

### 1. Village Profile

Village Name	Vakkanamaram	Bavikkarai	Sakkapadigai	Mudiyr
Panchayat	Aracode	Aracode	Aracode	Aracode
No. of households	22	5	6	7
Population	120	20	25	20
Community	Irula	Irula	Irula	Irula
Institutions in the village (if any)	Community Hall	Nil	Nil	Nil

### 2. Water supply and demand

Village Name	Vakkanamaram		Bavikkarai		Sakkapadigai		Mudiyr	
	Monsoon	Summer	Monsoon	Summer	Monsoon	Summer	Monsoon	Summer
Avg. daily water demand of the household (LPD)	365	266	272	174	390	273	299	288
Avg. daily water demand of the village (LPD)	8,030	3,920	1,360	870	5,465	3,826	2,093	2,018
Avg. daily water supply in the village (LPD)	20,000	10,000	10,000	1,000	3,000	1,000	20,000	5,000
Avg. daily shortfall/surplus in water supply in the village (Liters per day)	Surplus of 11,970	Surplus of 6,080	Surplus of 8,640	Surplus of 130	Shortfall of 2,465	Shortfall of 2,826	Surplus of 17,907	Surplus of 2,982

### 3. Water Storage facilities

#### 3(a).Water Storage facilities in a household in the village

Households harvesting rain water at home	No
Average water storage capacity in a household (in liters)	200
Maximum storage capacity in a household (in liters)	200

#### 3(b).Water Storage facilities in the village

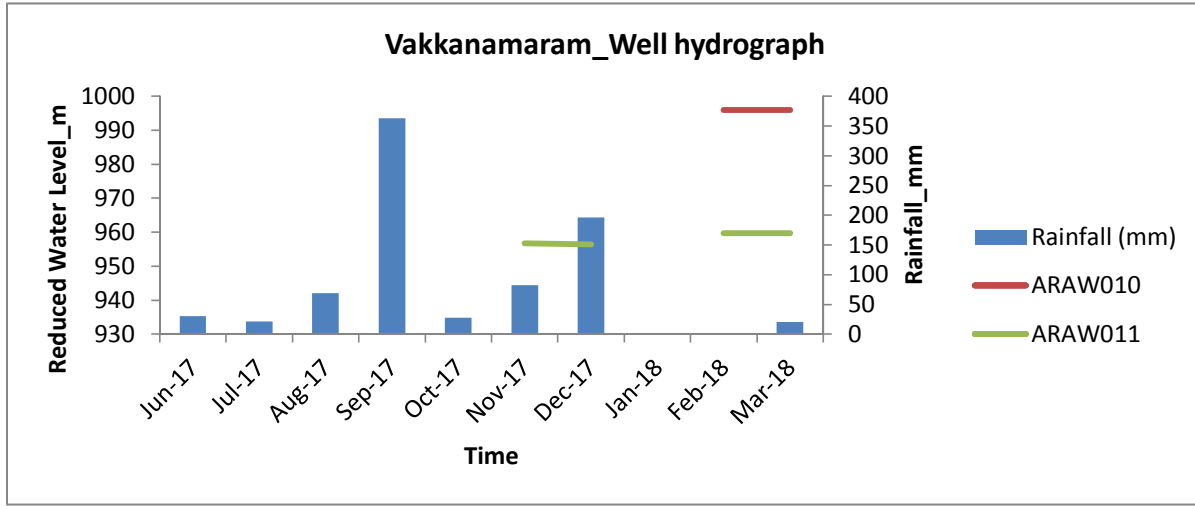
Vakkanamaram	: Two Ground level Reservoirs
Bavikarai	: A Ground Level Reservoir
Sakkapadigai	: A Sintex tank provided under Water Security Plan
Mudiyr	: A Ground Level Reservoir

