



# KOTTAYAM DISTRICT





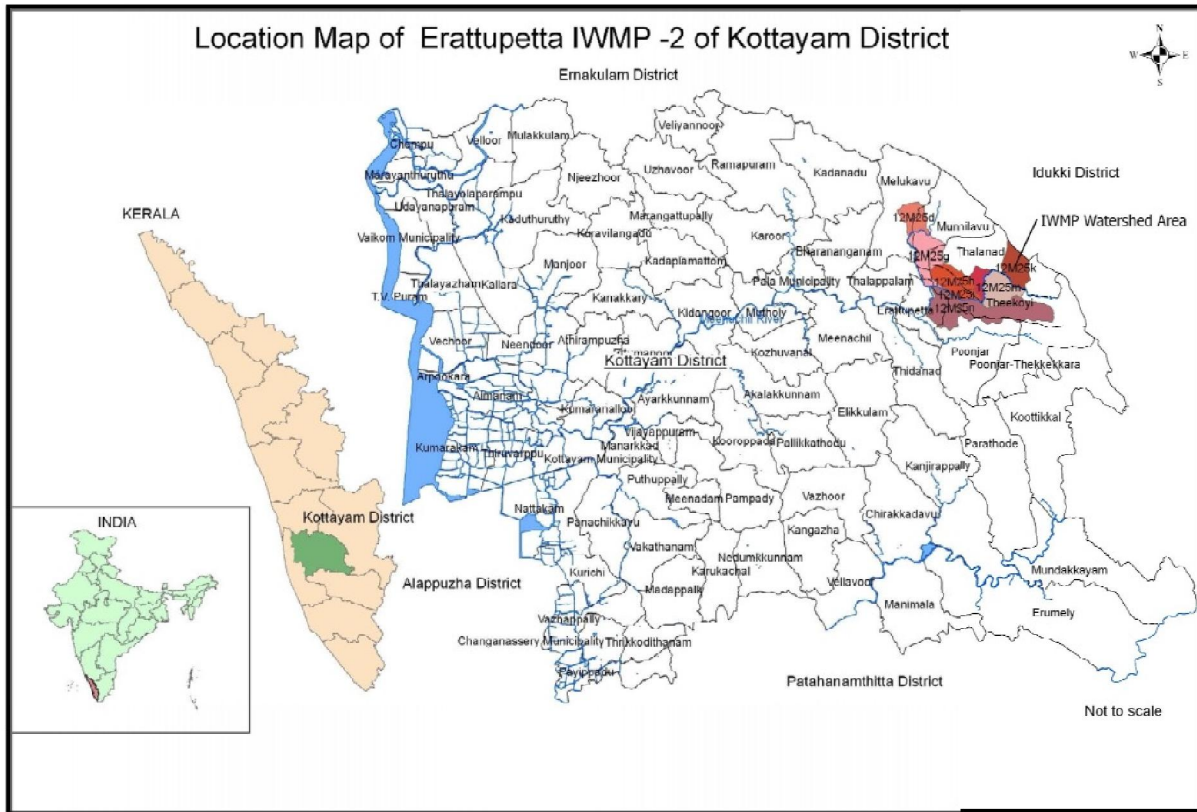
## Endline Evaluation of PMKSY-WDC Watershed Projects

### REPORT: ERATTUPETTA BLOCK (Kottayam District)

The IWMP project area lies in the Erattupetta Block Panchayath which is 38 km away from the district HQ in the Meenchil Taluk of Kottayam District. The project area, lying in the catchment of Meenachil River, consists of seven micro watersheds namely Orappurakkad, Vellani, Areekkathodu, Vengattuthodu, Mesthiripadi, Nedungazhi and Maravikallu, covering Teekoy, Thalanad, Melukavu, Moonilavu, Erattupetta and Poonjar Gram Panchayaths. The total treatable area of the project is 5365 ha.

