

**Establishing Rainwater Harvesting / Aquifer Recharging Structures in Public Building and Selected Households in Amboori Village, Thiruvananthapuram**

**(Agreement No. DoECC/AEO2/CC/1680/2019)**

**FINAL TECHNICAL PROJECT REPORT**

*Submitted by:*



**Dr. Sabu Joseph**  
**Professor**

**DEPT. OF ENVIRONMENTAL SCIENCES**  
**UNIVERSITY OF KERALA**

*Submitted to:*



**DIRECTORATE OF ENVIRONMENT AND CLIMATE CHANGE (DOECC)**  
**GOVERNMENT OF KERALA, THIRUVANANTHAPURAM**

**MAY 2023**

**1.1 Title of the Project:**

**Establishing Rainwater Harvesting / Aquifer Recharging Structures in Public Building and Selected Households in Amboori Village, Thiruvananthapuram**

**1.2 Sanction order No:**

**(Agreement No. DoECC/AEO2/CC/1680/2019)**

**1.3 Name and Address of PI:**

Dr. Sabu Joseph  
Professor  
Dept. of Environmental Sciences  
University of Kerala, Kariavattom  
[jsabu2020@gmail.com](mailto:jsabu2020@gmail.com)

**1.4 Total Budget Outlay :Rs. 20,90,000/-**

**1.5 First instalment released : 8,36,000/-**

**1.6 Second instalment released : 6,69,575/-**

**1.7 Date of starting of the project : 28/01/2021**

**1.8 Duration of the project : Two years and two months**

**1.9 Period of study: 28/1/2021 to 06/04/2023**

**2.1 Introduction**

Village Adoption means to work along with the community at the grass root level, while enabling / empowering them for pursuing the goal of development of the village in line with the Sustainable Development Goals and learning as to what works and what does n't and evolve a model of village development for replication and trainings.

The Village Adoption study provides an opportunity to understand the factors that are responsible for under-development in a village, despite plethora of programmes /schemes in vogue. They also get familiar with the interventions, participatory interaction, understanding the prevailing situations, mobilization of community, initiate participatory processes, establishing linkages among line departments etc. which are likely to strengthen the process of development and ensure poverty reduction and strengthen natural resources management especially water, soil and forest

management. The process of Village Adoption is thus an experimentation and involvement of faculty members, researchers and students of a university to drive the process of development in a selected village especially from a rural area.

The village adoption study envisages integrated and holistic development of village or cluster of villages selected on a micro/macro watershed basis, on an Action Research mode. The village adoption provides an opportunity to academicians, policy makers and civil society, to get sensitized and understand the problems and social dynamics that exist at the grass root level and assimilate the facilitating/catalyzing factors responsible for building sustainable and cohesive communities through inspiring, igniting, educating and enabling them to develop by utilizing multiple opportunities with special focus on disadvantaged sector. The village adoption will also empower the faculty for better training, research and thus rural development.

The Dept. of Environmental Sciences, University of Kerala are involved in research, action research, consultancy and training programmes in various domains of environment, particularly water and soil with their pollution and conservation studies etc. This broad stream of activities, especially research, enables the faculty members to come out strong on theoretical aspects. However, the expertise gained at universities should be transferred and shared to the rural sectors to empower the rural population as envisaged by the University Grants Commission.

## **2.2 Objectives of the Project**

### **Village Adoption involves:**

- To inspire the rural communities to dream, plan, mobilize forces and resources for sustainable development of each member who can realize his/her full potential and create such ecosystem for positive behavioral transformation
- The plan will cover water resources management, natural resource management, waste to wealth, capacity building, knowledge dissemination, community mobilization etc.
- To establish rainwater harvesting structures in selected houses and public buildings (n= ~100) of Amboory Panchayaths to recharge aquifer in water scarcity regions, and hence for sustainable management of groundwater resources.
- To promote rainwater harvesting and well recharging in rural communities.

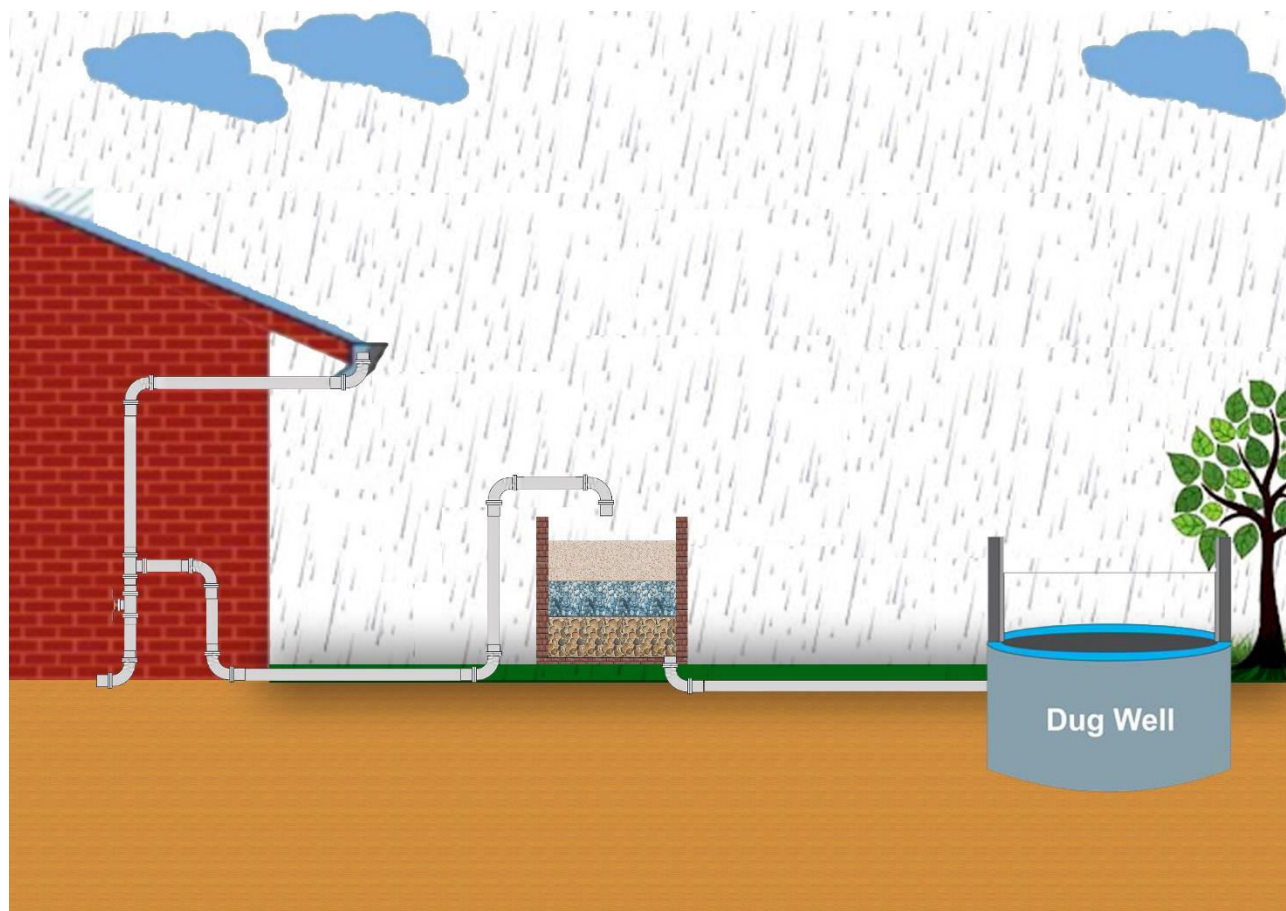
## **2.3 Scope of the Project**

This project aims in increasing rain water harvesting in households in the water scarce regions of

Amboori village. Rain water harvesting through recharge of wells can accelerate groundwater table and will in turn reduce water scarcity during dry summer season. This will help the people of village to cope with the changing climate. This is an ongoing project and need to do rainwater harvesting in some more 100 houses.

