49	23.100	23.480	3	21.040	2.060	2	68.6	26.57	1380			
58				Mangalam Tank	Non Sys	13^0 4' 49.98"	80^0 5' 17.70"	120.66													0.000							
59				Kannapalayam Thumal Tank	Non Sys	13^0 5' 3.32"	80^0 5' 27.63"		0.21	0.42	2.00	2.02		2.02	11.99	7.82	23.740	24.200	2	21.430	2.310	1	15.24	7.863	1320			
60				Melpakkam Tank	Non Sys	13^0 5' 24.54"	80^0 5' 47.44"	44.00	0.21	0.42	2.00	1.09		1.09	7.93	6.45	23.020	23.320	1	20.510	2.510	1	25.81	7.013	1845			

1.4 PARTICIPATORY IRRIGATION MANAGEMENT (PIM)

SALIENT FEATURES OF IMPLEMENTATION OF PIM IN COOUM SUB BASIN

The Cooum Sub Basin:

This is one of the five sub basins of the Chennai Basin. There are 80 tanks in the sub basin in which 60 tanks alone having irrigable ayacut. The PIM activities have been proposed in these 60 tanks only. In this sub basin, 80 tanks and two anicuts are under the control of PWD, WRO. Due to urbanization, the entire ayacut of 20 tanks in Thiruvallur Block, Poonamallee Block and Villivakkam Block are converted as residential area. Hence, the PIM activities in these tanks are not proposed.

Similarly, the PIM activities are not proposed in the anicuts as they are not having any independent ayacut.

Hence, 60 tanks are to be considered for PIM activities and the details are furnished in annexure.

These 60 tanks spread over 57 villages of Kanchipuram Taluk in Kanchipuram District, Arakkonam Taluk in Vellore District, Tiruvallore Taluk in Tiruvallore District. The total Cultivable Command Area under these 60 tanks works out to 6629.51ha.

Command Area:

Under system tanks	:	2446.93 ha.
Under Non-system tanks	:	4182.58 ha.
Total	:	6629.51 ha.

Assessment of Number of WUAs (Abstract):

Sl. No.	Particulars	No of WUAs	No of Tanks covered	No of Villages covered	Command Area covered
i)	Associations already formed under WRCP	14	32	18	3341.59 ha.
ii)	Associations proposed to be formed under IAMWARM project	19	28	39	3287.92 ha.
	TOTAL	**33**	**60**	**57**	**6629.51 ha.**

Assessment of Number of WUAs (District wise):

		No of WUAs			No of Tanks covered			No of Villages covered			Command Area covered		
		Vellore	Kanchipura	Thiruvallur	Vellore	Kanchipura	Thiruvallur	Vellore	Kanchipura	Thiruvallur	Vellore	Kanchipura	Thiruvallur
i)	Associations already formed under WRCP	1	12	1	1	28	3	1	16	1	121.68 ha.	3127.74 ha.	92.23 ha.
ii)	Associations proposed to be formed under IAMWARM project	-	6	13	-	6	22	-	6	33	-	555.80 ha.	2732.06 ha.
	TOTAL	1	18	14	1	34	13	1	22	34	121.68 ha.	3683.54 ha.	2824.29 ha.

An Account of "Awareness Creation" among the farming community: Activities undertaken and "Walkthrough Surveys" carried out:

There are 60 tanks having irrigable ayacut in this sub basin spread over 57 villages, as detailed in Annexure – III. All these villages were visited by the WRO officials and line department officials and awareness about the various activities, contemplated under IAMWARM project has been created.

Details of villages covered, walkthrough surveys conducted, farmers attended, and list of work suggested by the farmers, list of works analysed and finalised by WRO officials, are all furnished in the Annexure III , IV and V.

Schedule for completion of delineation and preparation of WUA documents comprising of

Form – I: Details to be notified by District Collectors (End of Dec ‘10).

Form – II: WUA Document to be notified by District Collectors (End of Jan ‘11).

Completion of preparatory works for the conduct of Elections for WUAs. (End of Mar ‘11).

Schedule for Conduct of Elections in the sub basin for forming Management Committees (End of Apr ’11).

Support Organisations (SOs):

- ≈ Initiating and completing the process of publishing EOI to hire Support Organisation at Sub basin level (End of Dec ’10).
- ≈ Short listing and providing Request for Proposals (RFPs) to all the short listed agencies and obtaining Technical and Cost Proposals (Middle of Jan ’11).
- ≈ Selection and deployment of Support Organisation to the sub basin (End of Mar ’11).

Appointment and role of Competent Authorities:

Section 26 of Tamil Nadu Farmer’s Management of Irrigation Systems (TNFMIS) Act provides for the appointment of “Competent Authorities” to assist the respective farmers’ organisations (WUA, Distributory Committee and Project Committee) in the implementation and execution of all decisions taken by such farmers’ organisation. Similarly, all farmers’ organisation shall extend such co-operation or assistance, as may be required by the Competent Authority, for carrying out all the tasks related to implementation of TNFMIS Act.

For the **WUA's formed under WRCP**, there are these competent authorities already functioning as listed below.

Sl. No.	Details of WUAs	Details of Competent Authorities (For WUAs already formed under WRCP I Project)
(Vellore District – Cooum Sub Basin)		
1.	VLR 104	Section Officer, Irrigation Section, Thakkolam., Asst. Exe. Engineer, Upper Palar Basin Sub Division, Ranipet.
(Kanchipuram District – Cooum Sub Basin)		
2	KPM 5 KPM 6 KPM 8 KPM 13 KPM 15 KPM 105 KPM 173 KPM 174	Junior Engineer, Irrigation Section, Kanchipuram. Asst. Exe. Engineer, Lower Palar Basin Sub Division, Kanchipuram.
3	KPM 16 KPM 23 KPM 195 KPM 196 TVL	Junior Engineer, Irrigation Section, Sriperumbudur. Asst. Exe. Engineer, Lower Palar Basin Sub Division, Kanchipuram.

It is proposed to form 19 WUAs under IAMWARM project to cover a Command area of 3287.92 ha.

Appointment of Competent authorities for the WUAs proposed to be **formed under IAMWARM project** is based on the "WRO Section Officerwise" distribution as indicated below:

Name of the WRO Sub Divisional Officers Working in Cooum Sub Basin:

1. Assistant Executive Engineer, Upper Palar Basin Sub Division, Ranipet.
2. Assistant Executive Engineer, Lower Palar Basin Sub Division, Kanchipuram.
3. Assistant Executive Engineer, Kosathalaiyar Basin Sub Division, Thiruvallur.
4. Assistant Executive Engineer, Kosathalaiyar Basin Sub Division, Chepauk.

List of Competent authorities:

Sl. No.	Details of WUAs	Details of Competent Authorities (For WUAs to be formed under TN IAMWARM Project)
(Kanchipuram District – Cooum Sub Basin)		
1	CVM 1 CVM 2 CVM 3 CVM 4	Junior Engineer, Irrigation Section, Kanchipuram. Asst. Exe. Engineer, Lower Palar Basin Sub Division, Kanchipuram.
2	CVM 5 CVM 6	Junior Engineer, Irrigation Section, Sriperumbudur. Asst. Exe. Engineer, Lower Palar Basin Sub Division, Kanchipuram.
(Thiruvallur District – Cooum Sub Basin)		
3	CVM 7 CVM 8 CVM 9 CVM 10 CVM 11 CVM 12 CVM 13 CVM 14	Assistant Engineer, Irrigation Section, Kadambathur. Asst. Exe. Engineer, Kosasthalaiyar Basin Sub Division, Thiruvallur.
4	CVM 15 CVM 16 CVM 17	Junior Engineer, Irrigation Section, Thiruvallur. Asst. Exe. Engineer, Kosasthalaiyar Basin Sub Division, Thiruvallur.
5	CVM 18 CVM 19	Junior Engineer, Irrigation Section, St. Thomas Mount. Asst. Exe. Engineer, Kosasthalaiyar Basin Sub Division, Chepauk.

Involvement of farmers in the preparation "Scheme Modernisation Plans".

Based on the outcome of the "Awareness Creation Programme" and Walkthrough survey carried out with the involvement of farmers, a list of tasks proposed to be taken up for "Modernisation" under IAMWARM project was discussed with 530 Nos. of farmers from 57 villages. The final list of the tasks was also prepared and exhibited in the Notice board of the Village Administrative Offices and Panchayat offices. These details were also discussed with the farmers and the tasks to be taken up under scheme modernisation finalised on 10.07.2010.

During the meeting, the farmers present were also informed that soon after finalisation of contract for carrying out “Modernisation of Irrigation Systems” a ‘Notice Board’ with the details about the nature if works, its cost, period of contract and Name of the contractor will all be fixed at the site of the work, as well as in the Panchayat Office of the villages concerned for information to the farmers. They have also been informed that they are free to supervise the work by the contractor and any lapse in the quality of work may be reported to the field officers of WRO, as well as the Executive Engineer of WRO, who has been designated as the Nodal Officer for the sub basin concerned.

The field officers of WRO are all aware of the problems in handing over the operation and maintenance responsibilities to the farmers concerned, if the task as desired by the farmers in the command area are not included in the modernisation of the system and also in case, some of the tasks already included and planned are not implemented due to some reasons or other.

The WRO officers were also informed that they are personally responsible for handing over the irrigation systems after completing the tasks related to modernisation of irrigation systems, under IAMWARM Project.

Current status of Recovery of water charges:

An enquiry conducted with the Village Administrative Officers (VAOs) of randomly selected villages (12 numbers out of 57 villages) located within the sub basin the normal water charges recovery as informed by the VAO, works out to 50-60% only, about the expected percentage of 80-90%.

With the proposal to form new WUAs under IAMWARM in Cooum sub basin the Managing Committee will be trained to take up the responsibility of improving the Water charges recovery percentage. These will be followed up, after completing the modernisation tasks and handing over of the O&M responsibilities to WUAs.

“Capacity Building” of the WUA farmers:

The “Support Organisation Group” will prepare “Training Modules” required for building the capacity of the WUA farmers, based on a “Training Needs” analysis. They will also organise various “Capacity building” programmes at suitable locations within the sub basin command area to benefit the farmers of the WUAs in the sub basin.

The “Support Organisation” will also arrange for organising the “Study Tours” both within and outside the state to enhance their knowledge and experiences which will help them to improve the crop productivity and thereby the farmer’s income.

The support organisation will also conduct necessary “awareness programme” and impart training to educate the farmers of the WUAs in all aspects of the TNFMIS Act, TNFMIS rules and Election Procedures for constituting the “Managing Committees” of the WUAs.

The “Competent Authorities” appointed for the sub basin will also be trained to effectively to interact with WUA farmers and maintain good report and relationship with the farming community in the sub basin.

Annexure IV

IAMWARM PROJECT W.R.O. - COOUM SUB BASIN

Details of "Awareness Creation Activities and Walk through surveys"

Sl. No.	Date of Visit	Name of Tank	Awareness Programme (No. of Farmers attended)	Walk through surveys (No. of farmers participated)	Remarks
1	10.07.10	Thirumalpur Tank	16	9	
2	06.07.10	Pudupakkam Peria eri	20	6	
3	06.07.10	Pudupakkam Chitheri			
4	06.07.10	Periakarumbur tank	31	14	
5	10.07.10	Govindavadi Big tank	10	6	
6	10.07.10	Govindavadi Chitheri			
7	06.07.10	Veliur Big tank	37	18	
8	06.07.10	Veliur Chitheri			
9	06.07.10	Uveri tank			
10	06.07.10	Putheri tank			
11	07.07.10	Parandur Big tank	29	17	
12	07.07.10	Parandur Andan thangal			
13	07.07.10	Parandur Alwar thangal			
14	07.07.10	Parandur Chitheri			
15	07.07.10	Parandur Buderi			
16	07.07.10	Parandur Kattupattur tank			
17	07.07.10	Parandur Nagapattu Karanthangal			
18	07.07.10	Pondavakkam tank	11	6	
19	07.07.10	Kottavakkam tank	15	8	
20	07.07.10	Valathur tank			

21	07.07.10	Pullalure Peria eri	15	9	
22	07.07.10	Pullalure Iyyan eri			
23	07.07.10	Pallampakkam tank			
24	07.07.10	Edayarpakkam tank	20	12	
25	07.07.10	Kottur tank			
26	08.07.10	Ekanapuram kali eri			
27	08.07.10	Ekanapuram kadaperi			
28	08.07.10	Ekanapuram vayaleri			
29	08.07.10	Mahadevimangalam tank	20	6	
30	08.07.10	Mahadevimangalamthangal			
31	08.07.10	Kannanthangal thangal	10	7	
32	08.07.10	Kannanthangal Large tank			
33	08.07.10	Gunagarambakkam tank			
34	08.07.10	Ettikuttimedu tank			
35	08.07.10	Akkamapuram tank	1	1	
36	16.07.10	Kannur tank	15	7	
37	16.07.10	Elambakkam tank	12	4	
38	16.07.10	Pudupattu Anumandhai eri	22	14	
39	16.07.10	Pudupattu Kommanthangal			
40	16.07.10	Pudupattu krishnanthangal			
41	16.07.10	Cooum tank	35	12	
42	07.07.10	Satharai tank	12	5	
43	07.07.10	Adhigathur tank	20	9	

44	07.07.10	Melnallathur tank	12	4	
45	07.07.10	Kilnallathur tank	9	4	
46	06.07.10	Vengathur tank	12	3	
47	06.07.10	Aranvoil big tank	11	2	
48	07.07.10	Kadambathur	26	8	
49	07.07.10	Kesavanallathur			
50	07.07.10	Selai	12	5	
51	06.07.10	Tholur	14	6	
52	06.07.10	Thirurkuppam	12	7	
53	09.07.10	Putlur	11	4	
54	08.07.10	Thiruninravoor Tank	23	11	
55	08.07.10	Thandurai Tank	7	2	
56	09.07.10	Vayalanallur Tank	9	3	
57	08.07.10	Banaveduthottam Hissathangal	14	6	
58	08.07.10	Mangammal Tank			
59	08.07.10	Kannapalayam Thumal Tank			
60	08.07.10	Melpakkam Tank	7	2	

IAMWARM PROJECT W.R.O. - COOUM SUB BASIN

Details of Modernisation works suggested by farmers and as finalised by Officials of WRD

Sl.No	Date of Visit	Name of Tank	Outcome of walk through survey and discussions with farmers	
			Works suggested by farmers	Works finalised by WRD officials
1	10.07.10	Thirumalpur Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
2	06.07.10	Pudupakkam Peria eri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

3	06.07.10	Pudupakkam Chitheri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
4	06.07.10	Periakarumbur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

5	10.07.10	Govindavadi Big tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
6	10.07.10	Govindavadi Chitheri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
7	06.07.10	Veliur Big tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

8	06.07.10	Veliur Chitheri	agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
9	06.07.10	Uveri tank		Already Rehabilitated Through NABARD. Foreshore Trench and Boundary Pillars Proposed
10	06.07.10	Putheri tank		Already Rehabilitated Through NABARD. Foreshore Trench and Boundary Pillars Proposed
11	07.07.10	Parandur Big tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

12	07.07.10	Parandur Andan thangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
13	07.07.10	Parandur Alwar thangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

14	07.07.10	Parandur Chitheri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
15	07.07.10	Parandur Buderi	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

16	07.07.10	Parandur Kattupattur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
17	07.07.10	Parandur Nagapattu Karanthangal		Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
18	07.07.10	Pondavakkam tank		Already Rehabilitated Through NABARD. Foreshore Trench and Boundary Pillars Proposed

19	07.07.10	Kottavakkam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
20	07.07.10	Pullalure Peria eri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

21	07.07.10	Pullalure Iyyan eri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
22	07.07.10	Pallampakkam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
23	07.07.10	Valathur tank		Already Rehabilitated Through NABARD. Foreshore Trench and Boundary Pillars Proposed
24	07.07.10	Edayarpakkam tank		Already Rehabilitated Through NABARD. Foreshore Trench and Boundary Pillars Proposed
25	07.07.10	Kottur tank		Already Rehabilitated Through NABARD. Foreshore Trench and Boundary Pillars Proposed

26	08.07.10	Ekanapuram kali eri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
27	08.07.10	Ekanapuram kali eri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

28	08.07.10	Ekanapuram vayaleri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
29	08.07.10	Mahadevimangalam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

30	08.07.10	Mahadevimangalamthangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
31	08.07.10	Kannanthangal thangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

32	08.07.10	Kannanthangal Large tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
33	08.07.10	Gunagarambakkam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

34	08.07.10	Ettikuttimedu tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
35	08.07.10	Akkamapuram tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

36	16.07.10	Kannur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
37	16.07.10	Elambakkam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

38	16.07.10	Pudupattu Anumandhai eri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
39	16.07.10	Pudupattu Kommanthangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

40	16.07.10	Pudupattu krishnanthangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
41	16.07.10	Cooum tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

42	07.07.10	Satharai tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
43	07.07.10	Adhigathur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

44	07.07.10	Melnallathur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
45	07.07.10	Kilnallathur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

46	06.07.10	Vengathur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
47	06.07.10	Aranvoil big tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

48	07.07.10	Kadambathur	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
49	07.07.10	Kesavanallathur	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

50	07.07.10	Selai	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
51	06.07.10	Tholur	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

52	06.07.10	Thirurkuppam	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
53	09.07.10	Putlur	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

54	08.07.10	Thiruninravoor Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
55	08.07.10	Thandurai Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

56	08.07.10	Sekkadu Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
57	08.07.10	Banaveduthottam Hissathangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

58	08.07.10	MangalamTank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.
59	08.07.10	Kannapalayam Thumal Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

60	08.07.10	Melpakkam Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be lined, Social bore wells are to be erected, All modern agricultural machineries and equipments are to be provided, Ground water recharge ponds (agricultural ponds) are to be provided and Veterinary hospitals are to be provided.	Instead of complete desilting, strengthening the tank bund to the standards is alone proposed. Lining of Field Channels upto a length of 30m is proposed. Except the above all the works suggested by farmers are included and finalised.

Annexure VI

STATEMENT WITH DETAILS OF DATE OF WALK THROUGH SURVEY, LOCATION, FARMERS REQUEST, TECHNICAL SOLUTION, PROPOSED IN THE PLAN

Sl. No.	Walk Through Survey		Farmers request	Technical Solution	Proposals in Plan
	Date	Location			
1	10.07.10	Thirumalpur Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
				Agri. Engg: 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Nil	**Fisheries:** Nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.
2	06.07.10	Pudupakkam Peria eri	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
3	06.07.11	Pudupakkam Chitheri		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
4	06.07.12	Periakarumbur tank		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Farm Pond	**Fisheries:** Farm Pond
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

5	10.07.10	Govindavadi Big tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
6	10.07.10	Govindavadi Chitheri		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Aqua culture in Irrigation Tanks.	**Fisheries:** Aqua culture in Irrigation Tanks.
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

7	06.07.10	Veliur Big tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks. For Uveri and Putheri Tanks the rehabilitation has been taken over by NABARD project. Hence, Foreshore trenches and Bo
8	06.07.10	Veliur Chitheri		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
9	06.07.10	Uveri tank		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
10	06.07.10	Putheri tank		**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Farm Pond and Aquaculture.	**Fisheries:** Farm Pond and Aquaculture.
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

11	07.07.10	Parandur Big tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
12	07.07.10	Parandur Andan thang		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
13	07.07.10	Parandur Alwar thanga		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
14	07.07.10	Parandur Chitheri		**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
15	07.07.10	Parandur Buderi		**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
16	07.07.10	Parandur Kattupattur tank		**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
17	07.07.10	Parandur Nagapattu Karanthangal		**Fisheries:** Farm Pond	**Fisheries:** Farm Pond
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

18	07.07.10	Pondavakkam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks. For Pondavakkam and Valathur Tanks the rehabilitation has been taken over by NABARD project. Hence, Foreshore trenches
19	07.07.10	Kottavakkam tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
20	07.07.10	Pullalure Peria eri		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
21	07.07.10	Pullalure Iyyan eri		**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
22	07.07.10	Pallampakkam tank		**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
23	07.07.10	Valathur tank		**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Farm Pond, Aqua Culture and Ornamental Fish Development.	**Fisheries:** Farm Pond, Aqua Culture and Ornamental Fish Development.
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

24	07.07.10	Edayarpakkam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks. For Edayarpakkam and Kottur Tanks the rehabilitation has been taken over by NABARD project. Hence, Foreshore trenches
25	07.07.10	Kottur tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
26	08.07.10	Ekanapuram kali eri		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
27	08.07.10	Ekanapuram kadaperi		**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
28	08.07.10	Ekanapuram vayaleri		**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
29	08.07.10	Mahadevimangalam tank		**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
30	08.07.10	Mahadevimangalamtha		**Fisheries:** Farm Ponds	**Fisheries:** Farm Ponds
31	08.07.10	Akkamapuram tank		**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

32	08.07.10	Kannanthangal thanga	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
33	08.07.10	Kannanthangal Large tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
34	08.07.10	Gunagarambakkam tank		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
35	08.07.10	Ettikuttimedu tank		**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Farm Pond	**Fisheries:** Farm Pond
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

36	16.07.10	Kannur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are to be provided.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
37	16.07.10	Pudupattu Anumandha		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
38	16.07.10	Pudupattu Kommantha		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
39	16.07.10	Pudupattu krishnantha		**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Nil	**Fisheries:** Nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

40	16.07.10	Elambakkam tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
41	16.07.10	Cooum tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Aqua culture in Irrigation Tanks.	**Fisheries:** Aqua culture in Irrigation Tanks.
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

42	07.07.10	Satharai tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
43	07.07.10	Adhigathur tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Nil	**Fisheries:** Nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

44	07.07.10	Melnallathur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
45	07.07.10	Kilnallathur tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Nil	**Fisheries:** Nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

46	06.07.10	Vengathur tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
47	06.07.10	Aranvoil big tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Aqua culture in Irrigation Tanks.	**Fisheries:** Aqua culture in Irrigation Tanks.
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

48	07.07.10	Kesavanallathur Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
49	07.07.10	Kadambathur Tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
50	07.07.10	Selai Tank		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Nil	**Fisheries:** Nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

51	06.07.10	Tholur Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
52	06.07.10	Thirurkuppam Tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: nil	**Fisheries:** nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

53	09.07.10	Putlur Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
				Agri. Engg: 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
				TNAU: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Nil	**Fisheries:** Nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

54	08.07.10	Thiruninravoor Tank	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
55	08.07.10	Thandurai Tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
56	09.07.10	Vayalanallur Tank		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Horticulture: Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Farm Ponds	**Fisheries:** Farm Ponds
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

57	08.07.10	Banavedu Thottam Hissa Thangal	Scrub jungles are to be cleared, Tank to be desilted and bund to be strengthened, Damaged sluices and weirs are to be repaired / reconstructed, supply and surplus channels are to be desilted, shutters are to be provided for the inlets, Feild Channels are	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.	**WRO:** Strengthening of Bunds, Reconstruction of Sluices, Reconstruction of weirs, Desilting of Supply Channel, Demarcation for all tanks.
58	08.07.10	Mangalam Tank		**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o	**Agri. Engg:** 1.Providing required modern agricultural machineries and equipment for mechanised farming. 2.Provision of farm ponds with fish culture for income generation activities. 3. Awareness creation through training and exposure visit for adoption o
59	08.07.10	Kannapalayam Thama		**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**TNAU:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
60	08.07.10	Melpakkam Tank		**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.	**Horticulture:** Area expansion under horticultural crops such as Vegetables, Fruits and Flowers.
				Agri Mktg: Drying Yard, Information, Education, Communication and Capacity Building	**Agri Mktg:** Drying Yard, Information, Education, Communication and Capacity Building
				Agriculture: SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.	**Agriculture:** SRI in Paddy, Pulses after Rice in the residual moisture. Cultivation of Maize, Groundnut, Ragi during water scarce period.
				Fisheries: Nil	**Fisheries:** Nil
				AH: Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.	**AH:** Veterinary Dispensary, Animal insurance, grazing lands into fodder plots.

IAMWARM PROJECT W.R.O. - COOUM SUB BASIN

Assessment of Command Area and WUAs (already formed) Under the control of WRD of PWD in COOUM SUB BASIN

Sl. No.	Name of Tank	Command Area in ha	Location of Command Area			Coverage of command area under different projects (ha)		Status of Formation of WUAs in the Sub basin
			Village	Taluk	District	WRCP and Others	IAMWARM	Formed under WRCP
1	Thirumalpur Tank	121.68	Thirumalpur	Arakkonam	Vellore	121.68		VLR 104
2	Pudupakkam Peria eri	267.93	Pudupakkam	Kanchipuram	Kanchipuram	267.93		KPM 6
3	Pudupakkam Chitheri			Kanchipuram	Kanchipuram			
4	Periakarumbur tank	124.53	Periakarumbur	Kanchipuram	Kanchipuram	124.53		KPM 5
5	Govindavadi Big tank	312.63	Govindavadi	Kanchipuram	Kanchipuram	312.63		KPM 15
6	Govindavadi Chitheri	124.33		Kanchipuram	Kanchipuram	124.33		
7	Veliur Big tank	246.14	Veliur	Kanchipuram	Kanchipuram	246.14		KPM 8
8	Veliur Chitheri	91.82		Kanchipuram	Kanchipuram	91.82		
9	Parandur Big tank	301.44	Parandur	Kanchipuram	Kanchipuram	301.44		KPM 13
10	Parandur Andan thangal			Kanchipuram	Kanchipuram			
11	Parandur Alwar thangal			Kanchipuram	Kanchipuram			
12	Parandur Chitheri			Kanchipuram	Kanchipuram			
13	Parandur Buderi	31.87		Kanchipuram	Kanchipuram	31.87		
14	Parandur Kattupattur tank	57.92	Kattupattur	Kanchipuram	Kanchipuram	57.92		
15	Parandur Nagapattu Karanthangal	77.57	Nagapattu Karanthangal	Kanchipuram	Kanchipuram	77.57		
16	Kottavakkam tank	153.60	Kottavakkam	Kanchipuram	Kanchipuram	153.60		KPM 174
17	Pullalure Peria eri	66.10	Pullalure	Kanchipuram	Kanchipuram	66.10		KPM 173
18	Pullalure Iyyan eri	209.62		Kanchipuram	Kanchipuram	209.62		
19	Valathur tank	394.78	Valathur	Kanchipuram	Kanchipuram	394.78		KPM 105

20	Ekanapuram kali eri	69.02	Ekanapuram	Sriperumbudur	Kanchipuram	69.02		KPM 16
21	Ekanapuram kadaperi	98.52		Sriperumbudur	Kanchipuram	98.52		
22	Ekanapuram vayaleri	61.39		Sriperumbudur	Kanchipuram	61.39		KPM 195
23	Mahadevimangalam tank	111.28	Mahadevimangalam	Sriperumbudur	Kanchipuram	111.28		KPM 16
24	Mahadevimangalamthangal			Sriperumbudur	Kanchipuram			
25	Kannanthangal thangal	23.87	Kannanthangal	Sriperumbudur	Kanchipuram	23.87		KPM 23
26	Kannanthangal Large tank	90.65		Sriperumbudur	Kanchipuram	90.65		
27	Gunagarambakkam tank	79.72	Gunagarambakkam	Sriperumbudur	Kanchipuram	79.72		
28	Ettikuttimedu tank	31.57	Ettikuttimedu	Sriperumbudur	Kanchipuram	31.57		
29	Akkamapuram tank	101.41	Akkamapuram	Sriperumbudur	Kanchipuram	101.41		KPM 196
30	Pudupattu Anumandhai eri	92.23	Pudupattu	Thiruvallur	Thiruvallur	92.23		TLR
31	Pudupattu Kommanthangal			Thiruvallur	Thiruvallur			
32	Pudupattu krishnanthangal			Thiruvallur	Thiruvallur			
	TOTAL	**3341.59**				**3341.59**		

IAMWARM PROJECT W.R.O. - COOUM SUB BASIN

Assessment of Command Area and WUAs (to be formed) Under the control of WRD of PWD in COOUM SUB BASIN

Sl. No.	Name of Tank	Command Area in ha	Location of Command Area			Coverage of command area under different projects (ha)		Status of Formation of WUAs in the Sub basin
			Village	Taluk	District	WRCP and Others	IAMWARM	To be formed under IAMWARM
1	Uveri tank	107.91	Uveri	Kanchipuram	Kanchipuram		107.91	WUA to be formed (CVM 1)
2	Putheri tank	63.18	Putheri	Kanchipuram	Kanchipuram		63.18	WUA to be formed (CVM 2)
3	Pondavakkam tank	116.40	Pondavakkam	Kanchipuram	Kanchipuram		116.40	WUA to be formed (CVM 3)
4	Pallampakkam tank*	47.35	Pallampakkam	Kanchipuram	Kanchipuram		47.35	WUA to be formed (CVM 4)
5	Edayarpakkam tank	149.75	Edayarpakkam	Sriperumbudur	Kanchipuram		149.75	WUA to be formed (CVM 5)
6	Kottur tank	71.21	Kottur	Sriperumbudur	Kanchipuram		71.21	WUA to be formed (CVM 6)
7	Kannur tank*	64.10	Kannur	Thiruvallur	Thiruvallur		64.10	WUA to be formed (CVM 7)
8	Elambakkam tank*	128.80	Elambakkam	Thiruvallur	Thiruvallur		128.80	WUA to be formed (CVM 8)
9	Cooum tank	929.58	Cooum	Thiruvallur	Thiruvallur		929.58	WUA to be formed (CVM 9)
10	Satharai tank	71.42	Satharai	Thiruvallur	Thiruvallur		71.42	WUA to be formed (CVM 10)
11	Adhigathur tank	100.36	Adhigathur	Thiruvallur	Thiruvallur		100.36	WUA to be formed (CVM 11)
12	Melnallathur tank	14.97	Melnallathur	Thiruvallur	Thiruvallur		14.97	WUA to be formed (CVM 12)
13	Kilnallathur tank	71.06	Kilnallathur	Thiruvallur	Thiruvallur		71.06	
14	Vengathur tank	89.47	Vengathur	Thiruvallur	Thiruvallur		89.47	WUA to be formed (CVM 13)
15	Aranvoil big tank	100.45	Aranvoil	Thiruvallur	Thiruvallur		100.45	WUA to be formed (CVM 14)

16	Kesavanallathur Tank	100.30	Kesavanallathur	Poonamallee	Thiruvallur		100.30	WUA to be formed (CVM 15)
17	Kadambathur Tank	101.28	Kadambathur	Poonamallee	Thiruvallur		101.28	
18	Selai Tank	25.58	Selai	Poonamallee	Thiruvallur		25.58	
19	Tholur Tank	251.75	Tholur	Poonamallee	Thiruvallur		251.75	WUA to be formed (CVM 16)
20	Thirurkuppam Tank	38.10	Thirurkuppam	Poonamallee	Thiruvallur		38.10	WUA to be formed (CVM 17)
21	Putlur Tank	24.79	Putlur	Poonamallee	Thiruvallur		24.79	
22	Thiruninravoor Tank	442.26	Thiruninravoor	Poonamallee	Thiruvallur		442.26	WUA to be formed (CVM 18)
23	Thandurai Tank	30.14	Thandurai	Poonamallee	Thiruvallur		30.14	
24	Vayalanallur Tank	21.17	Vayalanallur	Poonamallee	Thiruvallur		21.17	WUA to be formed (CVM 19)
25	Banavedu Thottam Hissa Thangal	111.54	Kannapalayam	Poonamallee	Thiruvallur		111.54	
26	Mangammal Thangal		Kannapalayam	Poonamallee	Thiruvallur			
27	Kannapalayam Thamal Eri		Kannapalayam	Poonamallee	Thiruvallur			
28	Melpakkam Tank	15.00	Melpakkam Tank	Poonamallee	Thiruvallur		15.00	
	TOTAL	**3287.92**					**3287.92**	

