1. **Village Profile**

Village Name - Chokkanalli
Panchayat - Kadanad
No. of households - 45 (53 families as per FRA claims)
Population - 160
Community - Irular
Institutions in the village (if any) - Community hall, Tuition centre

2. **Water supply and demand**

Average daily water demand of the village (Liters per day)
Summer 22,950 lpd (w/o washing= 13,680 lpd)
Monsoon 22,320 lpd (w/o washing= 13,230 lpd)

Average daily water demand of the household (Liters per day)
Summer 510 lpd (w/o washing= 304 lpd)
Monsoon 496 lpd (w/o washing= 294 lpd)

Average daily water supply in the village (Liters per day)
Summer 10,000 lpd
Monsoon 20,000 lpd

Average daily **shortfall**/surplus in water supply in the village (Liters per day)
Summer 12,950 lpd (w/o washing= 3,680 lpd)
Monsoon 12,320 lpd (w/o washing= 3,230 lpd)

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)	470
% of households with storage capacity of 1000 liters or less	250

3(b).Water Storage facilities in the village

Three Ground Level Reservoirs each with a minimum capacity of 10,000lt in the village

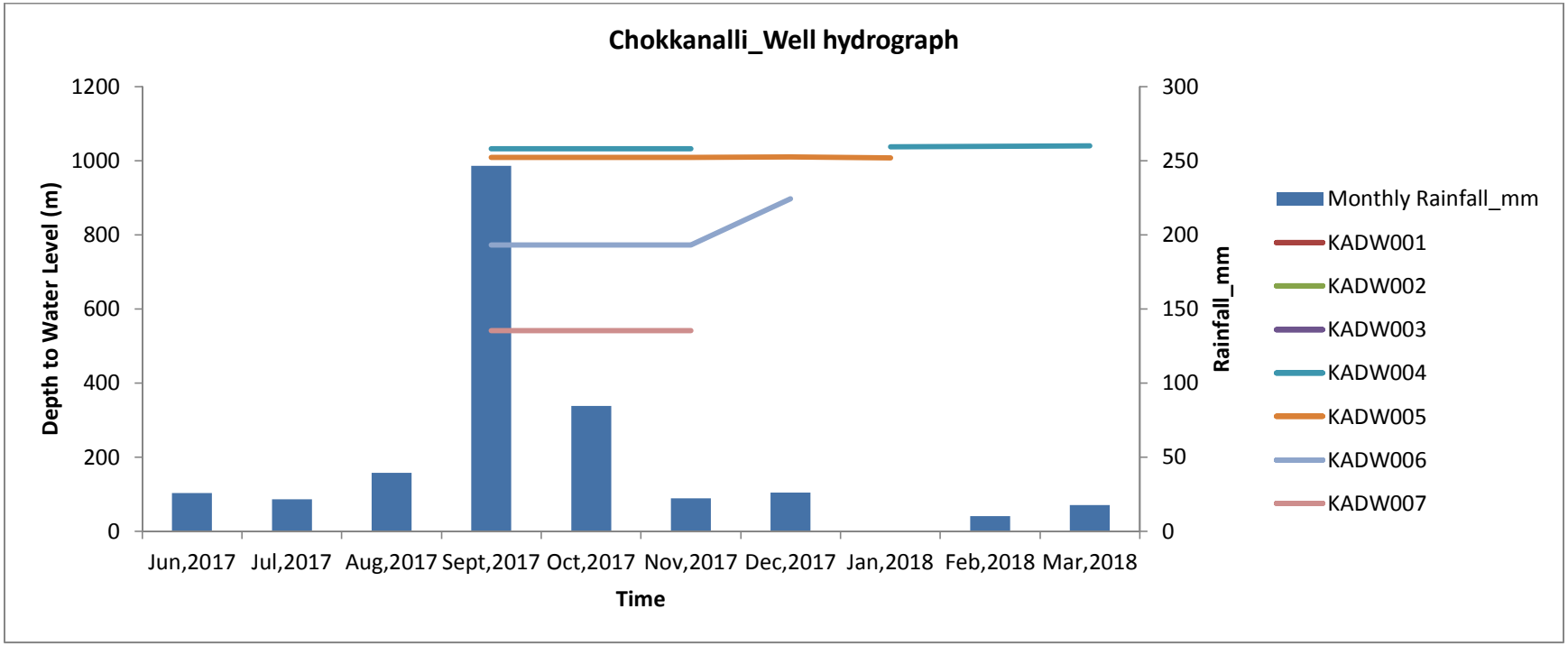
4. **Water Resources**

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) in meters	Seasonality	Springshed /catchment area (Acres)	Land ownership	Land-use pattern of the watershed area	Geology of the watershed area
1	Moongil	KAD101	Spring	4.1*5.3*2.6	Perennial		Forest		
2	Pungamaram	KAD102	Spring	1.9*3	Seasonal		Don't know		
3	Sakkathu lower	KAD103	Spring	2.5	Perennial		Private		Contact spring; Charnockyte, mountainous soil
4	Sakkothu upper	KAD104	Spring	1	Perennial		Revenue		Contact or fracture spring, from inside a cave
5	Ball ground	KADW001	Borewell	180	DNA		Panchayat		
6	Mel Kovil	KADW002	Borewell	300	Perennial		Private		
7	Mango tree	KADW003	Well	4.4*2.2	Seasonal		Panchayat		
8	Bamboo tree	KADW004	Well	3.1*10.58	Perennial		Panchayat		
9	Mukkarsi maram	KADW005	Well	DNA	Perennial		Panchayat		
10	Beside river	KADW006	Borewell	260	DNA		Private		
11	Bore-Riverside	KADW007	Borewell	260	Seasonal		Private		
12	Newbore	KADW008	Borewell	360	Don't know		Panchayat		

S No.	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)	Water Quality issues (in different seasons)	Other issues (In different seasons)	Long term prospect (Will it remain perennial)
