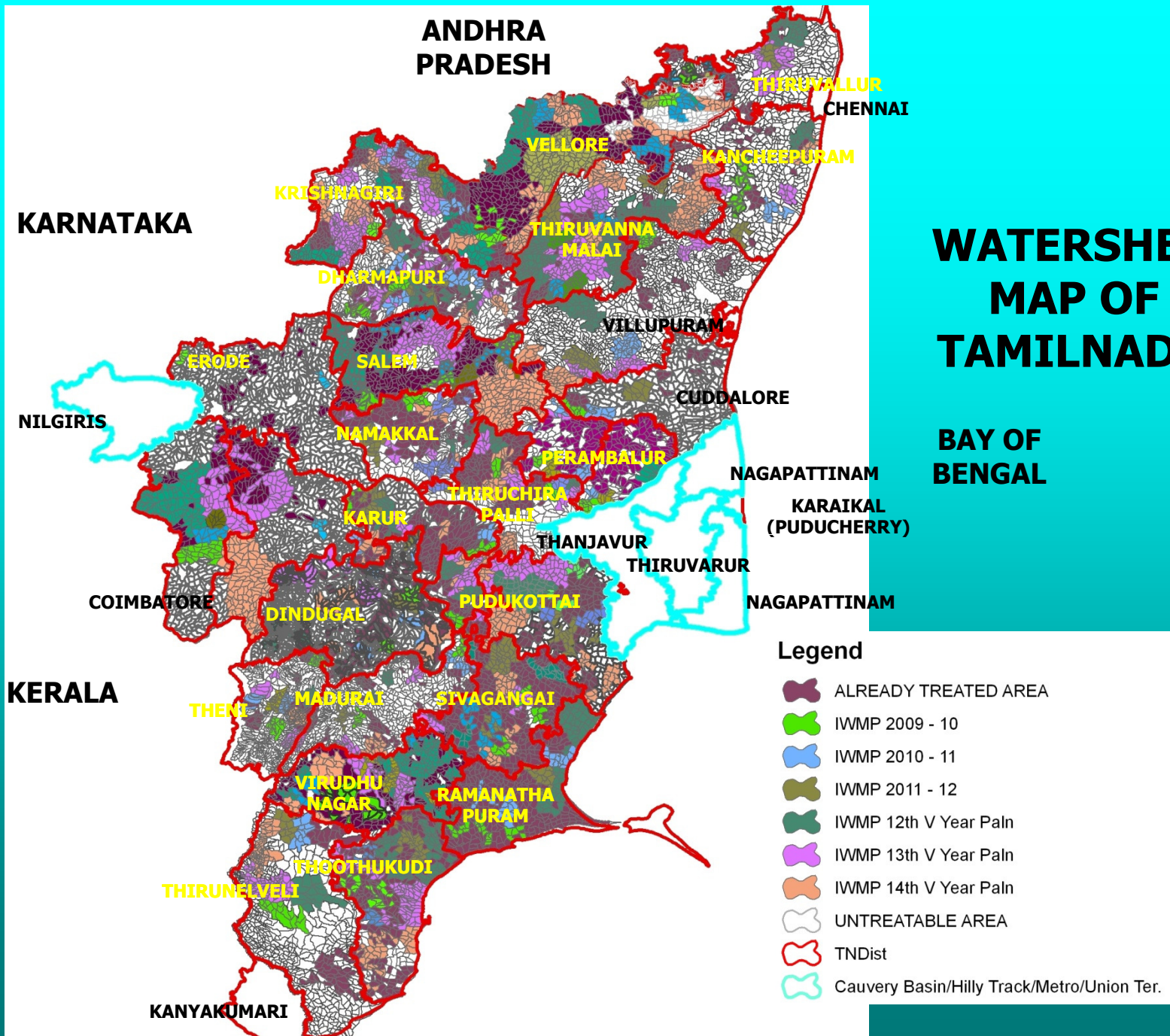


**Workshop on
Success Stories
in Watershed Programmes of
Department of Land Resources**

03.02.2011

**STATE LEVEL NODAL AGENCY /
TAMIL NADU WATERSHED DEVELOPMENT AGENCY
TAMILNADU**



PHYSICAL ACHIEVEMENT UNDER ONGOING DPAP & IWDP PROJECTS

Expenditure so far under DPAP - Rs.272.07 Crores
IWDP - Rs.203.80 Crores

SOIL & MOISTURE CONSERVATION WORKS

Sl. No.	Work	Unit	DPAP	IWDP
1.	Land Leveling	Ha.	4490	11744
2.	Summer Ploughing	Ha.	23124	22863
3.	Bunding	Ha.	104357	87119
4.	Retaining Wall	Rmt. (In Lakhs)	2.779	1.396

WATER CONSERVATION WORKS

Sl. No.	Work	Unit	DPAP	IWDP
1.	Percolation Pond	No.	3551	2207
2.	Cattle Pond	No.	1720	1786
3.	Farm Pond	No.	10437	5681
4.	Sunken Pond	No.	5570	3354
5.	Check Dam	No.	5705	4619
6.	Supply Channel	Rmt. (In Lakhs)	22.545	14.440
7.	LRCD	No.	11204	5539
8.	Renovation of Tank	No.	5691	3735

AFFORESTATION ACTIVITIES

Sl. No.	Work	Unit	DPAP	IWDP
1.	Horticulture Plantation	Ha.	31805	26210
2.	Social Forestry	Ha.	29253	16469
3.	Avenue Plantation	K.M.	1203	312
4.	Fodder Development	Ha.	4082	4978
5.	Homestead Garden	No.	77391	140785
6.	Community Nursery	No.	383	428
7.	Crop Demonstration	Ha.	17826	9458

CHANGES IN LANDUSE DUE TO INTERVENTIONS OF WATERSHED DEVELOPMENT PROGRAMMES of DoLR

(Area in Ha.)