**Table 1 Details of micro watersheds in the project area**

Sl No	Code	Name	Geographical Cordinates	Gram Panchayath	Treatable Area (Ha)
1	12M 25m	Orappurakkad	76°45'46.328"E 76°47'8.784"E 9°44'49.791"N 9°46'26.11"N	Teekoy	650
2	12M25k	Vellani	76°50'23.987"E 76°51'44.717"E 9°42'29.466"N 9°44'41.738"N	Thalanadu	568
3	12m25d	Areekkathodu	76°45'46.328"E 76°47'8.784"E 9°44'49.791"N 9°46'26.11"N	Melukavu & Moonilavu	463
4	12M25g	Vengattuthodu	76°46'5.708"E 76°47'50.378"E 9°42'34.675"N 9°45'11.264"N	Moonilavu	820
5	12M25i	Mesthiripadi	76°48'56.255"E 76°49'56.027"E 9°41'55.209"N 9°43'36.007"N	Thalanadu	231
6	12M25n	Nedungazhi	76°46'55.731"E 76°52'45.229"E 9°40'41.483"N 9°42'42.519"N	Teekoy, Erattupetta, Poonjar	1897
7	12M25h	Maravikallu	76°47'10.117"E 76°49'32.556"E 9°41'55.172"N 9°43'43.68"N	Thalanadu & Teekoy	736
<b>Total</b>					<b>5365</b>



**Figure 1 Location map of the project area**

The evaluation team from CWRDM visited the project area on 14/03/2019. The team had a discussion with the officials in Block Panchayath before setting out to the field. Discussion was also held with the Block Panchayath President who has very well appreciated the positive impact of activities carried out. The main interventions carried out in the watershed were stone bunds, well recharge, well construction, pond renovation, rainwater harvesting tanks, spring development etc. A total of 21 trainings were conducted as part of capacity building program. The works visited by the team were:

1. Aaniyilappu pond renovation

This pond is located in the Nedungazhi watershed of Teekoy Gram Panchayath. The pond has a capacity of 1.5 lakh litres and nearly 50 families use the pumped water from this pond for their daily needs. The cost of renovation was ₹ 45,000.

2. Spring protection and renovation

This work is located in the Nedungazhi watershed of Teekoy Gram Panchayath. The water in the spring is available only upto December. 15 families draw water from this spring.

3. Arukulathodu side protection



This work is situated in the Nedungazhi watershed of Teekoy Gram Panchayath. Nearly 100 m of the sides of the stream is lined with rubble masonry. The work was completed at a cost of ₹ 2,99,000.

4. Well renovation and recharge

This work is located in the Nedungazhi watershed of Teekoy Gram Panchayath. Nearly 20 families benefit from this well.

5. New well at Aaniyilapp

This work lies in the Nedungazhi watershed of Teekoy Gram Panchayath. It was done in convergence with MGNREGS. 3 families draw water from this well.

6. Rainwater harvesting tank

This tank is constructed in the plot of Mr. Sunil, residing near Vettiparambu Anganwadi in Nedungazhi watershed of Teekoy Gram Panchayath. The capacity of the tank is 10,000 L and the water is made use by the public as well.

### **Summary of the Evaluation of Outcomes of PMKSY- WDC Project**

District	Kottayam	Date of visit	14/03/2019
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#### **1. Project Details**

Project No	IWMP – I/2010-11
Name of Block	Erattupetta
Date of project initiation	20/10/2011
Date of project completion	31/03/2018
Sanctioned Area (ha)	5365
Sanctioned Cost (₹ lakh)	643.68
Actual Cost (₹ lakh )	224.58 (34.89)
Name of Villages included in the project	Erattupetta, Melukavu, Moonnilavu, Teekoy, Poonjar, Vadakkekara

**2. Impact Details**

Sl. No.	Items	Unit	Pre-project status	Status at the end of project	Remarks
1	Average depth of water table in dug wells	m	11.97	7.36	Nearly 3-4 m increase in certain wells
2	Average depth of water table in tube wells	m	-	-	Very less bore wells. Not monitored.
3	Number of ground water structures (dug wells + tube wells + hand pumps) rejuvenated	nos.	2879	3356	Total 477 structures created /22 rejuvenated
4	Increase in Irrigation potential	ha	1380	2025	Additional 645 ha is brought under protective irrigation
5	Area of Wasteland brought under productive use (like agriculture, plantation, fodder, etc)	ha	152	152	Not much change noticed
6	Change in cropping / land use pattern (i) Area under Agriculture Crop (ii) Area under plantation / forest cover (iii) Area Under Wastelands	ha	907 4303 152	919 4305 98	35 % reduction in wasteland area
7	Area Under Agriculture Crop (i) Area under Kharif crop (ii) Area under Rabi crop (iii) Area under double crop	ha	378 269 260	383 274 262	Only marginal increase in agriculture area
8	Cropping intensity	%	120	124	4 % increase
9	Increase in Yield /ha of crops (i) Rabi crop (ii) Kharif crop	qt/ha	6.5 8	8.5 9.2	An increase of 15-30%
10	Area of horticulture crop	ha	34	37	An increase of 8 %
11	Employment in agriculture related activities among beneficiaries	Man days	-	23009	Nearly Twenty four thousand additional man-days created
12	Employment in non- agricultural sectors	Man days	-	810	
13	Fodder production	qt	1.75	4.25	More than 2.5 times increase
14	Fuelwood production	qt	--	--	No data available
15	Number of milch cattle	nos	509	625	An increase of 22%. 28 cow rearing units set



