

### 1. Village Profile

Village Name	Garikaiyur	Nadur	Baragur
Panchayat	Aracode	Aracode	Aracode
No. of households	35	14	10
Population	130	40	30
Community	Irula	Irula	Irula
Institutions in the village (if any)	Anganwadi and Primary school	None	None

### 2. Water supply and demand

Village Name	Garikaiyur		Nadur		Baragur	
	Monsoon	Summer	Monsoon	Summer	Monsoon	Summer
Average daily water demand of the household (Liters per day)	323	256	303	234	340	284
Average daily water demand of the village (Liters per day)	11,920	9,580	4,240	3,278	3,400	2,835
Average daily water supply in the village (Liters per day)	8,900	1,000	10,000	4,000	River water 24*7	3,000
Average daily shortfall/surplus in water supply in the village (Liters per day)	Shortfall of 3,020	Shortfall of 8,580	Surplus of 5,760	Surplus of 722	Surplus water	Surplus of 65

### 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)	290
Maximum storage capacity in a household (in liters)	250

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

Garikaiyur : Village Ground Level Reservoir, Sintex tanks- Anganwadi, Primary school

Nadur : Ground Level reservoir

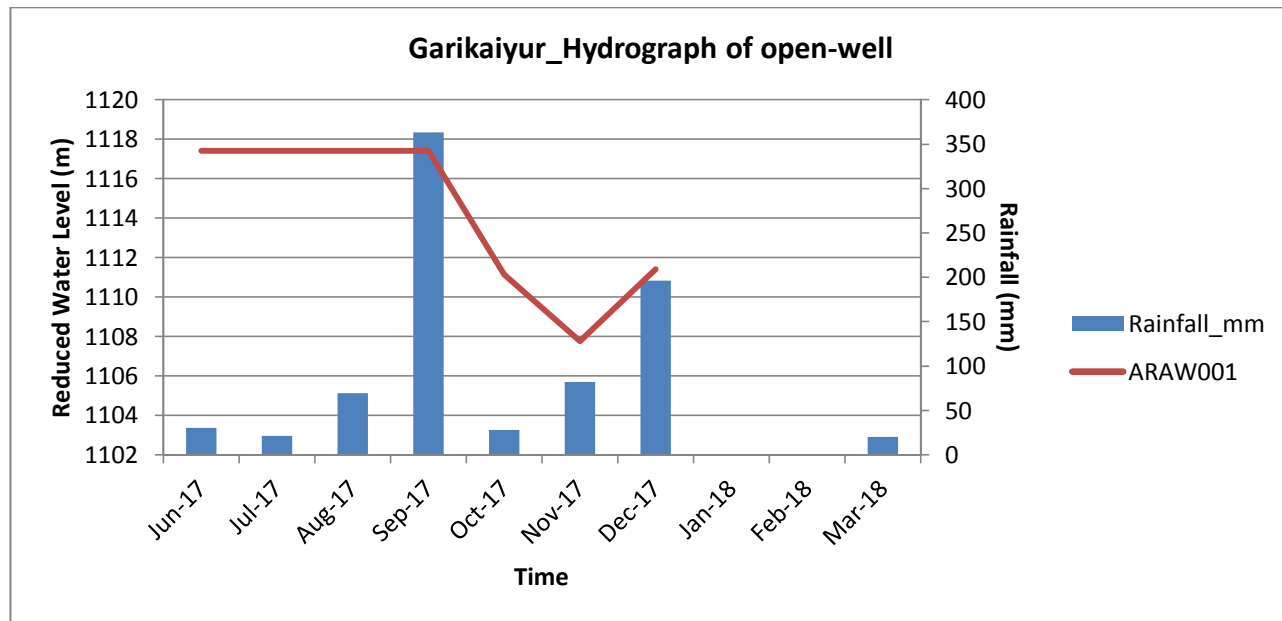
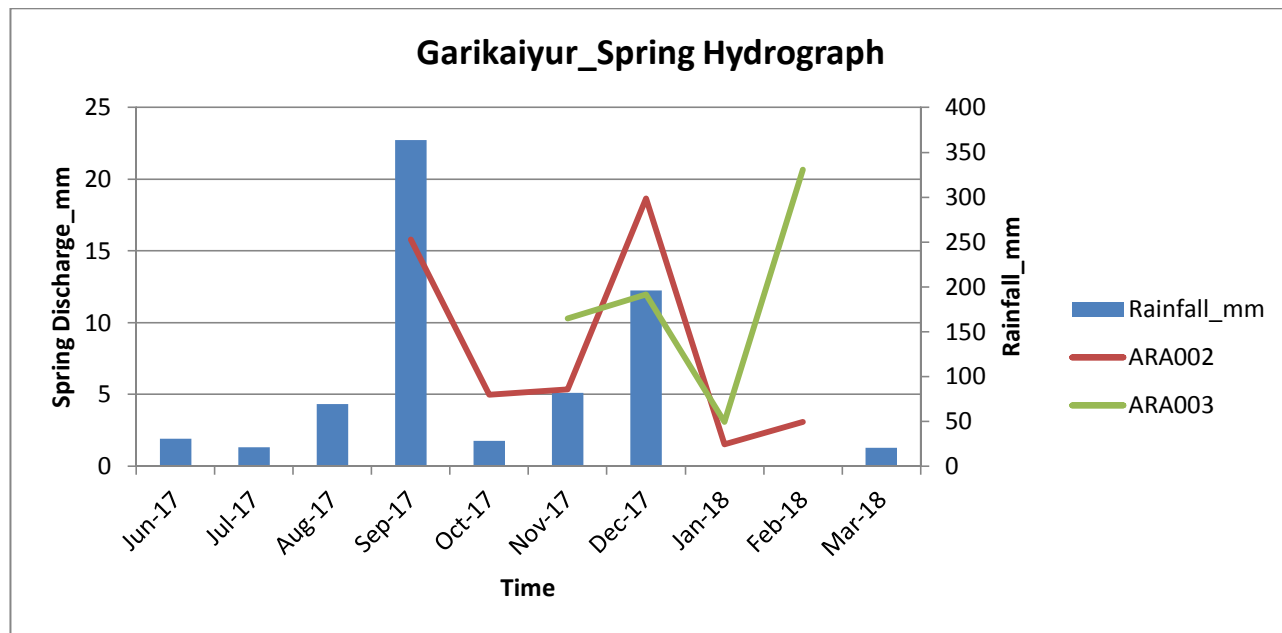
Baragur : Ground Level reservoir