4. Water Resources (Provide details of all water resources)

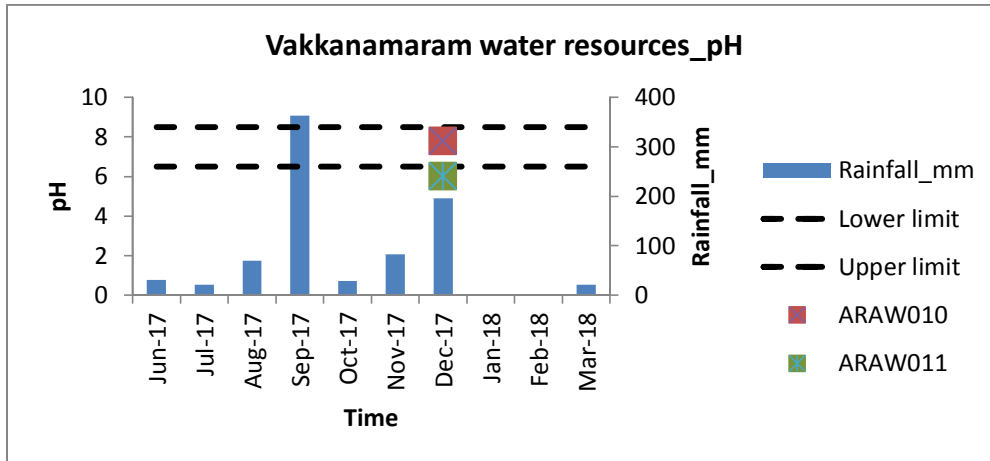
S N o.	Name of the water resource	Source ID (if any)	Type of resource (Spring/Open well/wetland /Bore well/stream)	Dimensions of the water resource (Spring-length, width, depth; Well-diameter, total depth)	Seasonality	Spring-shed/catc hment area (Acres)	Land ownership	Land-use pattern of the watershed area	Geology of the watershed area
1	Sajubhai estate	ARA024	Spring	Don't know	Seasonal	20	Panchayat	Coffee estate	Stream
2	Kaadubavi	ARA019	Spring	1.6*1.6*0.6	Seasonal	2	Private	Coffee estate	Contact spring
3	Dhonikkerai	ARA008	Spring	3.3*3.7*1.7	Perennial	8	Panchayat	Coffee estate	Depression spring
4	Sakkapadigai	ARAW011	Open well	2.86*5	Seasonal	5	Panchayat	Coffee estate	Don't know
5	Senthubavi	ARAW022	Open well	3.6*7.4	Seasonal	7.3	Panchayat	Coffee estate	Don't know

S N o.	Name of the water resource	Source ID (if any)	Type of resource (Spring/Open well/ wetland/ Bore well/ stream)	Users of the water from this resource (People/Wildlife/School/ Anganwadi/ PHC/resort/ private estate/community toilet etc.) List all	How is the water delivered from the source? Describe	State of sanitation near the source (toilet, waste dumps, OD, etc)	Water Quality issues (in different seasons)	Long term prospect (Will it remain perennial)
1	Sajubhai estate	ARA024	Spring	Community, Agriculture, livestock, wildlife	Pipeline	Nothing	Nothing	As long as coffee estate exists, the source be perennial
2	Kaadubavi	ARA019	Spring	Livestock, wildlife	Spring-box	Nothing	Nothing	Don't know
3	Dhonikkerai	ARA008	Spring	Community, livestock, wildlife	Spring-box, check-dam, pipeline	Nothing	Nothing	Perennial
4	Sakkapadigai	ARAW011	Open well	Community	Motor	Nothing	Nothing	Don't know
5	Senthubavi	ARAW022	Open well	Community		Nothing	Nothing	Don't know

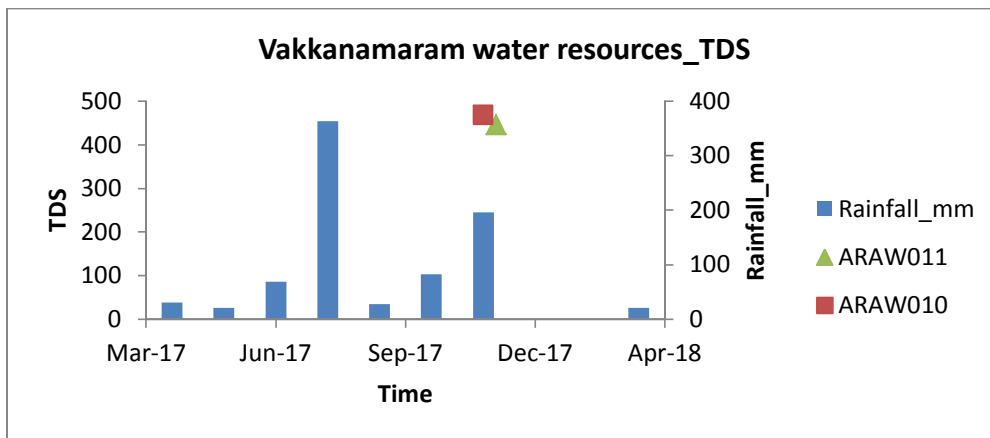
5a. Spring and Well Hydrographs



5b. Water Quality



Note:  
Permissible limit  
for pH is between  
6.5 and 8.5



Note:  
Permissible limit  
for tDS is below  
500ppm.

## 6. Discussions and Interventions

These following interventions were discussed at common village meetings facilitated by Community Resource Person from Keystone Foundation who regularly monitors the water resources for its discharge and water quality from October, 2016 till March, 2018. These interventions were agreed by the villages, some of which have already been implemented under Village Water Security Plan by community and Keystone.

Name of the water resource	Source ID	Interventions	Expenditures (Rs)	Status
Sajubhai estate	ARA024	To lay pipeline to tap water from a perennial point along the stream that flows in Sajubhai estate till Vakkanamaram village.	1,70,000	<i>Planned</i> To approach Aracode Panchayat and Forest Dept. to meet pipeline cost.
Sakkapadigai	ARAW011	To have a covering for the well.	7,000	Planned Expenses to be met from pooled water funds by community.
Sakkapadigai village		To provide a storage infrastructure.	5,500	Done 1000l Sintex tank cost borne by Keystone.

