TN – IAMWARM PROJECT

HANUMANADHI SUB BASIN

DETAILED PROJECT REPORT

WATER RESOURCE DEPARTMENT

1.1 INTRODUCTION

CHAPTER –1
INTRODUCTION

1.1 GENERAL

Agriculture is the dominant sector in the Indian economy. Tamil Nadu, depends largely on the surface water irrigation as well as ground water irrigation. The state has used the surface and ground water potentials to the maximum limit and hence the future development and expansion depends only on the efficient and economical use of water potential and resources.

To achieve higher water use efficiency, it is necessary to improve and upgrade the existing conveyance system and also to introduce modern irrigation methods.

With the above objective, a comprehensive programme has been proposed with a Multi Disciplinary Approach.

1.2 DESCRIPTION OF NAMBIYAR BASIN

The Nambiyar basin falls in Tirunelveli, Thoothukudi and Kanyakumari districts. There are three rivers in this basin. The Karamaniyar is in the northern part of the basin and Hanumanadhi river is in the southern part of the basin and the Nambiyar river is in between these two rivers. Tamiraparani basin on north and Kodaiyar basin on south and the Gulf of Mannar on the east surround this basin

The Nambiyar river basin falls in part of the Survey of India toposheets 58H and 58L and it lies between the following co-ordinates. North- Latitudes 08° 08’00” - 08° 33’ 00” and East - Longitude 77° 28’00” - 78° 15’ 00”.

This basin is sandwitched between Tamiraparani basin on the north and Kodayar basin on the west. The total area of the basin is 2018.4 sq.km and it covers the part of Kanyakumari, Tirunelveli and Thoothukudi districts.

DETAIL OF AYACUT

The total ayacut under this sub basin is 8013.23ha and the details are as follows.

1. Direct at ayacut under Radhapuram Channel of Kodayar system – 6475.74ha
2. Ayacut under system time (61 tanks) - 554.57ha
3. Ayacut under non system tanks (47 tanks) - 982.92ha

Total - 8013.23ha

Ayacut under Panchayat – Union tanks [56 tanks] - 638.88ha

The Talukwise, Districtwise ayacut details are as follows

Sl. No	District	Taluk	Block	System Tanks		Non-System tanks		Anicut		Suply Channel		Total
				No	Ayacut	No	Ayacut	No	Ayacut	Length Km	Ayacut ha	
1	Tirunelveli	Radhapuram	Valliyoor	51	387.925	37	915.82	12	0	133.858	4935.09.5	6238.84
2			Radhapuram	7	110.12.0	10	67.09.5	0	0	14.539	1540.64.5	1717.86.0
3	Kanyakumari	Thovalai	Thovalai	3	56.52.5	0	0	0	0	0	0	56.52.5
			Total	61	554.57.0	47	982.91.5	12	0	148.397 Or 148.40	6475.74.0	8013.23

The list of tank with their ayacut and capacities are separately appended in Page No. of Detailed Project Report.

The list of Panchyat Union tank is also appended in Page No. of Detailed Project Report.

Out of 61 System tanks, Radhapuram channel of Kodayar system feeds 52 tanks, Poigaikal of Poigai Reservoir feeds 8 tanks and the remaining 1 tank fed by Vadamalayan channed of Nambiyar system.

Out of the total ayacut of 8013.23ha. there is a permanent gap of 2288.15 ha due to erection of wind mills. The blocks namely Thovalai, Radhapuram and Valliyur of

this sub basin are falling in the intensive wind zone. Due to this, the ayacut area of 2288.15ha have been used for the purpose of generating power by erection of wind mills. Therefore this sub basin has a permanent gap of ayacut to the above extent.

1.3 DESCRIPTION OF HANUMANADHI SUB BASIN

Hanumanadhi River:

Hanumanadhi originates in the eastern slopes of the western ghats at an altitude of 1100m in the Mahendragiri hill region on the north west of Panakkudi village in Nanguneri Taluk of Tirunelveli district. It has a number of jungle streams. After feeding a few tanks, they join with Hanumanadhi river at various points. It flows in the hill ranges for about 5.6 km and reaches the west of Panakkudi village in Radhapuram taluk after running 6.40 km. It traverses entirely in Radhapuram taluk for a distance of about 32km in total and confluences into the Gulf of Mannar. There are 12 small anicuts across this river viz. 1. Sivanpilli anicut, 2.Senthilkathayan anicut, 3.Thandayarkulam anicut, 4. Sanjetti anicut, 5. Perungudi anicut, 6. Vadakkankulam anicut, 7. Adankarkulam anicut, 8. Sakkilianparai anicut and 9. Kanjaneri anicut 10. Alaganeri Anicut, 11.Koliankulam Anicut, 12. Sooravali Anicut. The total area of the sub basin is 510.179 sq.km covering blocks of Kalakkadu, Valliyur, Radhapuram in Tirunelveli district and Thovala and in Kanyakumai district either part or full. Kallandi odai, Kuthiraipanchan odai & sooravali odai are the three tributaries in the Hanumanadhi Sub Basin.

Further Description of the basin:

A canal known as Radhapuram canal crosses into this basin near Levichipuram in Radhapuram Tauk from the adjacent Kanyakumari district. Radhapuram canal starts from Pechiparai reservoir in Kanyakumari district. At its starting point this canal is called Kodayar left bank canal. Another canal from Perunchani dam joins this Kodayar left bank canal at the 17^{th} km. After the confluencing point the downstream of the canal is called Thovalai channel. After entering Tirunelveli district near Thirumulangar village, it is called Radhapuram canal. After feeding a number of tanks through supply channels, it crosses Hanumanadhi river near Koliyankulam anicut.

INFRASTRUCTURE WISE COVERGENCE TABE

Sl. No	Name of the cluster/ Infrastructure/ Village	Tanks	Total Ayacut in Ha			Total Area in Ha			WRO		Agri-culture		TNAU		Horti culture		Agri marketing		Agri Engg		Fisheries		Animal Husbandary	
			FI	PI	Gap	Wop	WP	Gap	Act	No Ha	Act	No Ha	Act	No./ Ha	Act	No. Ha	Act	No. / Ha	Act	No. Ha	Act	N Ha	Act	No./ Ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
I	**Sivanpillai cluster**																							
	Parivirisooriyan	Pariviri soori yan kulam, Sivanpillai Anicut & SivanPillai kal	41.10	0.00	1.93	41.10	41.1	1.93	A.Rep S.chl Desit S.chl Rt wall B Str Retaining wall S Rep W rep D D Rep	1 No 3400 M 50m 1350 m 10 M 1No 1 No 1 No	SRI	25	-	-	AEP - Tc	5	Cap. Bldg		D SP FM	2 Ha 6Ha 1 PT	FCIT 3	92.26	Co3 Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 3 10 1 300 0 25
	Panagudi Pt- I	Nagarai kulam	62.47	0.00	0.00	62.47	62.47	0.00	B Str S Rep W rep Ret.wall	1600 m 2 Nos 1 No 20 m	SRI	35	-	-	AEP	8			SP	6 Ha				
		Sannaneri kulam	133.39	0.00	40.38	133.39	145.00	28.77	B Str S Recon Re wall W rep Ramp cons	1870 m 2 Nos 70 m 1 No 1 No	SRI	100	-	-	AEP	2			D SP	4 Ha 25 Ha				

	Therkkuvalliyoor Pt- I	MelaKadam pan kulam	17.16	0.00	0.00	17.16	17.16	0.00	Re wall	30M	SRI	5	-	-	AEP	6	Dry .Yard		-	-				
		Keezhakadampan kulam	0.86	0.00	5.50	0.86	5.80	0.56	S Rep R wall	2 No 20M	-	-	-	-	AEP	2		1	-	-				
	Thandayarkulam	Pampankulam	4.29	0.00	0.00	4.29	4.29	0.00	-	-	-	-	-	-	AEP	1	-	-	-	-				
II	**Senthilkathaiyan cluster**																							
	Panagudi Pt- II	Pettai kulam, Senthil Kathaiyan Anicut& Suuply Channel	6.50	0.63	11.51	7.13	12.75	5.89	S.chl.Desilt Bridge con S.chl Re. wall A Rap D D con S R ep. R wall	1500 M 1 No 400M 1 No 1 No 2 Nos 20M	SRI	10	-	-	AEP - Tc	2	Com. Gr		D SP FM	2 Ha 6 Ha 1 PW	FCIT 3 ACFP 1	102.49 0.10	Co3 Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 3 10 1 300 0 25
		Padalayar kulam	8.70	0.60	5.11	9.30	13.65	0.76	S. Re. Con	1 No	SRI	5	-	-	AEP - Tc	2			D	4 Ha				
	Thandayarkulam	Khaikulam	11.95	0.00	33.91	11.95	41.77	4.09	-	-	-	-	SRI	20	AEP	10	Com. Gr		D SP	4 Ha 6 Ha				
		Sirunambikulam	0.00	1.00	4.36	1.00	3.95	1.41	-	-	-	-	-	-	AEP	1	Dry . Yard		D	4 Ha				
		Sathan kulam	30.25	0.57	5.59	30.82	35.78	0.63	B Str S rep Re Wall W rep	1290 M 2 Nos 20m 1No	SRI	10	-	-	AEP	12		1	D SP FP	2 Ha 2 Ha 1				
		Thandayarkulam, Anicut & Supply Channel	31.59	0.00	0.00	31.59	31.59	0.00	Ani Rep S Ch Desilt S rep W rep Rt.wall	1 No 1950 M 2 Nos 1 No 20 m	-	-	SRI	10	AEP	1			D SP	2 Ha 2 Ha				

III	**Senjetty cluster**																							
	Thandayar kulam	Senjetty kulam	2.88	0.00	0.00	2.88	2.88	0.00	Ani Rep DD Recon D D Const S Ch Dest	1 No 1 No 2 No 5000 M	-	-	-	-	AEP	1	Com. Gr		-	-	ACFP 2	0.20	Co3 Cholam In Camp MM Dis. FI Meet DEW F.Training.	2 2 3 10 1 500 0 50
	Perungudi Pt- I	Thalavai pudu kulam	0.00	0.00	60.33	0.00	58.45	1.88	B Str S rep W rep R wall	2140 M 2 nos 1 no 30 M	-	-	SRI	40	TEP	10			FM	2 PT				
	Veppilankulam Pt- II	Veppilan kulam	3.85	0.00	12.545	3.85	15.55	0.84	B Str S Re Con R wall W rep	1000 M 1 no 10 no 1 no	SRI	5	-	-	AEP	5			-	-				
		Pullankurichikulam	7.52	0.00	61.62	7.52	65.75	3.39	B Str W rep S Rep RE wall	1650 m 2Nos 2 Nos 20 M	-	-	SRI	40	AEP	8			FP FM	1 2 PT				
	Veppilankulam Pt- I	Pallicheri Kulam	2.08	0.00	4.69	2.08	5.55	1.22			-	-	-	-	AEP	2								
		Kalkarai kulam	10.38	0.00	13.18	10.38	22.37	1.19			SRI	10	-	-	AEP	5			FM	1 PW				
	Radhapuarm	Pappan kulam	9.08	0.00	6.06	9.08	13.35	1.79	B Str S rep R wall W rep	1340 M 1 No 10 M 1 No	-	-	SRI	5	AEP	4								
		Pavirithottam kulam	2.98	1.39	1.39	4.37	4.60	1.16	B Str S rep R wall	700 M 1 No 10 M	-	-	-	-	AEP	2			D	2 Ha				

		Marayan pattukulam	4.30	0.39	3.86	4.69	7.25	1.30	S rep Re. Wll	1 No 10 M	-	-	SRI	5	AEP	2							
		Panayar kulam	2.20	0.00	4.45	2.20	5.67	0.98	Bund Str Sluice repair W rep Re. Wall	700 M 1 No 1 No 10 M	-	-	-	-	AEP	2							
		Neduvazhi kulam	3.69	0.77	5.88	4.46	8.66	1.68	S. Re Re. Wall	1 No 10 M	-	-	SRI	5	AEP	3			D	2 Ha			
		Pattarkulam	1.39	0.00	3.18	1.39	4.15	0.42	-	-	-	-	-	-	AEP	1							
		Verakulam	0.00	0.00	8.08	0.00	6.54	1.54	-	-	-	-	-	-	AEP	2							
		Chettiputhu kulam	1.01	0.00	0.97	1.01	1.50	0.48	-	-	-	-	-	-									
		Vallakulam	0.00	0.00	6.02	0.00	5.87	0.15	-	-	-	-	-	-	AEP	2			D FP	2 Ha 1			
	Dharmakarkulam	Puthukulam	9.95	0.00	0.00	9.95	9.95	0.00	S repair Re Wall	2 Nos 40 m	-	-	SRI	5	AEP	3			SP	2 Ha			
	Radhapuram	Pandaraperiakulam	11.72	14.60	41.48	26.32	55.70	12.10	-	-	SRI	15	-	-	AEP	10							

IV	**Perungudi cluster**																							
	Dhanakkarkulam	Keeraneri kulam, Perunkudi Anicut & Supply kal	4.75	3.00	16.61	7.75	22.65	1.71	A. Rep A. Ch.Re wall Supply Kal S. Rep	1 No 400 M 4000 M 2 No	SRI	10	-	-	AEP	7	Cap .Bldg		FP FM	1 1 PT	ACFP 2	0.20	Co3 Cholam In Campaign MM Dis. FI Meet DEW F.Training.	2 2 3 20 1 300 0 50
		Karuppilan kulam	3.00	1.30	5.95	4.30	8.87	1.38	S rep Re.wall	1 No 10 M	SRI	5	-	-	AEP	3			FP	1				
		Veesadi kulam	4.69	1.75	11.23	6.44	15.76	1.91	S. Rep Re.wall	1 No 10 M	SRI	5	-	-	AEP	5								
		Vadaputhu kulam	6.50	5.50	15.17	12.00	25.10	2.07	S .Rep R wall	1 No 10M	-	-	SRI	10	AEP	8	Dry. Yard	1						
	Perungudi Pt- I	Vadakkan kulam & Vadakkan kulam Anicut & Supply kal	2.32	0.45	13.54	2.77	15.11	1.20	B Str S re cont R wall Weir.Rep	900 2 Nos 20 M 1 No	SRI	5	-	-	AEP	7			FM	1 PW				
	Azhaganeri	Azhaganeri kulam & Azhaganeri anicut, Adangar kulam Anicut& Supply kals	0.97	1.36	2.60	2.33	4.50	0.43	S rep R wall S.ch.Re.wall A.Re.const S.ch.Desilt	2 Nos 20 M 50M 1 No 3800 M	-	-	-	-	AEP	1								
	Sadayaneri	Sadayaneri kulam	1.32	0.00	1.54	1.32	2.55	0.31	S.Rep Re.wall	1 No 10 M	-	-	-	-	AEP	1								

V	**Sakkiliyanparai Cluster**																										
	Erukkanthurai Pt- I	Mithiyan kulam, Kanchaneri Anicut ,Sakiliyan parai Anicut & Supplykals	0.00	0.00	7.10	0.00	5.35	1.75	Re.wall S rep A rep S upply kal	10 M 1 No 1 Nos 3000 M	-	-	-	-	AEP	2	.				FCIT 4	65.35	Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 20 1 600 0 25
		Thumbai kulam	0.00	0.70	13.57	0.70	12.65	1.62	Re.wall S rep	10 M 1 No	SRI	5	-	-	AEP	5											
VI	**Sooravalli Cluster**																										
	Parivirisooriyan Pt- II	Manamari kulam	14.655	2.63	0.00	17.29	15.95	1.34	B Str S rep R wall	955 1 No 10 M	-	-	SRI	5	AEP	5					ACFP 1	0.10	Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 20 1 500 0 50
		Veerapandi yan kulam	36.99	0.00	0.00	36.99	36.99	0.00	S rep Re.wall	1 No 10 M	SRI	20	-	-	AEP	4	Com. Gr		FP FM	1 1 PT							
	Panagudi Pt- I	Miaputhu kulam, Sooravali Anicut, Lower Contour canal	16.82	0.00	0.00	16.82	16.82	0.00	A rep S chl Desit B Str S rep Re wall W.rep	1 No 4800 M 1070 1 No 10 M 1 No	-	-	SRI	5	AEP	5											

		Sivakami puthu kulam	11.395	0.00	0.00	11.40	11.395	0.00	B Str S rep W Rep	950 1 No 1 No	-	-	-	-	AEP	5									
	Perungudi Pt-II	Perumal Puthu kulam	0.13	0.00	7.62	0.13	6.90	0.85	S rep Re.wall	1 No 10M	-	-	-	-	AEP	3	Col. Cen								
		Manimala yankulam	0.00	0.00	3.42	0.00	3.10	0.32	S rep Re wall	1 No 50 M	-	-	-	-	AEP	1									
		Vinayagar puthukula m	4.73	0.00	6.26	4.73	9.55	1.44	-	-	-	-	-	-	AEP	3									
		PeriyaPuth u kulam	12.16	2.72	0.52	14.88	14.77	0.63	S rep Re wall	1 No 50 M	-	-	-	-	AEP	7				FM	1 PT				
		KaliPuthu kulam	8.08	0.00	0.00	8.08	8.08	0.00	B Str S rep Re wall W Rcont	800 1 No 10 M 1 No	-	-	-	-	AEP	2									
		Punchakat ti kulam	8.22	0.00	6.19	8.22	12.23	2.18	-		SRI	5	-	-	AEP	4									
VI I	**Poigai Kal Cluster**																								
	Pazhavoor Pt- I	Pazhavoor Periakula m	0.00	9.10	1.43	9.10	9.76	0.77	S Re con R wall	1 No 10m	SRI	5	-	-										Co3 Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 3 40 1 300 0 75
		Keezha Palaarkula m	3.09	0.00	0.79	3.09	3.34	0.54	R wall	10m	-	-	-	-			IEC & CB ACT								
		Mela Palaar kulam	0.00	0.00	2.86	0.00	2.34	0.52	S Re con R wall	1 No 50m	-	-	-	-											
		Therkkusiva - gangai kulam	0.00	0.00	2.28	0.00	1.98	0.30	B Str S Re con R wall	815m 1 No 10m	-	-	-	-											

		Salai Pudukulam	0.00	0.00	1.72	0.00	1.54	0.18	S Re con R wall	1 No 10m	-	-	-	-											
	Aralvoimozhi	Lekshmi Pudukulam	0.00	5.02	14.68	5.02	17.85	1.85	B Str S Recon R wall	590m 1 No 20m	-	-	SRI	10											
		Athikulam	0.00	6.00	15.66	6.00	20.57	1.09	B Str S Recon R wall	975m 1 No 10m	-	-	SRI	15											
		Annuthukulam	0.00	5.00	10.18	5.00	14.60	0.58	B Str S Recon R wall	285m 1No 10m	-	-	-	-											
VIII	**Levinchipuram Cluster**																								
		Distributory 1	4.00	2.00	31.09	6.00	34.59	2.50	M C Ling Shutter	300 M 1 No	SRI	5	-	-	AEP	8					ACFP 2	0.20	CO 3 Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 3 50 1 500 0 50
		Distributory 2	82.00	3.00	21.81	85.00	95.20	11.61	M C Ling M.C.S. Shutter Distri ling D .S rep D.Drop rep D Syphon rep D.D S A Rep.	100 M 1No 1500 M 8 No 5No 1 No 2400 M 1 No	SRI Demo	30 30	-	-	AEP	26	Expo. Visit							
		Distributory 3	3.00	1.50	19.14	4.50	18.75	4.89	M C ling M.C.S. shutter	50 M 1 No	SRI	10	-	-	AEP	12									

		Distributory 4	44.00	12.00	150.89	56.00	180.33	26.56	M C Ling M.C.S. Shutter Distri ling D .S rep D.Drop rep D. Syphon rep D.D. S	150M 1 No 1000 M 10 Nos 5 Nos 1 No 3000 M	-	-	SRI Demo	3540	AEP	80							
		Distributory 5	7.00	2.50	5.64	9.50	11.32	3.82	M C Ling M.C.Shutter	200M 1 No	SRI	10	-	-									
		Distributory 6	146.00	17.00	42.70	163.00	170.55	35.15	M C Ling M.C.SShutter Distri ling D.S rep D. Drop rep D.D.S	100M 1 No 1500 M 8 Nos 6 Nos 2500 M	SRI Demo	6060	-	-	AEP	54			FM	1 PTiller				
	Levinchipuram	Nariparaikulam	0.00	0.00	7.98	0.00	4.15	3.83	-		-	-	-	-									
		Distributory 7	119.00	18.00	134.07	137.00	245.75	25.32	M C Ling M.C.SShutter Distri ling D.S rep D. Drop rep D.D.S	100M 1No 1000 M 4 No 4No 4200 M	Demo	25	SRI	100	AEP	122			FP	2				
	Levinchipuram	Achanpadu kulam	1.37	0.83	0.08	2.20	2.10	0.18			-	-	-	-									
		Poothottikulam	0.00	0.00	7.96	0.00	6.10	1.86	Bund str. T.S recont Re wall W rep	1340 M 1 No 30 1No	-	-	-	-									

IX	**Karunkulam Cluster**																							
		Distributory 8	83.00	12.00	70.84	95.00	137.45	28.39	M C Ling M.C.S Shutter Distri ling D.S rep D. Drop rep D.D.S	100M 1 No 800 5 Nos 3 Nos 2500	Demo	30	AEP	36	AEP	36	Com. Gr				ACFP 2	0.20	Co3 Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 2 50 1 500 0 75
	Therkkukarunkulam	Venmanikulam	2.46	1.275	2.685	3.74	5.55	0.87	Bund str. T. S rep Re wall W rep	1600 1 No 10 1No	SRI	5	-	-										
		Periyapamanikulam	3.78	0.00	4.34	3.78	7.18	0.94	Bund str. T.S rep Re wall W rep	1600 1 No 10M 1 No	-	-	SRI	5										
	Levinchipuram	Nambikurichikulam	5.26	0.00	2.19	5.26	6.60	0.85	Bund str. T. S rep W rep Re.wall	1340 M 1 No 1No 10M	-	-	SRI	5			Col. Cen							
		Distributory 9	87.00	16.00	108.47	103.00	180.45	31.02	M C Ling M.C.S. Shutter Distri ling D.S rep D.Drop rep D.Syphon rep D.D. S	150M 1 No 700M 8 Nos 4 Nos 2 Nos 2100 M	SRI Demo	40 40	AEP	17	AEP	36			FP	1					

	Therkkukarun kulam	Melavelari kulam	3.700	0.49	2.00	4.19	4.89	1.30	Bund str T S recont Re wall W rep	1070 M 1 No 30M 1 No	SRI	5	-	-									
		Keezhave larikulam	1.49	0.00	3.00	1.49	3.70	0.79	Bund str T.S re.con Re wall	800 1 No 30	SRI	5	-	-									
		Chittalam kulam	0.825	0.115	3.19	0.94	3.50	0.63	Bund str T.S rep Re wall	1070 1 No 10M	-	-	-	-									
		Distributory 10	78.00	39.00	121.01	117.00	199.54	38.47	M C Ling M.C.SShutter Distri ling D.S rep D.Drop rep D.Syphon rep D.D. S	50M 1No 500M 8 Nos 4 Nos 2 Nos 4700 M	-	-	SRI Demo	65 40	AEP	42			FM	1 PW				
	Pazhavoor Pt- II	Thirupathi kulam	2.40	1.37	1.50	3.77	3.96	1.31	Bund str, W Recont T.S.rep Re.wall.	1210 1 No 1 No 10M	SRI	10	-	-									
	Therkkukarun kulam	Vadakku Parambi kulam	0.70	0.00	7.61	0.70	6.84	1.47	Bund str. T, S rep	1340 1 No	-	-	SRI	5									
		Malayan kulam	0.50	0.22	4.96	0.72	3.94	1.74	Bund str. T. S rep W rep	1500 1 No 1 No	-	-	SRI	5									
		Periyakulam	1.12	3.36	19.32	4.48	20.85	2.95	Bund str. T.S recont W Recont	1870 1 No 1 No	SRI	15	-	-									

		Distributory 11	97.05	42.00	198.36	139.05	285.40	52.01	M C Ling Ling rep Distri ling D S rep D Drop rep D.R culvert rep D.D.S	50M 625 1000 M 12No 5No 2No 6900 M	SRI	125	AEP	2	AEP	60			FP	1			
	Pazhavoor Pt- II	Veppan kulam	0.00	0.00	2.03	0.00	1.60	0.43	Bund str T.S rep R.Wall	540 1 No 10 m	-	-	-	-								
		Kallikulam	1.66	7.40	1.50	9.06	8.21	2.35	Bund str T. S rep R.Wall	1210 m 1 No 10m	-	-	SRI	5								
		Karumeni yanthal kulam	1.18	1.98	0.37	3.16	1.97	1.56	Bund str. T. S rep Re.wall	700M 1 No 10m	-	-	-	-								
	Therkkukarun kulam	Kokkaneri kulam	1.34	2.32	4.04	3.66	4.95	2.75	-		-	-	SRI	5								
		Pullaneri kulam	0.00	0.00	7.93	0.00	6.21	1.72	-		-	-	SRI	5								
		Ariyankudi kulam	0.72	0.10	11.05	0.82	9.95	1.92	-		-	-	SRI	5								

X	**Avaraikulam Cluster**																						
		Distributory 12	57.00	20.00	62.04	77.00	117.65	21.39	M C Ling M.C.Shutter Distri ling D.S rep D.D rep D.D.S	500 1 No 400 2 Nos 4 Nos 900M	Demo	40	AEP	1	AEP	25	Com. Gr		FP	1	ACFP 2	0.20	Co3 Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 2 20 1 500 0 50
	Pazhavoo Pt-II	Sulekapani kulam	0.13	5.76	2.34	5.89	6.38	1.85	Bund str W Recont T.S. rep Re.wall	1500 1 No 1 No 10M	-	-	-	-									
		Distributory 13	6.00	10.00	76.87	16.00	74.36	18.51	M C Ling M.C.S. rep Distri ling D.S rep D.D.S	350 1 No 500M 2 nos 2000 M	SRI	10	-	-	AEP	23			FP	1				
		Distributory 14	71.00	53.00	230.98	124.00	294.31	60.67	M C Ling M.C.SShutter Distri ling D.S rep D.Drop rep D.Syp rep D.D.S	200 1 No 700M 6 Nos 4 Nos 1 No 5200 M	Demo	230	AEP	35	AEP	21			FP FM	1 1 P Tiller				
	Pazhavoo Pt- II	Koothar kulam	1.47	0.00	5.69	1.47	5.47	1.69	Bund str. T. S rep Re.wall	1210 M 1 No 10M	-	-	-	-			Cap .Bldg						
		Distributory 15	10.00	11.00	70.37	21.00	69.35	22.02	M C Ling M.C.Ling rep M.C.S.Shutter Distri ling D.S rep	150M 534M 1 No 300M 2 Nos 2 Nos	SRI	50	-	-									

									D.Drop rep D.D.S	1400 M															
		Distributory 16	5.00	6.80	0.00	11.80	9.43	2.37	M.C.SShutter Distri ling D.S rep D.D.S	1 No 300M 2 Nos 1100 M	SRI	5	-	-					PL	3 Ha				
	Adangarkulam	Kilakulam	8.00	5.00	0.19	13.00	10.67	2.52	Bund str. S Rep R.Wall	1600 1 No 10M	SRI	5	-	-										
XI	**Adankarkulam Cluster**																								
		Distributory 17	153.00	82.245	318.105	235.25	299.52	253.83	M C Ling M.C.SShutter Distri ling D.S rep D.Drop rep D.Syphon D.D.S	475 1 No 800M 12 Nos 6 Nos 2 Nos 6500 M	Demo	85	AEP Demo	5 200	AEP	43	Com. Gr		FM	1 PW	ACFP 2	0.20	Co3 Cholam In Camp MM Dis. FI Meet DEW F.Traing.	2 2 3 10 1 700 0 50
	Pazhavoor Pt- II	Chembikulam	0.00	0.835	2.725	0.84	2.43	1.13	Bund str. S Rep R.Wall	800 1 No 10 m	-	-	-	-										
	Adankarkulam	Kurumbilarkulam	5.21	0.00	0.00	5.21	5.21	0.00	Bund str. S Recont R.Wall	1070 M 1 No 10 m	-	-	-	-										

	Pazhavoor Pt- II	Kumaran kulam	1.34	0.00	6.51	1.34	5.65	2.20	Bund str. S Rep R.walll	1210 M 1 No 10 m	-	-	-	-									
		Maran kulam	0.00	5.10	5.25	5.10	8.77	1.58	Bund str.	1600 M	-	-	-	-									
		Distribu tory 18	20.00	20.0 0	96.29	40.00	102.35	33.94	M C Ling M.C.S Shutter Distri ling D.S rep Drop rep D.D.S	1017 1 No 400M 7 Nos 2 Nos 2000 M	-	-	Dem o	100					FP	2				
	Adankar kulam	Adankar kulam	14.68	0.00	0.00	14.68	14.68	0.00	Bund str. T.S Recont	1070 M 2 Nos	SRI	5	-	-									
	Pazhavoo Pt- II	Mathaka neri kulam	0.00	0.00	9.02	0.00	7.43	1.59	Bund str. T.S Recont	1340 M 2 No	-	-	-	-									
		Distribu tory 19	10.00	3.00	0.46	13.00	12.00	1.46	M C Ling M.C.S.repair	275 1 No	-	-	AEP	4					D	5 Ha			

XII	**Erukkanthurai Cluster**																								
		Distributory 20	0.00	5.00	1.52	5.00	4.37	2.15	M C Ling M.C.SShutter	726 1 No	-	-	-	-			Com. Gr				ACFP 6	0.60	Co3 Cholam In Camp MM Dis. FI Meet DEW F.Training.	2 2 2 10 1 400 0 25
	Dhanakkarkulam	Koliyankulam	9.00	2.10	0.67	11.10	9.95	1.82	Bund str. Weir rep	800 1No	-	-	SRI	10											
		Distributory 21	58.00	45.00	212.29	103.00	225.67	89.62	M C Ling M.C.SShutter Distri ling D.S rep D.Drop rep D.D.S	40M 1No 500M 12 Nos 8 Nos 5058 M	-	-	Demo Demo	100 70	AEP	36			FP	5						
	Adankarkulam	Uralvaimozhikulam	15.44	9.63	8.62	25.07	28.20	5.49	Bund str. S Rep S.re.const Re.wall	1500 2No 3Nos 50M	SRI	20	-	-											
	Erukkanthurai Pt- I	Kurumbilarkulam	0.00	0.00	5.21	0.00	4.76	0.45			-	-	-	-											
	Erukkanthurai Pt- II	Putherikulam	0.75	0.71	7.40	1.46	6.85	2.01	Bund str S Rep R.Wall	1210 1 No 10 m	-	-	-	-											
		Distributory 22	5.00	3.00	38.82	8.00	31.88	14.94	M.C.Ling rep M.C.SShutter	1052 1 No	-	-	Demo	30					FP	2					

		Distributory 23	22.00	12.00	316.94	34.00	210.55	140.39	M.C.SShutter Distri ling D.S rep D. Drop rep D.D.S	1No 1500 15 Nos 4 Nos 6700 M	Demo Demo	50 120	SRI	20	AEP	20			FP FM	4 1 PW				
	Dhanakkarkulam	Pullavalam padukulam	4.36	0.00	0.00	4.36	4.36	0.00	Bund str. T.S.rep Re.wall	1340 1No 10M	-	-	-	-										
	Erukkanthurai Pt- II	Soochi kulam	0.00	0.60	3.39	0.60	2.50	1.49	Bund str.	1340 M	-	-	-	-										
		Nedum kulam	0.00	0.00	4.16	0.00	3.65	0.51	Bund str. S.rep Re.wall	1070 M 1 No. 10M	-	-	-	-										
		Amachiyar kulam	0.22	0.00	2.70	0.22	2.20	0.72	-		-	-	-	-										
		Kanchaneri kulam	0.50	1.00	4.88	1.50	5.15	1.23	-		-	-	-	-										
		Vannankulam	0.60	0.00	2.17	0.60	1.85	0.92	-		-	-	-	-										
	Erukkanthurai Pt- II	Udayaneri kulam	0.70	1.42	4.98	2.12	5.47	1.63	Bund str. S Rep Re.wall	1070 1 No 10M	-	-	SRI	5										

		Senarkulam	0.00	0.58	1.61	0.58	1.85	0.34	Bund str. S Recont R.Wall W.R.	800 1 No 30 m 10m	-	-	-	-										
	Nakkaneri Cluster																								
XII		Distibutory 24	111.01	37.60	414.09	148.61	368.44	194.26	M.C.ling M.C.S.Shutter Distri ling D.D.S	25M 1 No 1500 M 5900 M	SRI Demo	50 100	-	-	AEP	17	Com. Gr		D SP FP	4 Ha 10 Ha 4	ACFP 4	0.40	Cholam In Camp MM Dis. DEW	2 2 10 7000
	Dhanakkarkulam	Aladikurichi kulam	2.10	2.34	3.25	4.44	5.00	2.69	Bund str	1070 M	-	-	-	-										
		Nakkaneri kulam	4.00	1.70	3.03	5.70	6.75	1.98	Re.wall T.S rep	10 M 1No	-	-	-	-										
	Erukkanthurai Pt- II	Pullamangalam kulam	6.40	0.00	6.06	6.40	10.34	2.12	Bund str. S rep Re.wall	800 1 No 10M	-	-	SRI	5										
		Pandiyanputhukulam	1.43	0.00	2.45	1.43	2.31	1.57	-		-	-	-	-										
		Distributory 25	35.00	13.00	129.20	48.00	95.98	81.22	M.C.Ling M.C.S Shutter Distri ling D.S.Rep D.D.Rep D.D.S	100M 1 No 500M 4 Nos 3 Nos 3700 M	SRI	65	-	-			Training		SP FM	3 1 P Tiller				

		Distributory 26	15.00	13.00	5.97	28.00	16.35	17.62	M .C.Ling M.C.SShutter D.S.Rep	100M 1 No 1No	SRI	25	-	-										
	Veppan padu cluster																							
XIV		Distributory 27	41.00	18.00	114.33	59.00	95.56	77.77	M.C.SShutter Distri ling D.S rep D.Drop rep D.D.S	1 no 1500 18 Nos 8 Nos 2000 M	SRI Demo	25 40	-	-	AEP	15			FP FM	3 2 PT	ACFP 6	0.60	Cholam In Camp DEW F.Traing.	2 2 600 0 50
	Erukkanthurai Pt- II	Veppan padu kulam	5.09	0.00	0.51	5.09	5.12	0.48	Bund str. S rep Re.wall	1200 1 No 10M	-	-	SRI	5										
	Koodan kulam	Sanarkulam	12.70	0.40	0.80	13.10	12.75	1.15	Bund str. S rep Re.wall	950 M 1 No 10M	-	-	SRI	5										
	Erukkanthurai Pt- II	Sankaneri kulam	13.65	0.00	0.31	13.65	13.65	0.31	Bund str. S rep Re.wall	1340 M 1 No 10 M	-	-	-	-			Com. Gr							
		Distributory 28	106.04	16.96	772.65	123.00	545.50	350.15	M.C.Ling M.C.SShutter Distri ling D.S rep D.Drop rep	50 M 1 No 2500 M 15 M 7No 6000	Demo Demo	20 140	Demo	125	AEP	30			FP	6					

									D.D.S	M																	
		Distributory 29	65.23	92.00	381.32	157.23	152.67	385.88	M.C.Ling M.C.S.Shutter Distri ling D.S rep D.Drop rep D.D.S	50 M 1 No 500M 8 Nos 6Nos 3200 M	-	-	Demo	150	AEP	20			FP FM	2 1 P Tiller							
	Udayathoor	Vaniyan kulam	0.00	0.00	7.11	0.00	5.38	1.73	Bund str. S Re con Re.wall	800M 1 No 10M	-	-	-	-			Training								
		Sivathanu peri kulam	0.23	0.00	3.19	0.23	2.11	1.31	Bund str. S rep Re.wall	540 M 1No 10M	-	-	-	-											
	Radhapuram Cluster																										
XV		Distributory 30	0.00	0.00	0.00	0.00	0.00	0.00	M.C.Ling M.C.Shutter	30M 1 No	-	-	-	-										Cholam In Camp MM Dis. DEW	2 2 10 3000
	Parameswarapuram	Arasaneri kulam	4.07	0.15	2.11	4.22	4.50	1.83	Bund str. S rep Re.wall	1340 M 1No 10M	-	-	-	-											

		Distribu tory 31	20.00	10.0 0	76.05	30.00	31.58	74.47	M.C.Ling M.C.S Shutter Distri ling D.S rep D Drop rep D.D.S	30M 1 No 500M 3No 2No 1370 M	-	-	SRI	20	AEP	10	Co m. Gr							
	Udaya thoor	V.N. Kulam	0.17	0.00	6.00	0.17	5.33	0.84	Bund str. S rep	1070 M 1 No	-	-	-	-										
		Distribu tory 32	0.00	8.00	42.35	8.00	24.38	25.97	M.C.Ling M.C.Shutter	60M 1 No	-	-	SRI	15										
		Tail End	0.00	6.11	0.00	6.11	3.26	2.85	M.C.Lining	1 0 No	-	-	-	-										
	Radha puram	Mahendra kulam	4.85	0.00	0.53	4.85	4.85	0.53	Bund str. S rep Re.wall	1070 1 No 10M	-	-	-	-										
			2267.0 4	771. 98	4974. 21	3039.0 2	5707.7 2	2305. 51				189 0		142 8		92 2 Ha			65	120 Ha	30	263.1 0 Ha		

CONVERGENCE TABLE - ABSTRACT

Cluster Number	Name of cluster	Total Ayacut in Ha			Total Area in HA			WRO		Agri		Hort		TNAU		Agri marketing		Agri Eng.		Fishers		Animal Husboundary	
		FI	PI	Gap	Wop	Wp	GAP	Activities	Nos	Activities	Nos/ Ha	Activities	Nos/ Ha	Activities	Nos/ Ha	Activities	Nos/ Ha	Activities	Nos/ Ha	Activities	Nos/ Ha	Activities	Nos/ Ha
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
I	**SIVANPILLAI**	259.27	0	47.81	259.27	275.28	31.26	A. Rep S.Chl.Desilt S.Chl.Rt.Wall B.Str S.R.Con S.Rep. W.Rep D.D.Rer Ramp Cons Rt.Wall	1No 3400M 50M 4820M 2Nos 5Nos 3Nos 1No 1No 160 M	SRI	165	AEP	37	-	-	Cap Bldg Dry Yard	1 1	D SP FM	6 Ha 37 Ha 1 PT	FCIT	3	CO3 Cho In.ca mp MMDi s FI meet Dew. F.Trai ng	2 2 3 10 1 3000 25
II	**SENTHIL KATHIYAN**	88.99	2.8	60.48	91.79	139.49	12.78	A. Rep S.Chl.Desilt S.Chl.Rt.Wall Br.&D.D Cons D.D.Con S.Rep. S.Recons W.Rep Rt.Wall B.Str	2 Nos 3450M 400M 1No 1No 6No 1Nos 2Nos 60 M 1290M	SRI	25	AEP	28	SRI	30	com. Gr Dry Yard	1 1	D SP FM FP	18 Ha 16 Ha 1 PW 1	FCIT ACFP	3 1	CO3 Cho In.ca mp MMDi s FI meet Dew. F.Trai ng	2 2 3 10 1 3000 25