## 2.4 Materials and Methodology

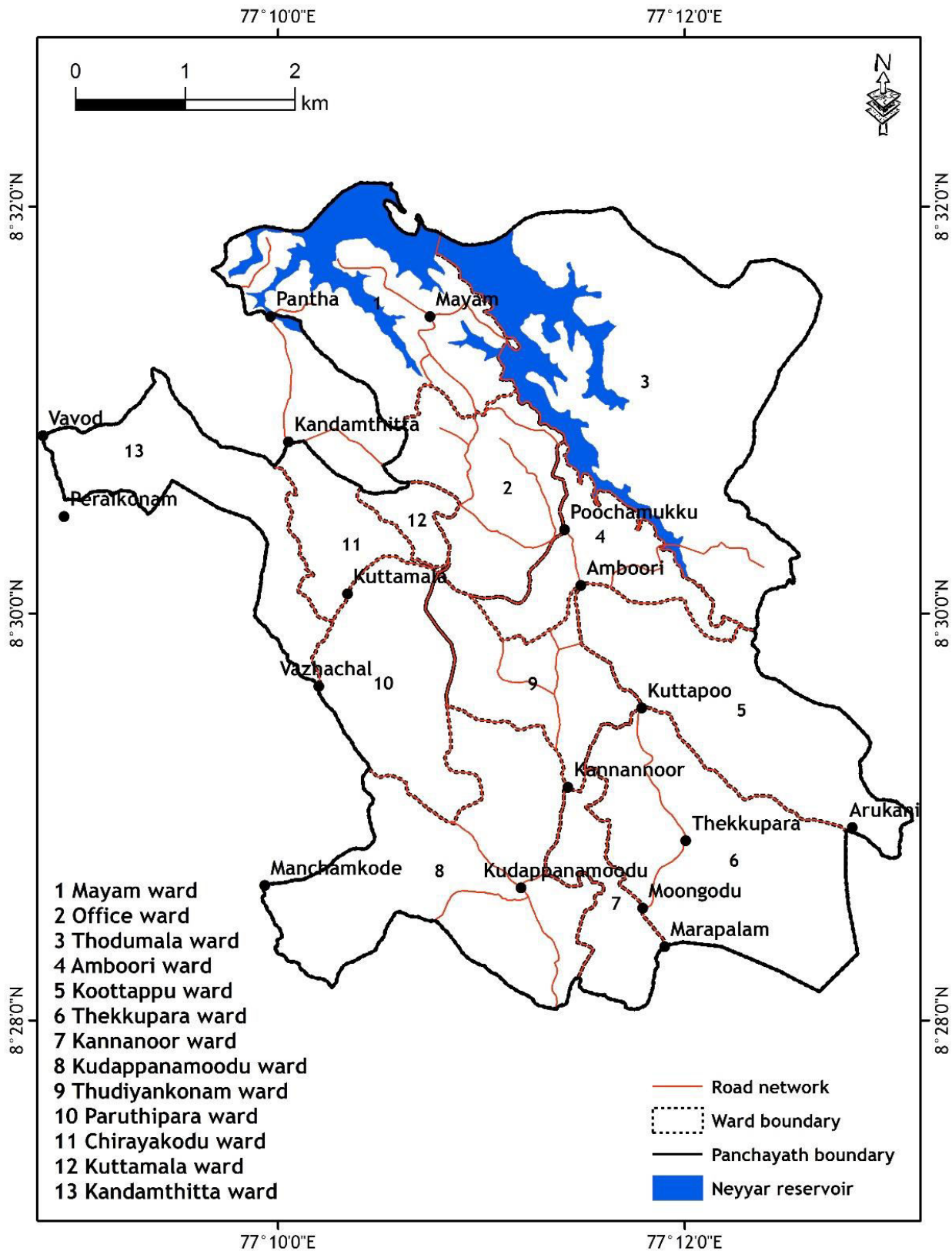
### Model Rainwater Harvesting structures



***Figure 1.1 Model of Rainwater Harvesting Structure implemented at Amboori Village.***

The structure consists of a pre-cast ferrocement filtering unit of 75” height and 70” diameter made up of 50 x 50 cm weld mesh 1 layer and ½ x ½ “ chicken net 2 layers (outside and inside) with three coat plastering. It is partially filled with materials like metal – 10 cm thickness, charcoal- 10 cm thickness and chips metal – 10cm thickness. A top cover is also there. The roof top water is directed into this structure through a 2” PVC pipe and another 3” PVC pipe connects the outlet of filtering unit and it is directed into the bottom of the well.

**Study Area:**



Amboory village (Area= 38km<sup>2</sup>) in Thiruvananthapuram district is selected as the study area. The activities cover steps to restore ecological balance through water conservation, enhance water table through ground water recharge and ensure safe and quality drinking water. About hundred houses in the Amboori village will be selected for the rainwater harvesting. With the permission of panchayaths rainwater harvesting by means of aquifer recharge will be done. The domestic wells and geology of the area of the selected houses will be investigated by a geologist/hydrogeologist for its suitability for aquifer recharging. The structures will be done in collaboration with the trained persons from 'Jalanidi', Govt. of Kerala. This will enable overall improvement in quantity of water availability.

**Criteria used to select houses/public buildings in consultation with Panchayath authorities:**

1. The house should belong to BPL category and accessibility to house should be present.
2. There should be a dug well of considerable depth (>25 ft. depth).
3. Building should be suitable for fitting rainwater pipes and dug well should be near to it.
4. The terrain should be gentle slope to flat terrain.
5. Preference should be given to water scarcity regions of panchayath.
6. Preference should be given to the ward or regions adjacent to forest area.

# PHASE - I

### List of Project Beneficiaries – First Phase of Project

<b>Sl.No</b>	<b>Project No.</b>	<b>Name and Address of Beneficiary</b>	<b>Ward</b>
1.	AMB-01 AMB/01/01	Moncey Jijo Kunneil Veedu Njavarakkad, Mayam P.O. Mob. 8943895597	Mayam
2.	AMB-06 AMB/02/01	Suja Akhil Nivas Thattamukku Colony Mayam P.O. Mob. 9645648940	Office Ward
3.	AMB-07 AMB/02/02	Moly George Puthanparambil Mayam P.O. Mob. 9745001573	Office Ward
4.	AMB-08 AMB/02/03	Meshamma Parakkal Veedu Mayam P.O Mob. 8606082269	Office Ward
5.	AMB-09 AMB/02/04	Samuvel P.K. Puthanparambil Mayam P.O. Mob. 9020137533	Office Ward
6.	AMB-10 AMB/02/05	Panchayath Common Well	Office Ward
7.	AMB-11 AMB/02/06	Panchayath Common Well	Office Ward
8.	AMB-12 AMB/02/07	Jose Thadathukayath Kurishumala, Amboori P.O. Mob. 7902627231	Office Ward
9.	AMB-13 AMB/02/08	Georgekutty Kurishumala, Amboori P.O. Mob. 9447161123	Office Ward
10.	AMB-14 AMB/03/01	Usha Usha Bhavan Chakkappara Mob. 892110571	Thodumala
11.	AMB-14 AMB/03/02	Omena Swaraswathi Thadatharikathu Chakkapara, Mob. 9488105421	Thodumala
12.	AMB-19 AMB/04/01	Saritha Puthanpurackal Amboori P.O. Mob. 9961356390	Ambori