<b>Discussion 1</b>	<b>: December, 2017</b>
<b>Source</b>	<b>: Sajubhai estate stream (ARA024)</b>
<b>Intervention</b>	<b>: To lay pipeline from the spring till Vakkanamaram village.</b>
<b>Total expenditure</b>	<b>: Rs 1,70,000</b>

<b>Interventions</b>	<b>Reason (benefits)</b>	<b>Expenditure (Rs)</b>
Monthly monitoring of the stream water for its quantity and quality.	It helps to ensure if water demand by the village could be met by the water source.	
To lay pipeline from the spring till Vakkanamaram village.	<p>The current place from where water is tapped from the stream has very less discharge. Currently, PVC pipe laid by Panchayat from Sajubash estate to Vakkanamaram is 3.27km</p> <p>People want to tap water from a perennial spring point along the Samaigodal stream. The distance from the source to Vakkanamaram GLR is 1.32km.</p> <p><i>Status:</i> <i>To approach Aracode Panchayat and Forest Dept. to meet pipeline cost.</i></p>	<p><u>Material cost of pipeline:</u> =Rs 42/m of 1" H.D .pipe*1320 =Rs 55,440 Or =Rs 60/m of 1.25" H.D .pipe*1320m = Rs 79,200 Or =Rs 80/m of 1.50" H.D .pipe*1320m = Rs 1,05,600 Or =Rs 115/m of 2" H.D .pipe*1320m = Rs 1,51,800</p> <p><u>Laying cost of pipeline:</u> To lay and burry the pipeline in the ground- to avoid elephants damaging the pipelines =Rs 350/person*20people*3days =Rs 21,000</p>

<b>Discussion 2</b>	<b>: January, 2018</b>
<b>Source</b>	<b>: Sakkapadigai well (ARAW011)</b>
<b>Intervention</b>	<b>: To have a covering for the well</b>
<b>Total expenditure</b>	<b>: Rs 8,000</b>

<b>Interventions</b>	<b>Reason (benefits)</b>	<b>Expenditure (Rs)</b>
To have a covering for the well.	To prevent leaves from falling, and entry of any kind of contamination.	<p>Covering cost: = Rs 7,000 Labour: Rs 250/person*5 = Rs 1,250/day</p>

**General Discussions** : June, 2017 - March, 2018  
**Village** : Vakkanamaram, Bavikkarai, Sakkapadigai, Mudiyyur

The following are the planned interventions in respective three villages that were discussed collectively in community meetings held commonly for the three villages.

1. Sakkapadigai village

There is no common storage structure to the village, and therefore to provide a storage tank for the village.

Expense: A 1000 liter sintex costs Rs 5,500

Status : The plan was covered under Water Security Plan by Keystone.

2. To plant shola saplings in all the spring-shed regions.

Expenses: Rs.20 per sapling from Keystone nursery.

Status : *Planned*. Very few saplings were planted as there were less number of saplings at Keystone nursery.

3. To repair pipelines from GLR to the village.

Status: *On-going*. Things needed for the intervention are provided through Water Security Plan by Keystone, repair works yet to be started.

## 7. Maintenance and Intervention

Operations to ensure regular equitable water supply to every household in respective villages

- Storing spring water in the village GLR and accessing water from it than by-passing it and directly taking from the pipeline that comes from the source.
- Opening the water outlet from the GLR in the morning and/or evening, so that all families can fetch water from a common point(s).
- In case of shortage of water, deciding on quota of water each family can take with a given timings.
- Mutual understanding between four villages in ensuring equitable sharing and distribution of water.

Monsoon: During day initially both GLRs in Vakkanamaram gets filled followed by Bavikairai GLR. Mudiyyur GLR gets fully filled in the whole of night hours. Sakkapadigai village has no water storage infrastructure, and the village with five households gets water from Mudiyyur GLR.

Summer: Water from Sajubhai estate gets filled only in Vakkanamaram GLR, from where other four villages that is Mudiyyur, Sakkapadigai, Bavikkarai, and Samaigodal access water in addition to water from Sakkekadavu bavi.

Maintenance to ensure

- Cleaning of GLR tank once in two months
- Checking pipelines for leakage and repairing it as and when need arises
- Monitoring of discharge from the spring, wells and their respective water quality by a person from the respective village

## 8. Other agencies and village institutions

- Community hall in Vakkanamaram village

## 9. Finances

- There are savings group in Vakkanamaram village run by women.
- There is no pump-operator for the village. Any complaints in the open well's motor and complaints in pipelines are attended by some men from respective villages. When problems related to inefficiencies in the water supply infrastructure is taken to the Aracode panchayat, the panchayat send experienced technicians to address the issue.

**Annexure**

**A1. Maps**

- Habitation
- Surrounding area
- GPS location of water resources, GLR
- Catchment area

**A2. Photos from the field**