

CHITTUMALA BLOCK (KOLLAM DISTRICT)

Project No: IWMP-5/2013-14

Chittumala is a Block in Kollam District of Kerala established on September 1963. Chittumala is the headquarters of Chittumala block panchayat which encompasses 13 Gram panchayats that form the southern shore of Ashtamudi Lake. As per Census 2011, Chittumala's population is 152973. Out of this, 73048 are males while the females count 79925 here. PMKSY in Chittumala block Panchayat was started in 2013-14. The total area of the project was 3898 ha, spanning across 9 Gram panchayaths (East Kallada, Muntrothuruthu, Mulavana, Panayam, Kundara, Perinad, Perayam, Thrikkaruva, Thrikkadavoor). The project has three micro watersheds namely Kumbalam, Peruman and Kurippuzha. The total outlay of the project was Rs. 467.76 lakhs.

Table 1. Details of the Watershed

S.No	Watershed Name	Code	Area (ha)
1	Kumbalam	7K49a2	2841.99
2	Peruman	7K49a3	2411.56
3	Kureppuzha	7K49a1	2281.27

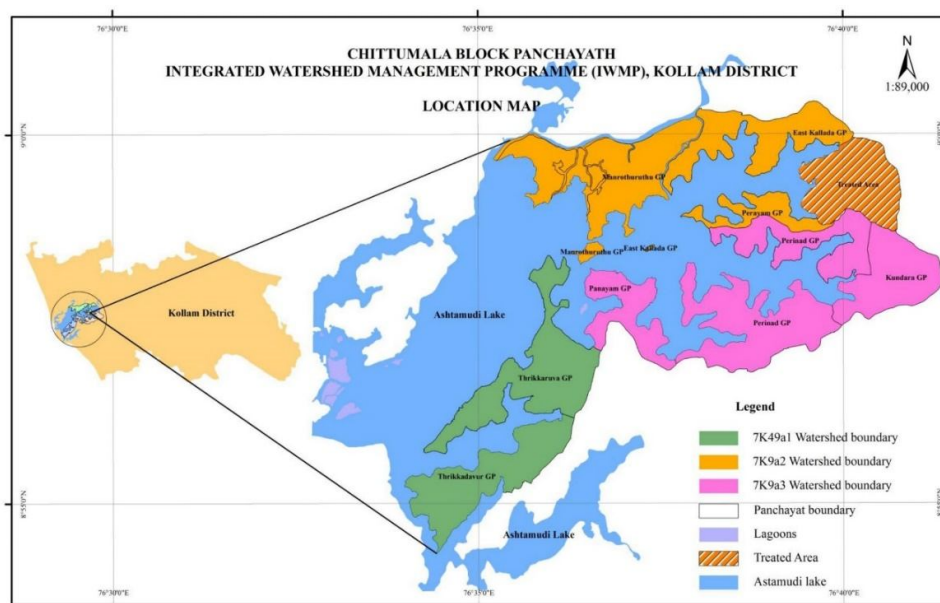


Fig.1 Watershed map of Chittumala block

The project evaluation team from Centre for Water Resources Development and Management (CWRDM), Kozhikode visited the IWMP watershed areas of Chittumala block of Kollam district on 07.07.2022. The team had a discussion with the BDO, Block Panchayat President and Village Extension Officer to know about the perception about the project and implementation. After discussion the team visited the sites.

