

Final  
Implementation  
Report  
2016-2017

Submitted to :  
Pernod Ricard India Pvt. Ltd.

**ALTERNATE APPROACHES  
TO LIVELIHOOD ENHANCEMENT  
AMONG RURAL COMMUNITIES**

Implementation Project in Phagi Block,  
Jaipur District, Rajasthan



***advit foundation***  
[www.advit.org](http://www.advit.org)

# CONTENTS

BACKGROUND	01-02
PROJECT ACHIEVEMENT	02
PROJECT SUMMARY	03-06
PROJECT IMPACT	06-08
Environmental impact	
Social impact	
Economic impact	
Beneficiaries	
MONITORING AND MEASUREMENT	09-11
PROJECT SUSTAINABILITY	12
ANNEXURES	
ANNEXURE I	
Drawings of structures made by community	12-13
ANNEXURE II	
Formalised drawings of the structures	14-17
ANNEXURE III	
Monitoring framework	18
ANNEXURE IV	
Letter of support from the Panchayat	19
ANNEXURE V	
Thank you letter from the Panchayat	20
ANNEXURE VI	
Advit Foundation brief	21-23

# 01 BACKGROUND

Groundwater is the major source of irrigation and drinking in the rural areas of Rajasthan. Being an important and integral part of the hydrological cycle, its availability depends on the rainfall and recharge conditions. This is a dependable source of uncontaminated water. The detailed study conducted by Advit Foundation revealed that the entire area including the belt of selected villages is possibly the driest part of Jaipur district. The area is suffering from a disproportionately poor availability of water, loss of tree cover and very high fluoride content (80%). The situation has worsened over time due to a rapid increase in use-related parameters.

The primary source for groundwater recharge is the scanty and uncertain rainfall, confined to just two months of the year. The area can be categorized as semi-arid, which implies that the area is suffering from recurrent water scarcity.

The rainfall in the area is not only inadequate, but also varies sharply from year to year. Consequently, droughts are now almost a normal occurrence. Fluctuations in rainfall influence both surface and ground water availability. The water balance analysis of the area indicates a moderate recharge of only 14%. Due to the dry climate, the evapo- transpiration losses are very high (57%). The excessive pumping of groundwater is one of the major reasons for low water levels in the area. The volume of seepage (6.67 %) is also very low due to the structure of the soil. The analysis of monthly rainfall and monthly evaporation data indicates that there is a small period when the evaporation is lesser than the rainfall (mid-July to end-September). This is the period when maximum harvesting of rainwater should be done to increase the groundwater charging. The water stored in water harvesting structures can reduce the pressure on ground water resources.

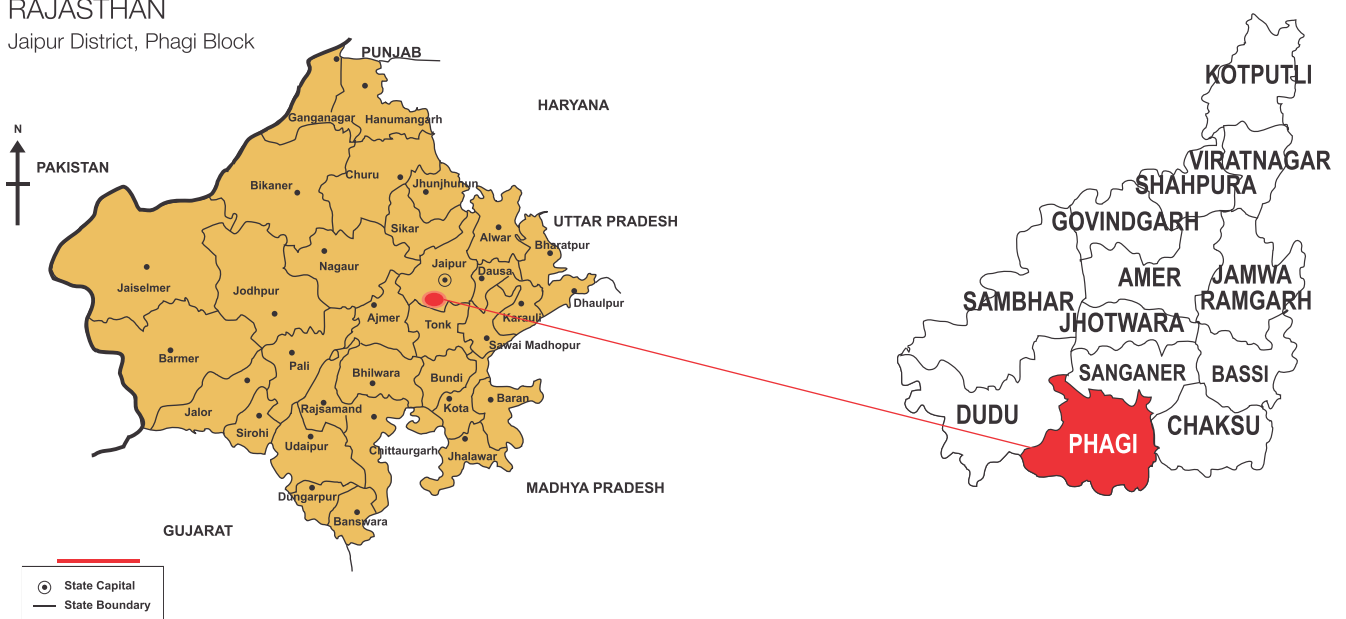
In this project, Advit Foundation with CSR support from Pernod Ricard India Pvt. Ltd. has undertaken a water conservation programme in Rajasthan.

## PROJECT LOCATION

The target area of this project is Phagi block, Jaipur District which has been categorized as water critical by the Central Ground Water Board. The ground water is not just inadequate, but the little available water is also highly saline and is high in fluoride leading to health complications. Poor availability of water also affected the agricultural and livestock output thereby directly affecting the livelihood of the people.

### RAJASTHAN

Jaipur District, Phagi Block



The area receives around 450-500 mm of rainfall annually and is very erratic. However, it was observed that if designed properly and at the right location, rain water harvesting structures could replenish the water table and revive the surrounding wells with clean water.

This initiative was taken up with an objective of enhancing the livelihood of the community at Phagi block by improving the water scenario in the region through rain water harvesting check dams. The area topography was studied in depth and strategic locations and designs for the check dams were arrived at. In early 2016, the construction of check dams was started with an aim to be ready before the rains in the months of July, August and September. 4 water harvesting structures were built well before the rains. Fortunately, the rainfall this year in this region has been higher than annual average. As a result the water structures have swelled up with fresh water. The nearby wells that were absolutely dry previously have all filled up with water. There is sufficient water to last for at least 2 more years. More than 25,000 cubic metre of rain water storage capacity has been created.

## 02. PROJECT ACHIEVEMENT

- More than 7000 community members have been directly benefited by this water initiative. However, indirect beneficiaries would be more than 20,000 as at least 3 more adjoining villages are benefited from this initiative.
- Approximately 25,000 cubic metre (25,000,000 litres) of rain water storage capacity has been created by means of constructing 4 water harvesting structures as per the following table.

Village	Built water storage capacity	Actual storage capacity
Awandia (Gawariyo ki Dhani)	4,950 cu.m	4,950 cu.m
Sultania (Musalmano ki Dhani)	4,950 cu.m	4,950 cu.m
Sultania	4,950 cu.m	7,500 cu.m
Sawa ka Baas	4,950 cu.m	10,000 cu.m
<b>TOTAL</b>	<b>19,800 cu.m</b>	<b>27,400 cu.m</b>

- The nearby wells have been replenished. Some wells which were known to be absolutely dry previously have now got recharged.