Sl. No.	Program me	Area Targeted	Land Use in Post Project Period					
			Agri	Horti	Aff	Pasture	Water Bodies	Total
01.	DPAP	85319	28143	16990	9194	1079	6220	61700
02.	IWDP	83697	26746	13936	7758	1177	4516	54133
	Total	169016	54889	30926	16952	2274	10736	115833

ORGANOGRAM at STATE & DISTRICT Level

Institutional Structure

**Chairman, SLNA
(APC and Secretary , Agriculture)**

Nodal Dept.: Agriculture

CEO (SLNA)

**DWDA – Deputy Director / Planting Technologists, SWC Engineer,
Sociologist / Project Economist & Extension Officer**

PIA

WC

LAND LEVELLING



DPAP - XII Batch - Kodaikanal Block -Dindigul District – TamilNadu

Problem statement:

- The watersheds being treated are in the rainfed areas of kodaikanal block.
- The major problems are - bushes, rocks, roots of the nearby trees apart from erosion due to undulating topography, ranging from 17 – 25 %.
- The Marginal & Small Farmers were unable to reclaim their lands due to financial constraints.

LAND LEVELLING



Elevation : 2105 Mts above MSL

Objective s and methodology:

- ❖ The work was done to reclaim uncultivable lands in the sloppy hills of the watershed in order to bring additional area under cultivation.
- ❖ To increase Vegetable Production in the area.
- ❖ After clearing the bushes, stubbles, stones, tree roots, the land was leveled.
- ❖ Earthen bunding was provided wherever necessary.

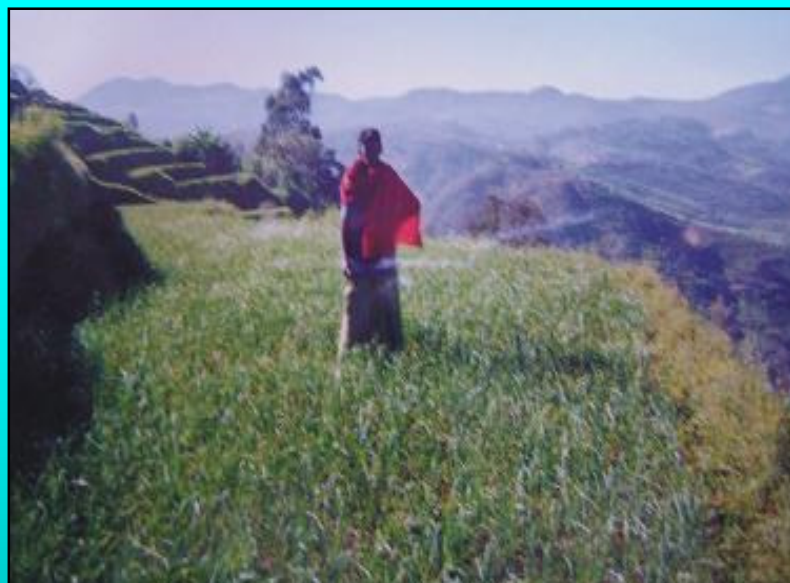
LAND LEVELLING



Objectives and methodology (contd.)

- **The land was leveled so as to raise irrigated crops.**
- **It retains the available runoff and reduces the erosion of the top soil.**
- **The initial ploughing with bullocks was done to loose the top soil to form field beds.**

DPAP - XII Batch - Kodaikanal Block -Dindigul District – TamilNadu



Velammal, D/o.Murugan, SF.No.505/1

Evaluation / Evidence

Income from the field Before Land Development			NIL
Duration of the crop	90 - 110days	--	--
Cost of the seed materials	Rs.12500/ha	--	--
Cost of Cultivation	Rs.10000/ha	--	--
Yield/ha	4000 kg/ha	--	--
cost of the yield@Rs12/kg	Rs.48000/ha	--	--
After land reclamation by DPAP, income from the field (per Ha.)		--	Rs.25,500

FORMATION OF FARM PONDS



Elumalai, S/o.Pitchai, SF.No.919



Thirupathi, S/o.Perumal,
SF.No.670/2

IWDP –VI - Guziliamparai Block – Dindigul District – TamilNadu

Problem statement:

- ❖ The watershed is situated in the dry block in Guziliamparai of Dindigul district.
- ❖ Lowest annual rainfall - 675mm/year and erratic.
- ❖ No adequate soil conservation or water harvesting techniques.
- ❖ There are 53 BC and 8 SC families owning 142 ha of land.

IWDP –VI - Guziliamparai Block – Dindigul District – TamilNadu



Elumalai, S/o.Pitchai, SF.No.919



Thirupathi, S/o.Perumal, SF.No.670/2

Objective and methodology:

- Rain Water is harvested in the land.
- Wells benefitted are 7 Nos.
- To avoid percolation of water harvested, clay soil was spread in the Farm Pond.
- Timber crops are grown on the bunds.

IWDP –VI - Guziliamparai Block – Dindigul District – TamilNadu

Paraipatti watershed



Elumalai, S/o.Pitchai,
SF.No.919

Puliyampatti
watershed



Thirupathi, S/o.Perumal, SF.No.670/2

Karuthanampatti watershed



Vellaisamy, S/o.Perumal,
SF.No.882/A2

Results /impact

- ❖ During monsoon, the farm pond is filled to capacity of 5.15 lakh litre.
- ❖ Water level in 7 wells in the downstream of the farm pond is raised by 2 – 4 feet.
- ❖ Farmer Mr.Elumalai, S/o.Pichai watershed of Paraipatti happily says that he is now having high hopes to sustain the growth of the Gloriosa superba (Herbal Plant).
- ❖ The expected income is Rs.65000-Rs75000 during September2011.

IMPACTS OF WATERSHED PROGRAMMES

A META ANALYSIS

- The activities have significant positive impacts on various bio-physical aspects such as investment on soil and water conservation measures, soil fertility status, soil and water erosion, expansion in cropped area, changes in cropping pattern, cropping intensity, production and productivity of crops.
- The net sown area increased up to 31.85 per cent. and increase in gross cropped area ranged from 18 per cent to 35.14 per cent.