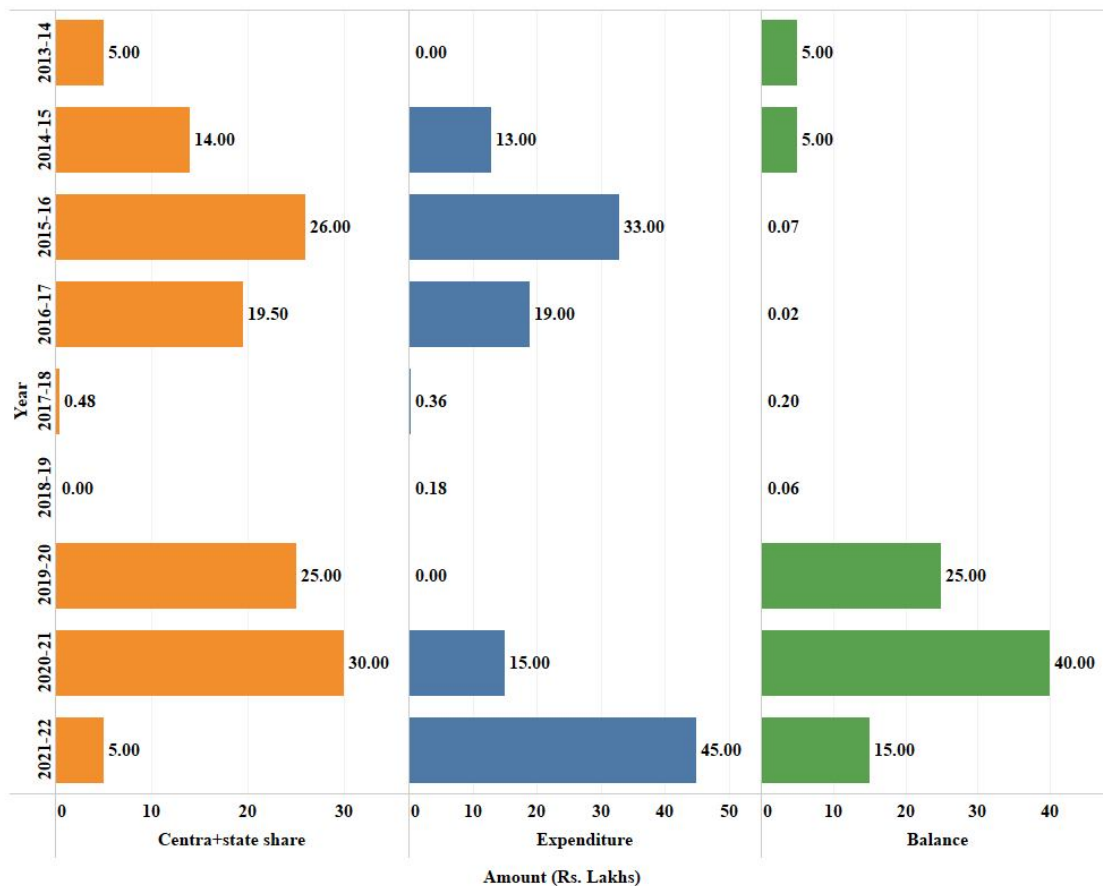


Fig 2: Financial overview of the Project

In general, it was found that the amount received was very less for this project area. Similar to other project areas, here also the amount received is not regular and it was observed that no fund was received during 2018-19 and very less amount was received in 2017-18. The utilization of the amount is also not properly planned by the project team as an amount of Rs.15 lakh has been refunded to SLNA despite a shortage of funds. This irregular transfer of amount had an impact on the planned interventions that were proposed during DPR.

The following work sites were visited by the team.

1. Stream bank side protection

- a) Eranthodu side protection work was carried out during 2020-21 to prevent lake bank as well as Ashtamudi lake water from entering the nearby areas. The total budget of the project was Rs 48,76,201/-. The work was carried out for 200 m on both sides of the stream. Around 300 houses are being protected from entering the flood water and also water stagnation in agricultural land is also prevented. After completing the project, bananas, and other agricultural crops were cultivated in the area.
- b) Kundukulam A and B are the two side protection structures implemented in the project area. Paddy cultivation is the major crop in the area and around 10 acres of land getting benefitted under these structures. Not only does it help in controlling the flood in the area but the structures were used as walkways by the nearby (15) families (daily labours) for daily conveyance.
- c) Kumbalam watershed side protection is one of the mile stone work implemented in Chittumala block. The project was implemented in five phases. Around 200 ha of area getting benefitted under this project and frequency of flood was reduced after this construction in the area.

The side protections are very effective PMKSY Scheme interventions, especially in Kerala State, where the topography of the land is undulating and most of the areas are prone to floods. This intervention helped in reducing the intensity of inundation of the area and thereby avoiding flood incidents. The project is also useful for bringing more area under agricultural practices. Along with protecting the stream, the side protection also prevents pollution and enhances the attractiveness of the channels/banks.