13.	AMB-20 AMB/04/02	Jose Thomas Puthanpurackal Amboori P.O. Mob. 9496391065	Ambori
14.	AMB-21 AMB/04/03	Philominamathew Churlonickal Amboori P.O. Mob. 9446331352	Ambori
15.	AMB-22 AMB/04/04	Stella Dravyathirtham Amboori P.O. Mob. 9446807893	Ambori
16.	AMB-24 AMB/05/01	Thankamani Thochalil Veed,Kuttappu Aamboori P.O Mob. 9895629733	Kuttappu
17.	AMB-25 AMB/05/02	Fahath Fahath Mansil Thekkupara P.O. Shurakkani Mob. 9489242268	Kuttappu
18.	AMB-29 AMB/06/01	Prabhulakumar B. Maruthuvela Veed Thekkupara P.O. Thekkupara Mob.	Thekkupara
19.	AMB-30 AMB/06/02	Joy Petter Thadathil House Thekkupara Mob.	Thekkupara
20.	AMB-31 AMB/06/03	Mullasheri Colany (Panchayath Common Well)	Thekkupara
21.	AMB-32 AMB/06/04	Leela Sudhivelasam Thekkupara P.O.	Thekkupara
22.	AMB-33 AMB/06/05	Pushpalatha Vineetha Bhavan Thekkupara P.O. Mob. 7902849753	Thekkupara
23.	AMB-69 AMB/06/06	Saju Kulamankuzhi Thekkupara P.O.	Thekkupara
24.	AMB-34 AMB/07/01	Sujithajayan Thanmayabhavan, Nellikamala	Kannannor
25.	AMB-39 AMB/08/01	Daisy Roadarikathu Veed Nellikamala, Mob. 9946592738	Kudappanamood
26.	AMB-40 AMB/08/02	Pathrose Thadatharikath Veed Nellikamala, Mob. 9744759047	Kudappanamood

27.	AMB-41 AMB/08/03	Sandhya Sandhya Bhavan Kavumpuram, Nellikkamala Mob. 9633795736	Kudappanamood
28.	AMB-44 AMB/09/01	Joseph Cheriyapathmathil Thudiyamkonam Mob.9633612725	Thudiyamkonam
29.	AMB-45 AMB/09/02	Sureesh Manalivelaakam Thudiyamkonam Mob. 9846872154	Thudiyamkonam
30.	AMB-46 AMB/09/03	Reeba Raju Achu Bhavan Amboori P.O. Mob. 8129923101	Thudiyamkonam
31.	AMB-49 AMB/10/01	Aswathy Aswathy Bhavan Ayyaramkuzhi Mob. 9747311346	Puruthippara
32.	AMB-50 AMB/10/02	Kumari Ayyaramkuzhi Kuttamala P.O. Mob. 9947858345	Puruthippara
33.	AMB-51 AMB/10/03	Anitha Snehabhavan Ayyaramkuzhi, Mob. 9400298082	Puruthippara
34.	AMB-54 AMB/11/01	Saju Sreeja Bhavan Mannakonam Cherayakkod, Kuttamala P.O, Mob. 9847419061	Cherayakkod
35.	AMB-55 AMB/11/02	Chandran Siju Bhavan Cherayakkod, Kuttamala P.O, Mob. 9747271697	Cherayakkod
36.	AMB-56 AMB/11/03	Zaker Binzelamanzil Cherayakkod, Kuttamala P.O, Mob. 9961772725	Cherayakkod
37.	AMB-57 AMB/11/04	Sinaba Roadarikath Veed Kuttamala P.O. Kuttamala	Cherayakkod
38.	AMB-59 AMB/12/01	Vijayan Nedumpulluthadathil Kuttamala P.O.. Mob. 9846959681	Kuttamala
39.	AMB-60 AMB/12/02	Ravindran Swathi Bhavan Nedumpullu, Kuttamala P.O. Mob. 7593919119	Kuttamala

40.	AMB-61 AMB/12/03	Sarasamma Roadarikathu Vedu Nedumpullu Mob. 8113847583	Kuttamala
41.	AMB-62 AMB/12/04	Titus Nedumpullu, Kuttamala P.O. Mob. 8943303859	Kuttamala
42.	AMB-64 AMB/13/01	Rajesh Idavachaal, Mob. 9605247583	Kandamthitta
43.	AMB-65 AMB/13/02	Kamalam Kakkanavela Veedu Peshakkonam, Idavachaal P.O., Mob.9605893352	Kandamthitta
44.	AMB-66 AMB/13/03	Vidhyadharan Panchivela, VazhichaalVeedu Mob. 9495405837	Kandamthitta

Prof. Sabu Joseph  
PI, Project of Rainwater Harvesting  
Dept. of Env. Sciences

**Dr. SABU JOSEPH**  
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President  
Amboori Panchayath

**PRESIDENT**  
Amboori Grama Panchayat  
Amboori P.O.

## Portrait of the selected Dug wells

Sl.No	Project No	Ward	Location		Depth of the Well (M)	Water table level (M)	Remarks
			Lat	Long			
1.	AMB-01 AMB/01/01	Mayam	08.51965	77.18364	12.20	10.40	Laterite bed
2.	AMB-06 AMB/02/01	Office Ward	08.51327	77.18171	15.40	08.22	Laterite bed
3.	AMB-07 AMB/02/02	Office Ward	08.51639	77.18318	07.60	06.20	Laterite bed
4.	AMB-08 AMB/02/03	Office Ward	08.51679	77.18411	07.40	05.50	Laterite bed
5.	AMB-09 AMB/02/04	Office Ward	08.51594	77.18621	08.20	07.30	Laterite bed
6.	AMB-10 AMB/02/05	Office Ward	08.51410	77.18511	12.19	11.58	Laterite bed
7.	AMB-11 AMB/02/06	Office Ward	08.51410	77.18511	12.19	11.58	Laterite bed
8.	AMB-12 AMB/02/07	Office Ward	08.51211	77.18563	10.66	09.14	Rocky bed
9.	AMB-13 AMB/02/08	Office Ward	08.51211	77.18563	09.14	6.57	Rocky bed
10.	AMB-14 AMB/03/01	Thodumala	08.50490	77.20162	13.50	07.28	Laterite bed
11.	AMB-15 AMB/03/02	Thodumala	08.50553	77.20296	06.76	05.10	Laterite bed
12.	AMB-19 AMB/04/01	Ambori	08.50103	77.19783	16.76	14.63	Laterite bed
13.	AMB-20 AMB/04/02	Ambori	08.50136	77.19868	12.20	11.20	Laterite bed
14.	AMB-21 AMB/04/03	Ambori	08.50556	77.19437	11.05	08.20	Laterite bed
15.	AMB-22 AMB/04/04	Ambori	08.49827	77.18630	11.30	09.46	Laterite bed
16.	AMB-24 AMB/05/01	Kuttappu	08.49201	77.19846	11.43	8.26	Rocky bed
17.	AMB-25 AMB/05/02	Kuttappu	08.48458	77.20552	11.20	9.10	Laterite bed
18.	AMB-29 AMB/06/01	Thekkupara	08.47980	77.19872	10.60	07.20	Laterite bed
19.	AMB-30 AMB/06/02	Thekkupara	08.48059	77.20204	08.25	06.70	Laterite bed
20.	AMB-31 AMB/06/03	Thekkupara	08.49024	77.19922	14.10	12.70	Laterite bed
21.	AMB-32 AMB/06/04	Thekkupara	08.48940	77.19997	12.19	09.14	Rocky bed
22.	AMB-33 AMB/06/05	Thekkupara	08.48938	77.19988	07.16	05.55	Rocky bed
23.	AMB-69 AMB/06/06	Thekkupara	08.48378	77.19892	04.10	3.30	Rocky bed