- The wells have been marked and periodic measurements of water level in these wells is taking place for a better understanding of the impact. This is part of the detailed monitoring framework that has been developed.
- The farmlands in Sultania village have become more than 80% irrigated due to the higher availability of water and improved soil moisture.

## 03. PROJECT SUMMARY

The project was initiated in January 2016. The first step was to mobilize the community. This was achieved by seeking participation from the community and the Panchayat. They were informed of the details of the project and its envisaged impact. Water user groups were formed to ensure sustainable water use and ensure maintenance of the structure.

A baseline study was undertaken of the target areas which included a study of the land topography, identification of land use patterns, marking of surrounding wells and land under agriculture and preparation of monitoring indicators. Subsequently, the sites were finalized along with the village governing body, Advit and Pernod Ricard representatives. Maps with the planned structure size were prepared with the community (Annexure I). Formalized drawings of the structures were also prepared (Annexure II). The contractors were identified by a participatory approach in the presence of the village Sarpanch and work was initiated in March 2016.

### Glimpses of community mobilization and site identification



The designs for the water structures and the cement overflow were finalized and the construction was completed by end of April 2016. The monsoon arrived in the region in July 2016. The structures were kept under observation for a couple of months. Some damages were incurred which were repaired by the end of September 2016. However, one of the structures is yet to be repaired. Post rain, due to good water flow and accumulation in the Awandia (Gawariyo ki Dhani) water structure, the adjoining farm land villagers diverted the water into their farm lands. This however led to excessive flow into their farm land and resulted in no accumulation in the constructed structure. This led to even spoilage of the farm produce. This diversion now has to be rectified.

## Glimpses of all the structures before and after the rains

### Awandia (Gawariyo ki Dhani)

Before Construction



After Construction



After Rain



### Sultania (Musalmano ki Dhani)

Before Construction



After Construction



After Rain



## Sultania

Before Construction



After Construction



After Rain



## Sawa ka Baas

Before Construction



After Construction



After Rain



The structures were formally inaugurated and handed over to the village panchayat in the presence of Pernod Ricard India team, SDM Phagi, and Sarpanch Pachala. The area has been surveyed again for documenting the impact on the surrounding wells (water depth, quality), agriculture, livestock and green cover.

## Glimpses of inauguration and handing over to panchayat



In January 2017, marking of wells and measurement of water level was initiated. A detailed monitoring framework has also been developed (Annexure III).



## 04. PROJECT IMPACT

The water structures in all the 4 villages have brought about environmental, social and economic benefits to the local community. The initiative has ensured water availability for drinking, agriculture, livestock and sanitation in the villages. The water quality has improved, salinity and fluoride in water has reduced, large area of agriculture land is under irrigation now (letter from the Sarpanch enclosed in annexure IV)

### 4.1 ENVIRONMENT IMPACT

- There is a significant increase in green cover due to improved soil moisture
- Since the wells have recharged with clean water, it is now being used for drinking and irrigation.
- Natural biological process are taking place around the water structures which is leading to improvement in bio diversity.

### 4.2 SOCIAL IMPACT

- There is enough water available for sanitation. This will lead to cleaner practices and better health.
- Women have to walk much less to fetch water. This gives them enough time to do additional income enhancing work or gain new skills.

### 4.3 ECONOMIC IMPACT

- Better availability of water and improved soil moisture is leading to more number of crops being planted thereby increasing income. The panchayat has declared that village Sultania now has more than 80% irrigated farmlands.
- Higher livestock yield also contributes to income enhancement.

## 4.4 BENEFICIARIES

There have been 7,000 direct beneficiaries. However, indirectly more than 20,000 are benefitted, and at least 3 more adjoining villages are impacted. There has been marked increase in the livestock number too. This could also be because of increased availability of green cover due to increase in soil moisture because of water accumulated in these water structures constructed through this project initiative.

S.No.	Village name	Block	No. of households	Village population.	No. of hamlets (~100 households/ av. 5 individuals per house)	Total direct beneficiaries (approx)
1.	Awandia	Phagi	178	1085	1	
2.	Sultania	Phagi	302	1863	3	
3.	Sawa ka Baas	Phagi	200	1097	2	
	TOTAL		680	4045	6 (600 households/ 3000 individuals)	1280 households/ <b>7,045 individuals</b> <b>1280 households/*</b>

\*Each village has around 100 cattle and 300-400 goats/sheep

### Glimpses of Project Impact

#### Recharged wells in and around the water structures





### Positive impact on Flora and Fauna



## 05. MONITORING & MEASUREMENT

A monitoring framework has been developed. As part of the framework, wells around each water harvesting structure have been marked with a unique ID and have been measured. These wells will be measured periodically to understand the impact better. The measurements have been tabulated. The measured data is compared with the data in the central ground water report.

S.No	Village	Well code	Approximate distance of the well from water structure (m)	Annual average rainfall (mm)*	Well depth (m)	Well diameter (m)	Irrigation pump usage	Average water level in Phagi block (mbgl)*	Water level (mbgl) 28.12.2016	Volume of water (x 1000L) 28.12.2016	Remarks
1.	Sawa Ka Baas	SKB/W01	50	501.28	26.4	4.0	Yes	~10.20	5.9	254	Water over drawn for irrigation
2.		SKB/W02	50	501.28	18.8	4.0	Yes	~10.20	4.5	176	
3.		SKB/W03	50	501.28	17.4	2.8	Yes	~10.20	7.0	63	
4.		SKB/W04	150	501.28	13.4	3.7	Yes	~10.20	1.8	122	
5.		SKB/W05	700	501.28	21.0	4.3	Yes	~10.20	4.5	8	
6.		SKB/W06	750	501.28	11.3	4.9	No	~10.20	8.8	131	
7.	Gavariyon Ki Dhani	GKD/W01	150	501.28	14.6	4.5	Yes	~10.20	20.5	93	Water over drawn for irrigation
8.		GKD/W02	300	501.28	16.8	4.0	Yes	~10.20	15.8	12	
9.	Musalmano Ki Dhani	MXD/W01	200	501.28	17.7	4.0	Yes	~10.20	7.2	130	
10.		MXD/W02	200	501.28	19.5	3.4	Yes	~10.20	13.3	55	
11.		MXD/W03	150	501.28	19.5	2.4	Yes	~10.20	9.8	46	
12.	Sultania	SUL/W01	50	501.28	15.5	2.1	Yes	~10.20	7.9	26	
13.		SUL/W02	250	501.28	9.1	2.4	No	~10.20	7.9	6	
14.		SUL/W03	250	501.28	12.5	3.3	No	~10.20	10.1	21	

The following maps show the location of the wells.



The following maps show the location of the wells.



## Glimpses of monitoring



## 06. PROJECT SUSTAINABILITY

The community and the panchayat have been directly involved in the entire process. Water user groups have been formed and trained in the maintenance of the water harvesting structures. This will ensure the structures are taken care of in the subsequent years.