- In 50.9 per cent of the watersheds, the increase in cropping intensity is observed to be less than 10 per cent.
- While 10 to 20 per cent increase in cropping intensity is found in 29.8 per cent of watersheds,
- There was 19.3 per cent of watersheds have registered an increase in cropping intensity of more than 20 per cent.

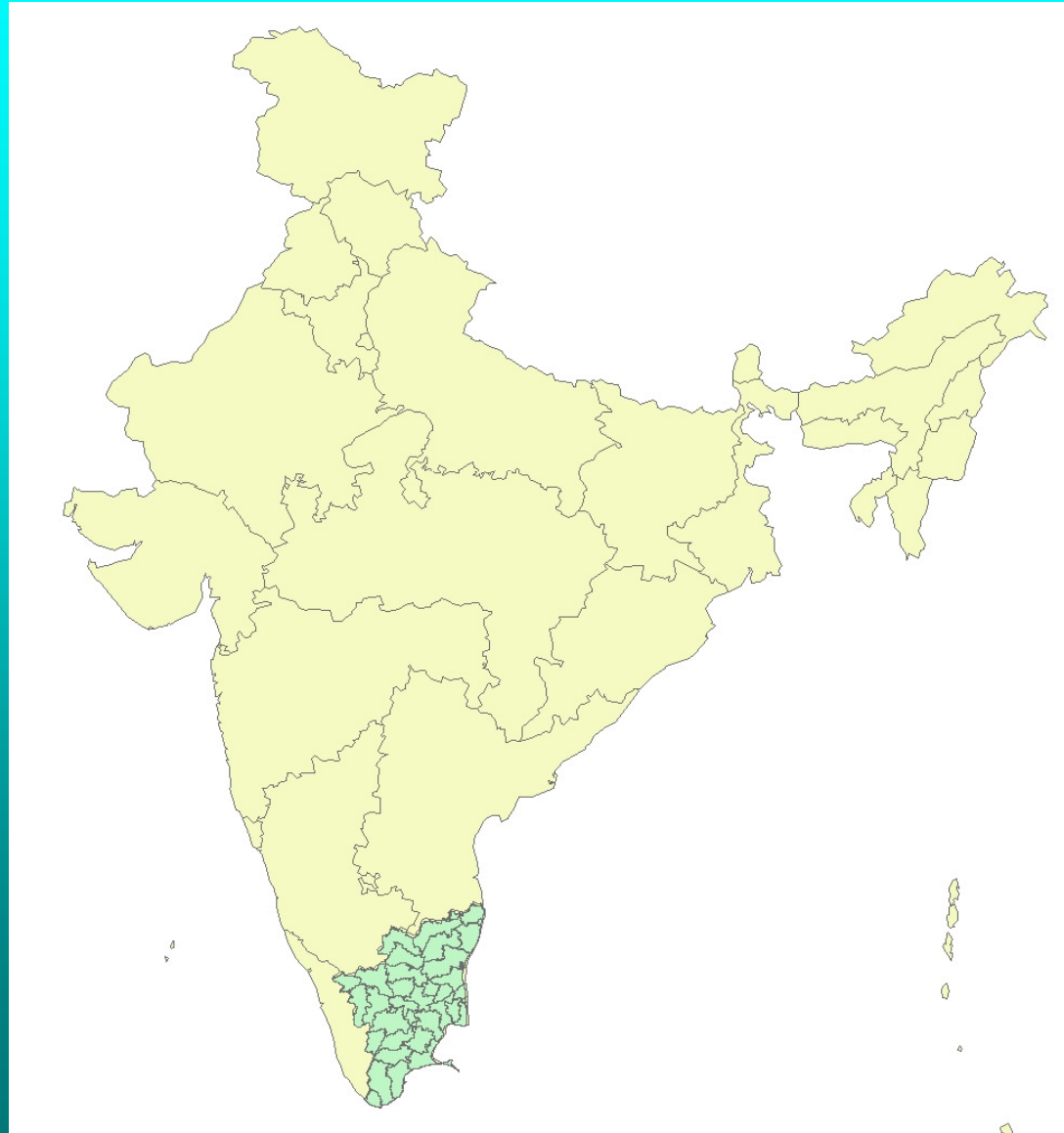


- watershed development activities generated significant positive impacts in the environment.
- The increase in water level in the wells is varied from 0.2 meter to 8.5 meters and this varied across seasons.
- Around 51.4 per cent of watersheds have less than two meters increase in water level in the wells.