24.	AMB-34 AMB/07/01	Kannannor	08.48349	77.18450	06.70	04.57	Rocky bed
25.	AMB-39 AMB/08/01	Kudappanamood	08.48135	77.18541	07.31	06.20	Rocky bed
26.	AMB-40 AMB/08/02	Kudappanamood	08.48135	77.18541	07.00	06.17	Rocky bed
27.	AMB-41 AMB/08/03	Kudappanamood	08.48134	77.18540	10.60	08.20	Laterite bed
28.	AMB-44 AMB/09/01	Thudiyamkonam	08.49336	77.18968	18.20	16.90	Laterite bed
29.	AMB-45 AMB/09/02	Thudiyamkonam	08.49153	77.18977	11.20	09.10	Laterite bed
30.	AMB-46 AMB/09/03	Thudiyamkonam	08.49750	77.18784	16.25	11.20	Laterite bed
31.	AMB-49 AMB/10/01	Puruthippara	08.50004	77.17404	15.30	06.70	Laterite bed
32.	AMB-50 AMB/10/02	Puruthippara	08.50010	77.17404	07.35	05.20	Rocky bed
33.	AMB-51 AMB/10/03	Puruthippara	08.50010	77.17402	08.70	06.08	Laterite bed
34.	AMB-54 AMB/11/01	Cherayakkod	08.50471	77.16847	10.45	08.50	Laterite bed
35.	AMB-55 AMB/11/02	Cherayakkod	08.50763	77.15607	11.38	09.80	Laterite bed
36.	AMB-56 AMB/11/03	Cherayakkod	08.50753	77.15604	11.15	08.68	Laterite bed
37.	AMB-57 AMB/11/04	Cherayakkod	08.51753	77.15637	08.46	07.21	Rocky bed
38.	AMB-59 AMB/12/01	Kuttamala	08.51132	77.17239	12.35	09.50	Rocky bed
39.	AMB-60 AMB/12/02	Kuttamala	08.51098	77.17188	12.10	08.47	Rocky bed
40.	AMB-61 AMB/12/03	Kuttamala	08.51302	77.16985	11.15	06.47	Laterite bed
41.	AMB-62 AMB/12/04	Kuttamala	08.50913	77.17075	10.40	09.10	Laterite bed
42.	AMB-64 AMB/13/01	Kandamthitta	08.51296	77.15498	07.20	5.95	Laterite bed
43.	AMB-65 AMB/13/02	Kandamthitta	08.51066	77.15133	14.20	11.30	Laterite bed
44.	AMB-66 AMB/13/03	Kandamthitta	08.51910	77.14936	12.19	06.80	Laterite bed

**Sample Name Board – Dug Well**



**Snapshots of Project completed Dug wells**



**AMP-01**



**AMB- 06**



**AMB- 07**



**AMB- 08**



**AMB- 09**



**AMB- 10**



**AMB- 11**



**AMB- 12**



**AMB- 13**



**AMB- 14**



**AMB- 15**



**AMB- 19**



**AMB- 20**



**AMB- 21**



**AMB- 22**



**AMB- 24**



**AMB- 25**



**AMB- 29**



**AMB- 30**



**AMB- 31**

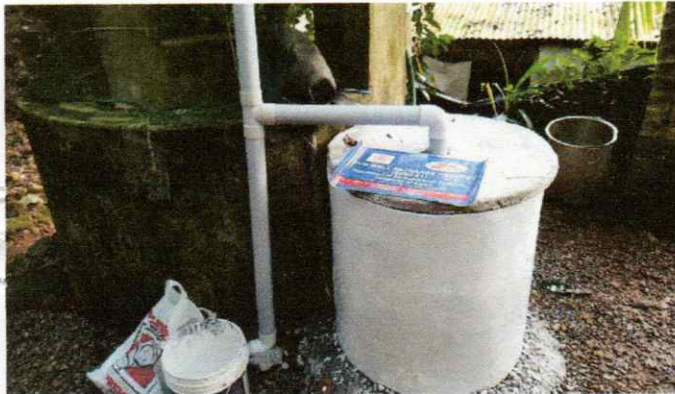




**AMB- 32**



**AMB- 33**



**AMB- 69**



**AMB- 34**



**AMB- 39**



**AMB- 40**



**AMB- 41**



**AMB- 44**



**AMB- 45**



**AMB- 46**



**AMB- 49**



**AMB- 50**



**AMB- 51**



**AMB- 54**



**AMB- 55**



**AMB- 56**



**AMB- 57**



**AMB- 59**



**AMB- 60**



**AMB- 61**



**AMB- 62**



**AMB- 64**



**AMB- 65**



**AMB- 66**

3. UC and SE for the period 28/1/2021 to 30/9/2021: attached separately.

**STATEMENT OF EXPENDITURE  
(28-1-2021 to 30-9-2021)**

Sl. No	Sanctioned Head of Expenditure	Total Amount sanctioned (Rs)	Amount Released (1 <sup>st</sup> instalment)	Total Expenditure Incurred (Rs)	Unspent Balance (Rs)
1	Rainwater Harvesting Structure System (n=100)	16,00,000/-	6,40,000/-	5,48,063/-	91,937/-
2	Project Fellow	2,40,000/-	96,000/-	47,742/-	48,258/-
3	Travel	1,50,000/-	60,000/-	60,000/-	NIL
4	Miscellaneous	1,00,000/-	40,000/-	13,770/-	26,230/-
<b>Total</b>		<b>20,90,000/-</b>	<b>8,36,000/-</b>	<b>6,69,575/-</b>	<b>1,66,425/-</b>

Unspent Balance as on 30/9/2021 = 1,66,425/-

Amount to be released second and third instalment together = 12.54 lakhs

I request you to kindly release the second and third instalment together for the smooth completion of the establishment of Rainwater harvesting structures in selected houses/public building at Amboory panchayath.

**Prof. Sabu Joseph**  
P.I, Project on RWH  
Dept. of Env. Sciences

**Dr. SABU JOSEPH**  
P.I. Project on RWH  
Dept. of Environmental Sciences  
University of Kerala, Kariavattom  
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# PHASE - II

**PROJECT ON “ESTABLISHING RAINWATER HARVESTING/AQUIFER RECHARGING STRUCTURES IN PUBLIC BUILDINGS AND SELECTED HOUSEHOLDS IN AMBOORI VILLAGE, THIRUVANANTHAPURAM” FUNDED BY DOECC, GOVT.OF KERALA**  
**SECOND PHASE - LIST OF BENEFICIARIES**

<b>Sl.No</b>	<b>Project No.</b>	<b>Name and Address of Beneficiary</b>	<b>Ward</b>
1.	AMB-02 AMB/01/02	Kuriakose Kulipparambil House, Mayam P.O. Mayam. Mob. 9539238353	Mayam
2.	AMB-03 AMB/01/03	Rajamma (Baby) Thadatharikathu Veedu, Mayam P.O. Mayam. Mob.	Mayam
3.	AMB-04 AMB/01/04	Jose Kulipparambil House, Mayam P.O. Mayam. Mob.	Mayam
4.	AMB-05 AMB/01/05	Vincent Pol Arackal House, Mayam P.O. Mayam, Mob. 8547395354	Mayam
5.	AMB-16 AMB/01/06	K.J. Joseph (Kuttichan) Vettillakkaleil, Mayam P.O Mayam. Mob. 8547631174	Mayam
6.	AMB-17 AMB/02/09	Indira Vinod Bhavan, Puttukallu Mayam. Mob. 9961746748	Office Ward
7.	AMB-18 AMB/02/10	Mini Payazwani, Kunninpuram Mayam. Mob. 9745643751	Office Ward
8.	AMB-23 AMB/02/11	Mariyamma Poulouse Valliyanipuram, Poochamukku Mob. 9961413404	Office Ward
9.	AMB-26 AMB/02/12	Renjitham Thadatharikathu Veedu, Kurishumala Mob. 9745540285 (Aani)	Office Ward
10.	AMB-27 AMB/02/13	Joshy Kallidikkil House, Kurishumala Mob. 9895479199	Office Ward
11.	AMB-28 AMB/04/05	Vargeese Kuriyan Kunneil House, Amboori P.O. Ambori Mob: 6238619750	Amboori
12.	AMB-35 AMB/04/06	Babukuttan Geethabhavan, Kantharivila Amboori P.O. Mob: 9072239731	Amboori
13.	AMB-36 AMB/04/07	Joseph Isaac Kulipparambil House, Kantharivila Amboori P.O. Mob: 9562479281	Amboori
14.	AMB-37 AMB/04/08	Xavior Joseph Nirappel House, Amboori P.O. Amboori Mob: 9995037670	Amboori

