

NENMARA BLOCK (PALAKKAD DISTRICT)

Project No: IWMP -6/2012-13

Nenmara (IWMP-6) project is located in Nenmara and Kollengode blocks of Palakkad district. The project comprises of four micro-watersheds namely Malappuram (20B39ac), Payyadore (20B39w), Payyalloor (20B39v) and Vengappara (20B39y). The project, with an area of 4832 hectares has been selected for treatment under the Integrated Watershed Management Programme (IWMP). The project area covers the grama panchayats of Elavanchery, Nenmara, Nelliampathy, Pallasena (all in Nenmara Block), Kollangode and Muthalamada (in Kollangode Block).

Table 1. Details of micro watersheds

Name	Code	Block Panchayats covered	Grama Panchayats covered	Wards Covered	Total Area (inHa)	Treatable area (in Ha)
Malappuram	0B39ac	Nenmara	Elavanchery	11p, 12p, 14p	932.70	738.8
Payyadore	20B39w	Nenmara	Elavanchery	7p, 8p, 9, 11p, 12p, 13p, 14p	1316.72	1316.72
			Nenmara	6		
		Kollangode	Kollangode	7, 8, 9, 12p		
			Muthalamada	17		
Payyalloor	20B39v	Nenmara	Elavanchery	1p, 2, 3p, 4, 5, 6, 10, 11p, 13p	1761.29	1761.29
			Pallasena	11p		
		Kollangode	Kollangode	10, 11, 12p, 13, 14, 15, 17, 18		
Vengappara	20B39y	Nenmara	Nelliampathy	2	822.19	622.19
		Kollangode	Kollangode	9, 12		
Total Area					4832.9	4439