ABSTRACT - WUA DETAILS		
1	Command Area already covered under WRCP and other Projects	3341.59 ha.
2	Command Area Proposed to be covered under IAMWARM Project	3287.92 ha.
3	Urbanised Area	3308.03 ha.
4	Total Command Area controlled by WRD of PWD in the Sub basin	9937.54 ha.
5	Total Nos. of WUAs already formed under WRCP	14
6	Total Nos. of WUAs to be formed under IAMWARM	19
7	Total Nos. of WUAs that will cover the entire Sub basin	33

Annexure VII a

IAMWARM PROJECT W.R.O. - COOUM SUB BASIN

Water Users Association Details - Already Formed

Sl. No.	WUA No.	Name of Tank and Village	Name of WUA	Registered Ayacut in Ha
1	VLR 104	Thirumalpur Tank	Thirumalpur Tank Water Users Association	121.68
2	KPM 6	Pudupakkam Peria eri	Pudupakkam Peria eri & Chitheri Water Users Association	267.93
		Pudupakkam Chitheri		
3	KPM 5	Periakarumbur tank	Periakarumbur tank and Chembarambakkam tank Water Users Association	124.525
4	KPM 15	Govindavadi Big tank	Govindavadi Big tank and Chitheri Water Users Association	312.625
		Govindavadi Chitheri		124.33
5	KPM 8	Veliur Big tank	Veliur Big tank and Chitheri Water Users Association	246.135
		Veliur Chitheri		91.82
6	KPM 13	Parandur Big tank	Parandur Big tank, Buderi, Kattupattur tank & Nagappattu Karanthangal Water Users Association	301.44
		Parandur Andan thangal		
		Parandur Alwar thangal		
		Parandur Chitheri		
		Parandur Buderi		31.865
		Parandur Kattupattur tank		57.915
		Parandur Nagapattu Karanthangal		77.57
7	KPM 174	Kottavakkam tank	Kottavakkam tank Water Users Association	153.6
8	KPM 173	Pullalure Peria eri	Pullalure Peria eri and Iyyan eri Water Users Association	66.1
		Pullalure Iyyan eri		209.62
9	KPM 105	Valathur tank	Valathur tank Water Users Association	394.775
10	KPM 16	Ekanapuram kali eri	EkanapuramKali eri, kadaperi, Mahadevimangalam tank and Mahadevimangalam thangal Water Users Association	69.02
		Ekanapuram kadaperi		98.52
		Mahadevimangalam tank		111.28
		Mahadevimangalamthangal		
11	KPM 195	Ekanapuram vayaleri	Ekanapuram Vayaleri Water Users Association	61.39
12	KPM 23	Kannanthangal thangal	Kannanthangal Large tank, Kannanthangal Thangal Gunagarambakkam tank and Ettikuttimedu tank Water Users Association	23.87
		Kannanthangal Large tank		90.65
		Gunagarambakkam tank		79.72
		Ettikuttimedu tank		31.57
13	KPM 196	Akkamapuram tank	Akkamapuram tank Water Users Association	101.41
14	TLR	Pudupattu Anumandhai eri	Pudupattu Anumandhai eri , Kommanthangal, Krishnanthangal Water Users Association	92.23
		Pudupattu Kommanthangal		
		Pudupattu krishnanthangal		

Annexure VII b

IAMWARM PROJECT W.R.O. - COOUM SUB BASIN

Water Users Association Details - To be Formed

Sl. No.	WUA No.	Name of Tank and Village	Name of WUA	Registered Ayacut in Ha
1	CVM 1	Uveri tank	Uveri tank Water Users Association	107.91
2	CVM 2	Putheri tank	Putheri tank Water Users Association	63.175
3	CVM 3	Pondavakkam tank	Pondavakkam tank Water Users Association	116.4
4	CVM 4	Pallampakkam tank	Pallampakkam tank Water Users Association	47.35
5	CVM 5	Edayarpakkam tank	Edayarpakkam tank Water Users Association	149.75
6	CVM 6	Kottur tank	Kottur tank Water Users Association	71.21
7	CVM 7	Kannur tank	Kannur tank Water Users Association	64.10
8	CVM 8	Elambakkam tank	Elambakkam tank Water Users Association	128.80
9	CVM 9	Cooum tank	Cooum tank Water Users Association	929.58
10	CVM 10	Satharai tank	Satharai tank Water Users Association	71.42
11	CVM 11	Adhigathur tank	Adhigathur tank Water Users Association	100.36
12	CVM 12	Melnallathur tank	Melnallathur tank and Kilnallathur tank Water Users Association	86.03
		Kilnallathur tank		
13	CVM 13	Vengathur tank	Vengathur tank Water Users Association	89.47
14	CVM 14	Aranvoil big tank	Aranvoil big tank Water Users Association	100.45
15	CVM 15	Kesavanallathur Tank	Kesavanallathur Tank, Kadambathur Tank and Selai Tank Water Users Association	227.16
		Kadambathur Tank		
		Selai Tank		
16	CVM 16	Tholur Tank	Tholur Tank Water Users Association	251.75
17	CVM 17	Thirurkuppam Tank	Thirurkuppam Tank Water Users Association	
		Putlur Tank	Putlur Tank Water Users Association	62.89
18	CVM 18	Thiruninravoor Tank	Water Users Association	472.40
		Thandurai Tank		
19	CVM 19	Vayalanallur Tank	Vayalanallur Tank, Banavedu Thottam Hissa Thangal Tank, Mangalam Tank, Kannapalayam Thamal Eri, and Melpakkam Tank Water Users Association	147.71
		Banavedu Thottam Hissa Thangal		
		Mangalam Tank		
		Kannapalayam Thamal Eri		
		Melpakkam Tank		

1.5 IRRIGATION INFRASTRUCTURE

Name of Sub Basin: Cooum

1.5 IRRIGATION INFRASTRUCTURE

ABSTRACT ON THE DETAILS OF THE IRRIGATION INFRASTRUCTURES / WORKS TAKEN UP UNDER IAMWARM PROJECT

Sl. No.	Details	ANICUT			SYSTEM TANKS			NON SYSTEM TANKS			REMARKS
		Nos.	Supply Channel in km	Ayacut	Nos.	Supply Channel in km	Ayacut	Nos.	Supply Channel in km	Ayacut	
1	Available infrastructure in Sub basin	02	--	--	25	27.5	2354.71	55	38.40	7582.83	--
2	Infrastructure taken up under TN IAMWARM	--	--	--	25	27.5	2354.71	36	22.25	5177.02	--
3	Infrastructure excluded in IAMWARM projects since works carried out under various schemes from 2000	--	--	--	--	--	--	6	1.5	903.22	--
4	Infrastructures that does not require any Rehabilitation works	--	--	--	--	--	--	--	--	--	--
5	Works taken up in IAMWARM Project	Nil	Nil	Nil	25	27.5	2354.71	36	22.25	5177.02	
	a) Works taken up under WRCP/NABARD but also taken up in IAMWARM Project.				--	--	--	6*	--	903.22	*Boundary Pillars for demarcating the water body area alone have been incorporated in this estimate as they are not done in the previous schemes.
	b) Works proposed in IAMWARM Project alone.	Nil	Nil	Nil	25	27.5	2354.71	30	22.25	4273.80	

1. Certified that the panchayat union tanks are not considered in this project.

2. Certified that the tanks executed under various schemes (viz. WRCP I, NABARD, PART II schemes, etc.) since 2000 are not proposed in this project.

1. List of Anicuts with details of Village, Block, District, Direct Ayacut Area, Capacity:

Sl. No.	ANICUT	VILLAGE	BLOCK	TALUK	DISTRICT	DIRECT AYACUT AREA in ha	CAPACITY
1	Aranvoyal Anicut	Aranvoyal	Thiruvallur	Thiruvallur	Thiruvallur	--	--
2	Korattur Anicut	Korattur	Poonamallee	Poonamallee	Thiruvallur	--	--

1. List of Supply Channels with Details of Feeding Tanks:

Sl. No.	RESERVOIRS / ANICUTS / DIVIDING DAMS / BED DAMS / OFF-TAKES	SUPPLY CHANNEL		FEEDING TANKS		PRESENT STATUS	REMARKS
		LEFT	RIGHT	LEFT	RIGHT		
1	Aranvoiyal Anicut	2.5 km	3.0 km	Thirunindravur Tank	Gudapakkam Tank	This Anicut is fully dilapidated condition and at present it is not functioning.	Not proposed for rehabilitation.
2	Korattur Anicut	-	9.7 km	-	Sembarambakkam Tank	Feeds the ChembarambakkamTank of Adyar Sub Basin.	Not proposed for rehabilitation.

List of Tanks with details of Villages, Block, Taluk, District & Ayacut

Name of The Sub Basin : Cooum Sub Basin

No.	Name of Tank	Village	Block	Taluk	District	Reg. Ayacut	Remarks
	SYSTEM TANKS						
1	Thirumalpur Tank	Thirumalpur	Nemili	Arakkonam	Vellore	121.68	
	TOTAL	**1**				**121.68**	
2	Pudupakkam Peria eri	Pudupakkam	Walajabad	Kanchipuram	Kanchipuram	267.93	
3	Pudupakkam Chitheri	Pudupakkam	Walajabad	Kanchipuram	Kanchipuram		
4	Periakarumbur tank	Periakarumbur	Walajabad	Kanchipuram	Kanchipuram	124.53	
5	Govindavadi Big Tank	Govindavadi	Walajabad	Kanchipuram	Kanchipuram	312.63	
6	Govindavadi Chitheri	Govindavadi	Walajabad	Kanchipuram	Kanchipuram	124.33	
7	Veliyur Big Tank	Veliyur	Walajabad	Kanchipuram	Kanchipuram	246.14	
8	Veliur Chitheri	Veliyur	Walajabad	Kanchipuram	Kanchipuram	91.82	
9	Parandur Big tank	Parandur	Walajabad	Kanchipuram	Kanchipuram	301.44	
10	Parandur Andan Thangal	Parandur	Walajabad	Kanchipuram	Kanchipuram		
11	Parandur Alwar Thangal	Parandur	Walajabad	Kanchipuram	Kanchipuram		
12	Parandur Chitheri	Parandur	Walajabad	Kanchipuram	Kanchipuram		
13	Parandur Buderi	Parandur	Walajabad	Kanchipuram	Kanchipuram	31.87	
14	Parandur Kattupattur tank	Kattupattur	Walajabad	Kanchipuram	Kanchipuram	57.92	
15	Parandur Nagapattu Karanthan	Nagapattu	Walajabad	Kanchipuram	Kanchipuram	77.57	
	TOTAL	**14**				**1636.17**	

16	Ekanapuram kali eri	Ekanapuram	Sriperumbudur	Sriperumbudur	Kanchipuram	69.02	
17	Ekanapuram kadaperi	Ekanapuram	Sriperumbudur	Sriperumbudur	Kanchipuram	98.52	
18	Mahadevimangalam tank	Mahadevimangalam	Sriperumbudur	Sriperumbudur	Kanchipuram	111.28	
19	Mahadevimangalam thangal	Mahadevimangalam	Sriperumbudur	Sriperumbudur	Kanchipuram		
20	Kannanthangal thangal	Kannanthangal	Sriperumbudur	Sriperumbudur	Kanchipuram	23.87	
21	Kannanthangal Large Tank	Kannanthangal	Sriperumbudur	Sriperumbudur	Kanchipuram	90.65	
22	Gunagarambakkam Tank	Gunagarambakkam	Sriperumbudur	Sriperumbudur	Kanchipuram	79.72	
23	Ettikuttimedu Tank	Ettikuttimedu	Sriperumbudur	Sriperumbudur	Kanchipuram	31.57	
	TOTAL	**8**				**504.63**	
24	Pudupattu Kommanthangal	Pudupattu	Kadambathur	Thiruvallur	Thiruvallur	92.23	Joint Ayacut with Pudupattu Hanumanthai Eri
25	Pudupattu krishnanthangal	Pudupattu	Kadambathur	Thiruvallur	Thiruvallur		
	TOTAL	**2**				**92.23**	
	NON SYSTEM TANKS						
26	Uveri tank	Uveri	Walajabad	Kanchipuram	Kanchipuram	107.91	
27	Putheri tank	Putheri	Walajabad	Kanchipuram	Kanchipuram	63.18	
28	Pondavakkam tank	Pondavakkam	Walajabad	Kanchipuram	Kanchipuram	116.40	
29	Kottavakkam tank	Kottavakkam	Walajabad	Kanchipuram	Kanchipuram	153.60	
30	Pullalure Peria eri	Pullalure	Walajabad	Kanchipuram	Kanchipuram	66.10	
31	Pullalure Iyyan eri	Pullalure	Walajabad	Kanchipuram	Kanchipuram	209.62	
32	Pallampakkam tank	Pallampakkam	Walajabad	Kanchipuram	Kanchipuram	47.35	
33	Valathur tank	Valathur	Walajabad	Kanchipuram	Kanchipuram	394.78	
	TOTAL	**8**				**1158.93**	
34	Edayarpakkam tank	Edayarpakkam	Sriperumbudur	Sriperumbudur	Kanchipuram	149.75	
35	Kottur tank	Kottur	Sriperumbudur	Sriperumbudur	Kanchipuram	71.21	
36	Ekanapuram vayaleri	Ekanapuram	Sriperumbudur	Sriperumbudur	Kanchipuram	61.39	
37	Akkamapuram tank	Akkamapuram	Sriperumbudur	Sriperumbudur	Kanchipuram	101.41	
	TOTAL	**4**				**383.76**	

38	Kannur tank	Kannur	Kadambathur	Thiruvallur	Thiruvallur	64.1	
39	Elambakkam tank	Elambakkam	Kadambathur	Thiruvallur	Thiruvallur	128.80	
40	Pudupattu Hanumanthai Eri	Pudupattu	Kadambathur	Thiruvallur	Thiruvallur	92.23	Joint Ayacut with Pudupattu Kommanthangal & Krishnanthnagal
41	Cooum tank	Cooum	Kadambathur	Thiruvallur	Thiruvallur	929.58	
42	Satharai tank	Satharai	Kadambathur	Thiruvallur	Thiruvallur	71.42	
43	Adhigathur tank	Adhigathur	Kadambathur	Thiruvallur	Thiruvallur	100.36	
44	Melnallathur tank	Melnallathur	Kadambathur	Thiruvallur	Thiruvallur	68.07	
45	Kelnallathur tank	Kelnallathur	Kadambathur	Thiruvallur	Thiruvallur	71.06	
46	Vengathur tank	Vengathur	Kadambathur	Thiruvallur	Thiruvallur	89.47	
47	Aranvoyal Tank	Aranvoyal	Kadambathur	Thiruvallur	Thiruvallur	100.45	
48	Kesavanallathur Tank	Kesavanallathur	Kadambathur	Thiruvallur	Thiruvallur	109.72	
49	Kadambathur Tank	Kadambathur	Kadambathur	Thiruvallur	Thiruvallur	101.28	
	TOTAL	**12**				**1926.55**	
50	Selai Tank	Selai	Thiruvallur	Thiruvallur	Thiruvallur	139.61	
51	Tholur Tank	Tholur	Thiruvallur	Thiruvallur	Thiruvallur	269.64	
52	Thirurkuppam Tank	Thirurkuppam	Thiruvallur	Thiruvallur	Thiruvallur	170.02	
53	Putlur Tank	Putlur	Thiruvallur	Thiruvallur	Thiruvallur	102.43	
	TOTAL	**4**				**681.70**	
54	Thiruninravoor Tank	Thiruninravoor	Poonamallee	Poonamallee	Thiruvallur	752.54	
55	Thandurai Tank	Thandurai	Poonamallee	Poonamallee	Thiruvallur	101.59	
56	Vayalanallur Tank	Vayalanallur	Poonamallee	Poonamallee	Thiruvallur	82.79	
57	Banavedu Thottam Hissa Thangal	Kannapalayam	Poonamallee	Poonamallee	Thiruvallur		
58	Mangammal Thangal	Kannapalayam	Poonamallee	Poonamallee	Thiruvallur	120.66	
59	Kannapalayam Thamal Eri	Kannapalayam	Poonamallee	Poonamallee	Thiruvallur		
60	Melpakkam Tank	Melpakkam	Poonamallee	Poonamallee	Thiruvallur	44.00	
	TOTAL	**7**				**1101.58**	

List of Tanks Executed Under Various Schemes (viz NABARD, WRCP - I, etc.) Since 2000

No.	Name of Tank	Reg. Ayacut	Scheme in Which Executed	Amount in Lakhs	Details of Component Executed	Remarks
1	Uveri tank	107.91	NABARD		Bund, Sluice and Selective Lining	No Rehabilitation works would be done under TN IAMWARM Project. Only Boundary Pillars provision has been made.
2	Putheri tank	63.18	NABARD		Bund, Sluice and Selective Lining	
3	Pondavakkam tank	116.40	NABARD		Bund, Sluice and Selective Lining	
4	Valathur tank	394.78	WRCP - I		Bund, Sluice and Selective Lining	
5	Edayarpakkam tank	149.75	NABARD		Bund, Sluice and Selective Lining	
6	Kottur tank	71.21	NABARD		Bund, Sluice and Selective Lining	

1.6 REHABILITATION OF IRRIGATION INFRASTRUCTURE

1.6 Rehabilitation of Irrigation Infrastructure

1.6.1 Structural Status & Deficiencies in the System

The following are the present structural condition of the Cooum sub-basin system.

1. The Cooum Sub Basin consists of Irrigation tanks both system and non system.
2. The system tanks are being supplemented with water from Palar Basin from Palar Anicut through Govindavadi Channel.
3. This is an old system existing for more than 100 years as such requires rehabilitation.
4. Lack of adequate control of regulating structures in Sluices, Head Sluices, Surplus Escapes etc.,
5. The System and Non system tanks are to be rehabilitated.
6. There are 2 anicuts (Aranvoyal and Korattur) existing across Cooum River which are at present not having any irrigation command in the Cooum Sub Basin.

Salient Features of Proposals:

In order to improve the conveyance and Operational Efficiency in Irrigation, it is now proposed to improve and modernize the Irrigation Infrastructures in Cooum Sub basin.

1. Providing shutters to head sluices at the off-take point of the supply channels to avoid breaches during floods and for better water management.
2. De-silting and trimming the supply channels by earthwork excavation for better conveyance of water.
3. Providing bed bars in the supply channels at 200m intervals.
4. Repairing, Restoring the traditional water bodies (i.e. tanks)
    a. De-silting the supply channels to tank.
    b. Strengthening the bunds of the tanks for effectively storing the water.
    c. Repairs and Reconstruction of damaged weirs.
    d. Reconstruction of the damaged Sluices

e. Providing revetments at the sides of existing sluices and in vulnerable places of the tank bunds which are exposed to the direction of wind having curved alignment.

f. Providing S.G. Shutter / Plug arrangements to Sluices, Head sluices, Scour vents etc.,

g. Removing, Repairing and re fixing in position of the existing S.G. shuttering arrangements and providing locking arrangements etc.,

1.6.2 Expected Outcome

1. Increase in conveyance efficiency from 43% to 53%
2. The present Gap area of 974.01 ha and partially irrigated areas of 1801.95 ha is to be converted as a fully irrigated area. The permanent gap area of 3308.04 ha is left as it is since it consists of buildings, permanent structures, etc.
3. The following irrigation infrastructure development works are proposed in this sub basin.

Total no. of Tanks in the Sub Basin	-	80 tanks.
No. of Tanks taken up under TN IAMWARM	-	61 tanks.
No. of Tanks proposed for rehabilitation under TN IAMWARM	-	54 tanks
No. of Tanks already rehabilitated under NABARD and WRCP – I. (Only boundary pillars provisions have been proposed under TN IAMWARM	-	06 tanks
No. of Tanks left out (in Rural Area) as there is no ayacut. However, it is taken up to prevent encroachment.	-	01 tank.

Rehabilitation works for 60 tanks:

- De-silting of supply channel for 49.75 km
- Reconstruction of Sluices – 87 nos. out of 158 Nos.
- Reconstruction of Weir – 27 nos.
- Repairs to Weir – 3 nos.
- Standardisation of Tank Bunds – 100.15 km
- Demarcation of Boundaries for 61 tanks
- Providing Measuring Devices – 155 nos.
- Providing Screw Gearing Shutters
  (to the existing tank sluices and
  Head Sluices of Supply channel) – 74 nos.

Infrastructure Details Proposed in Tanks in Cooum Sub basin - Package Wise

Sl. No.	Package	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Supply Channel		Shutters		Irrigation Channel Lining		Measuring Device		Total Amount
			Qty	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Qty	Amount	Shutters	Amount	Length	Amount	Nos	Amount	
1	Package - 1	1460.13	169890	225.56	21	12	57.34	14	6	0	25.97	60500	17.85	10	1.58	630	18.41	21	2.27	348.98
2	Package - 2	1456.64	165600	215.15	27	14	80.10	11	0	1	7.86	52900	14.64	13	2.93	810	23.78	27	2.92	347.38
3	Package - 3	888.39	127540	170.99	25	14	61.53	11	3	0	16.26	5000	1.44	10	1.58	750	22.81	25	2.78	277.38
4	Package - 4	1094.27	122670	156.09	27	15	83.41	11	4	2	26.92	51100	19.61	11	1.74	1380	42.01	26	2.89	332.66
5	Package - 5	708.68	111070	147.03	22	10	53.41	6	4	0	39.28	55500	24.01	16	3.12	660	19.86	22	2.43	289.14
6	Package - 6	1101.58	140000	156.60	13	7	29.76	6	5	0	33.00	0	0.00	7	1.11	700	21.63	12	1.35	243.45
7	Package - 7	892.70	13470	197.81	23	15	68.02	7	5	0	20.20	5900	14.54	7	1.11	660	19.89	22	2.43	324.01
			850240	**1269.22**	**158**	**87**	**433.57**	**66**	**27**	**3**	**169.49**	**230900**	**92.09**	**74**	**13.16**	**5590**	**168.40**	**155**	**17.07**	**2162.99**

It is proposed to line 30m reach of the irrigation channel in immediate D/S of irrigation sluices from the cistern in all Packages except in Cooum Tank of Package 4 and Thirunindravur Tank of Package 6 in which the length of lining in irrigation channels

Infrastructure Details proposed in tanks in Cooum Sub basin - Package 1

Sl. No.	Name of Tank	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Supply channel		Shutters		Irrigation Channel		Measuring Device		Total Amount (in Rs. in Lakh)
			Qty.	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Qty.	Amount	Shutters	Amount	Length	Amount	Nos.	Amount	
	Package - 1																			
1	Thirumalpur Tank	121.68	11360	17.97	3	2	8.65	1	0	0	0	11000	3.46	1	0.16	90	2.65	3	0.33	33.21
2	Pudupakkam Peria eri	267.93	26300	34.70	1	1	8.03	1	1	0	4.56	4000	1.23	0	0.00	30	0.87	1	0.11	49.50
3	Pudupakkam Chitheri		18370	21.38	3	3	9.08	1	1	0	4.10	4000	1.23	0	0.00	90	2.62	3	0.32	38.72
4	Periakarumbur tank	124.53	17160	22.33	1	1	6.48	1	1	0	2.47	0	0.00	1	0.16	30	0.88	1	0.11	32.42
5	Govindavadi Big tank	312.63	28200	38.90	5	2	11.26	3	2	0	11.73	4000	1.26	3	0.47	150	4.39	5	0.54	68.54
6	Govindavadi Chitheri	124.33	26300	33.07	2	0	0.00	3	0	0	0.00	32500	9.25	2	0.32	60	1.77	2	0.22	44.62
7	Veliur Big tank	246.14	28100	35.09	3	2	8.42	1	0	0	0.00	5000	1.43	1	0.16	90	2.61	3	0.32	48.03
8	Veliur Chitheri	91.82	14100	19.89	3	1	5.44	1	1	0	3.11	0	0.00	2	0.32	90	2.63	3	0.32	31.71
9	Uveri tank	107.91	0	1.07	1	0	0.00	1	0	0	Tanks already rehabilitated under NABARD. Only Boundary Pillars have been proposed in these tanks.									1.07
10	Putheri tank	63.175	0	1.16	1	0	0.00	1	0	0										1.16
	Total		**169890**	**225.56**	**23**	**12**	**57.34**	**14**	**6**	**0**	**25.97**	**60500**	**17.85**	**10**	**1.58**	**630**	**18.41**	**21**	**2.27**	**348.98**

Infrastructure Details Proposed in tanks of Cooum Sub Basin - Package 2

Sl. No.	Name of Tank	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Supply Channel		Shutters		Irrigation Channel Lining		Measuring Device		Total Amount (in Rs. in Lakh)
			Qty	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Qty	Amount	Shutters	Amount	Length	Amount	Nos	Amount	
	PACKAGE 2																			
1	Parandur Big tank	301.44	22500	25.1134	6	2	10.75	2	0	1	7.86	5000	1.43	4	1.51	180	5.27	6	0.65	52.57
2	Parandur Andan thangal		4500	7.59964	1	1	4.70	1		0	0	0	0.00	0	0.00	30	0.88	1	0.11	13.28
3	Parandur Alwar thangal		6500	9.52869	1	1	5.44	1		0	0	0	0.00	0	0.00	30	0.88	1	0.11	15.95
4	Parandur Chitheri		8900	11.7015	1	1	4.12	1		0	0	4600	1.33	0	0.00	30	0.88	1	0.11	18.14
5	Parandur Buderi	31.865	12500	15.9053	1		0.00	1		0	0	0	0.00	1	0.16	30	0.88	1	0.11	17.05
6	Parandur Kattupattur tank	57.915	16500	18.8043	2		0.00	1		0	0	0	0.00	2	0.32	60	1.76	2	0.22	21.09
7	Parandur Nagapattu Karanthangal	77.57	16900	20.7046	3	3	16.80	1		0	0	4300	1.26			90	2.65	3	0.33	41.73
8	Pondavakkam tank	116.4		1.31815	Tank already rehabilitated under NABARD. Only Bounday Pillars have been proposed in this tank.															1.32
9	Kottavakkam tank	153.6	28600	34.1104		0	0		0	0	0	13000	3.12	3	0.47	90	2.62	3	0.32	40.65
10	Pullalure Peria eri	66.1	16600	22.3151	3	2	14.14	1		0	0	12500	3.60	1	0.16	90	2.65	3	0.33	43.20
11	Pullalure Iyyan eri	209.62	15600	20.4703	3	2	12.33	1		0	0	5000	1.43	1	0.16	90	2.66	3	0.33	37.38
12	Pallampakkam tank	47.35	16500	23.9155	2	2	11.82	1		0	0	8500	2.47	1	0.16	90	2.65	3	0.33	41.34
13	Valathur tank	394.775		3.6631	Tank already rehabilitated under WRCP - I. Only Bounday Pillars have been proposed in this tank.															3.66
	Sub Total	**1456.635**	**165600**	**215.15**	**23**	**14**	**80.10**	**11**	**0**	**1**	**7.86**	**52900**	**14.64**	**13**	**2.93**	**810**	**23.78**	**27**	**2.92**	**347.38**

Infrastructure details Proposed in tanks of Cooum Sub basin - Package 3

Sl. No.	Name of Tank	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Supply Channel		Shutters		Irrigation Channel Lining		Measuring Device		Total Amount (in Rs. inLakh)
			Qty.	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Qty.	Amount	Shutters	Amount	Length	Amount	Nos	Amount	
	Package 3																			
1	Edayarpakkam tank	149.75		1.10	Tanks Already rehabilitated under NABARD. Only Boundary Pillars have been proposed in these tanks.															1.10
2	Kottur tank	71.21		2.25																2.25
3	Ekanapuram kali eri	69.02	24370	32.88	3	2	12.93	1		0				1	0.16	90	2.72	3	0.33	49.02
4	Ekanapuram kadaperi	98.52	8670	14.23	3	1	4.76	1		0				2	0.32	90	2.73	3	0.33	22.37
5	Ekanapuram vayaleri	61.39	12070	16.47	3	1	3.54	1		0				2	0.32	90	2.72	3	0.33	23.38
6	Mahadevimangalam tank	111.28	20800	25.32	3	2	8.62	1		0				1	0.16	90	2.73	3	0.33	37.16
7	Mahadevimangalamthangal		7270	11.01	1	1	3.14	1		0					0.00	30	1.00	1	0.12	15.26
8	Kannanthangal thangal	23.87	3070	5.68	1	1	2.87	1		0					0.00	30	0.91	1	0.11	9.57
9	Kannanthangal Large tank	90.65	14070	17.27	3			1	1	0	6.21			2	0.32	90	2.70	3	0.33	26.83
10	Gunagarambakkam tank	79.72	11970	16.67	3	2	11.52	1	1	0	7.18	5000	1.44	1	0.16	90	2.73	3	0.33	40.03
11	Ettikuttimedu tank	31.57	11970	12.94	2	2	7.82	1	1	0	2.87				0.00	60	1.82	2	0.22	25.68
12	Akkamapuram tank	101.41	13280	15.16	3	2	6.34	2		0				1	0.16	90	2.74	3	0.33	24.73
	Sub Total	**888.39**	**127540**	**170.99**	**25**	**14**	**61.53**	**11**	**3**	**0**	**16.26**	**5000**	**1.44**	**10**	**1.58**	**750**	**22.81**	**25**	**2.78**	**277.38**

Infrastructure Details Proposed in tanks of Coum Sub basin - Package 4

Sl. No.	Name of Tank	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Supply Channel		Shutters		Irrigation Channel Lining		Measuring Device		Total Amount (in Rs. in Lakh)
			Qty	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Qty	Amount	Qty	Amount	Length	Amount	Nos	Amount	
	PACKAGE 4																			
1	Kannur tank	65.08	13000	15.82	3	1	7.03	1	1	0	2.34	8500	2.47	2	0.32	90	2.72	3	0.33	31.03
2	Elambakkam tank	108.15	18500	23.23	4	3	15.13	2	1	1	7.78	5500	3.02	1	0.16	120	3.63	4	0.44	53.40
3	Pudupattu Anumandhai eri	92.23	8670	13.61	2	1	6.28	2	1	0	6.00	500	0.00	1	0.16	60	1.83	2	0.22	28.10
4	Pudupattu Kommanthangal		7500	11.65	3	3	13.69	1	1	0	4.65	8600	2.50		0.00	90	2.73	3	0.33	35.55
5	Pudupattu krishnanthangal		5000	7.74	3	2	6.49	1		0	0.00	1000	0.32		0.00	60	1.82	2	0.22	16.59
6	Coum tank	828.81	70000	84.04	12	5	34.79	4	0	1	6.16	27000	11.29	7	1.11	960	29.27	12	1.34	168.00
	Sub Total	**1094.27**	**122670**	**156.09**	**27**	**15**	**83.41**	**11**	**4**	**2**	**26.92**	**51100**	**19.61**	**11**	**1.74**	**1380**	**42.01**	**26**	**2.89**	**332.66**