1	Moongil	KAD101	Spring	Agriculture, Wildlife	Pumped from well	Nothing	Nothing	Nothing	Yes
2	Pungamaram	KAD102	Spring	Domestic use		Nothing	Nothing	Nothing	Maybe
3	Sakkathu lower	KAD103	Spring	Community, Wildlife	Storage tank	Nothing	Elephant dung near source	Nothing	Yes
4	Sakkothu upper	KAD104	Spring	Community, Wildlife	Storage tank	Nothing	Nothing	Nothing	Yes
5	Ball ground	KADW001	Borewell	No water	Nothing	Nothing	Nothing	Nothing	No
6	Mel Kovil	KADW002	Borewell	Community	Pumped to village GLR	Nothing	Nothing	Nothing	No
7	Mango tree	KADW003	Well	Agriculture, Livestock,	Pumped with	Open	Nothing	Nothing	Maybe

				Wildlife	electric motor	defecation			
8	Bamboo tree	KADW004	Well	Community	Pumped with electric motor	Sewage outlet	Nothing	Nothing	No
9	Mukkarsi maram	KADW005	Well	No water	Hand pulley	Household waste dump	Nothing	Nothing	No
10	Beside river	KADW006	Borewell	Livestock, Wildlife	No motor	Nothing	Nothing	Nothing	No
11	Bore-Riverside	KADW007	Borewell	Wildlife	No motor	Nothing	Nothing	Nothing	No
12	Newbore	KADW008	Borewell	No water	Electric motor	Nothing	Nothing	Nothing	Maybe

5. **Well Hydrograph**



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 June, 2017 till March, 2018. These interventions were agreed by the village, but most of which could not be implemented

Name of the water resource	Source ID	Interventions	Expenditures (Rs)	Status
Sakkoth_ Upper	KAD104	To have a stone structure and lay pipeline to tap water via pipeline to Chokkanalli village.	Cost of stone structure, pipeline, and labour =Rs 7,12,000	Planned To be leveraged with Panchayat or Forest Dept.
Sakkoth_ Lower	KAD103	To dig a pit for wildlife in KAD103.	Labour cost = Rs 4,000	Planned Permission from Forest Dept.
Ball ground	KADW001	To fix a hand pump for the bore-well.	Mark II hand pump =Rs 15,000	Planned To be leveraged with any existing panchayat schemes
New bore-well	KADW008	To lay pipeline from KADW008 till the new ELR.	Cost of pipeline = Rs 87,000	Planned To be leveraged with Panchayat

Discussion 1 : **July, 2017 – Feb, 2018**
Source : **Sakkoth upper and lower (KAD104 and KAD103)**
Intervention : To lay pipeline from KAD104 to the village.
Total expenditure : **Rs 7,20,000**