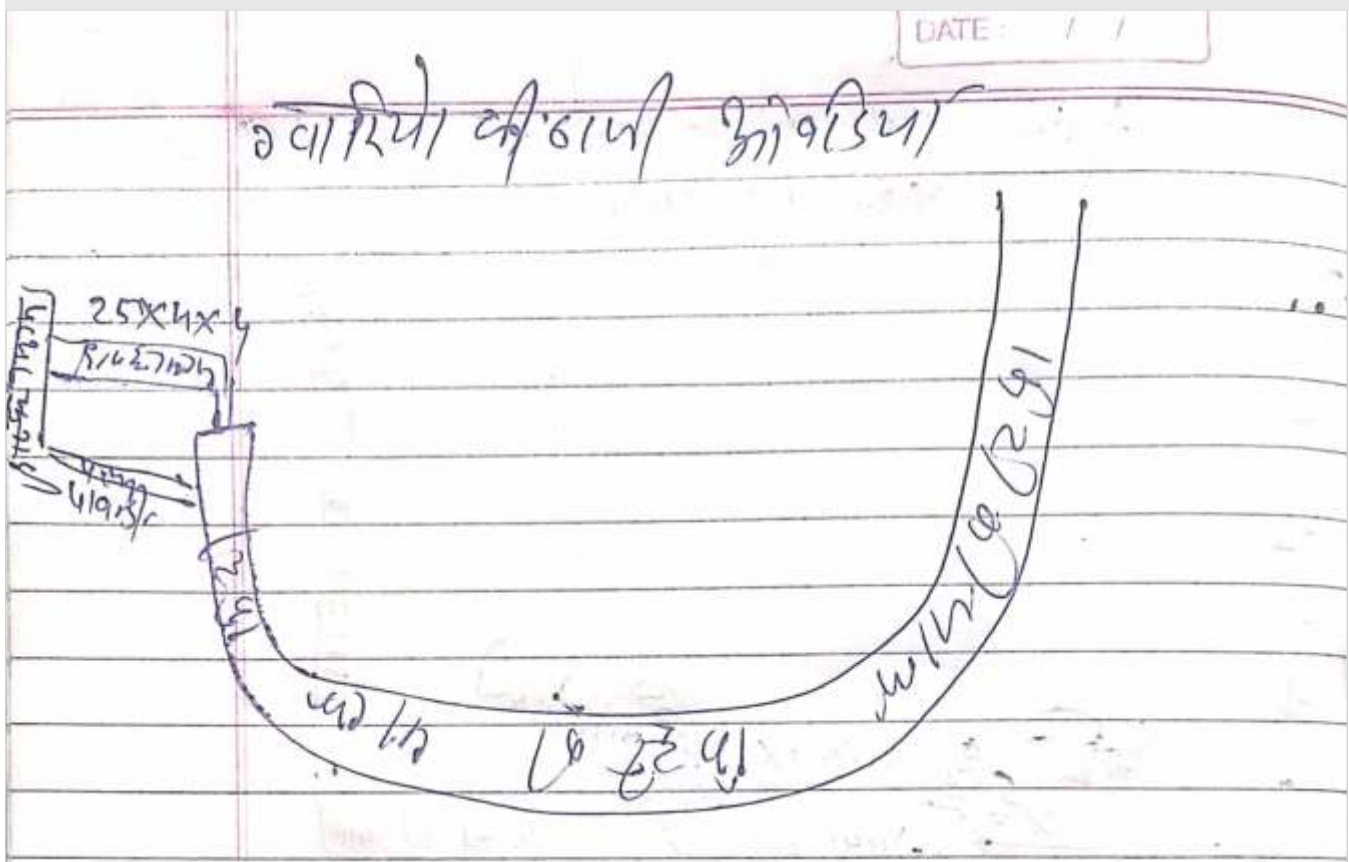
The wells around each structure have been marked with a unique ID. The level of water has also been measured. The youth in the villages are being trained in the measurement methods and water quality testing techniques. A portable, user friendly water test kit is being used to measure the quality of water. This will ensure periodic measurement to get a better understanding of the situation and take necessary actions.