Infrastructure Details Proposed in Tanks of Cooum Sub Basin - Package 5

Sl. No.	Name of Tank	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Supply Channel		Shutters		Measuring Device		Irrigation Channel Lining		Total Amount (in Rs. in Lakh)
			Qty	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Qty	Amount	Nos.	Amount	Nos	Amount	Length	Amount	
	PACKAGE 5																			
1	Satharai tank	182.3	31000	44.03	5	3	17.89	1	1	0	9.22	16500	10.75	4	0.88	5	0.56	150	4.58	87.90
2	Adhigathur tank	87.07	16000	23.60	5	1	5.39	1	1	0	8.92	18500	5.35	6	1.29	5	0.55	150	4.50	49.60
3	Melnallathur tank	68.6	7000	10.66	2	1	3.78	1		0	0.00	2500	0.72	1	0.16	2	0.22	60	1.79	17.32
4	Kilnallathur tank	55.47	9000	12.33	3	2	8.15	1		0	0.00		0.00	1	0.16	3	0.33	90	2.69	23.67
5	Vengathur tank	212.13	20450	26.46	5	2	12.22	1	1	0	13.36	13000	5.15	3	0.47	5	0.55	150	4.52	62.73
6	Periakuppam tank	No Ayacut	4620	2.00	This tank is not proposed for rehabilitation. Only Boundary Pillars have been proposed.															2.00
7	Aranvoil big tank	103.11	23000	27.96	2	1	5.97	1	1	0	7.78	5000	2.05	1	0.16	2	0.22	60	1.78	45.92
	Sub Total	**708.68**	**111070**	**147.03**	**22**	**10**	**53.41**	**6**	**4**	**0**	**39.28**	**55500**	**24.01**	**16**	**3.12**	**22**	**2.43**	**660**	**19.86**	**289.14**

Infrastructure Details Proposed in Tanks of Cooum Sub Basin - Package 6

Sl. No.	Name of Tank	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Shutters		Measuring Device		Irrigation Channel Lining		Total Amount (in Rs. in Lakh)
			Qty	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Nos.	Amount	Nos	Amount	Length	Amount	
	PACKAGE 6																	
1	Thiruninravoor	752.54	63000	60.95	2	1	4.35	1	1	0	6.36	1	0.16	2	0.22	400	12.31	84.35
2	Thandurai Tank	101.59	9000	13.03	2	1	5.31	1	1	0	6.60	1	0.16	2	0.22	60	1.86	27.18
3	Vayalanallur	82.79	9000	12.86	2	1	3.79	1	1	0	4.82	1	0.16	2	0.23	60	1.87	23.73
4	Banavedu Thottam	120.66	14000	17.65	2	2	8.15	1	1	0	8.87	1	0.16	2	0.22	60	1.86	36.91
5, 6	Mangalam & Kannapalayam		26000	30.13	3	1	3.97	1		0	0.00	2	0.32	2	0.22	60	1.86	36.50
7	Melpakkam	44	19000	21.98	2	1	4.20	1	1	0	6.35	1	0.16	2	0.23	60	1.87	34.79
	Sub Total		**140000**	**156.60**	**13**	**7**	**29.76**	**6**	**5**	**0**	**33.00**	**7**	**1.11**	**12**	**1.35**	**700**	**21.63**	**243.45**

Infrastructure Details Proposed in tanks of Cooum Sub basin - Package 7

Sl. No.	Name of Tank	Reg. Ayacut (in Ha)	Tank bund		Sluices			Weirs				Supply Channel		Shutters		Measuring Device		Irrigation Channel Lining		Total Amount (in Rs. in Lakh)
			Length	Amount	Total	Recontn	Amount	Total	Recontn	Repair	Amount	Length	Amount	Nos.	Amount	Nos	Amount	Length	Amount	
	PACKAGE 7																			
1	Putlur tank	102.43	1920	29.93	3	2	8.29	1	0	0	0	1500	3.25	0	0	2	0.22	60	1.80	43.49
2	Thirurkuppam tank	170.02	2804	38.86	3	3	14.78	1	1	0	5.83	0	0.00			3	0.33	90	2.69	62.49
3	Thozhur tank	269.64	2040	31.11	5	3	12.00	2	2	0	7.14	700	1.88	2	0.32	5	0.56	150	4.55	57.55
4	Selai tank	139.61	2286	32.76	5	3	13.54	1	1	0	5.86	700	1.94	2	0.32	5	0.55	150	4.50	59.46
5	Kadambathur tank	101.28	2652	37.78	4	2	10.73	1	1	0	1.37	1000	2.66	2	0.32	4	0.44	120	3.63	56.93
6	Kesavanallathur tank	109.72	1768	27.39	3	2	8.68	1	0	0	0	2000	4.82	1	0.16	3	0.33	90	2.71	44.09
	Sub Total	**892.7**	**13470**	**197.81**	**23**	**15**	**68.02**	**7**	**5**	**0**	**20.20**	**5900**	**14.54**	**7**	**1.11**	**22**	**2.43**	**660**	**19.89**	**324.01**

COOUM SUB BASIN - PACKAGE ABSTRACT

Sl. No.	Package	Base Cost in Rs.Lakhs	Addl' 2.80% in Rs.Lakhs	Total in Rs.Lakhs
1	Package 1	348.98	9.77	358.75
2	Package 2	347.38	9.73	357.11
3	Package 3	277.38	7.77	285.14
4	Package 4	332.66	9.31	341.97
5	Package 5	289.14	8.10	297.24
6	Package 6	243.45	6.82	250.27
7	Package 7	324.01	9.07	333.08
8	Environmental Component	17.00	--	17.00
	Total	**2180.00**	**60.56**	**2240.56**

Cooum Sub Basin

A. WRO COST TABLE

Sl.No.	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m3)	978770	1269.22	
	SLUICE RECONSTRUCTION (in Nos.)	87	433.57	
	WEIR RECONSTRUCTION (in Nos.)	30	169.49	
	SUPPLY CHANNEL IMPROVEMENTS(in m3)	230900	92.09	
	PROVISION FOR FLOW MEASURING DEVICES	155	17.07	
	PROVISIONS - Shutters	74	13.16	
	FIELD CHANNEL LINING	5590	168.40	
	Sub total		**2163.00**	
	Provision for Labour Welfare @ 0.3% (Rs. 6.49Lakhs) Provision for Contingencies, Advertisement charges,Photographic Charges @ 2.50% (Rs.54.07 Lakhs)	2.80%	60.56	
2	**Non Tank Component**			
	NIL			
	Environmental Cell		17.00	
	Ground Water			
	TOTAL		**2240.56**	

Annexure - VIII

Statement showing the details of Free Board provided in Tanks

Sl. No.	Name of Tank	FTL in m	MWL in m	Existing TBL	Proposed TBL	Deep Sill	Height of Bund in m	Free Board	
								Existing	Proposed
1	Thirumalpur Tank	96.100	96.620	97.800	98.120	92.670	5.130	1.180	1.500
2	Pudupakkam Peria eri	97.140	97.600	98.660	99.100	92.640	6.020	1.060	1.500
3	Pudupakkam Chitheri	94.390	95.000	95.900	96.500	91.700	4.200	0.900	1.500
4	Periakarumbur tank	92.500	93.000	94.500	94.500	89.700	4.800	1.500	1.500
5	Govindavadi Big tank	90.370	90.750	91.790	92.250	86.550	5.240	1.040	1.500
6	Govindavadi Chitheri	84.320	84.950	85.850	86.450	81.620	4.230	0.900	1.500
7	Veliur Big tank	89.140	89.590	90.970	91.090	86.370	4.600	1.380	1.500
8	Veliur Chitheri	89.360	89.670	90.580	91.170	86.370	4.210	0.910	1.500
9	Uveri tank	50.000	50.500	51.750	52.000	48.700	3.050	1.250	1.500
10	Putheri tank	85.000	85.300	86.550	86.800	82.500	4.050	1.250	1.500

11	Parandur Big tank	79.090	79.630	81.400	81.400	74.060	7.340	1.770	1.770
12	Parandur Andan thangal	83.110	83.340	84.250	84.840	80.510	3.740	0.910	1.500
13	Parandur Alwar thangal	84.940	85.090	86.010	86.590	82.070	3.940	0.920	1.500
14	Parandur Chitheri	69.120	69.720	70.720	71.220	67.120	3.600	1.000	1.500
15	Parandur Buderi	84.940	85.240	86.160	86.740	81.640	4.520	0.920	1.500
16	Parandur Kattupattur tank	85.120	85.430	87.100	87.100	81.670	5.430	1.670	1.670
17	Parandur Nagapattu Karanthang	69.120	69.720	70.720	71.220	66.220	4.500	1.000	1.500
18	Pondavakkam tank	81.400	81.800	83.300	83.300	78.150	5.150	1.500	1.500
19	Kottavakkam tank	59.630	60.130	61.130	61.630	56.580	4.550	1.000	1.500
20	Pullalure Peria eri	100.000	100.600	101.600	102.100	96.700	4.900	1.000	1.500
21	Pullalure Iyyan eri	93.610	95.140	96.730	96.730	90.400	6.330	1.590	1.590
22	Pallampakkam tank*	75.000	75.450	76.650	76.950	72.310	4.340	1.200	1.500
23	Valathur tank	77.570	78.020	79.520	79.520	74.070	5.450	1.500	1.500

24	Edayarpakkam tank	35.360	35.890	37.390	37.390	32.200	5.190	1.500	1.500
25	Kottur tank	35.020	35.470	36.720	36.970	32.600	4.120	1.250	1.500
26	Ekanapuram kali eri	38.785	39.090	40.460	40.590	35.680	4.780	1.370	1.500
27	Ekanapuram kadaperi	69.890	70.200	71.100	71.700	67.590	3.510	0.900	1.500
28	Ekanapuram vayaleri	37.180	37.490	38.860	38.990	35.720	3.140	1.370	1.500
29	Mahadevimangalam tank	68.360	68.750	70.100	70.250	66.280	3.820	1.350	1.500
30	Mahadevimangalam thangal	67.260	67.570	68.480	68.820	66.050	2.430	0.910	1.250
31	Kannanthangal thangal	71.630	71.930	72.850	73.180	70.040	2.810	0.920	1.250
32	Kannanthangal Large tank	73.150	73.610	74.980	75.110	70.650	4.330	1.370	1.500
33	Gunagarambakkam tank	66.750	67.050	68.580	68.580	64.040	4.540	1.530	1.530
34	Ettikuttimedu tank	67.000	67.300	68.500	68.800	65.220	3.280	1.200	1.500
35	Akkamapuram tank	37.185	37.470	38.860	38.860	35.990	2.870	1.390	1.390

36	Kannur tank*	21.340	21.950	23.160	23.450	18.140	5.020	1.210	1.500
37	Elambakkam tank*	15.240	15.850	17.120	17.350	11.730	5.390	1.270	1.500
38	Pudupattu Anumandhai eri	70.790	71.220	72.600	72.720	68.400	4.200	1.380	1.500
39	Pudupattu Kommanthangal	71.540	71.840	72.750	73.340	69.450	3.300	0.910	1.500
40	Pudupattu krishnanthangal	70.100	70.400	71.300	71.650	69.120	2.180	0.900	1.250
41	Cooum tank	63.250	63.780	65.610	65.610	58.630	6.980	1.830	1.830
42	Satharai tank	30.790	31.390	32.210	32.890	28.220	3.990	0.820	1.500
43	Adhigathur tank	15.240	16.030	16.950	17.530	12.980	3.970	0.920	1.500
44	Melnallathur tank*	30.000	30.450	31.450	31.950	28.200	3.250	1.000	1.500
45	Kilnallathur tank	30.780	31.090	32.310	32.590	28.700	3.610	1.220	1.500
46	Vengathur tank	45.720	46.180	47.550	47.680	42.120	5.430	1.370	1.500
47	Aranvoil big tank	30.470	30.920	32.290	32.420	26.880	5.410	1.370	1.500
48	Kesavanallathur Tank	52.730	53.040	54.410	54.540	50.760	3.650	1.370	1.500
49	Kadambathur Tank	51.200	51.750	53.120	53.250	48.880	4.240	1.370	1.500

50	Selai Tank	46.860	47.400	48.160	48.900	44.850	3.310	0.760	1.500
51	Tholur Tank	40.100	40.540	41.920	42.040	37.250	4.670	1.380	1.500
52	Thirur Hissa Tank	30.500	30.950	32.330	32.450	27.920	4.410	1.380	1.500
53	Putlur Tank	43.960	44.420	45.330	45.920	41.930	3.400	0.910	1.500
54	Thiruninravoor Tank	33.560	34.400	35.770	35.900	29.910	5.860	1.370	1.500
55	Thandurai Tank	27.120	27.530	28.900	29.030	25.760	3.140	1.370	1.500
56	Vayalanallur Tank	94.390	95.000	95.910	96.500	91.700	4.210	0.910	1.500
57	Banaveduthottam Hissathangal	23.100	23.480	24.390	24.980	21.040	3.350	0.910	1.500
58	Mangammal Tank	23.100	23.480	24.390	24.980	21.040	3.350	0.910	1.500
59	Kannapalayam Thumal Tank	23.740	24.200	25.110	25.700	21.430	3.680	0.910	1.500
60	Melpakkam Tank	23.020	23.320	24.520	24.820	20.510	4.010	1.200	1.500

Cooum Sub Basin

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No.	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m^3)	510300	761.98	339940	507.24	850240	1269.22
2	SLUICE RECONSTRUCTION (in Nos.)	51.8	258.33	35.2	175.23	87	433.57
3	WEIR RECONSTRUCTION (in Nos.)	20	102.67	10	49.64	30	152.30
4	REPAIRS TO WEIR (IN Nos.)	2	14.02	1	3.17	3	17.19
4	SUPPLY CHANNEL IMPROVEMENTS (in m^3)	138600	55.30	92300	36.79	230900	92.09
5	PROVISION FOR FLOW MEASURING DEVICES	97	10.68	58	6.39	155	17.07
6	PROVISIONS - Shutters	47	8.34	27	4.82	74	13.16
7	FIELD CHANNEL LINING	3354	101.04	2236	67.36	5590	168.40
	Sub total		**1312.35**		**850.65**		**2162.99**
	LS PROVISIONS						
	Provision for Labour Welfare @ 0.3%		3.93		2.55		6.48
	Contingencies, advertisement charges, Photographic charges, etc. @ 2.50%		32.81		21.26		54.08
II	**Non Tank Component**						
	NIL						
	Environmental Cell						17.00
	Ground Water						
	TOTAL		**1349.10**		**874.46**		**2240.56**

PACKAGE No. 1

A. WRO COST TABLE

Sl.No.	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m3)	169890	225.56	
	SLUICE RECONSTRUCTION (in Nos.)	12	57.34	
	WEIR RECONSTRUCTION (in Nos.)	6	25.97	
	SUPPLY CHANNEL IMPROVEMENTS(in m3)	60500	17.85	
	PROVISION FOR FLOW MEASURING DEVICES	21	2.27	
	PROVISIONS - Shutters	10	1.58	
	FIELD CHANNEL LINING	630	18.41	
	Total		**348.98**	
	LS Provisions			
	Provision for Labour welfare @ 0.3% (Rs.1.05 Lakhs) Provision for contingencies,advertisement charges, photographic charges @ 2.5% (Rs.8.72 Lakhs)	2.80%	**9.77**	
2	**Non Tank Component**			
	NIL			
	TOTAL		**Nil**	
	Environmental Cell			
	Ground Water			
	TOTAL		**358.75**	

PACKAGE No. 1

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No.	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m)	101950	135.36	67940	90.20	169890	225.56
2	SLUICE RECONSTRUCTION (in Nos.)	7	33.45	5	23.89	12	57.34
3	WEIR RECONSTRUCTION (in Nos.)	4	17.31	2	8.66	6	25.97
4	SUPPLY CHANNEL IMPROVEMENTS	36300	10.71	24200	7.14	60500	17.85
5	PROVISION FOR FLOW MEASURING DEVICES	13	1.40	8	0.86	21	2.27
6	PROVISIONS - Shutters	6	0.95	4	0.63	10	1.58
7	FIELD CHANNEL LINING	378	11.05	252	7.37	630	18.41
	Sub total		**210.23**		**138.75**		**348.98**
	LS Provisions						
	Provision for Labour Welfare @ 0.3%		0.63		0.42		1.05
	Provision for Contingencies, advertisement Charges, photographic charges @ 2.5%		**5.26**		**3.47**		**8.72**
II	**Non Tank Component**						
	NIL						
	Sub total						
	Environmental Cell						
	Ground Water						
	TOTAL		**216.12**		**142.64**		**358.75**

PACKAGE No. 1					
C. Broad requirement of Construction Equipment					
Based on broad calculations, the equipment requirement is listed below.					
1	Hydraulic Excavator	6	Nos.	(2 of $\pm$ 0.3m^3 and 4 of $\pm$ 0.9m^3)	
2	Tippers/Lorries (8 - 10T)	24	Nos.	(for Earthwork and Material conveyance)	
3	Power Roller / Vibratory Power Roller	6	Nos.	(including 3 of $\pm$ 0.9m drum width)	
4	Water Lorries ($\pm$10000 litres)	8	Nos.		
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.		
6	Pneumatic Tampers / Earth Rammers	3	Nos.		
7	Air Compressor $\pm$ 300 cfm	2	Nos.		
8	Plate Vibrator	3	Nos.		
9	Dozers (D6 or equivalent)	3	Nos.		

PACKAGE No. 1

D. REQUIREMENT OF MATERIALS

Sl.No.	Description of work	Quantity	Unit	Cement in MT	Sand in m^3	20mm Metal in m^3	40mm Metal in m^3	Rubble Stone in m^3	Gravel in m^3	Steel in Qtl.
1	M7.5 PCC	669	m^3	108	301		602			
2	M10 PCC (using 40mm Metal)	142	m^3	31	64		128			
	M10 PCC (using 20mm Metal)	178	m^3	39	80	160				
3	M15 PCC (using 40mm Metal)	1330	m^3	376	598		1197			
4	M20 RCC	64	m^3	23	29	58				
5	Fabrication of Steel	242	Qtl.							242
6	RR Masonry in CM 1:4	1208	m^3	148	411			1208		
7	Sloped RR in CM 1:4	1466	m^3	127	352			1613		
8	Rough Stone Dry Packing	1140	m^3					1253		
9	S/F Cutstone	8	m^3	0	1					
10	TBL Stone	188	Nos.	2	4	8				
11	Gravel Backing	1629	m^3						1890	
12	Gravel Spreading	8780	m^3						7902	
	TOTAL			**747**	**1539**	**225**	**1325**	**4074**	**9792**	**242**

PACKAGE No. 1							
E. REQUIREMENT OF EQUIPMENTS AND MATERIALS							
	EQUIPMENTS REQUIRED IN NUMBERS						
1	Hydraulic Excavator	6	Nos.	(2 of $\pm$ 0.3m^3 and 4 of $\pm$ 0.9m^3)			
2	Tippers/Lorries (8 - 10T)	25	Nos.				
3	Power Roller / Vibratory Power Rollers	6	Nos.	(including 3 of $\pm$ 0.9m drum width)			
4	Water Lorries ($\pm$10000 litres)	8	Nos.				
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.				
6	Pneumatic Tampers / Earth Rammers	3	Nos.				
7	Air Compressor $\pm$ 300 cfm	2	Nos.				
8	Plate Vibrator	3	Nos.				
9	Dozers (D6 or equivalent)	3	Nos.				
	MATERIALS REQUIRED						
1	Cement	747	MT				
2	Sand	1539	m^3				
3	Metal 20mm	225	m^3				
4	Metal 40mm	1325	m^3				
5	Rubble Stone	4074	m^3				
6	Gravel	9792	m^3				
7	Steel	242	Qtl.				

PACKAGE No. 1

F. CONSTRUCTION METHODOLOGY

Sl. No.	Description of Item	Working Period						Rainy Season			Working Period									Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	Earthwork																			
	Channel		16500	16500	16500	16500	16500					13500	13441							109441
	Bund	25200	25200	25200	25200	25200	25200						8400	8290						167890
	Foundation		450	450	450	316														1666
2	Concrete																			
	M7.5 grade			200	200	269														669
	M10 grade			100	100	120														320
	M15 grade			450	450	430														1330
	M20 grade				32	32														64
3	Random Rubble Masonry					450	450					450	400	400	200	200	123			2674
4	Gravel Backing														300	180	150			1629
5	Rough Stone Dry Packing														600	550				1140
6	Gravel Spreading															3480	2650	2650		8780

PACKAGE No. 2

A. WRO COST TABLE

Sl.No.	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m)	165600	215.15	
	SLUICE RECONSTRUCTION (in Nos.)	14	80.10	
	WEIR RECONSTRUCTION (in Nos.)	1	7.86	
	SUPPLY CHANNEL IMPROVEMENTS	52900	14.64	
	PROVISION FOR FLOW MEASURING DEVICES	27	2.92	
	PROVISIONS - Shutters	13	2.93	
	FIELD CHANNEL LINING	810	23.78	
	Sub total		**347.38**	
	Provision for Labour welfare @ 0.3% (Rs.1.04Lakhs) Provision for contingencies,advertisement charges, photographic charges @ 2.5% (Rs.8.69 Lakhs)		**9.73**	
2	**Non Tank Component**			
	NIL			
	Sub total			
	Environmental Cell			
	Ground Water			
	TOTAL		**357.11**	

PACKAGE No. 2

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m)	99400	129.14	66200	86.01	165600	215.15
2	SLUICE RECONSTRUCTION (in Nos.)	8	48.06	6	32.04	14	80.10
3	WEIR RECONSTRUCTION (in Nos.)	1	7.86	0	0.00	1	7.86
4	SUPPLY CHANNEL IMPROVEMENTS	31750	8.78	21150	5.85	52900	14.64
5	PROVISION FOR FLOW MEASURING DEVICES	17	1.84	10	1.08	27	2.92
6	LS PROVISIONS - Shutters	8	1.81	5	1.13	13	2.93
7	FIELD CHANNEL LINING	486	14.27	324	9.51	810	23.78
	Sub total		**211.76**		**135.62**		**347.38**
	LS PROVISIONS						
	Provision for Labour Welfare @ 0.3%		0.63		0.41		1.04
	Provision for Contingencies, advertisement Charges, photographic charges @ 2.5%		**5.30**		**3.39**		**8.69**
II	**Non Tank Component**						
	NIL						
	Sub total						
	Environmental Cell						
	Ground Water						
	TOTAL		**217.69**		**139.42**		**357.11**

PACKAGE No. 2					
C. Broad requirement of Construction Equipment					
Based on broad calculations, the equipment requirement is listed below.					
1	Hydraulic Excavator	6	Nos.	(2 of $\pm$ 0.3m^3 and 4 of $\pm$ 0.9m^3)	
2	Tippers/Lorries (8 - 10T)	24	Nos.	(for Earthwork and Material conveyance)	
3	Power Roller / Vibratory Power Roller	6	Nos.	(including 3 of $\pm$ 0.9m drum width)	
4	Water Lorries ($\pm$10000 litres)	8	Nos.		
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.		
6	Pneumatic Tampers / Earth Rammers	3	Nos.		
7	Air Compressor $\pm$ 300 cfm	2	Nos.		
8	Plate Vibrator	3	Nos.		
9	Dozers (D6 or equivalent)	3	Nos.		

PACKAGE No. 2

D. REQUIREMENT OF MATERIALS

Sl.No.	Description of work	Quantity	Unit	Cement in MT	Sand in m^3	20mm Metal in m^3	40mm Metal in m^3	Rubble Stone in m^3	Gravel in m^3	Steel in Qtl.
1	M7.5 PCC	582								
2	M10 PCC (using 20mm Metal)	165	m^3	36	74	148				
	M10 PCC (using 40mm Metal)	147		33	66		132			
3	M15 PCC (using 40mm Metal)	1203	m^3	341	542		1083			
4	M20 RCC	80	m^3	29	36	72				
5	Fabrication of Steel	276	Qtl.							276
6	RR Masonry in CM 1:4	1127	m^3	138	383			1127		
7	Sloped RR in CM 1:4	2081	m^3	180	499			2289		
8	Rough Stone Dry Packing	1078	m^3					1186		
9	S/F Cutstone	10	m^3	1	2					
10	TBL Stone	177	Nos.	2	4	7				
11	Gravel Backing	1806	m^3						2095	
12	Gravel Spreading	7625	m^3						6862	
	TOTAL			**759**	**1606**	**228**	**1216**	**4602**	**8957**	**276**

PACKAGE No. 2				
E. REQUIREMENT OF EQUIPMENTS AND MATERIALS				
EQUIPMENTS REQUIRED IN NUMBERS				
1	Hydraulic Excavator	6	Nos.	(2 of ± 0.3m^3 and 4 of ± 0.9m^3)
2	Tippers/Lorries (8 - 10T)	24	Nos.	
3	Power Roller / Vibratory Power Rollers	6	Nos.	(including 3 of ± 0.9m drum width
4	Water Lorries (±10000 litres)	8	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor ± 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	
MATERIALS REQUIRED				
1	Cement	759	MT	
2	Sand	1606	m^3	
3	Metal 20mm	228	m^3	
4	Metal 40mm	1216	m^3	
5	Rubble Stone	4602	m^3	
6	Gravel	8958	m^3	
7	Steel	276	Qtl.	

PACKAGE No. 2

F. CONSTRUCTION METHODOLOGY

Sl. No.	Description of Item	Working Period						Rainy Season			Working Period									Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	Earthwork																			
	Channel		15800	15800	15800	15800	15800					13200	13074							105274
	Bund	24900	24900	24900	24900	24900	24900						8100	8100						165600
	Foundation		400	400	400	363														1563
2	Concrete																			
	M7.5 grade			100	100	382														582
	M10 grade			100	100	112														312
	M15 grade			400	400	403														1203
	M20 grade				40	40														80
3	Random Rubble Masonry					500	500					500	500	500	250	250	170			3208
4	Gravel Backing														1000	500	290			1806
5	Rough Stone Dry Packing															600	531			1078
6	Gravel Spreading															2300	2300	3048		7625

PACKAGE No. 3

A. WRO COST TABLE

Sl.No	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m)	127540	170.99	
	SLUICE RECONSTRUCTION (in Nos.)	14	61.53	
	WEIR RECONSTRUCTION (in Nos.)	3	16.26	
	SUPPLY CHANNEL IMPROVEMENTS	5000	1.44	
	PROVISION FOR FLOW MEASURING DEVICES (in Nos.)	25	2.78	
	PROVISIONS - Shutters	10	1.58	
	FIELD CHANNEL LINING (in m)	750	22.81	
	Sub total		**277.38**	
	Provision for Labour welfare @ 0.3% (Rs.0.83 Lakhs) Provision for contingencies,advertisement charges, photographic charges @ 2.5% (Rs.6.94 Lakhs)	2.80%	**7.76**	
2	**Non Tank Component**			
	NIL			
	Sub total			
	Environmental Cell			
	Ground Water			
	TOTAL		**285.14**	

PACKAGE No. 3

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m)	76550	102.63	50990	68.36	127540	170.99
2	SLUICE RECONSTRUCTION (in Nos.)	8	36.92	6	24.61	14	61.53
3	WEIR RECONSTRUCTION (in Nos.)	2	10.84	1	5.42	3	16.26
4	SUPPLY CHANNEL IMPROVEMENTS	3000	0.86	2000	0.58	5000	1.44
5	PROVISION FOR FLOW MEASURING DEVICES	15	1.67	10	1.11	25	2.78
6	PROVISIONS - Shutters	6	0.95	4	0.63	10	1.58
7	FIELD CHANNEL LINING (in m)	450	13.68	300	9.12	750	22.81
	Sub total		**167.55**		**109.83**		**277.38**
	LS PROVISIONS						
	Provision for Labour Welfare @ 0.3%		0.50		0.33		0.83
	Provision for Contingencies, advertisement Charges, photographic charges @ 2.5%		**4.19**		**2.74**		**6.93**
II	**Non Tank Component**						
	NIL						
	Sub total						
	Environmental Cell						
	Ground Water						
	TOTAL		**172.24**		**112.90**		**285.14**

PACKAGE No. 3				
Broad requirement of Construction Equipment				
Based on broad calculations, the equipment requirement is listed below.				
1	Hydraulic Excavator	5	Nos.	(2 of $\pm$ 0.3m^3 and 3 of $\pm$ 0.9m^3)
2	Tippers/Lorries (8 - 10T)	20	Nos.	(for Earthwork and Material conveyance)
3	Power Roller / Vibratory Power Roller	5	Nos.	(including 3 of $\pm$ 0.9m drum width)
4	Water Lorries ($\pm$10000 litres)	7	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor $\pm$ 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	

Package No. 3

D. REQUIREMENT OF MATERIALS

Sl.No.	Description of work	Quantity	Unit	Cement in MT	Sand in m^3	20mm Metal in m^3	40mm Metal in m^3	Rubble Stone in m^3	Gravel in m^3	Steel in Qtl.
1	M7.5 PCC	646	m^3	105	291		582			
2	M10 PCC (using 20mm Metal)	142	m^3	31	64	128				
	M10 PCC (using 40mm Metal)	78	m^3	17	35		70			
3	M15 PCC (using 40mm Metal)	1197	m^3	339	539		1077			
4	M20 RCC	71	m^3	26	32	64				
5	Fabrication of Steel	244	Qtl.							244
6	RR Masonry in CM 1:4	854	m^3	104	290			854		
7	Sloped RR in CM 1:4	1620	m^3	140	389			1782		
8	Rough Stone Dry Packing	1005	m^3					1105		
9	S/F Cutstone	13	m^3	1	2					
10	TBL Stone	140	Nos.	1	3	6				
11	Gravel Backing	1844	m^3						2139	
12	Gravel Spreading	6085	m^3						5476	
	TOTAL			**765**	**1644**	**197**	**1729**	**3740**	**7615**	**244**

PACKAGE No. 3				
E. REQUIREMENT OF EQUIPMENTS AND MATERIALS				
	EQUIPMENTS REQUIRED IN NUMBERS			
1	Hydraulic Excavator	5	Nos.	(2 of $\pm$ 0.3m^3 and 3 of $\pm$ 0.9m^3)
2	Tippers/Lorries (8 - 10T)	20	Nos.	
3	Power Roller / Vibratory Power Rollers	5	Nos.	(including 3 of $\pm$ 0.9m drum width
4	Water Lorries ($\pm$10000 litres)	7	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor $\pm$ 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	
	MATERIALS REQUIRED			
1	Cement	765	MT	
2	Sand	1644	m^3	
3	Metal 20mm	197	m^3	
4	Metal 40mm	1729	m^3	
5	Rubble Stone	3740	m^3	
6	Gravel	7615	m^3	
7	Steel	244	Qtl.	