15.	AMB-38 AMB/04/09	Mohan T. Mini Bhavan, Amboori P.O, Amboori Mob: 9961107196	Amboori
16.	AMB-42 AMB/04/10	Rosamma Jose Maliyolikkal House Amboori P.O, Mob: 9447495770	Amboori
17.	AMB-43 AMB/04/11	Binu George Anjupankil House Amboori P.O. Mob: 7306574611	Amboori
18.	AMB-47 AMB/05/03	Abin Jose Moonnanacal House Amboori P.O. Mob: 9074594220	Kuttappu
19.	AMB-48 AMB/05/04	M.M. Chakko Marottikal House Amboori P.O. Mob: 9446545960	Kuttappu
20.	AMB-52 AMB/05/05	Shebu George Chooranoolickal House, Amboori P.O. Amboori, Mob. 8547945216	Kuttappu
21.	AMB-53 AMB/05/06	George Kezhakkenerappu Amboori P.O. Mob: 9446662997	Kuttappu
22.	AMB-58 AMB/06/07	Shivanandhan Kunnumpurathu House, Thekkupara P.O. Thekkupara	Thekkupara
23.	AMB-63 AMB/06/08	Subash Charuvila Veedu, Thekkupara P.O. Thekkupara, Mob. 9072194038	Thekkupara
24.	AMB-67 AMB/06/09	Mathew Jose Myladikkunneil House, Thekkupara P.O. Thekkupara	Thekkupara
25.	AMB-68 AMB/06/10	Jayakumari Anu Bhavan, Thekkupara P.O. Thekkupara	Thekkupara
26.	AMB-70 AMB/06/11	Siby Jose Kunnumpurath House, Kuttappu, Amboori P.O Mob: 6262214205	Thekkupara
27.	AMB-71 AMB/07/02	Unni Muthuketta House, Kannannoor Mob. 9496911205	Kannannor
28.	AMB-72 AMB/07/03	Ammini (Sheju) Thadatharikathu Puthanveed, Kannannoor Mob: 7902853986	Kannannor
29.	AMB-73 AMB/07/04	Syamala Rejivilasam, Thekkupara P.O. Kannannoor, Mob. 8129039339	Kannannor
30.	AMB-74 AMB/09/04	Jeeva Joseph Plakkil House, Thudiyamkonam Amboori P.O. Mob: 7907406302	Thudiyamkonam
31.	AMB-75 AMB/09/05	Sunil M. Achu Bhavan, Thudiyamkonam Amboori P.O. Mob: 8129197818	Thudiyamkonam

32.	AMB-76 AMB/09/06	Lovely Kuriakose Kottoor House, Thudiyamkonam Amboori P.O. Mob: 9400555449	Thudiyamkonam
33.	AMB-77 AMB/09/07	Binoy Mathew Vettikkavunkal, Thudiyamkonam Amboori P.O. Mob: 9495037770	Thudiyamkonam
34.	AMB-78 AMB/09/08	Joy Vargeese Perumana, Thudiyamkonam Amboori P.O. Mob: 9446752938	Thudiyamkonam
35.	AMB-79 AMB/09/09	Sibi Vargeese Anjupankil House, Thudiyamkonam Amboori P.O. Mob: 9446104086	Thudiyamkonam
36.	AMB-80 AMB/09/10	Ponnayyan K. Pallikkal Puthanveedu, Rajagiri Amboori P.O. Mob: 7025006642	Thudiyamkonam
37.	AMB-81 AMB/09/11	Raju Thodalivila House, Amboori P.O. Rajagri, Mob. 8993994697	Thudiyamkonam
38.	AMB-82 AMB/10/04	M.V. Ashadevi Malarvadi, Puruthippara, Kuttamala P.O. Mob. 7907069423	Puruthippara
39.	AMB-83 AMB/10/05	Sheejakumari Vijith Bhavan, Puruthippara Mob. 7034885876	Puruthippara
40.	AMB-84 AMB/10/06	Sathayan Chemparundhumpara Thadatharikathu Veedu Mob. 9747407332, 9048357213	Puruthippara
41.	AMB-85 AMB/10/07	Sohitha Navas Mancil, Kochuvayalmukku Kuttamala P.O. Mob. 9961173073	Puruthippara
42.	AMB-86 AMB/10/08	Aneesh Aneesh Bhavan, Narakathinmood Kuttamala P.O. Mob. 9961414332	Puruthippara
43.	AMB-87 AMB/11/05	Sheju Anagha Bhavan, Nedumbullu Kuttamala P.O. Mob. 9746407019	Cherayakkod
44.	AMB-88 AMB/11/06	Deepu R Palamoottukadavu, Shednada, Kuttamala P.O. Mob. 8402001525	Cherayakkod
45.	AMB-89 AMB/11/07	Umayiffa Seenamanzhil, Cherayakkod Kuttamala P.O. Mob. 9895013781	Cherayakkod
46.	AMB-90 AMB/11/08	M.C. Madhu Pushpakala Bhavan, Cherayakkod Kuttamala P.O. Mob. 9747313889	Cherayakkod
47.	AMB-91 AMB/11/09	R. Vijayan Anoop Bhavan, Cherayakkod Kuttamala P.O. Mob. 9633396748	Cherayakkod
48.	AMB-92 AMB/11/10	John Johnynivas, Cherayakkod, Kuttamala P.O. Mob. 7025570537	Cherayakkod



49.	AMB-93 AMB/12/05	Mohana Das Vinod Bhavan, Kongottupara Kuttamala P.O. Mob. 9072925673	Kuttamala
50.	AMB-94 AMB/12/06	Sanikumar Priya Nivas, Nedumbullu Kuttamala P.O. Mob. 9745062301	Kuttamala
51.	AMB-95 AMB/12/07	Antony Joseph Ezhuparayil House, Kuttamala P.O. Mob. 9747054101	Kuttamala
52.	AMB-96 AMB/12/08	Ratheesh Ratheesh Bhavan, Shednada Kuttamala P.O. Mob. 9745860644	Kuttamala
53.	AMB-97 AMB/12/09	Vasundharan Vasundharavelasam, Kuttamala P.O. Mob. 9745141660	Kuttamala
54.	AMB-98 AMB/13/04	Ramachandran Rajeesh Bhavan, Kandamthitta Pantha P.O. Mob. 7558064995	Kandamthitta
55.	AMB-99 AMB/13/05	Thankappan Prakash Bhavan, Kandamthitta Pantha P.O. Mob. 8086124328	Kandamthitta
56.	AMB-100 AMB/13/06	Antony Thiruhrdhayam, Kandamthitta Pantha P.O. Mob. 8086838586	Kandamthitta
57.	AMB-101 AMB/13/07	Seenakumari Madayadiyil House, Chelandikuzhi Pantha P.O. Mob. 9656940895	Kandamthitta
58.	AMB-102 AMB/13/08	Thambi George Vadakedathu Veedu, Chelandikuzhi Pantha P.O. Mob. 9744350564	Kandamthitta
59.	AMB-103 AMB/13/09	Jose Kudakuthiyel House, Panda P.O. Idavachaal, Mob. 9839292559	Kandamthitta
60.	AMB-104 AMB/13/10	Santhoshkumar Mountseenayi, Panda P.O. Idavachaal Mob. 9847453334	Kandamthitta