III	**SENJETTY**	73.03	17.15	233.74	90.18	293.79	30.13	A. Rep S.Chl.Desilt D.Dcons D.D.Rep B.Str S.Rep. S.ReCons W.Rep W.Recons Rt.Wall	1No 5000m 2Nos 1No 7530M 11Nos 1Nos 4Nos 2Nos 150M	SRI	15	AEP	54	SRI	100	com. Gr	1	FM FP D SP	5 PT 2 6 Ha 2 Ha	ACFP	2	CO3 Cho In.ca mp MMDi s FI meet Dew. F.Trai ng	2 2 3 10 1 5000 50
IV	**PERUNGUDI**	23.55	13.36	66.64	36.91	94.54	9.01	A.Recons A.Rep S.Chl.Desilt S.Chl.Rt.wall B.Str S.Rep S.Recons W.Rep Rt wall	1No 1No 7800M 450M 900 M 8Nos 2No 1No 80M	SRI	40	AEP	32	SRI	10	Cap Bldg Dry Yard	1 1	FP FM FM	2 1 PT 1 PW	ACFP	2	CO3 Cho In.ca mp MMDi s FI meet Dew. F.Trai ng	2 2 3 20 1 3000 50
V	**SAKKILIYANPARAI**	0	0.7	20.67	0.7	18	3.37	A.Rep S.Chl.Desilt S.Rep Rt.wall	1No 3000M 2Nos 20M	SRI	5	AEP	7	-	-	Cap Bldg	1	-	-	FCIT	4	Cho In.ca mp MMDi s FI meet Dew. F.Trai ng	2 2 20 1 6000 25

VI	**SOORAVALI**	113.18	5.35	24.01	118.53	135.79	6.76	A.Rep S.Chl.Desilt B.Str S.Rep W.Recons W.Rep Rt.Wall	1No 4800M 3775M 7 Nos 1No 2 Nos 100M	SRI	25	AEP	39	SRI	10	Com Gr Col Cen	1 1	FP FM	1 2 PT	ACFP	1	Cho In.camp MMDis FI meet Dew. F.Traing	2 2 20 1 5000 50
VII	**POIGAI**	3.09	25.12	49.6	28.21	71.98	5.83	B.Str S.Recons Rt.Wall	2265M 7Nos 130M	SRI	5			-	-	IEC & CD Act	1	-	-	-	-	CO3 Cho In.camp MMDis FI meet Dew. F.Traing	2 2 3 40 1 3000 75
VIII	**LEVINCHIPURAM**	406.37	56.83	421.36	463.2	768.84	115.72	M.C.Lining M.C.S.Shutter Dist.Lining DS Rep D.Dr.Rep D.Sy.Rep A.C Rep D.D.Silt B.Str Rt.Wall S.Rep	1000M 7Nos 5000M 30Nos 20Nos 2Nos 1No 1210M 1340M 30M 1No	SRI Demo	135 115	AEP	302	SRI Demo	155 40	Expo Visit	1	FM FP	1 P Tiller 2	ACFP	2	CO3 Cho In.camp MMDis FI meet Dew. F.Traing	2 2 3 50 1 5000 50

IX	**KARUNKULAM**	372.19	127.63	576.4	499.82	902.74	173.47	M.C.Lining M.C.S.Shutter Dist.Lining DS Rep D.Dr.Rep D.Cut D.Sy.Rep D.D.Silt B.Str S.Rep S.ReCons W.Rep W.Recons Rt.Wall	350M 3Nos 3000M 33Nos 16Nos 2Nos 4Nos 16200M 15850M 10Nos 3Nos 6No 1No 140M	Demo SRI	70 205	AEP	174	SRI Demo AEP	235 80 55	Com Gr Col Cen	1 1	FP FM	2 1 PW	ACFP	2	CO3 Cho In.camp MMDis FI meet Dew. F.Traing	2 2 2 50 1 5000 75
X	**AVARAIKULAM**	158.6	111.56	448.48	270.16	557.62	131.02	M.C.Lining M.C.S.Shutter Dist.Lining DS Rep D.Dr.Rep D.Sy.Rep D.D.Silt B.Str S.Rep W.Recons Rt.Wall	265 M 5 Nos 2200M 14 Nos 12 Nos 1No 10600 M 4310 M 3 Nos 1No 30M	SRI Demo	70 270	AEP	69	AEP Demo	4 5	Com Gr Cap Bldg	1 1	FP FM PL	3 1 P Tiller 3 Ha	ACFP	2	CO3 Cho In.camp MMDis FI meet Dew. F.Traing	2 2 2 20 1 5000 50

XI	**ADANGARKULAM**	204.23	111.18	438.36	315.41	458.04	295.73	M.C.Lining M.C.S.Shutter Dist.Lining DS Rep D.Dr.Rep D.Sy.Rep D.D.Silt B.Str S.Rep S.Recons Rt.Wall	875M 3Nos 1200M 19 Nos 8 Nos 2Nos 8500 M 7090M 2Nos 5Nos 30 M	SRI Demo	5 85	AEP	43	AEP Demo	10 300	Com Gr	1	FM FP D	1 PW 2 5 Ha	ACFP	2	CO3 Cho In.camp MMDis FI meet Dew. F.Traing	2 2 2 20 1 7000 50
XII	**IRRUKANTHURAI**	116.57	81.04	615.36	197.61	549.26	263.71	M.C.Lining M.C.S.Shutter Dist.Lining DS Rep D.Dr.Rep D.D.Silt B.Str S.Rep S.Recons W.Rep Rt.Wall	215M 4Nos 2000M 27Nos 12Nos 11758M 9130M 6Nos 4 Nos 2Nos 120M	SRI Demo	20 170	AEP	56	SRI Demo	10 200	Com Gr	1	FP FM	11 1 PW	ACFP	6	CO3 Cho In.camp MMDis FI meet Dew. F.Traing	2 2 2 10 1 4000 25
XIII	**NAKKANERI**	174.94	67.64	64.05	242.58	505.17	301.46	M.C.Lining M.C.S.Shutter Dist.Lining DS Rep D.Dr.Rep D.D.Silt B.Str S.Rep Rt.Wall	225M 3Nos 2000M 4Nos 3Nos 9600 M 1870M 2Nos 20M	SRI Demo	140 100	AEP	17	SRI Demo	5 150	Com Gr Training	1 1	D SP FP FM	4 Ha 13 Ha 4 1 P Tiller	ACFP	4	Cho In.camp MMDis Dew.	2 2 10 7000

XIV	**VEPPANPADU**	243.94	127.36	1280.22	371.3	832.74	818.78	M.C.Lining M.C.S.Shutter Dist.Lining DS Rep D.Dr.Rep D.D.Silt B.Str S.Rep S.Recons Rt.Wall	180 M 3Nos 4500M 41Nos 21Nos 11200M 4830M 4Nos 1No 50M	SRI Demo	25 200	AEP	65	SRI Demo	10 125	Com Gr Training	1 1	FP FM	11 3 P Tiller	ACFP	6	Cho In.camp Dew. F.Traing	2 2 6000 50
XV	**RADHAPURAM**	29.09	24.26	127.04	53.35	73.9	106.49	M.C.Lining M.C.S.Shutter Dist.Lining D.S Sep D.Dr.Rep D.D.Silt B.Str S.Rep Rt.Wall	130M 4Nos 500M 3Nos 2Nos 1370M 3480M 2Nos 30M	-	-	AEP	10	-	-	Com Gr	1	-	-	-	-	Cho In.camp MMDis Dew.	2 2 10 3000

HANUMANADHI CONVERGENT TABLE

ABBREVIATIONS USED

1. D- Drip
2. SP- Sprinkler
3. FP- W.H.S.Farm Pond
4. FM- Farm Machineries
5. PT- Paddytrans
6. PW- Power Weeder
7. PT- Power Tiller
8. PL- Pipe Linning
9. Cap.Bldg- Capacity Building
10. Dry.Yard- Drying Yard
11. Com.Gr- Commodity Groups
12. Col.Cen- Colletion Center
13. IEC & CB Act- IEC & CB Activities
14. Exp.Visit- Exposure Visit
15. A Rep- Anicut Repair
16. S Chl Desit- Supply Channel Desilting
17. S Chl Rt wall- Supply Channel Retaininmg wall
18. S Rep- Sliuce Repair
19. W Rep- Weir Repair
20. D D Rep- Dividing Dam Repair
21. B Str- Bund Strengthening
22. S Recon- Sliuce Reconstruction
23. Ramp cons- Ramp Construction
24. Bridge Con- Bridge Construction
25. D D Con- Dividing Dam Construction
26. W Rcont- Weir Reconstruction
27. M C Ling- Main Canal Lining
28. Distri ling- Distributory Lining
29. D Drop Rep- Dividing Drop Repair
30. FCIT- Fish Culture in Irrigation tanks
31. ACFP- Aqua culture in farm ponds
32. SRI- System of Rice Intensification
33. Demo- Demonstration

34. AEP- Area expansion under Polyhouse
35. Incamp – Infertility camp
36. M.M.Dis. - Mineral Mixture Distribution.
37. F.I.Meet - Farmers Interactive meeting
38. Dew - Deworming
39. F. Traing - Farmers Training

1.2 HYDROLOGY

CHAPTER –2
HYDROLOGY

1.2.1 GENERAL

The river Hanumanadhi organates at an elevation of 1100 M in Mahendraheri hills covering under resersed forest. It traverse through Panagudi Vadakkankulam and finally Confluences with the Gulf of Mannar at the south of Erukkanthurai in Radhapuram Taluk of Tirunelveli District.

1.2.2 LOCATION

Hanumanadhi river is one of the rivers in the basin area which originates in the eastern slopes of the western ghats at an altitude of 1100m in the Mahendragiri hill region above north west of Panakkudi village in Nanguneri Taluk of Tirunelveli District. It has a number of jungle streams. After feeding a few tanks, they join with Hanumanadhi river at various points. It flows in the hill ranges for about 5.6Km and reaches 6.4Km west of Panagudi village in Radhapuram taluk after running 6.40Km. It traverses entirely in Radhapuram taluk for a distance of about 32Km in total and confluences into the Gulf of Mannar in the limits of Chettikulam village. Kallandi Odai, Kuthiraipanchan Odai and Sooravali Odai are the three tributaries of this river.

A canal known as Radhapuram canal crosses into this basin from the adjacent Kanyakumari District. Radhapuram canal starts from Pechiparai Reservoir in Kanyakumari district. At its starting point this canal is called Kodayar left bank canal. Another canal from Perunchani dam joins this Kodayar left bank canal at the 17^{th}km. After this confluence the canal is called Thovala Channel. After entering Tirunelveli district near Thirumulangar village, it is called Radhapuram canal. After feeding a number of tanks through supply channels in Uppar minor river basin, it crosses Hanumanadhi river near Koliyankulam anicut.

1.2.3 CATCHMENT AREA OF HANUMANADHI SUB BASIN

Hanumanadhi Sub Basin has a typical climate, owing to the marginal catchments area in the Western Ghats and extensive major catchments area in plains. Hanumanadhi Sub Basin enjoys the benefits of mostly North East monsoon and South West Monsoon.

1.2.4 HYDROMETEOROLOGY

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

1.2.5 RAIN FALL

The dependable gauging stations influencing this sub basin is as follows.

Table B - Southwest Monsoon – Dependable Rainfall

Sl. No.	Raingauge Stations	25%	50%	75%	90%
1	**Aralvaimozhi**	230	177	112	54
2	**Nanguneri**	111	87	53	11
3	**Radhapuram**	105	61	36	12
4	**Nelaparai**	244	187	83	0

Table C -Northeast Monsoon – Dependable Rainfall

Sl. No.	Raingauge Stations	25%	50%	75%	90%
1	**Aralvaimozhi**	561	368	290	184
2	**Nanguneri**	609	403	291	212
3	**Radhapuram**	541	374	245	110
4	**Nelaparai**	614	338	208	0

Table - D Winter Dependable Rainfall

Sl. No.	Raingauge Stations	25%	50%	75%	90%
1	**Aralvaimozhi**	54	4	0	0
2	**Nanguneri**	75	34	4	0
3	**Radhapuram**	64	14	0	0
4	**Nelaparai**	39	4	0	0

Table E - Summer Dependable Rainfall

Sl. No.	Raingauge Stations	25%	50%	75%	90%
1	**Aralvaimozhi**	183	141	97	51
2	**Nanguneri**	155	95	71	31
3	**Radhapuram**	132	89	50	13
4	**Nelaparai**	157	124	71	30

Table F- Annual Dependable Rainfall

Sl. No.	Raingauge Stations	25%	50%	75%	90%
1	**Aralvaimozhi**	927	774	654	509
2	**Nanguneri**	832	708	552	426
3	**Radhapuram**	766	584	407	291
4	**Nelaparai**	956	767	569	221

A. CLIMATE

The weather station considered is furnished below:

Name of the weather station	Maintained by
Aralvaimozhi	PWD (GW)

The climatological values of this river basin are given below.

Climatological Parameters

S. No	Climatological Parameter	Aralvaimozhi
1	Average monthly temperature Maximum. in. ^{0} Celsius	33.16
2	Average monthly temperature Minimum. in. ^{0} Celsius	25.65
3	Average mean temperature in ^{0} Celsius	29.25
4	Average relative humidity in %	68.56

5	Average wind velocity in km/hour	9.32
6	Average Sunshine hours / day	7.08
7	Average ETO mm/ Month (PET)	154.67

B. SOIL CLASSIFICATION

Due to different stage of weathering of parent material, the above soil types are met with in combination. The types of soils along with their sub groups are described below.

Entisols:

These soils show little or no evidence of development of pedogenic(diagnostic) horizons. Horizons have not been formed in these soils due to shortness of time for pedogenesis. Surface material is removed from the site as fast or faster than most diagnostic horizons can form. They are found distributed on steep, actively eroding slopes and on flood plains which receive new deposits of alluvium. Erosion is active in these soils. Resistant nature of the parent material like quartzite, bed rock etc prolongs the period of undistinguished horizonation.

Inceptisols:

This comprises of immature soils having profile features more weakly expressed. All the pedogenic processes are active to some extent but none predominates in these soils. They are poorly drained to well drained with moderate to rapid permeability. Most of them are cultivated under irrigated or rainfed conditions.

Alfisols:

This consists of deep to very deep matured soils with alluvial concentration of clay in the sub horizon. The surface horizon is massive and hard. Cultivation is extensive on these soils. They have moderate to high base saturation.

Table 2.10.1 Tamil Nadu Soils- Nambiyar River Basin

Mapping Unit	Description	Classification
133	Rock Outcrops	Rock Outcrops
145	Rock outcrops; associated with; Very deep Well drained; loamy soils on moderately steeply sloping, high	Rock land Fine loamy Ustropepts.

	hills and escarpments, severely eroded.	
148	Rock outcrops; associated with; deep well drained; loamy soils on undulating, low hills , severely eroded.	Rock land Fine loamy Ustropepts.
161	Very deep, excessively drained, clayey soils on gently sloping lands, severely eroded; associated with; very deep, well drained, loamy soils on very gently sloping lands with moderate erosion.	Sandy, mixed, Psammentic Paleustalfs. Fine-loamy, mixed, Rhodic Paleustalfs.
162	Deep, moderately well drained, clayey soils on gently sloping lands, slightly eroded; associated with; very deep, well drained, clayey soils on nearly level lands.	Clayey skeletal, mixed,Rhodic Paleustalfs. Fine- mixed, Rhodic Paleustalfs.
185	Deep, well drained, gravelly loam soils on gently sloping lands, moderately eroded; associated with; moderately shallow, well drained, gravelly clay soils on level lands.	Fine loamy, mixed, Typic Haplustalfs. Fine- mixed, Typic Haplustalfs.
195	Very deep, excessively drained, Sandy soils on very gently sloping lands, moderately eroded;	Mixed, Typic Ustipsamments.
196	Very deep, excessively drained, Sandy soils on gently sloping sand hills, severaely eroded;	Mixed, Typic Ustipsamments.
197	Very deep, excessively drained, Sandy soils on gently sloping lands, severaely eroded;	Mixed, Typic Ustipsamments.
220	Deep, imperfectly drained, calcarious clayey soils on nearly level low lands, slightly eroded;	Fine, mixed, Typic Ustrapepts.
223	Very deep, moderately well drained, clayey soils on nearly level low lands, slightly eroded; associated with; moderately deep, moderately well drained, loamy soils.	Fine, mixed, Typic Ustropepts.

1.2.6 DEMOGRAPHY

Sl.No	Name of the sub basin	Area (Sq.km)	Total Population in Million	Density Persons/sq.km
1	Hanumanadhi	510.179	0.196	385

1.2.7 WATER POTENTIAL

75% Dependable Surface Water Potential for the Nambiyar River Basin

Sl. No.	Name of Sub basin	75% Dependable Surface Water Potential in Mcum			
		SW	NE	NM	ANNUAL
1.	Hanumanadhi	**5.96**	**28.63**	**7.22**	**58.81**

1.2.8. Ground water potential

Table B – Groundwater potential

Sl. No	Name of Sub Basin	Name of Block	Total Block Area sq.km	Block Area falls in sub basin sq.km	% of block falls in sub basin	100 % Block Net potential Mcm	Block Net potential in sub basin Mcm	Total Sub basin Net potential Mcm	Level of Exploitation
1	Hanumanadhi	Kalakadu	440.940	2.401	0.0054	41.3576	0.2252	37.7672	Safe
		Valliyur	433.425	297.738	0.6869	27.7882	19.0889		Over Exploited
		Radhapuram	458.572	140.327	0.3060	24.4471	7.4810		Over Exploited
		Thovalai	369.070	61.915	0.1678	51.6508	8.6649		Safe
		Agastheeswaram	138.020	7.798	0.0565	40.8345	2.3071		Safe
		Nanguneri	502.590	78.006	0.1552	66.0175	10.2464		Safe

Water Potential

Surface Water Potential - 58.81 Mcum.

Ground Water Yield - 37.77 Mcum.

Total - 96.58 Mcum

1.2.11. WATER DEMAND WITHOUT PROJECT

1. DOMESTIC WATER DEMAND

Sl. No.	Name of the Sub Basin	2001	2006		2010		2020		2045	
		Total Population in Million	Total Popula-tion in Million	Total Water Demand in Mcum	Total Popula-tion in Million	Total Water Demand in Mcum	Total Popula-tion in Million	Total Water Demand in Mcum	Total Population in Million	Total Water Demand in Mcum
1	Hanumanadhi	0.196	0.212	6.242	0.225	6.655	0.263	7.816	0.389	11.747

INDUSTRIAL WATER DEMAND

The annual water demand for the Industries during the planning periods for Hanumanadhi sub basin is given below

Sl.No.	Name of the Sub-Basin	Annual water Demand in Mcum			
		2005	2010	2020	2045
1	**Hanumanadhi**	**5.93**	**7.82**	**12.57**	**24.43**

1.2.12. LIVESTOCK POPULATION															
Sl. No.	Name of the Sub Basin	Cattle	Buffaloes	Bovines	Sheep	Goat	Ovines	Horses & Ponies	Mules & Donkeys	Pigs	Dogs	Rabbits	Fowls	Ducks	Other Birds
1	Hanumanadhi	3423	7775	27702	19167	15544	34712	17	190	1530	4922	15	273680	1242	27

Live stock Demand 3.41 M. Cu. m

CROPPING PATTERN

Name of the sub Basin	: **Hanumanadhi**	Fully Irrigated	2267.04	Ha
District	: Tirunelveli & Kanyakumari	Partially Irrigated	771.98	Ha
Registered Ayacut Area	: 8013.23 Ha	Gap	4974.21	Ha
		Total Ayacut Area	**8013.23**	Ha

S.No.	Crop	Without Project				With Project				Increas-ing
		FI	PI	RF/G	TOTAL	FI	PI	RF/G	TOTAL	
I	**Perennial crop**									
	Coconut	528.00	5.71	-	533.71	735.71	-	-	735.71	202.00
	Mango	-	167.25	-	167.25	349.25	-	-	349.25	182.00
	Aonla	-	50.00	-	50.00	125.00	-	-	125.00	75.00
	Jasmine	-	27.00	-	27.00	75.00	-	-	75.00	48.00
	Perennial Fodder	-	-	-	0.00	20.00	-	-	20.00	20.00
	Sub Total	**528.00**	**249.96**	**0.00**	**777.96**	**1304.96**	**0.00**	**0.00**	**1304.96**	527.00
II	**Annual crop**									
	Tapioca	-	18.00	-	18.00	28.00	-	-	28.00	10.00
	Banana	237.04	-	-	237.04	622.04	-	-	622.04	385.00
	Moringa	-	36.00	-	36.00	51.00	-	-	51.00	15.00
	Sub Total	**237.04**	**54.00**	**0.00**	**291.04**	**701.04**	**0.00**	**0.00**	**701.04**	410.00
III	**1st crop**									
1. a	Paddy	1400.00	-	-	1400.00	-	-	-	0.00	-1400.00
b	Paddy - SRI	-	-	-	0.00	1400.00	-	-	1400.00	1400.00
2	Cotton	20.00	-	-	20.00	60.00	-	-	60.00	40.00
3	Ground nut	-	210.00	-	210.00	890.00	-	-	890.00	680.00
4	Pulses	-	250.00	-	250.00	951.70	-	-	951.70	701.70
5	Curry leaf	-	-	-	0.00	5.00	-	-	5.00	5.00
6	Casurina	-	-	-	0.00	180.00	-	-	180.00	180.00
7	Bhendi	10.00	-	-	10.00	25.00	-	-	25.00	15.00
8	Tomato	42.00	0.75	-	42.75	82.75	-	-	82.75	40.00
9	Flowers	30.00	7.27	-	37.27	77.27	-	-	77.27	40.00
10	Fodder cholam	-	-	-	0.00	30.00	-	-	30.00	30.00
11	Fallow / Gap	-	-	2686.06	2686.06	-	-	17.36	17.36	-2668.70
12	wind mill	-	-	2288.15	2288.15	-	-	2288.15	2288.15	0.00
	Sub Total	**1502.00**	**468.02**	**4974.21**	**6944.23**	**3701.72**	**0.00**	**2305.51**	**6007.23**	-937.00
	Grand Total (I+II+III)	**2267.04**	**771.98**	**4974.21**	**8013.23**	**5707.72**	**0.00**	**2305.51**	**8013.23**	0.00
IV	**2 nd Crop**									
	Sub Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00
V	**3 rd Crop**									
	Total									
	Great Grand Total	**2267.04**	**771.98**	**4974.21**	**8013.23**	**5707.72**	**0.00**	**2305.51**	**8013.23**	
	Cropping Intensity				**37.93%**				**71.23%**	

1.2.13.Crop water requirement (without project)

SI.No.	Name of crop	Area in Ha	crop water requirement in mm	Total crop water requirement in Mcm	Irrigation requirement at source Eff= 43 %	Total irrigation requirement in Mcm.
I	**Perennial crops**					
1	Cocunut	533.71	1392	7.429	17.28	17.28
2	Mango	167.25	402	0.672	1.56	1.56
3	Amla	50.00	526	0.263	0.61	0.61
4	Jasmine	27.00	138	0.037	0.09	0.09
5	Perennial foodder	0.00	386	0.000	0.00	0.00
	Sub total	**777.96**		**7.430**	**17.28**	**17.28**
II	**Annual Crops**					
1	Tapiaco	18.00	538	0.097	0.23	0.23
2	Banana	237.04	1343	3.183	7.40	7.40
3	Moringa	36.00	256	0.092	0.21	0.21
	Sub total					
III	**I st Crop**					
1.a	Paddy	1400.00	728	10.192	23.7	23.70
1.b	Paddy SRI	0.00	510	0.000	0.00	0.00
	Cotton	20.00	437	0.087	0.20	0.20
	Ground nut	210.00	467	0.981	2.28	2.28
	Pulses	250.00	300	0.750	1.74	1.74
	Curry leaf	0.00	330	0.000	0.00	0.00
	Casurina	**0.00**	290	0.000	0.00	0.00
	Bhendi	10.00	315	0.032	0.07	0.07
	Tomato	42.75	294	0.126	0.29	0.29
	Flowers	37.27	595	0.222	0.52	0.52
	Fodder cholam	0.00	50	0.000	0.00	0.00
	Follow Gap	2686.06	0	0.000	0.00	0
	Wind mill	2288.15	0	0.000	0.00	0.00
	Sub total	6944.23		12.39	28.81	28.81
	Grand Total (I+II+III)	8013.23		23.19	53.93	53.93
IV	2nd Crop					
	Total	0.00		0.00	0.00	0.00
	Great Grand Total	8013.23		23.19	53.93	53.93

HANUMANADHI SUB BASIN - NAMBIYAR BASIN

Water Potential without Project

surface Water Potential	=	58.81	Mcm
Gronud Water Potential	=	37.77	Mcm

Water Demand without Project

Domestic	=	6.24	Mcm
Livestock	=	3.41	Mcm
Industrial WRO	=	5.93	Mcm
Irrigation	=	53.93	Mcm
PU & GW	=	19.22	Mcm
Total Water Demand	=	88.73	Mcm
Water Balance	=	7.85	Mcm

1.2.14.Crop water requirement (with project)

SI.No.	Name of crop	Area in Ha	crop water requirement in mm	Total crop water requirement in Mcm	Irrigation requirement at source Eff= 53 %	Total irrigation requirement in Mcm.
I	**Perennial crops**					
1	Cocunut	735.71	1392	10.241	19.32	19.32
2	Mango	349.25	402	1.404	2.65	2.65
3	Amla	125.00	526	0.658	1.24	1.24
4	Jasmine	75.00	138	0.104	0.2	0.20
5	Perennial foodder	20.00	386	0.077	0.15	0.15
	Sub total	**1304.96**		**12.480**	**23.55**	**23.55**
II	**Annual Crops**					
1	Tapiaco	28.00	538	0.151	0.28	0.28
2	Banana	622.04	1343	8.354	15.76	15.76
3	Moringa	51.00	256	0.131	0.25	0.25
	Sub total	701.04		8.640	16.29	16.29
III	**I st Crop**					
1.a	Paddy	0.00	728	0.000	0	0.00
1.b	Paddy SRI	1400.00	510	7.140	13.47	13.47
2	Cotton	60.00	437	0.262	0.49	0.49
3	Ground nut	890.00	467	4.156	7.84	7.84
4	Pulses	951.70	300	2.855	5.39	5.39
5	Curry leaf	5.00	330	0.017	0.03	0.03
6	Casurina	**180.00**	290	0.522	0.98	0.98
7	Bhendi	25.00	315	0.079	0.15	0.15
8	Tomato	82.75	294	0.243	0.46	0.46
9	Flowers	77.27	595	0.460	0.87	0.87
10	Fodder cholam	30.00	50	0.015	0.03	0.03
11	Follow Gap	17.36	0	0.000	0.00	0.00
12	Wind mill	2288.15	0	0.000	0.00	0.00
	Sub total	6007.23		15.75	29.71	29.71
	Grand Total (I+II+III)	8013.23		36.87	69.56	69.56
IV	**2nd Crop**					
	Total	0.00		0.00	0.00	0.00
	Great Grand Total	8013.23		36.87	69.56	69.56

HANUMANADHI SUB BASIN - NAMBIYAR BASIN

Water Potential with Project

surface Water Potential		=	58.81	Mcm
Gronud Water Potential		=	37.77	Mcm

Water Demand with Project

Domestic		=	6.24	Mcm
Livestock		=	3.41	Mcm
Industrial		=	5.93	Mcm
Irrigation	WRO	=	69.56	Mcm
	PU & GW	=	19.22	Mcm
Total Water Demand		=	**104.36**	**Mcm**
Water Balance		=	**-7.78**	**Mcm**

1.3 HYDRAULICS OF THE COMPONENTS

HANUMANADHI SUB BASIN HYDRALIC PARTICULARS OF ANICUTS

Sl.No	Name of Anicut	Village	Ayacut	Length of Anicut(M)	Free Sq.km	Comb ined Sq.km	Maximum flood discharge Cumecs	Head sluice Location
1	Sooravali Anicut	Panagudi Part-I	-	33.5	6.38	6.38	22.51	Left Side
2	Sivanpillai Anicut	Parivirisooriyan	-	31	4.92	4.92	17.36	Left Side
3	Senthlkathaiyan Anicut	Panagudi Part-I	-	41	6.67	17.97	87.63	Left Side
4	Thandayarkulam Anicut	Thandayarkulam	-	39.6	11.61	29.58	122.60	Left Side
5	Senjetty Anicut	Thandayarkulam	-	97.9	0.96	30.54	117.59	Left Side
6	Perunkudy Anicut	Perungudi Part-I	-	55	11.72	48.64	164.42	Left Side
7	Vadakkankulam Anicut	Perungudi Part-II	-	87	5.04	53.68	173.03	Open off take(left & Right side)
8	Azhaganeri Anicut	Azhaganeri	-	69.3	3.12	56.86	178.62	Left Side
9	Koliyankulam Anicut	Dhanakkarkulam	-	42.2	0.39	56.25	175.90	Left Side
10	Adangarkulm Anicut	Dhanakkarkulam	-	34	0.023	56.273	178.61	Left Side
11	Sakkiliyanparai Anicut	Erukkanthurai Part- I	-	46.4	6.55	62.823	195.69	Open off take(Right side)
12	Kanchaneri Anicut	Erukkanthurai Part- I	-	70.75	0.81	63.633	164.34	Left Side

HANUMANADHI SUB BASIN HYDRALIC PARTICULARS OF TANK

Sl. No	District	Taluk	Name of Tank	Village	Ayacut Ha	Capacity in Mcft	Number of Fillings	Free catchment in SqKm	Combined Catchment in Sq.Km	Water spread area(Sq .Km)	FTL in M	MWL in M	No.of Sluices	Discharge in Cusecs	Length of bund (M)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17
1	Tirunelveli	Radhapuram	Parivarisooriyankulam	Parivarisooriyan	43.03.5	6.26	-	-	-	-	100.000	100.450	1	-	1350
2			Nagaraikulam	Panagudi Pt.I	62.47.0	8.0	-	-	-	-	100.000	100.450	2	-	1660
3			Sannanerikulam	Panagudi Pt.I	173.77.0	14.0	-	-	-	-	100.000	100.450	3	-	1870
4			Melakadambankulam	Therku Valliyoor Pt.1	17.16.5	11.17	0.468	1.144	1.144	0.1426	88.755	89.055	1	10.6722	1320
5			Keezhakadambankulam	Therku Valliyoor Pt.1	6.35.0	2.72	-	-	-	-	100.000	100.450	1	-	1210
6			Pambankulam	Thandayarkulam	4.29.5	0.24	-	-	-	-	100.000	100.300	1	-	-
7			Pettaikulam	Panagudi Pt.I	18.63.0	1.36	-	-	-	-	100.000	100.300	2	-	800
8			Khaikkulam	Thandayarkulam	45.85.0	2.62	-	-	-	-	100.000	100.450	3	-	1650
9			Padalayarkulam	Panagudi Pt.I	14.41.5	1.29	3	0.2047	0.2047	0.0259	93.450	94.050	1	2.8079	700
10			Sirunambikulam	Thandayarkulam	5.36.5	0.39	-	-	-	-	100.000	100.300	1	-	-
11		Radhapuram	Sathankulam	Thandayarkulam	36.41.0	5.15	-	-	-	-	100.000	100.450	1	-	1280
12			Thandayarkulam	Thandayarkulam	31.59.0	1.99	-	-	-	-	100.000	100.450	3	-	1580
13			Senjettykulam	Thandayarkulam	2.88.5	1.62	-	-	-	-	100.000	100.300	1	-	-
14			Thalavaipudhukulam	Panagudi Pt.I	60.33.5	10.92	1.4205	1.825	1.825	0.4125	74.785	75.385	3	23.057	2140

15			Veppilamkulam	Veppilankulam	16.38.5	1.35	-	-	-	-	100.000	100.450	1	-	1000
16	Tirunelveli		Pullankurichikulam	Veppilankulam	69.14.5	22.57	-	-	-	-	100.000	100.450	2	-	1650
17			Palliserikulam	Veppilankulam	6.77.5	1.74	1.77	1.2307	10.5157	0.1259	64.565	65.165	1	59.6591	800
18			Kalkaraikulam	Veppilan kulam	23.56.5	21.39	-	-	-	-	100.000	100.450	2	-	-
19			Pappankulam	Radhapuram	15.14.0	4.74	1	3.417	4.830	0.241	55.600	56.050	1	31.873	1340
20			Pavirithoottamkulam	Radhapuram	5.75.0	4.57	2	1.577	6.407	0.080	52.060	52.510	1	29.237	700
21	Kanyakumari		Pandaraperiyakulam	Radhapuram	67.61.0	63.48	3.000	2.061	7.0880	0.6370	61.910	62.360	3	33.7070	1920
22			Marayanpattukulam	Radhapuram	8.55.5	7.95	0.8240	0.728	9.026	0.199	48.375	48.825	1	56.396	1458
23			Pannayarkulam	Radhapuram	6.65.0	3.46	-	-	-	-	100.000	100.450	1	-	700
24			Neduvazhikulam	Radhapuram	10.33.5	9.84	-	-	-	-	100.000	100.450	1	-	1070
25		Tirunelveli	Pattarkulam	Radhapuram	4.57.5	5.74	-	-	-	-	100.000	100.300	1	-	800
26			Veerakulam	Radhapuram	8.08.5	1.24	0.9530	0.7395	9.8916	0.1575	44.705	45.305	1	56.3451	1253
27			Chettipudhukulam	Radhapuram	1.98.0	2.25	-	-	-	-	100.000	100.450	1	-	-
28		Tirunelveli	Vallakulam	Radhapuram	6.02.5	4.03	-	-	-	-	100.000	100.450	1	-	-
29	Tirunelveli		Pudhukulam	Dhanakkar kulam	9.95.5	2.32	-	-	-	-	100.000	100.450	2	-	1340
30			Keeranerikulam	Dhanakkar kulam	24.36.0	16.17	2.50	1.175	1.175	0.2453	50.560	51.160	3	19.3	1070
31	Tirunelveli		Karuppilankulam	Dhanakkar kulam	10.25.0	0.29	0.392	0.8229	4.151	0.2319	55.840	56.440	1	15.446	1082
32			Veesadikulam	Dhanakkar kulam	17.67.5	1.07	0.381	3.328	3.328	0.3076	59.86	60.160	1	11.874	1412
33			Vadapathukulam	Dhanakkar kulam	27.16.5	4.68	-	-	-	-	100.000	100.450	2	-	1250
34			Mithiyankulam	Erukkan thurai	7.09.5	3.14	0.599	1.150	1.5696	0.3886	22.700	23.150	1	6.178	900

				Pt.1											
35			Thumbaikulam	Erukkanthurai Pt.1	14.27.0	7.14	2.50	1.357	28.456	0.3912	25.200	25.650	2	118.216	1650
36			Manamarikulam	Parivarisooriyan	17.28.5	9.22	3	2.156	2.156	0.0516	110.500	110.800	1	7.735	741
37			Veerapandiyankulam	Parivarisooriyan	36.99.0	2.00	0.515	1.786	3.942	0.1718	106.440	106.990	1	14.4945	1302
38			Miapudhukulam	Panagudi Pt.II	16.82.0	1.82	0.794	3.199	3.1990	0.1679	99.960	100.560	1	12.68	1138
39			Sivahamipudukulam	Panagudi Pt.II	11.39.5	1.00	1.67	1.63	2.6780	0.064	95.110	95.410	1	23.985	880
40			Perumalpudhukulam	Perungudi Pt.II	7.74.5	0.05	1.224	1.192	1.192	0.0612	80.840	81.240	1	8.1422	755
41	Tirunelveli	Radhapuram	Manimalayankulam	Perungudi Pt.II	3.41.5	1.10	-	0.6423	0.6423	-	100.000	100.300	1	5.666	555
42			Vinayagarpudhukulam	Perungudi Pt.II	10.99.5	0.10	0.909	0.7105	0.7105	0.0457	81.480	81.780	1	6.2943	868
43		Radhapuram	Periyapudhukulam	Perungudi Pt.II	15.40.0	2.40	1.905	0.9715	7.9765	0.0846	79.540	76.990	1	49.557	1040
44			Kalipudhukulam	Perungudi Pt.II	8.07.5	2.40	0.814	1.128	4.327	0.1568	86.500	86.950	1	15.60	900
45			Punchakattykulam	Perungudi Pt.II	14.41.5	3.70	0.855	0.4456	8.4221	0.1109	79.690	79.990	1	50.455	1002
46			Vadakkankulam	Perungudi Pt.II	16.30.5	9.70	3	5.122	5.122	0.1096	58.00	50.600	2	18.419	1225
47	Tirunelveli		Azhaneri kulam	Azhaneri	4.92.0	8.80	0.8893	1.625	6.748	0.2488	51.210	51.810	2	24.907	-
48		Thovalai	Sadayaneri kulam	Sadayaneri	2.85.5	3.42	0.9006	1.0397	1.0397	0.1450	51.090	51.690	1	9.1759	1129
49			Lekshimiputhu kulam	Aralvaimozhy	19.69.0	0.393	-	-	-	-	100.000	100.450	2	-	590
50			Athikulam	Aralvaimozhy	21.65.5	0.223	-	-	-	-	100.000	100.450	2	-	975
51			Annauthukulam	Aralvaimozhy	15.18.0	0.212	-	-	-	-	100.000	100.450	2	-	285
52			Salaiputhukulam	Pazhavoor	1.72.5	0.180	-	-	-	-	100.000	100.300	1	-	675