PACKAGE No. 3

F. CONSTRUCTION METHODOLOGY

Sl. No.	Description of Item	Working Period						Rainy Season			Working Period									Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	Earthwork																			
	Channel		6800	6800	6800	6800	6800					5500	5475							44975
	Bund	19200	19200	19200	19200	19200	19200						6200	6140						127540
	Foundation		300	300	300	280														1180
2	Concrete																			
	M7.5 grade			100	100	446														646
	M10 grade			100	100	20														220
	M15 grade			400	400	397														1197
	M20 grade				35	35														71
3	Random Rubble Masonry					400	400					400	400	400	250	123				2473
4	Gravel Backing														900	600	345			1844
5	Rough Stone Dry Packing															550	463			1005
6	Gravel Spreading														1850	1850	2378			6085

PACKAGE No. 4

A. WRO COST TABLE

Sl.No.	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m)	122670	156.09	
	SLUICE RECONSTRUCTION (in Nos.)	15	83.41	
	WEIR RECONSTRUCTION (in Nos.)	6	26.92	
	SUPPLY CHANNEL IMPROVEMENTS	51100	19.61	
	PROVISION FOR FLOW MEASURING DEVICES	26	2.89	
	PROVISIONS - Shutters	11	1.74	
	FIELD CHANNEL LINING	1380	42.01	
	Sub total		**332.66**	
	Provision for Labour welfare @ 0.3% (Rs.0.99 Lakhs) Provision for contingencies,advertisement charges, photographic charges @ 2.5% (Rs.8.32 Lakhs)	2.80%	**9.31**	
2	**Non Tank Component**			
	NIL			
	Sub total			
	Environmental Cell			
	Ground Water			
	TOTAL		**341.97**	

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m)	73650	93.71	49020	62.37	122670	156.09
2	SLUICE RECONSTRUCTION (in Nos.)	9	50.04	6	33.36	15	83.41
3	WEIR RECONSTRUCTION (in Nos.)	4	17.95	2	8.97	6	26.92
4	SUPPLY CHANNEL IMPROVEMENTS	30700	11.78	20400	7.83	51100	19.61
5	PROVISION FOR FLOW MEASURING DEVICES	16	1.78	10	1.11	26	2.89
6	PROVISIONS - Shutters	7	1.11	4	0.63	11	1.74
	FIELD CHANNEL LINING	828	25.20	552	16.80	1380	42.01
	Sub total		**201.58**		**131.09**		**332.66**
	LS PROVISION						
	Provision for Labour Welfare @ 0.3%		0.60		0.39		0.99
	Provision for Contingencies, advertisement Charges, photographic charges @ 2.5%		**5.04**		**3.28**		**8.32**
II	**Non Tank Component**						
	NIL						
	Sub total						
	Environmental Cell						
	Ground Water						
	TOTAL		**207.22**		**134.76**		**341.97**

PACKAGE No. 4			
Broad requirement of Construction Equipment			
Based on broad calculations, the equipment requirement is listed below.			
1	Hydraulic Excavator	4 Nos.	(1 of $\pm$ 0.3m^3 and 3 of $\pm$ 0.9m^3)
2	Tippers/Lorries (8 - 10T)	20 Nos.	(for Earthwork and Material conveyance)
3	Power Roller / Vibratory Power Roller	4 Nos.	(including 2 of $\pm$ 0.9m drum width)
4	Water Lorries ($\pm$10000 litres)	6 Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2 Nos.	
6	Pneumatic Tampers / Earth Rammers	3 Nos.	
7	Air Compressor $\pm$ 300 cfm	2 Nos.	
8	Plate Vibrator	3 Nos.	
9	Dozers (D6 or equivalent)	3 Nos.	

PACKAGE No. 4

D. REQUIREMENT OF MATERIALS

Sl.No.	Description of work	Quantity	Unit	Cement in MT	Sand in m^3	20mm Metal in m^3	40mm Metal in m^3	Rubble Stone in m^3	Gravel in m^3	Steel in Qtl.
1	M7.5 PCC	1075	m^2	237	484		967			
2	M10 PCC (using 40mm Metal)	125	m^3	28	56		112			
3	M10 PCC (using 20mm Metal)	243	m^3	54	109	219				
4	M15 PCC (using 40mm Metal)	1808	m^3	512	814		1628			
5	M20 RCC	97	m^3	36	44	88				
6	Fabrication of Steel	250	Qtl.							250
7	RR Masonry in CM 1:4	852	m^3	104	290			852		
8	Sloped RR in CM 1:4	1453	m^3	126	349			1599		
9	Rough Stone Dry Packing	929	m^3					1022		
10	S/F Cutstone	15	m^3	1	2					
11	TBL Stone	119	Nos.	1	2	5				
12	Gravel Backing	1516	m^3						1759	
13	Gravel Spreading	4864	m^3						4378	
	TOTAL			**1098**	**2150**	**311**	**2707**	**3473**	**6137**	**250**

PACKAGE No. 4

E. REQUIREMENT OF EQUIPMENTS AND MATERIALS

EQUIPMENTS REQUIRED IN NUMBERS

1	Hydraulic Excavator	4	Nos.	(1 of $\pm$ 0.3m^3 and 3 of $\pm$ 0.9m^3)
2	Tippers/Lorries	20	Nos.	
3	Power Roller	4	Nos.	(including 2 of $\pm$ 0.9m drum width
4	Water Lorries	6	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor $\pm$ 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	

MATERIALS REQUIRED

1	Cement	1098	MT
2	Sand	2150	m^3
3	Metal 20mm	311	m^3
4	Metal 40mm	2707	m^3
5	Rubble Stone	3473	m^3
6	Gravel	6137	m^3
7	Steel	250	Qtl.

PACKAGE No. 4

F. CONSTRUCTION METHODOLOGY

Sl. No.	Description of Item	Working Period						Rainy Season			Working Period									Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	Earthwork																			
	Channel		12400	12400	12400	12400	12400					10200	10107							82307
	Bund	18500	18500	18500	18500	18500	18500						5900	5770						122670
	Foundation		450	450	450	257														1607
2	Concrete																			
	M7.5 grade			150	150	775														1075
	M10 grade			150	150	68														368
	M15 grade			550	550	708														1808
	M20 grade				49	49														97
3	Random Rubble Masonry					350	350						350	350	350	350	214			2305
4	Gravel Backing														600	600	316			1516
5	Rough Stone Dry Packing															500	415			929
6	Gravel Spreading														1500	1500	1864			4864

PACKAGE No. 5

A. WRO COST TABLE

Sl.No.	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m3)	111070	147.03	
	SLUICE RECONSTRUCTION (in Nos.)	10	53.41	
	WEIR RECONSTRUCTION (in Nos.)	4	39.28	
	SUPPLY CHANNEL IMPROVEMENTS	55500	24.01	
	PROVISION FOR FLOW MEASURING DEVICES	22	2.43	
	PROVISIONS - Shutters	16	3.12	
	FIELD CHANNEL LINING	660	19.86	
	Sub total		**289.14**	
	Provision for Labour welfare @ 0.3% (Rs.1.05 Lakhs) Provision for contingencies,advertisement charges, photographic charges @ 2.5% (Rs.8.72 Lakhs)	2.80%	**8.10**	
2	**Non Tank Component**			
	NIL			
	Sub total			
	Environmental Cell			
	Ground Water			
	TOTAL		**297.24**	

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m)	66650	88.23	44420	58.80	111070	147.03
2	SLUICE RECONSTRUCTION (in Nos.)	6	32.04	4	21.36	10	53.41
3	WEIR RECONSTRUCTION (in Nos.)	3	29.46	1	9.82	4	39.28
4	SUPPLY CHANNEL IMPROVEMENTS	33300	14.41	22200	9.61	55500	24.01
5	PROVISION FOR FLOW MEASURING DEVICES	14	1.55	8	0.88	22	2.43
6	LS PROVISIONS - Shutters	10	1.95	6	1.17	16	3.12
7	FIELD CHANNEL LINING	396	11.92	264	7.95	660	19.86
	Sub total		**179.55**		**109.59**		**289.14**
	LS PROVISIONS						
	Provision for Labour Welfare @ 0.3%		0.54		0.33		0.87
	Provision for Contingencies, advertisement Charges, photographic charges @ 2.5%		**4.49**		**2.74**		**7.23**
II	**Non Tank Component**						
	NIL						
	Sub total						
	Environmental Cell						
	Ground Water						
	TOTAL		**184.58**		**112.65**		**297.24**

PACKAGE No. 5			
C. Broad requirement of Construction Equipment			
Based on broad calculations, the equipment requirement is listed below.			
1	Hydraulic Excavator	4 Nos.	(1 of ± 0.3m^3 and 3 of ± 0.9m^3)
2	Tippers/Lorries (8 - 10T)	18 Nos.	(for Earthwork and Material conveyance)
3	Power Roller / Vibratory Power Roller	4 Nos.	(including 2 of ± 0.9m drum width)
4	Water Lorries (±10000 litres)	6 Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2 Nos.	
6	Pneumatic Tampers / Earth Rammers	3 Nos.	
7	Air Compressor ± 300 cfm	2 Nos.	
8	Plate Vibrator	3 Nos.	
9	Dozers (D6 or equivalent)	3 Nos.	

PACKAGE No. 5

D. REQUIREMENT OF MATERIALS

Sl.No.	Description of work	Quantity	Unit	Cement in MT	Sand in m^3	20mm Metal in m^3	40mm Metal in m^3	Rubble Stone in m^3	Gravel in m^3	Steel in Qtl.
1	M7.5 PCC	817	m^2	180	368		735			
2	M10 PCC (using 20mm Metal)	363	m^3	80	163	327				
3	M10 PCC (using 40mm Metal)	138	m^3	30	62		124			
4	M15 PCC	1663	m^3	471	748		1497			
5	M20 RCC	56	m^3	20	25	50				
6	Fabrication of Steel	219	Qtl.							219
7	RR Masonry in CM 1:4	822	m^3	101	279			822		
8	Sloped RR in CM 1:4	1396	m^3	121	335			1536		
9	Rough Stone Dry Packing	1055	m^3					1160		
10	S/F Cutstone	10	m^3	1	2					
11	TBL Stone	113	Nos.	1	2	5				
12	Gravel Backing	1183	m^3						1372	
13	Gravel Spreading	4873	m^3						4386	
	TOTAL			**1005**	**1985**	**382**	**2356**	**3518**	**5758**	**219**

PACKAGE No. 5

E. REQUIREMENT OF EQUIPMENTS AND MATERIALS

EQUIPMENTS REQUIRED IN NUMBERS

1	Hydraulic Excavator	4	Nos.	(1 of ± 0.3m^3 and 3 of ± 0.9m^3)
2	Tippers/Lorries (8 - 10T)	18	Nos.	
3	Power Roller / Vibratory Power Rollers	4	Nos.	(including 2 of ± 0.9m drum width)
4	Water Lorries (±10000 litres)	6	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor ± 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	

MATERIALS REQUIRED

1	Cement	1005	MT
2	Sand	1985	m^3
3	Metal 20mm	382	m^3
4	Metal 40mm	2356	m^3
5	Rubble Stone	3518	m^3
6	Gravel	5758	m^3
7	Steel	219	Qtl.

PACKAGE No. 5

F. CONSTRUCTION METHODOLOGY

Sl. No.	Description of Item	Working Period						Rainy Season			Working Period									Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	Earthwork																			
	Channel		14500	14500	14500	14500	14500					12100	12014							96614
	Bund	16000	16000	16000	16000	16000	16000						5300	5150						106450
	Foundation		400	400	400	242														1442
2	Concrete																			
	M7.5 grade			200	200	417														817
	M10 grade			200	200	101														501
	M15 grade			500	500	663														1663
	M20 grade				28	28														56
3	Random Rubble Masonry					350	350						350	350	350	250	187			2218
4	Gravel Backing														400	400	383			1183
5	Rough Stone Dry Packing															550	514			1055
6	Gravel Spreading														1500	1500	1877			4873

PACKAGE No. 6

A. WRO COST TABLE

Sl.No.	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m3)	140000	156.60	
	SLUICE RECONSTRUCTION (in Nos.)	7	29.76	
	WEIR RECONSTRUCTION (in Nos.)	5	33.00	
	SUPPLY CHANNEL IMPROVEMENTS	0	0.00	
	PROVISION FOR FLOW MEASURING DEVICES	12	1.35	
	PROVISIONS - Shutters	7	1.11	
	FIELD CHANNEL LINING	700	21.63	
	Sub total		**243.45**	
	LS provision			
	Provision for Labour welfare @ 0.3% (Rs.0.73 Lakhs) Provision for contingencies,advertisement charges, photographic charges @ 2.5% (Rs.6.82 Lakhs)	2.80%	**6.82**	
2	**Non Tank Component**			
	NIL			
	Sub total			
	Environmental Cell			
	Ground Water			
	TOTAL		**250.27**	

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m)	84000	93.96	56000	62.64	140000	156.60
2	SLUICE RECONSTRUCTION (in Nos.)	4	17.01	3	12.75	7	29.76
3	WEIR RECONSTRUCTION (in Nos.)	3	19.80	2	13.20	5	33.00
4	SUPPLY CHANNEL IMPROVEMENTS	0	0.00	0	0.00	0	0.00
5	PROVISION FOR FLOW MEASURING DEVICES	8	0.90	4	0.45	12	1.35
6	LS PROVISIONS - Shutters	5	0.79	2	0.32	7	1.11
7	FIELD CHANNEL LINING	420	12.98	280	8.65	700	21.63
	Sub total		**145.43**		**98.01**		**243.45**
	LS Provisions						
	Provision for Labour Welfare @ 0.3%		0.44		0.29		0.73
	Provision for Contingencies, advertisement Charges, photographic charges @ 2.5%		**3.64**		**2.45**		**6.09**
II	**Non Tank Component**						
	NIL						
	Sub total						
	Environmental Cell						
	Ground Water						
	TOTAL		**149.51**		**100.76**		**250.27**

PACKAGE No. 6

C. Broad requirement of Construction Equipment

Based on broad calculations, the equipment requirement is listed below.

1	Hydraulic Excavator	5	Nos.	(2 of $\pm$ 0.3m^3 and 3 of $\pm$ 0.9m^3)
2	Tippers/Lorries (8 - 10T)	20	Nos.	(for Earthwork and Material conveyance)
3	Power Roller / Vibratory Power Roller	5	Nos.	(including 3 of $\pm$ 0.9m drum width)
4	Water Lorries ($\pm$10000 litres)	7	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor $\pm$ 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	

PACKAGE No. 6										
D. REQUIREMENT OF MATERIALS										
Sl.No.	**Description of work**	**Quantity**	**Unit**	**Cement in MT**	**Sand in m^3**	**20mm Metal in m^3**	**40mm Metal in m^3**	**Rubble Stone in m^3**	**Gravel in m^3**	**Steel in Qtl.**
1	M7.5 PCC	578	m^2	128	260		520			
2	M10 PCC (using 40mm Metal)	81	m^3	18	36		73			
	M10 PCC (using 20mm Metal)	108	m^3							
3	M15 PCC (using 40mm Metal)	1247	m^3	353	561		1122			
4	M20 RCC	48	m^3	17	21	43				
5	Fabrication of Steel	86	Qtl.							86
6	RR Masonry in CM 1:4	710	m^3	87	241			710		
7	Sloped RR in CM 1:4	777	m^3	67	187			855		
8	Rough Stone Dry Packing	1011	m^3					1112		
9	S/F Cutstone	8	m^3	0	1					
10	TBL Stone	290	Nos.	3	6	12				
11	Gravel Backing	1009	m^3						1170	
12	Gravel Spreading	4736	m^3						4262	
	TOTAL			**673**	**1314**	**55**	**1715**	**2677**	**5432**	**86**

PACKAGE No. 6				
E. REQUIREMENT OF EQUIPMENTS AND MATERIALS				
	EQUIPMENTS REQUIRED IN NUMBERS			
1	Hydraulic Excavator	5	Nos.	(2 of $\pm$ 0.3m^3 and 3 of $\pm$ 0.9m^3)
2	Tippers/Lorries (8 - 10T)	20	Nos.	
3	Power Roller / Vibratory Power Rollers	5	Nos.	(including 3 of $\pm$ 0.9m drum width)
4	Water Lorries ($\pm$10000 litres)	7	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor $\pm$ 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	
	MATERIALS REQUIRED			
1	Cement	673	MT	
2	Sand	1314	m^3	
3	Metal 20mm	55	m^3	
4	Metal 40mm	1715	m^3	
5	Rubble Stone	2677	m^3	
6	Gravel	5432	m^3	
7	Steel	86	Qtl.	

PACKAGE No. 6

F. CONSTRUCTION METHODOLOGY

Sl. No.	Description of Item	Working Period						Rainy Season			Working Period									Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	Earthwork																			
	Channel		4600	4600	4600	4600	4600					3800	3728							30528
	Bund	21000	21000	21000	21000	21000	21000						7000	7000						140000
	Foundation		300	300	300	209														1109
2	Concrete																			
	M7.5 grade			100	100	378														578
	M10 grade				100	89														189
	M15 grade			400	400	447														1247
	M20 grade				24	24														48
3	Random Rubble Masonry					250	250						350	350	350	250	187			1507
4	Gravel Backing														400	400	383			1040
5	Rough Stone Dry Packing															550	514			859
6	Gravel Spreading														1800	1500	1877			5956

PACKAGE No. 7

A. WRO COST TABLE

Sl.No.	Description of Work	Quantity	Amount Rs.in Lakhs	Remarks
1	**Tank Component**			
	TANK BUND IMPROVEMENTS (in m3)	142000	197.81	
	SLUICE RECONSTRUCTION (in Nos.)	15	68.02	
	WEIR RECONSTRUCTION (in Nos.)	5	20.20	
	SUPPLY CHANNEL IMPROVEMENTS	5900	14.54	
	PROVISION FOR FLOW MEASURING DEVICES	22	2.43	
	PROVISIONS - Shutters	7	1.11	
	FIELD CHANNEL LINING	660	19.89	
	Sub total		**324.01**	
	Provision for Labour welfare @ 0.3% (Rs.0.97 Lakhs) Provision for contingencies,advertisement charges, photographic charges @ 2.5% (Rs.8.10 Lakhs)		**9.07**	
2	**Non Tank Component**			
	NIL			
	Sub total			
	Environmental Cell			
	Ground Water			
	TOTAL		**333.08**	

PACKAGE No. 7

B. PHYSICAL AND FINANCIAL PROGRAM

Sl. No	Description	I year		II year		Total	
		Quantity	Amount in Lakhs	Quantity	Amount in Lakhs	Quantity	Amount in Lakhs
I	**Tank Component**						
1	TANK BUND IMPROVEMENTS (in m)	8100	118.95	5370	78.86	13470	197.81
2	SLUICE RECONSTRUCTION (in Nos.)	9	40.81	6	27.21	15	68.02
3	WEIR RECONSTRUCTION (in Nos.)	3	13.47	2	6.73	5	20.20
4	SUPPLY CHANNEL IMPROVEMENTS	3550	8.75	2350	5.79	5900	14.54
5	PROVISION FOR FLOW MEASURING DEVICES	14	1.55	8	0.89	22	2.43
6	LS PROVISIONS - Shutters	5	0.79	2	0.32	7	1.11
7	FIELD CHANNEL LINING	396	11.93	264	7.96	660	19.89
	Sub total		**196.25**		**127.75**		**324.01**
	LS PROVISIONS						
	Provision for Labour Welfare @ 0.3%		0.59		0.38		0.97
	Provision for Contingencies, advertisement Charges, photographic charges @ 2.5%		**4.91**		**3.19**		**8.10**
II	**Non Tank Component**						
	NIL						
	Sub total						
	Environmental Cell						
	Ground Water						
	TOTAL		**201.75**		**131.33**		**333.08**

PACKAGE No. 7												
C. Broad requirement of Construction Equipment												
Based on broad calculations, the equipment requirement is listed below.												
1	Hydraulic Excavator					5	Nos.	(2 of ± 0.3m^3 and 3 of ± 0.9m^3)				
2	Tippers/Lorries (8 - 10T)					21	Nos.	(for Earthwork and Material conveyance)				
3	Power Roller / Vibratory Power Roller					5	Nos.	(including 3 of ± 0.9m drum width)				
4	Water Lorries (±10000 litres)					7	Nos.					
5	Hydraulic Excavator (with Steel Plate Attachment)					2	Nos.					
6	Pneumatic Tampers / Earth Rammers					3	Nos.					
7	Air Compressor ± 300 cfm					2	Nos.					
8	Plate Vibrator					3	Nos.					
9	Dozers (D6 or equivalent)					3	Nos.					

PACKAGE No. 7

D. REQUIREMENT OF MATERIALS

Sl.No.	Description of work	Quantity	Unit	Cement in MT	Sand in m^3	20mm Metal in m^3	40mm Metal in m^3	Rubble Stone in m^3	Gravel in m^3	Steel in Qtl.
1	M7.5 PCC	757	m^2	167	341		681			
2	M10 PCC (using 40mm Metal)	113	m^3	25	51		102			
3	M10 PCC (using 20mm Metal)	108	m^3	24	49	97				
4	M15 PCC (using 40mm Metal)	1247	m^3	353	561		1123			
5	M20 RCC	66	m^3	24	30	60				
6	Fabrication of Steel	279	Qtl.							279
7	RR Masonry in CM 1:4	877	m^3	107	298			877		
8	Sloped RR in CM 1:4	1580	m^3	137	379			1738		
9	Rough Stone Dry Packing	803	m^3					884		
10	S/F Cutstone	14	m^3	1	2					
11	TBL Stone	144	Nos.	1	3	6				
12	Gravel Backing	1324	m^3						1536	
13	Gravel Spreading	6508	m^3						5857	
	TOTAL			**839**	**1714**	**163**	**1906**	**3499**	**7393**	**279**

PACKAGE No. 7				
E. REQUIREMENT OF EQUIPMENTS AND MATERIALS				
	EQUIPMENTS REQUIRED IN NUMBERS			
1	Hydraulic Excavator	5	Nos.	(2 of $\pm$ 0.3m^3 and 3 of $\pm$ 0.9m^3)
2	Tippers/Lorries (8 - 10T)	21	Nos.	
3	Power Roller / Vibratory Power Rollers	5	Nos.	(including 3 of $\pm$ 0.9m drum width)
4	Water Lorries ($\pm$10000 litres)	7	Nos.	
5	Hydraulic Excavator (with Steel Plate Attachment)	2	Nos.	
6	Pneumatic Tampers / Earth Rammers	3	Nos.	
7	Air Compressor $\pm$ 300 cfm	2	Nos.	
8	Plate Vibrator	3	Nos.	
9	Dozers (D6 or equivalent)	3	Nos.	
	MATERIALS REQUIRED			
1	Cement	839	MT	
2	Sand	1714	m^3	
3	Metal 20mm	163	m^3	
4	Metal 40mm	1906	m^3	
5	Rubble Stone	3499	m^3	
6	Gravel	7393	m^3	
7	Steel	279	Qtl.	

PACKAGE No. 7

F. CONSTRUCTION METHODOLOGY

Sl. No.	Description of Item	Working Period						Rainy Season			Working Period									Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1	Earthwork																			
	Channel		13100	13100	13100	13100	13100					10900	10782							87182
	Bund	21300	21300	21300	21300	21300	21300						7100	7100						142000
	Foundation		300	300	300	189														1089
2	Concrete																			
	M7.5 grade			100	100	566														766
	M10 grade			100	100	21														221
	M15 grade			400	400	447														1247
	M20 grade				33	33														66
3	Random Rubble Masonry					400	400						350	350	350	250	187			2457
4	Gravel Backing														400	400	383			1324
5	Rough Stone Dry Packing															550	514			803
6	Gravel Spreading														2000	1500	1877			6508

1.7 ENVIRONMENTAL CELL

GOVERNMENT OF TAMIL NADU
PUBLIC WORKS DEPARTMENT
WATER RESOURCES ORGANISATION

PLAN FORMULATION

Name of Work

Environmental Component in Detailed Project Report for COOUM SUB BASIN (RURAL) of Chennai Basin under TN – IAMWARM PROJECT

Ayacut Area: 9937.54 Ha

Estimate Amount: Rs 17.00 Lakhs

Environmental Cell Division

Tharamani, Chennai-113

Report to accompany the estimate for the work of "Environmental Component in Detailed Project Report for Cooum Sub Basin (Rural) of Chennai Basin under TN – IAMWARM PROJECT"

Estimate Amount: Rs 17.00 Lakhs

Under TNWRCP, with World Bank assistance, special emphasis was given for the first time to assess the Environmental Status and degradation caused for all River basins in Tamilnadu. Soil Assessment study has been conducted by Environment Protection Training and Research Institute (**EPTRI),** Hyderabad. This institute has identified the Environmental issues, mitigatory measures and given their recommendations on the following issues.

Environmental and Social issues

Environmental Issues	Social Issues
Industrial Pollution	Encroachment in the river and tank beds
Sea water intrusion reduced the quality of ground water	Poor sanitary conditions
Sand Mining is prevalent in the river bed areas	Skin Allergies
Siltation	Mosquito breeding due to water stagnation and Elephantiasis
Coastal Erosion	
Weeds Growth	
Industrial Effluents released into river	
Domestic sewage released into river	
Over Exploitation of ground water	
Dumping of Debris into tanks	

i) Mitigatory Measures
- Non-judicial and excessive sand mining have to be controlled and regulated.
- Livestock services delivery and Management
- Common storage facilities may be established

ii) Agency
- The above measures can be improved by the combined

working of Environmental Cell
wing and other Line Departments

The Environmental Cell of WRO assessed the Environmental impact on the quality of Surface and Ground water and Soil by collecting water & soil samples and testing them, preparation of Micro level Environmental Status Reports for all the River basins with the World Bank assistance for these works up to March 2004.

Also few Awareness programs & workshops were conducted to create Awareness on the Environmental issues & remedies among the public, farmers, Govt. officials and NGOs. Seminars were conducted to find out new techniques and methods developed recently to solve the Environmental problems.

Now under IAMWARM Project, focus is at each Sub Basin level to identify and prioritize the requirements for improvements to storage structures, rehabilitation, new schemes for water harvest, and diversification of crops. Any new schemes or rehabilitation of existing one, consideration of the Environmental issues pertaining to that area and remedial action to overcome the problems is must.

Under Chennai Basin, following Sub Basins are involved:

1) Kosathalaiyar Sub Basin
2) Araniyar Sub Basin
3) **Cooum Sub Basin**
4) Adayar Sub Basin
5) Gummidipoondi
6) Kovalam
7) Nagari
8) Nadhiyar

Accordingly, Environmental issues prevailing in the Cooum Sub basin (Rural) is taken up under IAMWARM Project.

COOUM RIVER

Cooum river takes off from the Kesavaram anicut aross Kosathaiyar. The Korattur anicut was constructed to divert the floodwater of Chembarambakkam tank through Bangaru channel (an artificial channel). The river enters into the Bay of Bengal near Nepier Bridge at Chennai with catchment area of about 139.80 Sq. Km The river starts from Sattarai village at a distance of about 65 Km from West of Chennai City. Across Cooum River an anicut has been constructed at Korattur and New Bangaru Channel takes off on the right bank to feed the Chembarambakkam tank.

Below this anicut the river takes serpentine course and absorb many drainage until it enter city near Koyambedu. The River then finds its way through the heart of the city for a length of 17.98 Km draining the storm water from 18 Sq.Km of the city area before in fall into the

Sea mouth near Napier Bridge. Throughout its course the Cooum is largely used for agricultural purpose.

Due to the diversion of water into Chembarambakkam tank, there is very little flow in the Cooum as it approaches the Chennai City.

Total length of the River	-	65.00 Km
City limit of the River	-	17.98 Km
Catchment Area	-	139.8 Sq. Km
Maximum Flood Discharge	-	19000 Cusecs

COOUM SUB BASIN

Cooum Sub Basin which comes under Chennai Basin acquire its importance since it is located very adjacent to the Chennai Metropolitan Area with complicity in nature like exploitation of Major resources like mines, minerals, water etc. from rural areas. Chennai City has posed environmental degradation like sewage flow, pollution, health hazard and encroachments etc. in the urban area for the sake of rapid development

As such Cooum basin can be conveniently classified as rural area where agriculture is very predominant and urban area where agricultural activities not exists at all.

RURAL AREA.

Cooum Sub basin starts from Thakkolam village in Arakonam taluk in Vellore district. The surplus of Kaveripakkam tank (Kallar river) in Vellore district and surplus of Govindavadi tank (Govindavadi channel) in Kancheepuram district confluences near Kesavaram anicut in Thiruvallur district which is located at a distance of **43 Km** from Kaveripakkam tank.

Total number of minor irrigation tanks which drains into the Cooum sub basin from **Thakkolam upto Kesavaram anicut** is **41 tanks** with a total ayacut of **7116.79 Ha**.

One arm of Kesavaram anicut called Kosasthalaiyar River carries the surplus to the Poondi reservoir over an open weir. Another arm starts from Kesavaram anicut with regulating arrangements and runs as Placis Canal for about

5 Km and then runs as Cooum River from the intersection of Cooum tank surplus and Placis Canal.

There are about 22 open off take which feed water to the irrigation sources in addition to the off take from **2 Anicuts** called Aranvoyal anicut and Korattur anicut.

Aranvoyal Anicut: This anicut is situated at 45.33 km from the mouth of Cooum River. The anicut was constructed originally to feed Thiruninravur tank having registered ayacut of 892.71 ha. at left flank and Gudappakkam tank having registered ayacut of 353.30 ha. in the right flank, which lies in Adyar Sub basin.

Korattur Anicut is situated about **83 Km** from Kaveripakkam tank about **3 Km** down stream of Aranvoyal anicut. This anicut diverts water to Chembrambakkam tank through at regulator and the off take channel is called as New Bangaru canal which runs for length of **7.65 Km** and maximum discharging capacity of the canal is **3627 Cusec**

The Cooum sub basin (Rural) is proposed to be improved under IAMWARM Project. The Cooum sub basin (Rural) is having 80 irrigation tanks of registered ayacut of 9937.54ha

AQUATIC WEEDS:

It is observed in this basin area that the Aquatic weeds growth Ipomoea, locally known as **Kadal Palai** is found to be in almost 80 % of the tanks. The plant growth varies from 40 % to 80 % in various tanks. In general weeds growth restricts the water storage and loss in capacity of the tanks.

DOMESTIC SEWAGE AND MUNICIPAL SOLID WASTE:

Sewage is not being treated by the Municipality in this sub basin. Solid waste generated in this sub basin is **253.5 MT / day** and disposed in the land.

Sewage is being leached into the ground or directly into the nearby drains and streams. Practically there is no sewage discharge of domestic effluent in the case of villages and they create non point pollution. It is essential to conduct awareness programmes in the sub basin to avoid domestic pollution in the sub basin. It is also essential to give training to make use of the waste as worth manure by Vermi composting techniques.

INDUSTRIES:

The effluent generated is let out directly into the nearby drains, which ultimately reach the River or supply channels of tanks in this sub basin. Even though major industries have their own treatment plants, the fields in and around the area are still affected by the treated effluent disposed by the industries. Special attention is needed to avoid water pollution in the sub basin. Classifications of industries in this sub basin are shown below:

Classification / Category	Large	Medium	Small
Red	32	24	223
Orange	87	124	331
Green	7	22	37

SAND MINING:

One of the major problem in river basin related to Sand Mining as it poses major threat to River Bed. Sand quarrying for construction and other purposes is growing at an alarming rate which causes failure of Anicuts and Diversion structures, stagnation of water in the deep mined river bed causing consequent health hazards. This needs to be prevented by all means.

ENCROACHMENT:

This river basin is being encroached for various kinds of activities; this includes farming activities and industrial activities, which may ultimately narrow down the flow of river. This would generally increase the chances of occurring flood during monsoon season and loss to the properties and agricultural crops.

Therefore, legal measures should be strengthened in order to prevent more tanks being encroached upon and get lost. Encroachment also caused due to dumping of solid waste which arrest ground water recharge to a greater extent

DISEASE PREVALENCE:

The disease profile indicates that acute Diarrhea is a major disease prevailing in the basin. In addition, Dysentery and Jaundice are prevalent in the basin (majority of area lies in Thiruvallur District).This is due to contamination of sewage water and lack of knowledge with the people to boil and drink the water for safety reasons.

SOCIAL ISSUES:

The social problems identified in the sub basin are reduction in Livestock, Poor drinking water supply, poor sanitation and poor marketing facilities.