## 07. ANNEXURES

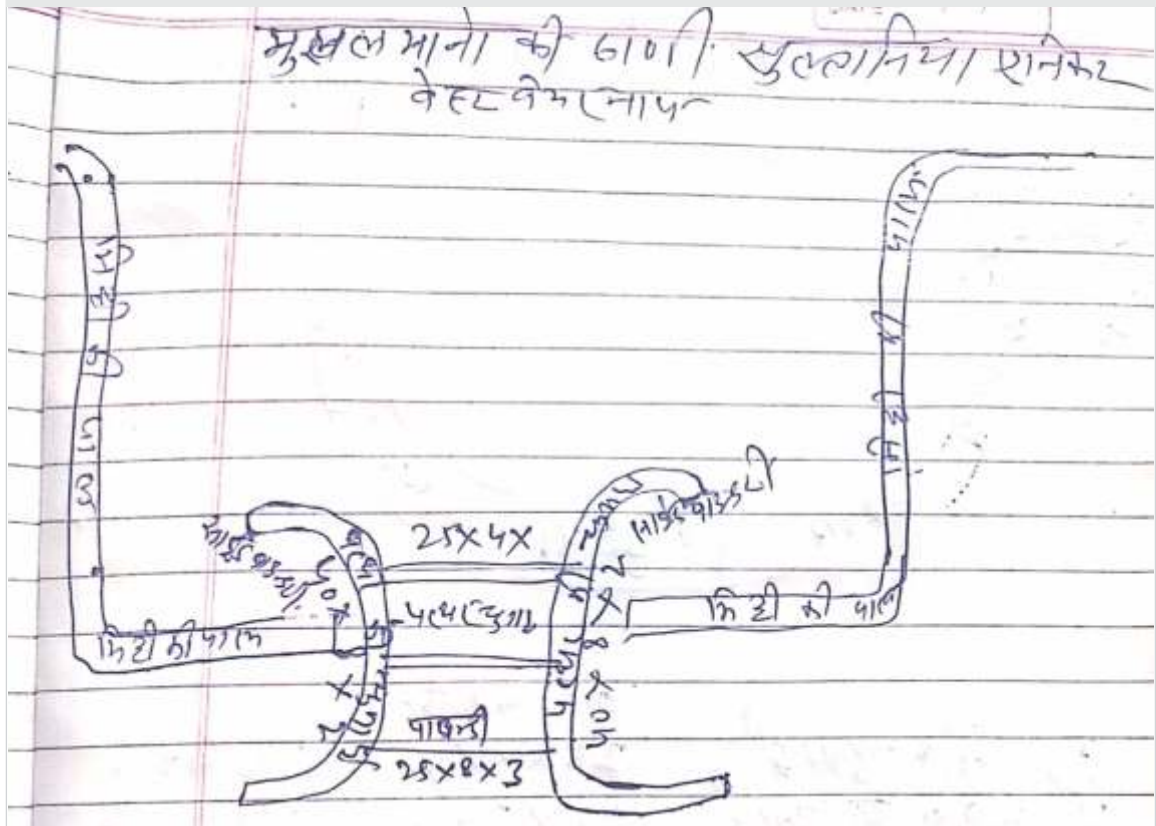
### 7.1 ANNEXURE - I

#### Drawings of structures made by community

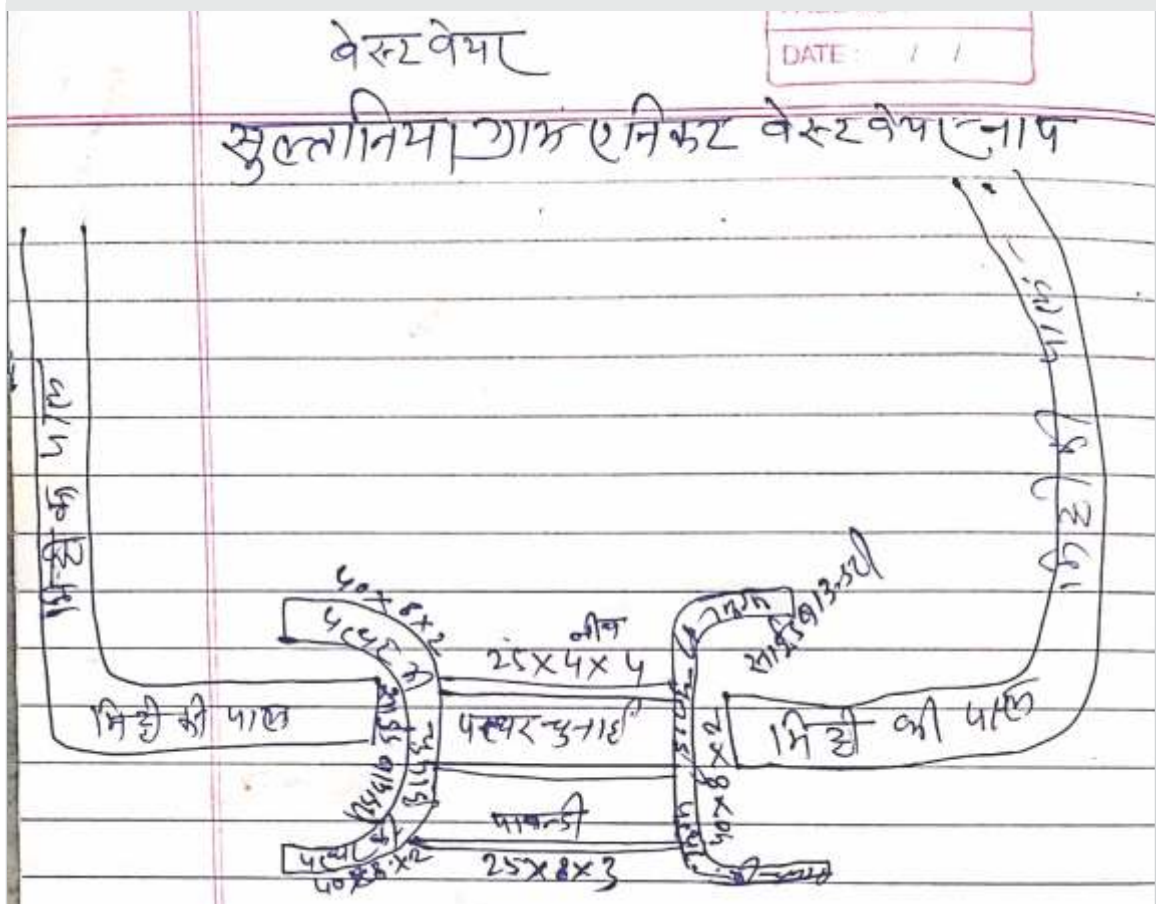
##### Awandia (Gawariyo ki Dhani)



### Sultania (Musalmano ki Dhani)



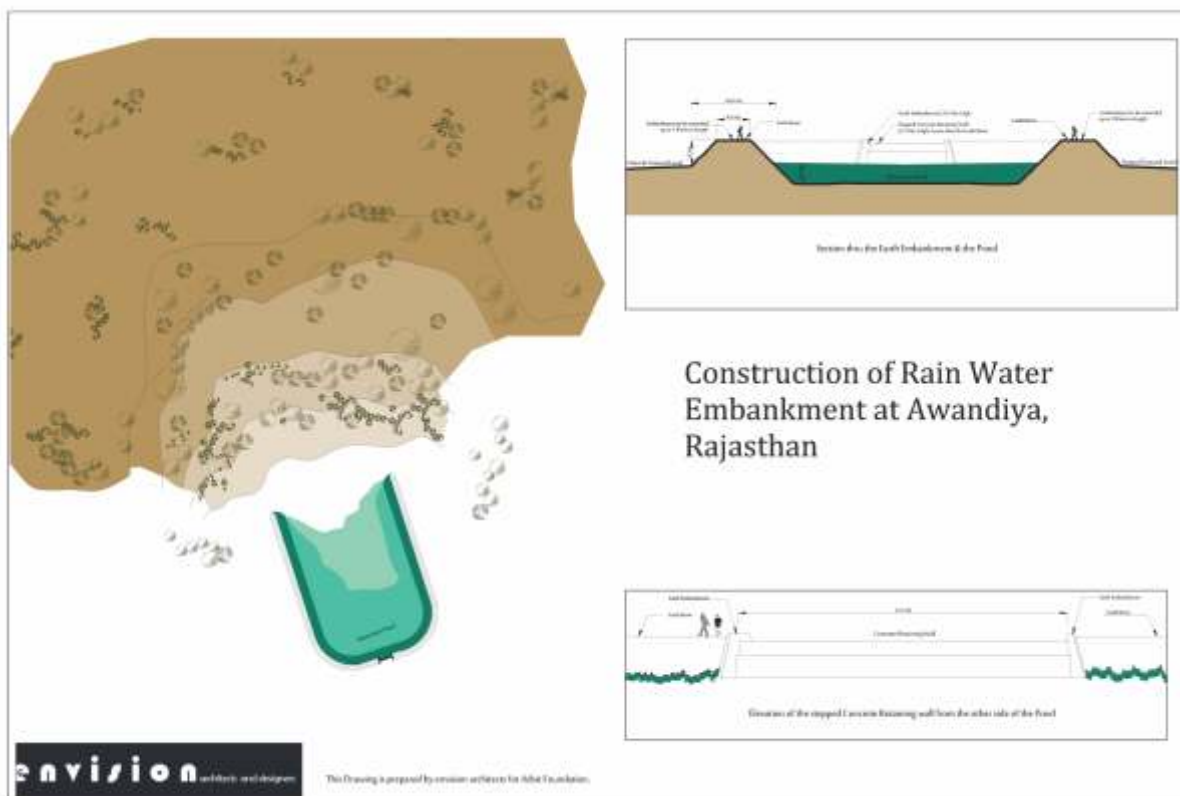
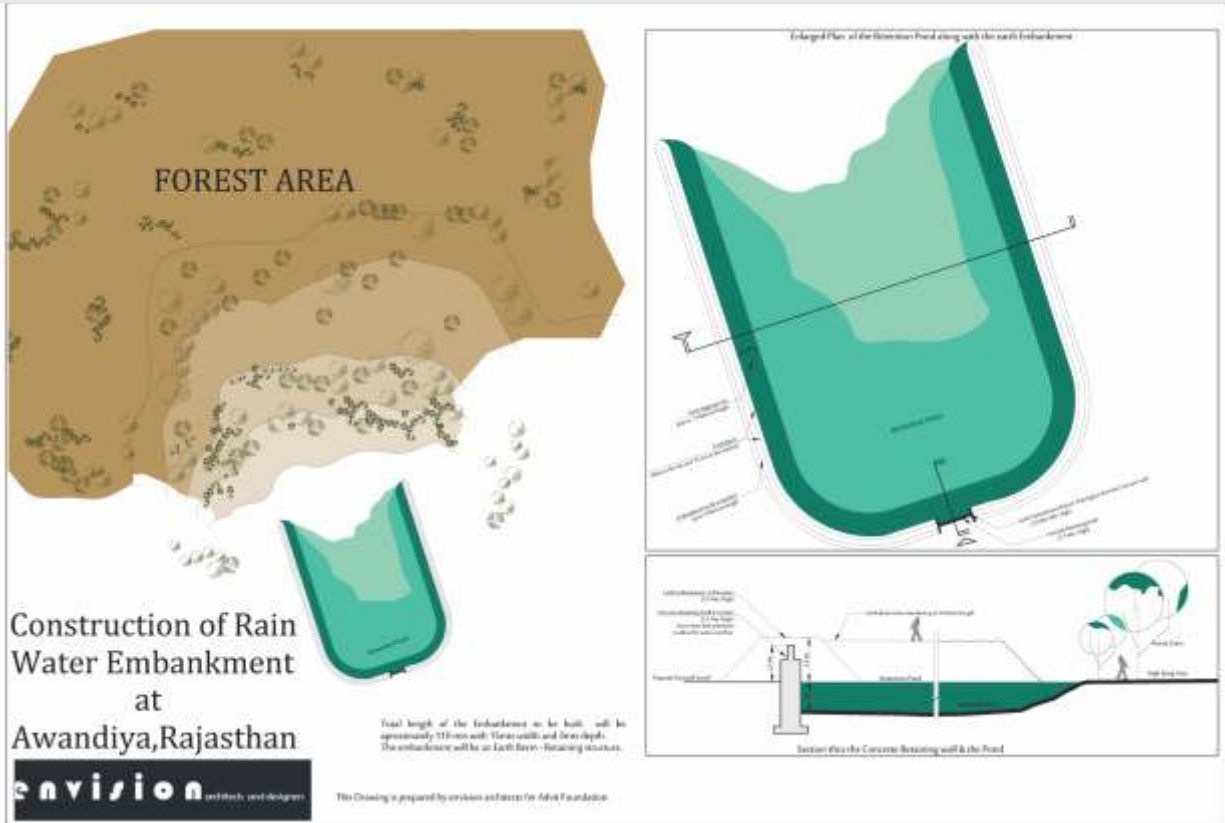
### Sultania