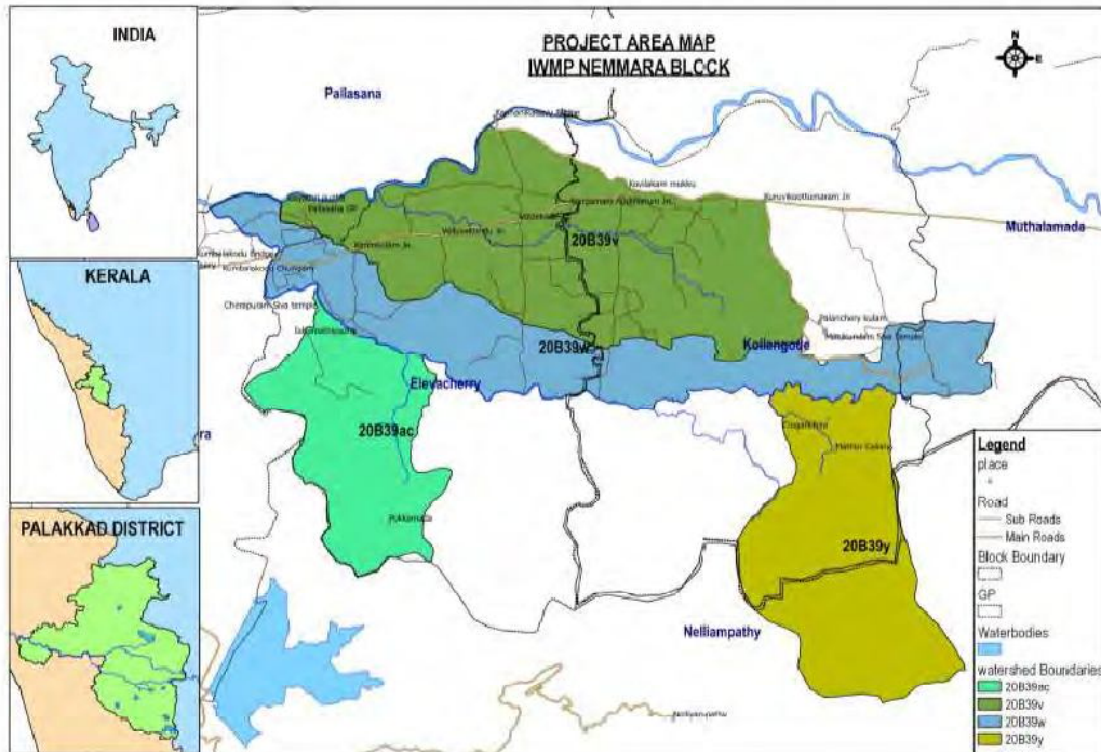


Fig 1: Map of the Watershed area

Physiographically the project area lies above MSL 76 m to 1595 m. The four micro watersheds coming under Nemmara IWMP- 6 project falls under high land division. The geographical area of these micro watersheds ranges from 800 to 1800 ha. Maximum relief (elevation difference between highest and lowest point) of these micro watersheds ranges from 46 to 1496 m. Some areas of Vengappara (20B39y) and Malappuram (20B39ac) micro watersheds are hilly areas.

The project evaluation team from the Centre for Water Resources Development and Management (CWRDM), Kozhikode visited the IWMP watershed areas of the Nemmara block of Palakkad district on 29.06.2022. Initially, the team discussed with the block development officer and Village Extension officer to know about the perception of the project and implementation. After discussion, the team visited the sites of IWMP.

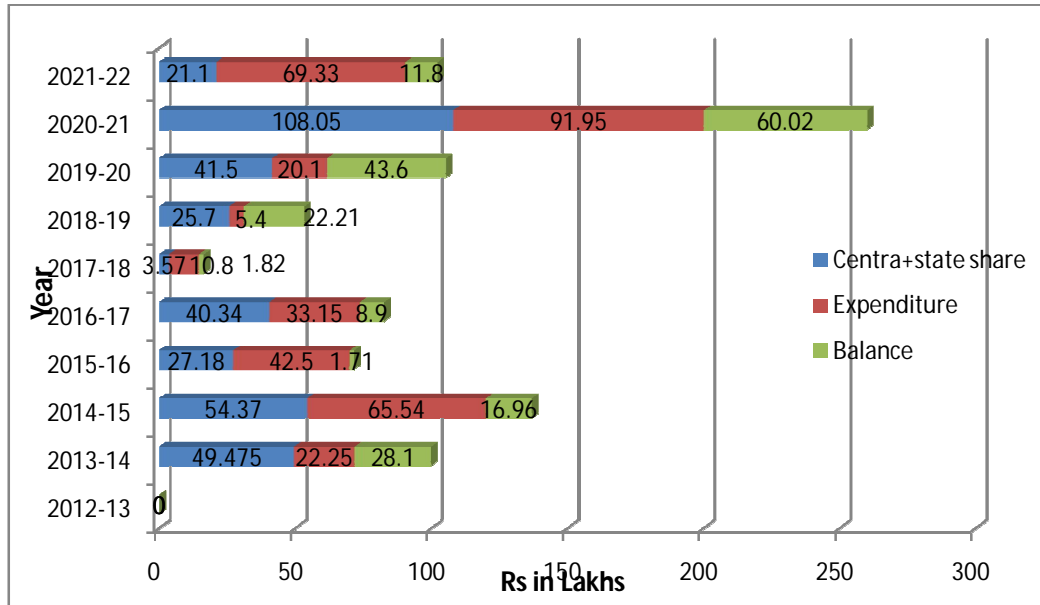


Fig2: Financial overview of the Project

From the financial records, it was observed that, though the project started in 2012-13, no fund was received during that year. The regular fund flow was observed throughout the project implementation period. However, the maximum fund was received during FY 2020-21. Similarly, the expenditure was also more during that year.

1. Stream bank side protection

Mathur laxmanansella thodu side protection was constructed with a budget of Rs. 14,00,000/- at Vengapara watershed, Kollenkode. The benefitted area under this structure is around 20 acres. Bunds were constructed at regular intervals to increase the flow velocity and reduce siltation in the stream.