WATER QUALITY AND QUANTITY:

a**) Surface water quality of the basin**

Generally the surface water quality in Cooum River is in excess of permissible limits and other than city limits the surface water quality was found to be good.

b) Ground water quality of the basin

In the Sub Basin the pH value is ranges from 8.0 to 8.5 .The TDS and Total Hardness value of water are high.

ENVIRONMENTAL ACTIVITIES SO FAR CONDUCTED:

The following activities have been conducted in this basin

1) River basin monitoring
2) Awareness Programmes

RIVER BASIN MONITORING:

Water samples have been collected in the identified sampling points and also at polluted tanks. Based on the water quality and data collection, environmental status report has been prepared.

AWARENESS PROGRAMMES:

Environmental Awareness Programmes have been conducted throughout the basin by inviting all the line departments, farmers, Public and NGOs. These programmes had made the people to interact with the departments' representatives and to address the local environmental issues. Also, the environmental protection schemes of the Government have reached the people through the programmes.

The importance and the benefit of Solid waste management, Water conservation techniques, Organic farming and Tree plantation has reached the participants from the lectures of the experts and through pamphlets. Tree Saplings has also been distributed to the participants and it had created interest in tree plantation by utilizing the sullage water.

ENVIRONMENTAL ACTIVTIES PROPOSED:

River Basin Monitoring:

To monitor the quality of water and soil and create database regarding the environmental status for the sub basin, the following activities are proposed at the sub basin level.

Collection and testing of water and soil samples:

Water samples will be collected and tested in the identified sampling points and also at polluted tanks in the sub basin. Soil samples will be collected according to the necessity arising in the sub basin. Collection and testing of water samples is essential, as good and long range data will enable to understand the problems more precisely.

Hence, it is proposed to collect and test water samples at identified points for a period of **Three years** to assess the environmental impact on the quality of surface water of this sub basin more accurately.

In addition to the above identified locations, water samples will also be collected and tested at regular intervals from tanks to estimate the level of pollution where sewage is directly let into tanks and channels to assess the impact of pollution on the quality of surface and ground water.

Soil samples are to be collected from the selected locations to assess the impact on the quality of soil due to various environmental problems like use of Chemical fertilizer and Pesticides and using the polluted water. From these locations, number of samples at regular interval has to be collected and tested to determine precisely the impact on the degradation of the quality of the soil.

Environmental and social knowledge base analysis and Development

Environmental and Social Base line data will be collected to dissipate knowledge amongst villagers for development activities.

Transfer of technical know-how for solid waste management system including source segregation, recycle of dry waste and linkage with user agencies.

Now a new scheme for solid waste management plan is under implementation in all municipalities and Panchayats. Under this scheme, collection tank for disposal and non-disposable garbage have been constructed in most of the local bodies. But recycling the waste and converting the solid waste into manure and production of energy from them are yet to be come up.

Hence demonstration and action programs are planned with user agencies and necessary field visits are programmed to transfer of technical know how for solid waste management system.

Conducting Environmental and social Awareness meeting, Programme, demonstration and exhibitions on various environmental and social related issues including capacity building

Awareness programmes are essential to create awareness among the public and WUA members about environmental and social aspects and the action to be taken by them to remove or reduce the impacts due to the environmental problems.

To create and motivate the people, awareness programmes are to be conducted in the sub basin area. It is also proposed to conduct Environmental Awareness meetings in School / Educational Institutions, conduct Workshops at sub basin and at Region level, provide exposures and field visit to Eco friendly practices including training to the WUA members

during the period of **Three years** covering the following subjects in addition to placing stickers, tin sheets and pamphlets containing messages about environmental awareness.

- Sanitation
- Solid waste treatment
- Sewage treatment and converting the same into Gas
- Natural farming
- Herbal gardening
- Conversion of Aquatic weeds into manure by Vermi composting ,

TOTAL COST:

River basin monitoring and Environmental awareness should be given throughout the sub basin for conserving the quantity and quality of water. In order to achieve this objective, an estimate has been prepared. The estimate cost works out to **Rs 17.00 Lakhs (Rupees seventeen lakhs Only).**

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Environmental Cell Section-II
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PWD / WRO				
PLAN FORMULATION WING				
ENVIRONMENTAL CELL DIVISION, CHENNAI				
IAMWARM PROJECT				
(ENVIRONMENTAL COMPONENT)				
Name of River Basin	Chennai Basin			
Name of Sub Basin	**Cooum Sub Basin (Rural)**			
Name of WUA	Yet to be formed			
Name of Division	Krishna Water Supply Division -8 , Chepauk, Chennai- 05			
Name of sub division	Krishna Water supply Sub Division -1 , Chepauk, Chennai- 05			
	Krishna Water Supply Sub Division -2 , Chepauk, Chennai- 05			
	Krishna Water Supply Sub Division -3 , Pudhuchatram. (Korattur Anicut).			
	Krishna Water Supply Sub Division -4 ,Thiruvallur			
District	**1) Vellore**	**2)Kancheepuram**	**3)Tiruvallur**	**Chennai**
Taluk	1)Arakonam	1)Kancheepuram	1)Tiruvallur	
		2)Sriperumbudur	2) Poonamallee	
			3) Ambhattur	
Block	1)Nemili	1)Walajabad	1)Kadambathur	
		2)Sriperumbudur	2)Poonamallee	
			3) Villivakkam	
Name of Tanks severely affected by the Aquatic weeds:	Almost 80% of the tanks are affected by Aquatic weeds, especially Ipomoea (Kadal Palai)			
Domestic Sewage (Name of River/ Tank with specific location polluted by Domestic sewage)	Sewage generated in seven Municipalities and Two Town Panchayats are 55.6 MT / day and disposed in the water bodies and land which may cause surface and ground water pollution.			
Municipal Solid Waste (Name of River/ Tank with specific location where Municipal solid waste is dumped)	Solid waste generated in six Municipalities and two Town Panchayats are 253.50 MT / day and disposed in the land, which may cause ground water pollution.			
Water Quality Status:				
i) Ground Water	The pH values in Cooum has inadequate data based on the observation well from the Ground Water wing of WRD , this shows that the values ranges from 8.0 to 8.5 shows the influence of contamination in the water quality.			
ii)Surface Water	Flow occurs only during North East monsoon in the river. During the flow period, the surface water is found to be generally good .Pollution of surface water is very high due to addition of industrial and municipal waste.			

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Environmental Cell Sub Division- II	Taramani, Chennai - 113
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DETAILED ESTIMATE

Sl No	Description of work	No	Measurement			Contents
			L	B	D	
I.	**Environmental Social Monitoring of river basin including peroidical water and soil quality testing and documentation. (By fixing nodel agency any educational instituition)**					
a)	Water samples collection from River & Tanks for a period of Three years	24				24 Nos.
b)	Soil samples collection from irrigation fields for a period of Three years	9				9 Nos.
c)	Hiring jeep driver on service contract basis for the department vehicle	1No	3x3 = 9 Months			9 months
d)	Collection and conveyance charges for water and soil samples	LS				LS
e)	Purchases like Cans, Bottles,Chemicals,Documentation of test results including labour charges.	LS				LS
II	**Environmental Social knowledge base analysis and development (By fixing nodel agency or any educational instituition)**					
b)	Preparation of Environmental and Social Impact Assessment report with expert analysis for 3 yrs @ every 6 months and documentation					
i	Environmental and Social Impacts due to project investment.	LS				LS
ii	Environmental Other impacts observed in the river basin due to non project investment	LS				LS
III.	**Transfer of technical know how for solid waste management system including source segregation, recycle of dry waste and linkage with user agencies. (By fixing nodel agency or any educational instituition)**					
a)	Motivating the local bodies for Soild waste management project and Sewage treatment plants to prevent pollution of water sources and using for irrigation by transfering technical know how through demonstration Documentary film and Technical visit	L.S.				L.S.

b)	Promoting Entrepreneurship Policy for Eradication for weeds by Vermi compost By WUA through Awareness creation, Demonstration and consultative meeting and PILOT STUDY.	L.S.				L.S.
c)	Formation of Herbal gardens	L.S.				L.S.
IV.	**Conducting Environmental and Social Awareness meeting, programme, demonstration and Exhibitions on various Environmental and Social related issues including capacity building.(By fixing nodel agency or any educational instituition)**					
a)	Printing Stickers, Pamphlets, Tin sheets, Providing Banners for Propagating Environmental Awareness among public	LS				LS
b)	Conducting Environmental and Social Awareness Programs for Public	LS				LS
c)	Conducting Meetings for WRO officials / Line Department officials.	LS				LS
d)	Conducting Environmental and Social Awareness Programs in School/ Institutions	LS				LS
e)	Conducting Workshop at sub basin level	LS				LS
f)	Conducting Workshop at Region level	LS				LS
g)	Exposure to field visit to Eco-friendly practices including training to WUA members	LS				LS
h)	Environmental Fair / Exhibition, benchmarking, recognition of good Eco friendly practices, green awards.	LS				LS
i)	Preparing and publishing Environmental Atlas for the Sub Basin for the use of Line departments / Institutions for better Management of Sub basin	LS				LS
j)	Environmental related books/ Journal, publishing, Annual report for the sub basin,	LS				LS
k)	Documentation of the entire activities, Videofilms,hire purchase of LCD, Preparation of sub-basin maps of all size & Upgradation of computer and accessories.	LS				LS
l)	Engaging Computer Operator Grade-II for the preparation of reports,Documents etc..	4 months				4 Months
V)	Unforeseen items	LS				LS

ABSTRACT

S.No	Qty		Description of Work	Rate	Per	Amount
I. Environmental Social Monitoring of river basin including peroidical water and soil quality testing and documentation. (By fixing nodel agency or any educational instituition)						
a)	24	Nos	Testing Charges for the water samples collection from river & tanks for a period of Three years	6441	Each	154584
b)	9	Nos	Testing Charges for the Soil samples collection from irrigation fields for a period of Three years	10964	Each	98676
c)	9	Months	Hiring Jeep driver for the Dept Vehicle @ Rs 166.10 /day (26 days)	166.10	/day	38867
d)	LS		Collection and conveyance charges for water and soil samples	LS		10000
e)	LS		Purchases like Cans, Bottles, Chemicals, Documentation of test results including labour charges.	LS		5000
II	**Environmental Social knowledge base analysis and development (By fixing nodel agency or any educational instituition)**					
b)	LS		Preparation of Environmental and Social Impact Assessment report with expert analysis for 3 yrs @ every 6 months and documentation			
i	LS		Environmental and Social Impacts due to project investment.	LS		250000
ii	LS		Environmental Other impacts observed in the river basin due to non project investment	LS		50000
III.	**Transfer of technical know how for solid waste management system including source segregation, recycle of dry waste and linkage with user agencies. (By fixing nodel agency or any educational instituition)**					
a)	L.S.		Motivating the local bodies for Soild waste management project and Sewage treatment plants to prevent pollution of water sources and using for irrigation by transfering technical know how through demonstration Documentary film and Technical visit.	LS		75000
b)	L.S.		Promoting Entrepreneurship Policy for Eradication for Weeds by Vermi compost by WUA through Awareness creation, Demonstration and consultative meeting and PILOT STUDY.	LS		100000
c)	L.S.		Formation of Herbal garden	LS		30000

IV.	**Conducting Environmental and social Awareness meeting, programme, demonstration and Exhibitions on various environmental and social related issues including capacity building. (By fixing nodel agency)**					
a)	LS		Printing Stickers, Pamphlets, Tin sheets, Providing Banners for Propagating Environmental Awareness among public	LS		5000
b)	LS		Conducting Environmental and Social Awareness Programs for Public	LS		300000
c)	2	Nos	Conducting Meetings for WRO officials / line department officials.	15000		30000
d)	4	Nos	Conducting Environmental and Social Awareness Programme in School/ Institutions	20000		80000
e)	LS		Conducting Workshop at sub basin level	LS		100000
f)	LS		Conducting Workshop at Region level	LS		100000
g)	LS		Exposure to field visit to Eco-friendly practices including training to WUA members	LS		75000
h)	LS		Environmental Fair / Exhibition, benchmarking, recognition of good eco friendly practices, green awards.	LS		50000
i)	LS		Preparing and publishing Environmental Atlas for the Sub Basin for the use of Line departments / Institutions for better Management of Sub basin	LS		100000
j)	LS		Environmental related books/ journal, publishing, Annual report for the sub basin,	LS		5000
k)	LS		Documentation of the entire activities, Videofilms,hire purchase of LCD, Preparation of sub-basin maps of all size & Upgradation of computer and accessories.	LS		6000
l)	4 Months		Engaging Computer Operator grade-II for the preparation of reports,Documents etc.. (26 days / month)	246.4	day	25626
V)	LS		Unforeseen items	LS		11247
			Total			**1700000**

(Rupees Seventeen Lakhs only)

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Working Sheet

24 Nos of water sample
9 Nos of soil sample

Average distance per sample 30 Km

Conveyance Charges for the Collection of water and water samples

Sl No	Description	No. of sample	Distance covered	Cost per km	Cost
1	Conveyance charges for collection of water sample	24	720	10	**7200**
2	Conveyance charges for collection of Soil sample	9	270	10	**2700**
				Total	**9900** or **10000**

Note: Rs 10 Per km (including driver allowance

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Working Sheet

Water Samples

1	Testing Charges rate as per ground water division (Dept) (Partly)	650.00	/Sample
2	Testing Charges rate as per SGS Laboratory (private) (Total Coliform,Faecal Coliform, Pesticides Residual) (Partly)	5250.00	/Sample
3	Service Charges @ 10.30 %	540.75	
	TOTAL	6440.75	(or)
		6441	

Soil Samples

1	Testing Charges rate as per SM & R Division (Dept) (Partly)	6000	/Sample
2	Testing Charges rate as per SGS Laboratory (private) (Pesticides Residual) (Partly)	4500	/Sample
	Service Charges @ 10.3 '	463.50	
	TOTAL	10963.5	(or)
		10964	

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Status of Sewarage condition

S.No	Town	Population 2001	Estimated Sewarage generation in MLD	Existance of Sewarage under ground	No Treatment	Nature of Disposal & Quantity in MLD		
						Water Body		
						River	Reservoir	Land
	Municipalities							
1	Thiruvallur	45517	12.60		yes	3.50		9.10
2	Avadi	230913	5.50		yes			5.50
3	Ambattur	302492	5.40		yes		0.40	4.80
4	Thiruverkadu	30734	9.00		yes	7.00		2.00
5	Poonamallee	42522	8.50		yes			8.50
6	Porur	28782	2.80		yes	2.80		
7	Maduravoyal	44127	7.00		yes	7.00		
	Town Panchayat							
1	Thiuninravur	29395			yes			
2	Thirumazhisai	15271	4.80		yes			4.80
	Total	**769753**	**55.60**			**20.30**	**0.40**	**13.30**

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TN IAMWARM - COOUM SUB BASIN (Rural) - Phase IV - TANK LIST

Blockwise Infrastructure Details - Kancheepuram District

Sl. No	District	Taluk	Block	Name of Tank	TYPE	Reg. Ayacut in ha.	Present Available ayacut in ha.
1	Vellore	Arakkonam	Nemili	Thirumalpur Tank	System	121.68	121.68
				Sub Total		**121.68**	**121.68**
2	**Kanchipuram**	**Kanchipuram**	**Walajabad**	Pudupakkam Peria eri	System	267.93	267.93
3				Pudupakkam Chitheri	System		
4				Periakarumbur tank	System	124.53	124.53
5				Govindavadi Big tank	System	312.63	312.63
6				Govindavadi Chitheri	System	124.33	124.33
7				Veliur Big tank	System	246.14	246.14
8				Veliur Chitheri	System	91.82	91.82
9				Uveri tank	Non Sys	107.91	107.91
10				Putheri tank	Non Sys	63.18	63.18
				Sub Total		**1338.45**	**1338.45**
11				Parandur Big tank	System	301.44	301.44
12				Parandur Andan thangal	System		
13				Parandur Alwar thangal	System		
14				Parandur Chitheri	System		
15				Parandur Buderi	System	31.87	31.87
16				Parandur Kattupattur tank	System	57.92	57.92
17				Parandur Nagapattu Karanthanga	System	77.57	77.57
18				Pondavakkam tank	Non Sys	116.40	116.40
19				Kottavakkam tank	Non Sys	153.60	153.60
20				Pullalure Peria eri	Non Sys	66.10	66.10
21				Pullalure Iyyan eri	Non Sys	209.62	209.62
22				Pallampakkam tank	Non Sys	47.35	47.35
23				Valathur tank	Non Sys	394.78	394.78
				Sub Total		**1456.64**	**1456.64**
24		**Sriperumbudur**	**Sriperumbudur**	Edayarpakkam tank	Non Sys	149.75	149.75
25				Kottur tank	Non Sys	71.21	71.21
26				Ekanapuram kali eri	System	69.02	69.02
27				Ekanapuram kadaperi	System	98.52	98.52
28				Ekanapuram vayaleri	Non Sys	61.39	61.39
29				Mahadevimangalam tank	System	111.28	111.28
30				Mahadevimangalam thangal	System		
31				Kannanthangal thangal	System	23.87	23.87
32				Kannanthangal Large tank	System	90.65	90.65
33				Gunagarambakkam tank	System	79.72	79.72
34				Ettikuttimedu tank	System	31.57	31.57
35				Akkamapuram tank	Non Sys	101.41	101.41
				Sub Total		**888.39**	**888.39**
				Grand Total		**3805.16**	**3805.16**

Thiruvallur District

Sl. No.	District	Name of Taluk	Block	Name of Tank	Type	Registered ayacut (Ha)	Present Available ayacut in ha.
1	Thiruvallur	Thiruvallur	Kadambathur	Kannur tank	Non Sys	64.10	64.10
2				Elambakkam tank	Non Sys	128.80	128.80
3				Pudupattu Anumandhai eri	Non Sys	92.23	92.23
4				Pudupattu Kommanthangal	System		
5				Pudupattu krishnanthangal	System		
6				Cooum tank	Non Sys	929.58	929.58
7				Satharai tank	Non Sys	71.42	71.42
8				Adhigathur tank	Non Sys	100.36	100.36
9				Melnallathur tank	Non Sys	68.07	14.97
10				Kilnallathur tank	Non Sys	71.06	71.06
11				Vengathur tank	Non Sys	89.47	89.47
12				Aranvoil big tank	Non Sys	100.45	100.45
13				Kesavanallathur	Non Sys	109.72	100.30
14				Kadambathur	Non Sys	101.28	101.28
				Sub Total		**1926.55**	**1864.03**
15			Tiruvallur	Selai	Non Sys	139.61	25.58
16				Tholur	Non Sys	269.64	251.75
17				Thirurkuppam	Non Sys	170.02	38.10
18				Putlur	Non Sys	102.43	24.79
19				Periakuppam tank	Non Sys	144.94	Nil
				Sub Total		**826.64**	**340.22**
20		Poonamalee	Poonamalee	Thiruninravoor Tank	Non-Sys	752.54	442.26
21				Thandurai Tank	Non-Sys	101.59	24.83
22				Sekkadu Tank	Non-Sys	73.96	5.31
23				Vilinjiambakkam	Non-Sys	63.39	Nil
24				Melmanambedu Tank	Non-Sys	105.60	Nil
25				Vayalanallur Tank	Non-Sys	82.79	21.17
26				Banavedu Thottam Hissa Thangal	Non-Sys	120.66	111.55
27				Mangammal Thangal			
28				Kannapalayam Thamal Eri			
29				Veeraraghavapuram	Non-Sys	66.50	Nil
30				Varadharajapuram Tank	Non-Sys	115.36	Nil
31				Melpakkam Tank	Non-Sys	44.00	15.00
32				Parivakkam Tank	Non-Sys	92.86	Nil
33				Sundarasolapuram	Non-Sys	23.42	Nil
34				Paruthipattu tank	Non-Sys	360.27	Nil
				Sub Total		**2002.94**	**620.11**
35	Thiruvallur	Ambattur	Villivakkam	Ayapakkam Tank	Non-Sys	93.50	Nil
36				Ambathur Tank	Non-Sys	145.75	Nil
37				Korattur Tank	Non-Sys	302.47	Nil
38				Kolathur	Non-Sys	71.66	Nil
39				Konnur Tank	Non-Sys	42.11	Nil
40				Sennerkuppam Tank	Non-Sys	120.74	Nil
41				Koladi Tank	Non-Sys	68.42	Nil
42				Ayanambakkam Tank	Non-Sys	85.83	Nil
43				Madura Voyal tank	Non-Sys	212.55	Nil
44				Nerkundram Tank	Non-Sys	103.13	Nil
45				Virugambakkam Tank	Non-Sys	130.10	Nil
				Sub Total		**1376.26**	**0.00**
				Total		**6132.39**	**2824.36**
				Total for Cooum Sub Basin (Rural)		**9937.54**	**6629.51**

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Status of Solid Waste Generation

Local Body	Population 2001	Designed Capacity of Protected Water Supply (Lakh Litre)		Total Estimated Consumption (Lakh Litre)	Estimated Sewarage generation in MLD	Solid Waste Management (Tonnes)	
		Surface Water	Ground Water			Generation	Collection
Municipalities							
1.Thiruvallur	45517				13	15	8
2.Avadi	230913	73		73	6	90	90
3.Ambattur	302492		88	88	5	125	110
4.Thiruverkadu	30734		11		9	3	1
5.Poonamallee	42522		11		9	5	
6.Porur	28782	13	3		3	10	10
7.Maduravoyal	44127		10	10	7	3	1
Total	725087	86	123	171	51	250	219
Town Panchayat							
1.Thiuninravur	29395					3.5	3.0
2.Thirumazhisai	15271	6	1	7	5		
Total	44666	6	1	7	5	4	3
Grand Total	**769753**	**92**	**124**	**178**	**56**	**254**	**222**

Sampling Points

Chennai Basin **Cooum Sub Basin (Rural)**

Origin : Kesavaram Anicut

S.No	Sampling Code No	Location	Distance from origin	Remarks
1	10301	Rear side of Majestic furniture Ltd in Aranvoyal Village	25 Km	U/S point of newly constructed Breweries at Aranvoyal on Poonamallee- Thiruvallur road. Aranvoyal is 14 Km from Poonamallee
2	10302	200m D/S of newly constructed Breweries at Aranvoyal	26 Km	D/S point of newly constructed Breweries at Aranvoyal on Poonamallee- Thiruvallur road
3	10303	D/S Bridge on Poonamallee - Avadi road near Paruthipattu	45 Km	4 Km from Avadi road leading to Poonamallee

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Taramani, Chennai - 113

1.8 GROUND WATER COMPONENT

PUBLIC WORKS DEPARTMENT

From
Er. S. Nanthakumar, B.E.,
Executive Engineer, PWD,
Ground Water Division,
Tharamani, Chennai – 600 113.

To
The Executive Engineer, PWD,
Krishna Water Supply Project Division – 8,
Chepauk,
Chennai – 600 005.

Lr.No: JDO/IAMWARM/2010-2011/dated: 03.08.2010

Sir,

Sub: IAMWARM – Ground Water Component Cooum Sub Basin – DPR – Reg.

Ref: Your Proc. No: DB/JDO 4/F 34 (2)/ 2010/443M/dt:20.07.2010.

With reference to the above letter cited, I am to state that the proposal on Ground Water Component regarding Cooum sub basin may be taken as 'NIL'.

Executive Engineer, PWD,
Ground Water Division,
Tharamani, Chennai – 113.

Name of Work :- Rehabilitation of Pudupakkam Big Tank under TN IAMWARM Project in Walajabad Taluk of Kancheepuram District

DESIGN OF SURPLUS ARRANGEMENTS

YIELD FOR CATCHMENT

Free catchment area	=	0.63	Sq.miles	
Intercepted catchment area	=	0.27	Sq.miles	
Combined Catchment area	=	0.90	Sq.miles	
Equivalent catchment Area	=	Free catch.+1/5 of Inter .catch.		
	=	0.63+ 1/5 x	0.27	
	=	0.684	Sq.miles(or)	1.772 Sq.km

II MAXIMUM FLOOD DISCHARGE

"As the combined catchment area is less than 3 Sq.miles Presipitation formulae is adopted for arriving the Maximum flood discharge. as per CE memo No. MI / 3849/ 6TER/ AT/ Date. 02.05.1967

MFD(Q) =Eqi. Catch x5280x15x5280/(24x60x60x12)

	=	275.88	Cusec
Maximum discharge from supply channel =		15.24	Cusec
Total MFD	=	291.12	Cusec
	=	8.244	Cumecs

Discharge Capacity of Weir

FTL	=	97.140	m
MWL	=	97.600	m
MWL- FTL	=	0.460	m
Flood Lift	=	0.960	
Length of existing weir	=	9.35	m

Discharge capacity of surplus weir

$Q = 2/3 \times Cd \times L \times H \times (2gh)^{1/2}$

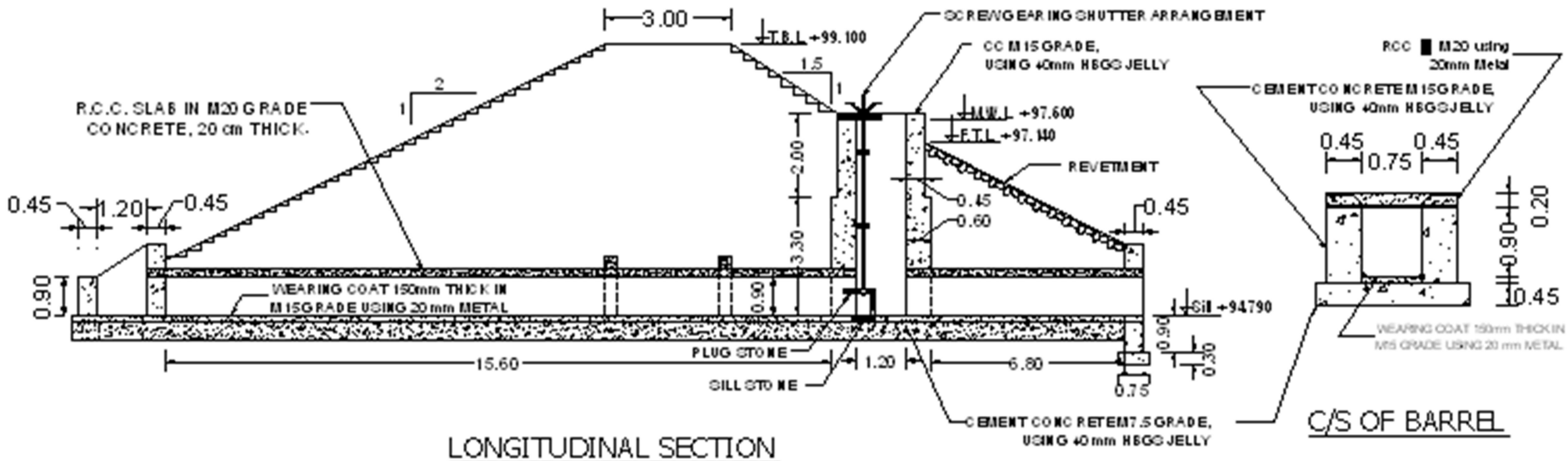
$= 2/3 \times 0.562 \times 9.35 \times 0.960 \times (2 \times 9.81 \times 0.960)^{1/2}$

$= 14.595$ Cumecs

* **Hence the existing BC weir is adequated to discharge MFD**

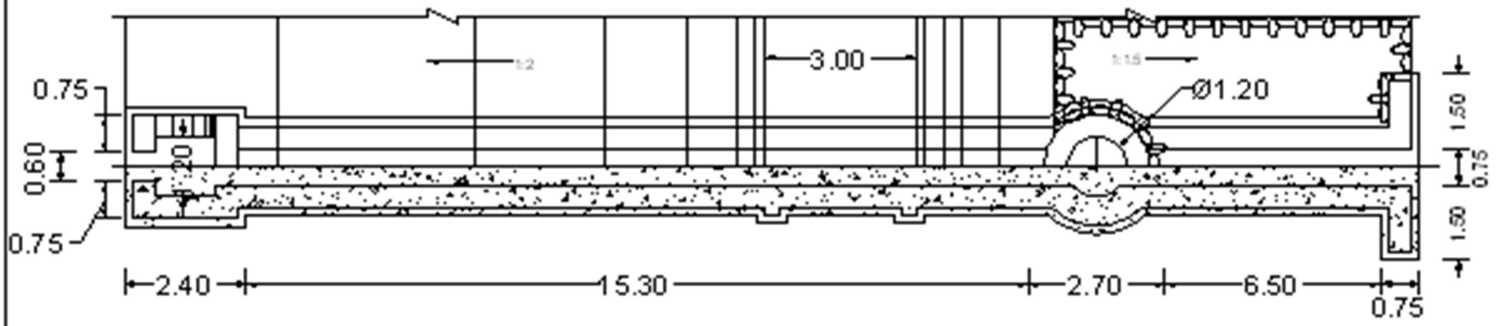
DRAWINGS AND MAPS

TANK SLUICE - TOWER HEAD TYPE



LONGITUDINAL SECTION

C/S OF BARREL

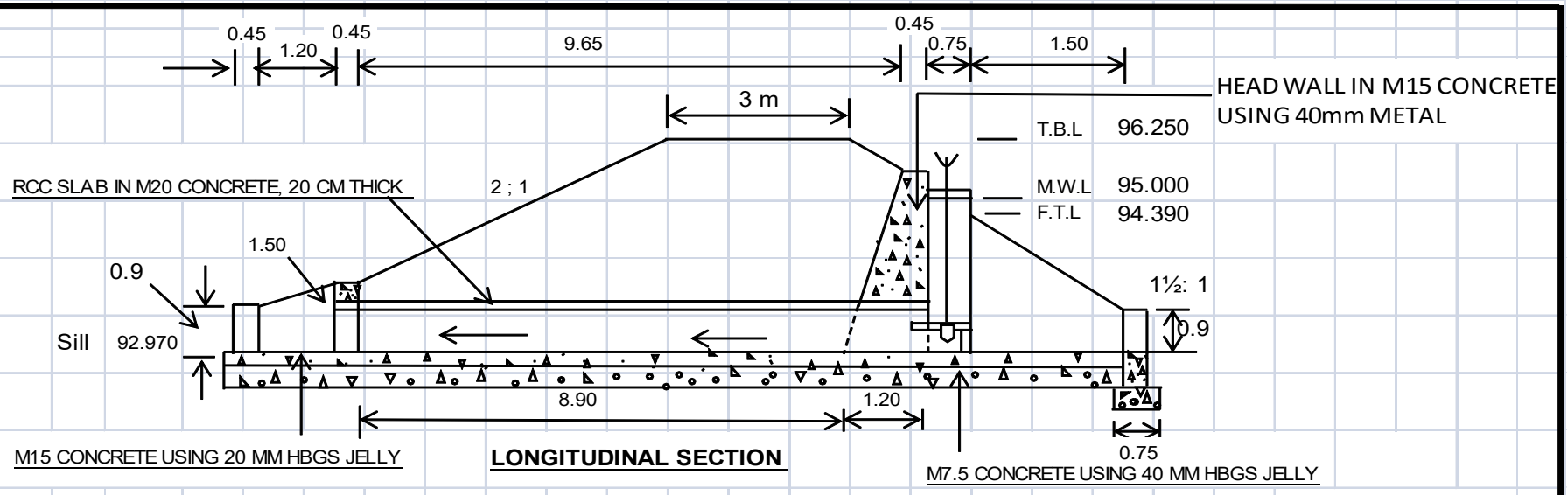


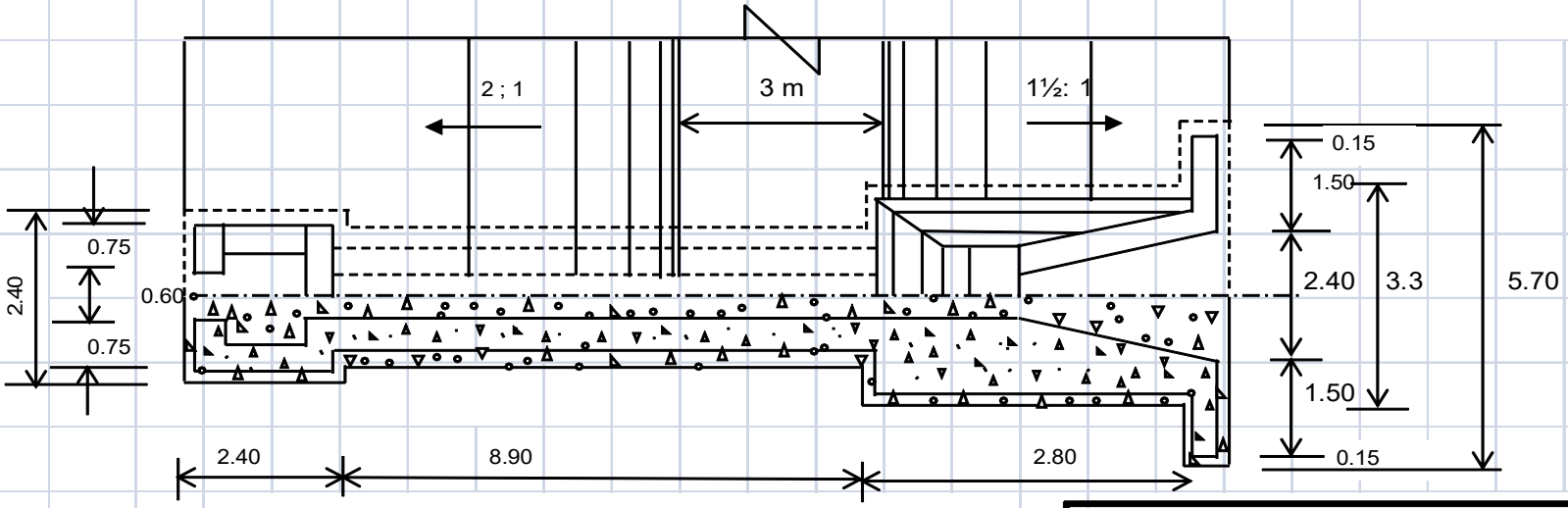
HALF PLAN AT TOP AND HALF PLAN AT FOUNDATION

CERTIFIED THAT THE ORIGINAL HYDRAULIC PARTICULARS/ STRUCTURAL STATUS ARE UNCHANGED.