53			Therkku Sivagangaikulam	Pazhavoor	2.27.5	0.230	-	-	-	-	100.000	100.300	1	-	815
54			Melapalar kulam	Pazhavoor	2.86.5	0.295	-	-	-	-	100.000	100.300	1	-	1280
55			Keelapalar kulam	Pazhavoor	3.87.5	0.295	-	-	-	-	100.000	100.300	1	-	785
56		Radhapuram	Pazhavoor periyakulam	Pazhavoor	10.52.5	0.108	-	-	-	-	100.000	100.300	1	-	1650
57			Nariparai kulam	Livinchi puram	7.98.5	1.90	2.00	3.129	4.6993	0.1355	21.075	21.675	2	17.1600	1000
58		Radhapuram	Achampadukulam	Livinchi puram	2.27.0	1.70	-	-	-	-	100.000	100.300	1	-	641
59			Poothatikulam	Livinchipuram	7.96.0	2.50	0.612	1.036	1.0360	0.1091	22.730	23.330	1	17.8540	1212
60			Venmanikulam	Therku Karunkulam	6.42.0	2.50	1.60	2.200	2.2000	0.1111	26.460	27.060	1	10.9600	1080
61			Periyapamanikulam	Therku Karunkulam	8.12.0	3.40	1.230	1.023	6.8870	0.1383	21.180	21.780	1	38.2800	1168
62			Nambikurichikulam	Livinchipuram	7.45.5	2.20	1.721	0.622	8.5450	0.1067	18.130	18.730	1	33.6600	1016
63	Tirunelveli		Melavelarikulam	Therku Karunkulam	6.19.0	3.00	1.402	2.353	3.6664	0.1606	25.810	26.110	1	13.1772	1035
64			Keezhavelarikulam	Therku Karunkulam	4.49.0	2.00	1.905	0.831	0.8310	0.0771	26.210	26.510	1	11.8799	635
65			Chittalamkulam	Therku Karunkulam	4.13.0	4.10	-	-	-	-	100.000	100.300	1	-	1070
66			Thiruppathikulam	Pazhavoor Pt. II	5.27.5	3.10	2.00	0.227	14.637	0.0841	33.320	33.920	2	74.2300	972
67			Vadakkuparambi kulam	Therku Karunkulam	8.30.5	2.10	2.00	0.438	15.461	0.1156	31.520	32.120	1	77.0870	1065
68			Malayankulam	Therku Karunkulam	5.67.5	4.60	0.607	0.761	0.7610	0.0925	27.130	27.730	1	2.7460	935
69			Periyakulam	Therku Karunkulam	23.80.0	7.70	0.897	0.9	17.123	0.3755	24.620	25.220	1	82.1050	1850
70			Veppankulam	Pazhavoor Pt. II	2.03.0	1.20	-	-	-	-	100.000	100.300	1	-	1140
71			Kallikulam	Pazhavoor Pt. II	10.55.5	4.20	1.880	4.324	13.983	0.2350	36.940	37.240	1	73.6670	1390

72			Karumeniyanthal kulam	Pazhavoor Pt. II	3.52.5	3.60	-	-	-	-	100.000	100.300	1	-	882
73			Kokkanerikulam	Therku Karunkulam	7.69.5	3.30	0.155	0.345	0.3452	0.1356	18.770	19.370		1.7160	934
74		Radhapuram	Pullanerikulam	Therku Karunkulam	7.93.0	3.00	1.960	1.188	19.667	0.1630	19.650	20.250	1	88.3270	1300
75			Ariyankudikulam	Therku Karunkulam	11.87.0	5.10	0.256	0.720	0.7200	0.2027	19.290	19.890	1	12.1200	1396
76			Sulekapanikulam	Pazhavoor Pt. II	8.23.5	4.50	2.021	1.686	9.6594	0.1205	40.820	41.120	1	58.2520	1260
77	Tirunelveli		Kootharkulam	Pazhavoor Pt. II	7.16.0	4.50	2.000	2.199	2.1990	0.1581	36.000	36.600	1	8.5810	1350
78			Kilakkulam	Adangarkulam	13.19.0	7.80	1.327	3.368	12.906	0.2286	43.900	44.500	2	70.5470	1705
79			Chembi kulam	Pazhavoor Pt. II	3.56.0	0.90	-	-	-	-	100.000	100.300	1	-	800
80			Kurumbilarkulam	Adangar kulam	5.21.5	3.35	1.436	1.336	2.9750	0.1620	37.420	37.870	1	12.9930	920
81			Kurumarankulam	Pazhavoor Pt. II	7.85.5	6.40	1.537	4.424	8.4820	0.2427	33.210	33.800	1	55.3760	1260
82			Marankulam	Pazhavoor Pt. II	10.35.5	7.40	1.318	2.445	26.814	0.2159	28.600	29.200	2	109.912	1750
83	Tirunelveli		Adankarkulam	Adangar kulam	14.67.5	11.40	2.000	0.447	0.8650	0.0820	38.420	38.870	1	3.5110	750
84			Madhaganerikulam	Pazhavoor Pt. II	9.01.5	6.60	0.440	0.115	4.0580	0.1152	34.650	35.100	1	22.2540	980
85			Koliyankulam	Danakkar kulam	11.76.5	6.30	0.777	1.225	1.2250	0.1193	42.950	43.550	2	10.8790	1005
86			Uralvaiymozhuy kulam	Adangar kulam	33.69.0	18.50	1.530	2.712	2.7120	0.4678	32.890	33.340	5	21.0250	2040
87			Kurumbilarkulam	Erukkan thurai Pt-I	5.21.5	5.00	0.749	0.840	7.9272	0.2128	26.350	26.800	1	52.0440	1120
88			Putherikulam	Erukkan thurai Pt-I	8.86.0	2.50	1.186	0.449	11.403	0.1912	19.000	19.450	1	62.0660	1080
89			Pullavallampadu kulam	Danakkar kulam	4.36.0	1.50	-	-	-	-	100.000	100.450	1	-	-
90		Radhapuram	Suchikulam	Erukkan thurai Pt-I	3.99.0	2.50	1.620	1.471	4.1830	0.1222	29.800	30.250	1	29.4300	1080

91			Nedunkulam	Erukkan thurai Pt-I	4.16.0	6.00	1.836	2.904	2.9040	0.1387	27.550	28.000	1	10.5860	850
92			Ammachiyarkulam	Erukkan thurai Pt-I	2.92.0	1.60	-	-	-	-	100.000	100.300	1	-	-
93			Kanchaneri kulam	Erukkan thurai Pt-I	6.37.5	1.80	0.960	0.245	8.1722	0.0816	23.000	23.450	1	50.2760	1000
94			Vannankulam	Erukkan thurai Pt-I	2.77.5	1.40	-	-	-	-	100.000	100.300	1	-	-
95			Udayanerikulam	Veppilan kulam	7.09.5	5.30	0.864	2.663	3.3840	0.1873	16.200	16.650	1	19.6230	720
96			Sonarkulam	Dhanakkar kulam	2.19.5	1.20	-	-	-	-	100.000	100.300	1	-	400
97			Aladikurichikulam	Dhanakkar kulam	7.68.5	5.40	-	-	-	-	100.000	100.450	1	-	
98			Nakkanerikulam	Erukkan thurai Pt-I	8.73.0	5.10	2.500	3.412	37.657	0.2012	40.765	41.365	1	19.5658	930
99			Pullamangalam kulam	Erukkan thurai Pt-I	12.46.0	6.60	-	-	-	-	100.000	100.300	1	-	800
100			Pandiyanpudukulam	Erukkan thurai Pt-I	3.88.5	2.70	-	-	-	-	100.000	100.300	1	-	800
101			Veppanpadukulam	Erukkan thurai Pt-I	5.60.5	2.10	-	-	-	-	100.000	100.300	1	-	1200
102			Sanarkulam	Koodan kulam	13.89.5	4.30	-	-	-	-	100.000	100.300	2	-	950
103			Sanganerikulam	Erukkan thurai Pt-I	13.95.5	9.60	-	-	-	-	100.000	100.300	1	-	1340
104		Radhapuram	Vaniyankulam	Udayathoor	7.11.0	2.80	2.000	2.847	2.8470	0.149	35.050	35.350	1	11.3670	1050
105			Sivathanuperi kulam	Udayathoor	3.42.5	2.40	-	-	-	-	100.000	100.300	1	-	845
106			Arasanerikulam	Parames warapuiram	6.33.5	2.80	-	-	-	-	100.000	100.300	2	-	1340
107			V.N.Kulam	Udayathoor	6.17.5	3.30	-	-	-	0.1355	100.000	100.300	1	-	1070
108			Mahendramkulam	Radha puram	5.38.0	3.10	3.000	1.680	5.0680	0.1228	43.280	43.730	1	20.0600	1110

HYDRAULIC PARTICULARS OF CHANNELS

Sl. No.	Name of District	Name of Taluk	Name of Block	Name of Channel	Length in M	Bed width in M	Bed Fall	Side slope	Depth of flow
1	Tirunelveli	Radhapuram	Valliyoor	Radhapuram canal Distributry -1 (Field Boothie- 1)	-	-	-	-	-
2				Radhapuram canal Distributry -2	2416	0.45	1:500	1:1	0.50
3				Radhapuram canal Distributry -3 (Field Boothie- 2)	-	-	-	-	-
4				Radhapuram canal Distributry -4	3069	0.50	1.500	1:1	0.50
5				Radhapuram canal Distributry -5 (Field Boothie- 3)	-	-	-	-	-
6				Radhapuram canal Distributry -6	2548	0.45	1:500	1:1	0.50
7				Radhapuram canal Distributry -7	4229	0.45	1:500	1:1	0.50
8				Radhapuram canal Distributry -8	2650	0.60	1:500	1:1	0.50
9				Radhapuram canal Distributry -9	2169	0.75	1:500	1:1	0.50

10				Radhapuram canal Distributry -10	4749	0.50	1:500	1:1	0.50
11				Radhapuram canal Distributry -11	6963	0.50	1:500	1:1	0.50
12				Radhapuram canal Distributry -12	936	0.50	1:500	1:1	0.50
13				Radhapuram canal Distributry -13	2081	0.75	1:500	1:1	0.50
14				Radhapuram canal Distributry -14	5233	0.75	1:500	1:1	0.50
15				Radhapuram canal Distributry -15	1480	0.50	1:500	1:1	0.50
16				Radhapuram canal Distributry -16	1138	0.50	1:500	1:1	0.50
17				Radhapuram canal Distributry -17	6660	0.75	1:500	1:1	0.50
18				Radhapuram canal Distributry -18	2025	0.75	1:500	1:1	0.50
19				Radhapuram canal Distributry -19 (Field Boothie-4)	-	-	-	-	-
20				Radhapuram canal Distributry -20 (Field Boothie-5)	-	-	-	-	-
21				Radhapuram canal Distributry -21	5057	0.50	1:500	1:1	0.50
22				Radhapuram canal Distributry -22 (Field Boothie-6)	-	-	-	-	-
23				Radhapuram canal Distributry -23	6770	0.60	1:500	1:1	0.50
24	Tirunelveli	Radhapuram	Valliyoor	Radhapuram canal Distributry -24	5715	0.75	1:500	1:1	0.50
25				Radhapuram canal Distributry -25	3715	0.50	1:500	1:1	0.50
26				Radhapuram canal Distributry -26 (Field Boothie-7)	-	-	-	-	-
27				Radhapuram canal Distributry -27	2035	0.75	1:500	1:1	0.50

28			Radhapuram	Radhapuram canal Distributry -28	9689	0.75	1:500	1:1	0.50
29				Radhapuram canal Distributry -29	3210	0.75	1:500	1:1	0.50
30				Radhapuram canal Distributry -30 (Field Boothie- 8)	-	-	-	-	-
31				Radhapuram canal Distributry -31	1370	0.80	1:500	1:1	0.50
32				Radhapuram canal Distributry -32 (Field Boothie- 9)	-	-	-	-	-
33				Radhapuram main canal	28800	3.50	1:5280	1:1	1.50
34	Tirunelveli	Radhapuram	Valliyoor	Sivan pillai kal	3400	5.00	1:510	1:1	0.90
35				Senthilkathayan kal	1500	3.00	1:500	1:1	0.60
36				Thandayarkulam kal	1950	4.00	1:500	1:1	0.75
37				Senjetty kal	5000	5.00	1:500	1:1	1.00
38				Perungudy kal	4000	3.00	1:720	1:1	0.75
39				Vadakkankulam kal	1080	3.00	1:1000	1:1	0.60
40				Karupillan kulam	810	3.00	1:720	1:1	0.60
41				Sadayaneri kal	700	2.00	1:1000	1:1	0.60
42				Koliyan kulam kal	750	2.00	1:1000	1:1	0.60
43				Adangar kulam kal	3800	2.50	1:720	1:1	0.60
44				Mithiyan kulam kal	3000	3.00	1:720	1:1	0.75
45				Kanjaneri kulam kal	1500	3.00	1:720	1:1	0.60

46				Lower contour canal kal	4800	5.00	1:2500	1:1	0.90
47				Sooravali Odai	1400	5.00	1:500	1:1	1.20
				Total	**148397**				

1.4 PARTICIPATORY IRRIGATION MANAGEMENT (PIM)

1.1.Salient Features of Implementation of PIM in Hanumanathi Sub Basin

1. The Sub Basin :

This is one of the Sub Basins of the Nambiyar Basin. Totally 108 irrigation tanks are under the control of Water Resources Organistion (WRO) of Public Works Department (PWD) in this Sub Basin. The list of tanks covered with more details are furnished in the Annexure 1. These 108 tanks are located within the Sub Basin hydraulic boundary spread over 25 villages of Radhapuram Taluk in Tirunelveli District and 1 Village of Thovalai Taluk in Kanyakumari District. The total command area under these 108 tanks works out to 8013.22.5 Ha.

2. Command Area

Under system tank		-	1537.48.5 Ha
i)	Radhapuram System	-	6884.72 Ha
ii)	Poigai System	-	77.79 Ha
iii)	Vadamalayan kal System	-	67.80 Ha
Under Non system tank			
i)	Alanthuraiyar scheme	-	982.92 Ha

	Total	-	**8013.23.0 Ha**

3.An assessment of number of WUAS:

i) Associations already formed under WRCP	-	10 (7030.31.0 Ha)
ii) Associations proposed to be formed under IAMWARM Project covering 47 tanks and 13 Villages.	-	5 (982.92.0 Ha)
iii) The total command area covered by the above (10+5 = 15 WUAS) works out to	-	15 (8013.23.0 Ha)

4. An account of "Awareness Creation"

Activities under taken and walk through surveys carried out.

i. There are 108 tanks in the sub basin spread over 25 Village. As detailed out in Annexure – 01. All these Villages were visited by the WRO Officials and awareness about various activities, contemplated under IAMWARM Project has been created.

ii. Details of Villages covered, walkthrough surveys conducted, farmers attended, list of works suggested by the farmers, list of works analysed and finalized by WRO Officials, are all furnished in the Annexure – 02.

5. Schedule for completion of delineation and preparation for WUA documents, comprising of:

i Form – 1 : Details to be notified by District Collectors (End of March 2009)

ii. Form – II WUA document to be notified by District Collectors (End of April 2009)

iii. Completion of preparatory works for the conduct of Elections for WUAs (End of May 2009)

6. Schedule for Conduct of Elections in the Sub-basin for farming Management committees will be completed by end of July 2009

7. Support Organization (SOS)

i) Initiating and completing the process of Publishing EOI to hire Support Organisation at sub-basin level (End of Feb 2009)

ii) Providing Request for Proposals (RFPs) to all the short listed agencies, and obtaining Technical and Cost Proposals (Middle of April 2009)

iii) Selection and deployment of support Organisation to the sub-basin (End of May 2009)

8. Appointment and the Role of Competent Authorities

i) Section 26 of the Tamil Nadu Farmers' Management of Irrigation Sysetm (TNFMIS) Act.

Provides for the appoint of "Competent Authorities" to assist the respective farmers organizations (WUA, Distributory Committee and Project Committee), in the implementation and execution of all decisions taken by such farmers organization. Similarly, every farmer's organization shall extend such co-option or asistance, as may be required by the Competent Authority for carrying out all the tasks related to implementation of TNFMIS Act.

ii For the WUAs to be formed under IAMWARM, the Competent Authorities are as listed below:

Sl. No.	Details of WUAs in code	Details of Competent Authorities
1	HAN - 01	Section officer, WRO, Irrigation Section, Vadakkankulam
2	HAN - 02	Section officer, WRO, Irrigation Section, Vadakkankulam
3	HAN – 03	Section officer, WRO, Irrigation Section, Vadakkankulam

4	HAN – 04	Section officer, WRO, Irrigation Section, Vadakkankulam
5	HAN - 05	Section officer, WRO, Irrigation Section, Vadakkankulam

iii. It is proposed to form 5 WUAs only under IAMWARM Project to cover a command area of 982.82.0 Ha

iv. Name of the WRO Sub Division officers working in the Hanumanathi Sub basin

Assistant Executive Engineer, WRO,
Pazhayar Basin Sub Division,
Nagercoil

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

i. 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 "Modernization" under IAMWARM Project was discussed with farmers from 25 Villages and the tasks was also prepared and exhibited in the Notice Board of the Village Administrative Officers Office and Panchayat Office.

ii. During the meeting, the farmers present were also informed that soon after finalization of contract for carrying out "Modernization of Irrigation System" a "Notice Board" with the details about the nature of 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, for information of the farmers. They have also been informed that they are free to supervise the work done 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.

iii. The field officers of WRO have all been informed about the problems in handing over the operation and maintenance responsibilities to the farmers concerned, if the tasks as desired by them are not included in the modernization of the system and also in case some of the tasks already planned are not implanted due to some reasons or other..

iv. The WRO officers were also informed that they are personally responsible for handing over the irrigation systems after completing the tasks related to modernization of irrigation systems.

10. Current status of Recovery of Water charges:

i. An enquiry conducted with the "Villages Administrative Officers" (VAOs) of randomly selected village, the normal water charges recovery is very less.

ii. With the proposal to form new WUAs under IAMWARM in "Hanumanathi 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 modernization tasks and handing over the O & M responsibilities to WUAs.

11. Capacity Building " of the WUA farmers:

i. 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 organize various "Capacity building" Programmes at **Suitable locations** within the sub-basin command area, to benefit the farmers of the WUAs in the sub-basin.

ii. The "Support Organisation" will also arrange for organizing 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 there by the farmer's income.

iii. 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. TNFMS Rules and Election procedures for constituting the "Managing Committees" of the WUAs.

12 The "Component Authorities" appointed for the Sub-basin will also be trained to effectively to interact with WUA farmers and maintain good rapport and relationship with the farming community in the sub-basin.

AN ASSESSMENT OF COMMND AREA AND WUAS UNDER THE CONTROL OF WRO OF PWD IN HANUMANADHI SUB BASIN

SL. NO	NAME OF IRRIGATION SYSTEM AND TANKS	COMMAND AREA(Ha)	LOCATION OF THE COMMAND AREA			COVERAGE OF AREA UNDER DIFFERENT PROJECT (Ha)			STATUS OF FORMATION OF WUAs IN THE SUB BASIN	
			VILLAGE	TALUK	DISTRICT	WRCP AND OTHERS		IAMWARM	FORMED UNDER WRCP (CODE)	TO BE FORMED UNDER IAMWARM (CODE)
						DIRECT	INDIRECT			
1	2	3	4	5	6	7	8	9	10	11
I	**SYSTEM TANKS**									
1	Parivarisooriyan kulam	43.03.5	Parivarisooriyan	Radhapuram	Tirunelveli					
2	Nagaraikulam	62.47.0	Panagudi Pt.I	Radhapuram	Tirunelveli					
3	Sannanerikulam	173.77.0	Panagudi Pt.I	Radhapuram	Tirunelveli					
4	Melakadamban kulam	17.165.0	Therkku Valliyoor Part I	Radhapuram	Tirunelveli			**307.08.5**		**HAN- 01**
5	Keexhakadamban kulam	6.35.0	Therkku Valliyoor Part I	Radhapuram	Tirunelveli					
6	Pambankulam	4.29.5	Thandayarkulam	Radhapuram	Tirunelveli					
7	Pettaikulam	18.63.0	Panagudi Pt.I	Radhapuram	Tirunelveli			152.26.0		**HAN 02**
8	Khaikkulam	45.85.0	Thandayarkulam	Radhapuram	Tirunelveli					

9	Padalayarkulam	14.41.5	Panagudi Pt.I	Radhapuram	Tirunelveli					
10	Sirunambikulam	5.36.5	Thandayarkulam	Radhapuram	Tirunelveli					
11	Sathankulam	36.41.0	Thandayarkulam	Radhapuram	Tirunelveli					
12	Thandayarkulam	31.59.0	Thandayarkulam	Radhapuram	Tirunelveli					
13	Senjettykulam	2.88.5	Thandayarkulam	Radhapuram	Tirunelveli			256.14.0		HAN 03
14	Thalavaipudhu kulam	60.33.5	Panagudi Pt.I	Radhapuram	Tirunelveli					
15	Veppilamkulam	16.38.5	Veppilankulam	Radhapuram	Tirunelveli					
16	Pullankurichi kulam	69.14.5	Veppilankulam	Radhapuram	Tirunelveli					
17	Palliserikulam	6.77.5	Veppilankulam	Radhapuram	Tirunelveli					
18	Kalkaraikulam	23.56.5	Veppilankulam	Radhapuram	Tirunelveli					
19	Pappankulam	15.14.0	Radhapuram	Radhapuram	Tirunelveli					
20	Pavirithoottam kulam	5.75.0	Radhapuram	Radhapuram	Tirunelveli					
22	Marayanpattu kulam	8.55.5	Radhapuram	Radhapuram	Tirunelveli					
23	Pannayarkulam	6.65.0	Radhapuram	Radhapuram	Tirunelveli					
24	Neduvazhikulam	10.33.5	Radhapuram	Radhapuram	Tirunelveli					

25	Pattarkulam	4.57.5	Radhapuram	Radhapuram	Tirunelveli					
26	Veerakulam	8.08.5	Radhapuram	Radhapuram	Tirunelveli					
27	Chettipudhu kulam	1.98.0	Radhapuram	Radhapuram	Tirunelveli					
28	Vallakulam	6.02.5	Radhapuram	Radhapuram	Tirunelveli					
29	Pudhukulam	9.95.5	Danakkarkulam	Radhapuram	Tirunelveli					
30	Keeranerikulam	24.36.0	Danakkarkulam	Radhapuram	Tirunelveli					
31	Karuppilankulam	10.25.0	Danakkarkulam	Radhapuram	Tirunelveli					
32	Veesadikulam	17.67.5	Danakkarkulam	Radhapuram	Tirunelveli					
33	Vadapathukulam	27.16.5	Danakkarkulam	Radhapuram	Tirunelveli					
34	Mithiyankulam	7.09.5	Erukkanthurai Pt-I	Radhapuram	Tirunelveli			**70.62.0**		**TAN 04**
35	Thumbaikulam	14.27.0	Erukkanthurai Pt-I	Radhapuram	Tirunelveli					
36	Vadakkankulam	16.30.5	Perungudi Part II	Radhapuram	Tirunelveli					
37	Azhaganeri kulam	4.92.0	Azhaganeri	Radhapuram	Tirunelveli					
38	Sadayaneri kulam	2.85.5	Sadayaneri	Radhapuram	Tirunelveli					
39	Miapudhukulam	16.82.0	Panagudi Pt.II	Radhapuram	Tirunelveli					
40	Sivahamipudu kulam	11.39.5	Panagudi Pt.II	Radhapuram	Tirunelveli			**196.81.0**		**HAN 05**

41	Perumalpudhu kulam	7.74.5	Perungudi Part II	Radhapuram	Tirunelveli					
42	Manimalayan kulam	3.41.5	Perungudi Part II	Radhapuram	Tirunelveli					
43	Manamarikulam	17.28.5	Parivarisooriyan	Radhapuram	Tirunelveli					
44	Veerapandiyan kulam	36.99.0	Parivarisooriyan	Radhapuram	Tirunelveli					
45	Vinayagarpudhu kulam	10.99.5	Perungudi Part II	Radhapuram	Tirunelveli					
46	Periyapudhu kulam	15.40.0	Perungudi Part II	Radhapuram	Tirunelveli					
47	Kalipudhukulam	8.07.5	Perungudi Part II	Radhapuram	Tirunelveli					
48	Punchakatty kulam	14.41.5	Perungudi Part II	Radhapuram	Tirunelveli					
49	Lekshimiputhu kulam	19.69.0	Aralvoimozhi	Radhapuram	Tirunelveli			**TNU- 111**		
50	Athikulam	21.65.5	Aralvoimozhi	Radhapuram	Tirunelveli					
51	Annauthukulam	15.18.0	Aralvoimozhi	Radhapuram	Tirunelveli					
52	Salaiputhukulam	1.72.5	Pazhavoor	Radhapuram	Tirunelveli					
53	Therkku Sivagangai kulam	2.27.5	Pazhavoor	Radhapuram	Tirunelveli					

54	Melapalar kulam	2.86.5	Pazhavoor	Radhapuram	Tirunelveli		-		-	
55	Keelapalar kulam	3.87.5	Pazhavoor	Radhapuram	Tirunelveli		-		-	
56	Pazhavoor Periyakulam	10.52.5	Pazhavoor	Radhapuram	Tirunelveli		-		-	
	Sluice No.1	37.09.0	Livinchipuram			**866.33.5**	**18.21.5**		**TNU 112**	
	Sluice No.2	106.81.0	Livinchipuram							
	Sluice No.3	23.64.0	Livinchipuram							
	Sluice No.4	206.89.0	Livinchipuram							
	Sluice No.5	15.14.0	Livinchipuram Therkku Karunkulam							
	Sluice No.6	205.69.5	-	-	-					
57	1.Nariparai kulam	7.98.5	Levenchipuram	Radhapuram	Tirunelveli					
	Sluice No.7	271.07.0								
58	1.Achampadukulam	2.27.0	Levenchipuram	Radhapuram	Tirunelveli					
59	2. Poothatikulam	7.96.0	Levenchipuram	Radhapuram	Tirunelveli					
	Sluice 8	165.84.5				**952.74.0**	**123.46.5**		**TNU 113**	
60	1.Venmanikulam	6.42.0	Therrkkukarungulam	Radhapuram	Tirunelveli					

61	2.Periyapamani kulam	8.12.0	Therrkkukarungulam	Radhapuram	Tirunelveli					
62	3.Nambikurichi kulam	7.45.5	Levenchipuram	Radhapuram	Tirunelveli					
	Sluice 9	211.47.5								
63	1. Melavelari kulam	6.19.0	Therrkkukarungulam	Radhapuram	Tirunelveli					
64	2.Keezhavelari kulam	4.49.0	Therrkkukarungulam	Radhapuram	Tirunelveli					
65	3.Chittalam kulam	4.13.0	Therrkkukarungulam	Radhapuram	Tirunelveli					
	Sluice 10	238.01.5								
66	1.Thiruppathi kulam	5.27.5	Pazhavoor Pt.II	Radhapuram	Tirunelveli					
67	2.Vadakkuparambi kulam	8.30.5	Therrkkukarungulam	Radhapuram	Tirunelveli					
68	3.Malayankulam	5.67.5	Therrkkukarungulam	Radhapuram	Tirunelveli					
69	4.Periyakulam	23.80.0	Therrkkukarungulam	Radhapuram	Tirunelveli					
	Sluice 11	337.40.5								
70	1.Veppankulam	2.03.0	Pazhavoor Part II	Radhapuram	Tirunelveli					
71	2.Kallikulam	10.55.5	Pazhavoor Part II	Radhapuram	Tirunelveli					
72	3.Karumeniyanthal kulam	3.52.5	Pazhavoor Part II	Radhapuram	Tirunelveli					
73	4.Kokkanerikulam	7.69.5	Therrkkukarungulam	Radhapuram	Tirunelveli					

74	5.Pullanerikulam	7.93.0	Therrkkukarungulam	Radhapuram	Tirunelveli					
75	6.Ariyankudikulam	6.65.0	Radhapuram	Radhapuram	Tirunelveli					
	Sluice No.12	139.04.0								
76	Sulekapanikulam	8.23.5	Pazhavoor Pr.II	Radhapuram	Tirunelveli					
	Sluice No.13	92.86.5	-	-	-					
	Sluice No.14	354.98.0				**690.05.5**	**28.58.5**		TNU 114	
77	Kootharkulam	7.16.0	Pazhavoor Pt.II	Radhapuram	Tirunelveli					
	Sluice No.15	91.37.0	-	-	-					
	Sluice No.16	11.80.0								
78	Kilakkulam	13.19.0	Adankarkulam	Radhapuram	Tirunelveli					
	Sluice No.17	553.35.0								
79	1.Chembi kulam	3.56.0	Pazhavoor Pr.II	Radhapuram	Tirunelveli					
80	2.Kurumbilarkulam	5.21.5	Adankarkulam	Radhapuram	Tirunelveli	**703.10.0**	**50.67.5**		**TNU 115**	
81	3.Kurumarankulam	7.85.5	Pazhavoor Pr.II	Radhapuram	Tirunelveli					
82	4.Marankulam	10.35.5	Pazhavoor Pr.II	Radhapuram	Tirunelveli					

	Sluice No.18	136.29.0								
83	5.Adankarkulam	14.67.5	Adankarkulam	Radhapuram	Tirunelveli					
84	6.Madhaganeri kulam	9.01.5	Pazhavoor Pr.II	Radhapuram	Tirunelveli					
	Sliuce No. 19	13.46.6	-	-	-					
	Sliuce No. 20	6.51.5	-	-	-					
85	Koliyankulam	11.76.5	Dhanakkar kulam	Radhapuram	Tirunelveli					
	Sliuce No. 21	315.29.5								
86	1.Uralvaiymozhy kulam	33.69.0	Adankarkulam	Radhapuram	Tirunelveli					
87	2.Kurumbilarkulam	5.21.5	Erukkanthurai Pt.1	Radhapuram	Tirunelveli					
88	3.Putherikulam	8.86.0	Erukkanthurai Pt.1	Radhapuram	Tirunelveli					
	Sliuce No. 22	46.82.0				719.57.0	93.4		**TNU 116**	
	Sliuce No. 23	350.94.0								
89	5.Pullavallampadu kulam	4.36.0	Dhanakkar kulam	Radhapuram	Tirunelveli					
90	6.Suchikulam	3.99.0	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					
91	7.Nedungulam	4.16.0	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					
92	8.Ammachiyar kulam	2.92.0	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					

93	9.Kanchanerikulam	6.37.5	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					
94	10.Vannankulam	2.77.5	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					
95	11.Udayanerikulam	7.09.5	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					
96	12.Senarkulam	2.19.5	Dhanakkar kulam	Radhapuram	Tirunelveli					
	Sliuce No.24	562.70.0								
97	1.Aladikurichi kulam	7.68.5	Dhanakkar kulam	Radhapuram	Tirunelveli					
98	2.Nakkanerikulam	8.73.0	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					
99	3.Pullamangalam kulam	12.46.0	Erukkanthurai Pt.I	Radhapuram	Tirunelveli	**773.87.0**	**32.76.0**		**TNU 117**	
100	4.Pandiyanpudu kulam	3.88.5	Erukkanthurai Pt.I	Radhapuram	Tirunelveli					
	Sliuce No.25	177.20.0	-	-	-					
	Sliuce No.26	33.97.0								
	Sliuce No.27	173.33.0								
101	1.Veppanpadu kulam	5.60.5	Erukkanthurai Pt.I	Thovalai	Tirunelveli					-
102	2.Sanarkulam	13.89.5	Koodankulam	Thovalai	Tirunelveli					-
103	3.Sanganerikulam	13.95.5	Erukkanthurai Pt.I	Thovalai	Tirunelveli	**1607.50.0**	**43.99.0**		**TNU - 118**	-
	Sliuce No.28	875.68.0								
	Sliuce No.29	538.55.0								
104	4.Vaniyankulam	7.11.0	Udayathoor	Radhapuram	Tirunelveli					-

105	5.Sivathanuperi kulam	3.42.5	Udayathoor	Radhapuram	Tirunelveli					-
	Sliuce No. 30	-	-	-	-					
106	1.Arasanerikulam	6.33.5	Parameswarapuram	Radhapuram	Tirunelveli					-
	Sliuce No. 31	106.05.8							**TNU - 119**	
107	V.N.Kulam	6.17.s5	Udayathoor	Radhapuram	Tirunelveli					-
	Sliuce No. 32	50.35.0								
108	Mahendram kulam	5.38.0	Radhapuram	Radhapuram	Tirunelveli					-
21	Pandaraperiakulam	67.80.0	Radhapuram	Radhapuram	Tirunelveli	-	**67.80.0**			

ABSTRACT

1	Commend area already covered under WRCP and other Projects/Scjhemes	-	7030.31
2	Commend area proposed to be covered under IAMWARM Project (Total of column 8) -		982.92.0
3	Total Command area controlled by WRO of PWD in the Sub basin	-	8013.23.0
4	Total No. of WUAs already formed under WRCP	-	10
5	Total No.of WUAs proposed to be formed under IAMWARM	-	5
	Total No. of WUAs that will cover the entire sub-basin		15

ANNEXURE - II
HANUMANADHI SUB BASIN

DETAILS OF " AWARNESS CREATION ACTIVITIES AND WALK - THROUGH SURVEY "

Sl. No	Date of Visit	Name of the villages Visited	Awareness Programme (No.of farmers attended)	Walk through survey (No. of Farmers Participated)	Remarks
1	23.10.2008	Parivarisooriyan Pt- I, Panagudi Pt-I & Pt- II, Therkuvalliyoor Pt- II, Thandayarkulam	5	5	
2	24.10.2008	Pazhavoor,Thandayarkulam, Perungudi Pt- I, Veppilankulam Pt- I & Pt- II.	13	13	
3	29.10.2008	Thandayarkulam, Veppilankulam Pt- I, South Valliyoor Pt- I, Parivirisooriyan	19	16	
4	7.11.2008	Panagudi Pt- I, Perungudi Pt- I, Perungudi Pt- II, Azhagasneri, Sadayaneri, Adangarkualm	29	-	
5	18.11.2008	Perungudi Pt- II, Azhaganeri	-	18	
6	28.11.2008	Levinchipuram, Erukkanthurai Pt-I, Dhanakkarkulam.	22 16 21	-	
7	29.11.2008	Udayathoor, Parameswarapuram, Radhapuram	23 7 8	12	
8	10.12.2008	Dhanakkarkulam, Erukkanthurai Pt- I	-	16	
9	12.12.2008	Adangarkulam, Dhanakkarkulam, Pazhavoor Pt- II	-	18	
10	13.12.2008	Levinchipuram, Therkkukarunkulam.	-	14	
11	15.12.2008	Erukkanthurai Pt- I, Dhanakkarkulam, Parivirisooriyan.	-	18	
12	16.12.2008	Erukkanthurai Pt- I, Koodankulam, Udayathoor.	-	16	
13	17.12.2008	Panagudi Pt- II, Perungudi Pt- II, Pazhavoor.	-	12	
14	18.12.2008	Aralvoimozhi, Perungudi Pt- II, Sadayaneri.	-	17	
15	19.12.2008	Therkkukarunkulam, Pazhavoor Pt- II, Adangarkulam.	-	16	
16	20.1.2009	Therkkukarunkulam.	-	14	
17	29.1.2009	Pazhavoor Pt- II, Adangarkulam.	-	19	
18	4.2.2009	Radhapuram.	-	18	

ANNEXURE- III

DETAILS OF MODERNISATION WORKS AS SUGGESTED BY THE FARMERS AND AN FINALISED BY THE OFFICIALS OF WRO

Sl. No.	Date of visit	Name of the Village visited	Out come of walk through survey and discussion with the farmers		Remarks
			Works Suggested by the farmers	Work Finalized by WRO officials	
1	23.10.2008	Parivarisooriyan Pt- I, Panagudi Pt-I & Pt- II, Therkuvalliyoor Pt- II, Thandayarkulam	1.Repairs to the Anicut 2.Rehabilitation of tank surplus, weir, sluices 3.Strengthening tank bund 4.Desilting the supply channel 5.Construction of two dividing dam in Senthilkathaiyankal 6.Repairs to the dividing dam in Sivanpillaikal 7.Construction of a bridge Across Senthilkathainkal	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
2	24.10.2008	Pazhavoor,Thandayarkulam, Perungudi Pt- I, Veppilankulam Pt- I & Pt- II.	1.Repairs to the Anicuts 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting thesupplychannels	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
3	29.10.2008	Thandayarkulam, Veppilankulam Pt- I, South Valliyoor Pt- I, Parivirisooriyan	1.Repairs to the surplus, weir & sluices 2.Strengthening tank bunds 3.Desilting thesupplychannels	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
4	7.11.2008	Panagudi Pt- I, Perungudi Pt- I, Perungudi Pt- II, Azhagasneri, Sadayaneri, Adangarkualm	1.Repairs to the weir & sluices 2.Strengthening the tank bund	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	

5	18.11.2008	Perungudi Pt- II, Azhaganeri	1.Repairs to the Anicuts 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting the supplychannels	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
6	28.11.2008	Levinchipuram, Erukkanthurai Pt-I, Dhanakkarkulam.	1.Reconstruction of Adangarkulam Anicut 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting the supply channels	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
7	29.11.2008	Udayathoor, Parameswarapuram, Radhapuram	1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
8	10.12.2008	Dhanakkarkulam, Erukkanthurai Pt- I	1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
9	12.12.2008	Adangarkulam, Dhanakkarkulam, Pazhavoor Pt- II	1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
10	13.12.2008	Levinchipuram, Therkkukarunkulam.	1.Repairs to the Sooravali Anicuts 2.Repairs to the surplus weir & sluices 3.Strengthening tank bunds 4.Desilting the supply channels	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	

11	15.12.2008	Erukkanthurai Pt- I, Dhanakkarkulam, Parivirisooriyan.	1.Repairs to sluices 2.Strengthening tank bunds	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
12	16.12.2008	Erukkanthurai Pt- I, Koodankulam, Udayathoor.	1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
13	17.12.2008	Panagudi Pt- II, Perungudi Pt- II, Pazhavoor.	1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
14	18.12.2008	Aralvoimozhi, Perungudi Pt- II, Sadayaneri.	1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
15	19.12.2008	Therkkukarunkulam, Pazhavoor Pt- II, Adangarkulam.	1.Desilting the tank.	Tank rehabilitation have been done under NABARD.	