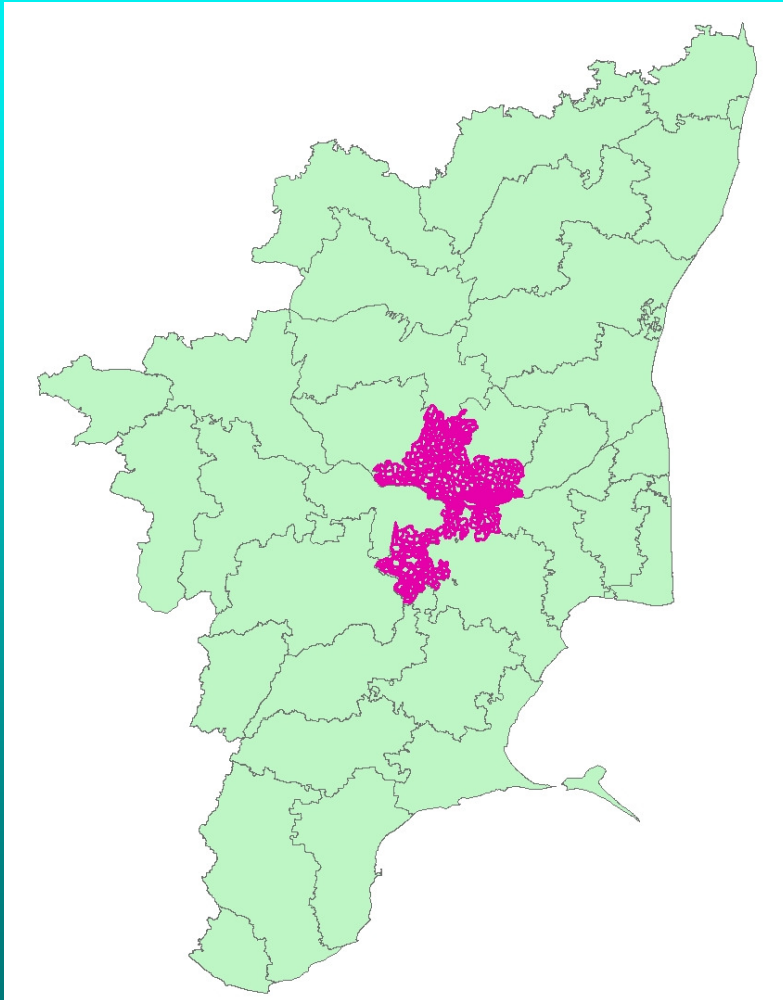


- The overall community participation was found to be as 42 per cent.
- The peoples' participation in watershed development was found to be mixed during the project period and found to be very low or nil particularly during post-project period.
- This suggests that community participation in watershed development programme yet to reach more.
- *Source: Palanisami.K and Suresh Kumar D. (2010) Comprehensive Assessment of Watershed Development Programmes in Tamil Nadu, Report submitted to the State Planning Commission - State Land Use Board (SLUB), Chennai.*

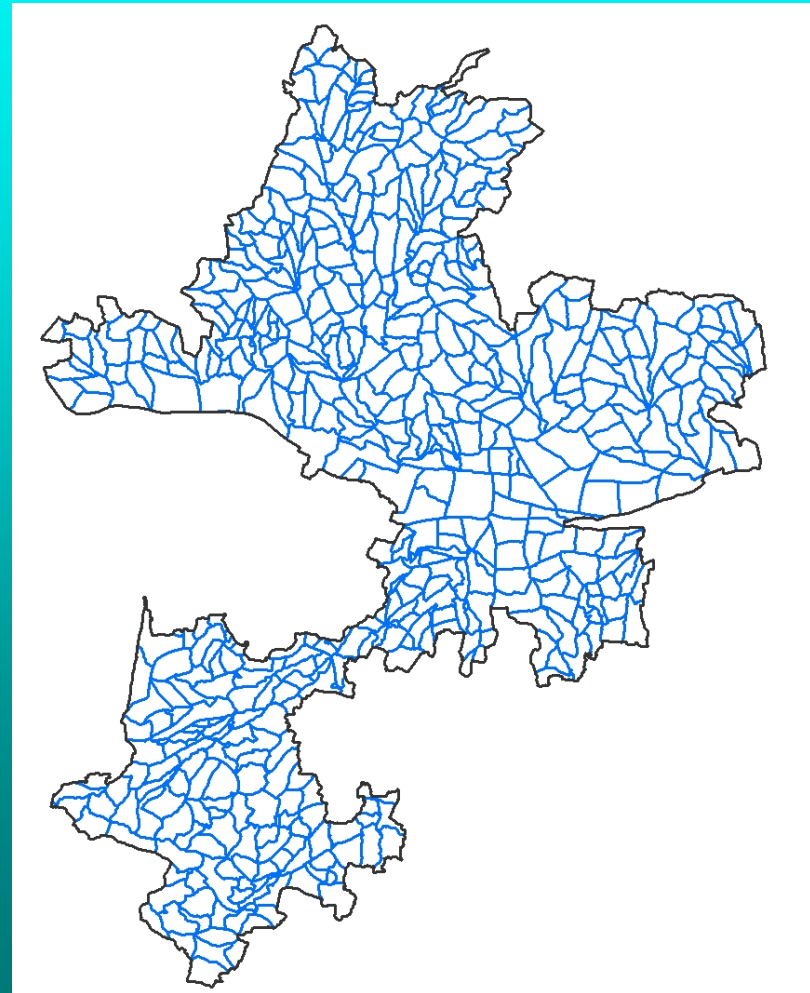
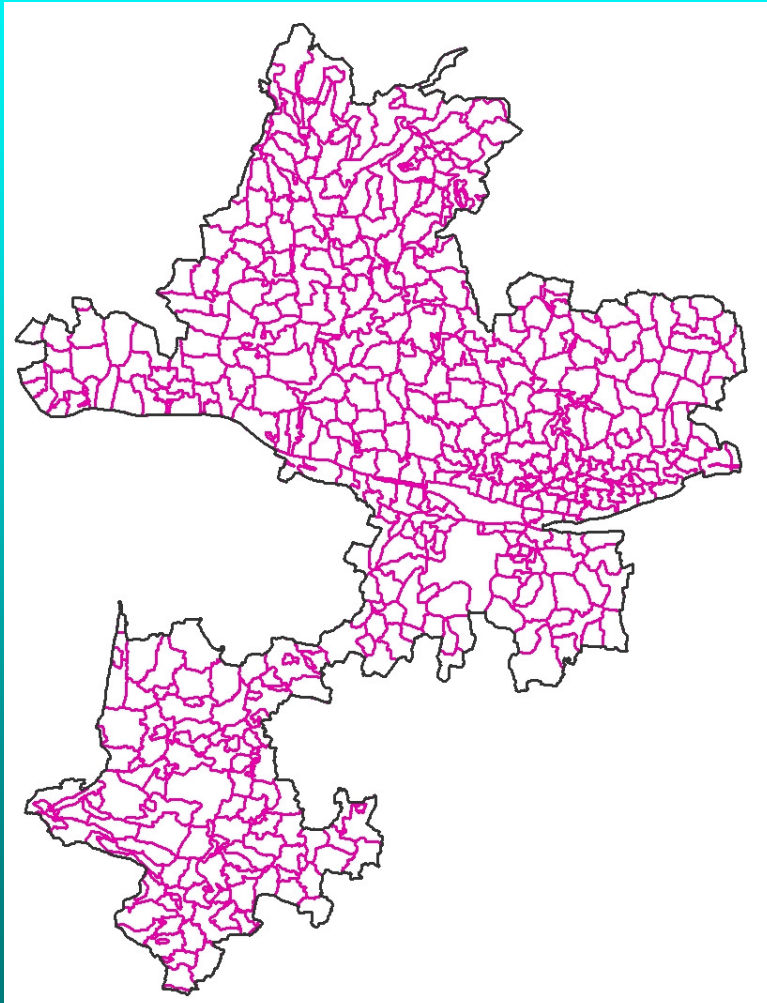
India - Tamilnadu



