

VENGARA BLOCK (MALAPPURAM DISTRICT)**Project No: IWMP VI/2012-13**

Vengara Project is located in Vengara and Tirurangadi block panchayats in Malappuram District of Kerala. The project comprises nine micro watersheds namely Kutturthodu watershed, (23K8a), Vengarathodu north WS (23K8b), Cherurthodu North WS (23K8c), cherurthodu East WS (23K8d), Vengarathodu south WS (23K8e), Valiyora WS (23K9a), Kadalundipuzha North- Parapur (23K1), Perumpuzhathodu (23K46a) and Kadalundipuzha South –Tirurangadi WS (23K46d). The main part of the project area is located on both sides of Parapanangadi-Manjeri route, Oorakam hills are the north boundary of the project area. Kadalundi River is flowing through the project area. There are 18772 households in the project area and the total population is 109898. The total project cost is Rs. 656.4 lakhs.

Table 1. Details of micro watersheds in the project area

S.No	Name of the watershed	Code	Area (ha)
1	Kutturthodu watershed	23K8a	649
2	Vengarathodu north WS	23K8b	645
3	Cherurthodu North	23K8c	663
4	Cherurthodu East	23K8d	445
5	Vengarathodu south	23K8e	450
6	Valiyora	23K9a	554
7	Kadalundipuzha North- Parapur	23K10a	817
8	Perumpuzhathodu	23K46a	861
9	Kadalundipuzha–Tirurangadi	23K46d	386
Total			5470

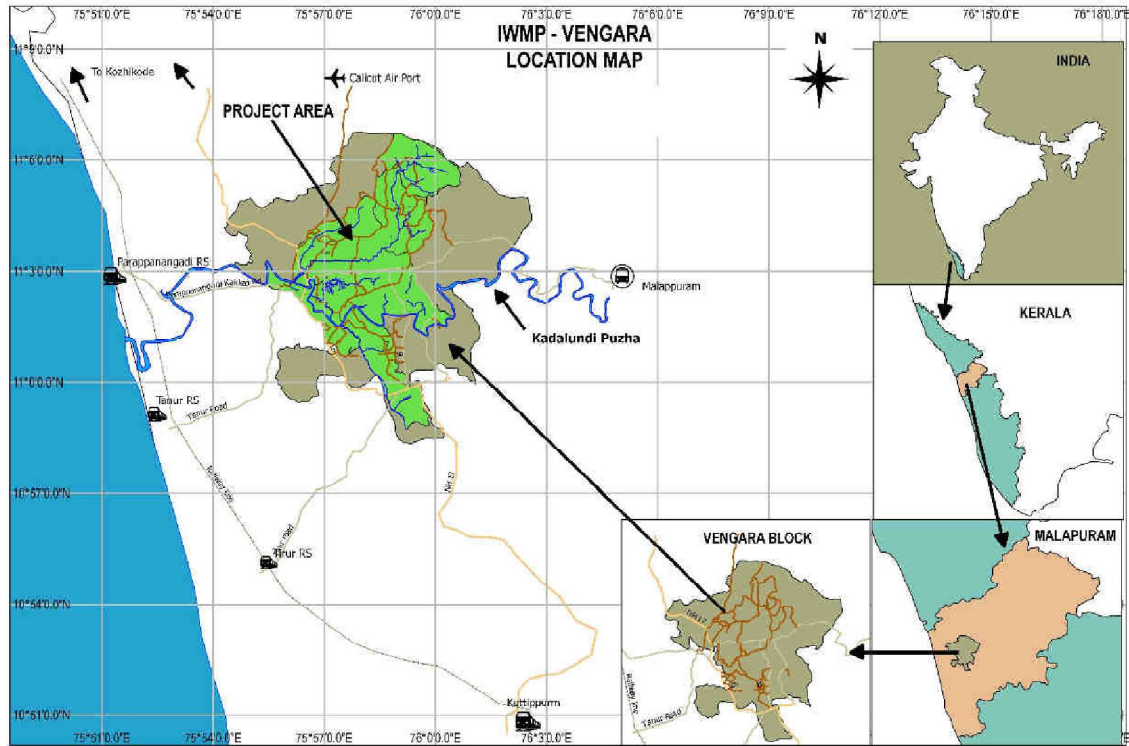


Fig.1 Map of the watershed area

The project evaluation team visited the IWMP areas of the Vengara block on 15.06.2022. After the initial discussion with the block development officer and other officers associated with the project activities, a field visit was planned and the following sites were visited by the team to see the interventions implemented. The team also held a discussion with the local beneficiaries in the respective areas.



