

TAMIL NADU'S
ARIYANENDAL
IS A MODEL VILLAGE
FOR GREYWATER
MANAGEMENT



सत्यमेव जयते

Government Of India



GREY WATER MANAGEMENT BEST PRACTICES TAMILNADU

**District Rural Development Agency (DRDA),
Ramanathapuram,
Government of Tamil Nadu**

ARIYANENDAL VILLAGE PANCHAYAT

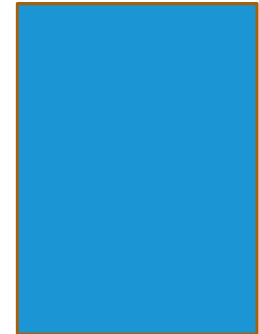
BLOCK: PARAMAKUDI | DISTRICT: RAMANATHAPURAM | STATE: TAMIL NADU

Owing to the proactive Initiatives undertaken by the **Ariyanendal Panchayat**, the village today is a model village with 100 percent end-to-end management of greywater. With the ongoing Implementation of the Jal Jeevan Mission Project, the village also has 100 percent of access to **Safe Drinking Water**.

- Situated in the Aspirational District of Ramanathapuram on the *Madurai Rameswaram National Highway*, *Ariyanendal Village Panchayat* is one of the 39 Village Panchayats in **Paramakudi Block**.
- It is home to **761** Families and a Population of **2,560** spread across two Hamlets namely **Ariyanendal** and **Vagaikulam**.
- From unpleasant Living conditions, the village has transformed into a **Green** and **Visually Clean Village** that has made the Community Proud.



Har Ghar Jal
Jal Jeevan Mission



PROBLEM OF STAGNANT GREYWATER

A Greywater Management: Problem

- Approximately daily 100 Kiloliters of Greywater were generated in the village.
- There was no proper Disposal Structure Mechanism available for Wastewater Management in the village panchayat and the Greywater was stagnating in streets and open spaces and water bodies. This was causing inconvenience to motorists and pedestrians alike.
- Greywater often overflowed into either of the eight narrow and disorganized roads that made Panchayat Representatives and the Public Complain to the Ramanathapuram District Management.
- Providing Individual Soak Pits posed a bigger concern owing to the Unavailability of land in households.

ACTION TAKEN BY PANCHAYAT

To address this, the Ramanathapuram District Administration with the support of Village-level Motivators and Enthusiastic Individuals, Organized a transect walk that concluded with a **Special Grama Sabha** in which the Village Panchayat President, Ward Members, and the entire village Community Participated.

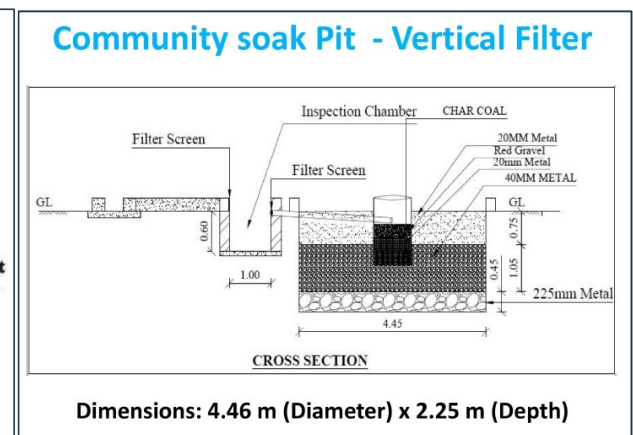
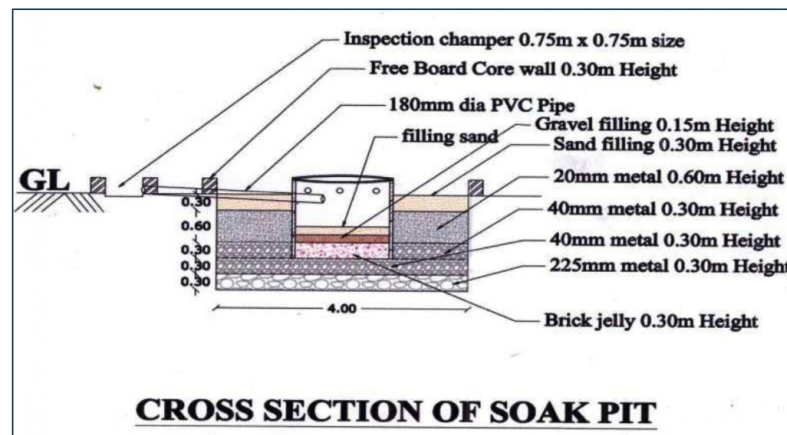
A Village **Waste Water Map** was drawn, and all Households were plotted on the Map with the Active Inputs of Residents.