Tamilnadu – Tiruchirapalli District



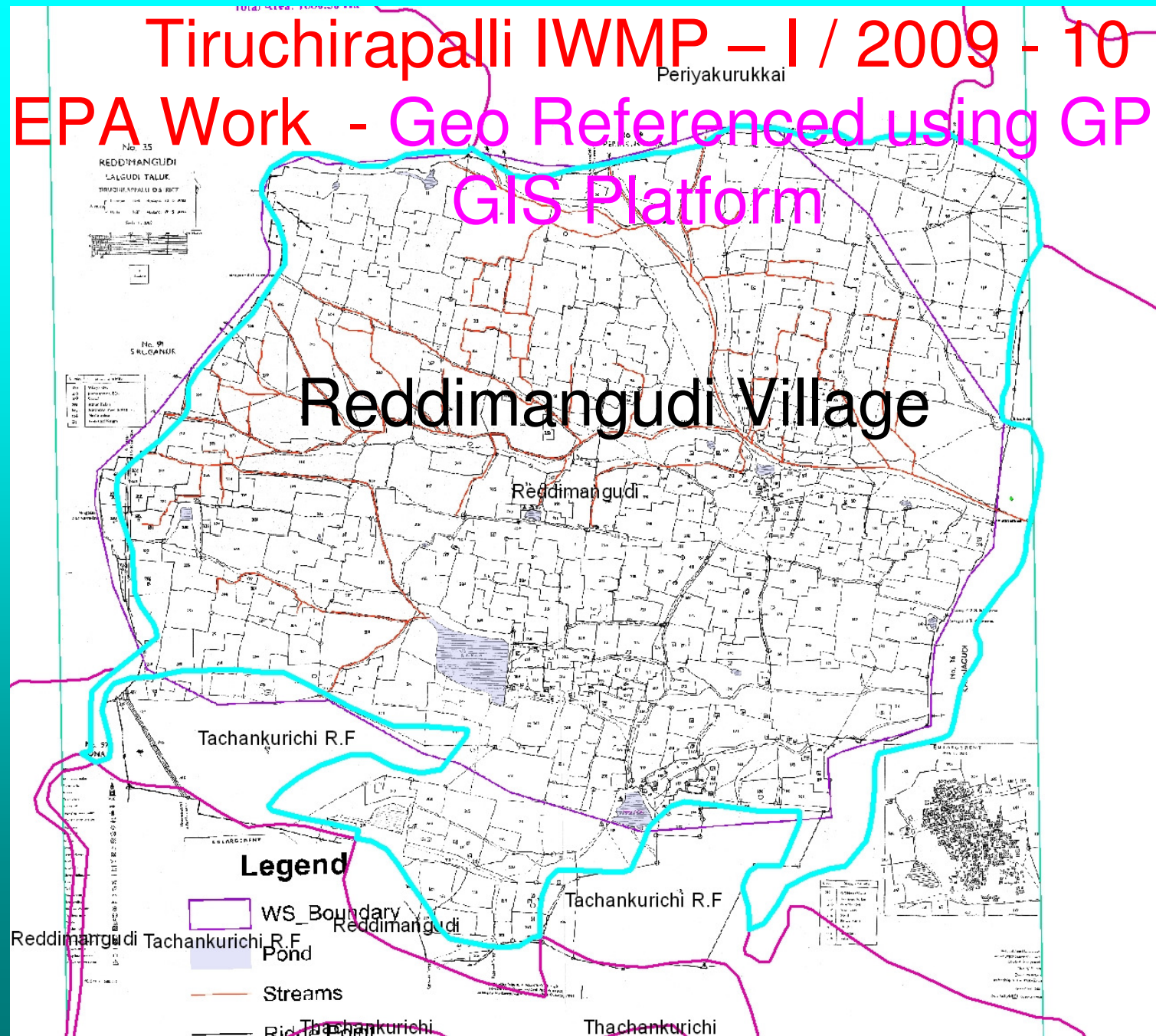
Tiruchirapalli District - Village boundary Map & Watershed Boundary Map