#### 4. Water Resources

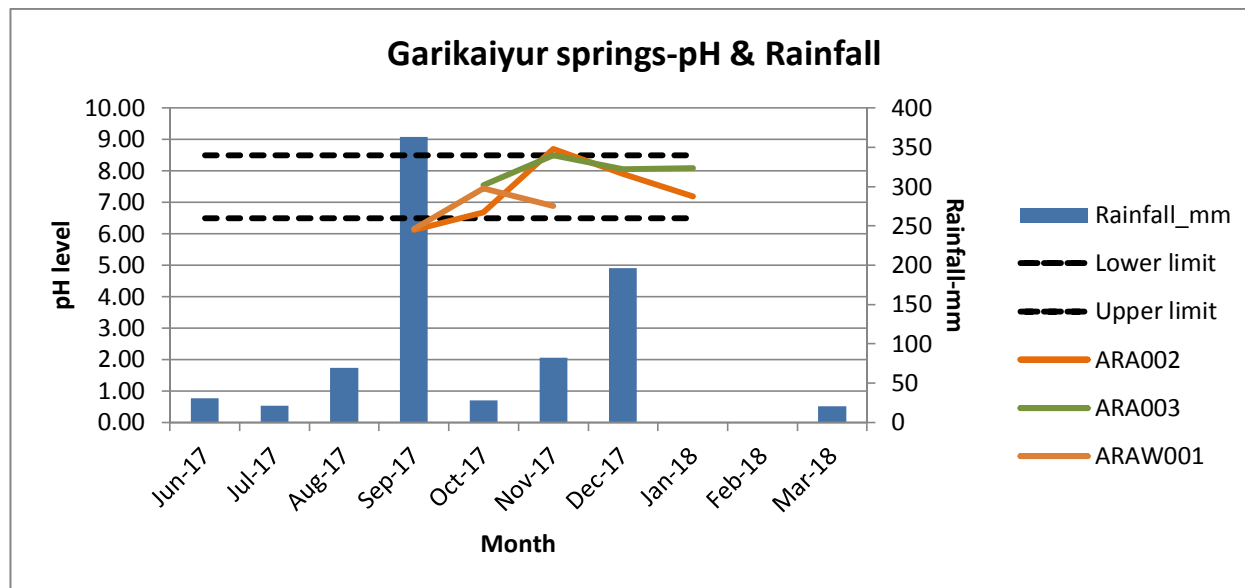
S No .	Name of the water resource	Source ID (if any)	Type of resource (Spring/Open-well/wetland/Bore-well/stream)	Dimensions of the water resource (Spring-length, width, depth; Well- diameter, total depth)	Seasonality	Land ownership	Land-use pattern of the watershed area	Geology of the watershed area
1	Vaagaigundi	ARA002	Spring	1.8*2.5*1	Perennial	Forest	Forest	Fracture
2	Koppaikarai	ARA003	Spring	3*3*0.25	Perennial	Forest	Forest	Depression and contact
3	Vekkikerai	ARA047	Spring	DNA	Seasonal	Panchayat	Agriculture fields, fallow land	Contact
4	Senthubavi	ARAW001	Open well	3*11	Seasonal	Community	Coffee, Silver-oak, Playground, Fallow land	
5	GTRHS	ARAW027	Bore well	91.44	Don't know	School	School building	
6	Garikaiyur borewell	ARAW028	Bore well	106.68	Perennial	Community	Playground, houses, 4 toilets	
7	Nadur borewell	Incomplete	Bore well	54.86	Don't know	Community	Houses, coffee plantation, toilets	