16	20.1.2009	Therkkukarunkulam.	1.Strengthening the tank bunds 2.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
17	29.1.2009	Pazhavoor Pt- II, Adangarkulam.	1.Strengthening the tank bunds 2.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	
18	4.2.2009	Radhapuram.	1.Strengthening the tank bunds 2.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	

PWD/WRO

TN IAMWARM - HANUMANADHI SUB BASIN

KODAYAR BASIN DIVISION - NAGERCOIL

Statement With The Details Of walk Through Survey Conducted in Hanumanadhi Sub Basin

Sl.No	Date	Location (Name of village)	Name of visited	Name of Department	Formers request	Technical solution	Proposed in the plan	Remarks
1	2	3	4	5	6	7	8	9
1	23.10.2008	Parivarisooriyan Pt-I, Panagudi Pt-I & II, Therkuvalliyoor Pt-II, Thandayarkulam .	1.Parivirisooriyankulam 2.Nagaraikulam 3.Sannanerikulam 4.Melakadambankulam 5.Keezhakadambankulam 6.Pettaikulam 7.Kaikulam 8.Padalaiyarkulam 9.Sirunambikulam	WRD, Animal Husbandary and vertinary services, Fisheries, Horticulture and Plantation Crops, Agricultural and Agricultural Marketing, Tamil Nadu Agricultural University.	1.Repairs to the Anicut 2.Rehabilitation of tank surplus, weir, sluices 3.Strengthening tank bund 4.Desilting the supply channel 5.Construction of two dividing dam in Senthilkathaiyankal 6.Repairs to the dividing dam in Sivanpillaikal 7.Construction of a bridge Across Senthilkathainkal	Demands raised by the farmers and Paticipats are analysed and the essential components for Rehabilitation are included in the project proposal.	Yes included in the project proposal	

2	24.10.2008	Thandayarkulam, Perungudi Pt- I, Veppilankulam Pt- I & II, Radhapuram, Pazhavoor.	1.Sathankulam 2.Thandayarkulm 3.Senjettykulam 4.Thalavaiputhukulam 5.Veppilankulam 6.Pullankurichikulam 7.Palliserikulam 8.Kalkaraikulam 9.Pappankulam 10.Marayanpattukulam 11.Neduvazhikulam 12.Pattarkulam 13.Veerakulam 14.Pazhavoorperiakulam		1.Repairs to the Anicuts 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting thesupplychannels		Yes included in the project proposal	
3	18.11.2008	Perungudi Pt- II, Azhaganeri	1.Vadakkankulam 2.Azhaganeri	WRD with Farmers	1.Repairs to the surplus, weir & sluices 2.Strengthening tank bunds 3.Desilting thesupplychannels			
4	29.11.2008	Udayathoor Parameswarapuram Radhapuram	1.V.N.Kulam 2.Arasanerikulam 3.Pannayarkulam 4.Pavirithootam 5.Mahendrakulam	WRD, Animal Husbandary and vertinary services, Fisheries, Horticulture and Plantation Crops, Agricultural and Agricultural Marketing, Tamil Nadu Agricultural University.	1.Repairs to the weir & sluices 2.Strengthening the tank bund			

5	10.12.2008	Dhanakkarkulam Erukkanthurai Pt- I	1.Keeranerikulam, 2.Karuppilankulam, 3.Veesadikulam, 4.Vadapattukulam 5.Mithiyankulam, 6.Thumbaikulam	WRD, Animal Husbandary and vertinary services, Fisheries, Horticulture and Plantation Crops, Agricultural and Agricultural Marketing, Tamil Nadu Agricultural University.	1.Repairs to the Anicuts 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting the supplychannels			
6	12.12.2008	Adankarkulam Dhanakkarkulm Pazhavoor Pt- II	1.Adangarkulam, 2.Kurumbilankulam 3.Koliyankulam 4.Chembikulam, 5.Kumarankulam, 6.Marankulam, 7.Madhakanerikulam	WRD, Animal Husbandary and vertinary services, Fisheries, Horticulture and Plantation Crops, Agricultural and Agricultural Marketing, Tamil Nadu Agricultural University.	1.Reconstruction of Adangarkulam Anicut 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting the supply channels			
7	13.12.2008	Levinchipuram Therkkukarunkulam	1.Nariparaikulam, 2.Achanpadukulam, 3.Poothatikulam, 4.Nambikurichikulam 5.Venmanikulam, 6.Periapamanikulam, 7.Melavelarikulam, 8.Keezhavelarikulam, 9.Chittalamkulam, 10.Vadakkuparambikulam	WRD, Animal Husbandary and vertinary services, Fisheries, Horticulture and Plantation Crops, Agricultural and Agricultural Marketing, Tamil Nadu Agricultural University.	1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.			

8	15.12.2008	Erukkanthurai Pt- I Dhanakkarkulam Parivirisooriyan	1.Putherikulam , 2.Suchikulam, 3.Nedunkulam, 4.Amachiyarkulam, 5.Kanchanerikulam, 6.Vannankulam. 7.Udayanerikulam 8.Pullavallampadukulam, 9.Sonarkulam, 10Aladikurichikulam 11.Manamarikulam, 12Veerapandiankulam	WRD	1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.			
9	16.12.2008	Erukkanthurai Pt- I Koodankulam Udayathoor	1.Nakkanerikulam, 2.Pullamangalamkulam, 3.Pandiyanputhukulam, 4.Veppanpadukulam, 5.Sanganerikulam 6.Sangarankulam 7.Vanniyankulam, 8.Sivathanuperikulam	WRD	1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.			
10	17.12.2008	Panagudi Pt- II Perungudi Pt- II Pazhavoor	1.Miaputhukulam, 2.Sivakamiputhuklulam 3.Perumalputhukulam, 4.Manimalayankulam, 5.Vinayagarputhukulam 6.Salaiputhukulam, 7.Therkkusivagangaikulam, 8.Melapalarkulam, 9.Keezhapalarkulam		1.Repairs to the Sooravali Anicuts 2.Repairs to the surplus weir & sluices 3.Strengthening tank bunds 4.Desilting the supply channels			

11	18.12.2008	Aralvoimozhi Perungudi Pt- II Sadayaneri	1.Lekshmiputhukulam, 2.Athikulam, Annuthukulam 3.Periyaputhukulam, 4.Kaliputhukulam, 5.Punjakattykulam 6.Sadayanerikulam	WRD	1.Repairs to sluices 2.Strengthening tank bunds			
12	19.12.2008	Therkkukarunkulam Pazhavoor Pt- II Adangarkulam	1.Malayankulm, 2.Periakulam, 3.Kokkanerikulam, 4.Pullanerikulam, 5.Ariyankudikulam 6.Veppankulam, 7.Thiruppathikulam, 8.Kallikulam, 9.Karumeniyanthalkulam, 10.Sulekapanikulam, 11.Kootharkulam 12.Killakulam		1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.			
13	20.1.2009	Therkukarunkulam	1.Malayankulm, 2.Periyakulam, 3.Kokkanerikulam, 4.Pullanerikulam, 5.Ariyankudikulam, 6.Vadakkuparambikulam		1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.			

14	29.1.2009	Pazhavoor Pt- II Adangarkulam	1.Veppankulam, 2.Thiruppathikulam, 3.Kallikulam, 4.Karumeriyanthalkulam, 5.Sulekapanikulam, 6.Kootharkulam 7.Killakulam		1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.			
15	4.2.2009	Pandaraperunkulam	Pandaraperunkulam	WRD, Animal Husbandary and vertinary services, Fisheries, Horticulture and Plantation Crops, Agricultural and Agricultural Marketing, Tamil Nadu Agricultural University.	1.Desilting the tank.	Tank rehabilitation have been done under NABARD.	No prposal included in the project.	
16	10.2.2009	Radhapuram Dhanakkarkulam	Marayanpattukulam 2.Neduvalikulam 3.Pattarkulam 4.Veerakulam 5.Chettiputhukulam 6.Vallakulam 7.Puthukulam	WRD, Animal Husbandary and vertinary services, Fisheries, Horticulture and Plantation Crops, Agricultural and Agricultural Marketing, Tamil Nadu Agricultural University.	1.Strengthening the tank bunds 2.Repairs to the surplus weirs and sluices in tanks.			

Statement With Details Of Date of walk Through Survey, Location, Farmers request, Technical solution, Proposed in the plan

Sl. No	Walk through survey		Formers request	Technical solution								Proposed in the plan							
	Date	Location (Name of village)		WRO	Agri culture	TNAU	Horticulture	Agri Marketing	Agri Engg	Fisheries	A.H	WRO	Agri culture	TNAU	Horticulture	Agri Marketing	Agri Engg	Fisheries	A.H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	23.10.08	Parivarisooriyan Pt- I, Panagudi Pt-I & II, Therkuvalliyoor Pt- II, Thandayarkulam .	<u>WRO</u> 1.Repairs to the Anicut 2.Rehabilitation of tank surplus, weir, sluices 3.Strengthening tank bund 4.Desilting the supply channel 5.Construction of two dividing dam in Senthilkathaiyankal 6.Repairs to the dividing dam in Sivanpillaikal 7.Construction of a bridge Across Senthilkathainkal	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.		-	-	-	-	-	-	Yes included in the project proposal							
			<u>Agri Engg</u> OFD Works, Drip Irrigation, Sprinkler Irrigation, Farm Machinaries, Farm Road, DLT Works, Community, Bore well with Pipe Line	-	-	-	-	-	Drpi Irrigation, Sprinkler, Irrigation, Farm Machineries.	-	-						Yes included in the Project proposal		
			<u>Agri Marketing</u> Drying Yard, Marketing Tie- UP	-	-	-	-	Drying and Commodity Group	-	-	-					Yes included in the proposal			

			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculyure Technologies to get more yield and labour sawing technologies in paddy.		Paddy system rice intenfication (SRI) technolosies.							Plan to conduc t SRI Demon stratio n							
			Horticulture i.Banana varities suitable for this area. Ii)Whether tissue culture Banana han be cultivated. Iii)Cost of tissue culture Banana. Iv)Whether T.C Banana can be culttivated at the same time. v)Whether uniform bearing can be got. Vi)T.C Banana cultivation aspects	-	-	-	T.C Banana cultivation was discussed in detailed and all the doubts were cleared.	-	-	-	-			Cultivation of T.C Banana has been proposed in the plan				
			Animal Husbandry Demanded for fodder								Co3 and Chola m can be cultivi tated								Cultivation of Co3 in 2 Ha and solam in 2 H of areas included in the Project Proposal

			TNAU i) Wateer scarcity, ii)Cost of production high iii)Water difficulties during the harvest time			Crop production system will be replaced with the new technology of System of Rice Intensification							SRI					
2	24.10.08	Thandayarkulam, Perungudi Pt- I, Veppilankulam Pt- I & II, Radhapuram, Pazhavoor.	WRO 1.Repairs to the Anicuts 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting thesupplychannels	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, Drip Irrigation, Sprinkler Irrigation, Farm Machinaries, Farm Road, DLT Works, Farm pond.	-	-	-	-	-	Drip Irrigation, Sprinkler Irrigation, Farm Machineries, Farm Pond.	-	-						Yes included in the Project proposal		
			Agri Marketing Drying Yard, Marketing Arrangement.	-	-	-	-	Drying and Commodity Group	-	-	-					Yes included in the proposal			

			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculyure Weeding machine to control weeds in paddy.	-	Using Conoweeder.	-	-					Plan to conduc t SRI Demon stratio n						
			Horticulture i.Banana varities suitable for this area. Ii)Whether H.D Banana can be cultivated. Iii)Whether H.D Banana can be harvested and yield will be more for closer normal spscing iv) H.D Banana cultivation aspects.	-	-	-	T.C Banana cultivation was discussed in detailed and all the doubts were cleared.	-	-	-	-			Cultivation of T.C Banana has been proposed in the plan				
			Animal Husbandary Demanded for conducting infertility camps to increase the consumption rate among nikh animals							Suppl ement ation of minar als with vitami ns can be done to increa se the fertilit y rate.								Supply of minaral mixer and conducting infartility camp included in the Project Proposal

			TNAU i) Wateer scarcity, ii) High cost of fertilizers due to excessive application iii)Cost of production high iv) Water difficulties during the harvest time			i)Crop production system will be replaced with the new technology of System of Rice Intensification ii) Cut shot the cost of irrigation and fertilizer							High Density of Banana with Drip and Fertigation SRI					
3	18.11.08	Perungudi Pt- II, Azhaganeri	WRO 1.Repairs to the surplus, weir & sluices 2.Strengthening tank bunds 3.Desilting thesupplychannels	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, Farm Machinaries	-	-	-	-		Farm Machineries								Yes included in the Project proposal		
			Agri Marketing Post Harvest Training.	-	-	-	-	IEC & CB Activities								Yes included in the proposal			

			<u>Fisheries</u> Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculyure</u> To get more yield in paddy.	-	Using Mn mixture & square planting technologies.			-	-	-	-		Plan to conduc t SRI Techno logies						
			<u>Horticulture</u> i.Banana varities suitable for this area. Ii)Whether H.D Banana can be cultivated. Iii)Whether H.D Banana can be harvested and yield will be more for closer normal spscing iv) H.D Banana cultivation aspects.	-	-	-	H.D Banana cultivation was discussed in detailed and all doubts were cleared.		-	-	-				Cultivation of H.D Banana has been proposed in the plan				
			<u>Animal Husbandry</u> Does not arise	-															Supply of minaral mixer and conducting infartility camp included in the Project Proposal

			TNAU 1) Wateer scarcity ii) Poor yield from groundnut			Application of inputs like gypsum , micro nutrient, biofertilizer and pesticide will improve the productivity of groundnut							IPT of Ground nut						
4	29.11.08	Udayathoor Parameswarapuram Radhapuram	WRO 1.Repairs to the weir & sluices 2.Strengthening the tank bund	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, Drip Irrigation, Farm Machinaries.	-	-	-	-	-	Drip Irrigation.	-	-						Yes included in the Project proposal		
			Agri Marketing Post Harvest Training.	-	-	-	-	-	-	-	-					Yes included in the proposal			

			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	-	-							Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculture to get more yield in Ground nut	-	Application of Gypsum and Micro nutrientes mixcures	-	-	-	-	-	-		Groun dnut Demon stratio n						
			Horticulture i.Banana varities suitable for this area. Ii)Whether H.D Banana can be cultivated. Iii)Whether H.D Banana can be harvested and yield will be more for closer normal spscing iv) H.D Banana cultivation aspects.	-	-	-	H.D Banana cultivation was discussed in detailed and all doubts were cleared.	-	-	-	-				Cultivation of H.D Banana has been proposed in the plan				
			Animal Husbandry Does not arise	-														Supply of minaral mixer and conducting infartility camp included in the Project Proposal	

			TNAU i) Wateer scarcity ii) Poor yield from Pulses iii) Poor yield from groundnut			i)Application of biofertilizer, ii)The inputs if given in proper time will enhance the productivity and income of the pulses iii) Application of inputs like gypsum , micro nutrient, biofertilizer and pesticide will improve the productivity of groundnut							i) IPT of Groundnut ii) IPT of Pulses						
5	10.12.08	Dhanakkarkulam Erukkanthurai Pt- I	WRO 1.Repairs to the Anicuts 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting the supplychannels	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							

			Agri Engg OFD Works, Farm Machinaries, Community, Bore well with Pipe Line, Farm pond.	-	-	-	-		Farm Pond, Farm Machineries.	-	-						Yes included in the Project proposal		
			Agri Marketing Drying Yard, Post Harvest Training.	-	-	-	-		-	-	-					Yes included in the proposal			
			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculture Technologies for control of weeds is paddy		Using cono weeder in SRI Techonology			Drying Yard Trining					To conduct SRI Demonstration						
			Horticulture i.Banana varities suitable for this area. Ii)Whether H.D Banana can be cultivated. Iii)Whether H.D Banana can be harvested and yield will be more for closer normal spscing iv) H.D Banana cultivation aspects.	-	-	-	H.D Banana cultivation was discussed in detailed and all doubts were cleared.	-	-	-	-				Cultivation of H.D Banana has been proposed in the plan			
			Animal Husbandry Demanded for fodder								Co3 and Cholam can be cultivitated								Cultivation of Co3 in 2 Ha and solam included in the Project Proposal

			TNAU i) Wateer scarcity, ii) High cost of fertilizers due to excessive application iii)Cost of production high iv) Water difficulties during the harvest time			) Cut shot the cost of irrigation and fertilizer ii)Crop production system will be replaced with the new technology of System of Rice Intensification							) High cost of fertilizers due to excessive application ii) SRI i						
6	12.12.08	Adankarkulam Dhanakkarkulm Pazhavoor Pt- II	WRO 1.Reconstruction of Adangarkulam Anicut 2.Repairs to the surplus, weir & sluices 3.Strengthening tank bunds 4.Desilting the supply channels	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, Drip Irrigation, Farm Machinaries, Farm Road . Farm pond.	-	-	-	-	-	Farm Pond, Drip Irrigation, Farm Machineries.	-	-						Yes included in the Project proposal		
			Agri Marketing Marketing	-	-	-	-	Drying and Commodity Group	-	-	-					Yes included in the proposal			

			<u>Fisheries</u> Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculture</u> Need high yielding Technologies is paddy.	-	SRI Techonologies with Rice Hybrids	-	-		-	-	-		To conduct SRI Demonstration							
			<u>Horticulture</u> i.Banana varities suitable for this area. Ii)Whether H.D Banana can be cultivated. Iii)Whether H.D Banana can be harvested and yield will be more for closer normal spscing iv) H.D Banana cultivation aspects.	-	-	-	H.D Banana cultivation was discussed in detailed and all doubts were cleared.	-	-	-	-				Cultivation of H.D Banana has been proposed in the plan				
			<u>Animal Husbandry</u> Demanded for Veteriery dispensary in Dhanakkar kulam Village.								Sub basin Veteniary Unite establishment in Dhanakkarkulam Villag e included in the Project Proposal								Sub basin Vertanary unit establishment in Dhanakkarkulam Village included in the Project porposal.

			TNAU i) Wateer scarcity, ii) High cost of fertilizers due to excessive application iii) Poor yield from Pulses			i)Crop production system will be replaced with the new technology of System of Rice Intensification ii)Application of biofertilizer,							SRI ii) IPT of Pulses						
7	13.12.08	Levinchipuram Therkkukarunkulam	WRO 1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-	-	-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, Farm Machinaries, Farm Road . Farm pond, DLT works.	-	-	-	-		Farm Pond, Farm Machineries.								Yes included in the Project proposal		
			Agri Marketing Post Harvest Technology.	-	-	-	-		-	-	-					Yes included in the proposal			

			<u>Fisheries</u> Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-		-	-	-						Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculture</u> To get more yield in pulsar is Ground Nut.	-	-	-	-	-	-	-	-		Conduct pulses & Groundnut Demonstration						
			<u>Horticulture</u> i.Mango varities suitable for this area ii)Whether Mango can be cultivated iii)Cost of Mango varities iv)Mango ciltivation aspects.	-	-	-	Manga varities cultivation was discussed ibn detailed and all the doubts were cleared.		-	-	-			Cultivation of Mango has been proposed in the plan				
			<u>Animal Husbandry</u> Does not arise	-														Sub basin Vertanary unit establishment in Dhanakkarkulam Village included in the Project porposal.

			TNAU i) Wateer scarcity ii) Poor yield from Pulses iii) Poor yield from groundnut iv) High cost of fertilizers due to excessive application			i)Application of biofertilizer, ii)The inputs if given in proper time will enhance the productivity and income of the pulses iii) Application of inputs like gypsum , micro nutrient, biofertilizer and pesticide will improve the productivity of groundnut							i) IPT of Groundnut ii) IPT of Pulses						
8	15.12.08	Erukkanthurai Pt- I Dhanakkarkulam Parivirisooriyan	WRO 1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-	-	-	-	-	Yes included in the project proposal							

			<u>Agri Engg</u> OFD Works, Drip Irrigation, Sprinkler Irrigation, Farm Machinaries, Community, Bore well with Pipe Line, Farm pond.	-	-	-	-		Farm Pond, Farm Machineries, Drip Irrigation, Sprinkler.								Yes included in the Project proposal		
			<u>Agri Marketing</u> Post Harvest Technology.	-	-	-	-									Yes included in the proposal			
			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	-	-							Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculture</u> High yielding technolosies in paddy.	-	Adopting SRI Technologies	-		-	-	-	-		To conduct SRI Demonstration						
			<u>Horticulture</u> i.Anola varities suitable for this area. Ii)Whether Anola can be cultivated. Iii) Cost of Anola varities. Iv)anola cultivation aspects.	-	-	-	Anola varities cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Anola has been proposed in the plan				
			<u>Animal Husbandry</u> Does not arise	-															Sub basin Vertanary unit establishment in Dhanakkarkulam Village included in the Project porposal.

			TNAU i) Wateer scarcity, ii) High cost of fertilizers due to excessive application iii)Cost of production high iv) Water difficulties			) Cut shot the cost of irrigation and fertilizer ii)Crop production system will be replaced with the new technology of System of Rice Intensification							i) High cost of fertilizers due to excessive application ii) SRI					
9	16.12.08	Erukkanthurai Pt- I Koodankulam Udayathoor	WRO 1.Lining main canal and Distributories at selective places. 2.Repairing sluices & Drops Aquiduct and symbons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices.	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, Drip Irrigation, Sprinkler Irrigation, Farm Machinaries, Farm Road, Farm pond.	-	-	-	-	-	Drpi Irrigation, Sprinkler, Farm Pond, Farm Machineries.	-	-						Yes included in the Project proposal		
			Agri Marketing Market Arrangement.	-	-	-	-	Drying and Commodity Group	-	-	-					Yes included in the proposal			

			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-		-	Create dead storage in Suitable tanks To impart Technical training program me							Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculture</u> To get more yield in Ground Nut.	-	Application of Gypsum and Micro nutrients in Ground nut	-	-	-	-	-	-		Condut Groun dnut Demon stratio n						
			<u>Horticulture</u> i.Anola varities suitable for this area. Ii)Whether Anola can be cultivated. Iii) Cost of Anola varities. Iv)anola cultivation aspects.	-	-	-	Anola varities cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Anola has been proposed in the plan				
			<u>Animal Husbandry</u> Demanded for Veteriery dispensary in Koodan kulam area								At prese nt not possib le								Village included in the route converge area in the porject proposal.
			<u>TNAU</u> i) Poor yield from Pulses ii) Poor yield from Vegetables			)Appli cation of biofert ilizer, ii) Fallo wing the latest techn ology								i) IPT of Pulses ii)PF in vegetabl es					

10	17.12.08	Panagudi Pt- II Perungudi Pt- II Pazhavoor	<u>WRO</u> 1.Repairs to the Sooravali Anicuts 2.Repairs to the surplus weir & sluices 3.Strengthening tank bunds 4.Desilting the supply channels	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							
			<u>Agri Engg</u> OFD Works, Community, Bore well with pipe Line, Farm Machinaries	-	-	-	-	-	Farm Machineries.	-	-						Yes included in the Project proposal		
			<u>Agri Marketing</u> Collection Marketing.	-	-	-	-	Collection Centre commodity Groups	-	-	-					Yes included in the proposal			
			<u>Fisheries</u> Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training programme	-							Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculture</u> high yielding varieties in paddy.	-	Using paddy hybrids and SRI Technologies	-	-	-	-	-	-		Paddy SRI Demonstration						

			Horticulture i.Sapota varities suitable for this area. Ii)Whether Sapota can be cultivated. Iii) Cost of Sapota varities. Iv)Sapota cultivation aspects.	-	-	-	Sapota varities cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Sapota has been proposed in the plan				
			Animal Husbandry Does not arise	-														Village included in the route converge area in the porject proposal.
			TNAU i) Wateer scarcity, ii) High cost of fertilizers due to excessive application iii)Cost of production high iv) Water difficulties v) Poor yield from flowers			) Cut shot the cost of irrigation and fertilizer ii)Crop production system will be replaced with the new technology of System of Rice Intensification iii) Fallowing the latest technology							i) High cost of fertilizers due to excessive application ii) SRI iii) PF in Flowers					

11	18.12.08	Aralvoimozhi Perungudi Pt- II Sadayaneri	WRO 1.Repairs to sluices 2.Strengthening tank bunds	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-	commodity Groups	-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, DLT works, Farm Machinaries	-	-	-	-	-	fram Machineries.	-	-						Yes included in the Project proposal		
			Agri Marketing Marketing.	-	-	-	-	-	-	-	-					Yes included in the proposal			
			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training programme								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculture high yielding varieties in paddy.	-	Using paddy hybrids	-		-	-	-	-		Paddy SRI Demonstration						
			Horticulture i.Sapota varities suitable for this area. Ii)Whether Sapota can be cultivated. Iii) Cost of Sapota varities. Iv)Sapota cultivation aspects.	-	-	-	Sapota varities cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Sapota has been proposed in the plan				

			Animal Husbandry Does not arise	-														Village included in the route converge area in the porject proposal.
			TNAU i) Poor yield from flowers ii) Poor yield from Vegetables			i) Fallowing the latest technology ii)Application of biofertilizer,							i) PF in Flowers ii)PF in vegetables					
12	19.12.08	Therkkukarunkulam Pazhavoor Pt- II Adangarkulam	WRO 1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-	Collection Centre commodity Groups	-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, Farm road, Drip Irrigation, Farm pond, Farm Machinaries	-	-	-	-	-	Drip Irrigation, Farm Pond, Farm Machineries.	-	-						Yes included in the Project proposal		
			Agri Marketing Collection Centre , Marketing, Post Harvest Technology.	-	-	-	-	-	-	-	-					Yes included in the proposal			

			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculture Labour sawing weeding Technologies.		Using cono weeder			-	-	-	-		Paddy SRI Demon stratio n							
			Horticulture i.Vegetable types tomato, Bhendi, Curry leaves Tapioca, Moriga suitable for this Area. Ii)Whether Vegetables can be cultivated. Iii) Cost of Vegetablesvarities. Iv)Vegetables cultivation aspects.	-	-	-	Vegetable type cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Vegetables has been proposed in the plan				
			Animal Husbandry Fertility rate in nikh animals should be improved								Minar als and vitami n suppl ement s shoul d be done							Supply of minaral mixer and conducting infartility camp included in the Project Proposal

			TNAU i) Cut shot the cost of irrigation and fertilizer ii)Crop production system will be replaced with the new technology of System of Rice Intensification			) Cut shot the cost of irrigation and fertilizer ii)Crop production system will be replaced with the new technology of System of Rice Intensification							i) High cost of fertilizers due to excessive application ii) SRI					
13	20.1.09	Therkukarunkulam	WRO 1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	Yes included in the project proposal							
			Agri Engg OFD Works, DLT works, Farm pond Farm Machinaries	-	-	-	-	-	Farm Pond, Farm Machineries.	-	-						Yes included in the Project proposal		
			Agri Marketing Marketing	-	-	-	-	Collection Centre commodity Groups	-	-	-					Yes included in the proposal			

			<u>Fisheries</u> Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculture</u> Labour sawing weeding Technologies.	-	Using cono weeder	-	-	-	-	-	-		Paddy SRI Demon stratio n						
			<u>Horticulture</u> i.Vegetable types tomato, Bhendi, Curry leaves Tapioca, Moriga suitable for this Area. Ii)Whether Vegetables can be cultivated. Iii) Cost of Vegetablesvarities. Iv)Vegetables cultivation aspects.	-	-	-	Vegetable type cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Vegetables has been proposed in the plan				
			<u>Animal Husbandry</u> Does not arise	-														Supply of minaral mixer and conducting infartility camp included in the Project Proposal

			TNAU i) Wateer scarcity ii) Poor yield from Pulses iii) Poor yield from groun)dnut iv) High cost of fertilizers due to excessive application			i)Application of biofertilizer, ii)The inputs if given in proper time will enhance the productivity and income of the pulses iii) Application of inputs like gypsum , micro nutrient, biofertilizer and pesticide will improve the productivity of groundnut							i) IPT of Groundnut ii) IPT of Pulses						
14	29.1.09	Pazhavoor Pt- II Adangarkulam	WRO 1.Lining main canal and Distributories at selective places. 2.Repairs to the sluices, Drops, syphons in distributories 3.Strengthening the tank bunds 4.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-		Yes included in the project proposal							

			Agri Engg OFD Works, DLT works, Farm pond, Farm Machinaries, Drip Irrigation.	-	-	-	-		Farm Machineries, Drip Irrigation, Farm Pond							Yes included in the Project proposal		
			Agri Marketing Post Harvest Technology.	-	-	-	-	Commodity Droups capacity building	-	-	-					Yes included in the proposal			
			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	-	-							Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculture High yielding varieties in paddy.	-	Adopting SRI Tecnologies	-	-	-	-	-	-		SRI Demonstration						
			Horticulture i.Flower varities for this suitable area. Ii)Whether Flowers can be cultivated. Iii) Cost of Flowers varities. Iv)Flowers cultivation aspects.	-	-	-	Flower varities cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Flowers has been proposed in the plan				
			Animal Husbandry Does not arise	-														Supply of minaral mixer and conducting infartility camp included in the Project Proposal	

			TNAU i) Poor yield from Pulses ii) Poor yield from Vegetables			i)Application of biofertilizer, ii) Fallowing the latest technology							i) IPT of Pulses ii)PF in vegetables					
15	4.2.09	Pandaraperunkulam	WRO Tank rehabilitation have been done under NABARD.	Tank rehabilitation have been done under NABARD.	-	-	-		-	-	-	No prposal included in the project.							
			Agri Engg Tank rehabilitation have been done under NABARD	-	-	-	-	-	Tank Rehabilitation have been done under NABARD.	-	-						Yes included in the Project proposal		
			Agri Marketing Marketing and PHT	-	-	-	-	Commodity Droups capacity building	-	-	-					Yes included in the proposal			
			Fisheries Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training programme	-							Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			Agriculture High yielding varieties in paddy.	-	Using Rice Hybrids usring SRI Technologies	-	-	-	-	-	-		SRI Demonstration						

			Horticulture i.Flower varities for this suitable area. Ii)Whether Flowers can be cultivated. Iii) Cost of Flowers varities. Iv)Flowers cultivation aspects.		-	-	Flower varities cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Flowers has been proposed in the plan				
			Animal Husbandry Does not arise	-														Supply of minaral mixer and conducting infartility camp included in the Project Proposal
			TNAU i) Poor yield from Pulses ii) Poor yield from Vegetables			i)Application of biofertilizer, ii) Fallowing the latest technology								i) IPT of Pulses ii)PF in vegetables					
16	10.2.09	Radhapuram Dhanakkarkulam	WRO 1.Strengthening the tank bunds 2.Repairs to the surplus weirs and sluices in tanks.	Demands raised by the farmers and Paticipants are analysed and the essential components for Rehabilitation are included in the project proposal.	-	-	-		-	-	-	No prposal included in the project.							
			Agri Engg OFD Works, Farm pond, Drip Irrigation. Farm road, Spinkler.	-	-	-	-	-	Drip Irrigation, Spinkler, Farm Pond.	-	-						Yes included in the Project proposal		
			Agri Marketing Marketing and PHT	-	-	-	-	Commodity Droups capacity building	-	-	-					Yes included in the proposal			

			<u>Fisheries</u> Remove the weeds & Maintain a dead storage in all tanks to facilitate fish culture Activities along with Agriculture activities	-	-	-	-	-	-	Create dead storage in Suitable tanks To impart Technical training program me								Recccomend for Fish culture in Irrigation tank & Farm ponds. To organize one day awarness programme and impart training programme for Fish culture in Irrigation tank & Aquaculture in Farm ponds.	
			<u>Agriculture</u> Get more yield in Ground Nut.	-	Adopting Gypsum application and MN mixure application.	-	-	-	-	-	-		Groun dnut Demon stratio n						
			<u>Horticulture</u> i.Casurina varities for this suitable area. Ii)Whether Casurina can be cultivated. Iii) Cost of Casurina varities. Iv)Casurina cultivation aspects.	-	-	-	Casurina varities cultivation was discussed ibn detailed and all the doubts were cleared.	-	-	-	-				Cultivation of Casurina has been proposed in the plan				
			<u>Animal Husbandry</u> Does not arise															Supply of minaral mixer and conducting infartility camp included in the Project Proposal

			TNAU i) Wateer scarcity ii) Poor yield from Pulses iii) Poor yield from groundnut iv) High cost of			i)Application of biofertilizer, ii)The inputs if given in proper time will enhance the productivity and income of the pulses iii) Application of inputs like gypsum , micro nutrient, biofertilizer and pesticide will improve the productivity of groundnut								i) IPT of Groundnut ii) IPT of Pulses						

1.5 IRRIGATION INFRASTRUCTURE

1. List of Anicut with Details of Villages, Block, Taluk, District etc.

Sl.No	Anicuts	Village	Block	Taluk	District	Ayacut in HA
1	Sooravali Anicut	Panagudi Part-I	Valliyoor	Radhapuram	Trunelveli	-
2	Sivanpillai Anicut	Parivirisooriyan				-
3	Senthlkathaiyan Anicut	Panagudi Part-I				-
4	Thandayarkulam Anicut	Thandayarkulam				-
5	Senjetty Anicut	Thandayarkulam				-
6	Perunkudy Anicut	Perungudi Part-I				-
7	Vadakkankulam Anicut	Perungudi Part-II				-
8	Azhaganeri Anicut	Azhaganeri				-
9	Koliyankulam Anicut	Dhanakkarkulam				-
10	Adangarkulm Anicut	Dhanakkarkulam				-
11	Sakkiliyanparai Anicut	Erukkanthurai Part- I				-
12	Kanchaneri Anicut	Erukkanthurai Part- I				-

2.LIST OF SYSTEM & NON SYSTEM TANKS WITH DETAILS OF VILLAGES, BLOCK, TALUK, DISTRICT, DIRECT AYACUT AREA, CAPACITY, ETC.,							
Sl. No	**Tank**	**Village**	**Block**	**Taluk**	**District**	**Direct Ayacut in Ha**	**Capacity in Mcft**
NON SYSTEM TANKS							
1	Parivarisooriyan kulam	Parivarisooriyan	Valliyoor	Tirunelveli	Tirineveli	43.03.5	6.26
2	Nagaraikulam	Panagudi Pt.I				62.47.0	8.00
3	Sannanerikulam	Panagudi Pt.I				173.77.0	14.00
4	Melakadamban kulam	Therku Valliyoor Pt.1				17.16.5	11.17
5	Keexhakadamban kulam	Therku Valliyoor Pt.1				6.35.0	2.72
6	Pambankulam	Thandayarkulam				4.29.5	0.24
7	Pettaikulam	Panagudi Pt.I				18.63.0	1.36
8	Khaikkulam	Thandayarkulam				45.85.0	2.62
9	Padalayarkulam	Panagudi Pt.I				14.41.5	1.29
10	Sirunambikulam	Thandayarkulam				5.36.5	0.39
11	Sathankulam	Thandayarkulam				36.41.0	5.15
12	Thandayarkulam	Thandayarkulam				31.59.0	1.99
13	Senjettykulam	Thandayarkulam				2.88.5	1.62
14	Thalavaipudhu kulam	Panagudi Pt.I				60.33.5	10.92
15	Veppilamkulam	Veppilankulam				16.38.5	1.35
16	Pullankurichi kulam	Veppilankulam				69.14.5	22.57
17	Palliserikulam	Veppilankulam				6.77.5	1.74

18	Kalkaraikulam	Veppilankulam				23.56.5	21.39
19	Pappankulam	Radhapuram	Radhapuram	Radhapuram	Tirineveli	15.14.0	4.74
20	Pavirithoottam kulam	Radhapuram				5.75.0	4.57
22	Marayanpattu kulam	Radhapuram				8.55.5	7.95
23	Pannayarkulam	Radhapuram				6.65.0	3.46
24	Neduvazhikulam	Radhapuram				10.33.5	9.84
25	Pattarkulam	Radhapuram				4.57.5	5.75
26	Veerakulam	Radhapuram				8.08.5	1.24
27	Chettipudhu kulam	Radhapuram				1.98.0	2.25
28	Vallakulam	Radhapuram				6.02.5	4.03
29	Pudhukulam	Dhanakkar kulam				9.95.5	2.32
30	Keeranerikulam	Dhanakkar kulam	Valliyoor			24.36.0	16.17
31	Karuppilankulam	Dhanakkar kulam				10.25.0	0.29
32	Veesadikulam	Dhanakkar kulam				17.67.5	1.07
33	Vadapathukulam	Dhanakkar kulam				27.16.5	4.68
34	Mithiyankulam	Erukkanthurai Pt.1				7.09.5	3.14
35	Thumbaikulam	Erukkanthurai Pt.1				14.27.0	7.14
36	Manamarikulam	Parivarisooriyan				17.28.5	9.22
37	Veerapandiyan kulam	Parivarisooriyan				36.99.0	2.00
38	Miapudhukulam	Panagudi Pt.II				16.82.0	1.82
39	Sivahamipudu kulam	Panagudi Pt.II				11.39.5	1.00
40	Perumalpudhu kulam	Perungudi Pt.II	Valliyoor	Radhapuram	Tirunelveli	7.74.5	0.05

41	Manimalayan kulam	Perungudi Pt.II				3.41.5	1.10
42	Vinayagarpudhu kulam	Perungudi Pt.II				10.99.5	0.10
43	Periyapudhu kulam	Perungudi Pt.II				15.40.0	2.40
44	Kalipudhukulam	Perungudi Pt.II				8.07.5	2.40
45	Punchakatty kulam	Perungudi Pt.II				14.41.5	3.70
46	Vadakkankulam	Perungudi Pt.II				16.30.5	9.70
47	Azhaneri kulam	Azhaneri				4.92.0	8.80
48	Sadayaneri kulam	Sadayaneri				2.85.5	3.42
Total						**982.92.0**	**239.13**
3.SYSTEM TANKS							
21	Pandaraperia Kualm	Radhapuram	Radhapuram	Radhapuram	Tirunelveli	67.80.0	26.34
49	Lekshimiputhu kulam	Aralvaimozhy	Thovalai	Thovalai	Kanniyakumari	19.69.0	3.75
50	Athikulam	Aralvaimozhy				21.65.5	2.23
51	Annauthukulam	Aralvaimozhy				15.18.0	2.12
52	Salaiputhukulam	Pazhavoor	Valliyoor	Radhapuram	Tirunelveli	1.72.5	1.80
53	Therkku Sivagangai kulam	Pazhavoor				2.27.5	0.23
54	Melapalar kulam	Pazhavoor				2.86.5	0.30
55	Keelapalar kulam	Pazhavoor				3.87.5	0.39
56	Pazhavoor Periyakulam	Pazhavoor	Valliyoor	Radhapuram	Tirunelveli	10.52.5	1.08
57	Nariparai kulam	Livinchipuram				7.98.5	1.90
58	Achampadukulam	Livinchipuram				2.27.0	1.70
59	Poothatikulam	Livinchipuram				7.96.0	2.50