Fig.2CWRDM team at BDO office, Vengara.

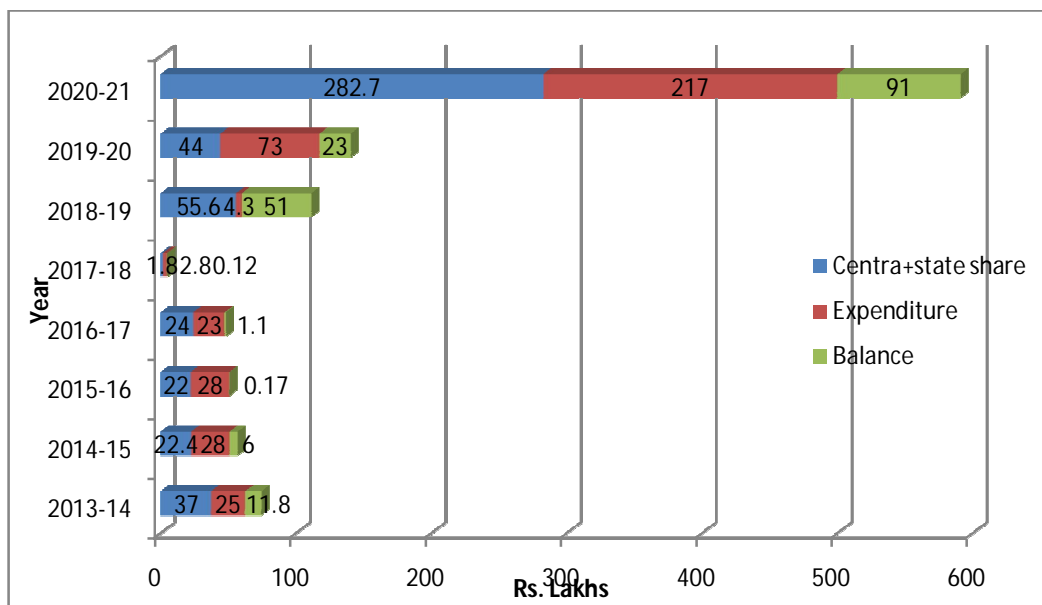


Fig.3 Financial overview of the Project

The financial records revealed that compared to other year, during 2017-18 very less amount of fund was received and more amount received in the last FY of the project. The amount received every year varies and it was irregular, this led to a lack of implementation of all the interventions that were proposed in the project area.

1. Pond renovation

- a) **Pookulam Pond:** Pookulam Pond comes under Cherur thodu north watershed of Kannamangalam Panchayath. It is located 6 KM from Vengara. The total capacity of the pond is 1450 m³ after renovation. It was renovated during 2020-21 with a budget of Rs. 7.8 lakhs. The water from the pond was mainly used for irrigation as well as integrated farming (fisheries). The crops cultivated under the benefitted area are paddy, vegetables and banana. Towards the downstream of the pond, a lined channel of 50m was also constructed along the field to distribute the water. The area that benefitted from this pond renovation is 20 acres.
- b) **Karuthonahammedkuttiyudebommiyil Pothukulam:** It was constructed during 2020-21 at an estimated amount of Rs. 8.5 lakhs. This pond comes under the AR Nagar panchayat. The benefitted area is 5 acres. This pond act as a water harvesting as well as a flood control structure.
- c) **Chalikkal public pond renovation:** Chalikkal public pond renovation is located Vengarathodutherkku watershed (23k8e). The work was carried out during 2018-



19 with a budget of Rs. 2.0 lakhs. Water from the renovated pond is used for both domestic as well as irrigation purpose. The water in the pond is specially used for third cropping in the benefitted area.