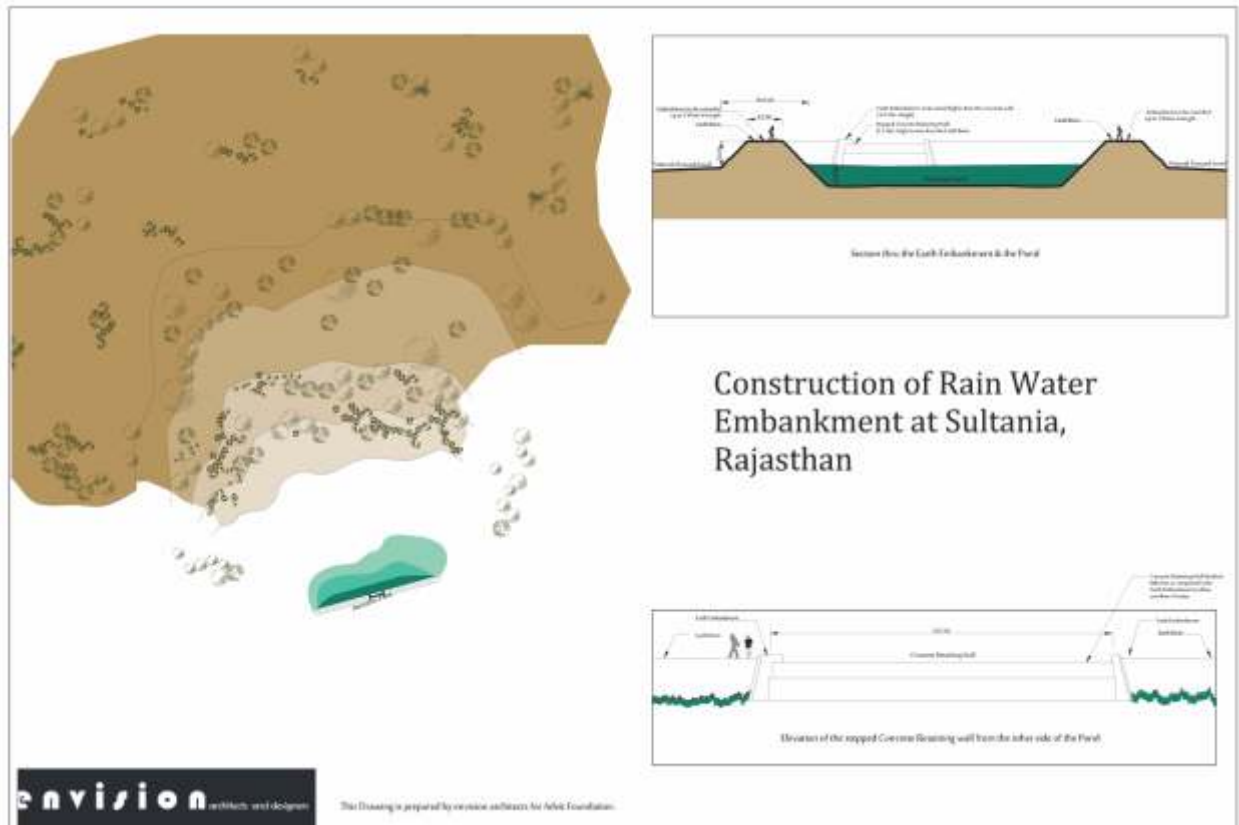
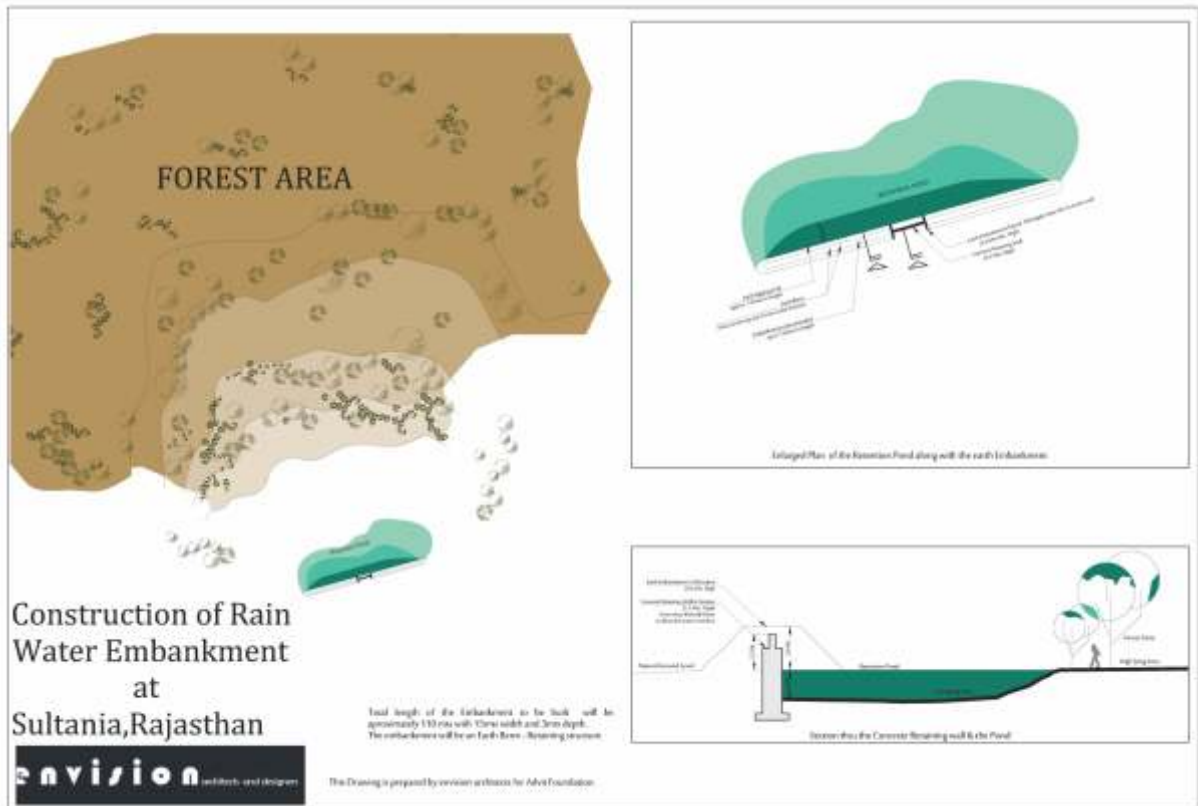
## 7.2 ANNEXURE - II