2. Kayar society spring protection

Spring protection structure otherwise called as spring shed constructed at Peruman watershed of Perinad grama panchayat. The structure is located at the junction of three first-order streams. The water stored in the structure is used for domestic purposes mainly during

the summer seasons. Around 300 families surrounding the area use this spring water for their domestic purposes. This spring is a major relief for people during the drought period.

Specifications:

Budget	Rs 1,05,100/-
Capacity	3.3 x0.85x 0.4 m

3. Livelihood Support System (LSS)

Mr. Ganeshan Pillai in Perinand village of Peruman watershed received funds under LSS for agriculture with a 20 % beneficiary contribution. An area of 1 ha is used for cultivating ginger, turmeric and tapioca.

The main element of livelihood activities was giving revolving funds or seed money to the registered groups in PMKSY. The earnings of households in the watershed area increased as a result of livelihood activities. Increased chances for the poor to earn a living through this intervention mainly by increasing production and income, thereby it promotes inclusiveness.

4. Well Recharge

Mr Jayakumar from Manalikara installed roof water harvesting combined with a groundwater recharge structure. The total cost of the structure was Rs. 8000/- with a 10 % beneficiary contribution. They observed an increase in groundwater level and a reduction in water scarcity during the summer months.

The well recharge initiative increased the amount of water in wells compared to before, enabling farmers to collect more rainwater. Water is now easily accessible for drinking and irrigation. The groundwater level in the areawas somewhat increased as a result of these actions. Well recharge has significantly helped to meet the needs of people during periods of severe drought. The wells used to completely dry up in the summer before well recharge operations, but they now have water round the year.

5. Production system

Mrs. Saraswathi from Perinad grama panchayat received 4 goats with a 20 % beneficiary contribution during 2020-21. Their main source of income was agriculture and now they are getting income through goat rearing as well. One of the main components of the watershed development projects under IWMP/PMKSY is PSME-based livelihood activities. It provided an excellent opportunity for self-employment of unemployed people. This component diversifies and increases the production and productivity of the agricultural sector as a whole.



Eranthodu side protection



Kayar society spring protection



Livelihood supporting system



Production system



Summary of the Evaluation of Outcomes of PMSKY-WDC Projects

District: Kollam

Date of Visit: 07.07.2022

1. Project Details:

Project No. Kozhikode: IWMP-5/2013-14

Name of Block -Chittumala

Sanctioned Area (ha): 3898

Sanctioned Cost (Rs in lakh): 467.76

Name of Villages included in the project: East kallada, Muntrothuruthu, Mulavana, Panayam, Kundara, Perinad, Perayam, Thrikkaruva, Thrikkadavoor

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	11.24	10.86	Marginal improvement in groundwater level
2	Average depth of water table in tube wells	m	11.35	11.27	
3	Number of ground water structures (dug wells	nos.	22	64	Increase in

	+ tube wells + hand pumps) rejuvenated				groundwater structures
4	Increase in Irrigation potential	ha	2248	3464	1216 ha increased under protective irrigation
5	Area of Wasteland brought under productive use (like agriculture, plantation, fodder, etc.)	ha	80	98	Nearly 18 ha of wasteland was brought under productive use
6	Change in cropping / land use pattern (i) Area under Agriculture Crop (ii) Area under plantation / forest cover (iii) Area Under Wastelands	ha	2248 127 90	3464 158 82	Area under agriculture is increased
7	Area Under Agriculture Crop (i) Area under Kharif crop (ii) Area under rabi crop (iii) Area under double crop	ha	948 -- 253	1293 -- 268	Increase in area under Kharif season
8	Cropping intensity	%	118	122	Increase of 4 %
9	Increase in Yield /ha of crops (i) rabi crop (ii) Kharif crop	qt/ha	-- 70	-- 130	
10	Area of horticulture crop	ha	604	716	Increase of more than 100 ha
11	Employment in agriculture related activities among beneficiaries	Man days	985	1235	16472 man-days of employment generated
12	Employment in non- agricultural sectors	Man days	2423	6465	
13	Fodder production	qt	2000	22000	
14	Fuelwood production	qt	--	--	No data available
15	Number of milch cattle	nos	2010	6241	Increase in milch cattle (4231)
16	Milk production	Lakh liter/yr	23.9	117.95	