60	Venmanikulam	Therku Karunkulam				6.42.0	2.50
61	Periyapamani kulam	Therku Karunkulam				8.12.0	3.40
62	Nambikurichi kulam	Livinchipuram				7.45.5	2.20
63	Melavelari kulam	Therku Karunkulam				6.19.0	3.00
64	Keezhavelari kulam	Therku Karunkulam				4.49.0	2.00
65	Chittalam kulam	Therku Karunkulam				4.13.0	4.10
66	Thiruppathi kulam	Pazhavoor Pt. II				5.27.5	3.10
67	Vadakkuparambi kulam	Therku Karunkulam				8.30.5	2.10
68	Malayankulam	Therku Karunkulam				5.67.5	4.60
69	Periyakulam	Therku Karunkulam				23.80.0	7.70
70	Veppankulam	Pazhavoor Pt. II				2.03.0	1.20
71	Kallikulam	Pazhavoor Pt. II				10.55.5	4.20
72	Karumeniyanthal kulam	Pazhavoor Pt. II				3.52.5	3.60
73	Kokkanerikulam	Therku Karunkulam				7.69.5	3.30
74	Pullanerikulam	Therku Karunkulam				7.93.0	3.00
75	Ariyankudikulam	Therku Karunkulam				11.87.0	5.10
76	Sulekapanikulam	Pazhavoor Pt. II				8.23.5	4.50
77	Kootharkulam	Pazhavoor Pt. II				7.16.0	4.50
78	Kilakkulam	Adangarkulam				13.19.0	7.80
79	Chembi kulam	Pazhavoor Pt. II				3.56.0	0.90
80	Kurumbilarkulam	Adangarkulam				5.21.5	3.35
81	Kurumarankulam	Pazhavoor Pt. II				7.85.5	6.40
82	Marankulam	Pazhavoor Pt. II				10.35.5	7.40
83	Adankarkulam	Adangarkulam				14.67.5	11.40
84	Madhaganerikulam	Pazhavoor Pt. II	Valliyoor	Radhapuram	Tirunelveli	9.01.5	6.60
85	Koliyankulam	Danakkarkulam				11.76.5	6.30
86	Uralvaiymozhuy kulam	Adangarkulam				33.69.0	18.50
87	Kurumbilarkulam	Erukkanthurai Pt-I				5.21.5	5.00
88	Putherikulam	Erukkanthurai Pt-I				8.86.0	2.50

89	Pullavallampadu kulam	Erukkanthurai Pt-I				4.36.0	1.50
90	Suchikulam	Erukkanthurai Pt-I				3.99.0	2.50
91	Nedungulam	Erukkanthurai Pt-I				4.16.0	6.00
92	Ammachiyarkulam	Erukkanthurai Pt-I				2.92.0	1.60
93	Kanchanerikulam	Erukkanthurai Pt-I				6.37.5	1.80
94	Vannankulam	Erukkanthurai Pt-I				2.77.5	1.40
95	Udayanerikulam	Erukkanthurai Pt-I				7.09.5	5.30
96	Sonarkulam	Dhanakkar kulam				2.19.5	1.20
97	Aladikurichikulam	Dhanakkar kulam				7.68.5	5.40
98	Nakkanerikulam	Erukkanthurai Pt-I				8.73.0	5.10
99	Pullamangalam kulam	Erukkanthurai Pt-I				12.46.0	6.60
100	Pandiyanpudukulam	Erukkanthurai Pt-I				3.88.5	2.70
101	Veppanpadukulam	Erukkanthurai Pt-I				5.60.5	2.10
102	Sankarankulam	Koodankulam				13.89.5	9.60
103	Sanganerikulam	Erukkanthurai Pt-I	Radhapuram			13.95.5	4.30
104	Vaniyankulam	Udayathoor				7.11.0	2.80
105	Sivathanuperi kulam	Udayathoor				3.42.5	2.40
106	Arasanerikulam	Parameswara puiram				6.33.5	2.80
107	V.N.Kulam	Udayathoor				6.17.5	3.30
108	Mahendram kulam	Radhapuram				5.38.0	3.10
Total						**554.57.0**	**256.09**

4. LIST OF CHANNELS

SL. NO	Resrevoiers/ Anicuts/ Dividing Dam/ Bed Dam/ Off takes	Supply Channel	Direct Ayacut in Ha	NAME OF THE TANKS FEEDED
1	2	3	4	5
1	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 1 (Field Boothie- 1)	37.09.0	-
2	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 2	106.81.0	-
3	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 3 (Field Boothie- 2)	23.64.0	-
4	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 4	206.89.0	-
5	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 5 (Field Boothie- 3)	15.14.0	-
6	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 6	205.69.0	Naripari kulam
7	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 7	271.07.0	Achanpadu kulam, Poothatti kulam
8	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 8	165.84.5	Venmani kulam, Periyabamini kulam, Nambikurichi kulam
9	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 9	211.47.5	Melavellari, Keezha vellari, Chittalam kulam.
10	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 10	238.01.5	Thirupathi kulam, Vadakku parambi kulam, Malayan kulam, Periyakulam
11	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 11	337.40.5	Veppan kulam, Kalli kulam, Karumeniyanthal kulam, Kokkaneri kulam, Pullaneri kulam, Arriyankudi kulam.
12	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 12	337.40.5	Sulekapani kulam
13	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 13	92.86.5	-
14	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 14	354.98.0	Koothar kulam

15	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 15	91.37.0	-
16	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 16	11.80.0	Kilakulam
17	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 17	553.35.0	Chembi kulam, Kurumbilar kulam, Kumaran kulam, Maran kulam.
18	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 18	136.29.0	Adankar kulam, Mathaganeri kulam
19	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 19 (Field Boothie- 4)	13.46.0	-
20	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 20 (Field Boothie-5)	6.51.5	Koliyan kulam
21	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 21	315.29.5	Ooralvaimozhi kulam, Kurumbilar kulam, Putheri kulam
22	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 22 (Field Boothie- 6)	46.82.0	-
23	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 23	350.94.0	Pullavalampadu kulam, Soochi kulam, Nedum kulam, Ammachiyar Kulam, Kanjaneri kulam, Vannankulam, Udayaneri kulam
24	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 24	562.70.0	Aladikkurichi kulam, Nakkaneri kulam, Pullamangalam kulam, Pandiyanputhu kulam
25	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 25	177.20.0	-
26	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 26 (Field Boothie-7)	33.97.0	-
27	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 27	173.33.0	Veppanpadu kulam, Sannar kulam, Sankaneri kulam
28	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 28	895.68.0	-
29	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 29	538.55.0	Vaniyan kulam, Sivathanuperi kulam
30	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 30 (Field Boothie- 8)	-	Arasaneri kulam
31	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 31	106.05.5	V.N. Kulam

32	Pechiparai Dam & Perunchani Dam	Radhapuram canal Distributry - 32 (Field Boothie- 9)	50.35.0	-
33	Pechiparai Dam & Perunchani Dam	Radhapuram canal end	6.10.5	Mahendra kulam
34	Sivan pillai Anicut	Sivan pillai kal	350.94.0	Parivarisooriyankulam, Nagaraikulam, Sananerikulam, Melakadampankulam, Keezhakadampamkulam, Pambankulam.
35	Senthilkathayan Anicut	Senthilkathayan kal	-	Pettaikulam, Kaikulam, Padalaiyarkulam, Sirunambikulam, Sathankulam.
36	Thandayarkulam Anicut	Thandayarkulam kal	-	Thandaiyarkulam.
37	Senjety Anicut	Senjetty kal	-	Senjectikulam, Thalavaiputhukulm, veppilankulam, Pullakurichikulam, Palliseri kulam Kalkaraikulam, Pappankulam, Pavirithottam, Marayanpattukulam, Pannayarkulam, Neduvalikulam, Pattarkulam, Veerakulam, Chettipudukulam, Vallakulam, Pudukulam.
38	Perungudy Anicut	Perungudy kal	-	Keeranerikulam, Karruppilankulam, Veesadikulam, Vadapathukulam.
39	Vadakkankulam Anicut	Vadakkankulam kal	-	Vadakkankulam
40	Vadakkankulam Anicut	Karupillan kulam	-	-
41	Azhaganeri Anicut	Sadayaneri kal	-	Sadayaneri kulam
42	Koliyan kulam Anicut	Koliyan kulam kal	-	Koliyan kulam
43	Adangar kulam Anicut	Adangar kulam kal	-	Azhaganeri kulam

44	Mithiyan kulamAnicut	Mithiyan kulam kal	-	Mithiyan kulam, Thumbai kulam
45	Kanjaneri kulam Anicut	Kanjaneri kulam kal	-	Kanjaneri kulam
46	Sooravazhi Anicut	Lower contour canal kal	-	Manamari kulam, Veerapandiyan kulam
Total			**6475.74**	

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

Name of Sub Basin: Hanumanadhi

Sl. No	Details	Anicuts			System Tanks			Non system tanks			Any Other Supply Channel		Remarks
		Nos	Suppyl Channel km	Diect Ayacut	Nos	Supply Channel km	Ayacut	Nos	Supply Channel km	Ayacut IN HA	Length	Direct Ayacut	
1	Available infrastructure in Sub Basin	12	-	-	61	-	554.57.0	47	30.45	982.92.0	114.647	6475.74	-
2	Infrastructures excluded in IAMWARM Project since works carried out under various schemes from 2000 and other reasons	-	-	-	1	-	67.80.0	-	-	-	-	-	-
3	Infrastructures that doesnot require any Rehabilitation works	4	-	-	10	-	58.92	12	8.20	134.81	44.299	-	-
4	Works taken up in IAMWARM Project	8	-	-	50	-	427.85	35	22.25	848.11	70.348	6475.74	-

1. Certified that the Panchayat Union Thanks are not considered in this project
2. Certified that the tanks executed under various schemes (Viz, WRCP I, NABARD, PART II schemes etc.,) since 2003 were not proposed in this project.

TANKS/ ANICUTS EXCLUDED IN IAMWARM PROJECT SINCE WORKS ARE CARRIED OUT UNDER VARIOUS SCHEMES SINCE 2000

Sl. No	Name of Tank	Name of Scheme	Year	Component of works executed in NABARD/ Part II Scheme	Component of works now proposed in IAMWARM Project	Remarks
1	Pandaraperiakulam	NABARD	2006	Bund strengthening and Rehabilation of wear and sluices	Nil	

1. Certified that the P.U. Tanks are not considered in this project.

2.Certified that the works executed under various schemes (viz. WRCP I, NABARD, Part- II ect) since 2000 are not taken up in this Project.

1.6 REHABILITATION OF IRRIGATION INFRASTRUCTURE

1.6 Rehabilitation of Irrigation Infrastructure

A REHABILITATION OF IRRIGATION INFRASTRUCSTURE OF THE SUB-BASIN

STRUCTURAL STATUS & DEFICIENCIES IN THE SYSTEM

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

The following are the present structural condition of the Hanumanathi Sub Basin System.

1. This system is a old system as such requires Rehabilitation.
2. Heavy accumulation of silt due to hilly region and contour nature of canal system.
3. Lack of adequate control of regulating structures like Anicuts, Head Sluices, Sand/Scour vents etc.,
4. The damaged condition of the existing anicuts, diversion head works etc, and supply channels causes to poor standard of the entire conveyor system.
5. The System tanks are to be rehabilitated.

In order to Improve the conveyance and Operational Efficiency in Irrigation, it is now proposed to improve and modernize the Irrigation infrastructures in Hanumanadhi Sub Basin.

1. Repairs to the damaged Anicuts .
2. Desilting the supply channels by earthwork excavation using machineries.
3. Providing revetments and Retaining walls in selective area of the supply channels.
4. Providing model sections to maintain the bed level and inner slopes of the supply channels.
5. Reconstruction of damaged lining in channel.
6. Reconstruction of damaged cross masonries in channel.

a. Restoring the capacity of the tanks, supply channels by desilting

b. Strengthening the bund of the tanks and channels where necessary for effectively storing the water and conveying it to the entire command area and also for conveying agriculture inputs to the field.
c. Reconstruction of Collapsed weirs.
d. Repairs to the damaged weirs.
e. Reconstruction of Collapsed Sluices.
f. Repairs to the damaged to the damaged Sluices.
g. Providing revetments and retaining walls in selective area of the tanks.

1.6.2 Expected Outcome

1. Increase in Conveyance efficiency from 42 % to 53%
2. The present Gap area of 2668.70 Ha out of 4974.21 Ha is to be converted as a fully irrigated area and the ayacut stabalised as 5707.72 Ha
3. The following irrigation infrastructure development works are proposed in the Hanumanathi Sub Basin

Rehabilitation of 8 Anicuts

Rehabilitation works for 84Tanks

Rehabilitatiopn of supply channel for 96.95 KM

FREE BOARD DETAILS OF TANKS
HANUMANADHI SUB BASIN

SL. No	Name of tank	Maximum Height of bund	Free Board		Length of Bund
			Provided Previously	Provided Now	
	TANKS TAKEN UNDER IAMWARM PROJECT				
1	Parivirisooriyankulam	4.950	0.950	1.500	1350
2	Nagaraikulam	5.050	1.000	1.500	1660
3	Sannnanerikulam	4.900	0.900	1.500	1870
4	Sathankulam	4.400	1.050	1.500	1280
5	Thalavaiputhukulam	5.980	0.950	1.500	2140
6	Veppilankulam	4.090	1.000	1.500	1000
7	Pullankurichikulam	4.760	0.950	1.500	1650
8	Pappankulam	4.095	1.110	1.500	1340
9	Pavirithottam	3.535	1.050	1.500	700
10	Pannayarkulam	4.005	0.950	1.500	700
11	Manamarikulm	4.200	0.900	1.500	741
12	Miaputhukulam	5.930	1.000	1.500	1138
13	Kalliputhuklulam	4.425	1.050	1.500	900
14	Sivakamiputhukulam	4.620	0.950	1.500	880
15	Vadkkankulam	4.140	1.000	1.500	1225
16	Lekshmiputhukulam	3.200	1.000	1.500	590
17	Athikulam	3.350	0.950	1.500	975
18	Annuthukulam	3.200	1.000	1.500	285
19	Therkkusivagangaikulam	3.300	0.950	1.500	815
20	Poothattikulam	4.580	0.950	1.500	1212
21	Venmanikulam	3.730	0.900	1.500	1080
22	Periyapamanikulam	4.010	0.950	1.500	1168
23	Nambikurichikulam	3.910	1.000	1.500	1016
24	Melavelarikulam	3.590	1.050	1.500	1035
25	Keezhavelarikulam	3.710	1.050	1.500	635
26	Chittalamkulam		1.000	1.500	1070
27	Thiruppathikulam	3.240	1.050	1.500	972
28	Vadakkuparambikulam	4.170	1.000	1.500	1065
29	Malayankulam	3.700	1.050	1.500	935
30	Periakulam	3.720	0.950	1.500	1850
31	Veppankulam	3.600	0.900	1.500	1140
32	Kallikulam	3.960	0.954	1.500	1390

33	Karumaniyanthalkulam	3.800	1.000	1.500	882
34	Sulekapanikulam	4.000	0.950	1.500	1260
35	Kootharkulam	4.100	0.600	1.500	1350
36	Killakulam	2.750	0.950	1.500	1705
37	Chembikulam	4.560	1.000	1.500	800
38	Kurumbilarkulam	3.600	0.900	1.500	920
39	Kumarankulam	3.170	0.900	1.500	1260
40	Marankulam	4.700	0.950	1.500	1750
41	Adangarkulam	4.400	0.850	1.500	750
42	Mathaganerikulam	3.820	0.900	1.500	980
43	Koliyankulam	3.800	1.000	1.500	1005
44	Uralvaimozhikulam	4.570	1.000	1.500	2040
45	Putherikulam	5.540	0.950	1.500	1080
46	Pullavalampadukulam	3.200	1.000	1.500	1340
47	Suchikulam	3.150	1.000	1.500	1080
48	Nedunkulam	4.065	0.950	1.500	850
49	Udayanerikulam	3.750	0.950	1.500	720
50	Senarkulam	3.500	0.900	1.500	400
51	Aladikurichikulam	3.300	1.000	1.500	1070
52	Pullamangalamkulam	3.450	0.950	1.500	800
53	veppanpadukulam	3.800	0.900	1.500	1200
54	Sanarkulam	3.600	0.900	1.500	950
55	Sanganerikulam	3.950	1.000	1.500	1140
56	Vaniankulam	3.120	0.900	1.500	1050
57	Sivathanuperikulam	3.650	1.050	1.500	845
58	Arasanerikulam	3.600	1.000	1.500	1340
59	V.N.Kulam	3.700	1.050	1.500	1070
60	Mahendrakulam	3.850	0.950	1.500	1110

B. WRO COST TABLE

PACKAGE I

Sl. No	Description of work	Quantity	Amount in Lakhs	Remarks
I. Tank Component				
1	Repairs to Weirs	6 Nos	5.30	
2	Reconstruction of Weirs	1 Nos	7.85	
3	Improvements to Bund	19598M	145.79	
4	Repairs to Sluices	39 Nos	68.97	
5	Reconstruction of Sluices	6 Nos	22.89	
6	Construction of Protective walls in tanks	990M	174.68	
7	Desilting	25000M	21.33	
8	Measuring Devices	45Nos	6.30	
	Total		**453.11**	
II. Non Tank Component				
1	Improvements to Anicut & Head sluice	8 Nos	48.31	
2	Reconstruction of Anicut	-	-	
3	Radhapuram Canal and Distributory Lining	-	-	
4	Improvements to Cross Masonries	6 Nos	20.23	
	Total		**68.54**	

1). Tank component = 453.11 lakhs

2). Non-Tank component = 68.54 lakhs

Total = **521.65** **LAKHS**

B. WRO COST TABLE

PACKAGE II

Sl. No	Description of work	Quantity	Amount in Lakhs	Remarks
I. Tank Component				
1	Repairs to Weirs	-	-	
2	Reconstruction of Weirs	-	-	
3	Improvements to Bund	2665M	17.47	
4	Repairs to Sluices	11 Nos	27.42	
5	Reconstruction of Sluices	-	-	
6	Construction of Protective walls in tanks	66M	9.65	
7	Desilting	-	-	
8	Measuring Devices	11Nos	1.54	
	Total		**56.08**	
II. Non Tank Component				
1	Improvements to Anicut & Head sluice	-	-	
2	Reconstruction of Anicut	-	-	
3	Radhapuram Canal and Distributory Lining	-	-	
4	Improvements to Cross Masonries	-	-	
	Total		**-**	

1). Tank component = 56.08 lakhs

2). Non-Tank component = - lakhs

Total = **56.08** **LAKHS**

B. WRO COST TABLE

PACKAGE III

Sl. No	Description of work	Quantity	Amount in Lakhs	Remarks
I. Tank Component				
1	Repairs to Weirs	5 Nos	1.59	
2	Reconstruction of Weirs	4 Nos	17.07	
3	Improvements to Bund	15450M	100.87	
4	Repairs to Sluices	6 Nos	6.16	
5	Reconstruction of Sluices	8 Nos	18.04	
6	Construction of Protective walls in tanks	171M	20.03	
7	Desilting	22693M	3.04	
8	Measuring Devices	25 Nos	3.50	
	Total		**170.30**	
II. Non Tank Component				
1	Improvements to Anicut & Head sluice	-	-	
2	Reconstruction of Anicut	-	-	
3	Radhapuram Canal and Distributory Lining	4076M	92.84	
4	Improvements to Cross Masonries	114Nos	25.94	
	Total		**118.78**	

1). Tank component	=	170.30	lakhs
2). Non-Tank component	=	118.78	lakhs
Total	=	**289.08**	**LAKHS**

B. WRO COST TABLE

PACKAGE IV

Sl. No	Description of work	Quantity	Amount in Lakhs	Remarks
I. Tank Component				
1	Repairs to Weirs	4 Nos	0.33	
2	Reconstruction of Weirs	-	-	
3	Improvements to Bund	19740M	125.22	
4	Repairs to Sluices	8Nos	5.78	
5	Reconstruction of Sluices	15Nos	45.91	
6	Construction of Protective walls in tanks	167M	20.03	
7	Desilting	25576M	1.68	
8	Measuring Devices	27Nos	3.78	
	Total		**202.72**	
II. Non Tank Component				
1	Improvements to Anicut & Head sluice	-	-	
2	Reconstruction of Anicut	-	-	
3	Radhapuram Canal and Distributory Lining	3752M	83.23	
4	Improvements to Cross Masonries	90Nos	22.79	
	Total		**106.02**	

1). Tank component	=	202.72	lakhs
2). Non-Tank component	=	106.02	lakhs
Total	=	**308.74**	**LAKHS**

B. WRO COST TABLE

PACKAGE V

Sl. No	Description of work	Quantity	Amount in Lakhs	Remarks
I. Tank Component				
1	Repairs to Weirs	8Nos	5.51	
2	Reconstruction of Weirs	-	-	
3	Improvements to Bund	10655M	81.50	
4	Repairs to Sluices	10Nos	4.85	
5	Reconstruction of Sluices	1No	2.07	
6	Construction of Protective walls in tanks	130M	14.36	
7	Desilting	23682M	2.48	
8	Measuring Devices	19Nos	2.66	
	Total		**113.43**	
II. Non Tank Component				
1	Improvements to Anicut & Head sluice	-	-	
2	Reconstruction of Anicut	-	-	
3	Radhapuram Canal and Distributory Lining	3763M	47.82	
4	Improvements to Cross Masonries	100Nos	14.07	
	Total		**61.89**	

1). Tank component	=	113.43	lakhs
2). Non-Tank component	=	61.89	lakhs
Total	=	**175.32**	**LAKHS**

B. WRO COST TABLE

Sl. No	Description of work	Quantity	Amount in Lakhs	Remarks
I. Tank Component				
1	Repairs to Weirs	23 Nos	12.73	
2	Reconstruction of Weirs	5 Nos	24.92	
3	Improvements to Bund	68108 M	470.85	
4	Repairs to Sluices	74 Nos	113.18	
5	Reconstruction of Sluices	30 Nos	88.91	
6	Construction of Protective walls in tanks	1524M	238.75	
7	Desilting	96951M	28.53	
8	Measuring Devices	127Nos	17.78	
	Total		**995.65**	
II. Non Tank Component				
1	Improvements to Anicut & Head sluice	8 Nos	48.31	
2	Reconstruction of Anicut	-	-	
3	Radhapuram Canal and Distributory Lining	11591M	223.88	
4	Improvements to Cross Masonries	310 Nos	83.02	
	Total		**355.21**	

1). Tank component	=	995.65	lakhs
2). Non-Tank component	=	355.21	lakhs
Total		**1350.86**	lakhs
3) Environment Cell	=	11.50	lakhs
4)Ground Water		Nil	
Total	=	**1362.36**	**LAKHS**

A.SALIENT FEATURES OF INFRASTRUCTURES OF THE HANUMANADHI SUB BASIN

IAMWARM - HANUMANADHI SUB BASIN

PACKAGE - 1

Sl. No	Name of Tanks/ Supplychannels/ Anicuts	Tank												Supply Channel						Measuring device		Anicut			Retaining wall		Total Amount in Lakhs
		Tank bund			Tank Sluices					Weir								Cross masonry										
		Total length (m)	Proposed length/boundry stone (m)	Amount in lakhs	Total no of sluice	No of sluice to be reconstructed	Amount in lakhs	No of sluice to be repaired	Amount in lakhs	Total no of weirs	No of weir to be reconstructed	Amount in lakhs	No of weir to be repaired	Amount in lakhs	Length to be desilted (m)	Amount in lakhs	Lining (m)	Amount in lakhs	Nos	Amount in lakhs	Nos	Amount in lakhs	Rapair	Reconstruction	Amount in Lakhs	Lngth in M	Amount in lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	Parivirisooriyankulam	1350	1350	9.34	1			1	2.83												1	0.14				6	2.64	14.95
2	Sivanpillai Anicut																						1		.98			1.98
3	Sivanpillai supply channel														3400	4.35			1	0.24						35	1.90	6.49
4	Nagarikulam	1600	1600	13.88	2			2	6.15	1			1	0.76							2	0.28				12	3.41	24.48
5	Sannanerikulam	1700	1700	15.35	2	2	10.42			1			1	0.13							2	0.28				20	15.28	41.46
6	Melakadampan kulam																									42	4.65	4.65
7	keezhakadampan kulam				2			2	3.49												2	0.28				12	2.38	6.15
8	Pettikulam				2			2	4.29												2	0.28				12	2.41	6.98

9	Senthilkathaiyan Anicut																					1		.34			4.34
10	Senthilkathaiyan supply channel														1500	1.21			2	8.84					140	6.48	16.53
11	Padalayarkulam				1	1	3.88														1	0.14						4.02
12	Sathankulam	1400	1400	11.00	2			2	3.26	1			1	0.17							2	0.28				12	4.56	19.27
13	Thandayakulam				2			2	5.45												2	0.28				12	4.67	10.40
14	Thandayakulam Anicut																						1	.02			3.02
15	Thandayakulam supply channel														1900	1.73											1.73
16	Senjetty Anicut																						1	3.1			3.10
17	Senjetty Supply channel														5100	2.70			3	11.15							13.85
18	Thazhavaiputhukulam	2400	2400	17.16	2			2	5.82												2	0.28				12	4.78	28.04
19	Veppilankulam	1020	1020	8.06	1	1	2.65														1	0.14				6	2.13	12.98
20	Pullankurichi kulam	1600	1600	14.36	2			2	3.30	1			1	1.12							2	0.28				12	4.64	23.70
21	Pappankulam	2050	2050	10.12	1			1	1.24												1	0.14				6	0.92	12.42
22	Pavirithottamkulam	860	860	5.92	1			1	1.54												1	0.14				6	1.29	8.89
23	Marayanpattukulam				1			1	1.20												1	0.14				6	1.87	3.21
24	Pannayarkulam	850	850	6.58	1			1	2.06												1	0.14				6	1.15	9.93
25	Neduvazhi				1			1	2.27												1	0.14				6	0.94	3.35
26	Puthukualm				2			2	1.82												2	0.28				12	3.83	5.93
27	Keeranerikulam				2			2	2.10												2	0.28				12	4.87	7.25

28	Perugudi Anicut																							1		.11			2.11
29	Perugudi Supply channel														5900	2.68											200	9.58	12.26
30	Karuppilankulam				1			1	1.10													1	0.14				6	2.38	3.62
31	Vessadikulam				1			1	1.01													1	0.14				6	1.49	2.64
32	Vadapathukualm				1			1	1.25													1	0.14				6	1.97	3.36
33	Vadakkan kulam	940	940	6.90	2	2	5.94			1			1	0.57								2	0.28				12	4.98	18.67
34	Azhaganerikulam				2			2	1.89													2	0.28				12	4.56	6.73
35	Aadangarkulam Anicut																							1		2.5	231	51.67	74.17
36	Aadangarkulam Supply chanel														800	0.67													0.67
37	Sadayanerikualm				1			1	1.68													1	0.14				6	1.89	3.71
38	Sadayaneri supply channel																										70	3.37	3.37
39	Mithiyankulam				1			1	1.68													1	0.14				6	1.54	3.36
40	Sakkiliyanparai Anicut																							1		.68			6.68
41	Mithiyankulam supply channel														1700	0.98													0.98
42	Thumbaikulam				1			1	1.65													1	0.14				6	1.25	3.04
43	Manamariyankulam	900	900	6.55	1			1	1.26													1	0.14				6	1.98	9.93
44	Veerapandiyankulam				1			1	2.22													1	0.14				6	3.56	5.92
45	Miaputhukulam	1070	1070	7.59	1			1	1.74													1	0.14				6	3.23	12.70
46	Sooravazhi Anicut																							1		.58			4.58

47	Lower Contour canel														4700	7.01												7.01
48	Sivakamiputhukulam	950	950	7.30	1			1	1.80	1			1	2.55							1	0.14				6	1.05	12.84
49	Perumalputhukulam				1			1	1.31												1	0.14				6	1.68	3.13
50	Periyaputhukulam				1			1	2.07												1	0.14				6	2.15	4.36
51	Kalliputhukulam	908	908	5.68	1			1	1.49	1	1	7.85									1	0.14				6	1.55	16.71
	TOTAL	**19598**	**19598**	**145.79**	**45**	**6**	**22.89**	**39**	**68.97**	**7**	**1**	**7.85**	**6**	**5.30**	**25000**	**21.33**	**0**	**0**	**6**	**20.23**	**45**	**6.30**	**8**	**0**	**48.31**	**990**	**174.68**	**521.65**

PACKAGE - II

Sl. No	Name of Tanks/ Supplychannels/ Anicuts	Tank												Supply Channel						Measuring device		Anicut			Retaining wall		Total Amount in Lakhs
		Tank bund			Tank Sluices					Weir																	
		Total length (m)	Proposed length/boundry stone (m)	Amount in lakhs	Total no of sluice	No of sluice to be reconstructed	Amount in lakhs	No of sluice to be repaired	Amount in lakhs	Total no of weirs	No of weir to be reconstructed	Amount in lakhs	No of weir to be repaired	Amount in lakhs	Length to be desilted (m)	Amount in lakhs	Lining (m)	Amount in lakhs	Cross masonry		Nos	Amount in lakhs	Rapair	Reconstruction	Amount in Lakhs	Lngth in M	Amount in lakhs	
																			Nos	Amount in lakhs							
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	Palavoorperiya kulam				1			1	2.89												1	0.14				6	0.96	3.99
2	Keezha palar kulam				1			1	2.80												1	0.14				6	0.82	3.76
3	Mela palar kulam				1			1	3.17												1	0.14				6	0.82	4.13
4	Therkku sivagangai kulam	815	815	7.00	1			1	2.35												1	0.14				6	1.02	10.51
5	Salaiputhu kulam				1			1	2.79												1	0.14				6	0.92	3.85
6	Lekshmi puthu kulam	590	590	3.08	2			2	5.96												2	0.28				12	1.71	11.03
7	Athikulam	975	975	4.65	2			2	3.87												2	0.28				12	1.74	10.54
8	Annathukulam	285	285	2.74	2			2	3.59												2	0.28				12	1.66	8.27
	TOTAL	**2665**	**2665**	**17.47**	**11**	**0**	**0**	**11**	**27.42**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**1.54**	**0**	**0**	**0**	**66**	**9.65**	**56.08**

PACKAGE - III

Sl. No	Name of Tanks/ Supplychannels/ Anicuts	Tank													Supply Channel						Measuring device		Anicut			Retaining wall		Total Amount in Lakhs
		Tank bund			Tank Sluices					Weir																		
		Total length (m)	Proposed length/boundry stone (m)	Amount in lakhs	Total no of sluice	No of sluice to be reconstructed	Amount in lakhs	No of sluice to be repaired	Amount in lakhs	Total no of weirs	No of weir to be reconstructed	Amount in lakhs	No of weir to be repaired	Amount in lakhs	Length to be desilted (m)	Amount in lakhs	Lining (m)	Amount in lakhs	Cross masonry		Nos	Amount in lakhs	Rapair	Reconstruction	Amount in Lakhs	Lngth in M	Amount in lakhs	
																			Nos	Amount in lakhs								
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	9
1	Distributory - 1														465	0.05	460	16.77	1	0.38	1	0.14						7.34
2	Distributory - 2														2060	0.26	1473	27.04	15	3.19	1	0.14						0.63
3	Distributory - 3														290	0.03	87	3.16	1	0.39	1	0.14						.72
4	Distributory - 4														2105	0.28	200	3.28	17	3.47	1	0.14						.17
5	Distributory - 5														678	0.06	526	19.31	1	0.41	1	0.14						9.92
6	Distributory - 6														2206	0.31	100	1.93	15	3.65	1	0.14						.03
7	Distributory - 7														1812	0.27	240	4.03	9	2.72	1	0.14						.16
8	Poothattikulam	1212	1212	7.28	1	1	3.77			1			1	0.52			0	0	0		1	0.14				21	5.53	7.24
9	Distributory - 8														998	0.17	350	6.27	8	2.28	1	0.14						.86
10	Vemmanikulam	1080	1080	7.40	1			1	0.97	1			1	0.2			0	0	0		1	0.14				15	1.39	0.10
11	Periyapamanikulam	1168	1168	9.68	1			1	0.66	1	1	3.2					0	0	0		1	0.14				10	1.4	5.08
12	Nambikurichikulam	1016	1016	6.27	1			1	0.57	1	1	4.91					0	0	0		1	0.14						1.89
13	Distributory - 9														2112	0.29	240	4.16	15	3.18	1	0.14						.77
14	Melavelarikulam	1035	1035	7.03	1	1	1.99			1			1	0.49			0	0	0		1	0.14				30	1.95	1.60
15	Keezhavelarikulam	635	635	4.69	1	1	2.08										0	0	0		1	0.14				30	1.89	.80

16	Chittalamkulam	1070	1070	4.97	1	1	1.92										0	0	0		1	0.14				10	1	.03
17	Distributory - 10														4755	0.62	200	3.27	15	3.07	1	0.14						.10
18	Thiruppathikulam	972	972	6.51	1	1	2.72			1	1	3.56					0	0	0		1	0.14				25	4.6	7.53
19	Vadakkuparambikulam	1065	1065	7.50	1			1	1.56	1			1	0.17			0	0	0		1	0.14						.37
20	Malayankulam	935	935	5.28	1			1	1.75	1			1	0.21			0	0	0		1	0.14						.38
21	Periyakulam	1850	1850	14.27	1			1	0.65	1	1	5.4					0	0	0		1	0.14						0.46
22	Distributory - 11														5212	0.7	200	3.62	17	3.20	1	0.14						.66
23	Veppankulam	1140	1140	5.92	1	1	1.64														1	0.14				10	0.55	.25
24	Kallikulam	1390	1390	9.10	1	1	2.15														1	0.14				10	1.04	2.43
25	Karumeniyanthalkulam	882	882	4.97	1	1	1.77														1	0.14				10	0.68	.56
	TOTAL	**15450**	**15450**	**100.87**	**14**	**8**	**18.04**	**6**	**6.16**	**9**	**4**	**17.07**	**5**	**1.59**	**22693**	**3.04**	**4076**	**92.84**	**114**	**25.94**	**25**	**3.50**	**0**	**0**	**0**	**171**	**20.03**	**89.08**

PACKAGE - IV

Sl. No	Name of Tanks/ Supplychannels/ Anicuts	Tank													Supply Channel						Measuring device		Anicut			Retaining wall		Total Amount in Lakhs
		Tank bund			Tank Sluices					Weir																		
		Total length (m)	Proposed length/boundry stone (m)	Amount in lakhs	Total no of sluice	No of sluice to reconstruct	Amount in lakhs	No of sluice to be repaired	Amount in lakhs	Total no of weirs	No of weir to be reconstructed	Amount in lakhs	No of weir to be repaired	Amount in lakhs	Length to be desilted (m)	Amount in lakhs	Lining (m)	Amount in lakhs	Cross masonry		Nos	Amount in lakhs	Rapair	Reconstruction	Amount in Lakhs	Lngth in M	Amount in lakhs	
																			Nos	Amount in lakhs								
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	Distributory 12														936	0.03	351	8.51	4	1.49	1	0.14						10.17
2	Sulakapani kulam	1260	1260	9.48	1			1	1.05												1	0.14				10	1.4	12.07
3	Distributory 13														2000	0.07	306	6.60	2	0.63	1	0.14						7.44
4	Distributory 14														3600	0.22	434	8.34	10	3.22	1	0.14						11.92
5	Kootharkulam	1350	1350	7.73	1			1	0.74												1	0.14				10	0.98	9.59
6	Distributory 15														1260	0.07	400	10.46	4	1.38	1	0.14						12.05
7	Distributory 16														1100	0.16	245	5.09	2	0.47	1	0.14						5.86
8	Kilakulam	1675	1675	11.10	1	1	2.88														1	0.14				12	1.63	15.75
9	Distributory 17														2850	0.22	475	8.53	20	4.83	1	0.14						13.72
10	Chembikulam	880	880	6.33	1			1	1.15	1			1	0.075							1	0.14				15	1.23	8.93
11	Kurubilar kulam	920	920	5.02	1	1	4.13			1			1	0.02							1	0.14				10	1.49	10.80
12	Kumaran kulam	1260	1260	8.44	1	1	4.04			1			1	0.21							1	0.14						12.83
13	Marankulam	1750	1750	11.96	1	1	4.42														1	0.14						16.52
14	Distributory -18														2000	0.30	330	9.17	9	1.4	1	0.14						11.01
15	Adangarkulam	750	750	3.85	2	2	4.65														1	0.14				10	1.29	9.93
16	Madhaneri kulam	980	980	5.83	2	2	5.44														1	0.14				10	0.8	12.21
17	Kolliyankulam	1005	1005	4.77	2			2	0.8	1			1	0.02							1	0.14				10	1.47	7.20
18	Sluice No . 19														130	0.03	438	15.16	0		1	0.14						15.33

19	Distributory 21														5000	0.16	290	4.35	20	5.41	1	0.14						10.06
20	Uralvolmozhi kulam	2040	2040	15.36	5	5	16.27														1	0.14				26	4.38	36.15
21	Putheri kulam	1080	1080	7.46	1	1	1.77														1	0.14				10	0.76	10.13
22	Distributory 23														6700	0.42	483	7.02	19	3.96	1	0.14						11.54
23	Pallavampattukulam	1340	1340	6.74	1	1	2.31														1	0.14				10	0.9	10.09
24	Soochikulam	1080	1080	6.35																	1	0.14				4	0.53	7.02
25	Neduvankulam	850	850	5.66	1			1	0.68												1	0.14				10	1.14	7.62
26	Udayanerikulam	720	720	4.27	1			1	0.68												1	0.14				10	0.91	6.00
27	Senarkulam	800	800	4.87	1			1	0.68												1	0.14				10	1.12	6.81
	TOTAL	**19740**	**19740**	**125.22**	**23**	**15**	**45.91**	**8**	**5.78**	**4**	**0**	**0**	**4**	**0.33**	**25576**	**1.68**	**3752**	**83.23**	**90**	**22.79**	**27**	**3.78**	**0**	**0**	**0**	**167**	**20.03**	**308.74**