A Total of **410 Houses** were Identified on the south side of the National Highway and **273 Houses** on the north side.

Thereafter, a mapping of Sewage Sources and Destination Points was done, followed by the drawing of a **Village-level Greywater Management Plan**.

Finally, a needs assessment was carried out and the actual number of following **Soak Pits requirements** were Identified

- Individual Soak Pits
- Community Soak Pits
- Vertical Soak Pits
- Horizontal Soak Pits, and
- Drainage Works



SOAK PIT PROCESS



EARTH WORK – 4m Diameter and 1.8m Depth



255mm metal up to 0.3m Height



1st filter Medium Inside Ring



2nd Filter Medium Inside Ring



3rd Filter Medium Inside Ring



Working Condition



Working Condition



2 Level Screening & Filter Media in Horizontal Filter



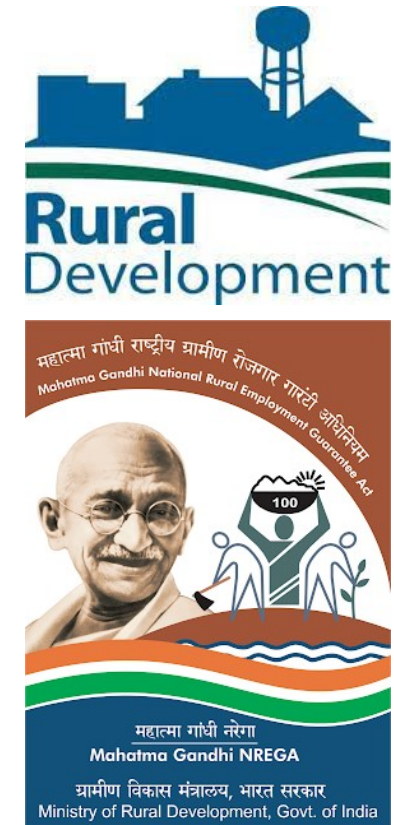
SUPPORT FROM DRDA & MGNREGS

The District Rural Development Agency (DRDA) Lays Sewage Lines:

- DRDA took up a Special Initiative to saturate the Greywater demand works for gap closure from the executive schemes.
- The Agency was able to lay 1100 meters of Sewage Pipelines and Vertical Public Suction Pits were erected at 5 places at the end point of the Pipelines to carry the Greywater to the Community Soak Pits.
- This resulted in the narrow streets becoming cleaner.

Mahatma Gandhi National Rural Employment Guarantee Scheme:

- Additionally, all the narrow lanes were laid with Pavement Blocks under MGNREGS, 15th Finance Commission, and other Schemes that resulted in a complete makeover and a new look for all streets.
- Further, for the 285 households that had sufficient available land **for construction of Individual soak pits** and 45 Community Soak Pits were constructed under MGNREGS Scheme.



ACTION TAKEN

A Greywater Management: Best Practice

- Ariyanendal Panchayat in Ramanathapuram District is one of the Panchayats where Grey Water Waste Management has been successfully implemented.
- Before 2019-2020, this Panchayat witnessed water-borne diseases and health hazards since sewage water was let into the streets and mixed with drinking water sources.
- The water was let into the tank situated on the southern end of the panchayat and the community sanitary complex on the National Highways.
- This too did not provide any succor and again health hazards loomed large due to excessing water drainage created at a single source by the villagers.
- Hence 5 vertical soak pits near the tank bund south of the village and one vertical soak pit near the Community Sanitary Complex on the National Highways were constructed under MGNREGS 2020 - 2021 and the sewage water was successfully drained into the soak pits thus ending the long-standing problem of all the households.
- Selection of Grey Water Management under Saturation Mode: This Village panchayat was selected by the District Rural Development Agency to attain self-sufficiency under Solid Waste Management during 2020 - 21. As such, Ariyanendal was selected for surveying under Solid Waste Management for the years 2020-21.
- During this experience, it was found that kitchen gardens were already in operation in 83 households and the filtered grey water discharged from these houses was let into the gardens thus successfully managing the sewage water under Grey Water Management.