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Amboory Panchayath

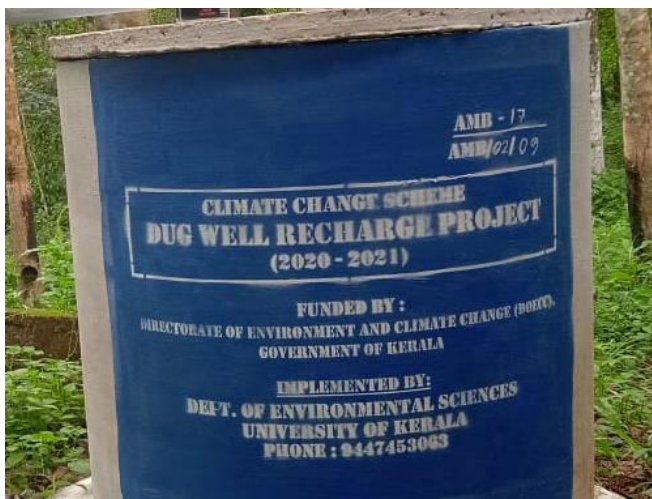
### Portrait of the Selected Dug Wells

Sl. No	Project No.	Ward	Location		Depth of the Well (M)	Water Table Level (M)	Remarks
			Lat	Long			
1.	AMB-02 AMB/01/02	Mayam	8.521500	77.178947	14.4	13.15	Laterite bed
2.	AMB-03 AMB/01/03	Mayam	8.520479	77.179812	16.63	14.93	Rocky bed
3.	AMB-04 AMB/01/04	Mayam	8.520642	77.180145	12.40	11.58	Laterite bed
4.	AMB-05 AMB/01/05	Mayam	8.519679	77.180133	13.47	12.00	Laterite bed
5.	AMB-16 AMB/01/06	Mayam	8.520063	77.181023	14.20	13.00	Laterite bed
6.	AMB-17 AMB/02/09	Office Ward	8.517527	77.177717	12.30	10.60	Laterite bed
7.	AMB-18 AMB/02/10	Office Ward	8.517097	77.184857	11.85	10.00	Laterite bed
8.	AMB-23 AMB/02/11	Office Ward	8.509512	77.190301	09.40	08.73	Laterite bed
9.	AMB-26 AMB/02/12	Office Ward	8.512528	77.186324	10.15	08.98	Rocky bed
10.	AMB-27 AMB/02/13	Office Ward	8.514101	77.185645	16.10	14.01	Rocky bed
11.	AMB-28 AMB/04/05	Amboori	8.502258	77.193756	08.60	07.00	Laterite bed
12.	AMB-35 AMB/04/06	Amboori	8.501208	77.197565	09.09	08.46	Laterite bed
13.	AMB-36 AMB/04/07	Amboori	8.500915	77.197621	10.23	09.01	Laterite bed
14.	AMB-37 AMB/04/08	Amboori	8.497573	77.186382	11.10	10.25	Laterite bed
15.	AMB-38 AMB/04/09	Amboori	8.497983	77.186800	10.60	10.06	Laterite bed
16.	AMB-42 AMB/04/10	Amboori	8.497488	77.186845	13.90	11.00	Laterite bed
17.	AMB-43 AMB/04/11	Amboori	8.498385	77.188289	15.05	10.65	Laterite bed
18.	AMB-47 AMB/05/03	Kuttappu	8.498868	77.191747	16.20	15.00	Laterite bed
19.	AMB-48 AMB/05/04	Kuttappu	8.498506	77.194839	17.60	15.05	Laterite bed
20.	AMB-52 AMB/05/05	Kuttappu	8.498516	77.191629	21.00	18.80	Rocky bed
21.	AMB-53 AMB/05/06	Kuttappu	8.500916	77.195953	15.34	14.34	Laterite bed
22.	AMB-58 AMB/06/07	Thekkupara	8.478508	77.204589	11.60	10.92	Laterite bed
23.	AMB-63 AMB/06/08	Thekkupara	8.479390	77.202764	10.65	09.70	Laterite bed

24.	AMB-67 AMB/06/09	Thekkupara	8.481397	77.200733	11.10	10.52	Laterite bed
25.	AMB-68 AMB/06/10	Thekkupara	8.479819	77.200419	11.25	10.20	Rocky bed
26.	AMB-70 AMB/06/11	Thekkupara	8.491777	77.196064	13.00	12.02	Laterite bed
27.	AMB-71 AMB/07/02	Kannannor	8.483387	77.193656	14.00	13.30	Rocky bed
28.	AMB-72 AMB/07/03	Kannannor	8.483228	77.193605	13.80	13.00	Rocky bed
29.	AMB-73 AMB/07/04	Kannannor	8.487139	77.194308	13.71	12.72	Laterite bed
30.	AMB-74 AMB/09/04	Thudiyamkonam	8.497530	77.187984	16.20	15.43	Laterite bed
31.	AMB-75 AMB/09/05	Thudiyamkonam	8.497470	77.187369	15.70	16.10	Laterite bed
32.	AMB-76 AMB/09/06	Thudiyamkonam	8.497462	77.186804	14.00	13.28	Laterite bed
33.	AMB-77 AMB/09/07	Thudiyamkonam	8.498165	77.190687	13.25	11.80	Laterite bed
34.	AMB-78 AMB/09/08	Thudiyamkonam	8.497879	77.191407	12.65	11.98	Laterite bed
35.	AMB-79 AMB/09/09	Thudiyamkonam	8.498188	77.189772	13.85	12.95	Laterite bed
36.	AMB-80 AMB/09/10	Thudiyamkonam	8.490692	77.187332	18.64	17.50	Rocky bed
37.	AMB-81 AMB/09/11	Thudiyamkonam	8.490084	77.187138	17.35	16.45	Rocky bed
38.	AMB-82 AMB/10/04	Puruthippara	8.496051	77.178663	15.34	14.25	Rocky bed
39.	AMB-83 AMB/10/05	Puruthippara	8.496706	77.177925	16.55	15.00	Rocky bed
40.	AMB-84 AMB/10/06	Puruthippara	8.497513	77.174554	15.98	14.67	Rocky bed
41.	AMB-85 AMB/10/07	Puruthippara	8.498663	77.173291	14.80	13.65	Rocky bed
42.	AMB-86 AMB/10/08	Puruthippara	8.504500	77.176567	16.00	15.20	Laterite bed
43.	AMB-87 AMB/11/05	Cherayakkod	8.508203	77.171163	15.70	14.40	Laterite bed
44.	AMB-88 AMB/11/06	Cherayakkod	8.505387	77.172055	15.00	14.00	Laterite bed
45.	AMB-89 AMB/11/07	Cherayakkod	8.500219	77.168574	17.80	16.35	Laterite bed
46.	AMB-90 AMB/11/08	Cherayakkod	8.500032	77.167936	12.90	11.00	Laterite bed
47.	AMB-91 AMB/11/09	Cherayakkod	8.502788	77.168390	14.00	13.00	Laterite bed
48.	AMB-92 AMB/11/10	Cherayakkod	8.503277	77.169494	15.90	14.20	Rocky bed

49.	AMB-93 AMB/12/05	Kuttamala	8.509458	77.170998	16.00	14.60	Rocky bed
50.	AMB-94 AMB/12/06	Kuttamala	8.509183	77.171168	12.06	10.78	Rocky bed
51.	AMB-95 AMB/12/07	Kuttamala	8.509333	77.175405	15.00	13.60	Laterite bed
52.	AMB-96 AMB/12/08	Kuttamala	8.506871	77.172488	08.50	07.80	Laterite bed
53.	AMB-97 AMB/12/09	Kuttamala	8.510621	77.172876	10.90	09.90	Rocky bed
54.	AMB-98 AMB/13/04	Kandamthitta	8.512662	77.165397	10.00	09.10	Laterite bed
55.	AMB-99 AMB/13/05	Kandamthitta	8.513207	77.162935	11.43	10.06	Laterite bed
56.	AMB-100 AMB/13/06	Kandamthitta	8.513773	77.162666	11.60	10.50	Laterite bed
57.	AMB-101 AMB/13/07	Kandamthitta	8.514397	77.159585	14.69	13.80	Laterite bed
58.	AMB-102 AMB/13/08	Kandamthitta	8.513677	77.159940	12.90	11.50	Laterite bed
59.	AMB-103 AMB/13/09	Kandamthitta	8.516707	77.159762	13.80	12.53	Laterite bed
60.	AMB-104 AMB/13/10	Kandamthitta	8.517025	77.158856	14.58	13.10	Laterite bed