17	Duration of flow of water in streams (upto November/December/January/February....May)		February	March	One month prolonged flow
18	Improvement of drinking water facility		March	April	55 water bodies were rejuvenated
19	No. of persons engaged in ancillary activities like fishery, poultry, rural craftsmanship	nos	9000	14000	
20	Number of children enrolled in schools in the project area	nos	7000	10000	Cent per cent enrollment was noticed in the project area
21	Reduction in migration from rural to urban area in the project area	nos	900	750	Migration reduced during the project period.
22	Annual mean household income	Rs	68000	98000	Increase in income
23	Any other measurable indicator of impact assessment <ul style="list-style-type: none"> ❖ 16472 man-days of employment generated under the project ❖ Rainwater harvesting structures: rejuvenated- 55 ❖ 123 units of production system promoted ❖ SHGs assisted: 2 				

Concluding Remarks

- PMKSY in Chittumala Block Panchayat was started in 2013-14. The total area of the project was 3898 ha. Spanning 9 grama panchayaths covering three micro watersheds namely Kumbalam, Peruman and Kuripuzha. Total outlay of the project was 467.76 lakhs.
- The major activities implemented were the construction of rainwater harvesting structures, well recharge, side protection, pond renovation, stone bund, grow bag and sapling distribution and mangroves planting.
- Side protection works gives more impact on agriculture as well as natural resources conservation. Side protection of Kundukulam A and B prevents soil erosion and increases the cultivable area (10 ha of land converted as cultivable land).
- Drainage line treatments and stream bank protection were taken under the project and many structures visited were in good condition. The farmers are getting benefitted

under stream bank protection works. Kundukulam B side protection work was helpful to the people living in nearby areas. These people previously don't have road facilities, especially during flood periods. Now they are using these bunds as their access to connect with the main road.

- Water bodies like ponds and wells were rejuvenated under the scheme. Totally 17 water bodies were rebuilt and 55 well recharge structures were installed around the project area which led to a notable increase in the groundwater table.
- Under the production system, farmers were provided with seed money to promote agricultural practices. The team visited the production system where group farming was adopted and they were of the opinion that they are getting benefitted from this. The amount sanctioned under seed money may be increased to take up various activities on a large scale.
- Delay in the availability of funds and irregular reception of funds has a burden on the activities that were planned at the time of DPR. Hence, the amount may be given in a consistent manner so that the activities or interventions can be taken at an appropriate time without any hurry in construction activities at the flag end of the project.
- In Kumbalam watershed kakkattukadavu side protection one side was treated (about 10 km) with the available fund. It prevents the flood water from entering one side of the land. But the other side is still affected by the flood and the stream bank is not in a stabilised condition. Hence, proper stakeholder assurance can be taken before undertaking the work to get the full benefit of the project.
- The maintenance of records was not up to the mark at the block level, for instance, shape files of the watersheds, soft copies of the DPR were not available. Hence, a dedicated system is to be created to store all the necessary information about the watershed activities. As it helps in retrieving the data whenever needed.

Success story

Kumbalam watershed kakkattukadavu side protection

Kakkatu kadav is a major tributary of the Kalladayar in the Kambalam watershed of Chittumla block. Over the years, the land was eroded by strong currents, destroying the landscape, living things and households. At that time when soil and other natural resources are being continuously lost, such work had under taken in IWMP, PMKSY project. About 10 km distance was divided into five reaches and a stone bund was constructed to protect the river banks. On environment day, around 300 mangroves were planted and livelihood activities were also done (cattle rearing and goat rearing). Also, local residents raised funds to build a new road connecting the two areas and build a bridge called “Naalumanikkaat” bridge after the completion of side protection. Through this tourism has increased which leads to endless possibilities of village improvement.