S No.	Name of the water resource	Source ID (if any)	Type of resource (Spring/Open-well/wetland/Borewell/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	Which storage infrastructure is used?	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	Vaagaigundi	ARA002	Spring	Community, livestock, wildlife	Pipeline	GLR	Nothing	Nothing	Less flow in summer , but perennial
2	Koppaikarai	ARA003	Spring	Community, livestock, wildlife	Pipeline	GLR	Nothing	Nothing	Goes dry in summer
3	Vekkikerai	ARA047	Spring	Community, livestock, wildlife	Pipeline	NA	Nothing	Nothing	Seasonal
4	Senthubavi	ARAW001	Open well	Community	Head-load	Well	Septic tank, OD	Nothing	Goes dry in summer
5	GTRHS	ARAW027	Bore well	School	Motor	Sintex	Septic tank, School toilets	Nothing	Dug in 2017
6	Garikaiyur	ARAW028	Bore well	Community	Hand-pump	No	Toilets	High iron	No
7	Nadur borewell	Incomplete inventory	Bore well	Community	Motor	Private Sintex	Toilets, septic tanks near the source	Nothing	Don't know

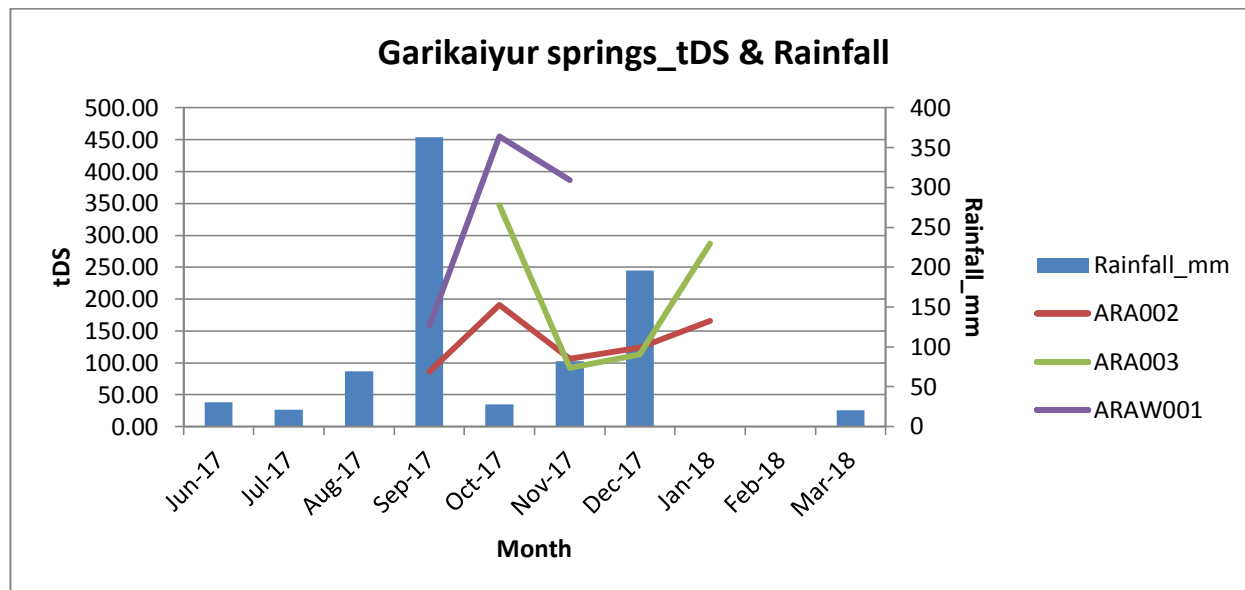
5a. Spring and Well Hydrographs



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
Garikaiyur village		To repair Garikaiyur and Nadur GLRs, repair pipeline in the village, and to make a proper basement for placing pots to fill water from common tap.	Repair GLRs =Rs 5,000 each Repair of pipelines =Rs 1,500 each Basement for GLR =Rs 5,000  TOTAL =Rs 18,000	Planned- The village to approach Aracode Panchayat.
		To get an electric pump motor for Garikaiyur Bore-well	15,000	Planned – The village has approached Aracode Panchayat.
		To plant grasses in all the spring-shed regions.	Rs 6,000	Planned for the next monsoon in 2018.
		To have a covering for Vaagekundi, Vekkikarai and Karapanai.	=Rs 9,000	On-going Material cost borne by Keystone. Labour by community.
Vaagaikundi	ARA002	Pipelines to be re-laid in a new route from source till GRL in Garikaiyur village.	Rs 1500	Material cost borne by Keystone. Labour by community.
Koppaikarai	ARA003	Pipeline from source to Garikaiyur GLR.	Rs 4,000	Material cost borne by Keystone. Labour by community.
Nadur Bore-well	Not available	To lay pipelines from the bore-well to Nadur GLR.	Rs 7,700	Material cost borne by Keystone. Labour by community.