- d) **Erimapuzha pond renovation:** Another pond was renovated at Parappur panchayath of Kadalundipuzha North- Parapur watershed during 2018-19. The stored water is used for both domestic as well as irrigation purpose.

2. Establishment of Miyawaki Forest

According to the Miyawaki theory, 162 plants can be cultivated in 1 cent of land and these plants will shoot straight up instead of towards the side for sunlight. In three years these trees will grow 30 feet, and in 20 years they will have the tone and tenor of a 100-year-old forest. Some of the sites visited by the team during field visit are:

- a) **At PPTMYHS School, Cherur:** Totally 440 plants with 22 varieties were planted in 2.5 cent area at PPTMYHS School, Cherur. The school students were also involved in weeding operations. Inputs like fertilizers and pesticides were provided under the project. The total budget of this project is Rs. 1.5 lakhs.
- b) Another Miyawaki was visited at Kannamangalam watershed (23k8d). The plot was developed with a budget of Rs 1.5 lakh. Around 24 varieties of saplings were planted six months before and some medicinal plants were also included in that.
- c) Miyawakki plot of 2.5 cents was established at Valiyora watershed of Vengara panchayat. Totally 14 varieties of different tree saplings were planted in this plot.
- d) Another Miyawakki plot was established at Perumpuzhathodu of Vengara panchayat with 60 varieties of medicinal plants during 2021. The estimated budget of this plot was Rs. 1.5 lakhs for 2.5 cents of area.

This kind of adoption improves the micro climate of the area along with providing tree fruits, medicines etc. Promoting this kind of activities in the region enriches the green cover and provides many associated benefits to the community.

3. Joint liability Group, Pradksha

JLG 'Pradksha', a 6 member group has set up a tailoring unit using the subsidy amount under the project. This work was located at Valliyur watershed of Vengara block. The team

visited their office and reviewed their work. The group makes hand gloves, socks, face mask etc., which was more marketed during the Covid-19 pandemic. They gave positive feedback about the business and were happy to be benefitted from the project.

4. Side protection Structures

- a) **Vettuthodu Side protection wall** located at Vengarathoduvadakku watershed of Kannamangalampanchayat. It acts as a flow regulation structure as well as a side protection wall. The total length of work is 28 m on both sides.
- b) **Amalapadam side protection:** located at Amalapadam of Kadalundipuzha North-Parappur watershed. Around 150 acres of land getting benefitted under this work. The total length of the work is 170m on both sides. The purpose of this structure is flow regulation in the channel as well as flood protection in surrounding fields.

5. VCB at Kutturthodu watershed near Fasiliyar road

This structure comes under Vengara panchayat. Side protection wall was constructed at a distance of 30m on both sides with a budget of Rs. 7.0 lakhs. Silt removal was also done for a distance of 3km. The crops cultivated under the benefited area are vegetables and paddy. A Total of 200 acres of land getting benefitted under this project.

6. Side bund stabilization with silt removal

Channel bund stabilization in the agricultural field was done using Jute materials (geotextiles) for a length of 3km. Around 50 acres of agricultural land from three panchayaths getting benefitted under this structure. Silt removal was also carried out during the installation of geotextile material along the bund. This improves the capacity of the flow of water in the channel.

7. Production system

Under the production system, subsidy was given for animal husbandry at Parappur watershed of Vengara panchayath. Subsidy of Rs. 20, 000/- were given to the beneficiary under this project. Currently, they are having a Jersey and Gir cows for milk production. This improves the household income marginally and also provides livelihood security.

8. Side wall protection at Kuttoor thodu watershed

The total length of work is 2.5 km with a budget of Rs. 5.5 lakhs. Around 300 acres of land are getting benefitted under this work. Silt removal was also carried out during the

implementation. After the implementation of sidewall protection and check dam, the area of cultivable land was converted from fallow land. Some weeds were identified during the visit. It is recommended to maintain the project in convergence with MGNREGS.