Tiruchirapalli IWMP – I / 2009 - 10

Periyakurukkai

EPA Work - Geo Referenced using GPS in GIS Platform

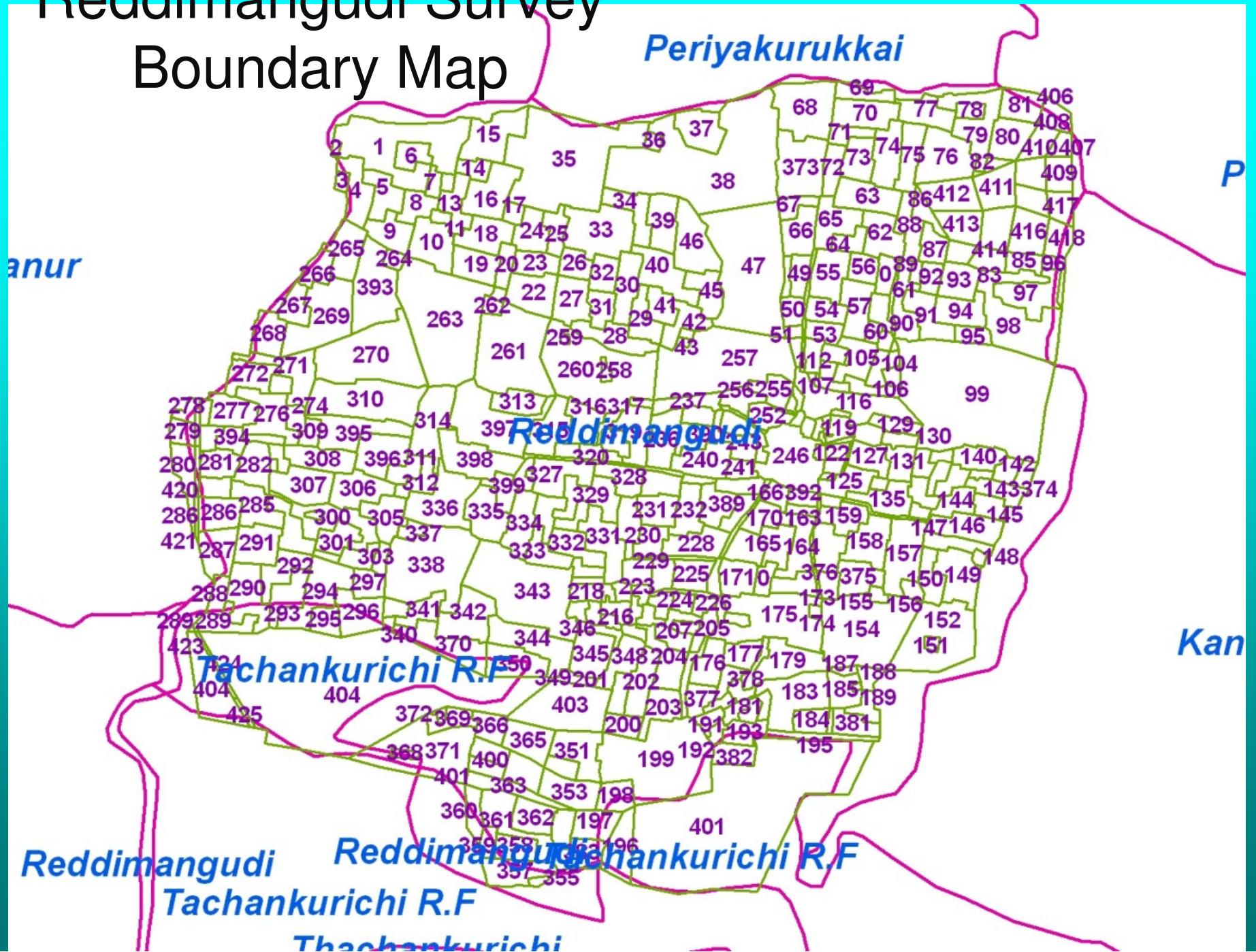


Reddimangudi Village

Legend

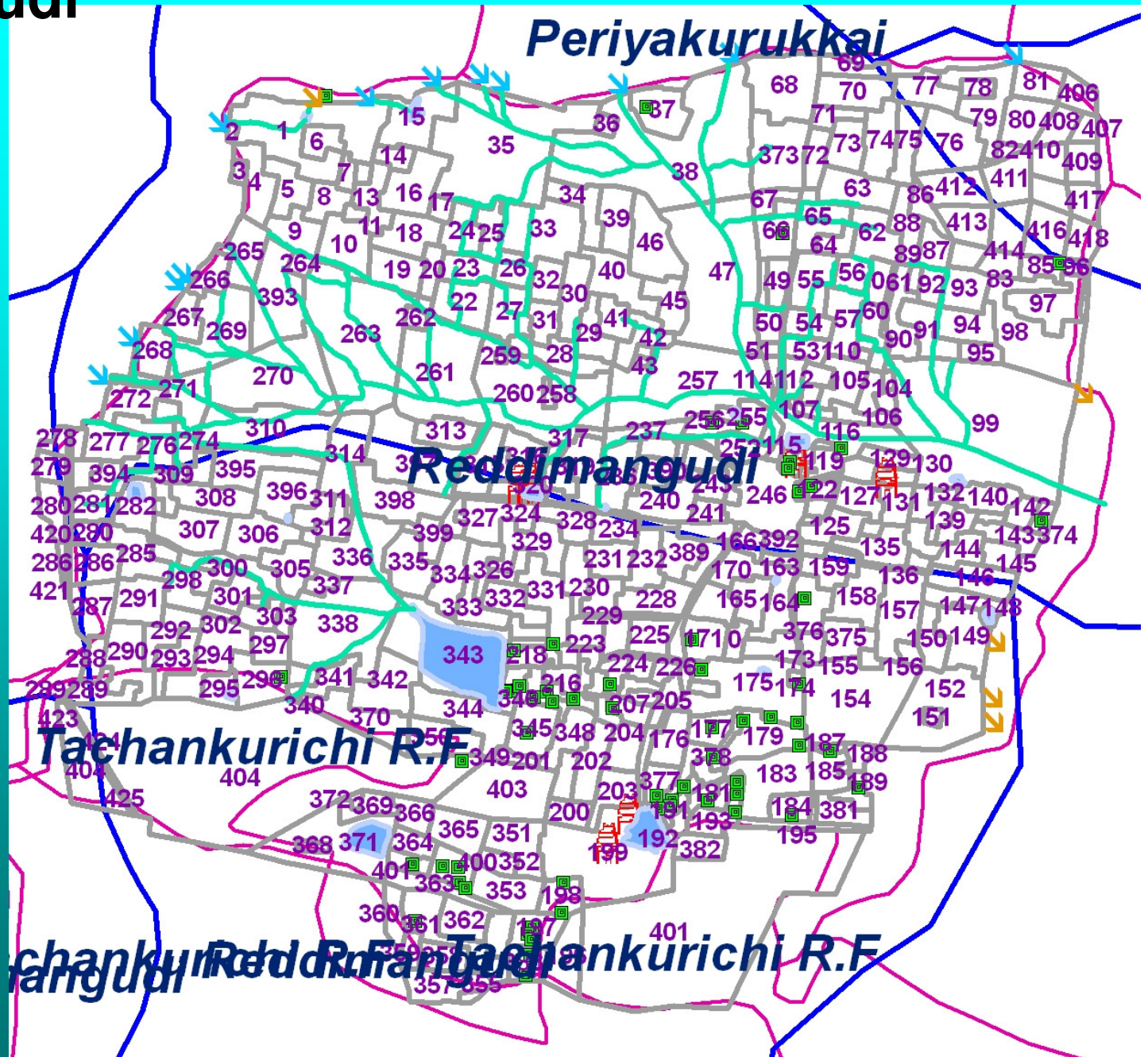
- WS_Boundary
- Pond
- Streams
- Ridgeline