Vekkikerai	ARA047	Pipeline from Vekkikerai (ARA047) till Nadur GLR to be repaired.	Rs 1,500	Material cost borne by Keystone. Labour by community.
		To construct a stone structure around Vekkikarai (ARA047) spring.	Rs 5,000	Planned by community

<b>Discussion 1</b>	<b>: November, 2017</b>
<b>Source</b>	<b>: Vaagaikundi (ARA002)</b>
<b>Intervention</b>	<b>: Pipelines to be from source till GRL in Garikaiyur village, to dig trenches and plant saplings in spring-shed region, and to fix covering for the source.</b>
<b>Total expenditure</b>	<b>: Rs 9,000</b>

<b>Interventions</b>	<b>Reason (benefits)</b>	<b>Expenditure (Rs)</b>
1. Pipelines to be re-laid in a new route from ARA002 till GRL in Garikaiyur village.	For the convenience of easy maintenance of pipeline which is re-laid near roadside from forest.	Cuplings and Unions =Rs 1,500
2. To dig trenches, and plant saplings in the spring-shed region of ARA002.	The spring-shed region is a forest land where prior permissions to be taken to dig trenches, and plant saplings by the community.	No. of sapling: 100 =Rs 20*100 =Rs 2,000 Wages to labour to plant saplings, and digging trenches is Rs.350/person/day* 4 people =Rs 1,400
3. Fix a covering for the source.	To prevent leaves from falling, and entry of any kind of contamination.	Rs 3,000

<b>Discussion 2</b>	<b>: November, 2017</b>
<b>Source</b>	<b>: Koppaikarai (ARA003)</b>
<b>Intervention</b>	<b>: Pipelines to be re-laid in a new route from source till GRL in Garikaiyur village.</b>
<b>Total expenditure</b>	<b>: Rs 4,000</b>

<b>Interventions</b>	<b>Reason (benefits)</b>	<b>Expenditure (Rs)</b>
Pipeline from ARA003 to Garikaiyur GLR.	To channel excess water from ARA003 after storing for school to the village GLR.	H.D pipe (50m) =Rs 4000

**Discussion 3** : November, 2017  
**Source** : Vekkikerai (ARA047)  
**Intervention** : To repair pipeline from source till Nadur GLR; to construct a stone structure around the source; to fix a covering for it; and also dig trenches and plant saplings in the spring-shed region.  
**Total expenditure** : Rs 15,000