## Formalized drawings of the structures

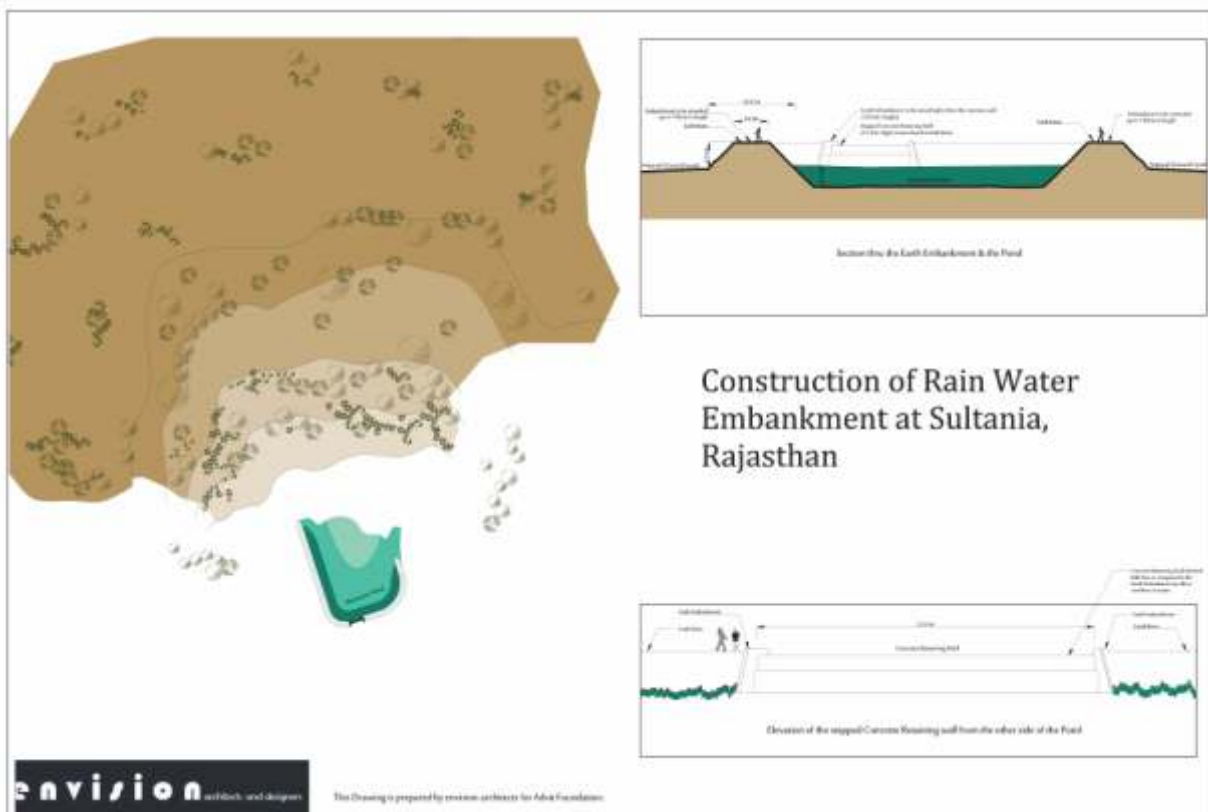
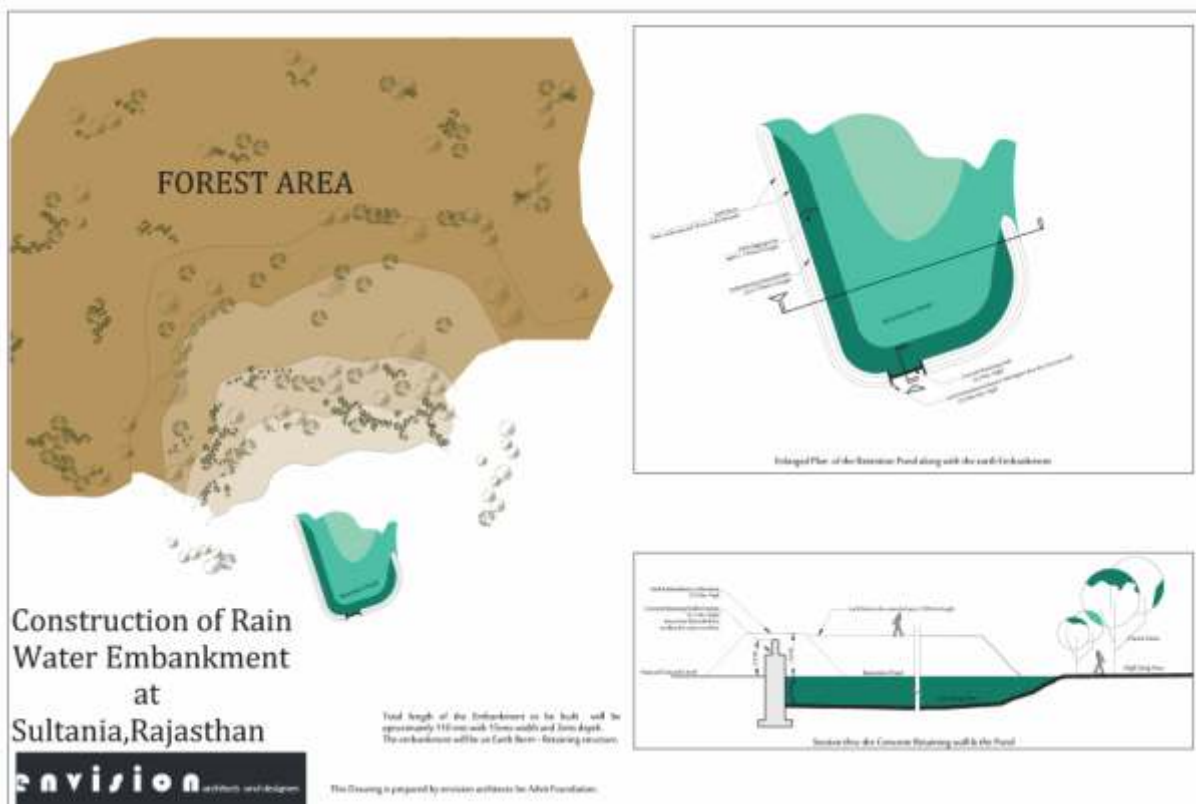
## Awandia (Gawariyo ki Dhani)



