

CHITTOOR BLOCK (PALAKKAD DISTRICT)**Project No: IWMP-7 Palakkad batch 4**

Chittoor block is one of the 13 blocks in the Palakkad district having an IWMP area of 6165 hectares. The Palakkad district is called the “Granary of Kerala”. Agriculture is the main occupation and paddy is the important crop. Other crops cultivated are banana, vegetables, Tapioca, coconut, turmeric and mixed cropping. The total population of Chittoor Block is 425,646 with 208,850 males and 216,796 females. The block consists of six micro watersheds namely Pampupara(20B18aa), Varattayar(20B18ae), Kottipara(20B18af), Vavolithodu (20B18ag), Elappuly (20B18an) and Vandithodu (20B18aa).

Table 1. Details of micro watersheds

S.No	Watershed Name	Watershed Code	Area (in Ha)
1	Pampupara	20B18aa	713.01
2	Varattayar	20B18ae	965.4
3	Kottipara	20B18af	647.8
4	Vavolithodu	20B18ag	514.56
5	Elappuly	20B18an	1638.3
6	Vandithodu	20B22a	1685.93
Total			6165

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

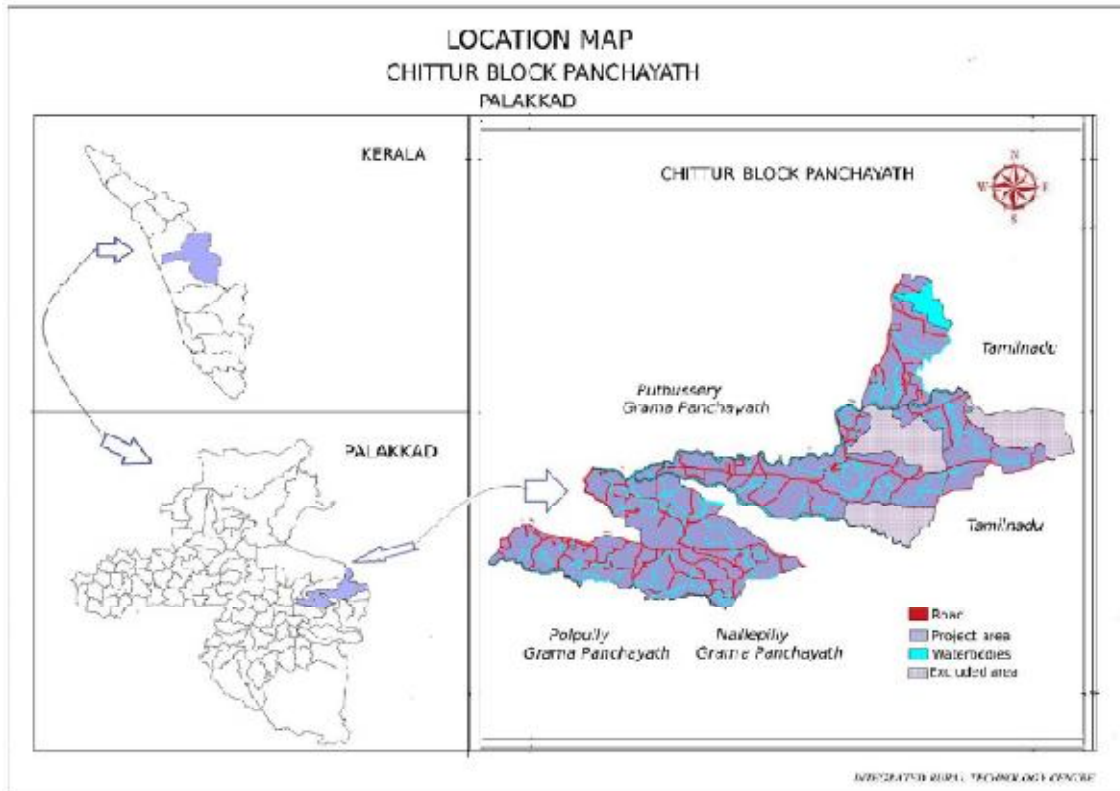


Fig 1: Map of the Watershed area



Fig 2: CWRDM team at BDO office, Chittoor

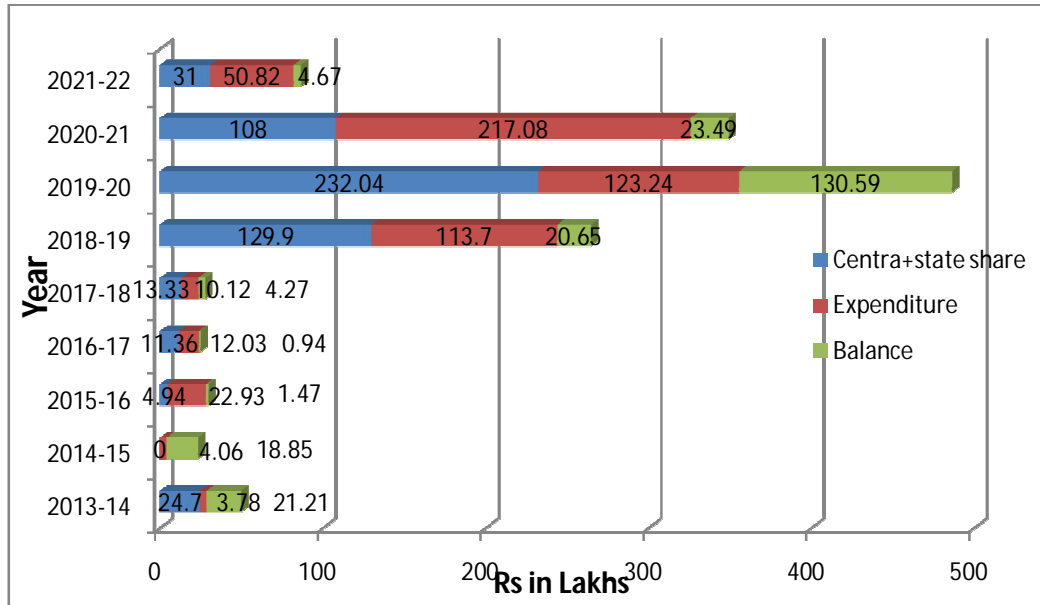


Fig 3: Financial overview of the Project

From the financial records, it was observed that in the FY 2014-15 no fund was received and till 2018-19, funds received were very less. The maximum amount received was in FY 2019-20 followed by 2018-19 and 2020-21. Expenditure also increased in the last 4 Financial years.

Sites visited by the team:

1. Stream bank side protection

Muttuchira padasekharam chalside protection constructed during 2020-21 with a budget of Rs.21.6 lakhs at Elappully Watershed. The length of side protection is 275m. It was constructed to prevent flood submergence in agricultural land. Silt removing also done for a length of 275 m to increase the capacity of the stream. More than 30 acres of land benefitted under this structure. Paddy, coconut and banana are the major crops cultivated in the benefitted area. Under production system free coconut saplings were also provided under the scheme. After construction of side protection, the stream bank stabilized and water entered to the agricultural land prevented. This enables farmers to cultivate crops throughout the year so that production will be increased.

2. Production system

- a) Under production system seed money of Rs. 25,000/- was given to 'Shilpa' JLG (five members) group at Elappully Watershed. They are doing groundnut cultivation using the seed money on 68 cents of area. Initially they cultivated vegetables and got more profit from that.