### Phase-II Sample Name Board



### Snapshots of Project Completed Dug Wells



**AMB-02**



**AMB-03**



**AMB-04**



**AMB-05**



**AMB-16**



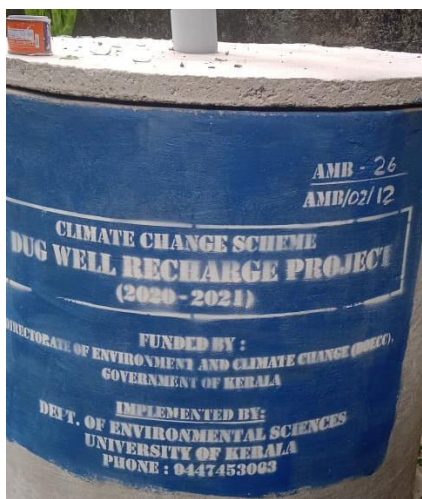
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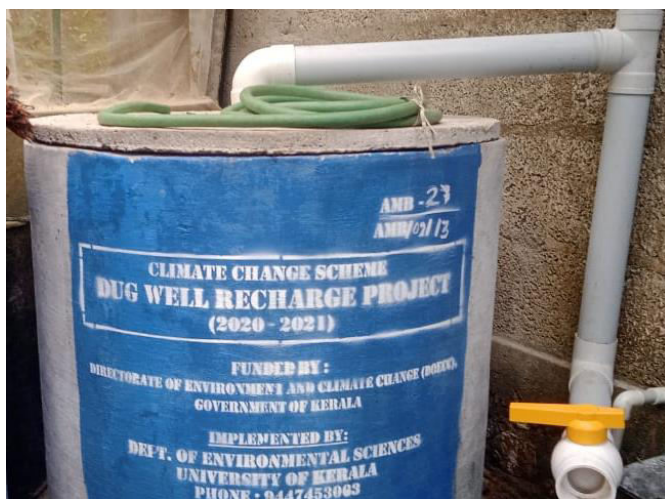
**AMB-18**



**AMB-23**



**AMB-26**



**AMB-27**



**AMB-28**



**AMB-35**



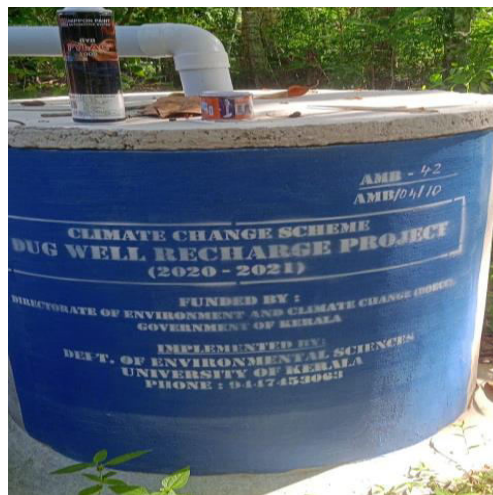
**AMB-36**



**AMB-37**



**AMB-38**



**AMB-42**



**AMB-43**



**AMB-47**



**AMB-48**



**AMB-52**



**AMB-53**



**AMB-58**





**AMB-63**



**AMB-67**



**AMB-68**



**AMB-70**



**AMB-71**



**AMB-72**



**AMB-73**



**AMB-74**



**AMB-75**



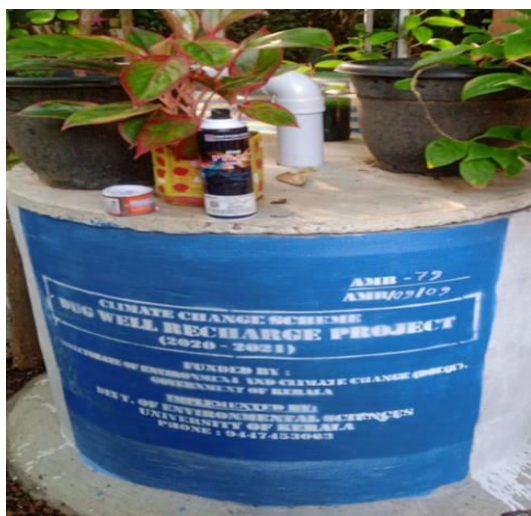
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**AMB-77**



**AMB-78**



**AMB-79**



**AMB-80**



**AMB-81**



**AMB-82**



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**AMB-84**



**AMB-85**



**AMB-86**



**AMB-87**



**AMB-88**



**AMB-89**



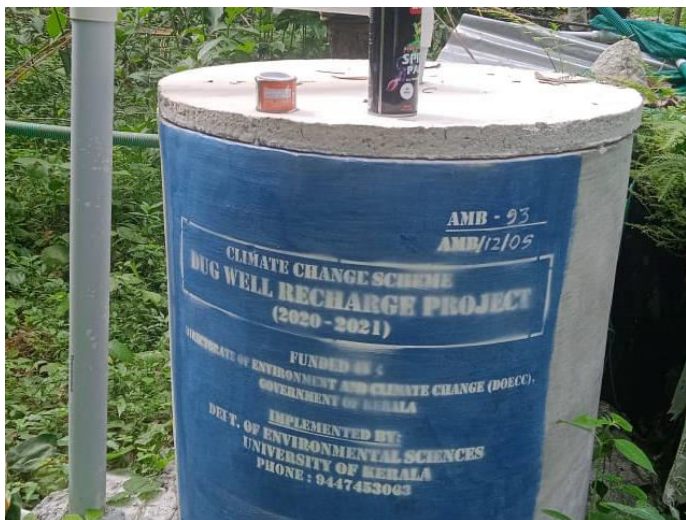
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**AMB-91**