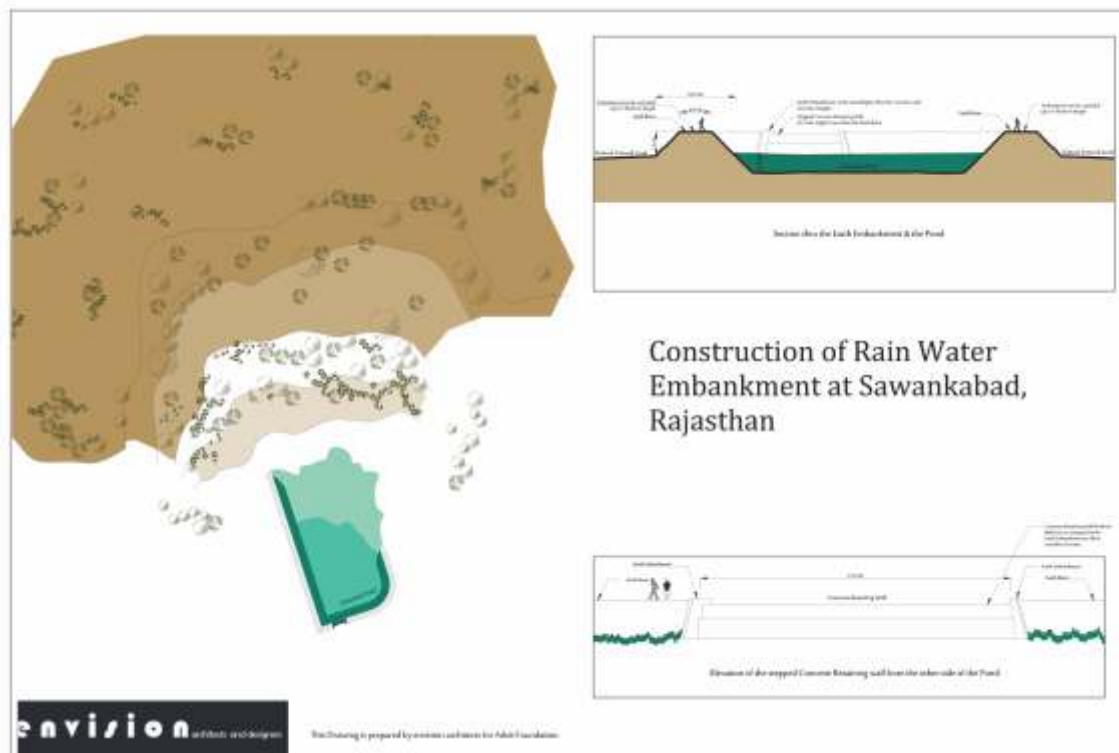
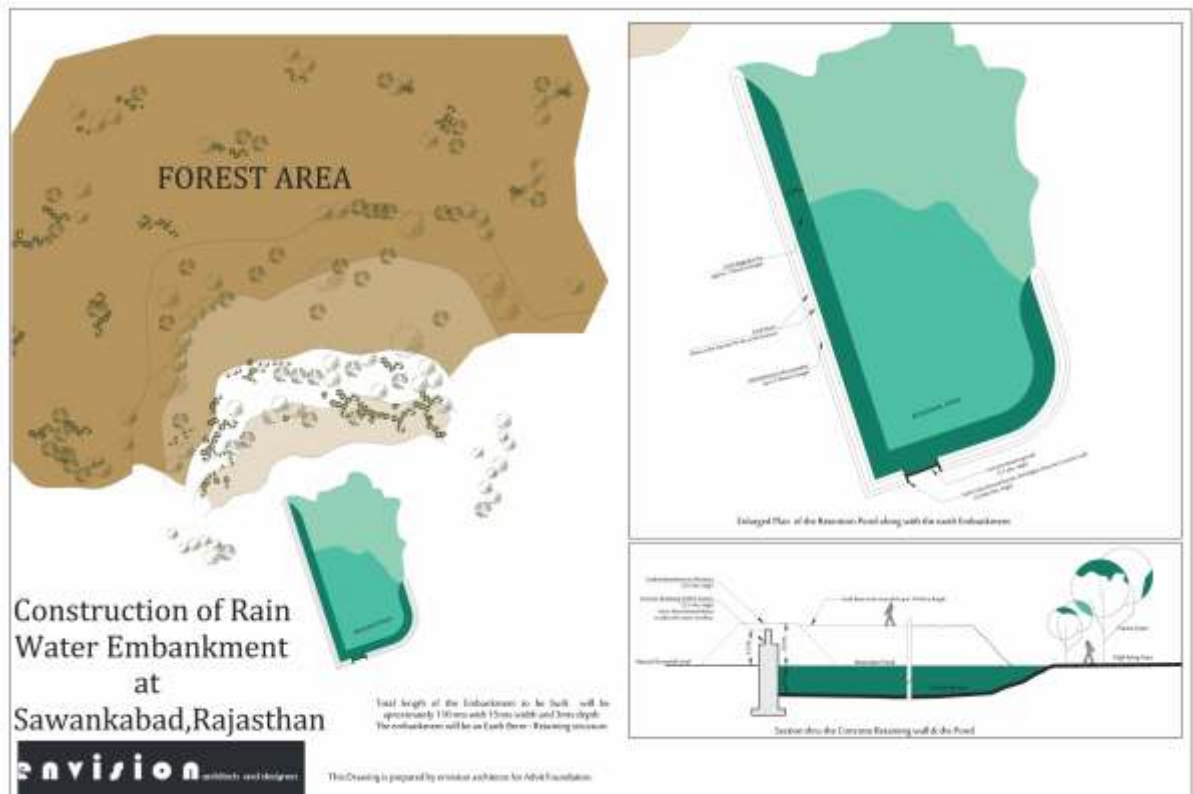
## Sultania (Musalmano ki Dhani)



## Sultania



## Sawa ka baas



## 7.3 ANNEXURE - III

### Monitoring framework

#### Water Monitoring Indicators - Framework

Village Name : \_\_\_\_\_

S.No.	Activity/ timeline		May (pre monsoon)	August (post monsoon)	December (mid year)
1.	Depth of water wells				
2.	Water quality test - 11 parameters <b>Physical :</b> pH, Temperature, Turbidity, Hardness <b>Chemical :</b> Chloride, Fluoride, Iron, Nitrate, Residual Chlorine, Ammonia <b>Biological :</b> Coliform Bacteria				
3.	Number of livestock - annual	Cattle Sheep Goat			
4.	Cropping pattern		April – August (summer)	September – March (winter)	
		Jawar			
		Makka			
		Bajra			
		Moong dal			
		Urad dal			
		Channa			
		Sarson			
		Tarameera (sarson variety)			
		Jau (millet)			
		Wheat			
		Arhar dal			
		Cotton			
5.	Area of land irrigated				

# कार्यालय ग्राम पंचायत पचाला

पंचायत समिति फागी, (जिला-जयपुर) राजस्थान

प्रेषक :-

**मिनाक्षी कंवर**

सरपंच

ग्राम पंचायत पचाला

पंचायत समिति, फागी (जयपुर)

मो. 8560836556, 9772090091

प्रेषित :-

अद्वित फाउंडेशन

गुड गांव हरियाणा

क्रमांक

दिनांक 08/11/16

अनापत्तिपत्र

प्रमाणित किया जाता है कि अद्वित फाउंडेशन जो फागी ब्लाक 2006 से पानी पर कार्य कर रही है वह वर्ष 2016-17 में ग्राम और पानी के तालाब (स्नीकर) ग्राम पंचायत के राजस्व ग्राम आवंटित स्कुलानिया में बनाये जायेगे इस परिधानना के लिए कम्पनी पर नोट स्टाकड फण्ड (विशेष सहायता) दे रही है।

यह सरपंच पानी का कार्य करवाती है। ग्राम पंचायत को कोई आपत्ति नहीं है। और समय 2 पर सस्था का सहयोग करती रहेगी। व ग्राम पंचायत पचाला का अधिकार क्षेत्र में रहेगा।

Mina K  
सरपंच

ग्राम पंचायत पचाला  
पं. स. फागी जयपुर

सचिव  
सचिव पचाला

## 7.5 ANNEXURE - V

## Letter of appreciation from the panchayat

# कार्यालय ग्राम पंचायत पचाला

पंचायत समिति फागी, (जिला-जयपुर) राजस्थान

प्रेषक :-

**मिनाक्षी कंवर**

सरपंच

ग्राम पंचायत पचाला

पंचायत समिति, फागी (जयपुर)

मो. 8560836556, 9772090091

प्रेषित :-

Advit Foundation

Gurgaon

क्रमांक

दिनांक 26 Jan 2017

We are thankful to Advit Foundation for its continued efforts in improving the water scenario in the villages under Pachala Panchayat. Furthermore, we are happy to inform you that as a result of the efforts taken in 2016 (4 structures built across Sawa Ka baas, Sultania and Awarandiya) the farming lands under the panchayat in Sultania have become more than 80% irrigated. Apart from this, the underground water level have also increased in the areas near the water bodis built. The fluoride level in the water has also decreased and the water have become sweeter. All this will empower the farmers and villagers to increase the yield from their farmlands.