PACKAGE - V

Sl. No	Name of Tanks/ Supplychannels/ Anicuts	Tank													Supply Channel						Measuring device		Anicut			Retaining wall		Total Amount in Lakhs
		Tank bund			Tank Sluices					Weir																			
		Total length (m)	Proposed length/boundry stone (m)	Amount in lakhs	Total no of sluice	No of sluice to be reconstructed	Amount in lakhs	No of sluice to be repaired	Amount in lakhs	Total no of weirs	No of weir to be reconstructed	Amount in lakhs	No of weir to be repaired	Amount in lakhs	Length to be desilted (m)	Amount in lakhs	Lining (m)	Amount in lakhs	Cross masonry		Nos	Amount in lakhs	Rapair	Reconstruction	Amount in Lakhs	Lngth in M	Amount in lakhs	
																			Nos	Amount in lakhs								
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	Distributory 24														3587	0.32	1407	15.37	30	2.05	1	0.14						17.88
	Aladikurichy kulam	800	800	7.49																	1	0.14						7.63
	Nakkaneri kulam	960	960	6.27	1			1	0.34	1			1	0.05							1	0.14						6.80
	Pullamangalam kulam	760	760	7.78	1			1	0.34	1			1	2.41							1	0.14						10.67
	Distributory 25														4055	0.53	600	8.54	5	1	1	0.14						10.21
	Distributory 26														1342	0.05	100	3.23	1	0.34	1	0.14						3.76
	Distributory 27														3207	0.43	440	3.35	26	5.63	1	0.14						9.55
	Veppanpadu kulam	690	690	7.14	1			1	0.34	1			1	0.33							1	0.14						7.95
	Sanar kulam	1100	1100	6.5	2			2	1.02	1			1	0.04							1	0.14						7.70
0	Sanganeri kulam	1375	1375	7.89	1			1	0.32	1			1	0.07							1	0.14				20	4.33	12.75
1	Distributory 28														4033	0.4	573	7.88	16	2.07	1	0.14						10.49
2	Distributory 29														4326	0.44	470	5.59	15	1.63	1	0.14						7.80
3	Vanniankulam	1050	1050	11.29	1	1	2.07			1			1	1.49							1	0.14						14.99
4	Sivathanuperiya kulam	800	800	6.61	1			1	0.44												1	0.14				20	1.14	8.33
5	Distributory -30														1154	0.08	30	0.75	1	0.64	1	0.14						1.61
6	Arasnerikulam	1020	1020	8.01	1			1	1.37												1	0.14				40	3.55	13.07

7	Distributory -31													1769	0.22	83	1.37	6	0.71	1	0.14						2.44
8	Vilaketinar kulam	1000	1000	8.16	1			1	0.34	1			1	0.34						1	0.14				20	1.15	10.13
9	Distributory -32													209	0.01	60	1.74										1.75
0	Mahendra kulam	1100	1100	4.36	1			1	0.34	1			1	0.78						1	0.14				30	4.19	9.81
	OTAL	**10655**	**10655**	**81.50**	**11**	**1**	**2.07**	**10**	**4.85**	**8**	**0**	**0**	**8**	**5.51**	**23682**	**2.48**	**3763**	**47.82**	**100**	**14.07**	**19**	**2.66**	**0**	**0**	**0**	**130**	**14.36**	**175.32**

A.SALIENT FEATURES OF INFRASTRUCTURES OF THE HANUMANADHI SUB BASIN

IAMWARM - HANUMANADHI SUB BASIN

PACKAGE - 1

Sl. No	Name of Tanks/ Supplychannels / Anicuts	Tank													Supply Channel						Measuring device		Anicut			Retaining wall		Total Amount in Lakhs
		Tank bund			Tank Sluices					Weir																			
		Total length (m)	roposed length/boundry ston (m)	Amount in lakhs	Total no of sluice	lo of sluice to be reconstructe	Amount in lakhs	No of sluice to be repaired	Amount in lakhs	Total no of weirs	No of weir to be reconstructed	Amount in lakhs	No of weir to be repaired	Amount in lakhs	Length to be desilted (m)	Amount in lakhs	Lining (m)	Amount in lakhs	Cross masonry		Nos	Amount in lakhs	Rapair	Reconstruction	Amount in Lakhs	Lngth in M	Amount in lakhs	
																			Nos	Amount in lakhs								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	Parivirisooriyankulam	1350	1350	9.34	1			1	2.83												1	0.14				6	2.64	14.95
2	Sivanpillai Anicut																						1		1.98			1.98
3	Sivanpillai supply channel														3400	4.35			1	0.24						35	1.90	6.49
4	Nagarikulam	1600	1600	13.88	2			2	6.15	1			1	0.76							2	0.28				12	3.41	24.48
5	Sannanerikulam	1700	1700	15.35	2	2	10.42			1			1	0.13							2	0.28				20	15.28	41.46
6	Melakadampan kulam																									42	4.65	4.65
7	keezhakadampan kulam				2			2	3.49												2	0.28				12	2.38	6.15
8	Pettikulam				2			2	4.29												2	0.28				12	2.41	6.98

9	Senthilkathaiyan Anicut																						1		4.34			4.34
10	Senthilkathaiyan supply channel													1500	1.21			2	8.84							140	6.48	16.53
11	Padalayarkulam				1	1	3.88													1	0.14							4.02
12	Sathankulam	1400	1400	11.00	2			2	3.26	1			1	0.17						2	0.28				12	4.56	19.27
13	Thandayakulam				2			2	5.45											2	0.28				12	4.67	10.40
14	Thandayakulam Anicut																					1		3.02			3.02
15	Thandayakulam supply channel													1900	1.73												1.73
16	Senjetty Anicut																					1		3.1			3.10
17	Senjetty Supply channel													5100	2.70			3	11.15								13.85
18	Thazhavaiputhukulam	2400	2400	17.16	2			2	5.82											2	0.28				12	4.78	28.04
19	Veppilankulam	1020	1020	8.06	1	1	2.65													1	0.14				6	2.13	12.98
20	Pullankurichikulam	1600	1600	14.36	2			2	3.30	1			1	1.12						2	0.28				12	4.64	23.70
21	Pappankulam	2050	2050	10.12	1			1	1.24											1	0.14				6	0.92	12.42
22	Pavirithottamkulam	860	860	5.92	1			1	1.54											1	0.14				6	1.29	8.89
23	Marayanpattukulam				1			1	1.20											1	0.14				6	1.87	3.21
24	Pannayarkulam	850	850	6.58	1			1	2.06											1	0.14				6	1.15	9.93
25	Neduvazhi				1			1	2.27											1	0.14				6	0.94	3.35
26	Puthukualm				2			2	1.82											2	0.28				12	3.83	5.93
27	Keeranerikulam				2			2	2.10											2	0.28				12	4.87	7.25

28	Perugudi Anicut																						1		2.11			2.11
29	Perugudi Supply channel														5900	2.68										200	9.58	12.26
30	Karuppilankulam				1			1	1.10												1	0.14				6	2.38	3.62
31	Vessadikulam				1			1	1.01												1	0.14				6	1.49	2.64
32	Vadapathukualm				1			1	1.25												1	0.14				6	1.97	3.36
33	Vadakkan kulam	940	940	6.90	2	2	5.94			1			1	0.57							2	0.28				12	4.98	18.67
34	Azhaganerikulam				2			2	1.89												2	0.28				12	4.56	6.73
35	Aadangarkulam Anicut																						1		22.5	231	51.67	74.17
36	Aadangarkulam Supply chanel														800	0.67												0.67
37	Sadayanerikualm				1			1	1.68												1	0.14				6	1.89	3.71
38	Sadayaneri supply channel																									70	3.37	3.37
39	Mithiyankulam				1			1	1.68												1	0.14				6	1.54	3.36
40	Sakkiliyanparai Anicut																						1		6.68			6.68
41	Mithiyankulam supply channel														1700	0.98												0.98
42	Thumbaikulam				1			1	1.65												1	0.14				6	1.25	3.04
43	Manamariyankulam	900	900	6.55	1			1	1.26												1	0.14				6	1.98	9.93
44	Veerapandiyankulam				1			1	2.22												1	0.14				6	3.56	5.92
45	Miaputhukulam	1070	1070	7.59	1			1	1.74												1	0.14				6	3.23	12.70
46	Sooravazhi Anicut																						1		4.58			4.58

47	Lower Contour canel													4700	7.01													7.01
48	Sivakamiputhukulam	950	950	7.30	1			1	1.80	1			1	2.55							1	0.14				6	1.05	12.84
49	Perumalputhukulam				1			1	1.31												1	0.14				6	1.68	3.13
50	Periyaputhukulam				1			1	2.07												1	0.14				6	2.15	4.36
51	Kalliputhukulam	908	908	5.68	1			1	1.49	1	1	7.85									1	0.14				6	1.55	16.71
	SUB TOTAL	**19598**	**1959**	**145.79**	**45**	**6**	**22.89**	**39**	**68.97**	**7**	**1**	**7.85**	**6**	**5.30**	**25000**	**21.33**	**0**	**0**	**6**	**20.23**	**45**	**6.30**	**8**	**0**	**48.31**	**990**	**174.68**	**521.65**

PACKAGE - II

1	Palavoorperiyakulam				1			1	2.89												1	0.14				6	0.96	3.99
2	Keezha palarkulam				1			1	2.80												1	0.14				6	0.82	3.76
3	Mela palarkulam				1			1	3.17												1	0.14				6	0.82	4.13
4	Therkku sivagangaikulam	815	815	7.00	1			1	2.35												1	0.14				6	1.02	10.51
5	Salaiputhukulam				1			1	2.79												1	0.14				6	0.92	3.85
6	Lekshmi puthukulam	590	590	3.08	2			2	5.96												2	0.28				12	1.71	11.03
7	Athikulam	975	975	4.65	2			2	3.87												2	0.28				12	1.74	10.54
8	Annathukulam	285	285	2.74	2			2	3.59												2	0.28				12	1.66	8.27
	SUB TOTAL	**2665**	**2665**	**17.47**	**11**	**0**	**0**	**11**	**27.42**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**1.54**	**0**	**0**	**0**	**66**	**9.65**	**56.08**

PACKAGE - III

1	Distributory - 1														465	0.05	460	16.77	1	0.38	1	0.14						17.34
2	Distributory - 2														2060	0.26	1473	27.04	15	3.19	1	0.14						30.63
3	Distributory - 3														290	0.03	87	3.16	1	0.39	1	0.14						3.72
4	Distributory - 4														2105	0.28	200	3.28	17	3.47	1	0.14						7.17
5	Distributory - 5														678	0.06	526	19.31	1	0.41	1	0.14						19.92
6	Distributory - 6														2206	0.31	100	1.93	15	3.65	1	0.14						6.03
7	Distributory - 7														1812	0.27	240	4.03	9	2.72	1	0.14						7.16
8	Poothattikulam	1212	1212	7.28	1	1	3.77			1			1	0.52			0	0	0		1	0.14				21	5.53	17.24
9	Distributory - 8														998	0.17	350	6.27	8	2.28	1	0.14						8.86
10	Vemmanikulam	1080	1080	7.40	1			1	0.97	1			1	0.2			0	0	0		1	0.14				15	1.39	10.10
11	Periyapamanikulam	1168	1168	9.68	1			1	0.66	1	1	3.2					0	0	0		1	0.14				10	1.4	15.08
12	Nambikurichikulam	1016	1016	6.27	1			1	0.57	1	1	4.91					0	0	0		1	0.14						11.89
13	Distributory - 9														2112	0.29	240	4.16	15	3.18	1	0.14						7.77
14	Melavelarikulam	1035	1035	7.03	1	1	1.99			1			1	0.49			0	0	0		1	0.14				30	1.95	11.60
15	Keezhavelarikulam	635	635	4.69	1	1	2.08										0	0	0		1	0.14				30	1.89	8.80
16	Chittalamkulam	1070	1070	4.97	1	1	1.92										0	0	0		1	0.14				10	1	8.03
17	Distributory - 10														4755	0.62	200	3.27	15	3.07	1	0.14						7.10
18	Thiruppathikulam	972	972	6.51	1	1	2.72			1	1	3.56					0	0	0		1	0.14				25	4.6	17.53
19	Vadakkuparambikulam	1065	1065	7.50	1			1	1.56	1			1	0.17			0	0	0		1	0.14						9.37
20	Malayankulam	935	935	5.28	1			1	1.75	1			1	0.21			0	0	0		1	0.14						7.38
21	Periyakulam	1850	1850	14.27	1			1	0.65	1	1	5.4					0	0	0		1	0.14						20.46
22	Distributory - 11														5212	0.7	200	3.62	17	3.20	1	0.14						7.66
23	Veppankulam	1140	1140	5.92	1	1	1.64														1	0.14				10	0.55	8.25
24	Kallikulam	1390	1390	9.10	1	1	2.15														1	0.14				10	1.04	12.43
25	Karumeniyanthalkulam	882	882	4.97	1	1	1.77														1	0.14				10	0.68	7.56
	SUB TOTAL	**15450**	**15450**	**100.87**	**14**	**8**	**18.04**	**6**	**6.16**	**9**	**4**	**17.**	**5**	**1.59**	**22693**	**3.04**	**4076**	**92.84**	**114**	**25.94**	**25**	**3.50**	**0**	**0**	**0**	**171**	**20.03**	**289.08**

												07																	

PACKAGE - IV

1	Distributory 12														936	0.03	351	8.51	4	1.49	1	0.14						10.17
2	Sulakapani kulam	1260	1260	9.48	1			1	1.05												1	0.14				10	1.4	12.07
3	Distributory 13														2000	0.07	306	6.60	2	0.63	1	0.14						7.44
4	Distributory 14														3600	0.22	434	8.34	10	3.22	1	0.14						11.92
5	Kootharkulam	1350	1350	7.73	1			1	0.74												1	0.14				10	0.98	9.59
6	Distributory 15														1260	0.07	400	10.46	4	1.38	1	0.14						12.05
7	Distributory 16														1100	0.16	245	5.09	2	0.47	1	0.14						5.86
8	Kilakulam	1675	1675	11.10	1	1	2.88														1	0.14				12	1.63	15.75
9	Distributory 17														2850	0.22	475	8.53	20	4.83	1	0.14						13.72
10	Chembikulam	880	880	6.33	1			1	1.15	1			1	0.075							1	0.14				15	1.23	8.93
11	Kurubilar kulam	920	920	5.02	1	1	4.13			1			1	0.02							1	0.14				10	1.49	10.80
12	Kumaran kulam	1260	1260	8.44	1	1	4.04			1			1	0.21							1	0.14						12.83
13	Marankulam	1750	1750	11.96	1	1	4.42														1	0.14						16.52
14	Distributory - 18														2000	0.30	330	9.17	9	1.4	1	0.14						11.01
15	Adangarkulam	750	750	3.85	2	2	4.65														1	0.14				10	1.29	9.93
16	Madhaneri kulam	980	980	5.83	2	2	5.44														1	0.14				10	0.8	12.21
17	Kolliyankulam	1005	1005	4.77	2			2	0.8	1			1	0.02							1	0.14				10	1.47	7.20
18	Sluice No . 19														130	0.03	438	15.16	0		1	0.14						15.33
19	Distributory 21														5000	0.16	290	4.35	20	5.41	1	0.14						10.06

20	Uralvolmozhi kulam	2040	2040	15.36	5	5	16.27													1	0.14				26	4.38	36.15
21	Putheri kulam	1080	1080	7.46	1	1	1.77													1	0.14				10	0.76	10.13
22	Distributory 23													6700	0.42	483	7.02	19	3.96	1	0.14						11.54
23	Pallavampattu kulam	1340	1340	6.74	1	1	2.31													1	0.14				10	0.9	10.09
24	Soochikulam	1080	1080	6.35																1	0.14				4	0.53	7.02
25	Neduvankulam	850	850	5.66	1			1	0.68											1	0.14				10	1.14	7.62
26	Udayanerikulam	720	720	4.27	1			1	0.68											1	0.14				10	0.91	6.00
27	Senarkulam	800	800	4.87	1			1	0.68											1	0.14				10	1.12	6.81
	SUB TOTAL	**19740**	**19740**	**125.22**	**23**	**15**	**45.91**	**8**	**5.78**	**4**	**0**	**0**	**4**	**0.33**	**25576**	**1.68**	**3752**	**83.23**	**90**	**22.79**	**27**	**3.78**	**0**	**0**	**0**	**167**	**20.03**	**308.74**

PACKAGE - V

1	Distributory 24													3587	0.32	1407	15.37	30	2.05	1	0.14						17.88
2	Aladikurichy kulam	800	800	7.49																1	0.14						7.63
3	Nakkaneri kulam	960	960	6.27	1			1	0.34	1			1	0.05						1	0.14						6.80
4	Pullamangalam kulam	760	760	7.78	1			1	0.34	1			1	2.41						1	0.14						10.67
5	Distributory 25													4055	0.53	600	8.54	5	1	1	0.14						10.21
6	Distributory 26													1342	0.05	100	3.23	1	0.34	1	0.14						3.76
7	Distributory 27													3207	0.43	440	3.35	26	5.63	1	0.14						9.55
8	Veppanpadu kulam	690	690	7.14	1			1	0.34	1			1	0.33						1	0.14						7.95
9	Sanar kulam	1100	1100	6.5	2			2	1.02	1			1	0.04						1	0.14						7.70
10	Sanganeri kulam	1375	1375	7.89	1			1	0.32	1			1	0.07						1	0.14				20	4.33	12.75
11	Distributory 28													4033	0.4	573	7.88	16	2.07	1	0.14						10.49
12	Distributory 29													4326	0.44	470	5.59	15	1.63	1	0.14						7.80
13	Vanniankulam	1050	1050	11.29	1	1	2.07			1			1	1.49						1	0.14						14.99
14	Sivathanuperiya kulam	800	800	6.61	1			1	0.44											1	0.14				20	1.14	8.33

15	Distributory -30														1154	0.08	30	0.75	1	0.64	1	0.14						1.61
16	Arasnerikulam	1020	1020	8.01	1			1	1.37												1	0.14				40	3.55	13.07
17	Distributory -31														1769	0.22	83	1.37	6	0.71	1	0.14						2.44
18	Vilaketinar kulam	1000	1000	8.16	1			1	0.34	1			1	0.34							1	0.14				20	1.15	10.13
19	Distributory -32														209	0.01	60	1.74										1.75
20	Mahendra kulam	1100	1100	4.36	1			1	0.34	1			1	0.78							1	0.14				30	4.19	9.81
	SUB TOTAL	**10655**	**10655**	**81.50**	**11**	**1**	**2.07**	**10**	**4.85**	**8**	**0**	**0**	**8**	**5.51**	**23682**	**2.48**	**3763**	**47.82**	**100**	**14.07**	**19**	**2.66**	**0**	**0**	**0**	**130**	**14.36**	**175.32**
	GRAND TOTAL	**68108**	**68108**	**470.85**	**104**	**30**	**88.91**	**74**	**113.18**	**28**	**5**	**24.92**	**23**	**12.73**	**96951**	**28.53**	**11591**	**223.89**	**310**	**83.03**	**127**	**17.78**	**8**	**0**	**8.31**	**1524**	**238.75**	**1350.87**

C. PHYSICAL FINANCIAL PROGRAMME

Sl. No	Description	I Year		II Year		Total	
		Qty.	Amt	Qty	Amt	Qty.	Amount in Lakhs
	I. Tank Component						
I	Repairs to Weirs	7	3.80	15	7.61	22	11.41
II	Reconstruction of Weirs	2	11.79	4	23.59	6	35.38
III	Improvements to Bund	22295	147.06	44590	294.13	66885	441.19
IV	Repairs to Sluices	25	42.72	49	85.45	74	128.17
	Reconstruction of Sluices	10	30.59	20	61.19	30	91.78
	Construction of Protective walls in tanks	504	61.79	1009	123.59	1513	185.38
	Desilting	30866	9.91	61732	19.81	92598	29.72
	Measuring Devices	43	6.47	85	12.95	128	19.42
	II. Non Tank Component						
	Improvements to Anicut & Head sluice	2	8.56	5	17.12	7 Nos	25.68
V	Reconstruction of Anicut	-	-	1	60.91	1 Nos	60.91
	Radhapuram Canal and Distributory Lining	4251	78.95	8503	157.90	12754 M	236.85
	Improvements to Cross Masonries	104	28.33	209	56.65	313 Nos	84.98
	Environmental Components	-	5.20	-	6.30	-	11.50

	Ground water	-	-	-	-	-	-
	L.S(4 %)	-	16.43	-	32.87	-	49.30
Total		**-**	**451.60**	**-**	**960.07**		**1411.67**

HANUMANATHI SUB BASIN					
Name of Work: Rehabilitation of Anicut supply channel and tanks in Alathuraiyar Diversion scheme in Kodayar System in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District					
Package - 1					
S.No	**Description**	**Amount RS**	**No of measuring device**	**Amount RS**	**Amount RS**
1	Parivirisooriyankulam	1480628.00	1	14000	1494628.00
2	Sivanpillai Anicut	197423.00	-	-	198005.00
3	Sivanpillai supply channel	649388.00	-	-	649392.00
4	Nagarikulam	2419714.00	2	28000	2447714.00
5	Sannanerikulam	4117660.00	2	28000	4145660.00
6	Melakadampankulam	463609.00	-	-	464563.00
7	keezhakadampan kulam	587471.00	2	28000	615471.00
8	Pettikulam	670186.00	2	28000	698186.00
9	Senthilkathaiyan Anicut	433699.00	-	-	433644.00
10	Senthilkathaiyan supply channel	1652506.00			1652506.00
11	Padalayarkulam	388366.00	1	14000	402366.00
12	Sathankulam	1898676.00	2	28000	1926676.00
13	Thandayakulam	1011881.00	2	28000	1039881.00
14	Thandayakulam Anicut	300773.00	-	-	301841.00
15	Thandayakulam supply channel	174275.00	-	-	172635.00
16	Senjetty Anicut	310000.00	-	-	310000.00
17	Senjetty Supply channel	1403261.00	-	-	1384788.00
18	Thazhavaiputhukulam	2776391.00	2	28000	2804391.00
19	Veppilankulam	1284410.00	1	14000	1298410.00
20	Pullankurichikulam	2342063.00	2	28000	2370063.00
21	Pappankulam	1227766.00	1	14000	1241766.00
22	Pavirithottamkulam	874891.00	1	14000	888891.00
23	Marayanpattukulam	307186.00	1	14000	321186.00
24	Pannayarkulam	979117.00	1	14000	993117.00
25	Neduvazhi	320946.00	1	14000	334946.00
26	Puthukualm	565066.00	2	28000	593066.00
27	Keeranerikulam	697027.00	2	28000	725027.00
28	perugudi Anicut	211263.00	-	-	211263.00
29	perugudi Supply channel	1519479.00	-	-	1225652.00
30	Karuppilankulam	348494.00	1	14000	362494.00
31	Vessadikulam	249792.00	1	14000	263792.00
32	Vadapathukualm	321633.00	1	14000	335633.00
33	Vadakkan kulam	1838773.00	2	28000	1866773.00
34	Azhaganerikulam	644866.00	2	28000	672866.00
35	Aadangarkulam Anicut	6091174.00	-	-	7417096.00
36	Aadangarkulam Supply chanel	88228.00	-	-	67357.00
37	Sadayanerikualm	356644.00	1	14000	370644.00
38	Sadayaneri supply channel	337578.00			337578.00
39	Mithiyankulam	322033.00	1	14000	336033.00
40	Sakkiliyanparai Anicut	668101.00	-	-	668101.00

41	Mithiyankulam supply channel	98340.00	-	-	98340.00
42	Thumbaikulam	290033.00	1	14000	304033.00
43	Manamariyankulam	978589.00	1	14000	992589.00
44	Veerapandiyankulam	578462.00	1	14000	592462.00
45	Miaputhukulam	1255905.00	1	14000	1269905.00
46	Sooravazhi Anicut	447517.00	-	-	458188.00
47	Lower Contour canel	731955.00	-	-	700723.00
48	Sivakamiputhukulam	1270286.00	1	14000	1284286.00
49	Perumalputhukulam	298993.00	1	14000	312993.00
50	Periyaputhukulam	422290.00	1	14000	436290.00
51	Kalliputhukulam	1657028.00	1	14000	1671028.00
	TOTAL	50561835.00	45	630000	**52164938.00**

Name of Work: Rehabilitation of Tanks under Poigai canal sluice in Kodayar system in Nambiyar basin in Hanumanadhi Sub Basin in Thovalai & Radhapuram Taluk of Kanyakumari & Tirunelveli District.

Package - 2

S.No	Description	Amount RS	No of measuring device	Amount RS	Amount RS
1	Palavoorperiya kulam	384753.00	1	14000	398753.00
2	Keezha palar kulam	361081.00	1	15000	376081.00
3	Mela palar kulam	397982.00	1	15000	412982.00
4	Therkku sivagangai kulam	1035924.00	1	15000	1050924.00
5	Salaiputhu kulam	369743.00	1	15000	384743.00
6	Lekshmi puthu kulam	1073062.00	2	30000	1103062.00
7	Athikulam	1023746.00	2	30000	1053746.00
8	Annathukulam	797385.00	2	30000	827385.00
	TOTAL	5443676.00	11	164000	**5607676.00**

Name of work: Rehabilitation of Main canal Distributories and Tanks upto L.S 0 to 6210M of Radhapuram Main Canal in Kodayar System in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District

Package - 3

S.No	Description	Amount RS	No of measuring device	Amount RS	Amount RS
1	Distributory - 1	1719915	1	14000	1733915
2	Distributory - 2	3049123	1	14000	3063123
3	Distributory - 3	358145	1	14000	372145
4	Distributory - 4	702886	1	14000	716886
5	Distributory - 5	1977616	1	14000	1991616
6	Distributory - 6	589366	1	14000	603366
7	Distributory - 7	701862	1	14000	715862
8	Poothattikulam	1709971	1	14000	1723971
9	Distributory - 8	871890	1	14000	885890
10	Vemmanikulam	995977	1	14000	1009977
11	Periyapamanikulam	1494143	1	14000	1508143
12	Nambikurichikulam	1175256	1	14000	1189256
13	Distributory - 9	762502	1	14000	776502
14	Melavelarikulam	1145548	1	14000	1159548
15	Keezhavelarikulam	866382	1	14000	880382

16	Chittalamkulam	788710	1	14000	802710
17	Distributory - 10	695690	1	14000	709690
18	Thiruppathikulam	1738945	1	14000	1752945
19	Vadakkuparambikulam	923144	1	14000	937144
20	Malayankulam	723840	1	14000	737840
21	Periyakulam	2031988	1	14000	2045988
22	Distributory - 11	751703	1	14000	765703
23	Veppankulam	811205	1	14000	825205
24	Kallikulam	1229252	1	14000	1243252
25	Karumeniyanthalkulam	742643	1	14000	756643
	TOTAL	28557700	25	350000	**28907700**

Name of work: Rehabilitation of Main canal Distributories and Tanks from L.S 6210M to 20360M of Radhapuram Main Canal in Kodayar System in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District

Package -4

S.No	Description	Amount RS	No of measuring device	Amount RS	Amount RS
1	Distributory 12	1002699.00	1	14000	1016699.00
2	Sulakapani kulam	1193483.00	1	14000	1207483.00
3	Distributory 13	729223.00	1	14000	743223.00
4	Distributory 14	1177846.00	1	14000	1191846.00
5	Kootharkulam	944941.00	1	14000	958941.00
6	Distributory 15	1190916.00	1	14000	1204916.00
7	Distributory 16	571547.00	1	14000	585547.00
8	Kilakulam	1560801.00	1	14000	1574801.00
9	Distributory 17	1357822.00	1	14000	1371822.00
10	Chembikulam	878775.00	1	14000	892775.00
11	Kurubilar kulam	1065681.00	1	14000	1079681.00
12	Kumaran kulam	1268797.00	1	14000	1282797.00
13	Marankulam	1637589.00	1	14000	1651589.00
14	Distributory -18	1086925.00	1	14000	1100925.00
15	Adangarkulam	979133.00	1	14000	993133.00
16	Madhaneri kulam	1207476.00	1	14000	1221476.00
17	Kolliyankulam	705700.00	1	14000	719700.00
18	Sluice No . 19	1519006.00	1	14000	1533006.00
19	Distributory 21	992034.00	1	14000	1006034.00
20	Uralvolmozhi kulam	3601357.00	1	14000	3615357.00
21	Putheri kulam	999189.00	1	14000	1013189.00
22	Distributory 23	1139894.00	1	14000	1153894.00
23	Pallavampattukulam	995477.00	1	14000	1009477.00
24	Soochikulam	687862.00	1	14000	701862.00
25	Neduvankulam	747693.00	1	14000	761693.00
26	Udayanerikulam	587071.00	1	14000	601071.00
27	Senarkulam	667441.00	1	14000	681441.00
	TOTAL	30496378.00	27	378000	**30874332.00**

Name of Work: Rehabilitation of main canal, Distributories and its Tanks from L.S. 20360 to 28800m of Radhapuram canal in Kodayar system in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District

Package - 5

S.No	Description	Amount RS	No of measuring device	Amount RS	Amount RS
1	Distributory -24	1773981.00	1	14000	1787981.00
2	Aradikurichi kulam	748564.00	1	14000	762564.00
3	Nakkaneri kulam	666164.00	1	14000	680164.00
4	Pullamangalam kulam	1052987.00	1	14000	1066987.00
5	Distributory -25	1007436.00	1	14000	1021436.00
6	Distributory -26	361488.00	1	14000	375488.00
7	Distributory -27	941292.00	1	14000	955292.00
8	Veppanpadu kulam	781387.00	1	14000	795387.00
9	sanar kulam	756000.00	2	14000	770000.00
10	sanganeri kulam	1260870.00	1	14000	1274870.00
11	Distributory -28	1035306.00	1	14000	1049306.00
12	Distributory -29	765675.00	1	14000	779675.00
13	Vannian kulam	1484749.00	1	14000	1498749.00
14	Sivathanu periya kulam	818972.00	1	14000	832972.00
15	Distributory -30	146900.00	1	14000	160900.00
16	Arasaneri kulam	1292793.00	1	14000	1306793.00
17	Distributory -31	229537.00	1	14000	243537.00
18	Vilaketrinar kulam	999184.00	1	14000	1013184.00
19	Distributory -32	175429.00	-	-	175429.00
20	Mahendran kulam	967171.00	1	14000	981171.00
	TOTAL	17265885.00	20	266000	**17531885.00**

TOTAL COST OF THE PROJECT

SL. NO	NAME OF WORK	AMOUNT IN LAKHS
	PACKAGE-1	
1	Rehabilitation of Anicut supply channel and tanks in Alathuraiyar Diversion scheme in Kodayar System in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District	**521.64**
	PACKAGE-2	
2	Rehabilitation of Tanks under Poigai canal sluice in Kodayar system in Nambiyar basin in Hanumanadhi Sub Basin in Thovalai & Radhapuram Taluk of Kanyakumari & Tirunelveli District.	**56.08**
	PACKAGE-3	
3	Rehabilitation of Main canal Distributories and Tanks upto L.S 0 to 6210M of Radhapuram Main Canal in Kodayar System in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District	**289.07**
	PACKAGE-4	
4	Rehabilitation of Main canal Distributories and Tanks from L.S 6210M to 20360M of Radhapuram Main Canal in Kodayar System in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District	**308.74**
	PACKAGE-5	
5	Rehabilitation of main canal, Distributories and its Tanks from L.S. 20360 to 28800m of Radhapuram canal in Kodayar system in Nambiyar basin of Hanumanathi sub basin in Radhapuram Taluk of Tirunelveli District	**175.32**
	SUB TOTAL	**1350.86**
6	Environmental Activities	**11.50**
TOTAL		**1362.36**

(Rupees One thousand three hundred and sixty two Lakhs and thirty six thuosand only)

BREAK UP DETAILS FOR MACHINERY & KEY PERSONAL (PACKAGE 1)

Period of Construction = 18 months
Working period = 15 months
Rainy season = 3 months

EARTH WORK QUANITY

Earth work for foundation	=	6161.00	m3
Desilting	=	58017.00	m3
Earth work conveyance	=	0.00	
Earth work for open excavtion	=	28128.00	m3
Bund Formation	=	266010.00	m3
TOTAL	=	**358316.00**	Cu.m

1. POCLAIN

One excavator working for 8 hours a day car = 8x15x3 = 360 Cu.m/Day

Make 15 trips of 3 cu.m each

Taking 20 Days a month to work = **20x360 =** **7200** Cu.m

For the working period of 15 months I POCLAIN can operate = 15 x 7200 = 108000 Cu.m

No.of excavators (Poclain) required = 358316/108000 = 3.32

Maximum No of Excavator (Poclains) required = 4

2. TIPPERS

Tipper required for earth work

One tipper performs 10 trips in 8 hrs a day = 358316.00 / 20x6x20x15 = 9.95

Cu.m per trip for 20 days for 15 months each.

Tippers required for for each work = 10

Tippers required for aggregates of concrete work @ 15 days per month for 15 months

M 7.5	=	1854.00	Cu.m
M 10 graded	=	8164.00	Cu.m
M10 20mm	=	197.00	Cu.m

10532 / 3x5x15x15 = 3.12

M10 40mm	=	217.00	Cu.m		(3 cum for a trip @ 5 trips a day)
M15 20mm	=	1139.00	Cu.m		
R.C.C M20	=	131.00	Cu.m		
Concrete Total	=	11702.00	Cu.m		
Aggregate Total	=	10532	Cu.m		

Trippers required for aggregate = 4

Tippers required for sand

50% of Aggregate	=	5266	Cu.m					
Plastering 1:4 20mm thick	=	191		(957	Sqm)	6437	=	2.38
R.R. in CM 1:4	=	44	Cu.m			6x2x15x15		
Sand filling	=	936	Cu.m					
Sand Total	=	6437	Cu.m					

Tippers required for sand = 3

Tippers required for R.R. stones @ 15 days per month

R.R. in C.M 1:4	=	129	Cu.m					
Rough stone Dry packing	=	547	Cu.m			744	=	0.22
Total	=	676	Cu.m			3x5x15x15		
R.R.Stones TOTAL	=	744	Cu.m		110%			

Tippers required for R.R.Stone = 1

Maximum No's Tippers required = 18

Providing 1 No of Tippers as stand by = 19

3. MIXER MACHINE

Concrete Total = 11702 Cu.m

Volume of concrete per day @ 15 days per month for 15 working Months = $\frac{11702}{15x15}$ = 52.0

Capacity of one mixer machine in one day = 15 cu.m

= $\frac{52.0}{15}$ 3.46726

Mixer Machine required = 4

Providing 1 No as stand by = **5**

Vibrator required = **5**

4. NEEDLE VIBRATOR

The same requirement of Mixer Machines

5. VIBRATING POWER ROLLERS OF SHORT DRUM

The same requirement of Mixer Machines

6. POWER ROLLERS

1/3 rd of the requirement of the Poclains = 4 x 1/3

= 1.33

TOTAL = **2**

7. DIESEL ENGINES(5HP & ABOVE)

The same requirement of Mixer Machines

Diesel Engines required = **5**

8. THUCK MOUNTED WATER TANKERS

For bund formation = **1**

For Concrete work = 1

Stand by = 0

Water Tankers required = **2**

MACHINE REQUIREMENT

1	POCLAINS	4
2	TIPPERS	19
3	MIXER MACHINES	5
4	NEEDLE VIBRATOR	5
5	SHORT DRUM	5
6	POWER ROLLERS	2
7	DIESAL ENGINE(5 HP & ABOVE)	5
8	TRUNK MOUNTED WATER TANKER	2

MATERIALS REQUIRED

1	CEMENT	2460.4	MT
2	SAND	6437	Cu.m
3	COURSE AGGREGATE	10532	Cu.m
4	ROUGH STONE FOR MASONRY	744	Cu.m
5	STEEL	260	QTL

BREAK UP DETAILS FOR MACHINERY & KEY PERSONAL (PACKAGE II)

Period of Construction = 12 months
Working period = 9 months
Rainy season = 3 months

EARTH WORK QUANITY

Earth work for foundation	=	658.00	m3
Desilting	=	0.00	m3
Earth work conveyance	=	0.00	
Earth work for open excavtion	=	330.00	m3
Bund Formation	=	28828.00	m3
TOTAL	=	**29816.00**	Cu.m

1. POCLAIN

One excavator working for 8 hours a day car = 8x15x3 = 360 Cu.m/Day

Make 15 trips of 3 cu.m each

Taking 20 Days a month to work = **20x360 =** **7200** Cu.m

For the working period of 15 months

I POCLAIN can operate = 15 x 7200 = 108000 Cu.m

No.of excavators (Poclain) required = 29816.00 / 108000 = 0.28

Maximum No of Excavator (Poclains) required = 1

2. TIPPERS

Tipper required for earth work

One tipper performs 10 trips in 8 hrs a day = 29816.00 / 20x6x20x12 = 1.04

Cu.m per trip for 20 days for 12 months each.

Tippers required for for each work = 1

Tippers required for aggregates of concrete work @ 15 days per month for 12 months

M 7.5	=	255.00	Cu.m
M 10 graded	=	991.00	Cu.m
M10 20mm	=	0.00	Cu.m
M15 20mm	=	18.50	Cu.m
M20 20mm	=	10.50	Cu.m

1157 / 3x5x15x15 = 0.43

(3 cum for a trip @ 5 trips a day)

R.C.C M20	=	11.00	Cu.m					
Concrete Total	=	1286.00	Cu.m					
Aggregate Total	=	1157	Cu.m					

Trippers required for aggregate = 1

Tippers required for sand

50% of Aggregate	=	579	Cu.m			-		
Plastering 1:4 20mm thick	=	191		(957	Sqm)	1750	=	0.81
R.R. in CM 1:4	=	44	Cu.m			6x2x15x15		
Sand filling	=	936	Cu.m					
Pointing	=	0	Cu.m					
Sand Total	=	1750	Cu.m					

Tippers required for sand = 1

Tippers required for R.R. stones @ 15 days per month

R.R. in C.M 1:4	=	129	Cu.m					
Rough stone Dry packing	=	547	Cu.m			744	=	0.28
Total	=	676	Cu.m			3x5x15x15		
R.R.Stones TOTAL	=	744	Cu.m		110%			

Tippers required for R.R.Stone = 1

Maximum No's Tippers required = 4

Providing 1 No of Tippers as stand by = 5

3. MIXER MACHINE

Concrete Total = 1286 Cu.m

Volume of concrete per day @ 15 days per month for 15 working Months = $\frac{1286}{15x15}$ = 7.1

Capacity of one mixer machine in one day = 15 cu.m

= $\frac{7.1}{15}$ = 0.48

Mixer Machine required = 1

Providing 1 No as stand by = 2

Vibrator required = **2**

4. NEEDLE VIBRATOR

The same requirement of Mixer Machines

5. VIBRATING POWER ROLLERS OF SHORT DRUM

The same requirement of Mixer Machines

6. POWER ROLLERS

1/3 rd of the requirement of the Poclains = 1 x 1/3

= 0.33

TOTAL = **1**

7. DIESEL ENGINES(5HP & ABOVE)

The same requirement of Mixer Machines

Diesel Engines required = **2**

8. THUCK MOUNTED WATER TANKERS

For bund formation = **1**

For Concrete work = 1

Stand by = 0

Water Tankers required = **2**

MACHINE REQUIREMENT

1	POCLAINS	1
2	TIPPERS	5
3	MIXER MACHINES	2
4	NEEDLE VIBRATOR	2
5	SHORT DRUM	2
6	POWER ROLLERS	1
7	DIESAL ENGINE(5 HP & ABOVE)	2
8	TRUNK MOUNTED WATER TANKER	2

MATERIALS REQUIRED

1	CEMENT	260	MT
2	SAND	1750	Cu.m
3	COURSE AGGREGATE	1157	Cu.m
4	ROUGH STONE FOR MASONRY	744	Cu.m

5	STEEL	88 QTL

BREAK UP DETAILS FOR MACHINERY & KEY PERSONAL (PACKAGE III)

Period of Construction = 18 months
Working period = 15 months
Rainy season = 3 months

EARTH WORK QUANITY

Earth work for foundation	=	856.00	m3
Desilting	=	0.00	m3
Earth work conveyance	=	0.00	
Earth work for open excavtion	=	4825.00	m3
Bund Formation	=	170078.00	m3
TOTAL	=	**175759.00**	Cu.m

1. POCLAIN

One excavator working for 8 hours a day car = 8x15x3 = 360 Cu.m/ Day

Make 15 trips of 3 cu.m each

Taking 20 Days a month to work = **20x360** = **7200** Cu.m

For the working period of 15 months

I POCLAIN can operate = 15 x 7200 = 108000 Cu.m

No.of excavators (Poclain) required = $\frac{175759.00}{108000}$ = 1.63

Maximum No of Excavator (Poclains) required = 2

2. TIPPERS

Tipper required for earth work

One tipper performs 10 trips in 8 hrs a day = $\frac{175759.00}{20x6x20x15}$ = 4.88

Cu.m per trip for 20 days for 12 months each.