PUDUPAKKAM PERIA ERI

RECONSTRUCTION OF SLUICE No. 1

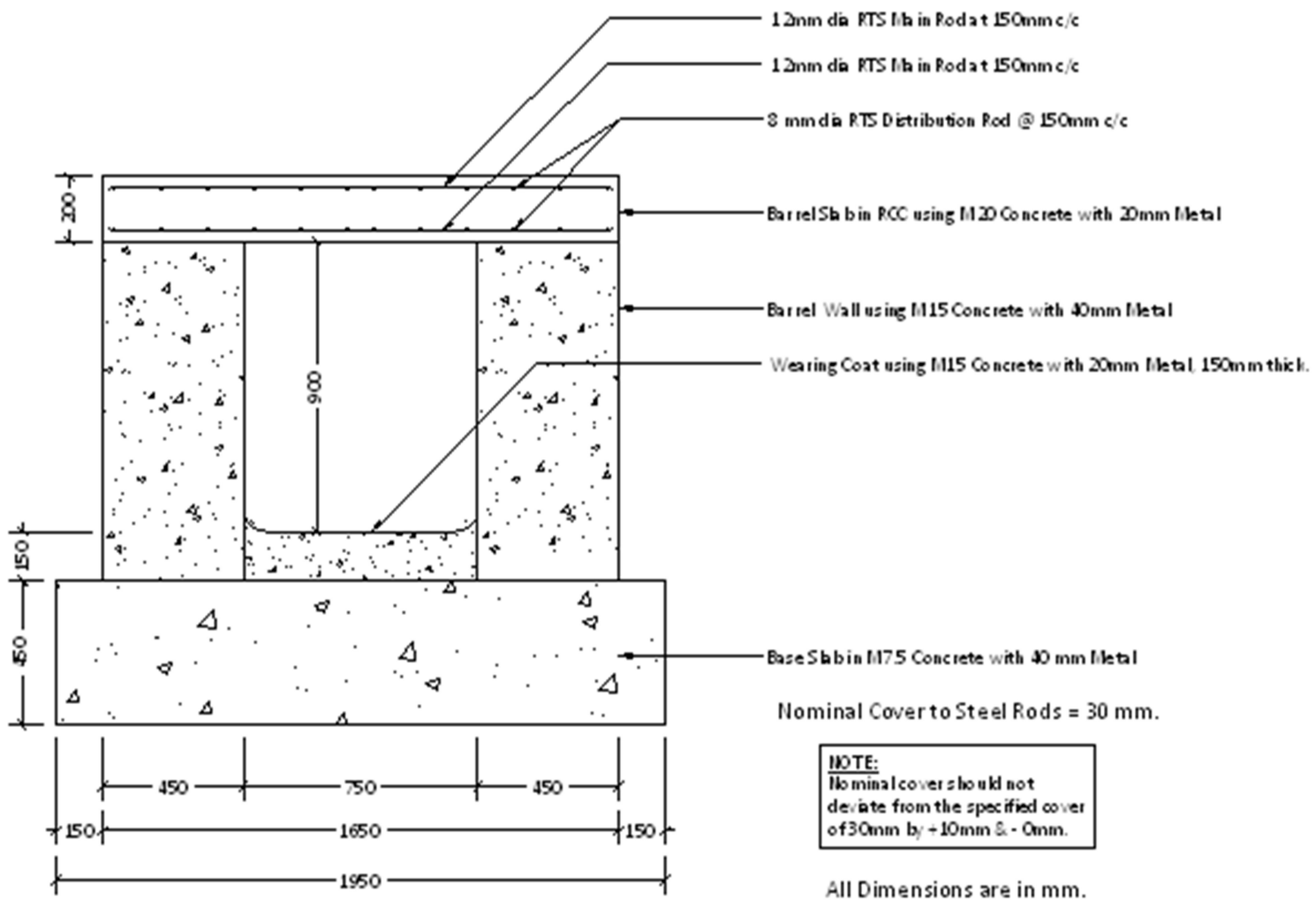




HALF PLAN AT TOP AND HALF PLAN AT FOUNDATION

RECONSTRUCTION OF SLUICE NO. 3

OF PUDUPAKKAM CHITHERI

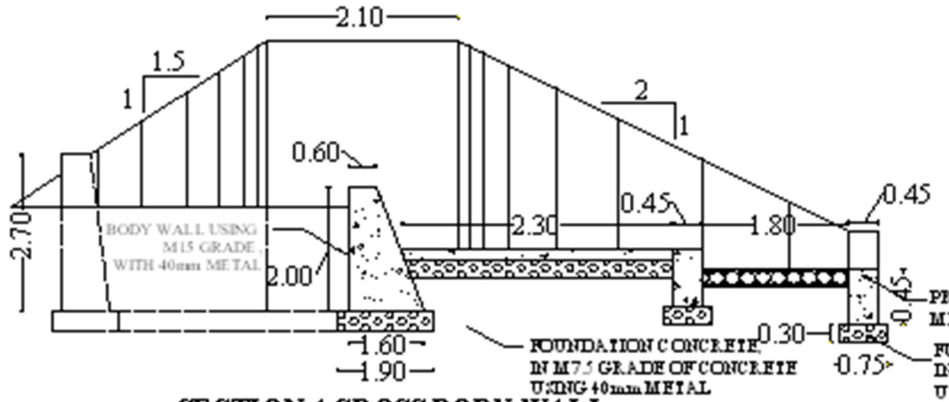


Nominal Cover to Steel Rods = 30 mm.

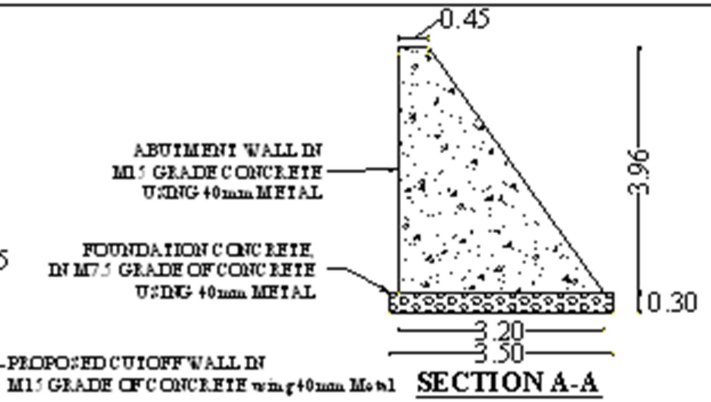
NOTE:
Nominal cover should not deviate from the specified cover of 30mm by +10mm & - 0mm.

All Dimensions are in mm.

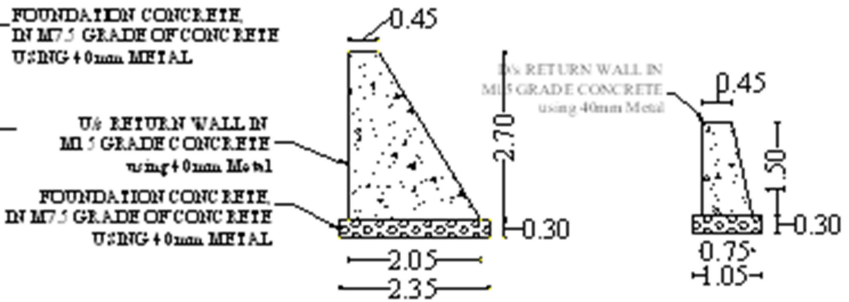
TYPICAL CROSS SECTION OF SLUICE BARREL



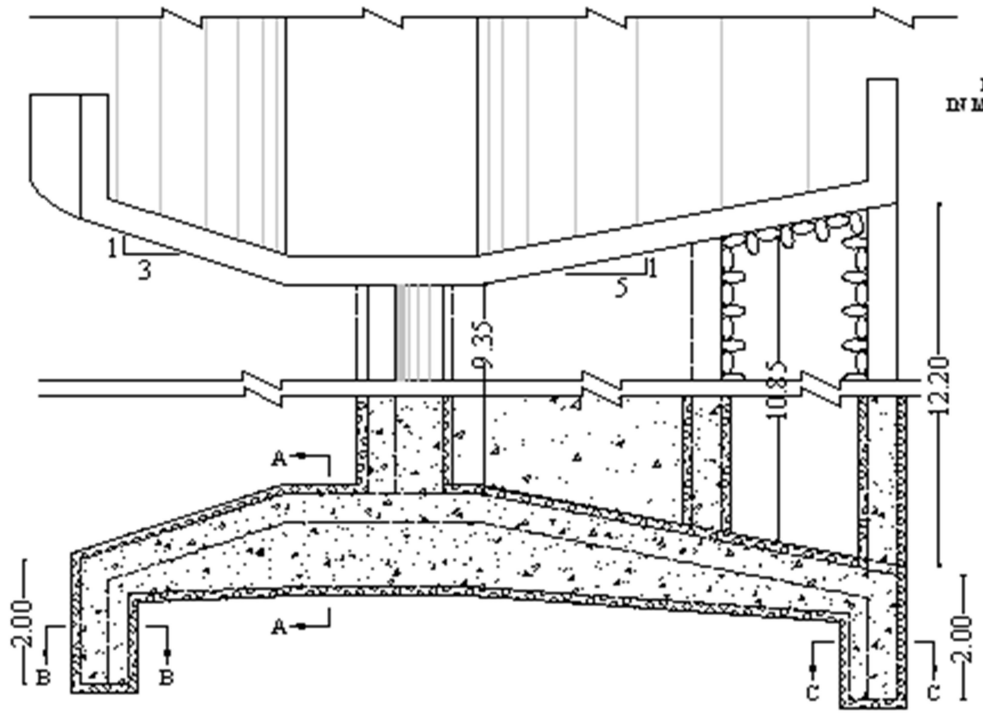
SECTION ACROSS BODY WALL



SECTION A-A



SECTION B-B **SECTION C-C**



HALF PLAN AT TOP & HALF PLAN AT FOUNDATION

This Drawing is based on the Engineer-in-Chief Circular No.S 7(4) 40361/2006/T.Cell/Dt. 24.04.07

ALL LEVELS AND DIMENSIONS ARE IN METRE.

PUDUPAKKAM PERIA ERI

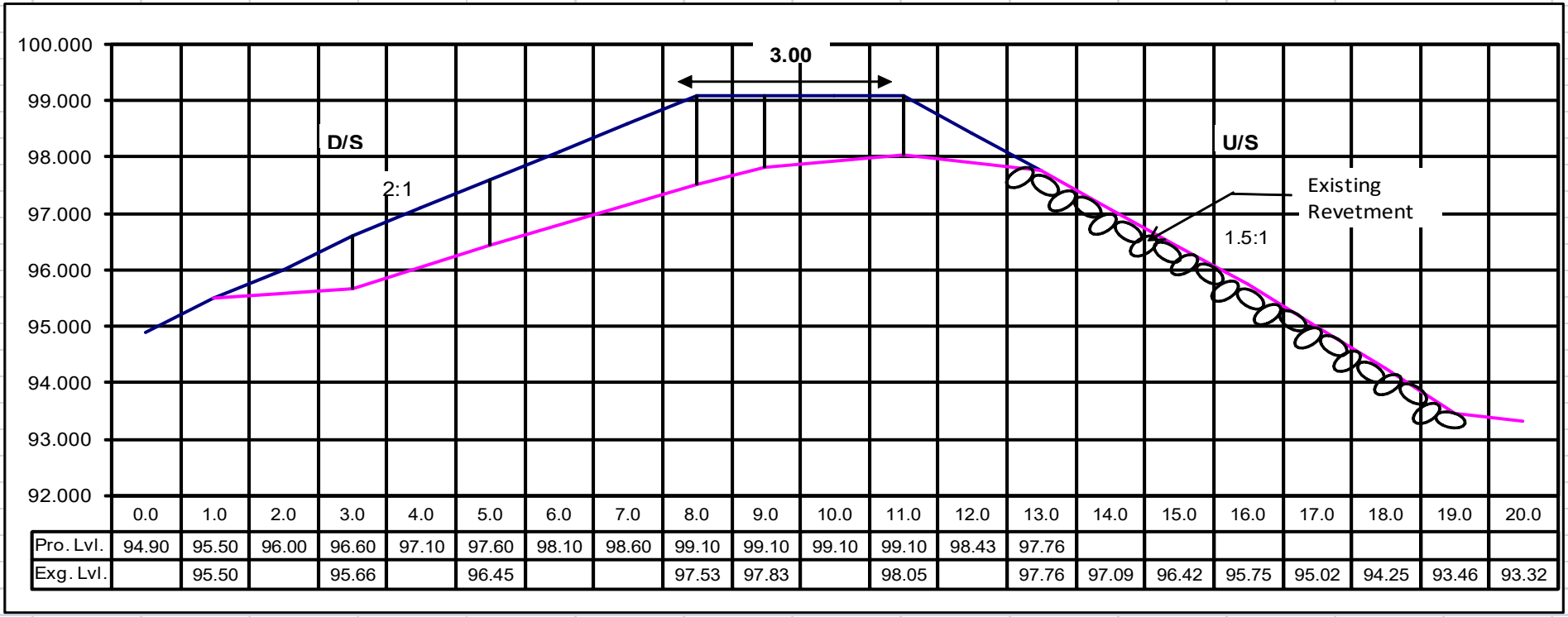
RECONSTRUCTION OF WEIR No. 1 WITH STEPPED APRON.

Rehabilitation of Pudupakkam Big Tank

Area **11.90** m2

TBL 99.100 MWL 97.600 FTL 97.140

x Axis 1 unit = 1 m
Y Axis 1 unit = 1 m

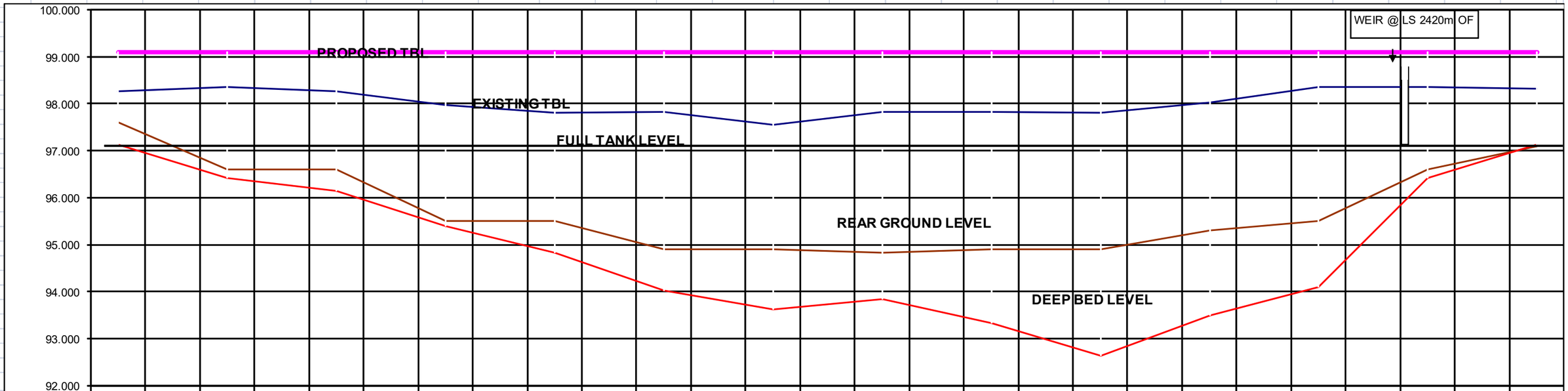


	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
Pro. Lvl.	94.90	95.50	96.00	96.60	97.10	97.60	98.10	98.60	99.10	99.10	99.10	99.10	98.43	97.76							
Exg. Lvl.		95.50		95.66		96.45			97.53	97.83		98.05		97.76	97.09	96.42	95.75	95.02	94.25	93.46	93.32

CS @ LS 1600m

Distance	1.0	3.0	5.0	8.0	9.0	11.0	13.0						
Existg. Lvl.	95.500	95.660	96.450	97.530	97.830	98.050	97.760						
Prop Lvl.	95.500	96.600	97.600	99.100	99.100	99.100	97.760						
Difernce	0.000	0.940	1.150	1.570	1.270	1.050	0.000						
Area (in m2)		0.94	2.09	4.08	1.42	2.32	1.05	11.9					

Rehabilitation of Pudupakkam Big Tank



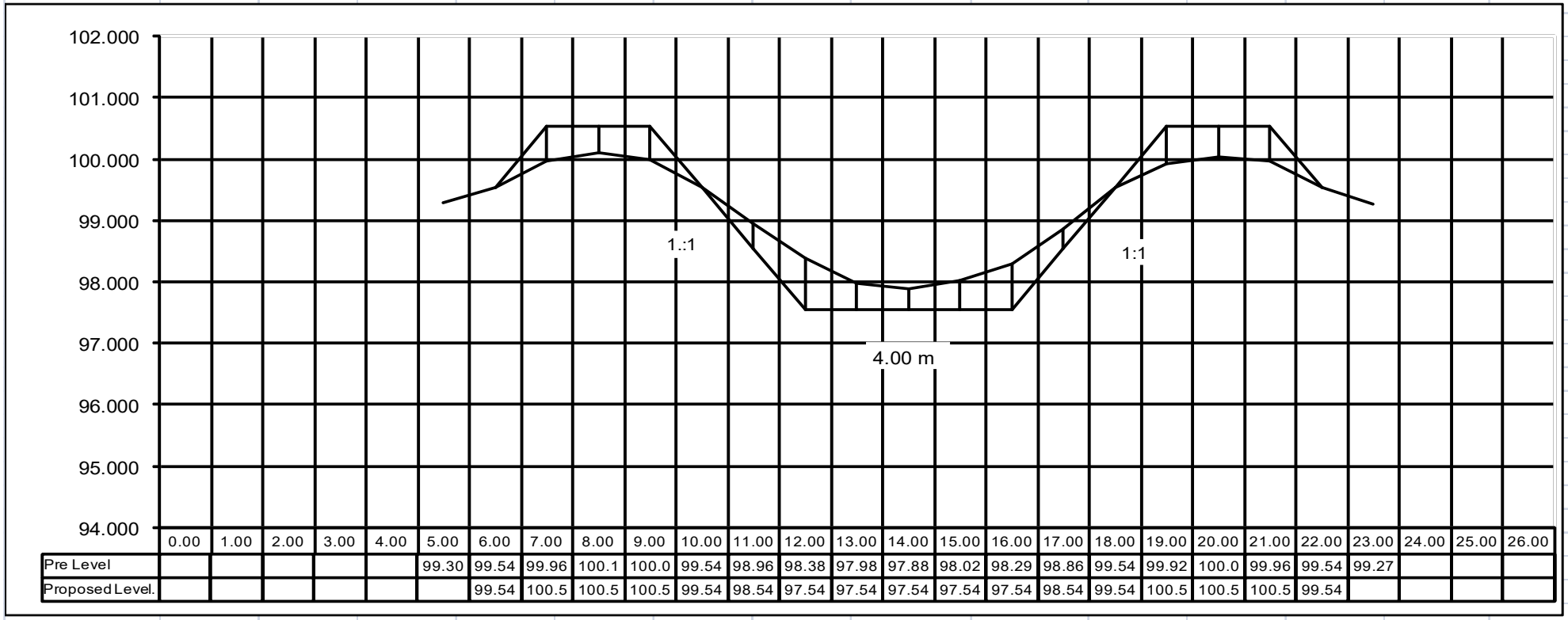
	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2623
Existing Lvl	98.270		98.350		98.270		97.970		97.800		97.830		97.550		97.830		97.830		97.800		98.020		98.350		98.350		98.320
Prop lvl.	99.100		99.100		99.100		99.100		99.100		99.100		99.100		99.100		99.100		99.100		99.100		99.100		99.100		99.100
Rear GL	97.600		96.600		96.600		95.500		95.500		94.900		94.900		94.830		94.900		94.900		95.300		95.500		96.600		97.100
Deep BL	97.140		96.420		96.150		95.400		94.830		94.030		93.620		93.840		93.320		92.630		93.500		94.090		96.420		97.140

LONGITUDINAL SECTION OF TANK BUND - PUDHUPAKKAM BIG TANK

Improvement to Pudupakkam Peria Eri Supply Channel

Area **3.59** m^2

Finished Bed Level + 97.540 **FSD 99.040**

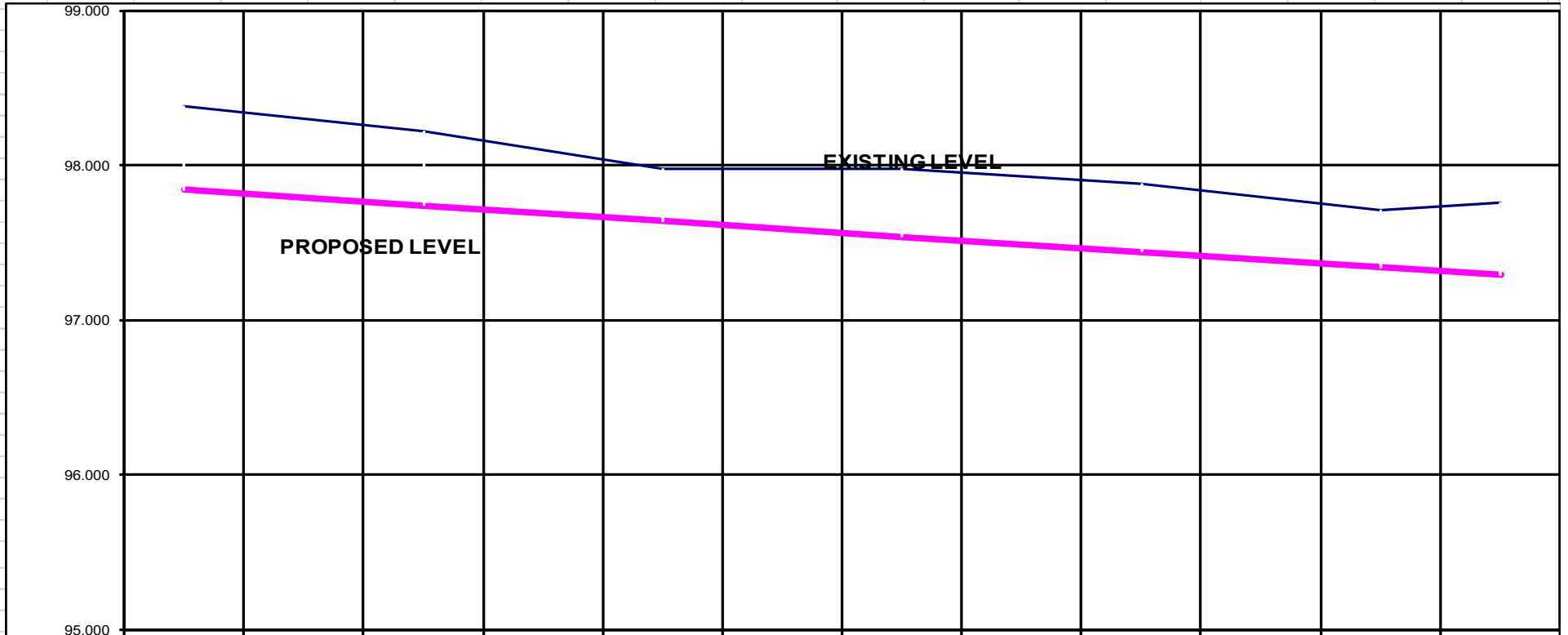


	0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00
Pre Level						99.30	99.54	99.96	100.1	100.0	99.54	98.96	98.38	97.98	97.88	98.02	98.29	98.86	99.54	99.92	100.0	99.96	99.54	99.27			
Proposed Level.							99.54	100.5	100.5	100.5	99.54	98.54	97.54	97.54	97.54	97.54	97.54	98.54	99.54	100.5	100.5	100.5	99.54				

CS of Supply Channel @ LS 600 m

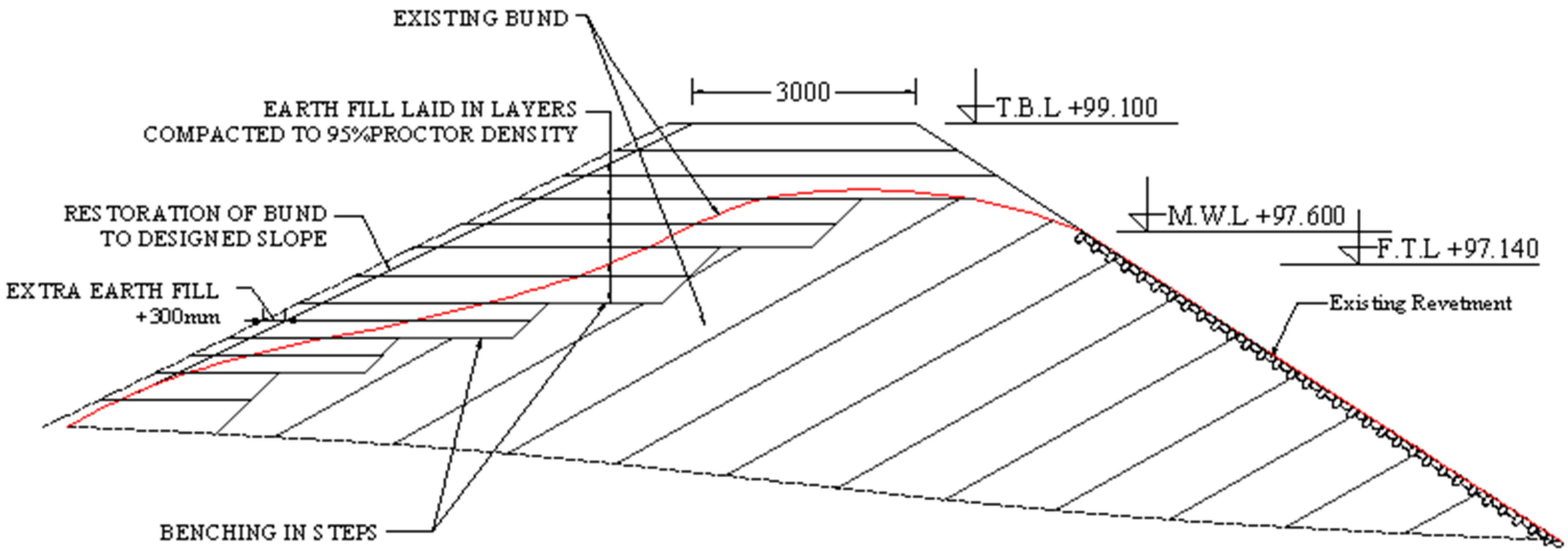
Distance	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00				
Pre Level	99.540	98.960	98.380	97.980	97.880	98.020	98.290	98.860	99.540				
Proposed Level.	99.540	98.540	97.540	97.540	97.540	97.540	97.540	98.540	99.540				
Difernce	0.000	0.420	0.840	0.440	0.340	0.480	0.750	0.320	0.000				
Area		0.210	0.630	0.640	0.390	0.410	0.615	0.535	0.160		**3.59**	m^2	

Rehabilitation of Pudhupakkam Big Tank



	0	100	200	300	400	500	600	700	800	900	1000	1100
Existing Lvl	98.380		98.220		97.980		97.980		97.880		97.710	97.760
Prop lvl.	97.84		97.74		97.64		97.54		97.44		97.34	97.29

RAISING AND STRENGTHENING OF BUND IN PUDUPAKKAM BIG TANK



CROSS SECTION AT LS 1000m

TN IAMWARM PROJECT - PHASE IV
COOUM SUB BASIN

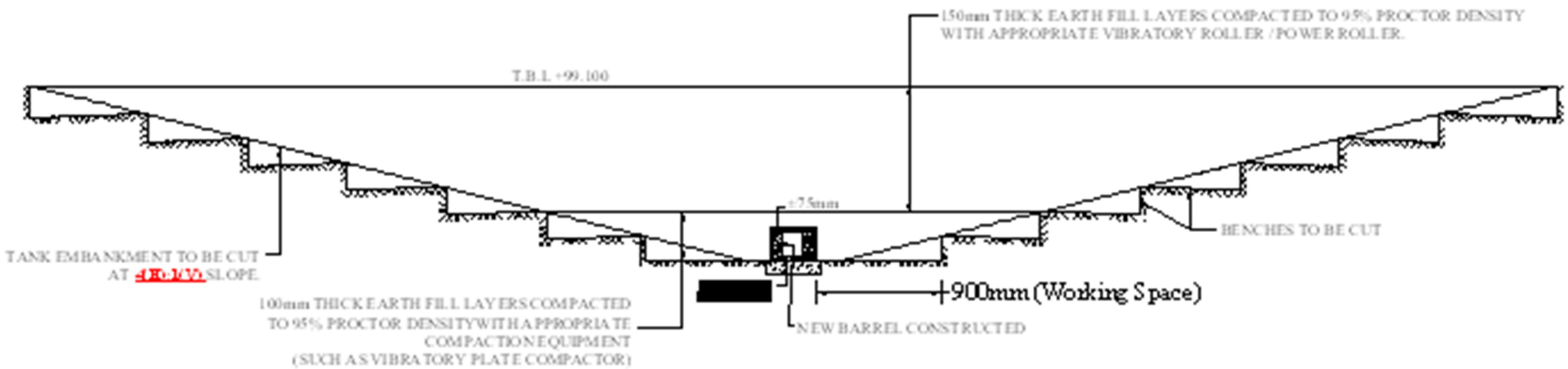
KRISHNA WATER SUPPLY PROJECT DIVISION 8
SUB DIVISION 3

PUDUPAKKAM BIG TANK - BUND

ALL DIMENSIONS ARE IN MM

ALL LEVELS ARE IN M

RE CONSTRUCTION OF SLUICE IN PUDUPAKKAM BIG TANK



NOTES:

1. THE BASE MUST BE MADE SMOOTH AND HARD, DULY COMPACTED WITH COMPACTORS / PNEUMATIC TAMPERS.

2. EARTHFILL COMPACTION ADJOINING THE BARREL AND BENCHES SHOULD BE COMPACTED BY MECHANICAL / PNEUMATIC TAMPERS TO ENSURE EFFECTIVE COMPACTION.

