

MAVELIKKARABLOCK – IWMP -V (ALAPPUZHA District)

The project area lies in the Mavelikkara Block of Alappuzha District. It consists of 3 micro watersheds namely Kadavoor, Kakkadu and Thriperumthura spread across four gram panchayaths namely Chettikulangara, Budhanoor, Mannar and Chennithala. The project has a total area of 6305 Ha. The project area is located between $9^{\circ}8'26''$ - $9^{\circ}17'38''$ N latitude and $76^{\circ}27'51''$ - $76^{\circ}33'46''$ E longitude.

Table 1. Details of micro watersheds

SI No	Name of Watershed	Watershed code	GPs covered	Area (in Ha)
1	Thriperumthura	9A5a	Mannar and Chennithala	2927
2	Kakkadu	9A6a	Budhanoor	719
3	Kadavoor	9A46a	Chettikulangara	2659
Total				6305

The evaluation team from CWRDM visited the IWMP project in Mavelikkara Block on 06/07/2022. A discussion was carried out with BDO and VEOs associated with the project. The Mavelikkara Block office provided the basic information and key characteristics of the project. Most of the staff were very new to the Block due to transfers. Unlike other watersheds, bund construction and proper drainage are the most necessary requirements for this area.

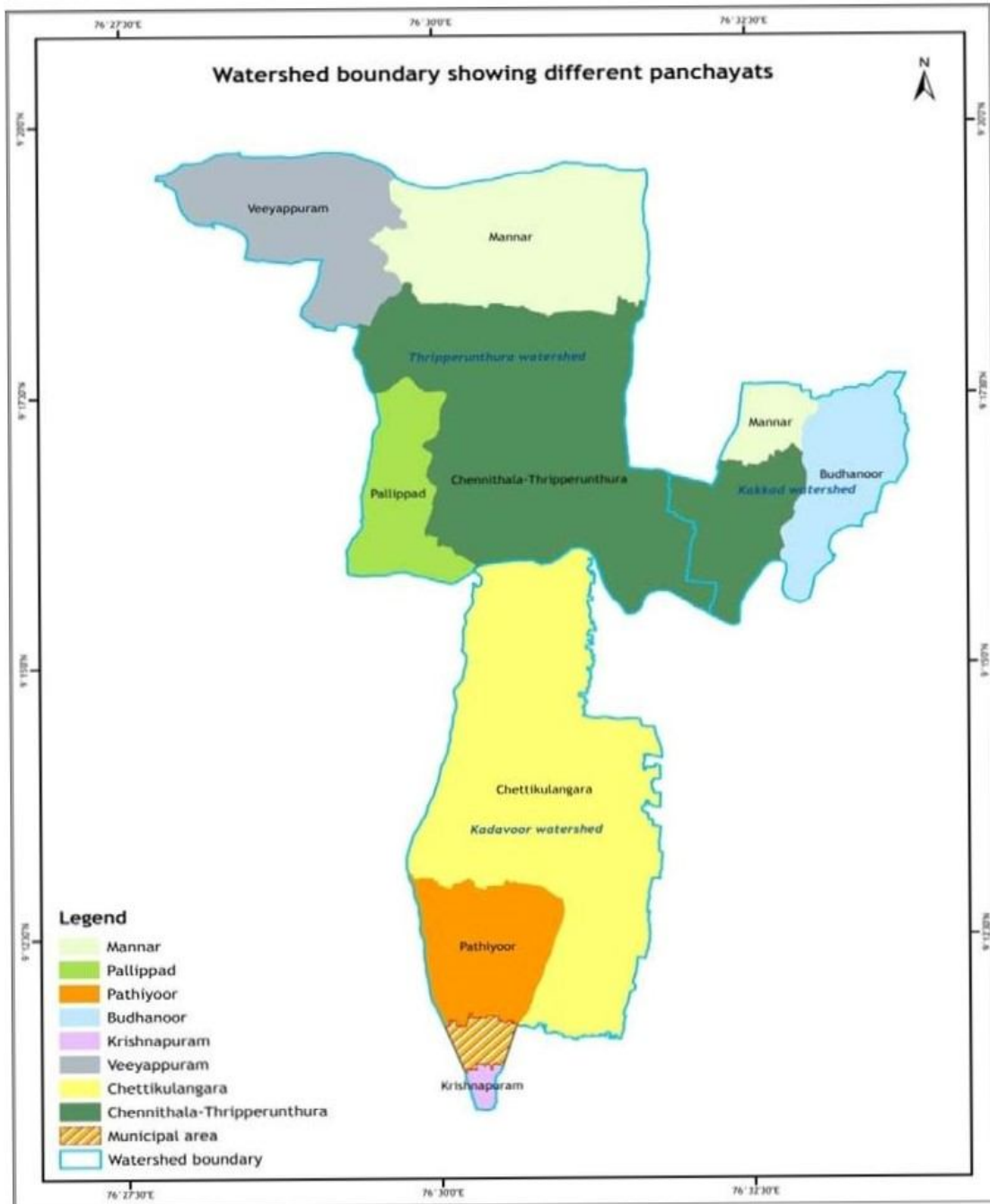


Fig 1: Map of the Watershed area

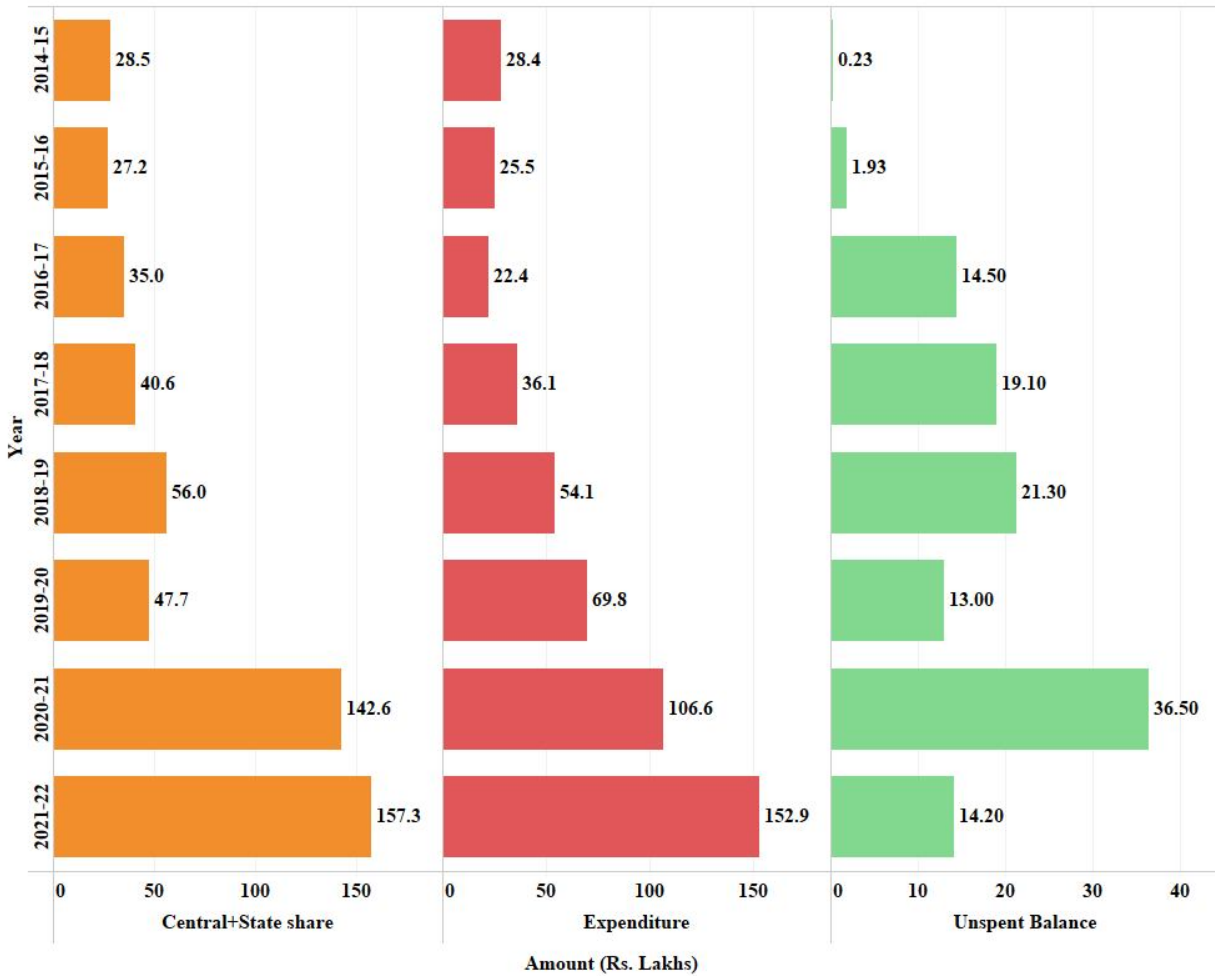


Fig 2: Financial overview of the Project

The financial statements revealed that the share from the Centre and State Government has increased considerably over the years and more amount was received in the FY 2021-22 followed by 2020-21. Expenditure for different interventions of the watershed also follows similar trajectory. In total an amount of Rs. 535 lakhs was received for the project and Rs. 14.20 lakhs of unspent amount has been refunded to SLNA.