Tippers required for for each work = 5

Tippers required for aggregates of concrete work @ 15 days per month for 15 months

M 7.5	=	716	Cu.m
M 10 graded	=	1750	Cu.m
M10 20mm	=	54	Cu.m
M15 20mm	=	359	Cu.m
M20 20mm	=	102	Cu.m
R.C.C M20	=	34	Cu.m

$\frac{2714}{3x5x15x15}$ = 0.80

(3 cum for a trip @ 5 trips a day)

Concrete Total	=	3015	Cu.m					
Aggregate Total	=	2714	Cu.m					

Trippers required for aggregate = 1

Tippers required for sand

50% of Aggregate	=	1357	Cu.m					
Plastering 1:4 20mm thick	=	53		(264	Sqm)	1857	=	0.69
R.R. in CM 1:4	=	57	Cu.m			6x2x15x15		
Sand filling	=	346	Cu.m					
Pointing	=	45	Cu.m					
Sand Total	=	1857	Cu.m					

Tippers required for sand = 1

Tippers required for R.R. stones @ 15 days per month

R.R. in C.M 1:4	=	167	Cu.m					
Rough stone Dry packing	=	22	Cu.m			207	=	0.06
Total	=	188.5	Cu.m			3x5x15x15		
R.R.Stones TOTAL	=	207	Cu.m		110 %			

Tippers required for R.R.Stone = 1

Maximum No's Tippers required = 8

Providing 1 No of Tippers as stand by = 9

3. MIXER MACHINE

Concrete Total = 3015 Cu.m

Volume of concrete per day @ 15 days per month for 15 working Months = $\frac{3015}{15x15}$ = 13.4

Capacity of one mixer machine in one day = 15 cu.m

= $\frac{13.4}{15}$ 0.89

Mixer Machine required = 1

Providing 1 No as stand by = 2

Vibrator required = 2

4. NEEDLE VIBRATOR

The same requirement of Mixer Machines

5. VIBRATING POWER ROLLERS OF SHORT DRUM

The same requirement of Mixer Machines

6. POWER ROLLERS

1/3 rd of the requirement of the Poclains = 2 x 1/3
0.6
= 7

TOTAL = **1**

7. DIESEL ENGINES(5HP & ABOVE)

The same requirement of Mixer Machines

Diesel Engines required = **2**

8. THUCK MOUNTED WATER TANKERS

For bund formation = **1**
For Concrete work = 1
Stand by = 0

Water Tankers required = **2**

MACHINE REQUIREMENT

1	POCLAINS	2
2	TIPPERS	9
3	MIXER MACHINES	2
4	NEEDLE VIBRATOR	2
5	SHORT DRUM	2
6	POWER ROLLERS	1
7	DIESAL ENGINE(5 HP & ABOVE)	2
8	TRUNK MOUNTED WATER TANKER	2

MATERIALS REQUIRED

1	CEMENT	642	MT
2	SAND	1857	Cu.m
3	COURSE AGGREGATE	2714	Cu.m
4	ROUGH STONE FOR MASONRY	207	Cu.m
5	STEEL	88	QTL

BREAK UP DETAILS FOR MACHINERY & KEY PERSONAL (PACKAGE IV)

Period of Construction = 18 months
Working period = 15 months
Rainy season = 3 months

EARTH WORK QUANITY

Earth work for foundation	=	1961	m3
Desilting	=	7384	m3
Earth work conveyance	=	0	
Earth work for open excavtion	=	4825	m3
Bund Formation	=	205147	m3
TOTAL	=	**219317.17**	Cu.m

1. POCLAIN

One excavator working for 8 hours a day car = 8x15x3 = 360 Cu.m/Day

Make 15 trips of 3 cu.m each

Taking 20 Days a month to work = **20x360** = **7200** Cu.m

For the working period of 15 months

I POCLAIN can operate = 15 x 7200 = 108000 Cu.m

No.of excavators (Poclain) required = 219317.17 / 108000 = 2.03

Maximum No of Excavator (Poclains) required = 3

2. TIPPERS

Tipper required for earth work

One tipper performs 10 trips in 8 hrs a day = 219317.17 / 20x6x20x15 = 6.09

Cu.m per trip for 20 days for 12 months each.

Tippers required for for each work = 6

Tippers required for aggregates of concrete work @ 15 days per month for 5 months 1

M 7.5	=	635	Cu.m			
M 10 graded	=	1739	Cu.m	4406	=	1.31

M10 20mm	=	0	Cu.m		3x5x15x15
M15 20mm	=	2452	Cu.m		(3 cum for a trip @ 5 trips a day)
M20 20mm	=	0	Cu.m		
R.C.C M20	=	70	Cu.m		
Concrete Total	=	4896	Cu.m		
Aggregate Total	=	4406	Cu.m		

Trippers required for aggregate = 2

Tippers required for sand

50% of Aggregate	=	2203	C.m			-		
Plastering 1:4 20mm thick	=	151		755	Sqm	3283	=	1.22
R.R. in CM 1:4	=	83	Cu.m			6x2x15x15		
Sand filling	=	817	Cu.m					
Pointing	=	30	Cu.m					
Sand Total	=	3283	Cu.m					

Tippers required for sand = 2

Tippers required for R.R. stones @ 15 days per month

R.R. in C.M 1:4	=	244	Cu.m					
Rough stone Dry packing	=	29	Cu.m			301	=	0.09
Total	=	273	Cu.m			3x5x15x15		
R.R.Stones TOTAL	=	301	Cu.m		110%			

Tippers required for R.R.Stone = 1

Maximum No's Tippers required = 11

Providing 1 No of Tippers as stand by = 12

3. MIXER MACHINE

Concrete Total = 4896 Cu.m

Volume of concrete per day @ 15 days per month for 15 working Months = $\frac{4896}{15x15}$

= 21.8

Capacity of one mixer machine in one day = 15 cu.m

= $\frac{21.8}{}$ 1.45

Mixer Machine required	=	**2**
Providing 1 No as stand by	=	**3**
Vibrator required	=	**3**

4. NEEDLE VIBRATOR

The same requirement of Mixer Machines

5. VIBRATING POWER ROLLERS OF SHORT DRUM

The same requirement of Mixer Machines

6. POWER ROLLERS

1/3 rd of the requirement of the Poclains = 3 x 1/3

= 1

TOTAL = 1

7. DIESEL ENGINES(5HP & ABOVE)

The same requirement of Mixer Machines

Diesel Engines required	=	**3**

8. THUCK MOUNTED WATER TANKERS

For bund formation	=	**1**
For Concrete work	=	1
Stand by	=	0
Water Tankers required	=	**2**

MACHINE REQUIREMENT

1	POCLAINS	3
2	TIPPERS	12
3	MIXER MACHINES	3
4	NEEDLE VIBRATOR	3
5	SHORT DRUM	3
6	POWER ROLLERS	1
7	DIESAL ENGINE(5 HP & ABOVE)	3
8	TRUNK MOUNTED WATER TANKER	2

MATERIALS REQUIRED

1	CEMENT	1182 MT

2	SAND	3283	Cu.m
3	COURSE AGGREGATE	4406	Cu.m
4	ROUGH STONE FOR MASONRY	301	Cu.m
5	STEEL	71	QTL

BREAK UP DETAILS FOR MACHINERY & KEY PERSONAL (PACKAGE V)

Period of Construction = 15 months
Working period = 12 months
Rainy season = 3 months

EARTH WORK QUANITY

Earth work for foundation	=	1154	m3
Desilting	=	7697	m3
Earth work conveyance	=	0	
Earth work for open excavtion	=	1438	m3
Bund Formation	=	135020	m3
TOTAL	=	**145309**	Cu.m

1. POCLAIN

One excavator working for 8 hours a day car
Make 15 trips of 3 cu.m each = 8x15x3 = 360 Cu.m/Day

Taking 20 Days a month to work = **20x360 =** **7200** Cu.m

For the working period of 15 months
I POCLAIN can operate = 15 x 7200 = 108000 Cu.m

No.of excavators (Poclain) required = 145309.00 / 108000 = 1.35

Maximum No of Excavator (Poclains) required = 2

2. TIPPERS

Tipper required for earth work

One tipper performs 10 trips in 8 hrs a day
Cu.m per trip for 20 days for 12 months each. = 145309.00 / 20x6x20 x12 = 5.05

Tippers required for for each work = 5

Tippers required for aggregates of concrete work @ 15 days per month for 12 months

M 7.5	=	178	Cu.m
M 10 graded	=	739	Cu.m
M10 20mm	=	0	Cu.m
M15 20mm	=	1444	Cu.m
M20 20mm	=	0	Cu.m
R.C.C M20	=	8	Cu.m
Concrete Total	=	2369	Cu.m
Aggregate Total	=	2132	Cu.m

$$\frac{2132}{3 \times 5 \times 15 \times 12} = 0.79$$

(3 cum for a trip @ 5 trips a day)

Trippers required for aggregate = 1

Tippers required for sand

50% of Aggregate	=	1066	Cu.m		
Plastering 1:4 20mm thick	=	151		755	Sqm
R.R. in CM 1:4	=	83	Cu.m		
Sand filling	=	817	Cu.m		
Pointing	=	30	Cu.m		
Sand Total	=	2146	Cu.m		

$$\frac{2146}{6 \times 2 \times 15 \times 15} = 0.99$$

Tippers required for sand = 1

Tippers required for R.R. stones @ 15 days per month

R.R. in C.M 1:4	=	244	Cu.m	
Rough stone Dry packing	=	29	Cu.m	
Total	=	273	Cu.m	
R.R.Stones TOTAL	=	301	Cu.m	110%

$$\frac{301}{3 \times 5 \times 15 \times 12} = 0.11$$

Tippers required for R.R.Stone = 1

Maximum No's Tippers required = 8

Providing 1 No of Tippers as stand by = 9

3. MIXER MACHINE

Concrete Total = 2369 Cu.m

Volume of concrete per day @ 15 days per month for 12 working Months = $\frac{2369}{15x12}$

= 13.2

Capacity of one mixer machine in one day = 15 cu.m

= $\frac{13.2}{12}$ 1.1

Mixer Machine required = **2**

Providing 1 No as stand by = **3**

Vibrator required = **3**

4. NEEDLE VIBRATOR

The same requirement of Mixer Machines

5. VIBRATING POWER ROLLERS OF SHORT DRUM

The same requirement of Mixer Machines

6. POWER ROLLERS

1/3 rd of the requirement of the Poclains = 2 x 1/3

= 0.67

TOTAL = **1**

7. DIESEL ENGINES(5HP & ABOVE)

The same requirement of Mixer Machines

Diesel Engines required = **3**

8. THUCK MOUNTED WATER TANKERS

For bund formation = **1**

For Concrete work = 1

Stand by = 0

Water Tankers required = **2**

MACHINE REQUIREMENT

1	POCLAINS	2
2	TIPPERS	9
3	MIXER MACHINES	3

4	NEEDLE VIBRATOR	3
5	SHORT DRUM	3
6	POWER ROLLERS	1
7	DIESAL ENGINE(5 HP & ABOVE)	3
8	TRUNK MOUNTED WATER TANKER	2

MATERIALS REQUIRED

1	CEMENT	593	MT
2	SAND	2146	Cu.m
3	COURSE AGGREGATE	2132	Cu.m
4	ROUGH STONE FOR MASONRY	301	Cu.m
5	STEEL	8	QTL

HANUMANADHI SUB BASIN - PACKAGE NO 1

FORM II

REQUIREMENT OF EQUIPMENTS AND MATERIALS

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED						
	POCLAINS	TIPPERS	MIXER MACHINES	NEEDLE VIBRATOR	SHORT DRUM	POWER ROLLERS	DIESAL ENGINE(5 HP & ABOVE)	TRUNK MOUNTED WATER TANKER	CEMENT IN M.T.	SAND IN m^3	STEEL IN Q.TL.	METAL 40MM IN m^3	METAL 20MM IN m^3	RR IN m^3	FUEL
01/IAMWARM / WRO /PNK /WORKS / 1 (2009 - 10)	4	19	5	5	5	2	5	2	2460	6437	260	4604	5928	744	

HANUMANADHI SUB BASIN PACKAGE NO 1

Construction Methodology

Sl.No.	Description of Item	Working Months							Rainy Season			Working Months									Total		Remarks
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
		03/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11	Qty	Unit	
1	Earth Excavation	2000	15000	15000	30000	30000	30000	30000	2000	2000	5000	30000	30000	30000	25000	25000	25000	25000	7316	40	358316	M3	
2	Concrete M 7.5	-	100	150	150	150	150	150	50	25	38	150	150	150	125	100	100	100	18	-	1856	M3	
3	M 10	-	200	300	500	600	600	600	200	200	300	600	600	600	700	700	700	600	578	8	8578	M3	
4	M15	-	50	50	50	50	100	100	50	50	50	100	100	100	100	50	50	50	40	-	1140	M3	
5	M 20	-	-	10	10	10	10	10	4	4	4	10	10	10	10	10	10	9	-	-	131	M3	
6	R.R.Masonry 1:4	-	-	10	10	10	10	10	3	3	3	10	10	10	10	10	10	10	-	-	129	M3	
7	Plastering 1:4	-	-	-	-	100	100	100	25	25	20	100	100	100	50	100	50	50	37	-	957	M3	

HANUMANADHI SUB BASIN PACKAGE NO 2

Construction Methodology

Sl.No.	Description of Item	Working Months								Rainy		Working Months			Total		Remarks
		1	2	3	4	5	6	7	8	9	10	11	12	13			
		3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10	1/11	2/11	3/11	Qty	Unit	
1	Earth Excavation	500	1500	2500	3000	4500	5000	4500	1000	1000	549	3000	2767	-	29816	M3	
2	Concrete M 7.5	-	20	40	40	40	40	10	10	10	10	20	15	-	255	M3	
3	M 10	-	-	100	100	150	125	125	50	50	20	125	125	21	991	M3	
4	M15	-	-	-	-	-	3	5	5	2	-	3	1	-	19	M3	
5	M 20	-	-	-	3	3	3	3	3	2	-	3	2	-	22	M3	
6	R.R.Masonry 1:4	-	-	-	-	-	10	10	5	3	2	10	3	-	43	M3	
7	Plastering 1:4	-	-	-	-	-	-	35	5	5	5	36	10	-	96	M2	

HANUMANADHI SUB BASIN PACKAGE NO 3

Construction Methodology

Sl. No.	Description of Item	Working Months							Rainy Season			Working Months									Total		Remarks
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
		3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10	01/11	02/11	3/11	4/11	05/11	06/11	07/11	08/11	09/11	Qty	Unit	
1	Earth Excavation	5000	10000	10000	15000	15000	20000	15000	5000	5000	5000	15000	15000	10000	10000	5805	5000	5000	4954	-	175759	M^3	
2	Concrete M 7.5	-	-	50	75	75	75	75	25	25	25	60	50	50	50	6	25	25	25	-	716	M^3	
3	M 10	-	-	-	200	250	250	200	50	50	50	150	150	150	100	55	50	50	50	-	1805	M^3	
4	M15	-	-	25	35	35	35	35	10	10	10	30	30	30	25	20	10	10	10	-	360	M^3	
5	M 20	-	-	-	10	15	15	15	5	5	5	15	10	10	10	6	5	5	5	-	136	M^3	
6	R.R.Masonry 1:4	-	-	-	20	20	20	20	5	5	5	15	15	15	10	2	5	5	5	-	167	M^3	
7	Plastering 1:4	-	-	-	-	25	30	30	10	10	10	35	25	25	20	14	10	10	10	-	264	M^3	

HANUMANADHI SUB BASIN PACKAGE NO 4

Construction Methodology

Sl. No.	Description of Item	Working Months							Rainy Season			Working Months									Total		Remarks
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
		3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10	01/11	02/11	3/11	04/11	05/11	06/11	07/11	08/11	09/11	Qty	Unit	
1	Earth Excavation	5000	10000	15000	15000	20000	20000	20000	2000	2000	3000	20000	20000	20000	20000	15000	10000	1000	1214	104	219318	M^3	
2	Concrete M 7.5	-	-	30	50	50	60	60	10	10	10	50	50	50	50	50	50	30	25	-	635	M^3	
3	M 10	-	-	100	150	175	200	200	25	25	25	150	150	100	100	100	100	65	60	14	1739	M^3	
4	M15	-	10	50	50	200	200	200	50	50	50	200	200	200	200	200	200	200	150	42	2452	M^3	
5	M 20	-	-	5	5	5	5	5	2	2	3	8	5	5	5	5	5	5	-	-	70	M^3	
6	R.R.Masonry 1:4	-	-	-	25	30	30	20	5	5	5	20	20	20	20	15	15	10	4	-	244	M^3	
7	Plastering 1:4	-	-	-	10	75	100	100	20	20	20	100	100	50	50	35	30	30	15	-	755	M^3	

HANUMANADHI SUB BASIN PACKAGE NO 5

Construction Methodology

Sl. No	Description of Item	Working months							Rainy Season			Working months					Total		Remarks
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
		3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	Qty	Unit	
1	Earth Excavation	5000	10000	10000	10000	15000	20000	20000	1000	1000	1000	20000	15000	15000	2200	109	145309	M^3	
2	Concrete M 7.5	-	-	20	20	20	20	20	5	5	5	20	20	10	10	3	178	M^3	
3	M 10	-	-	50	75	100	100	100	30	30	30	60	50	50	50	14	739	M^3	
4	M15	-	20	100	150	150	150	150	50	50	50	150	150	150	122	2	1444	M^3	
5	M 20	-	-	-	-	-	-	2	-	-	-	1	1	2	1	1	8	M^3	
6	R.R.Masonry 1:4	-	-	10	15	15	15	15	3	3	3	15	15	15	15	6	145	M^3	
7	Plastering 1:4	-	-	-	35	45	45	45	5	5	5	30	30	30	30	17	322	M^3	

1.7 ENVIRONMENTAL COMPONANT

INDEX

Sl. No	Details	Sheet no
1	**Environmental Component in Hanumanadhi sub basin**	
2	**Name of water users Association (Annexure I)**	
3	**Tanks affected by Aquatic weeds (Annexure-II)**	
4	**Domestic sewage inlet (Annexure-III)**	
5	**Solid waste dumping (Annexure-IV)**	
6	**List of industries (Annexure-V)**	
7	**Estimate report**	
8	**Detailed estimate**	
9	**Abstract estimate**	
10	**Baseline data collection Proforma**	
	Hanumanadhi Sub basin map	

IAMWARM Project

(Environmental Component in Hanumanadhi Subbasin)

Name of the River Basin	Nambiyar River Basin
Name of Sub basin	Hanumanadhi Sub basin
Name of WUA	Enclosed Annexure - I
Name of Division	The Executive Engineer, PWD-WRO., Kodayar Basin division, Nagerkiol.
Name of Sub division	The Assistant Executive Engineer, PWD-WRO., Pazhayar Sub division, Nagerkoil.
District	Thirunelveli District, Kanyakumari District.
Taluk	Thirunelveli District **1.Radhapuram Taluk** Kanyakumari District**. 1.Thovalai Taluk**
Block	Thirunelveli District **1.Radhapurm Block** **2.Valliyoor Block** Kanyakumari District **1. Thovalai Block**
I) Name of tank severely affected by Aquatic weeds	Enclosed Annexure - II
II) Domestic Sewage	Enclosed Annexure - III
III) Municipal solid Waste	Enclosed Annexure - IV
IV) Industries	Enclosed Annexure - V
V) Water quality status	i)Surface water **The surface water is collected and tested periodically by the Environmental Cell Division, Madurai The surface water quality is generally good in this sub basin, low in TDS (< 0.5gms/cm), chloride is medium to hard (temporary) and alkaline in nature. All the streams and tanks are complied with drinking and irrigation quality standards.**

	ii) Ground water **The ground water samples collected and tested by PWD in Radhapuram Taluk of this Sub Basin shows higher value of Electrical Conductivity. It ranges from 2000 to 3320 micro ohoms/ cm. The Sample also shown higher values of nitrates. It ranges from 50 to 300 ppm.**

ANNEXURE – I

Water users Associations in the Sub Basin

Sl. No	Name of water users Associations
1.	**Radhapuram Branch Canal Water users Association.**
2.	**Karungkulam, Pazhavoor Water users Association.**
3.	**Avarikulam Water users Association.**
4.	**Mathaganeri, Sivasubramaniyapuram, Ooralvaimozhy Water users Associations.**
5.	**Koliyankulam, Irrukanthurai Water users Associations.**
6.	**Nakkaneri, Pullamangalam Water users Associations.**
7.	**Kudankulam, Sanganeri Water users Associations.**
8.	**Radhapuram, Parameswarapuram Water users Associations.**

ANNEXURE – II

Tanks affected by Aquatic weeds

Sl. No	Name of tank	Name of village	Ayacut in Ha	Type of weed
1	**Naraparaikulam**	**Levinchiupuram**	**7.98.5**	**Prosopis Julie flora**
2	**Achampadukulam**	**Levinchiupuram**	**2.27.0**	**Prosopis Julie flora**
3	**Poothankulam**	**Levinchiupuram**	**7.96.0**	**Prosopis Julie flora**
4	**Vermanikulm**	**Therkku Karungulam**	**6.42.0**	**Prosopis Julie flora**
5	**Periyapamanikulam**	**Therkku Karungulam**	**8.12.0**	**Prosopis Julie flora**
6	**Nambikuruchikulam**	**Levinchiupuram**	**7.45.5**	**Prosopis Julie flora**
7	**Melavelarikulam**	**Therkku Karungulam**	**6.19.0**	**Prosopis Julie flora**
8	**Keezhavelarikulam**	**Therkku Karungulam**	**4.49.0**	**Prosopis Julie flora**
9	**Chittalamkulam**	**Therkku Karungulam**	**4.13.0**	**Prosopis Julie flora**
10	**Thiruppathikulam**	**Pazhavoor Pt. II**	**5.27.5**	**Prosopis Julie flora**
11	**Vadakkuparambi kulam**	**Therkku Karungulam**	**8.30.5**	**Prosopis Julie flora**
12	**Malayankulam**	**Therkku Karungulam**	**5.67.5**	**Prosopis Julie flora**
13	**Pariyakulam**	**Therkku Karungulam**	**23.80.0**	**Prosopis Julie flora**
14	**Veppankulam**	**Pazhavoor Pt. II**	**2.03.0**	**Prosopis Julie flora**
15	**Kallikulam**	**Pazhavoor Pt. II**	**10.55.5**	**Prosopis Julie flora**
16	**Karumeniyanthal Kulam**	**Pazhavoor Pt. II**	**3.52.5**	**Prosopis Julie flora**
17	**Kokkanerikulam**	**Therkku Karungulam**	**7.69.5**	**Prosopis Julie flora**
18	**Pullanerikulam**	**Therkku Karungulam**	**7.93.0**	**Prosopis Julie flora**
19	**Ariyankudikulam**	**Therkku Karungulam**	**11.87.0**	**Prosopis Julie flora**
20	**Sulekapanikulam**	**Pazhavoor Pt. II**	**8.23.5**	**Prosopis Julie flora**
21	**Kootharkulam**	**Pazhavoor Pt. II**	**7.16.0**	**Prosopis Julie flora**

22	Kilakkulam	Adangar Kulam	6.15.0	Prosopis Julie flora
23	Chembi kulam	Pazhavoor Pt. II	3.56.0	Prosopis Julie flora
24	Kurumbillarkulam	Adangar Kulam	5.21.5	Prosopis Julie flora
25	Kumararankulam	Pazhavoor Pt. II	7.85.5	Prosopis Julie flora
26	Marankulam	Pazhavoor Pt. II	10.35.5	Prosopis Julie flora
27	Adankarkulam	Adangar Kulam	14.67.5	Prosopis Julie flora
28	Madhaganeri kulam	Pazhavoor Pt. II	9.01.5	Prosopis Julie flora
29	Koliyankulam	Danakkarkulam	11.76.5	Prosopis Julie flora
30	Uravaiymozhuy kulam	Adangar Kulam	33.69.0	Prosopis Julie flora
31	Kurunbilarkulam	Ervkkanthurai Pt-I	8.03.5	Prosopis Julie flora
32	Putherkulam	Ervkkanthurai Pt-I	8.86.0	Prosopis Julie flora
33	Pullavallampadu kulam	Danakkarkulam	4.36.0	Prosopis Julie flora
34	Suchikulam	Ervkkanthurai Pt-I	3.99.0	Prosopis Julie flora
35	Nedungulam	Ervkkanthurai Pt-I	4.16.0	Prosopis Julie flora
36	Ammachiyar kulam	Ervkkanthurai Pt-I	2.92.0	Prosopis Julie flora
37	Kanchanerikulam	Ervkkanthurai Pt-I	6.37.5	Prosopis Julie flora
38	Vannarkulam	Ervkkanthurai Pt-I	2.77.5	Prosopis Julie flora
39	Udayanerikulam	Ervkkanthurai Pt-I	7.09.5	Prosopis Julie flora
40	Sonarkulam	Ervkkanthurai Pt-I	13.97.5	Prosopis Julie flora
41	Aladikurichi kulam	Danakkarkulam	7.68.5	Prosopis Julie flora
42	Nakkaneri kulam	Danakkarkulam	8.73.0	Prosopis Julie flora
43	Pullamngalam kulam	Ervkkanthurai Pt-I	12.46.0	Prosopis Julie flora
44	Pandiyanpudu kulam	Ervkkanthurai Pt-I	3.88.5	Prosopis Julie flora
45	Veppanpadu kulam	Ervkkanthurai Pt-I	5.60.5	Prosopis Julie flora
46	Sanarn kulam	Koodan kulam	13.89.5	Prosopis Julie flora

47	Sanganeri kulam	Ervkkanthurai Pt-I	13.95.5	Prosopis Julie flora
48	Varniyan kulam	Udayathoor	7.11.0	Prosopis Julie flora
49	Sivathanuperi kulam	Udayathoor	3.42.5	Prosopis Julie flora
50	Arasaneri kulam	Parameswara puram	6.33.5	Prosopis Julie flora
51	V.N Kulam	Udayathoor	6.17.5	Prosopis Julie flora
52	Mahendram kulam	Radhapuram	5.38.0	Prosopis Julie flora
53	Parivarisooriyan I kulam	Parivarisooriyan	43.03.5	Prosopis Julie flora
54	Nagaraikulam	Pahagudi Pt.I	62.47.0	Prosopis Julie flora
55	Sannaneri kulam	Pahagudi Pt.I	173.77.0	Prosopis Julie flora
56	Melakadamba kulam	Therkku valliyoor Pt.I	17.16.5	Prosopis Julie flora
57	Keezhakadamban kulam	Therkku valliyoor Pt.I	6.35.0	Prosopis Julie flora
58	Pambankulam	Thandayar kulam	4.29.5	Prosopis Julie flora
59	Pettaikulam	Pahagudi Pt.I	18.63.0	Prosopis Julie flora
60	Khaikkulam	Thandayar kulam	45.85.0	Prosopis Julie flora
61	Padalayar kulam	Pahagudi Pt.I	14.41.5	Prosopis Julie flora
62	Sirunambi kulam	Thandayar kulam	5.36.5	Prosopis Julie flora
63	Sathanjkulam	Thandayar kulam	36.41.0	Prosopis Julie flora
64	Thandayar kulam	Thandayar kulam	31.59.0	Prosopis Julie flora
65	Senjetty kulam	Thandayar kulam	2.88.5	Prosopis Julie flora
66	Thalavaipudhu kulam	Pahagudi Pt.I	60.33.5	Prosopis Julie flora
67	Veppilankulam	Veppilankulam	16.38.5	Prosopis Julie flora
68	Pullankurichi kulam	Veppilankulam	69.14.5	Prosopis Julie flora
69	Pallisen kulam	Veppilankulam	6.77.5	Prosopis Julie flora
70	Kalkarai kulam	Veppilankulam	23.56.5	Prosopis Julie flora
71	Pappan kulam	Radhapuram	15.14.0	Prosopis Julie flora

72	Pavirithoottam kulam	Radhapuram	5.75.0	Prosopis Julie flora
73	Marayanpattu kulam	Radhapuram	8.55.5	Prosopis Julie flora
74	Pannayar kulam	Radhapuram	25.49.0	Prosopis Julie flora
75	Neduvazhi kulam	Radhapuram	10.33.5	Prosopis Julie flora
76	Pattar kulam	Radhapuram	4.57.5	Prosopis Julie flora
77	Veera kulam	Radhapuram	8.08.5	Prosopis Julie flora
78	Chettipudh kulam	Radhapuram	1.98.0	Prosopis Julie flora
79	Valla kulam	Radhapuram	6.02.5	Prosopis Julie flora
80	Pandara periya kulam	Radhapuram	67.8.0	Prosopis Julie flora
81	Pudhu kulam	Dhanammar kulam	9.95.5	Prosopis Julie flora
82	Keeraneri kulam	Dhanammar kulam	24.36.0	Prosopis Julie flora
83	Karuppilan kulam	Dhanammar kulam	10.25.0	Prosopis Julie flora
84	Veesadi kulam	Dhanammar kulam	17.67.5	Prosopis Julie flora
85	Vadapthu kulam	Dhanammar kulam	27.16.5	Prosopis Julie flora
86	Mithiyan kulam	Erukkanthurai Pt.I	7.09.5	Prosopis Julie flora
87	Thumbai kulam	Erukkanthurai Pt.I	69.14.0	Prosopis Julie flora
88	Manamati kulam	Parivarisooriyan	6.77.5	Prosopis Julie flora
89	Veerapandiyan I kulam	Parivarisooriyan	23.56.0	Prosopis Julie flora
90	Miapudhu kulam	Panagudi Pt.II	15.14.0	Prosopis Julie flora
91	Sivahamipudu I kulam	Panagudi Pt.II	5.75.5	Prosopis Julie flora
92	Perumaipudu kulam	Panagudi Pt.II	8.55.5	Prosopis Julie flora
93	Manimalayan kulam	Panagudi Pt.II	25.49.5	Prosopis Julie flora
94	Vinayagarpudhu kulam	Panagudi Pt.II	10.33.5	Prosopis Julie flora
95	Periyapudhu kulam	Panagudi Pt.II	4.57.0	Prosopis Julie flora
96	Kalipukhu kulam	Panagudi Pt.II	8.08.5	Prosopis Julie flora

97	**Punchakatty kulam**	**Panagudi Pt.II**	**1.98.5**	**Prosopis Julie flora**
98	**Vadakkan kulam**	**Panagudi Pt.II**	**6.02.5**	**Prosopis Julie flora**
99	**Azhaneri kulam**	**Azhaneri**	**9.95.0**	**Prosopis Julie flora**
100	**Sadayaneri kulam**	**Sadayaneri**	**24.36.5**	**Prosopis Julie flora**
101	**Lekshimi puthu I kulam**	**Aralvaimozhy**	**19.69.0**	**Prosopis Julie flora**
102	**Atthikkulam I**	**Aralvaimozhy**	**21.65.5**	**Prosopis Julie flora**
103	**Annauthu I kulam**	**Aralvaimozhy**	**15.18.0**	**Prosopis Julie flora**
104	**Saiaiputhu kulam**	**Pazhavoor**	**1.72.5**	**Prosopis Julie flora**
105	**Therkku sivagangai kulam**	**Pazhavoor**	**2.27.5**	**Prosopis Julie flora**
106	**Melapalan kulam**	**Pazhavoor**	**2.86.5**	**Prosopis Julie flora**
107	**Keelaplar kulam**	**Pazhavoor**	**3.87.5**	**Prosopis Julie flora**
108	**Pazhavoor Periya kulam**	**Pazhavoor**	**10.52.5**	**Prosopis Julie flora**
		Total	1537.48.5	

ANNEXURE – III

Domestic Sewage Inlet

Sl. No	Name of Town / Village	Name of water bodies in to which the sewage is discharged
1	**Panakudi**	**Hanumanadhi**
2	**Vadakankulam**	**Vadakankulam Tank, Hanumanadhi**
3	**Perungudi**	**Hanumanadhi**
4	**Veppilankulam**	**Pullangkurichi kulam**

ANNEXURE – IV

Solid Waste Dumping

Sl. No	Name of Town / Village	Name of water bodies in to which the solid waste is dumped
1	**Panakudi**	**Hanumanadhi**
2	**Azhganeri**	**Azhganeri Tank, Radhapuram Channel**
3	**Vadakankulam**	**Vadakankulam Tank**

ANNEXURE – V

List of Industries

Sl. No	Name of industry	Category	Type
1.	**Selvi Rice Mill, Radhapuram**	**Orange/ Small**	**Rice Mill**
2.	**Lakshmi Blue Metal Industry, Irrukkanthurai.**	**Orange/ Small**	**Stone Crusher**
3.	**Jenifer Blue Metal, Perungudi Vilage**	**Orange/ Small**	**Stone Crusher**
4.	**Liquid propulsion Systems Cente, Mahenragiri**	**Red/Large**	**Rocket Engine Testing**
5.	**Siluvai Nadar & Sons, Panagudi**	**Orange/ Small**	**Tiles**
6.	**Eswari Nursing Home, Radhapuram**	**Red/Small**	**Hospital**
7.	**S.T.S. Tiles Factory, Panagudi**	**Orange/ Small**	**Tiles**
8.	**Manju Service Station, Panagudi.**	**Orange/ Small**	**Automobile Service**
9.	**Inigo Blue Metal Industries, Perungudi.**	**Orange/ Small**	**Stone Crusher**
10.	**Immanuel Blue Metal, Perungudi**	**Orange/ Small**	**Stone Crusher**
11.	**Ayyappa Blue Metal Industries, Perungudi**	**Orange/ Small**	**Stone Crusher**
12.	**Anand Construction Corporation, Kavalkinaru**	**Orange/ Small**	**Stone Crusher**
13.	**Maria Aqua Con. (P) Ltd. Kootapuli**	**Orange/Medium**	**Sea Food Processing**
14.	**Vinayaga Rice Mill, Radhapuram**	**Orange/ Small**	**Rice Mill**
15.	**Vivek Nursing Home, Panagudi**	**Red/Small**	**Hospital**
16.	**Government Hospital, Radhapuram**	**Red/Small**	**Hospital**
17.	**Bull Branf Tile Works, Panagudi**	**Orange/ Small**	**Tiles**
18.	**Three Yes Tiles, Pangudi**	**Orange/ Small**	**Tiles**

19.	**T. Vincent Jayaraj Blue Metal Kavalkinaru**	**Orange/ Small**	**Stone Crusher**
20.	**JMJ Crusher, Levengipuram**	**Orange/ Small**	**Stone Crusher**
21.	**V.V. Mieral (100% EOU) Irukkanthurai**	**Orange/ Small**	**Garnet Separation**
22.	**St. Thomas Chamber Tile Factory, Panagudi**	**Orange/ Small**	**Tiles**
23.	**Sive Rice Mill, Sanganapuram**	**Orange/ Small**	**Rice Mill**
24.	**V.V. Mineral, R.S. No. 349/1, Levengipuram**	**Red/Small**	**Garnet Sand Mining**
25.	**V.V. Mineral, 545, Part II, Irukkanthurai**	**Red/Small**	**Garnet Sand Mining**
26.	**V.V. Mineral, 1041/3, Koodangulam**	**Red/Small**	**Garnet Sand Mining**
27.	**Indian Resins & Polymers, Chettikulam**	**Orange/ Small**	**Cashew Processing**
28.	**S.A.V. Blue Metal, Perungudi**	**Orange/ Small**	**Stone Crusher**
29.	**Kudangulam Atomic Power Corporation) Koodangulam.**	**Red/Large**	**Atomic Power**
30.	**V.V. Mineral, R.S. No. 322/2, Chettikulam**	**Red/Small**	**Garnet Sand Mining**
31.	**V.V. Mineral, R.S. No. 442/1, Levengipuram**	**Red/Small**	**Garnet Sand Mining**
32.	**Products, Irrukkanthurai**	**Orange/ Small**	**Fish/ Cattle/ Poultry Feed**
33.	**Shanti Hospital, Levengipuram**	**Red/Small**	**Chemical**
34.	**Bharathi Hospital, Levengipuram**	**Red/Small**	**Hospital**
35.	**Kasturi Hospital, Koodangulam**	**Red/Small**	**Hospital**
36.	**P.B..A. Infrastructure Ltd. Perungudi**	**Orange/ Large**	**Stone Crusher**
37.	**Shopia Raja Milk Firm, Thanukkarkulam.**	**Red/Small**	**Diary**

Note: **The total number of industries located in the Hanumanadhi sub basin is around 37, in this the red category industries are given in the table.**

Name of work:- Environmental Monitoring on Water and Soil quality and creating awareness & Updating of "Environmental and Social Assessment Report" for Hanumanadhi Sub Basin of Nambiar River Basin.

Estimate Cost Rs 11.50 Lakhs

ENVIRONMANTAL MANAGEMENT FRAME WORK

INRODUCTION

Under TNWRCP, with World Bank assistance, special emphasis was given for the first time in WRO, to assess the Environmental status and degradation caused for all River basins in Tamilnadu. An Environmental assessment study has been conducted by Environment Protection Training and Research Institute, Hyderabad and identifies the Environmental issues, social issues and remedial measures for Nambiyar river basin as follows.

Environmental issues	-	Sand mining
	-	Dumping of solid waste
	-	Sewage pollution
Social issues	-	Dry land agriculture
	-	Reduction in livestock
	-	Women empowerment-SHGs
Remedial measures	-	Livestock services delivered and managed.
	-	Aquatic weed management
	-	Solid Waste management

The Environmental Cell of WRO assessed Environmental impact on the quality of Surface water, Ground water and Soil by collecting water & soil samples and testing them. Micro level Environmental Status Report for Nambiyar River basin was prepared with the assistance of World Bank.