9. Roofwater harvesting with groundwater recharge

A roof water harvesting structure connected with groundwater recharge was installed at Perumpuzhathodu of Vengara panchayat. The unit cost for this installation was Rs. 8400/- with a 10 % beneficiary contribution. The rainwater collection tank (300 liter capacity) attached to the system was filled with a layer of filtration materials. The rainwater from the roof collected and entered the filtration tank. The dry leave and other impurities will be filtered and retained in this tank. The water percolates and flows through the outlet which is connected to the open well. Through the system, the water level in the open well increased by 2 m.



Pookulam renovation



Miyawakki at PPTMYHS School, Cherur



Miyawakki at Kannamangalam watershed



JLG Pradksha



Vettuthodu Side protection wall



VCB at kuttur thodu watershed near Fasiliyar road



Kuttoor thodu Side bund stabilization with silt removal



Side wall protection at Kuttoor thodu watershed



KaruthonahammedkuttiyudebommiyilPothukulam



Miyawakki at Valliyora



Livelihood supporting at parappur



Erimapuzha pond renovation



Chalikkal public pond renovation



Amalpadam Side protection along with silt removal
 (Benefitted area 150 acres)



VCB and side protection



Production system at Parappur



Miyawakki



Roofwater harvesting with groundwater recharge

CONCLUDING REMARKS

- Vengara project consists of nine micro watersheds. The interventions implemented in the blocks were Natural Resource Management, Livelihood, Production System and micro enterprises, etc.
- From the field investigations it was identified that ponds, check dams, VCBs, bunds were constructed under the project. The irrigation potential was found to increase in certain watersheds due to the renovation of these structures.
- All the watersheds in the Vengara block observed that there was an improvement in the groundwater table in the wells due to the implementation of recharge structures like ponds, check dams, VCBs, bunds, recharge pits and roof water harvesting.
- Soil erosion during the rainy season from the stream banks was brought under control by the side protection works of several streams in the watersheds under PMKSY project. In addition, the cropping intensity of paddy increased 3 times by double cropping, and farmers' income increased in the watershed areas through increased production.
- Around 25 ha of cultivable wasteland are treated and brought under productive use through check dams, desilting streams/ponds and VCBs. Moreover, some structures are identified with sediments and need to carry out some maintenance work. It is better to carry out maintenance of these structures periodically by using MGNREGS labour in convergence mode.
- A total of 136 SHGs were assisted through the project and given financial support for their activities like biodegradable making napkin units, cloth bags, hand gloves, face masks, etc. More capacity building and training can be given to promote more marketing opportunities to the SHGs. They can earn more money through online business without any mediators.
- Under the project various IEC activities were taken like drawing pictures, and messages related to PMKSY activities on the walls of the block panchayath. This activity looks to attract people as it is eye catchy, hence it is better to use painting works mainly to create awareness of certain schemes and activities.
- Activities like strengthening of canal bank using geotextile materials, rainwater harvesting pits, cattle sheds, goat rearing were carried out in convergence with MGNREGS. This has improved the socio-economic status of beneficiaries in the

project area. Hence, it is better to continue these kinds of convergence activities and if possible, to scale up or include more activities in the future.

- Establishment of the Miyawaki forest system was promoted and adopted on a larger scale in the watershed area. Vengara block Panchayath is the first block panchayath in Malappuram district to undertake Miyawaki afforestation under this scheme. The yield from the Miyawaki was early and the scope of medicinal crop cultivation is possible. Hence, the promotion of medicinal crop cultivation through Miyawaki will increase medicinal crop production.
- Drinking water shortage was fixed to a certain extent by the installation of rainwater harvesting tanks and well recharge units. More number of such units will solve the problem of drinking water shortage on a regular basis. However, some of the well recharge structures and water harvesting units implemented under the scheme were not managed properly by the end user. Hence, maintenance of these structures must be given importance and can be monitored by the respective authorities.