Reddimangudi Survey Boundary Map



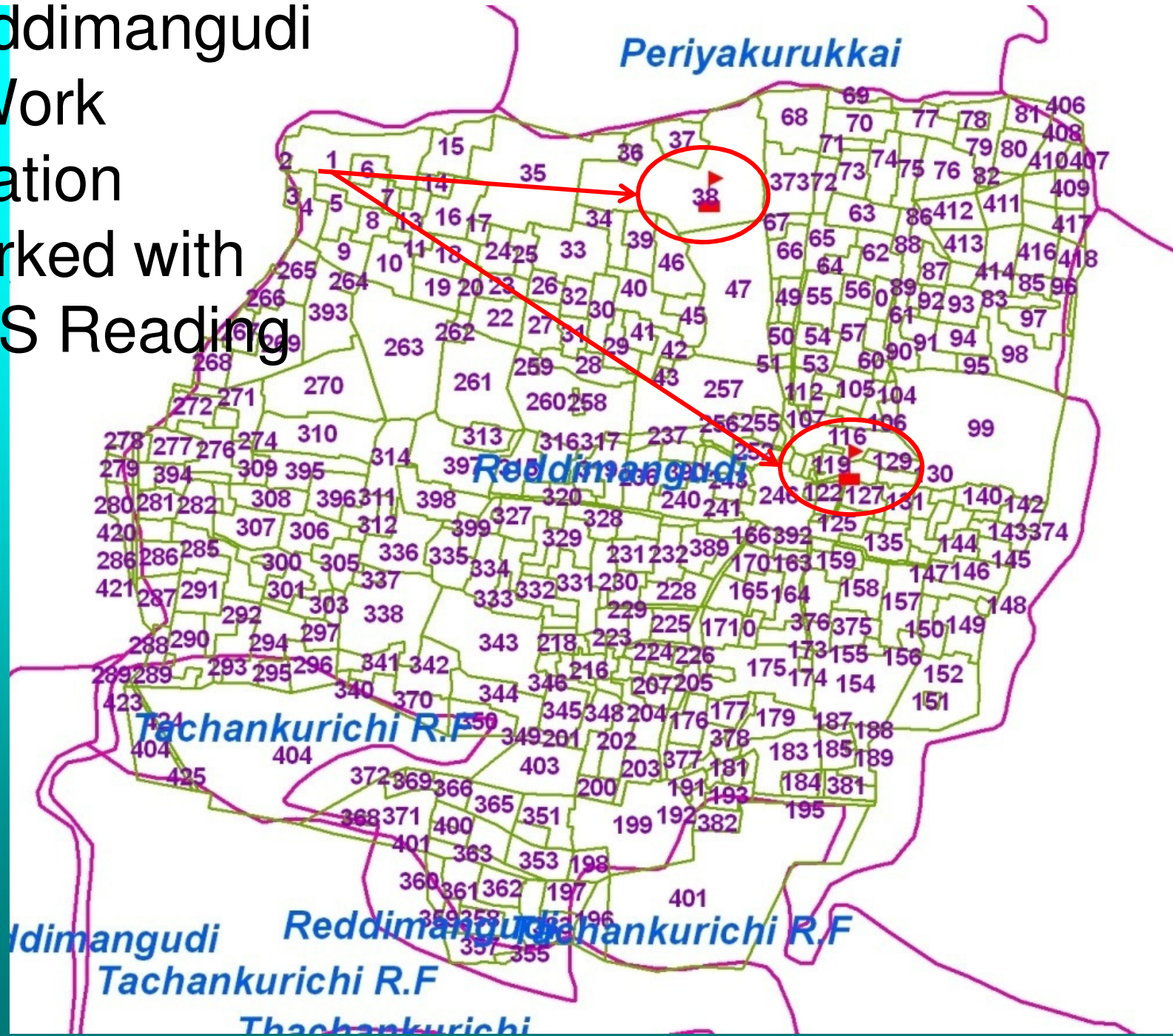
Reddimangudi village Watershed Features

-  Village Boundary
-  Water body
-  Supply Channel
-  Ridge Point
-  Drainage Point
-  Well Point
-  Temple