- b) Under production system, subsidy was given for installing drip irrigation at Vandithodu watershed. The farmer also followed organic farming along with drip irrigation system for coconut, banana and turmeric for an area of 4.5 acres. Open well is the source of irrigation.
- c) Also, at Vadakaraivillage of Vandithodu watershed seed money of Rs. 9200/- was given for fodder cultivation with a 10 % beneficiary contribution. Two acres of land cultivated with fodder crop.

Support for production/farming systems and associated microenterprises is one of the important parts of this watershed development initiative under IWMP. The primary goal of PSME is to encourage farmers to adopt modern agricultural technologies, integrated farming systems, and improved farming practices in order to strengthen their livelihoods. The activities proposed under PSME improved the livelihood of the poor and marginalized people in the project area.

3. Pond renovation

Chempattakholam pond side protection cum pond renovation was done at Elappully Watershed. Side protection work was carried out for a length of 155m. The total capacity of pond is 6750 m³. The stored water from the water is used for agricultural purpose. Around 50 acres of agricultural land benefitted from this pond. Paddy and coconut are the major crops cultivated in the benefitted area. This work was completed during 2021-22 with the budget of Rs 40,00,000/-.

The entire neighbourhood receives significant benefits as a result of the pond renovations. The water level in the nearby wells has raised as a result. Additionally, this was quite favourable for the development of agriculture as well.

4. Well recharge

Chittoor block of Palakkad is drought prone area hence many well recharge structures installed around the block to increase the groundwater potential. A rainwater harvesting connected with open well recharge structures installed at Vandithodu watershed during 2019-20. Due to this, an increase in water level was observed and they are getting water for domestic as well as agriculture throughout the year.

During the summer, they noticed a rise in the level of groundwater and a decrease in the shortage of water after this intervention. Households are now able to gather more rainwater owing to the well recharge efforts, which has increased the water level in wells.