Also awareness programs and Workshops were conducted to create awareness on the Environmental issues and remedies among the Public, Farmers, Government Officials and NGO's. Seminars were conducted to find

out new techniques and methods developed recently to solve 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.

DESCRIPTION OF SUB BASIN

The orgin of Hanumanadhi has its spring head in the Mahandragiri hills of western ghats at a height of about 1100m from the M.S.L. After flowing in the hills to a distance of 5.6 km, it touches the plain. The river than traverses through Radhapuram Taluk for a distance of 32 KM and confluences with the gulf of Mannar in the Bay of Bengal in the coast of Perumanal a place in Chettikulam Village.

The important places in the Sub basin are Panakudi, Vadakankulam, Perungudi Pathinathpuram, Radhapuram and Kudankulam.

Thus Sub Basin area is 510.179 Sqkm out of which the hilly area is 61.39 Sqkm. The influential rain gauge station in this Sub Basin are Panakudi and Pazhavoor. There are 11 Anicuts, 107 PWD tanks and one channel in this Sub Basin. The total registered ayacut in the Sub basin is 5707.72 ha

ENVIRONMENTAL PROBLEMS:

The following environmental issues were identified in the Hanumanadhi sub basin.

SAND MINING

Illegal mining of sand in river, channel, tanks etc., is rampant in many places and it affects not only the infiltration wells provided for drinking water schemes and the ground water resources in the nearby areas owing to rapid flow of water in the river, but also endanger the safety of masonry

structures, bridge piers, diversion structures. Illegal sand mining was observed in Hanumanadhi Sub basin near Senchetty Anicut in Panakudi, Perungudi and Koliyankulam villages.

CATCHMENT DEGRADATION

The Catchment of Hanumanadhi Consists of Western ghats Slopes, river valleys, dry red lands and Costal "Teri' Lands. In Radhapuram Taluk the Western Ghats Slope down forming the Aralvaimozhy pass. In these areas only, the water shed of Hanumanadhi is located. In these areas the soil erosion is high and the gullies in these areas are narrow due to the soil erosion.

WATER WEEDS

Ipomoea cornea and Prosopis Julie flora has invaded the water bodies ie. tanks, channels and rivers. These plants need to be eliminated totally for conserving precious water resources. The details of tanks affected by water weeds are given in the annexure - II. The aquatic weed growth affect the carrying capacity of channel and storage capacity of tanks, damage the lining of the channel, decrease the water quality and increases the evapotranspiration.

INDUSTRIAL POLLUTION

The total number of industries located in the Hanumanadhi sub basin is around 37, which includes the industries like Hospital, Stone Crusher, Tiles, Garnet Sand mining etc, There is no highly polluting Red category Industries, except the following and the important red category industries are listed out in the annexure – V.

- Liquid Propulsion System Centre.
- Kudagulam Atomic Power Corporation Kudangulam.

All the industries have their own treatment plant and the treated effluent is used to irrigate their own farm land. Trade Effluent from these industries is being monitored periodically by TNPCB. Any improvement to minimize the effect of pollution will be dealt by the TNPCB.

SOLID WASTE DIPOSAL

The problem of Garbage collection and its disposal has assumed importance, in the context of rapid growth of population, Urbanization, industrial growth and development. There is no organized scientific method of disposal in all the Panchayats of this sub basin (Annexure – IV).

In Panakudi Town Panchayat, about 2.9MT of solid waste is collected and dumped in the nearby open are without proper treatment.

In Vadakkankulam Town Panchayat, of solid waste is dumped near to the Vadakkankulam Tank without proper treatment.

Under the Rural welfare funds a new scheme for Solid waster Management plan is under implementation. Under that scheme, collection tank for disposable and un-disposable garbage have been constructed. But in most of the Panchayats, recycling the waste and converting the solid waste into manure and production of energy is yet to come up.

SEWAGE DISPOSAL LET INTO WATER BODIES

During the field survey, it is found that in many locations, public sanitary complex have been constructed near riverbanks and banks of tanks. This leads to every possibility to contaminate the water sources. It is observed that the sewage is directly let into the Hanumanadhi at Panakudi. At Vadakkankulam Sewage is let into the Hanumanadhi and Vadakkankulam Tank. (Annexure – III).

So creating awareness among the Presidents of the local bodies is must and to motivate them to adopt solid waste management and sewage management. Wherever required, Workshop including filed visits, exclusively for them is to be conducted under the IAM WARM project.

ACTIVITIES PROPOSED

To monitor the quality of water and soil and create database regarding the Environmental Status for this sub basin, this proposal has now been proposed with the following activities at sub basin level. The provisions and necessity are explained below.

I. MONITORING WATER AND SOIL QUALITY, PROJECT WORKS MONITORING Collection and testing of surface water samples is essential to understand the problem on water quality more precisely. Hence, it is proposed to collect and test the surface water sample in Hanumanadhi river at four selected locations, for a period of three years. Water samples at the following four locations will be collected and tested once in 3 months for a period of three years so as to assess the environmental impact on the quality of surface water of this sub basin more precisely.

1. Rosemiyapuram - D/S of bridge at Panakudi - Thirukurungudi Road.
2. Panakudi - Near Thandiarkulam Anicut.
3. Vadankankulam - D/S of Vadankankulam Anicut.
4. Sriranganarayanapuram - D/S of bridge at Anjugrammam - Chettikulam Road.

In addition to the above identified locations, water samples will also be collected once in a year from tanks and nearby wells in four selected locations, where sewage is directly let into water bodies. These samples will be tested to asses the impact on the quality of surface and ground water.

Soil samples are also to be collected from five selected locations to asses the impact on the quality of soil due various Environmental problems like use of chemical fertilizer and using the polluted water. Even from the same locations more number of samples at regular one-year interval has been collected and tested to determine precisely the impact on the degradation of the quality of the soil. Therefore testing of soil samples is essential. Soil samples thus collected will be tested in the Manonmanium Sundaranar University.

Under this item following provisions have been made.

1. Testing charges for the water and soil samples.
2. Provision for Conveyance, Purchase of Cans, bottles, chemicals, Documentation of water quality data, Driver salary and Computer operator

II.ENVIRONMENTAL AND SOCIAL KNOWLEDGE BASE

Micro level Environmental Status Reports for Nambiyar river basin have been prepared. In these reports Environmental problems and remedial measures have been documented at the basin level. Moreover Environmental and social assessment on river basins of Tamilnadu have been done by Environmental protection Training & Research Institute, Hydrabad. Based on these report and the data now proposed to be collected, Environmental and social assessment for each sub basins are to be updated and documented in order to program further activities.

Under this item following provisions have been made.

1. Salary for supporting staff i.e. Technical assistant,
2. Expert analysis and development reporting.

III.TRANSFER OF TECHNICAL KNOW HOW FOR SOLID WASTE AND WEED MANAGEMENT

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

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

IV.ENVIRONMENTAL AND SOCIAL AWARENESS CREATION

Awareness programs are necessary to create awareness among the public about environmental problems and the action to be taken by them to remove or reduce the impacts due to the environmental problems.

Hence, to create and motivate the people, awareness programs are to conducted in the villages where sewage is directly let in to the water bodies. It is also proposed to conduct awareness meeting in schools /institutions to cover

the following subjects in addition to placing stickers, tin sheets, and pamphlets containing message related to the following.

- **Sanitation.**
- **Solid waste treatment.**
- **Sewage treatment and converting the same in to gas.**
- **Natural farming.**
- **Conversion of aquatic weeds in to manure etc.**

As per the instructions of the environmental specialist Mr. Anupham Joshi, the following alterations are made in the proposal,

In addition to the above, pesticides test for water quality is added and test will be carried out for two locations for once in a year.

Moreover, it is proposed to conduct field visits for environmental monitoring of project activities with respect to environmental safe guards.

It is proposed to study the impact due to project investments and hence, provisions for data collection and development reports have now been added.

Provision for preparing environmental atlas is now inserted in the context of marking all environmental and social issues with consultations of stake holders, line departments and NGOS.

MODE OF EXECUTION

All the works proposed are to be carried out by outsourcing through an educational institution / NGO's.

TOTAL COST

The total proposal cost works out to Rs. **11.50 Lakhs (Rupees Eleven Lakhs and Fifty Thousands only)**

Name of Work : - Environmental Monitoring on Water and Soil Quality and Creating Awareness & Updating of "Environmental and Social Assessment Report" for HANUMANNADHI SUBBASIN

Detailed Estimate

Sl no	Description of work	No	Measurements			Contents
			L	B	D	
I	Monitoring Water and Soil Quality, Project Works Monitoring					
1	**Testing charges for Water samples Water samples from rivers 4x3 x3 =36**					
	Water samples from Tanks and wells collected once in six months 5x2x3 =30					
	Testing Charges for water samples 36+30 =66	**66 Nos**				**66 Nos**
2	**Testing Charges for water samples (Pesticides) 2x3 = 6 Nos**	**6 Nos**				**6 Nos**
3	**Testing charges for Soil sample collected from polluted sites= 5 No / year x 3 years =15 Nos**	**15 Nos**				**15 Nos**
4	**Hiring Jeep driver on service contract basis for the Department vehicle =3Manmonths/yearx3years=9 Man months**	**9 Man months**				**9Man months**
5	**Conveyance, Purchase of Cans, bottles, chemicals and Documentation of water quality data, engaging labour**	**3 years**				**3 years**
6	**Provision for field visits for environmental monitoring of project activities with respect to environmental safeguards**	**3 year**				**3 year**
II	Environmental and Social knowledge base					
1	**Village level data collection on Environmental and Social state regarding other impacts**	**40 Man months**				**40 Man months**
2	**Expert analysis and Development reporting on other impacts**	**LS**				**LS**
3	**Impact studies due to project investments**	**20 Man months**				**20 Man months**
4	**Expert Analysis and development reporting due to project investments**	**LS**				**LS**
III	Transfer of technical know how for Solid waste and Weed management					
1	**Motivating Office bearers of local bodies for**	**1 Nos**				**1 Nos**

	Solid waste and Sewage treatment to prevent pollution of water sources through Demo and Technical visit					
2	**Formation of Herbal gardens in Institutions**	**2 Nos**				**2 Nos**
3	**Demonstration and Consultative meeting for eradication of weed by making manure**	**1 Nos**				**1Nos**
IV	Environmental and Social Awareness creation					
1	**Awareness propagation through Stickers, Tin sheets, Pham lets and Banners**	**3 years**				**3 years**
2	**Awareness programme for public**	**3 Nos**				**3 Nos**
3	**Awareness meeting in Schools / Institutions**	**2 Nos**				**2 Nos**
4	**Workshop at sub basin level**	**1 No**				**1 No**
5	**Exposure field visit to Eco friendly practices**	**1 No**				**1 No**
6	**Preparing and publishing Environmental Atlas at sub basin level for the use of the line departments / Institutions**	**LS**				**LS**
7	**Documentation of the entire activities, Up gradation of computer and accessories and purchase of Video films and stationeries, computer operator etc.,**	**LS**				**LS**
V	Variation in Rates and unforeseen items	**LS**				**LS**

Name of Work : - Environmental Monitoring on Water and Soil Quality and Creating Awareness & Updating of "Environmental and Social Assessment Report" for HANUMANADHI SUBBASIN

Est.Amt:- Rs. 11,50,000

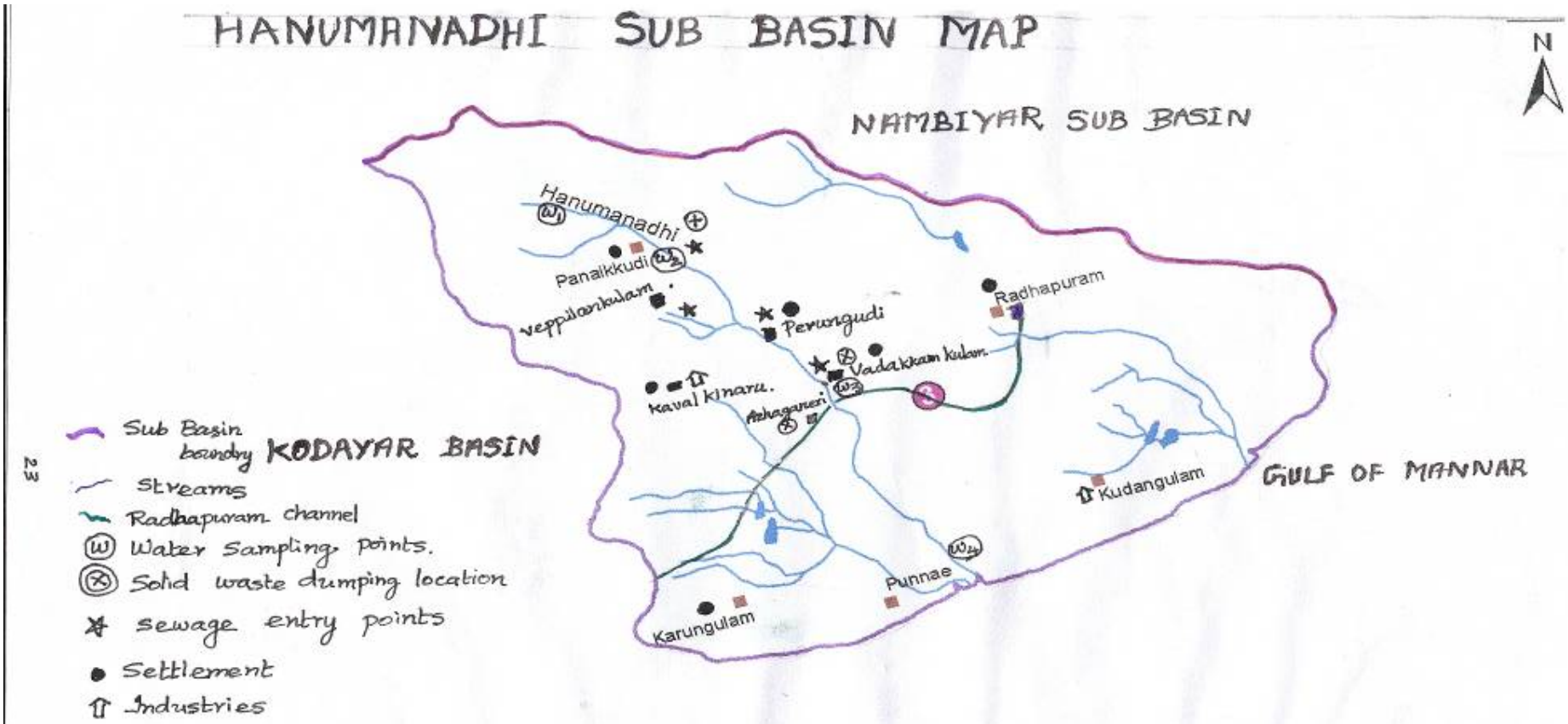
Abstract Estimate

Sl no	Qty.	Description of work	Rate (Rs)	Per	Amount
I	Monitoring Water and Soil Quality, Project Works Monitoring				
1	**66 Nos**	**Testing charges for Water samples**	**1400**	**Each**	**92400**
2	**6 Nos**	**Testing charges for Water samples**	**12000**	**Each**	**72000**
3	**15 Nos**	**Testing charges for Soil sample**	**7350**	**LS**	**110250**
4	**9Man months**	**Hiring Jeep driver on service contract basis**	**3500**	**1Man month**	**31500**
5	**3 years**	**Conveyance, Purchase of Cans, bottles, chemicals and Documentation of water quality data, engaging labour etc.,**	**6000**	**Per year**	**18000**
6	**3 year**	**Provision for field visits for environmental monitoring of project activities with respect to environmental safeguards**	**10000**	**Per year**	**30000**
II	Environmental and Social knowledge base				
1	**40 Man months**	**Village level data collection on Environmental and Social state regarding other impacts**	**5000**	**1Man months**	**200000**
2	**LS**	**Expert analysis and Development reporting on other impacts**	**LS**	**LS**	**30000**
3	**20 man months**	**Impact studies due to project investments**	**5000**	**I man month**	**100000**
4	**LS**	**Expert Analysis and development reporting due to project investments**	**LS**	**LS**	**25000**
III	Transfer of technical know how for Solid waste and Weed management				
1	**1 Nos**	**Motivating Office bearers of local bodies for Solid waste and Sewage treatment to prevent pollution of water sources through Demo and Technical visit**	**25000**	**Each**	**25000**

2	**2Nos**	**Formation of Herbal gardens in Institutions**	**25000**	**Each**	**50000**
3	**1 Nos**	**Demonstration and Consultative meeting for eradication of weed by making manure**	**15000**	**Each**	**15000**
IV	Environmental and Social Awareness creation				
1	**3 years**	**Awareness propagation through Stickers, Tin sheets, Pham lets and Banners**	**5000**	**Per year**	**15000**
2	**3 Nos**	**Awareness programme for public**	**15000**	**Each**	**45000**
3	**2 Nos**	**Awareness meeting in Schools / Institutions**	**15000**	**Each**	**30000**
4	**1 Nos**	**Workshop at sub basin level**	**75000**	**Each**	**75000**
5	**1 No**	**Exposure field visit to Eco friendly practices**	**25000**	**Each**	**25000**
6	**LS**	**Preparing and publishing Environmental Atlas at sub basin level for the use of the line departments / Institutions**	**LS**	**LS**	**100000**
7	**LS**	**Documentation of the entire activities, Up gradation of computer and accessories and purchase of Video films and stationeries, computer operator etc.,**	**LS**	**LS**	**55000**
V	**LS**	Variation in Rates and unforeseen items	**LS**	**LS**	**5850**
				Total	1150000

(Rupees Eleven Lakhs Fifty Thousands only)

HANUMANADHI SUB BASIN MAP



Assistant Engineer, PWD/ WRO, Environmental Cell Section -I Tirunelveli- 07.	Assistant Executive Engineer- PWD/ WRO, Environmental Cell Sub Division Tirunelveli - 07.	Executive Engineer, - PWD/ WRO, Environmental Cell Division, Madurai - 02.

DESIGN AND DRAWING

Design of Adangarkulam Anicut in Hanumanadhi

Free Catchment	:	0.023 sq.ft
Intercept Catchment	:	56.250 sq.ft
Combined Catchment	:	56.273 sq.ft

M.F.D for Ryres Method:

Q = $CM^{2/3}$ - $cm^{2/3}$ Where C = 15

c = 3

= $15 \times 56.23^{2/3} - 3x\ 56.25^{2/3}$

= 223.250 - 44.638

= 178.612 m^3/sec

The actual width of the river @ site is 50m. The existing weir length of Anicut is 34m. The upper Anicut (KoliyanKulam Anicut) length is 40m with a sand vent of size 1.00 x 0.60 m

Crest Level :

The existing level of the weir is 100 . 200m. The same cannot be changed. Since the existing supply depth of field channel in the u/s of Anicut will be affected. Hence the existing crest level is kept as 100.200m

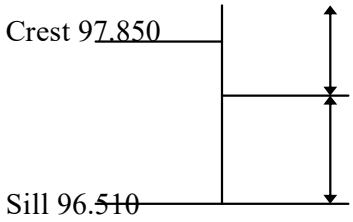
Designed Discharge:

Provide 1 No of sand vent of size 1.20 x 0.60 m

Discharges through the vent	=	5 a √n
As per Ryves Formula	=	2.75 a √n
		(in Metric Conversion)
	=	2.75 x 1.20 x 0.60 x√2.30
	=	3.003 m^3/sec
		n= 1.40 (1.20-0.30)
		= 2.35
Depth of flow over crest	=	1.45m
Discharges through the body wall	=	2.40 x 45.00x 1.4 3/2
	=	178.902 m^3/sec
Total Discharge through the Anicut	=	3.003 + 178.902
	=	181.905 m^3/sec

Check for Adequacy of existing Head Slice of Sivanpillai Anicut

Ayacut = 30.085 Ha
Duty adopted = 86 Ha/m.cu.m
Water requirement = $\frac{307.085}{86.00}$
= 3.571 m.cu.m
No of days of supply = 30 days
Discharge = $\frac{3.571 \times 106}{15 \times 24 \times 60 \times 60}$
= 2.756 Cu.m

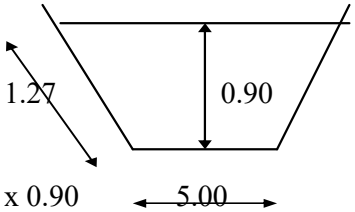


Existing Vent Slice = 1.5x 1.00x2 nos
= 3.00 m^2

Discharge = 6x A √h
= 6x 3.00 x √0.10
= 5.692 m^3/sec > 2.756 cu.m

Hence Safe

Design of Sivanpillaikal



Designed Discharge of Sivanpillaikal = 2.756 cu.m
Bed Fall = 1:1510
FSD = 0.90m
Bed Width = 5.00 m
Area = $\frac{5.00 + 6.80}{2}$ x 0.90
= 5.31 m^2
Perimeter (P) = 1.27+5.00+1.27
= 7.54
ג = $\frac{A}{P} = \frac{5.31}{7.54} = 0.704$
Value of 'n' = 0.025
Velocity (V) = $\frac{1}{N}$ $(ג)^{2/3}$ $S^{1/2}$
= $1/0.025 \times (0.704)^{2/3} (1/1510)^{1/2}$
= 40x 0.792 x 0.0257
= 0.814.
Discharge (Q) = A x v
= 5.31 x 0.873
= 4.322 > 2.75

Hence Safe

Design of Dividing Dam @ Off take of Pettaikulam in Senthilkalthayamkal

Ayacut

Total Ayacut of Senthilkathayankal = 120.67 Ha

PettaiKulam Supply Kal = 18.63 Ha

Water requirement for Pettikulam for Senthilkathayamkal = $\frac{18.63}{86}$

= 0.217 m.cum

No of days of supply = 12 days

Discharge = $\frac{0.217 \times 10^{6}}{12x24x60x60}$

= 0.209 cumec or 7.40 for

Water requirement for below the off take point of Pettaikulam Kal

= 120.67 – 18.63 = 102.04 Ha

Water requirement = $\frac{102.04}{86}$ = 1.186 m.cu.m

Discharge = $\frac{1.186 \times 10\ 6}{12x24x60x60}$

= 1.144 cumec (or) 40.39 cuses

Head of Flow = 0.45 m

Discharge for 0.45m Head of B.C.Weir = 0.5017 cumec/sec

Weir provided for Pettaikulam tank = 1.00 m

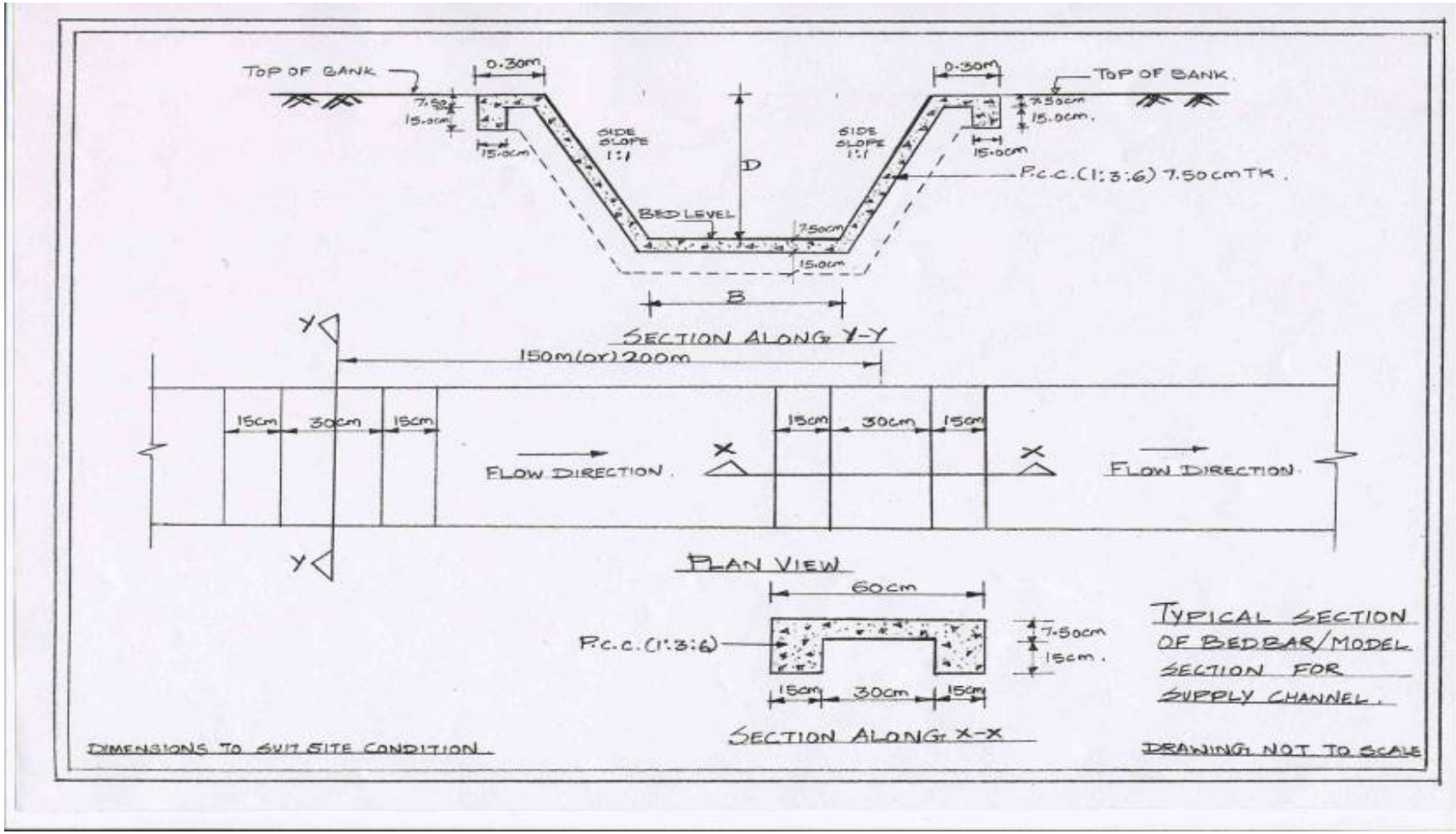
Discharge = 0.5017 x 1.00

= 0.502 cumec > 0.209 cu

Weir provided for below of the point of Pettaikulam kal = 2.50m

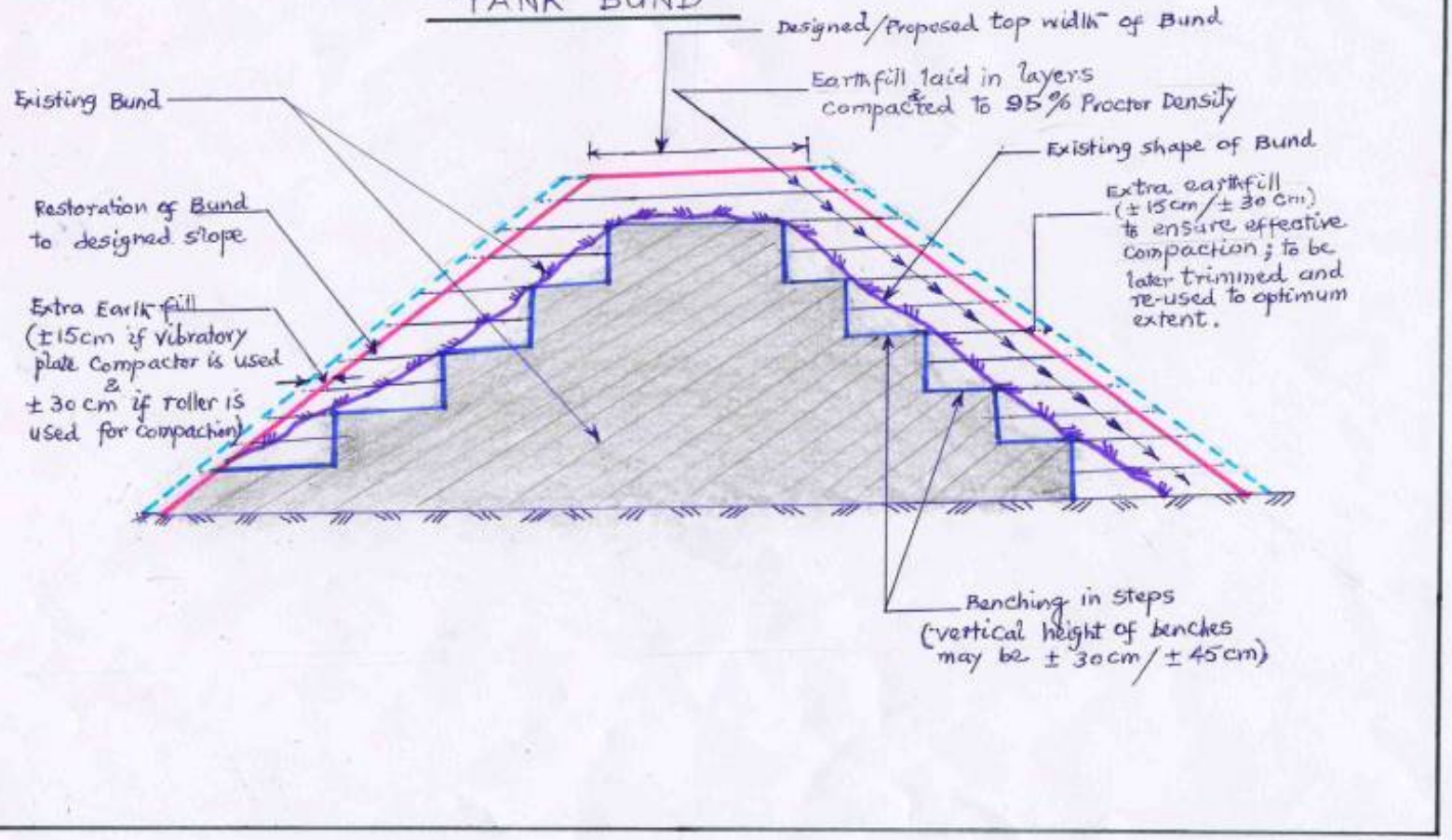
Dischargde = 0.5017 x 2.50

= 1.254 cumec > 1.144 cumec

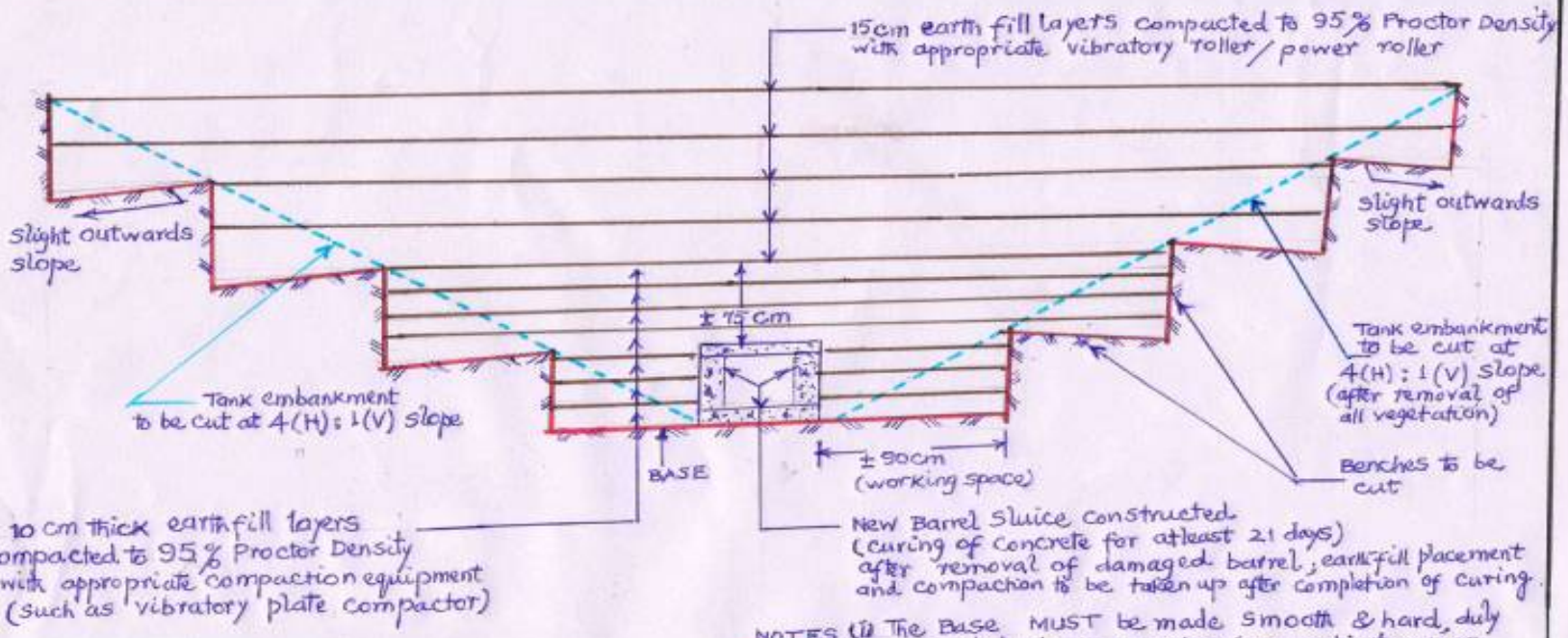

TOP OF BANK
0.30m
7.50cm
15.0cm
15.0cm
SIDE SLOPE 1:1
D
BED LEVEL
7.50cm
15.0cm
B
SIDE SLOPE 1:1
0.30m
TOP OF BANK
7.50cm
15.0cm.
15.0cm
P.c.c.(1:3:6) 7.50cm TK.
SECTION ALONG Y-Y
150m(or)200m
Y
Y
15cm
30cm
15cm
FLOW DIRECTION.
X
X
15cm
30cm
15cm
FLOW DIRECTION.
PLAN VIEW
60cm
P.c.c.(1:3:6)
7.50cm
15cm.
15cm
30cm
15cm
SECTION ALONG X-X
TYPICAL SECTION OF BEDBAR/MODEL SECTION FOR SUPPLY CHANNEL.
DIMENSIONS TO SUIT SITE CONDITION.
DRAWING NOT TO SCALE

TYPICAL SKETCH

RAISING & STRENGTHENING OF TANK BUND



TYPICAL SKETCH



NOTES

(i) The Base MUST be made smooth & hard, duly compacted with compactors/pneumatic tampers.

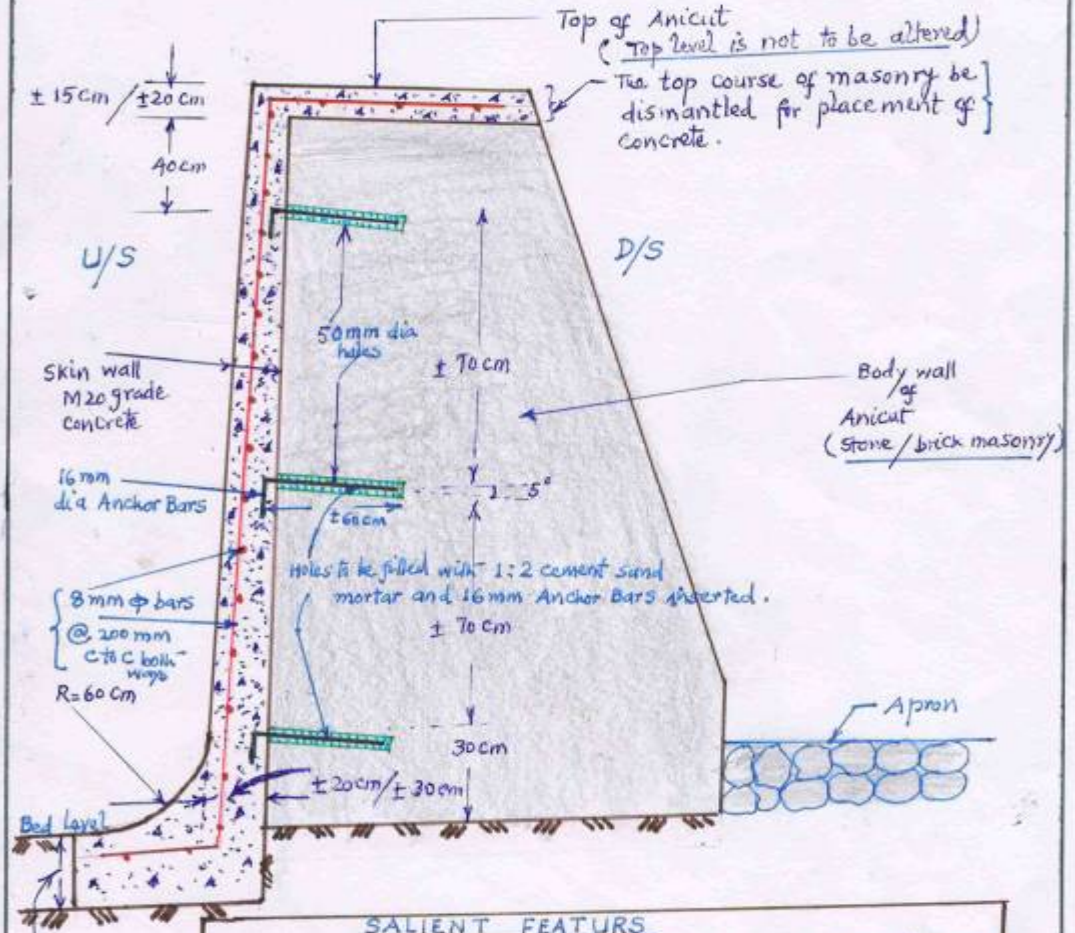
(ii) Earth fill compaction adjoining the Barrel and Benches should be compacted by mechanical/pneumatic tampers to ensure effective compaction.

(iii) Earth obtained from "benching" be reused (after removal of clods (bigger than 7.5cm), vegetation etc) in earth fill layers.

RECONSTRUCTION OF SLUICES

TYPICAL SKETCH

Rehabilitation of Anicut through SKIN WALL Concrete



SALIENT FEATURS

- Joints on u/s surface to be raked to 25 mm depth & Surface roughened by Chipping;
- Drill holes of 50 mm to be filled with 1:2 mortar and 16 mm Anchor Bars to be pushed in
- The roughened surface to be kept wet for 72 hours and cement slurry (1:2·5) of 0.70 water-cement ratio be applied over the surface prior to placement of Skin Concrete.
- Concrete of M20 Grade is to be used with 20 mm maximum aggregate Size.
- Curing is to be done for 21 days.
- Thickness of skin Concrete : 15 cm at top & 20 cm at bottom for Anicuts of height upto ± 1.50 m and 20 cm at top & 30 cm at bottom for Anicuts of height more than ± 1.5m