Success story

Development of Kuttoorthodu watershed- 23K8a

Kuttoorthodu Watershed comprising of 649 Ha in AR Nagar, Vengara & Knnamangalam Grama panchayaths with 124 ha area covered by paddy fields. It was identified that many areas left as barren land and around 5 Km long “Kuttoorthodu” was filled with silt, causing water scarcity in summer and flooding during rains. Vengara Block Panchayath undertook the rejuvenation work of Kuttoorthodu in convergence with MGNREGS. The main work carried out was desilting and strengthening of banks using coir geotextiles. Through this around 135 farmers benefitted and the second crop of paddy became possible. Meanwhile, 85 acres of barren land were brought under cultivation, which leads to an increase in crop production in the project area.



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

District: Malappuram

Date of Visit: 15.06.2022

1. Project Details:

Project No: 6

Name of Block -Vengara

Sanctioned Area (ha): 5470

Sanctioned Cost (Rs in lakh): 656.4

Name of Villages included in the project: Vengara, Parappur, Kannamagalam, Eadaricode, Thenmala, A R Nagar and Oorakam

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	9.1	7.1	2 m increase in water table. water table in Pre monsoon 13.01 m and post monsoon 9.17 m
2	Average depth of water table in tube wells	m	-	-	Data not available
3	Number of groundwater structures (dug wells + tube wells + hand pumps) rejuvenated	nos.	-	2107	well recharging- 2104, Rain water harvesting tank -1, well renovation- 2
4	Increase in Irrigation potential	ha	182	292	110 ha increase
5	Area of Wasteland brought under productive use (like agriculture, plantation, fodder, etc.)	ha	465	855	390 ha of wasteland 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	438 4320 465	652 4906 855	



7	Area Under Agriculture Crop (i) Area under Kharif crop (ii) Area under rabi crop (iii) Area under double crop	ha	450 -- 60	730 -- 180	
8	Cropping intensity	%	103	113	cropping intensity increased
9	Increase in Yield /ha of crops (i) rabi crop (ii) Kharif crop	qt/ha	- 18	- 42	Increase in yield was noticed
10	Area of horticulture crop	ha	152	258	Area of Banana , mixed & exotic fruits changed from 150 ha to 252 ha and 2 ha to 6 ha respectively
11	Employment in agriculture related activities among beneficiaries	Man days	400000	250000	46000 mandays of employment generated under the project
12	Employment in non- agricultural sectors	Man days	125000	300000	
13	Fodder production	Qt/yr	42000	230000	
14	Fuelwood production	qt	-	-	Data not available
15	Number of milch cattle	nos	1546	1698	Marginal increase in milch cattle number
16	Milk production	Kl/yr	3710	4815	Increased
17	Duration of flow of water in streams (upto November/December/January/February....May)		Feb	April	Two months increased flow of water in streams
18	Improvement of drinking water facility		Feb	April	Two months enhanced water availability
19	No. of persons engaged in ancillary activities like fishery, poultry, rural craftsmanship	nos	40	35	Poultry unit increased, Fishery not changed, Craftsmanship



					decreased.
20	Number of children enrolled in schools in the project area	nos	26500	25500	All children enrolled in schools in the project area
21	Reduction in migration from rural to urban area in the project area	nos	-	-	Reduction in migration experienced during the project period.
22	Annual mean household income	Rs	65000	75000	Increase of Rs. 10000/-
23	Any other measureable indicator of impact assessment i) SHG Formed /assisted- 136,Strengthened SHGs by biodegradable making napkin unit which is an emerging product ii) Value added the units of milk,meat, fruits & vegetables and tuber crops iii) No of Miyawaki units started- 18(17 horticulture units, 1 medicinal plant unit) iv) No. of farmers benefitted- 6160 v) IEC activities- Miniature watershed model constructed in Vengara block panchayat compound which covered almost all activities of Well and well recharging, Rainwater Harvesting Tank, Cattle and cattle shed, check dam, canals, hills, plantations and biogas etc.				