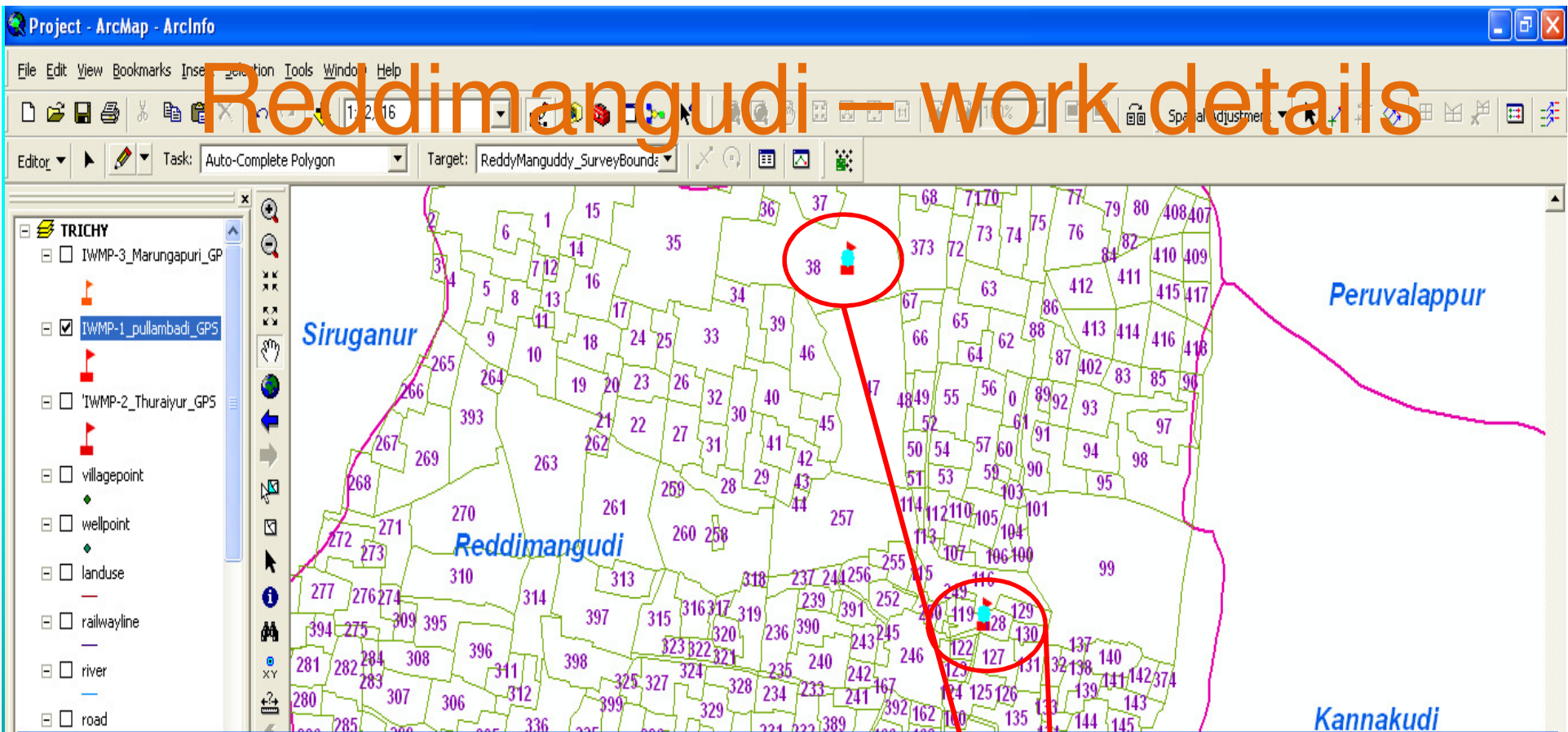


Reddimangudi

– Work location marked with GPS Reading



Reddimangudi — work details



Attributes of IWMP-1_pullambadi_GPS

sl	Watershed	Watershed1	North	East	name_of_th	s_f_rc	estimate	expenditu	date_of_co	date_of	GPS_code
0	Peruvalapur	4B1A7b1c	11.024683	78.871633	2. Construction of Threshing floor	96	100000	100000	2/12/2010	29-12-10	7Pullambad
0	Peruvalapur	4B1A7b1c	11.002683	78.8679	3. Construction of Threshing floor	419	100000	100000	2/12/2010	29-10-10	8Pullambad
4	Reddymangudi	4B1A7b2a	11.009633	78.82285	1. Formation of New village pond at Karumparai	47/1	250000	249900	29-07-10	9/8/2010	9Pullambad
0	Reddymangudi	4B1A7b2a	10.997133	78.829283	2. Improvement of village pond (Paraneri)	128/2	160000	160000	10/7/2010	22-07-10	10Pullamba
5	Kannakudi	4B1A7b2b1	10.9687	78.8566	1. Improvement of Village Pond (Ayyanarkulam)	226	210000	209800	10/7/2010	22-07-10	11Pullamba
0	Kannakudi	4B1A7b2b1	10.97465	78.849033	2. Construction of Threshing floor	308	100000	100000	2/12/2010	29-12-10	12Pullamba
0	Kannakudi	4B1A7b2b1	10.991517	78.845967	3. Construction of Threshing floor	491	100000	100000	2/12/2010	29-12-10	13Pullamba

Record: 1 | Show: All Selected | Records (2 out of 18 Selected) | Options

Reddimangudi – EPA work details

The screenshot displays the ArcMap interface with a map of Reddimangudi. The map shows several numbered polygons (115-130, 121-127, 246-254) representing survey areas. The name 'Reddimangudi' is written in blue text on the map. The Identify window is open, showing the following data for the selected feature:

Field	Value
sl_no	0
Watershed	Reddimangudi
Watershed1	4B1A7b2a
North	10.997133
East	78.829283
name_of_th	2. Improvement of village pond (Paraneri)
s_f_no	128/2
estimated	160000
expenditur	160000
date_of_co	10/7/2010
date_of_1	22-07-10
GPS_code	10Pullambadi

Reddimangudi – EPA work details

The screenshot displays the ArcMap interface with a map of Reddimangudi. The map shows several numbered plots (e.g., 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100) and a red flag marker. The text "Reddimangudi" is visible on the map. The Identify window is open, showing the following data:

Field	Value
sl_no	4
Watershed_	Reddimangudi
Watershed1	4B1A7b2a
North	11.009633
East	78.82265
name_of_th	1. Formation of New village pond at Karumparai
s_f_no	47/1
estimated	250000
expenditur	249900
date_of_co	29-07-10
date_of_1	9/8/2010
GPS_code	9Pullambadi

The Identify window also shows the location coordinates: 78°49'22.221"E 11°0'34.839"N. The identified feature is "IWMP-1_pullambadi_1. Formation".

THANK YOU