3. EARTH OBTAINED FROM BENCHING SHALL BE REUSED (AFTER REMOVAL OF CLODS BIGGER THAN 75mm., VEGETATION, ETC.) IN EARTHFILL LAYERS.

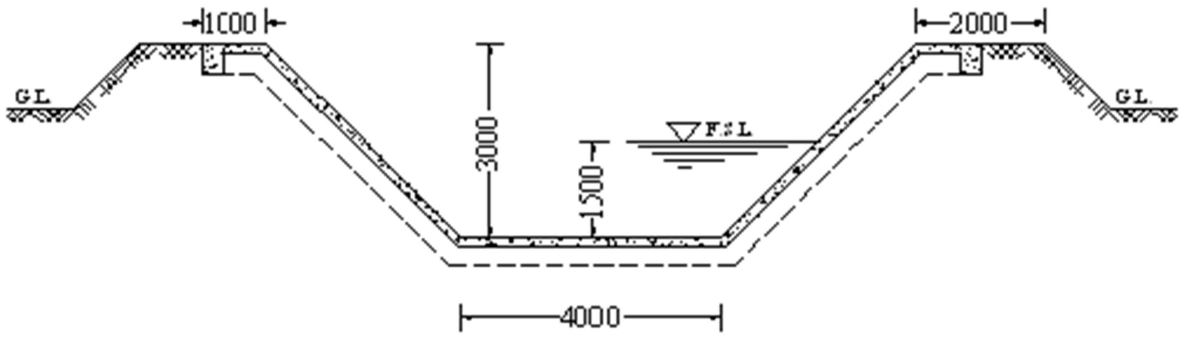
TN IAMWARM PROJECT - PHASE IV
COOUM SUB BASIN

KRISHNA WATER SUPPLY PROJECT DIVISION 8
SUB DIVISION 3

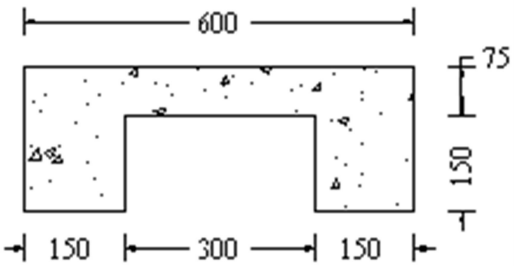
PUDUPAKKAM BIG TANK - SLUICE No. 1

ALL DIMENSIONS ARE IN MM
ALL LEVELS ARE IN M

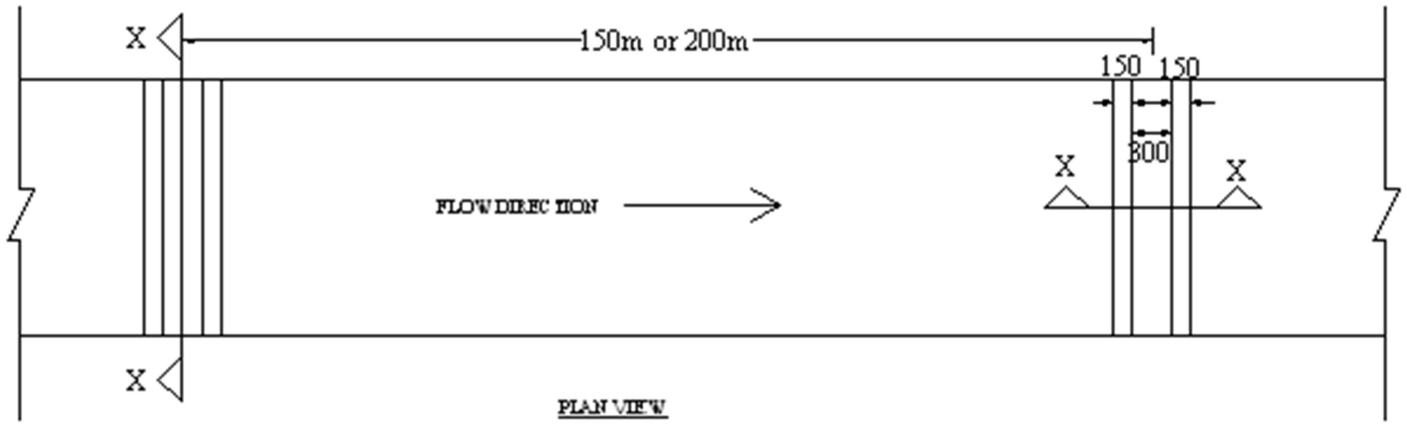
SECTION OF BED BAR / MODEL SECTION FOR SUPPLY CHANNEL OF PUDUPAKKAM BIG TANK



SECTION ALONG Y-Y



SECTION ALONG X-X



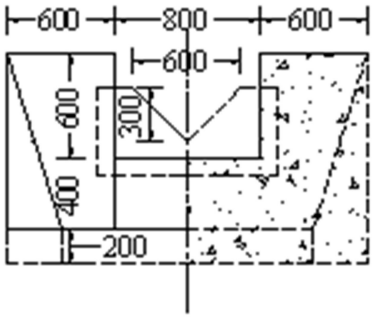
PLAN VIEW

TN IAMWARM PROJECT - PHASE IV
CO OUM SUB BASIN

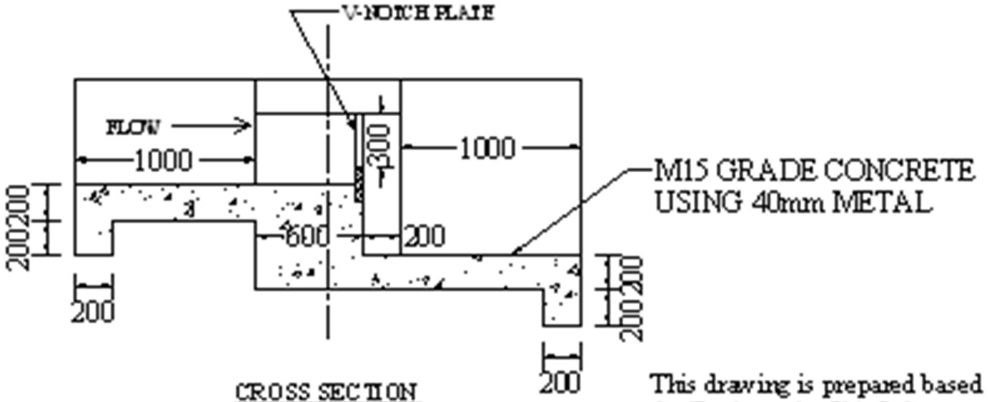
KRISHNA WATER SUPPLY PROJECT DIVISION 3
SUB DIVISION 3

PUDUPAKKAM BIG TANK - SUPPLY CHANNEL
ALL DIMENSIONS ARE IN MM

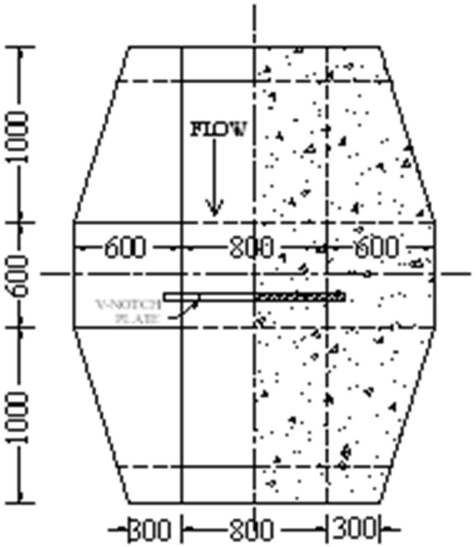
TYPICAL DETAILS OF MEASURING DEVICE (V-Notch) IN THE FEILD CHANNEL OF TANK SLUICE



HALF FRONT ELEVATION AND
HALF SECTIONAL ELEVATION



CROSS SECTION



HALF FRONT ELEVATION AND
HALF SECTIONAL ELEVATION

This drawing is prepared based on the Guidelines issued by the Engineer-in-Chief's letter no. Techcell / IAMWARM guidelines / 49119 / 2010 dt. 01.02.2010.

V–NOTCH – SALIENT DETAILS (For 1 to 3 Cusecs)

No. of notch	Discharge		Head over Crest in cm	V–Notch size in cm	Overall size in cm
	Cusecs	Lit/Sec			
59	1	28.30	20.50	25x50	50x65
88	2	56.60	27.00	30x60	50x75
06	3	85.00	32.00	35x70	55x90

TN IAMWARM PROJECT - PHASE IV
COOUM SUB BASIN

KRISHNA WATER SUPPLY PROJECT DIVISION 5
SUB DIVISION 3

MEASURING DEVICE

ALL DIMENSIONS ARE IN MM

ALL LEVELS ARE IN M

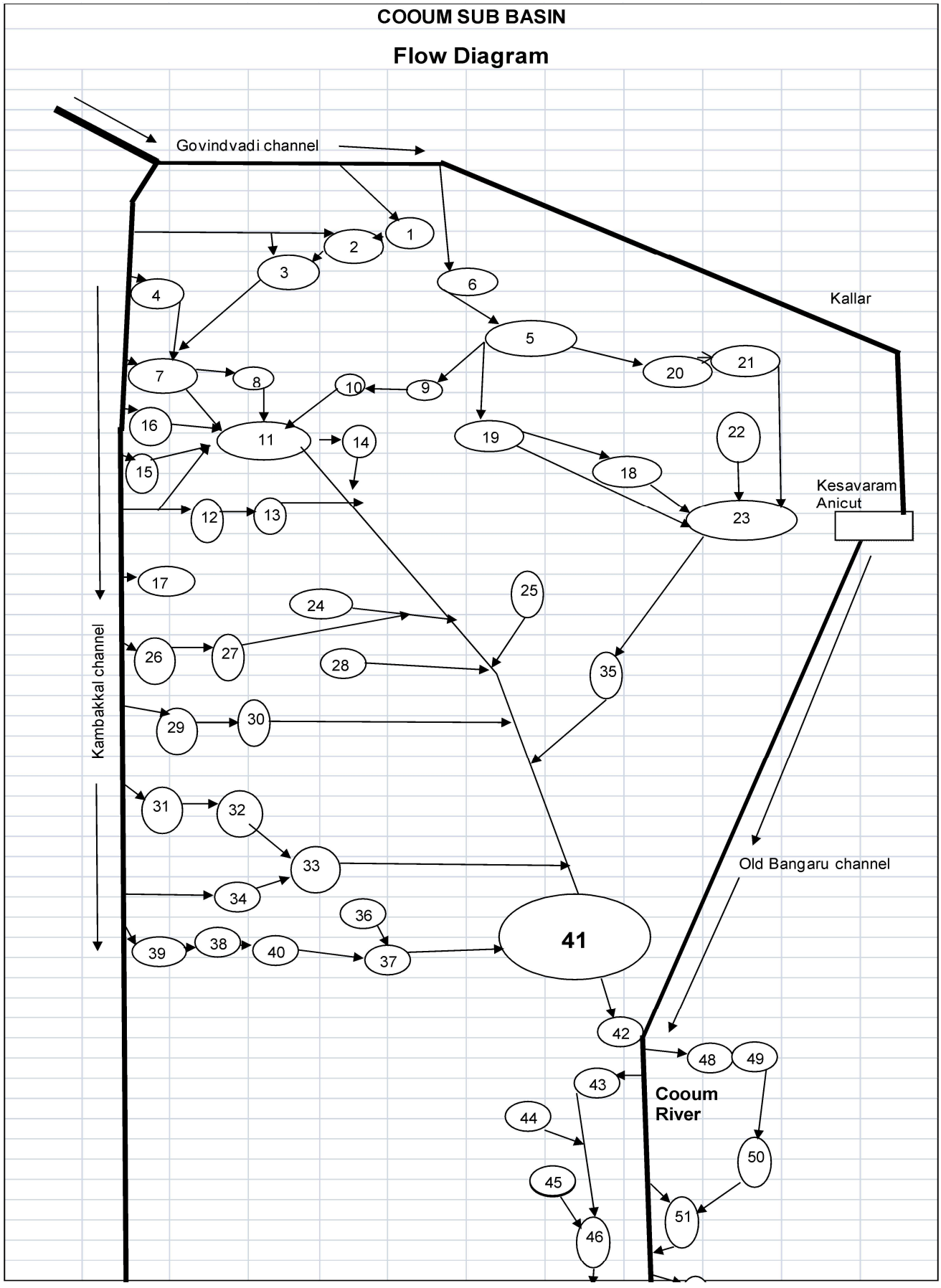
COOUM SUB BASIN - TANK LIST

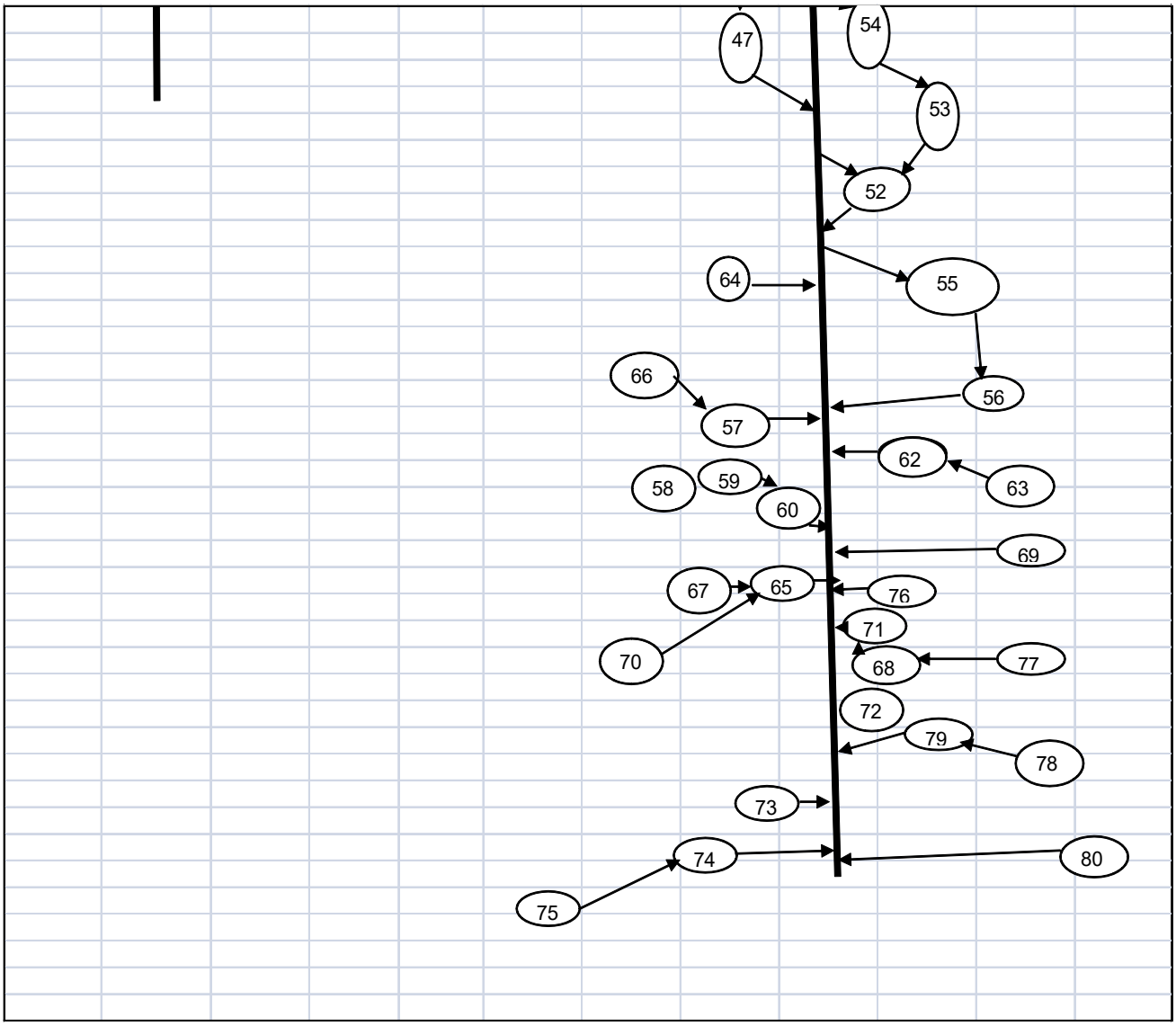
Tank	Name of Tank
1	Thirumalpur Tank
2	Pudupakkam Peria eri
3	Pudupakkam Chitheri
4	Periakarumbur tank
5	Govindavadi Big Tank
6	Govindavadi Chitheri
7	Veliyur Big Tank
8	Veliur Chitheri
9	Uveri tank
10	Putheri tank
11	Parandur Big tank
12	Parandur Andan Thangal
13	Parandur Alwar Thangal
14	Parandur Chitheri
15	Parandur Buderi
16	Parandur Kattupattur tank
17	Parandur Nagapattu Karanthangal
18	Pondavakkam tank
19	Kottavakkam tank
20	Pullalure Peria eri
21	Pullalure Iyyan eri
22	Pallampakkam tank
23	Valathur tank
24	Edayarpakkam tank
25	Kottur tank
26	Ekanapuram kali eri
27	Ekanapuram kadaperi
28	Ekanapuram vayaleri
29	Mahadevimangalam tank
30	Mahadevimangalam thangal
31	Kannanthangal thangal
32	Kannanthangal Large Tank
33	Gunagarambakkam Tank
34	Ettikuttimedu Tank
35	Akkamapuram tank
36	Kannur tank
37	Elambakkam tank
38	Pudupattu Hanumanthai Eri
39	Pudupattu Kommanthangal
40	Pudupattu krishnanthangal

Tank	Name of Tank
41	Cooum tank
42	Satharai tank
43	Adhigathur tank
44	Melnallathur tank
45	Kelnallathur tank
46	Vengathur tank
47	Aranvoyal Tank
48	Kesavanallathur Tank
49	Kadambathur Tank
50	Selai Tank
51	Periakuppam tank
52	Tholur Tank
53	Thirurkuppam Tank
54	Putlur Tank
55	Thiruninravoor Tank
56	Thandurai Tank
57	Vayalanallur Tank
58	Banavedu Thottam Hissa Thangal
59	Mangammal Thangal
60	Kannapalayam Thamal Eri
61	Melpakkam Tank
62	Sekkadu Tank
63	Vilinjiambakkam Tank
64	Melmanambedu Tank
65	Veeraraghavapuram Tank
66	Varadharajapuram Tank
67	Parivakkam Tank
68	Sundarasolapuram
69	Paruthipattu Tank
70	Sennerkuppam Tank
71	Koladi Tank
72	Ayanambakkam Tank
73	Madura Voyal tank
74	Nerkundram Tank
75	Virugambakkam Tank
76	Ayapakkam Tank
77	Ambathur Tank
78	Korattur Tank
79	Kolathur Tank
80	Konnur Tank

COOUM SUB BASIN

Flow Diagram




47
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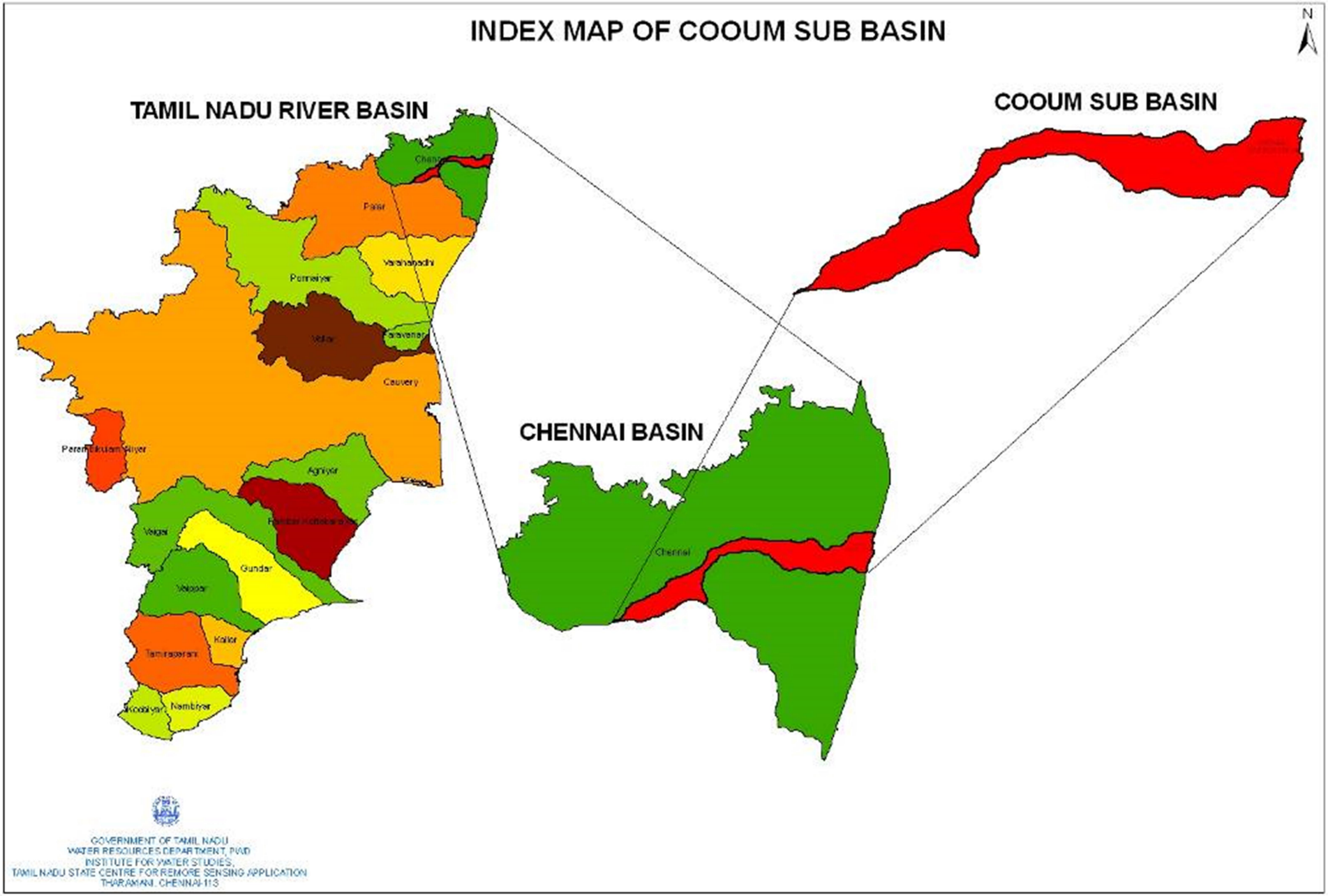
INDEX MAP OF COOUM SUB BASIN



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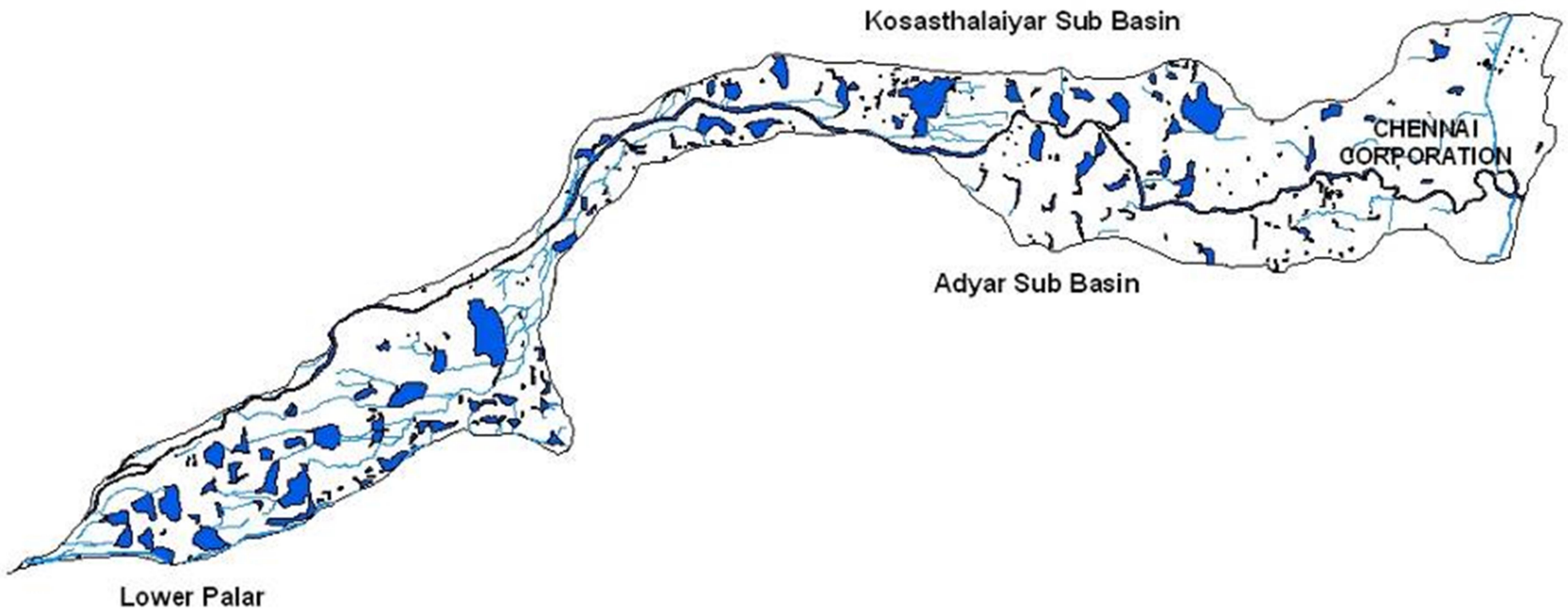
WATER RESOURCES DEPARTMENT, PWD
INSTITUTE FOR WATER STUDIES,
TAMIL NADU STATE CENTRE FOR REMORE SENSING APPLICATION
THARAMANI, CHENNAI-113

COOUM SUB BASIN

DRAINAGE MAP



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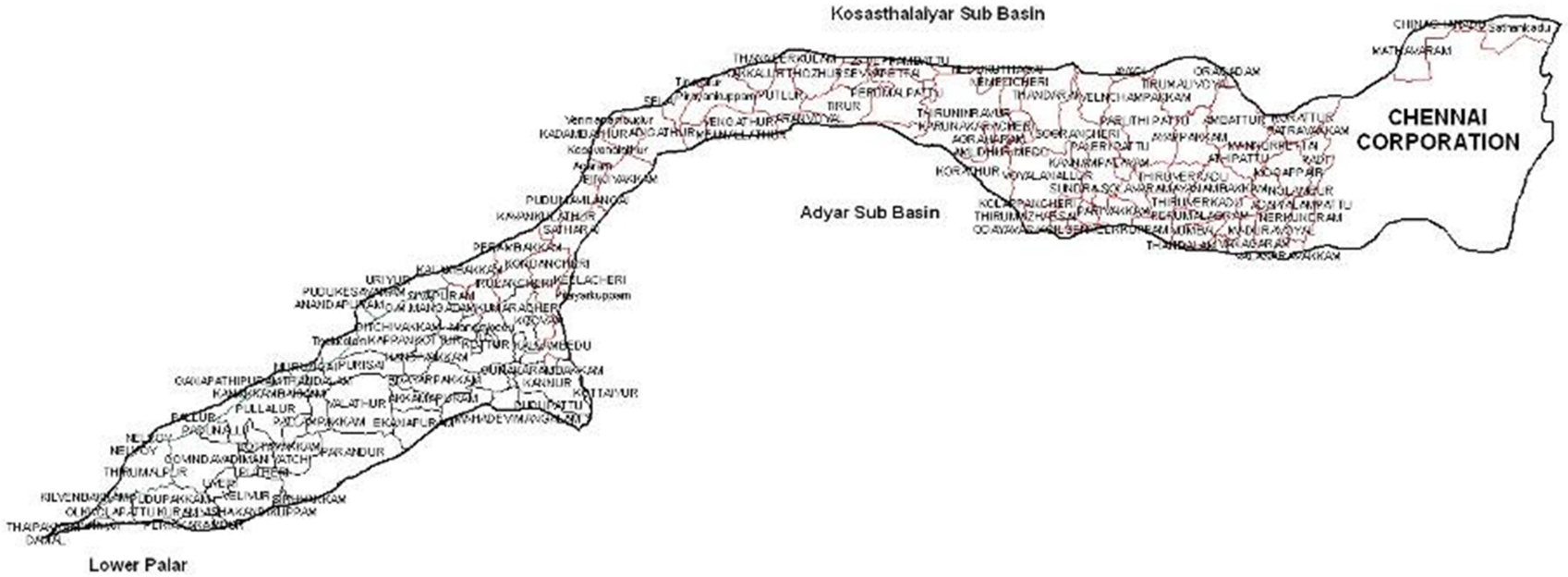
COOUM SUB BASIN
VILLAGE MAP



LEGEND

- Vellore District
- Kanchipuram District
- Thiruvallure District
- Sub Basin Boundary