Interventions	Reason (benefits)	Expenditure (Rs)
1.To have a stone structure at Sakkoth Upper (KAD104) and lay pipeline to tap water to Chokkanalli village.	It is a perennial water source which is located 6km away from the village crossing two valleys, and many small streams. Tapping water at the source ensures adequate water for consumption and to revive agricultural practices in their fields. *To be leveraged with Panchayat and/or Forest Dept.*	Stone structure =Rs 12,000 Pipeline cost = Rs 7,00,000
2.To dig a pit to make water assessable for wild animals like guars, elephants.	When water from KAD104 is fully tapped, KAD103 would be an alternative source for wildlife which would not disturb distribution line from KAD104's. *Permission to be obtained by the village from Forest Dept.*	Labour cost =Rs 4,000

Discussion 2 : **Mar, 2017**
Source : **New bore-well (KADW008)**
Intervention : **To lay pipeline from KADW008 till the new ELR.**
Total expenditure : **Rs 15,000**

Interventions	Reason (benefits)	Expenditure (Rs)
To lay pipeline from KADW008 till the new ELR near the temple at the end of the village.	Masinagudi Youth Welfare Association (MYWA) an NGO drilled the bore-well in 2015-16. They provided motor, and had handed over assert to Kadanad panchayat who is liable to provide pipelines to pump water from KADW008 to new ELR. *MYWA transferred the ownership of the water source to the panchayat. Provision of pipeline is to be leveraged by Panchayat. People approached Keystone for provision of pipeline. Due to lack of support from community from the start of WSP initiations, and high cost of pipelines; materials could not been provided. Community is not in peace with Community Resource Person of Sigur region with regard to this matter.*	**Cost of Pipeline** =Rs 115/ m of 2" pipe *750m **TOTAL COST =Rs 86,250**

General Discussions **: July-March, 2018**
Village **: Chokkanalli**

These interventions did not seem feasible to solve the water scarcity problem in the villages.

1. To fix a hand pump for a bore-well drilled in the village common ground (KADW001). The bore-well is drilled at a total depth of 260m, where there is water available at at-least 40m from ground level in December month. This could serve as an alternative source where immediate daily water needs of households could be met.

Expense : Cost of Mark II hand pump = Rs 15,000

Status : *The plan was not implemented, as people do not prefer using water from bore-well due to differences in water quality.*

2. To deepen Pungamaram spring source near stream (KAD102), to have a stone structure around it, and fix a motor to pump water to the village. The source remains as the main source of water during extreme summers. Having a permanent structure around the source could protect it from any contamination.

Expense : Cost incurred to work on KAD102 is around Rs 30,000

<u>Cost of labour to deepen the source</u>

Mason (Rs 400/day*2 masons*7 days) = Rs 5,600

Other helpers (Rs 200/day*5 people*7days) = Rs 7,000

<u>Cost of motor and panel board</u>

1HP Mahendra Open-well Submersible motor slick 3H = Rs 9,000

1HP MCB Panel box = Rs 1,700

<u>Covering for the source</u>

Material cost = Rs 5,000

Status : *The plan was not implemented, as it was observed that the level of water in the pit during summer is very minimal to pump water.*

7. Maintenance and Intervention

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

- Storing bore-well along with pumped water from open-well near Bamboo bush (KADW004) in the village GLR and accessing water from the GLR than tapping it directly from the source.
- Piping water from Sakkoth spring, and storing in three GLRs that are in good condition. A protocol to be collectively taken by the community which storage structure would be used for what purposes like domestic and irrigation.
- Opening the water outlet from the GLR in the morning and/or evening, so that all families can fetch water from a common point taps.
- In case of shortage of water, deciding on quota of water each family or line of households can take with a given timings would improve efficiency in distribution.

Maintenance to ensure

- Removal of leaves/blocks from the pipeline coming from the source
- 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 and water quality by a person from the respective village

8. Other agencies and village institutions

- Masinagudi Youth Welfare Association (MYWA)

9. Finances

- There is no saving group in the village.
- There is no particular pump-operator who has been appointed by panchayat for the village, and thus many men from the village take the initiative to attend to any day to problems or issues in the pipeline, and other water infrastructures.

Annexure

A1. Maps

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

A2. Photos from the field