MODEL VILLAGE PANCHAYAT

Replication of Best Practices

- After Successful grey water management in Ariyanendal panchayat, Ariyanendal village become a role model village for this district. The DRDA declared Ariyanendal Panchayat as a “**MODEL VILLAGE PANCHAYAT**” under the aegis of the Honorable Prime minister’s Swachh Bharat Mission. The vision of the honorable Prime minister was taken down to all the 11 blocks of Ramanathapuram District. In line with Government of India instructions and the vision of the honorable Prime minister “Jan Bhagidari” (Community participation) was taken up and an exposure visit was organized for all the elected representatives of the district. DRDA, panchayat president along with active public participation identified two village panchayats per block i.e., 22 village panchayats in this district for the year 2021-2022 to be declared 100% grey water management village panchayat. DRDA has given priority allocation for these 11 blocks and in the process of declaring 22 village panchayats are as model village panchayats.
- Director of Rural development instructed to test the quality of water before and after the lifting of treated sewage water into the water bodies.
- Approximately 100 Kilo Litre of water is generated as Grey Water in this village.
- Due to the Grey Water Management Systems 100 Kiloliters water is purified through Soak pits which leads to an increased water table in the village.

MODEL VILLAGE PANCHAYAT

Feedback from President of Grama Panchayat

The President of Grama Panchayat was elected by the Village people.

The Village panchayat people were complaining of wastewater flow in the street, leading to various diseases

Our panchayat representatives approached the Government department continuously for implementing grey water management in our village.

Then DRDA supported in the aspects of financial, training, and implementation of the soak pits, PVP pipeline for drainage, kitchen gardens etc.

Also, the village people made a significant monetary contribution for implementing these initiatives like providing the space for community soak pits.

Now the grey water management leads to recharge the ground water. Village looks like a pleasant and a model village now.



FUNDING SUPPORT

Gray Water Management facilities created from various schemes

Out of 761 Households, we have covered 675 households with various schemes, and the rest of the 83 Households already facilitated under won kitchen Garden. Now 100% covered all the households.

Sl. No.	Work Name	Scheme Name	Year	Number of Work Taken up	Estimate Cost in Rupees	Total Estimate Cost in Rupees	Number of Households Covered
1	Construction of open Drainage	Panchayat General Fund	2012-2013	1 (1 Streets, 100 Meter)	2,00,000	2,00,000	40
2	Construction of Drainage through PVC Pipeline with Junction Box	Village People and PRI Member contribution	2019-2020	1 (8 streets, 1100 Meter)	6,50,000	6,50,000	240
3.	Construction of Individual Household Soak Pit	MGNREGS	2019-2020	10	8,500	85,000	10
4.	Construction of Individual Household Soak Pit	MGNREGS	2020-2021	275	9,300	25,57,500	275
5	Construction of Drainage through PVC Pipeline with Junction Box	Panchayat Union General Fund	2020-2021	1 (3 streets, 160 Meter)	3,00,000	3,00,000	48
6	Construction of Drainage through PVC Pipeline with Junction Box	Panchayat Union General Fund	2021-2022	1 (3 streets, 180 Meter)	3,00,000	3,00,000	65
	Total					40,92,500	678

FUNDING SUPPORT

Construction of Vertical Filters at the end of the drainage points

Sl. No.	Work Name	Scheme Name	Year	Number of Work Taken up	Estimate Cost in Rupees	Total Estimate Cost in Rupees
1	Construction of Community Soak Pit (Vertical Filters)	MGNREGS	2019-2020	1	1,27,000	1,27,000
2			2020-2021	8	1,27,000	10,16,000
3.			2021-2022	3	1,30,000	3,90,000
	Total			12		15,33,000

Construction of Community Soak Pit in every Public Place in Public Tap, OHT, and Other places

Sl. No.	Work Name	Scheme Name	Year	Number of Work Taken up	Estimate Cost in Rupees	Total Estimate Cost in Rupees
1	Construction of Community Soak Pit	MGNREGS	2019-2020	15	10,300	1,54,500
2			2020-2021	30	12,500	3,75,000
	Total			45		5,29,500

Ariyanendal Village Panchayat

By all these proactive initiative taken by Ariyanendal village panchayat.

Today Ariyanendal has become a model village Panchayat with 100% end to end management of grey water.

With the ongoing Jal Jeevan Mission project in their village, now Ariyanendal village, have got 100% access to safe drinking water and 100% clean and safe environment.

An unpleasant Ariyanendal village on National Highway has been transformed into a green, neat and beautiful village.

Paramakudi Block Ariyanendal Village Panchayat

Video Link

https://drive.google.com/file/d/1_WU5Pcrben4oxzMQzfZMgJZ7iK2ojwEi/view

THANK YOU

The village of Ariyanendal now has a 100% clean and safe environment. Ariyanendal village, which was undesirable on the National Highway, has been transformed into a clean, elegant, and beautiful village.

Navneethan S, District Coordinator, District Rural Development Agency (DRDA), Ramanathapuram,
Government of Tamil Nadu