The smooth flow of water is greatly aided by this project. As a result, the problem of water scarcity has been somewhat resolved. Additionally, it stopped soil erosion, making the stream bank more attractive.

2. Check dam

Mathur check dam was constructed during 2020-21 at Vengapara watershed for irrigation purposes. The water from the check dam was diverted to the agricultural lands, the silt deposited at the check dam will be removed periodically by utilizing the watershed development funds. The major crops cultivated in benefitted areas are Mango, paddy and coconut.

Check dams allow sediments and contaminants to settle while reducing erosion and gully in the channel. They also slow down the flow of water during high rainfall events. The project region benefits from increased groundwater levels and water conservation through these interventions.

3. Retaining wall with lined canal

Shri kurumba thodu retaining wall with lined canal work done at Elavanchery village of Payyadore watershed during 2021-22 with the budget of Rs. 15,00,000/-. The total length of work was 419m. Around 13 acres of land benefitted under this work and paddy and vegetables are cultivated here.

4. Tharakulam renovation

Renovation of tharakulam was done at Elavanchery village of Payyalloor watershed during 2019-20. The stored water in the pond is used for irrigation as well as fishery. The total budget for this work was Rs. 6,10,000/-.

The water level in the nearby wells increased as a result of the pond renovation. Additionally, the development of agriculture benefitted greatly from this. Additional farmland has been covered with protected irrigation.

5. Well recharge

Kottayam kadukinar a public well renovation work was visited by the team. The public well renovation was completed during 2015-16 at Malappuram watershed. Currently, the well is not in used condition since private wells in the vicinity are increased.

Mrs. Geetha Shyamala from Elavanchery village of Malappuram watershed installed a rainwater harvesting structure with a filter system in her home. The harvested water is used for domestic as well as homestead irrigation.

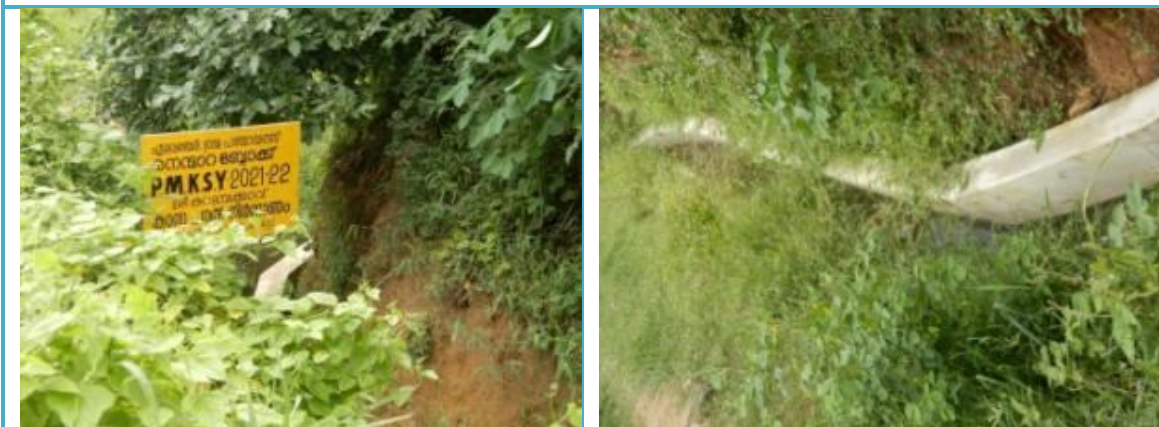
Injecting rainwater into wells to artificially recharge them increases the amount of fresh water available in the project area, helps ease drinking water shortages and raises well water levels.



