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WATER PROJECT

Medak, Telengana

Sustainability partner: advit foundation
www.advit.org

Submitted to: Pernod Ricard India
CHARITABLE FOUNDATION

2018 - 2019

Project site: Medak - Mandal Kowdipally, Village Mohammadnagar

Contents

MEDAK – NEED FOR INTERVENTION

Medak was originally known as "Methukudurgam", which subsequently changed into Methukur due to growth of fine and coarse variety of rice in this area. It is one of the ten districts of Telangana Region of Andhra Pradesh with a geographical area of 9,699 km^2. It forms a part of Deccan Plateau under Godavari basin and lies between North Latitudes 17º 27' and 18º 18', and East Longitudes 77º 28' and 79º 10'. The district is divided into 46 revenue mandals, with its headquarters at Sangareddy. The district has a population of 30,31,877 (as per 2011census). The population density is 313 persons per sq. km. The forest cover is 91,390 hectares and the Net Area Sown is 4,80,841 hectares.

Ground water is one of the important sources both for domestic and irrigation purposes in the district and is being exploited through large diameter dug wells, dug-cum bore wells and bore wells. The entire district is covered by hard rock, except for 0.2% of the alluvium area. Ground water occurs under unconfined to confined conditions in hard rock. The common ground water abstraction structures are dug wells, dug-cum-bore wells and bore wells; and their yields mainly depend on the recharge conditions in the area. Yield potential of the aquifers in the consolidated rocks varies widely from 3 to 7 lps. Due to unstructured drilling of bore wells; the yields have fallen drastically, the fracture confined aquifer has a lack of recharge water, and the existing bore wells are failing to provide sufficient water.

The average annual rainfall of the district is 910 mm, which ranges from negligible rainfall in December, January and February to 229 mm in July. July is the wettest month of the year. During pre-monsoon season, the depth of water level varies from a minimum of 3.85 m.bgl (Medikonda) to a maximum of 21.00 m.bgl (Kohir). Most of the area has water levels below 5 m.bgl. Water levels range from 5-10 m and above in Zahirabad, Kohir, Sangareddy and Kondapuram.

The district is mainly dependent on ground water for its irrigation due to scanty rainfall. About 1,65,930 abstraction structures viz., dug wells, bore wells and deep bore wells exist in the district.

Village Mahammadnagar is overall a very poor village with about 78% BPL families. Majority are landless and there is immense need to initiate community income enhancement interventions along with water to improve livelihood. The area experiences 906 mm of annual rainfall.

PROJECT ACHIEVEMENT

Main objectives of the project:

- Identify technologies and management approaches to help achieve sustainable groundwater recharge systems.
- Aggressively promote solutions for sustainable groundwater recharge among the target groups.

Village	Water Storage Capacity Created	Total Area Under Agriculture	Beneficiaries	Households	Farmer Families
Mohammadnagar, Mandal Kowdipally	10,000 cu m	1380.4 hectares	3,329(direct) 10,000 (indirect)	669	448

- **The Water Initiative ensures water availability for:**
  - Drinking, sanitation, agriculture and livestock. As the water scenario improved in the region, the scope and the need for other development activities emerged.
- **Benefits:**
  - Developed degraded lands.
  - Overall socio-economic development of the poor.
  - Mitigating drought conditions.
  - Employment generation and poverty alleviation.
- **Achievements:**
  - Created water storage capacity of 10,000 cu m.
  - Improved availability of water led to increase in agriculture and livestock output, thereby leading to better income.

1. PROJECT BACKGROUND

The primary source for groundwater recharge is the scanty and uncertain rainfall, confined to just two months of the year. 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 groundwater recharge. The water stored in water harvesting structures can reduce the pressure on ground water resources.

In March-April, 2018 one water conservation structure was set up of 10,000 cu m storage capacity in village Mahammadnagar in Kowdipally district of Telengana to ensure water availability for agriculture, sanitation, livestock and drinking. The first rainfall was good, however, it was below average in the subsequent months. As a result, the water structures which initially swelled up with fresh water after the first rain, have little water now. All the structures were full of water after the first rains which indicates that the site selection has been appropriate. In the subsequent years, when the rainfall is better, these structures will ensure water availability for agriculture, livestock, drinking and sanitation. The increase in soil moisture since the water stands in the above water structures creates a positive impact on agriculture, and overall increases the green belt of the area

Pernod Ricard India as part of their Corporate Social Responsibility has been working on water conservation since the last 3 years at Phagi in Rajasthan and Maharashtra with Advit Foundation. This year too, to achieve water neutrality, water conservation plans were designed. Pernod Ricard India, along with Advit Foundation as a sustainability and implementation partner, designed a strategy for conservation of water resources. A rapid appraisal was conducted jointly to identify villages where the intervention could be made. Land topography was analyzed and using PRA technique, the locations of the water structures were identified along with the village Panchayat.

