

Endline Evaluation of PMKSY-WDC Watershed Projects

REPORT: KALPETTA BLOCK - IWMP III D I (Wayanad District)

The IWMP III D I project, comprising seven micro watersheds and covering mainly four Grama Panchayaths in a total of 6144 Ha in Kalpetta Block Panchayat, in the Western Ghat region, is inhabited by 5226 families, mostly of small and marginal farmers. Kalpetta Block Panchayath has been selected as the Implementing Agency of this project. Kalpetta Block Panchayath is acting as the PIA for the project from 2010, in a treatable area of 5175 ha. This project is the most relevant and effective response to the crisis experienced by the farming community in terms of shortage in water and erosion of the top fertile soil for taking up profitable agriculture and allied activities, in the seven micro watersheds namely, Muthappankundu, Thrikkaipetta, Chepottukunnu, Malakkad, Varyad, Thondupaly and Muranikkara.

General Description

District : Wayanad

Block : Kalpetta

Project name : IWMP III (Kalpetta DI)

Number of Micro Watersheds : Seven

Grama Panchayats Covered : Moopainad, Meppadi, Meenangadi, Muttil,

Kottathttara, Ambalavayal

Wards Included : Moopainad (1,3,16), Meppadi(1,2,3,4),

Muttil(1,2,4,6,7,8,9,11,19), Meenangadi(11,12,13)

Kottathara(5,6), Ambalavayal(15)

Total Treatable Area : 5175 Ha

Latitude : 11⁰ 32' 48" N - 11⁰ 40' 12" N

Longitude : $76^{\circ} 04' 12'' E - 76^{\circ} 10'12'' E$

Soil : Clay loam to Forest loam soil

Total Households : 5226

Total Population : 20904

Major Catchment : Kabani River

Highest Elevation : 1380 m

Lowest Elevation Point : 730 m

Table 1 Details of micro watersheds

Sl No	Name of Watershed	Code	Total area (ha)	Treatable area (ha)
1	Muthappankundu	27K15u	1997	1225
2	Thrikkaipetta	27K15z	782	705
3	Chepottukunnu	27K15aa	702	582
4	Malakkad	27K15v	514	514
5	Varyad	27K15x	500	500
6	Thondupaly	27K15w	343	343
7	Muranikkara	27K15ad	1306	1306
Total			6144	5175

IWMP III D I - PROJECT AREA MAP 76°3'0"E 76°4'0"E 76°5'0"E 76°6'0"E 76°7'0"E 76°8'0"E 76°9'0"E 76°10'30"E Legend Kerala Cheppattukunnu - 27K 15aa 11°39°N ikkara - 27K Malakkad - 27K 15v Muranikkara - 27K 15ad Malak 11°37'30"N Muthappankundu - 27K 15u Thondpaly - 27K 15w Wayanad Dist Cheppattukunnu - 27K 15aa 11°36'0"N Thrikaipetta - 27K 15z Varyad - 27K 15x 11°34'30"N ppankundu - 27K 15u Kalpetta Block N..0 EE. 11 76°3'0"E 76°4'0"E 76°5'0"E 76°6'0"E 76°7'0"E 76°8'0"E 76°9'0"E

Figure 1 Location of project area

The evaluation team from CWRDM visited the project IWMP III D I in Kalpetta Block on 05/01/2019. NRM activities executed in the project area include earthen bunds, agro-horti plants, farm pond, stream embankment, farmland protection, check dam, biogas plant etc. A brief report of the works visited by the team follows:

1. Farm Pond near the residence of Munganaliyil Varghese

The structure is located in the Thrikkaipatta watershed of Meppadi Gram panchayat. The pond has a dimension of $25 \times 15 \times 2$ m. It is being utilized for irrigation purpose. The land for the pond is leased from a beneficiary for a period of 5 years. Nearly 25 families benefit from this pond.

2. Kakkavayal Pond

The pond is situated in the Malakkad watershed of Muttil Gram panchayat. It has dimensions of $6 \times 7 \times 2$ m. It is utilized for irrigation of banana and paddy. Also, fishes like katla and rohu are grown in the pond. More than 15 families benefit from this pond.

Summary of the Evaluation of Outcomes of PMSKY-WDC Project

1. Project Details

Project No	IWMP III D I			
Name of Block	Kalpetta			
Sanctioned Area (ha)	5175			
Sanctioned Cost (Rs in lakh)	776.25			
Actual expenditure (Rs. in lakh)	247.29 (31.85 %)			
Name of Villages included in the project	Moopainad, Thomattuchal, Muttil North, Muttil South, Trikaipetta			

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	2.8		Post Data not available. However, an increase of 1 m reported in many wells
2	Average depth of water table in tube wells	m	14.0		Bore wells are less
3	Number of ground water structures (dug wells + tube wells + hand pumps) rejuvenated/ created	nos.		85	New ponds 59, Rejuvenation of water bodies.
4	Increase in Irrigation potential	ha		163	Area brought under protective irrigation
5	Area of Wasteland brought under productive use (like agriculture, plantation, fodder, etc)	ha		278	Area brought under productive use, agri plants and fodder.
6	Change in cropping / land use pattern (i) Area under Agriculture Crop (ii) Area under plantation / forest cover (iii) Area Under Wastelands	ha	-	-	No recorded data. Area under plantation increased and wasteland reduced. Forest cover no change
7	Area Under Agriculture Crop (i) Area under Kharif crop (ii) Area under Rabi crop (iii) Area under double crop	ha			No information. Paddy cultivation is very less in the watershed
8	Cropping intensity	%			3 % increase
9	Increase in Yield /ha of crops (i) Rabi crop (ii) Kharif crop	qt/ha	20	22	10% increase. Only one crop paddy.
10	Area of horticulture crop	ha		115	Horticultural crops planted in 115 ha. Mostly mixed crops



11	Employment in agriculture related activities among beneficiaries	Man days		-	2528 man days
12	Employment in non- agricultural sectors	Man days		2528	-
13	Fodder production	qt	250	270	270 qt of fodder produced. 20 qt increase
14	Fuelwood production	qt			Mostly gas ovens
15	Number of milch cattle	nos		200	Approx. No. only
16	Milk production	Kl/yr		40	Milk production increased
17	Duration of flow of water in streams (upto November/December/January/February May)		Februar y	March	Duration of flow increased one month. Soil moisture increased.
18	Improvement of drinking water facility		March	April	Groundwater level raised due to earthen bunds and check dams
19	No. of persons engaged in ancillary activities like fishery, poultry, rural craftsmanship	nos	-	124	JLG/SHG/UG 124 newly formed.
20	Number of children enrolled in schools in the project area	nos		-	All children are school going
21	Reduction in migration from rural to urban area in the project area	nos			Migration Reduced
22	Annual mean household income	Rs	44000	47000	Marginal increase
23	Any other measureable indicator of impact assessment i) Committee and stakeholders have undergone 46 trainings and 2 exposure visits ii) General increase in soil moisture content and improved greenery and biodiversity changes				

- iii) Maximum amount is spent for NRM activities. Soil erosion and sediment load decreased after project implementation and crop production increased.

 iv) 12.65 ha area brought under SRI method of paddy cultivation
- v) Total No. of SHGs created/assisted: 35
- vi) Total No. of farmers benefitted: 827

Centre for Water Resources Development and Management



Farm pond constructed in Thrikkaipetta watershed



Kakkavayal pond in Malakkad watershed