GOVERNMENT OF TAMILNADU
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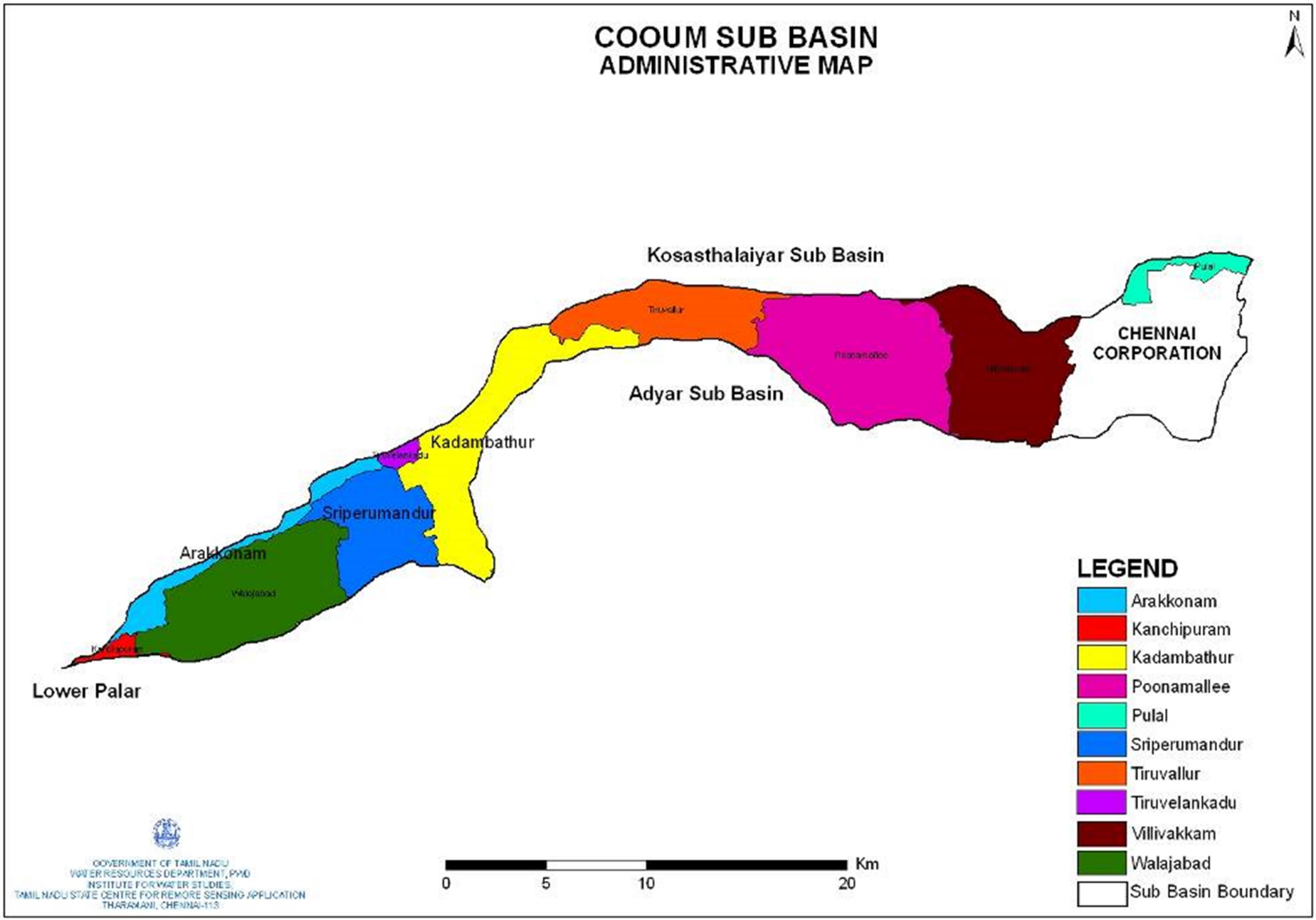
THARAMANI, CHENNAI-113


COOUM SUB BASIN
ADMINISTRATIVE MAP
N
Kosasthalaiyar Sub Basin
Adyar Sub Basin
CHENNAI CORPORATION
Kadambathur
Sriperumandur
Arakkonam
Lower Palar
LEGEND
Arakkonam
Kanchipuram
Kadambathur
Poonamallee
Pulal
Sriperumandur
Tiruvallur
Tiruvelankadu
Villivakkam
Walajabad
Sub Basin Boundary
0
5
10
20
Km
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TAMIL NADU STATE CENTRE FOR REMORE SENSING APPLICATION
THARAMANI, CHENNAI-113

COOUM SUB BASIN
CATEGORIZATION MAP

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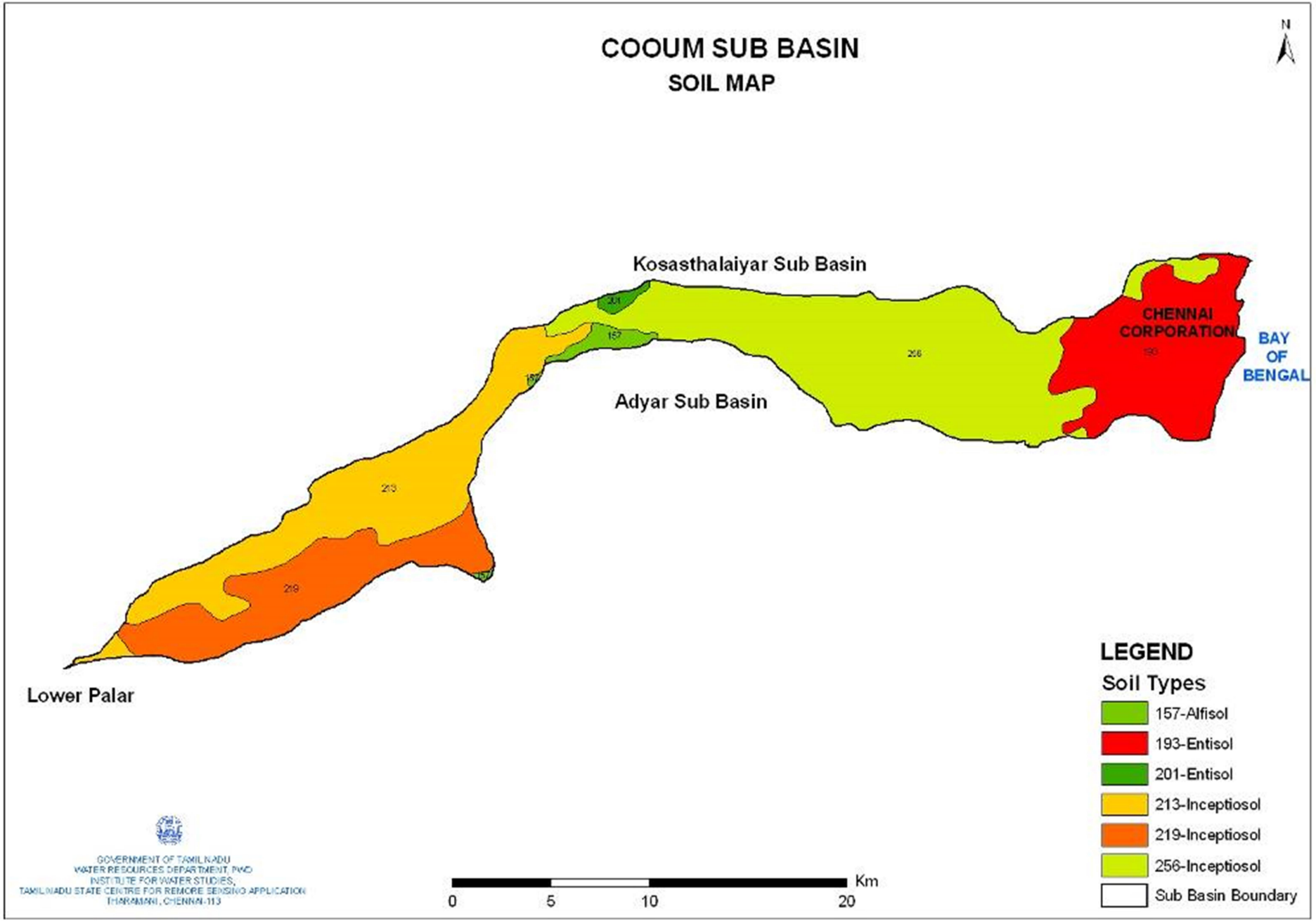
THARAMANI, CHENNA-113

COOUM SUB BASIN

SOIL MAP



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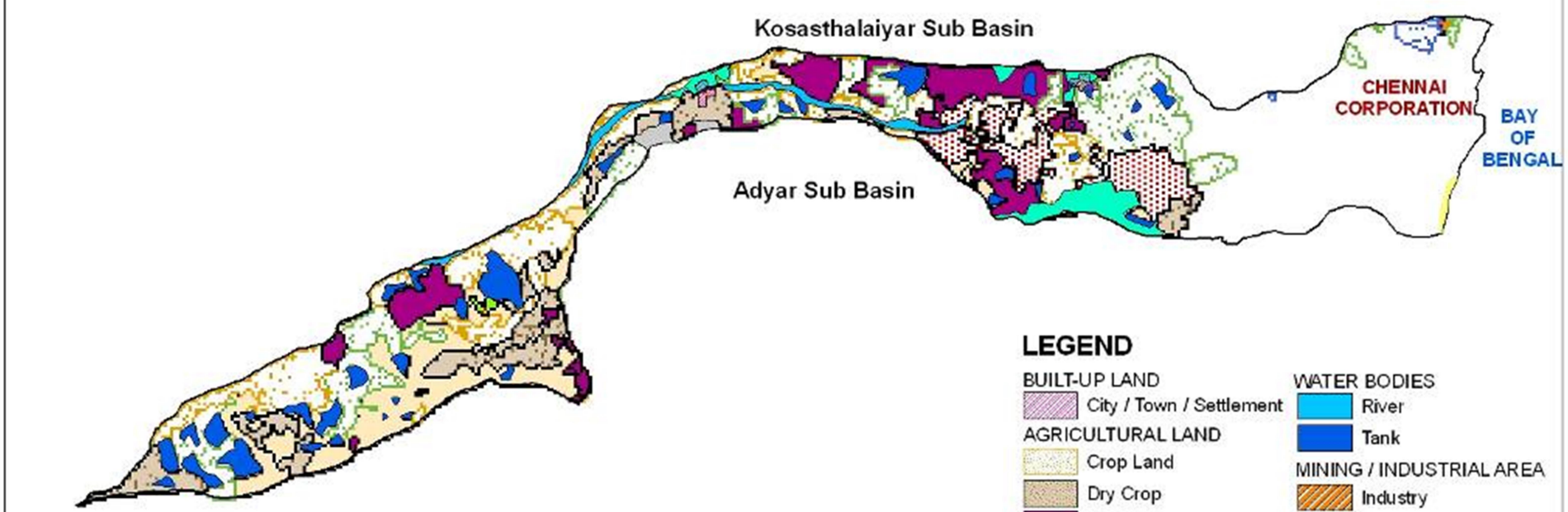
COOUM SUB BASIN
LANDUSE MAP



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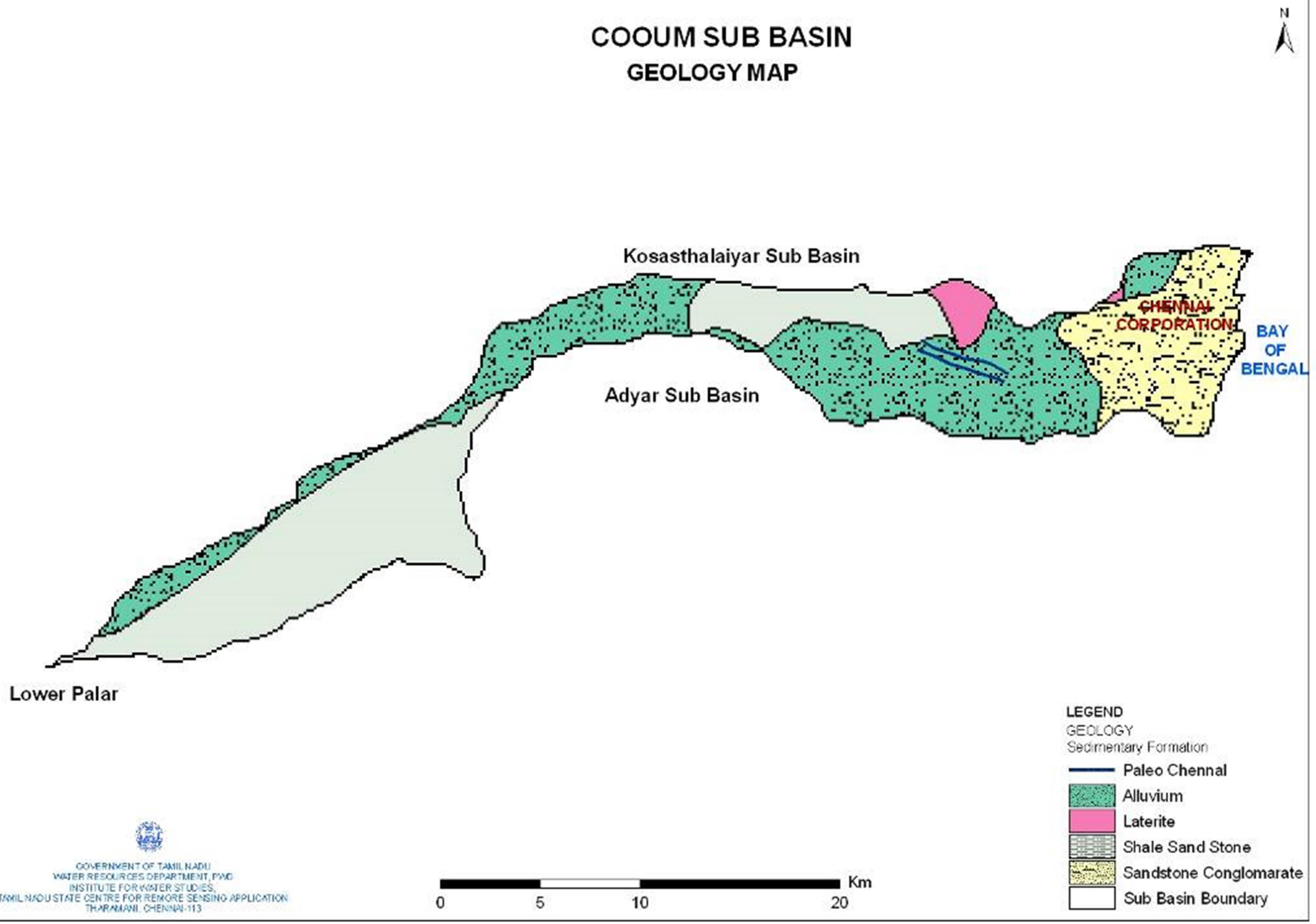
COOUM SUB BASIN
GEOLOGY MAP



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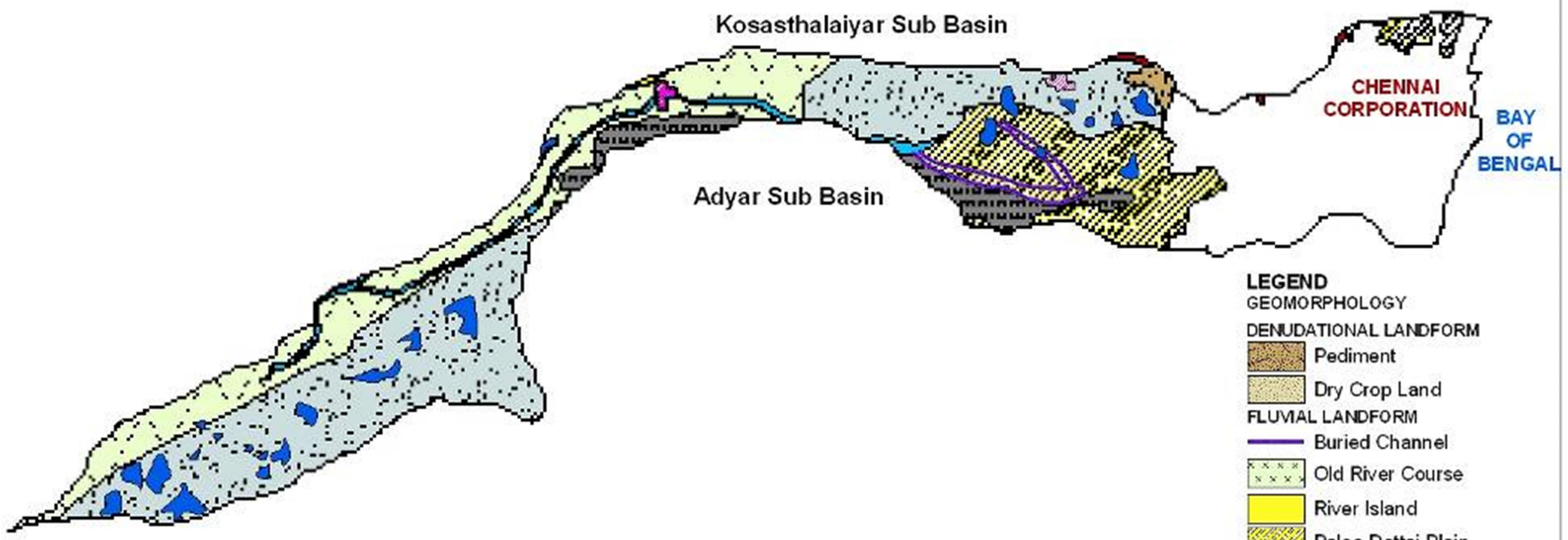
THARAMANI, CHENNAI-113

COOUM SUB BASIN
GEOMORPHOLOGY MAP



N

LEGEND

GEOMORPHOLOGY

DENUDATIONAL LANDFORM
- Pediment
- Dry Crop Land

FLUVIAL LANDFORM
- Buried Channel
- Old River Course
- River Island
- Paleo Dettai Plain
- Laterite Cap-Tertiary
- Up-LandTertiary
- Lower Gondwand

WATER BODIES
- Tank
- River

BUILTUP LAND
- City / Settlement
- Sub Basin Boundary

0 5 10 20 Km

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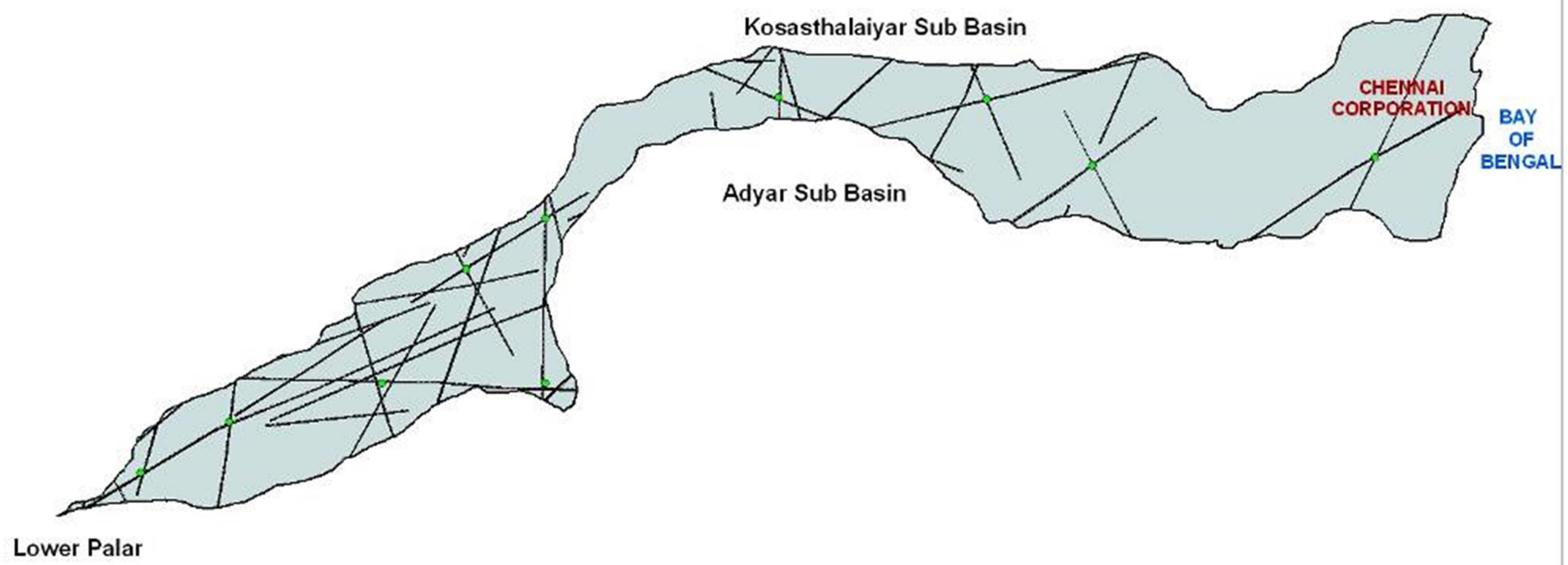
TAMIL NADU STATE CENTRE FOR REMORE SENSING APPLICATION
THARAMANI, CHENNAI-113

COOUM SUB BASIN
LINEAMENT MAP



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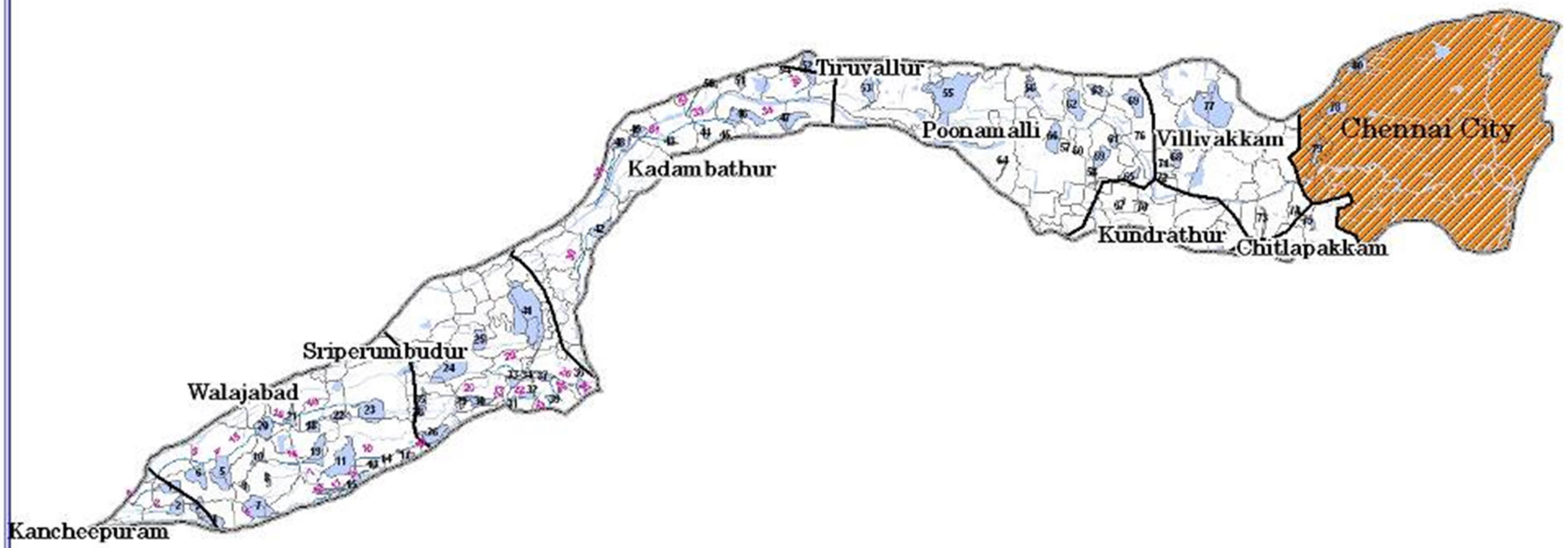
TAMIL NADU STATE CENTRE FOR REMORE SENSING APPLICATION
THARAMANI, CHENNAI-113

0 5 10 20 Km

LEGEND

- Intersection Point
- Lineament
- Sub Basin Boundary

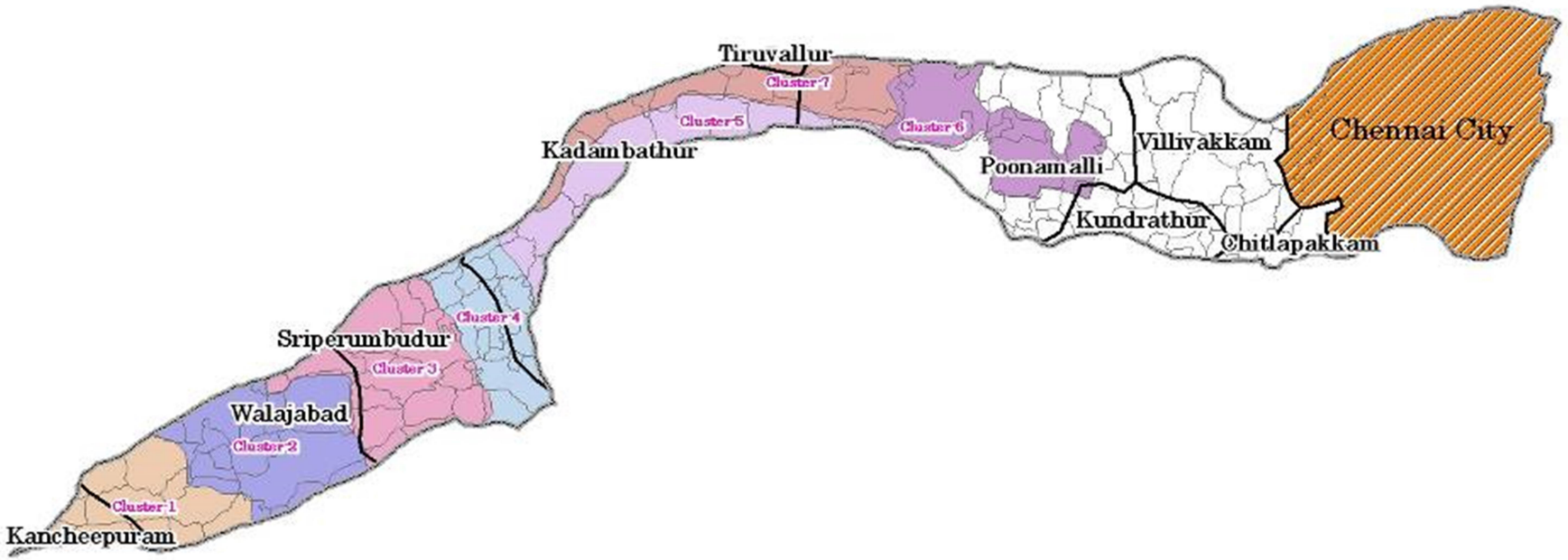
Coovam Sub basin
Drainage map



Legend

- Stream
- SupplyChannel (IAMWARM)
- Tank (IAMWARM)
- Tank
- Village

Coovam Sub basin
WRD-Cluster map

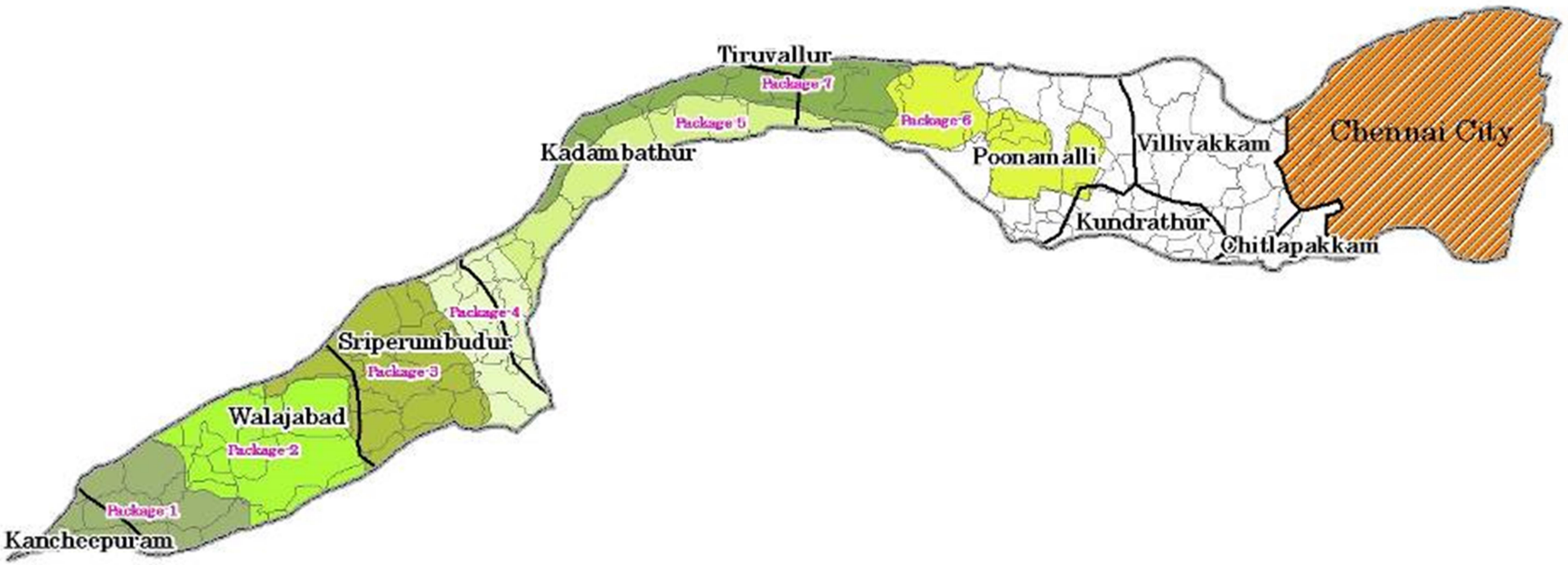


Legend

Village

Cluster

Coovam Sub basin
WRD-Package map

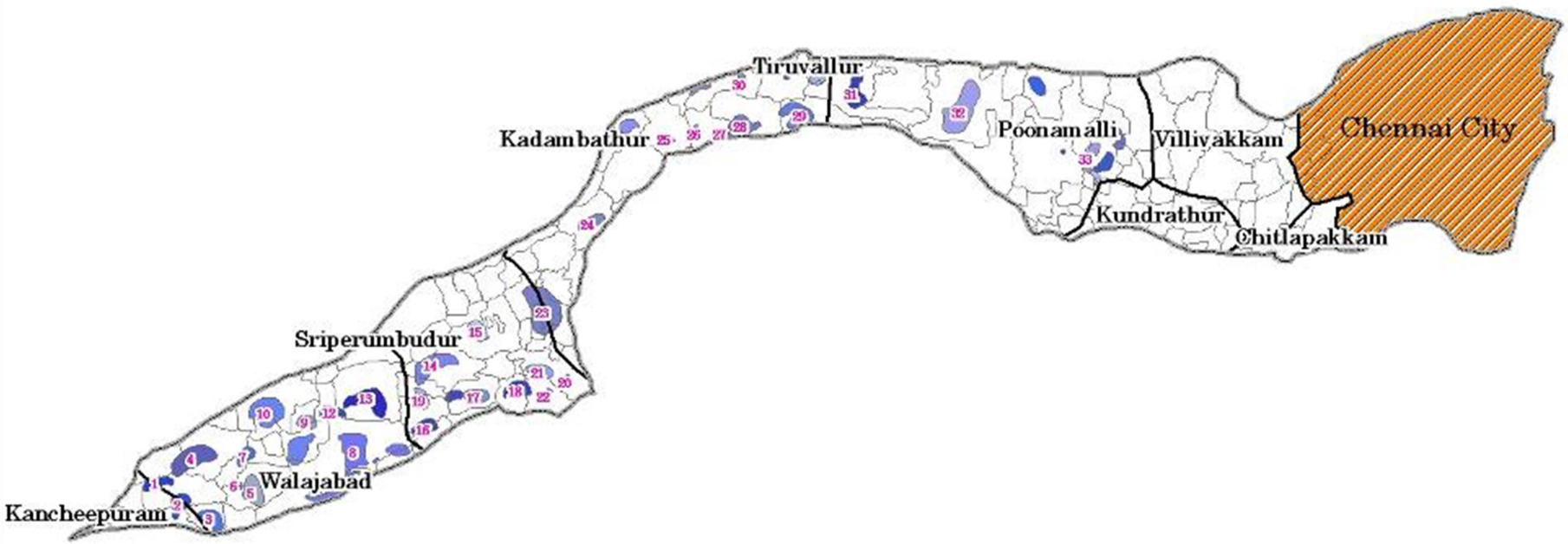


Legend

Village

Package

Coovam Sub basin
WRD - Water User Association
(Ayacut Area)



Legend

- Village
- Water User Association