Interventions	Reason (benefits)	Expenditure (Rs)
Pipeline from Vekkikerai (ARA047) till Nadur GLR to be repaired.	To improve the efficiency of water supply and distribution by minimising leakages and air-gaps.	Cuplings and Unions =Rs 1500
To construct a stone structure around the spring.	To protect the spring source from further contamination.	Rs 5,000
Fix a casing for the water tank.	To prevent leaves from falling, and entry of any kind of contamination.	Rs 5,000
To dig trenches, and plant saplings in the spring-shed region of ARA047.	Most of the spring-shed region is fallow lands, and people no longer use it for cultivation. Planting of samplings helps to retain, and enrich the aquifer capacity.	No. of sapling: 100 (Rs 20*100) =Rs 2,000 Wages to labour to plant saplings, and digging trenches is Rs.350/person/day* 4 people =Rs 1,400

**Discussion 4** : November, 2017  
**Source** : Nadur borewell  
**Intervention** : To lay pipelines from the bore-well to Nadur GLR.  
**Total expenditure** : Rs 7,700

Interventions	Reason (benefits)	Expenditure (Rs)
To lay pipelines from the bore-well to Nadur GLR.	Panchayat has drilled a bore-well, but there has not given electricity connection, or pipelines to pump water to the GLR. The water source could be used to meet the water scarcity issues in the village during summers.	H.D pipe (130m*1'') =Rs 5000 To flatten the base/flooring of GLR: Cement (100kg) = Rs 1,000 Sand (6tin) = Rs 1,000 Jalli (4tin) = Rs 700 Stones (250 stones) People's contribution

**General Discussions** : June, 2017 - March, 2018  
**Village** : Garikaiyur, Nadur, Baragur

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

1. Garikaiyur village  
To tackle water scarcity issues during summer and to prevent human-wildlife conflicts, an institutional mechanism for water sharing was to be collectively decided by all households from the village. In July, 2017 a community meeting with a group of ten women from the village was conducted. Water could be accessed only at the village GLR by all 40 households for 3 hours per day where standard access of 10 pots per household per day became a set norm for peak summer.  
Status: During peak summer, the norm is being implemented stringently.
2. To repair Garikaiyur and Nadur GLRs, repair pipeline in the village, and to make a proper basement for placing pots to fill water from common tap.  
Expenses:  
Repair GLRs =Rs 5,000 each  
Repair of pipelines =Rs 1,500 each  
Material cost for constructing a basement for GLR =Rs 5,000  
TOTAL =Rs 18,000  
Status: The village to approach Aracode Panchayat.
3. To get an electric pump motor for Garikaiyur Bore-well  
Expenses: Cost of installing an electric motor = Rs 15,000  
Status: The village has approached Aracode Panchayat.
4. To plant grasses in all the spring-shed regions.  
Expenses: Minimum cost of shola saplings is Rs 20 per sapling; wet-land grass species is Rs 300  
Status: To be planted in next 2018 monsoon. Saplings or grass species to be acquired from Keystone nursery.
5. To have a covering for Vaagekundi, Vekkikarai and Karapanai.  
Expenses: Cost of wired mesh covering is Rs 3,000 per source. Therefore, Rs 9,000 in total.  
Status: Work in progress. Materials have been provided under Water Security Plan by Keystone Foundation. Labour by community. As people from the village are migratory labourers, volunteer based works for the village takes place only on weekends.



## 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 the it than by-passing it and directly taking 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.
- Youth group took the lead and set up timings for water release from GLR which reduced time taken to fill water in the pots and ensured that no family was left out without water. Earlier some families which were last in the queue were deprived of water. They were also spending the entire day waiting for water as there was no system in place. The norm for accessing water per household is 10 pots per day only.
- Garikaiyur bore-well water is used meet additional demand for water during festivals in the village.

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

- Aganwadi with functional kitchen.
- Primary school with boarding facility for both boys and girls. When adequate water is supplied to sinetx tanks installed for school kitchen and toilets, the remaining water is channeled to Garikaiyur GLR to meet household demands for water.

## 9. Finances

- There are two savings group in the village run by women.
- There is a pump-operators appointed by Panchayat for the villages, and he turns pipe valves and attend to any problems in the pipeline, and other water infrastructures. He is paid by Panchayat for his role. As his pay from the panchayat is insufficient compared to the involved, he also collects some money on a monthly basis from the village people.

**Annexure**

**A1. Maps**

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

**A2. Photos from the field**