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16	Milk production	Kl/yr	11	15	Increase of 36%
17	Duration of flow of water in streams (upto November/December/January/February.... May)		2 months available	5 months available	3 months prolonged flow of water in streams
18	Improvement of drinking water facility		2879	3356	More than 470 rain water harvesting structures created
19	No. of persons engaged in ancillary activities like fishery, poultry, rural craftsmanship	nos	75	113	150 goats distributed.
20	Number of children enrolled in schools in the project area	nos	4430	7497	All children enrolled in schools
21	Reduction in migration from rural to urban area in the project area	nos	-	-	No migration Reported in the project area
22	Annual mean household income	Rs	50,000	56000	Rs. 6000 increase
23	<p>Any other measureable indicator of impact assessment</p> <p>i) Creation of production system and micro-enterprise activities like: Goat rearing (150 beneficiaries), cow rearing (28), agriculture (144) and others in MIS (322)</p> <p>ii) Nearly 400 SHGs &amp; JLGs were strengthened in the project</p> <p>iii) Additional area of 645 ha is brought under protective irrigation</p> <p>iv) Twenty one thousand six hundred eighteen farmers benefitted directly or indirectly from the project through employment generation or enterprise activities etc. Direct employment of 23819 man-days created.</p>				



Renovated pond at Aniyilapp



Spring protection and renovation in Nedungazhi watershed



Arukulathod side protection



Newly constructed well at Aaniyilappu



Rainwater harvesting tank in Nedungazhi watershed



## CONCLUDING REMARKS - KOTTAYAM DISTRICT

- Discussion was held with the Block Panchayath President, BDO and Technical Expert and the president has reported that the project was very useful for Erattupettah Block as the area faces acute water scarcity during summer. However, the fund was not available during transition stage and the user groups found it difficult to take up the works without committed funds.
- Some of the works started were completed in convergence with the funds from MNREGS and other sources.
- Well renovated at Nedungazhi is a great relief for the residents nearby as the region is having very steep slope and many families (more than 50) depend this well for water.
- In all the watersheds In Erattupetta Block, it has been observed that there was improvement in the ground water table of the area due to the implementation of recharge structures like stone pitched bunds, moisture conservation pits, renovation of ponds, construction of new wells, rooftop rainwater well recharge units etc.
- The irrigation potential was also found to increase in certain watersheds due to the construction of above schemes.
- Training programmes (21 Nos) were conducted for the stakeholders in the production system and livelihood activities.
- Soil erosion along stream banks was brought under check by the side protection work of several streams in the watersheds under the PMKSY project. Erosion from other fields in general was also reduced due to the conservation measures adopted.
- Drinking water shortage was fixed by the installation of rainwater harvesting tanks and well-recharge units and spring mouth development. The new wells constructed is being shared by many families as most of them don't have own wells.
- Employment was generated both in agricultural and non-agricultural sectors during the implementation of the PMKSY project. Also, the annual mean household income was improved.
- Activities like organic farming, vegetable cultivation, animal husbandry activities were promoted under the project.

### Success story

#### **Aaniyilappu pond renovation**

This pond is located in the Nedungazhi watershed of Teekoy Gram Panchayath. The pond has a capacity of 1.5 lakh litres and nearly 50 families use the pumped water from this pond for their daily needs. The cost of renovation was ₹ 45,000. The elevation of area being high, and underlying hard rock, many of the households don't have own wells and they are sharing the water from a common source.