**AMB-92**



**AMB-93**



**AMB-94**



**AMB-95**



**AMB-96**



**AMB-97**



**AMB-98**



**AMB-99**



**AMB-100**



**AMB-101**



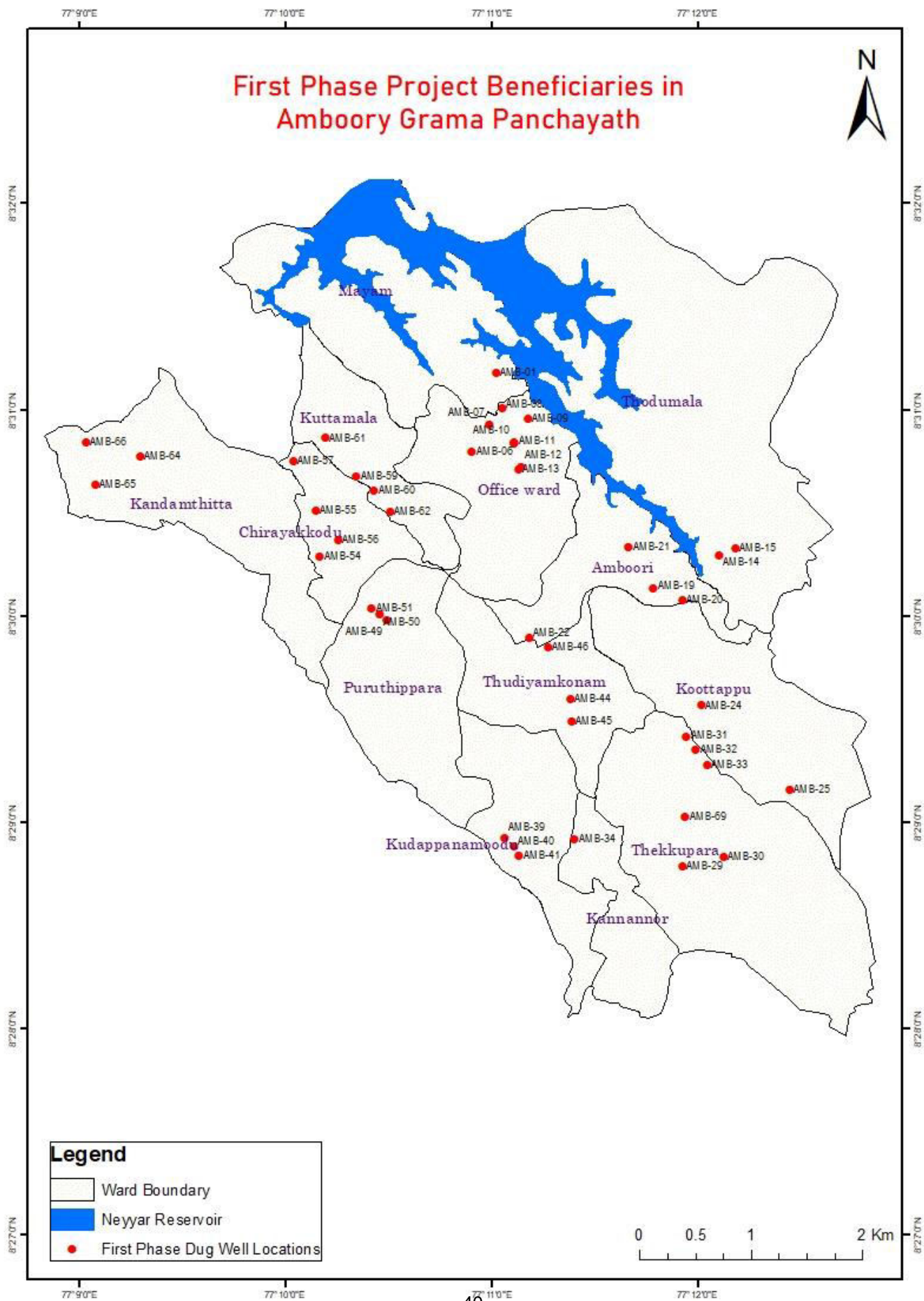
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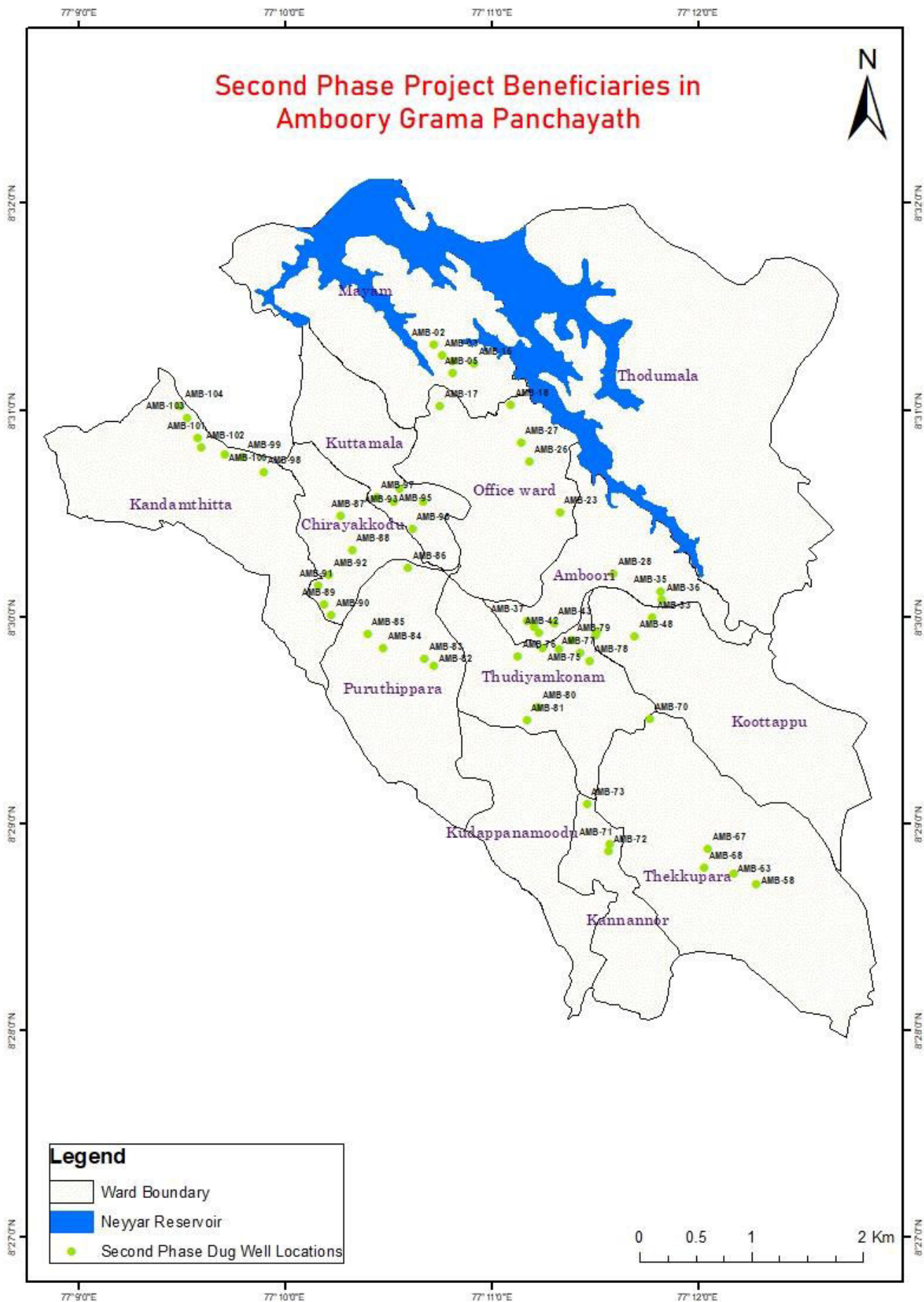
**AMB-103**



**AMB-104**







## Executive Summary of the Project

The project “Establishing Rainwater Harvesting / Aquifer Recharging Structures in Public Building and Selected Households in Amboori Village, Thiruvananthapuram” was started on 28/01/2021 and completed 2 years and 2 months as on 06/04/2023. During this period the project completed a total of 104 rainwater harvesting structures connected to 104 houses. The target given was 100 dug wells. It includes 44 structure construction in the first phase of the project and 60 constructions during the second phase of the project. The water from the roof is allowed to enter a ferrocement filtering unit with 75 cm height and 75 cm diameter. It is partially filled with a three layer like bottom gravel overlined by charcoal and sand at the top. These 104 houses covered all the 13 wards of the panchayath with emphasis given to water stressed wards like ward II (Office Ward) and ward IX (Thudiyamkonam).

One advantage of this project is that about three old panchayat dug wells, already under abandoned conditions, were cleaned by the local people based on our request and were revived by rainwater harvesting structures. Most of the harvesting structures are attached with deep wells, (> 25 ft) and wells were chosen in such a way that one recharging site will add water to the nearby 5-10 wells by subsurface groundwater flow. All the wells are functioning well. A WhatsApp group will be formed for the families of the 104 recharge connected wells, and follow-up action programme will be shared periodically. The water table depth of the wells will be monitored for the different seasons and the availability of water during summer will be monitored.