Mathur laxmanansella thodu side protection



Mathur check dam



Shri Kurumba thodu retaining wall with lined canal

**Tharakulam renovation****Public well renovation****Well recharge**

Concluding remarks

- The major activities carried out in the project area include Rainwater harvesting tanks, Well recharging, Check dam construction, Rejuvenation of ponds, Drainage line treatments, Soil & Moisture conservation activities etc. The water level in the nearby wells has risen due to these interventions in the project area.
- It was observed that some of the activities like desiltation of ponds, canal retaining structures carried out in the project improved the irrigation potential in the area.
- Desiltation works and stream bank stabilization implemented in the project area led to an increase in the capacity of the channel and hence a reduction in soil erosion.
- Public well constructed at Malappuram watershed of Nenmara block was not used effectively by the public. At the time of the visit, the well was in an abandoned condition. Hence, proper care should be taken before taking up the intervention whether it is necessary for the public.



- Some structures are not maintained properly and observed with weeds (retaining walls, ponds) and a reduction in storage capacity. Hence, proper monitoring of the interventions is a must and frequent cleaning of ponds with the help of MGNREGS labour can be initiated through convergence mode.

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

District:Palakkad

Date of visit : 29.06.2022

1. Project Details

Project No: IWMP-6 Palakkad Batch 4

Name of Block: Nenmara

Sanctioned Area: 4439Ha

Sanctioned Cost (Rs in lakhs) :532.68

Name of Villages included in the project--Kollangode, Elavanchery

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	5.56 4.03	5.3 3.49	No major change was observed (pre monsoon & post monsoon data)
2	Average depth of water table in tube wells	m	-	-	No borewells
3	Number of groundwater structures (dug wells + tube wells + hand pumps) rejuvenated	nos.	-	76	Pre-project data not available
4	Increase in Irrigation potential	ha	-	44	Marginal increase in irrigation potential through construction of check dams
5	Area of Wasteland brought under productive use (like agriculture, plantation, fodder, etc)	ha	-	13	Area under wastelands slightly reduced
6	Change in cropping/land use pattern <ul style="list-style-type: none"> •Area under Agriculture Crop •Area under plantation/forest cover •Area Under Wastelands 	ha	-		Moderate improvement in agriculture area was



					observed
7	Area Under Agriculture Crop <ul style="list-style-type: none"> •Area under Kharif crop •Area under rabi crop •Area under double crop 	ha	-		Improvement in Kharif area was noticed
8	Cropping intensity	%	117	120	Increase in cropping intensity by 3 %
9	Increase in Yield /ha of crops <ul style="list-style-type: none"> •rabi crop •Kharif crop 	qt/ha	-	1600	Increase of 2.5 qt/ha
10	Area of horticulture crop	ha	-	13	Horticulture crops in homesteads increased
11	Employment in agriculture related activities among beneficiaries	Man days	-	8360	4133 mandays of employment generated
12	Employment in non- agricultural sectors	Man days	-	10233	
13	Fodder production	qt	-	200000	
14	Fuelwood production	qt	-	-	No data available
15	Number of milch cattle	nos	-	4534	Pre-project data not available. About 10 % increase due to setting up of cattle rearing units
16	Milk production	Kl/yr	--	4991	Pre-project data not available. 10-12% increase
17	Duration of flow of water in streams upto November/December/January/FebruaryMay)		--	--	Throughout the year flow
18	Improvement of drinking water facility		Mar	Apr	Increase by one more month
19	No. of persons engaged in ancillary activities like fishery, poultry, rural craftsmanship	nos	-	23	



20	Number of children enrolled in schools in the project area	nos	-		All children enrolled in schools
21	Reduction in migration from rural to urban area in the project area	nos	-	26	4133 mandays of employment generated under the project
22	Annual mean household income	Rs.	35000	40000	Increase by Rs. 5000/-
23	Any Other Measurable indicator of impact assessment <ul style="list-style-type: none">• 963 farmers benefitted from the project• Total rainwater harvesting structures created 89 and 164 were rejuvenated				