The works visited by the team are:

1. Pump house at Cheruthodu padasekharam

This pump house lies in the Kakkadu watershed of Budhanoor panchayat, 550m long side protection was also constructed with a cost of Rs. 6.9 lakhs. This pump house provides irrigated water to nearly 75 acres of agricultural land. This helped to control the water level in the field.

Under this project, 6 pump houses were established. This increased the irrigation potential of the region and improved cultivation in the agricultural land area.

2. Ramp Constructions

- a) KandalkaripadamKalukku Ramp Constructioloated at the Thriperumthura watershed of Mannar panchayat.The work was completed at a cost of Rs. 6.95 lakhs. This ramp helps in the easy movement of tractors and other types of machinery to the paddy fields.
- b) Thondalilmaratheril/nalumoolckalpalathintenaaluvashavum ramp, located at the Kadavoor watershed of Chettikulangara panchayat. Nearly 2.5 km of desiltation work was carried out. The work was completed at a cost of Rs 10.83 lakhs. This work benefits nearly 200 acres of paddy cultivation and also helps in the easy movement of vehicles in and out of the fields.

Since the paddy fields are low-level areas, it was quite challenging to use contemporary agricultural equipments here. Sowing and harvesting take too much time as it is labourious task. They struggled to conveniently store the harvested paddy during the seasonal floods. In the PMKSY Project, eleven ramps were built to make it simple to use modern equipment in the field and transport harvested paddy out of the field easily. These ramp constructions reduced the cost of cultivation and also ease the production activity of paddy in the area.

3. Kudivellari A padasekharam thodu deepening and bund construction

This work is located at Thriperumthura watershed of Mannar panchayat. It lies between the Pampa and Achankovil rivers.As this is a part of upper Kuttanad and most of the area is near to sea level, deepening and bund construction will avoid the frequent floods in the area.This construction also helps to avoid soil erosion. In order to cultivate paddy, bunds were constructed to keep water in the paddy field. Using this, weed control and puddling are also accomplished. In certain fields, however, the construction of bunds helped replenish wells and restore groundwater levels. Under this project, 1500 field bunds were created.

4. Miyawaki forest establishmentin Govt U P school

This work lies in the Thriperumthura watershed of the Chennithala panchayat. This was a collaborative effort with MGNREGS, wherein they prepared the land for the establishment of the

Miyawaki forest. Different tree saplings were planted in a 2.5cent area with a unit cost of Rs. 1.5 lakhs.

A Miyawaki forest can achieve growth with a hundred year old natural forest within thirty years. This model will help in reclaiming the forest land which was destroyed due to urbanization and industrialization. It is a complete afforestation model with many advantages such as soil retention capacity, water purification and groundwater recharge. This is a model of afforestation that helps to create a micro-climate, regulate ambient temperature, increase oxygen availability and reduce carbon dioxide emissions. It also provides income from the fruit-bearing tree species. Hence, this kind of afforestation activity may be promoted and adopted in schools, and public places in order to bring more area under vegetation.

5. Thottarambalam well

An open well is sanctioned to ‘Omana’ at Mattanthakku in Kadavoor watershed of Chettikulangara panchayat. It has 11 rings and this is the main source of drinking water for the family. The unit cost of the proposed work was Rs.12,870/-.

Under this project, 271 wells have been created and helped resolve drinking water issues in this locality. Improvement of drinking water facility was observed. In several places of the region that were visited, it was observed that households did not consistently maintain their activities. Hence, frequent monitoring between the Panchayath and the units is necessary for sustainable water security in the region.

6. Production system

An H.F. breed cow was sanctioned under the production system of IWMP to Mr. ‘Sanilkumar, Kandathil’ in the Kadavoor watershed of the Chettikulangara panchayat. Cow gives an average of 13 liters of milk per day and it was sold at a cost of Rs. 41/liter to the Society or Rs.52 to the nearby households.