	
<p>Discussion with block development officer</p>	<p>Stream bank side protection</p>
	
<p>Production system</p>	<p>Chempattakolam side protection cum renovation</p>



Concluding Remarks:

- The entire Chittoorblock is identified as drought prone area hence many groundwater recharge structures are installed across the block. Activities like pond renovation, stream bank protection and well recharge structures are very much needed because of water scarcity.
- Well recharge works are a great relief for the residents nearby as the region is having water scarcity problems. Drinking water shortage was also reduced due to the implementation of well recharge structures. A considerable increase in the water table level is observed in the project implemented area. Hence, well recharge structures will be promoted in all the households to reduce the water scarcity of the region.
- Dairy and animal husbandry activities are promoted under the project and the block has the highest yield of milk. It is to be highlighted here that this block milk



production is the highest hence, promoting an integrated farming system will sustain the agriculture and related activities in the region.

- Subsidy to install drip irrigation system was given under production system in Chittoor block. But the system was not installed technically because of a lack of technical persons. Mainline directly connected with motor and Fertigation system without any filtrationis installed. This leads to clogging of emitters. Availability of technical personnel before installing technologies must be ensured by the Panchayath.
- While installing rainwater harvesting structures care should be taken to design the filtration unit. During the field visits, it was observed that the capacity of the filtration units was very small with respect to the rainfall intensity of the region. Hence, the roof catchment area along with the rainfall intensity of the area should be considered for setting up of capacity of the filtration unit.

Summary of the Evaluation of Outcomes of PMSKY-WDC Project

District:Palakkad

Date of visit:29.06.2022

1. Project Details

Project No: IWMP-7 Palakkad Batch 4

Name of Block: Chittoor

Sanctioned Area: 6165Ha

Sanctioned Cost (Rs in lakh):924.75

Name of Villages included in the project--Elappully 1, Elapully 2, Pudussery East, Pudussery West, Vadakarapathy, Ozhalapathi, Nalleppilly, Kodumbu



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	12	9.75	Water level increased by 2 m
2	Average depth of water table in tube wells	m	80	78	2 m increase in water column in tubewells
3	Number of groundwater structures (dug wells + tube wells + hand pumps) rejuvenated	nos.	--	650	Additional 346 structures created and 329 were renovated-including farm ponds, check dams etc.
4	Increase in Irrigation potential	ha	--	40.7	40.7 ha of additional area brought under protective irrigation
5	Area of Wasteland brought under productive use (like agriculture, plantation, fodder, etc.)	ha	--	9	9 hectares of barren land brought under productive crops
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	5640	5682	Marginal increase in agricultural crop area
7	Area Under Agriculture Crop <ul style="list-style-type: none"> •Area under Kharif crop •Area under rabi crop •Area under double crop 	ha	3724.71 1810.86 106.70	3752.14 1821.86 108.92	Marginal increase in Kharif area crop
8	Cropping intensity	%	106	109	3 % increase
9	Increase in Yield /ha of crops <ul style="list-style-type: none"> •Rabi crop •Kharif crop 	qt/ha	--	13 5	2 qt/ha



10	Area of horticulture crop	ha	--	595	
11	Employment in agriculture related activities among beneficiaries	Man days	--	11236	16450 mandays of employment generated
12	Employment in non- agricultural sectors	Man days	--	13337	
13	Fodder production	qt	--	25	197 ha of fodder area has improved
14	Fuelwood production	qt	--	--	No data available
15	Number of milch cattle	nos	--	--	Exact data not available. An increase of 8 % due to cattle rearing
16	Milk production	Kl/yr	--	--	Increase of 7 %
17	Duration of flow of water in streams(upto November/December/January/FebruaryMay)		January	March	Two months prolonged flow in streams
18	Improvement of drinking water facility		February	March end	Availability of water till March end
19	No. of persons engaged in ancillary activities like fishery, poultry,rural craftsmanship	nos		30	
20	Number of children enrolled in schools in the project area	nos	--	--	100 % enrollment in schools is noticed in the watershed area.
21	Reduction in migration from rural to urban area in the project area	nos	--	66	Reduction in migration was observed during the project tenure
22	Annual mean household income	Rs.	40000	48000	An increase of Rs. 8000/-



23	<p>Any Other Measurable indicator of impact assessment</p> <ul style="list-style-type: none">➤ 346 rainwater harvesting structures were created and 329 were rejuvenated➤ 40.7 ha area under protective irrigation was provided under the project➤ SHGs assisted: 28➤ 716 number of agricultural equipment's distributed➤ 21 compost pits were allotted to different households in the project area➤ 16450 mandays of employment generated
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Success story

Muttuchira padasekharam chal side protection

Muttuchira padasekharam chal side protection constructed during 2020-21 with a budget of Rs.21,66,197 at Elappully Watershed. The length of side protection is 275m. It was constructed to prevent flood submergence in agricultural land. Silt removing also done for a length of 275 m to increase the capacity of stream. More than 30 acres of land benefitted under this structure. Paddy, coconut and banana are the major crops cultivated in the benefitted area. Under production system free coconut saplings were also provided under the scheme. After construction of side protection, the stream bank stabilized and water entered to the agricultural land prevented. This enables farmers to cultivate crops throughout year so that production will be increased.