We appreciate the initiatives taken by Advit foundation and its partner organisation and we look forward to your continued support to undertake development projects in the area.

सं. 26/1/2017  
ग्राम पंचायत पचाला  
पं. स. फागी जयपुर

## 7.6 ANNEXURE -VI

### Advit Foundation – brief profile

Advit Foundation ([www.advit.org](http://www.advit.org)) is a not for profit development organization, registered in India working for Conservation of Environment Resources and Livelihood Enhancement. Advit is the managing partner for running the Solar Information Centre at The National Institute of Solar Energy, Ministry of New and Renewable Energy, Govt. Advit was the state nodal partner managing the Rajiv Gandhi Renewable Energy Park in Gurgaon for Haryana Government from 2009-2015. Since inception, Advit has sought to conserve environment and empower communities through viable options of environment conservation and sustainable development.

With a vision of promoting approaches to sustainable development Advit's work focuses on improving living/working conditions through improved environment conditions, promoting environment education and conservation practices. This is undertaken using information and communication systems tools and providing environment education and conservation services. The prime areas of field implementation work include – water conservation, occupational health and safety, energy efficiency, renewable energy promotion and skill development.

Forward linkages are sought through outreach programmes, capacity building and entrepreneurship development. Conservation work is undertaken by identifying local needs, selecting, improving, adopting and developing appropriate implementation plans. Advit operates through the following project areas:

#### AWARENESS

Advit strives to generate awareness on the need to educate, provide a platform for learning to all and impart the importance of conserving environment and conserving resources in our everyday life. Activities focus on all section of the society.

#### EDUCATION

The vision is to create and nurture a learning culture that believes in and breathes change through education. Through change we look towards the infinite possibilities that can be created for the positive development of children and adults. Advit designs and implements environmental training programmes pertinent to:

- Skill development and undertaking village development models that help in livelihood enhancement among communities.
- Environment education in schools and other educational institutes.
- Facilitating environment compliance in industries - Trainings on occupational health and safety, safe chemical handling and disposal, water conservation models, energy audits industry production process documentation and resource conservation in processes.,
- Information dissemination on energy efficiency, solar installations and waste management.

#### CONSERVATION

The programme highlights and suggests alternatives that can help address the challenges of resource conservation. The need for intervention and the alternatives that would improve resource management and development activities are sought. These include implementation of projects in water conservation, waste management and energy efficiency.

## AWARDS AND EMPANELMENT

- Advit Foundation is empaneled with TISS CSR Hub and PCRA.
- Advit is empaneled with the National CSR Hub of the Indian Institute of Corporate Affairs, MCA.
- Awarded the first CII beyond the Fence Project award for an industry in Rajasthan in 2009.
- Awarded the Impact Award for Skill Development at the Impact Conclave by Sambodhi in partnership with Bill and Melinda Gates Foundation, SIDBI, YES Bank in 2016.

Advit was the Managing Partner running the State Level Rajiv Gandhi Renewable Energy Park ([www.energycentre.in](http://www.energycentre.in)) at Gurgaon, set up by HAREDA (Haryana Renewable Energy Development Agency) from 2009-2015.

Is the Managing Partner of National Institute of Solar Energy running the Solar Information Centre set up by the Ministry of New and Renewable Energy, Govt. of India.

Advit is a training partner with the Electronics Sector Skills Council of India (ESSCI) and manages the Centre of Excellence on Solar setup by ESSCI at NISE.

Advit is also a training partner with HARTRON (Haryana State Electronics Development Corporation Ltd.) for Solar Electronics and has setup a Solar Lab in HARTRON Gurgaon.

### A few glimpses of Advit's work and achievement:

- Designed and constructed 14 check dams in villages in Phagi district near Jaipur, Rajasthan. Supported by IKEA, Coca Cola Foundation, Pernod Ricard India, CHOICE and BHEL.
- Implementing Solar home lighting projects in rural areas around Jaipur and Gurgaon targeting more than 2500 households.
- Undertaking trainings on Solar Electrical Training with certification with Rural Electrification Corporation Ltd, Ministry of New and Renewable Energy, Govt of India and major companies. Advit has trained more than 1500 candidates in the basics of Solar Photovoltaics.
- Distributed energy efficient stoves across 100 households in the villages in Phagi.
- Set up education and vocational skill up-gradation training center at Village Ghata, District Gurgaon. Supported by Monsoon Accessorize Trust.
- Undertaking Safe Chemical Handling trainings for workers of apparel, metal, leather and accessories industries all over India.
- Designated as the training partner for safe chemical management and energy efficiency for H&M.
- Implemented occupational health and safety trainings for 25 carpet weaving industries in Panipat, Haryana. Supported by Goodweave UK.
- Facilitate industries to comply with environment standards - Undertake energy efficiency trainings, audits and other resource conservation methods for various industrial processes.
- Implemented roof top rain water harvesting for buildings. Designed and constructed 3 large models for institutions in Gurgaon. Supported by Coca Cola.
- Prepared guide book on energy efficiency and carbon responsibility for apparel industries – Knowledge book. Supported by GIZ.
- Implementing an environment education programme for schools - Prakriti Eco School Programme. Supported by IKEA, Lease Plan, Yum foods.
- Implemented a Village Development Programme for NABARD at village Meoka, Haryana.

## Energy centre

### Water Centre

- Renewable energy information centre
  1. Rajiv Gandhi renewable energy park, HAREDA (till december 2015)
  2. National institute of solar energy
  3. Solar laboratory of HARTON
- Renewable energy awareness programmes
- Resource efficiency in industry
- Technology demonstration and dissemination

### Eco Initiatives

- Environment education programme
- Green Space development
- Waste management

### Energy Centre

- Watershed development
- Village development through water approach
- Community mobilisation and capacity building
- Roof-top water harvesting

### Centre for Learning

- Safe chemical handling training
- Occupational health and safety training
- Solar electrical training
- Project baseline and impact assessment studies

## TOUCHING LIVES

11+  
Years

2,50,000+  
lives transformed

25,000+  
industrial workers  
trained

1 lac+  
cubic meter water  
storage capacity created

100  
wells recharged



**HEAD OFFICE**

610 – A, Udyog Vihar, Phase – V, Gurugram,  
Haryana – 122016 (India)

**REGISTERED OFFICE**

101, Anupam Apartments, Meharauli Badarpur Road  
New Delhi – 110062 (India)



+91 124 4309490, 91, 92



+91 124 4309493



info@advit.org



<http://www.advit.org>