Under the production system, unemployed people were given a good opportunity to work for themselves. These activities provide additional income to the households. The project proved beneficial for goat and dairy farmers in the region as a total of 58cattle and 57 Goat units were distributed under the project. This resulted in increased milk production in the study area.

**Summary of the Evaluation of Outcomes of PMSKY-WDC Projects**

District	Alappuzha	Date of Visit	06/07/2022
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1. Project Details:

Project No	IWMP/IV/2013-14- Batch 5
Name of Block	Mavelikkara
Sanctioned Area (ha)	6305
Sanctioned Cost (Rs in lakh)	756.6 lakhs
Name of Villages included in the project	Mannar, Kuttemperoor, Peringala, Kannamangalam, Kurittiseeri, Thriperumthura, Ennakkadu, Chennithala, Pathiyoor.

2. Impact Details

Sl. No.	Items	Unit	Pre-project status	Status at the end of project	Remarks
1	Average depth of watertable in dug wells	m	4.208	3.5	Slight improvement in water table level
2	Average depth of watertable in tube wells	m	30	28	2 m rise in the water column
3	Number of groundwater structures (dug wells + tube wells + hand pumps) rejuvenated	nos.	--	4	4 structures rejuvenated
4	Increase in Irrigation potential	ha	4094	4514	420 ha increase
5	Area of Wasteland brought under productive use (like agriculture, plantation, fodder,etc)	ha	0	0	



6	Change in cropping/land use pattern (i) Area under Agriculture Crop (ii) Area under plantation / forest cover (iii) Area Under Wastelands	ha	4094 --	4514 312	Now it is declared as fallow free Block.
7	Area Under Agriculture Crop (i) Area under Kharif crop (ii) Area under rabi crop (iii) Area under double crop		2133 ha -- 460 ha	3041ha -- 580 ha	908
8	Cropping intensity	%	114	117	3 % increase
9	Increase in Yield /ha of crops	qt/ha			An average of 1 qt/ha of paddy increased
	(i) rabi crop				
	(ii) Kharif crop		20	21	
10	Area of horticulture crop	ha	215	240	25 ha increase in area
11	Employment in agriculture related activities among beneficiaries	Man days	1875	9995	18175 mandays generated
12	Employment in non- agricultural sectors	Man days	7850	15750	
13	Fodder production	qt	1250	8850	Increase in fodder production
14	Fuelwood production	qt	1300	9000	
15	Number of milch cattle	nos	3853	8660	Increase in the number of milch cattle
16	Milk production	Kl/yr	5000	16850	Increase in milk production
17	Duration of flow of water in streams (upto November/December/January/February....May)		--	--	No data available as most of the area is near to MSL



18	Improvement of drinking water facility		--	--	2672 rain water harvesting structures created and 4 rejuvenated
19	No. of persons engaged in ancillary activities like fishery, poultry,rural craftsmanship	nos	850	3600	Increased
20	Number of children enrolled in schools in the project area	nos	750	2600	All children are attending schools
21	Reduction in migration from rural to urban area in the project area	nos	350	100	
22	Annual mean household income	Rs	12000	35000	
23	Any other measurable indicator of impact assessment i) 2672 rainwater harvesting structures created and 4 rejuvenated ii) 15200 farmers benefitted from the project iii)SHGs assisted: 63 iv) 58 units of cattle rearing and 57 units of goat rearingwere distributed				

Some of the works visited in the project area



Pump house at Cheruthodu padasekharam



KandalkaripadamKalukku Ramp Construction



Kudivellari A padasekharam thodu deepening and bund construction



Miyawaki forest in Govt U P school



Thottarambalam well



Livestock of Sanilkumar, Kandathil



Thondalilmaratheril/nalumoolckalpalathintenaaluvashavum ramp

Success story

PMKSY Success Story – Chettikulangara Grama Panchayath Kadavoor Watershed

Thondamarathethil field is a 192acre paddy cultivated area in ward 1 of Chettikulangara gramapanchayath. The field is situated below road level and it is very difficult for the movement of modern agricultural equipments into the field. Because of this reason, more time was taken for sowing and reaping the produce. During seasonal floods, they were unable to store the harvested paddy easily. In PMKSY Project, four ramps were constructed with an expenditure of Rs. 10.83 lakhs and this helps in easy movement of advanced equipments to the field and carrying out sowing as well as harvesting activities. In the past year, 400 tons of paddy were produced and the income of the farmers was also increased.