2. PROJECT APPROACH

District Medak being an intense agricultural area, the local government has demarcated water storage zones. The water structure is located in village Mohammadnagar, Mandal Kowdipally. It is located in the government identified dam area in village Mohammadnagar. A storage capacity of 10,000 cu m has been created. The water is largely used for farming and ground water recharge.

The village panchayat representative facilitated identification of the site and getting clearance from the State Water Department. After rains and impact assessment, the structure was handed over to the Sarpanch for future maintenance. Community mobilization and information sharing of this initiative was undertaken. The project initiation was inaugurated by the local MP and MLA, Shri Madan Reddy. They were happy to know that the company, Pernod Ricard India, agreed to contribute their CSR towards water in their area.

The following has been the project implementation approach:

- Site was identified along with the government representatives.
- Once identified, interaction with the village panchayat was undertaken to ensure that they too agreed to the initiative.
- A step by step approach was adopted to assess the situation on ground & develop the design of the project.

(The required topography analysis, soil type and village maps were prepared. Based on these, the size and drawings were made for the structure.)

- Sanction letters were taken from the local governance authority.

To achieve the larger objective and goals; integrated and developmental approach is undertaken focusing on the following in close collaboration with village local governance body:

- Awareness and adoption of practices to address the local water problems.
- Build the capacity of PRIs and village level institutions on water conservation and judicial management.
- Judicial use of the financial resources for efficient and effective water management.
- Training and capacity building of local leader on water conservation, watershed management and water efficient farming system.
- Conservation of local streams, rivers and aquifers. Adoption of appropriate technological solutions and revival of traditional knowhow.
- Participatory water ecosystem conservation by introduction of innovation, and adoption of techno-economical solutions with community involvement.
- Work on developing a participatory integrated village development model for wider adoption.

Glimpses of water harvesting structure construction

Project site: Village Mohammagnagar, Mandal Kowdipally, District Medak

Measurement and marking at site: Prior to construction

Glimpses of site inauguration: Visit by the local MP and MLA

3. PROJECT IMPACT

The structure would directly impact a population of about 3,000. However, the neighboring villages will also be benefitted as the soil moisture will increase all over. Therefore, a total of at least 10,000 community members will be benefitted. The total water storage capacity being created through this one structure is 10,000 cu m.

Brief population details of the beneficiary village areas:

Village name	Block	No. of households	Beneficiaries	Farmer families	Landless	BPL	Area under agriculture
Mohammadnagar	Kowdipally	669	3,329(direct) 10,000 (indirect)	428	241	520	1380.4 hec.

The water initiative ensures water availability for drinking, sanitation, agriculture and livestock. As the water scenario improved in the region, the scope and the need for other development activities emerged.

The main benefits included:

- Developed degraded lands
- Overall socio-economic development of the poor
- Mitigating drought condition
- Employment generation and poverty alleviation

Water Storage: Created water storage capacity of 10,000 cu m. Improved availability of water would lead to increase in agriculture and livestock output, thereby leading to better income.

Benefit to livestock: The village comprises of about 500 cattle and about 2,000 goats, thereby benefitting livestock in the village. With adequate water availability, there could be increased milk production thereby enhancing the income level.

Impact on cropping pattern: Post rainfall in July, the water retention in the dam area would further increase soil moisture. This in turn would improve the crop quality and quantity. However, the challenge is not to increase the number of crops; instead look at the kinds of crops that are being sown to ensure that water does not get depleted. Additionally, there is an increase in forest cover due to the improved soil condition that could improve the rainfall in subsequent years.

Community empowerment: Community groups in the village have been trained to maintain such structures. In case of any upcoming government schemes, the groups will be able to avail grants to meet the cost of maintenance of such structures from the schemes in due course of time. The local community was employed in each of the villages to make and harden the mud embankments of the water structures.

Environment impact: Rainwater storage in the water structures leads to increase in soil moisture thereby increasing green cover. Water will be available for sanitation, drinking, agriculture and livestock.

4. PROJECT SUSTAINABILITY

The project was handed over to the local village governing body. An event was organized on May 29th, along with the Pernod Ricard India representatives for the handing over ceremony. A certificate was presented to the Sarpanch.

Handing over event

The water structure

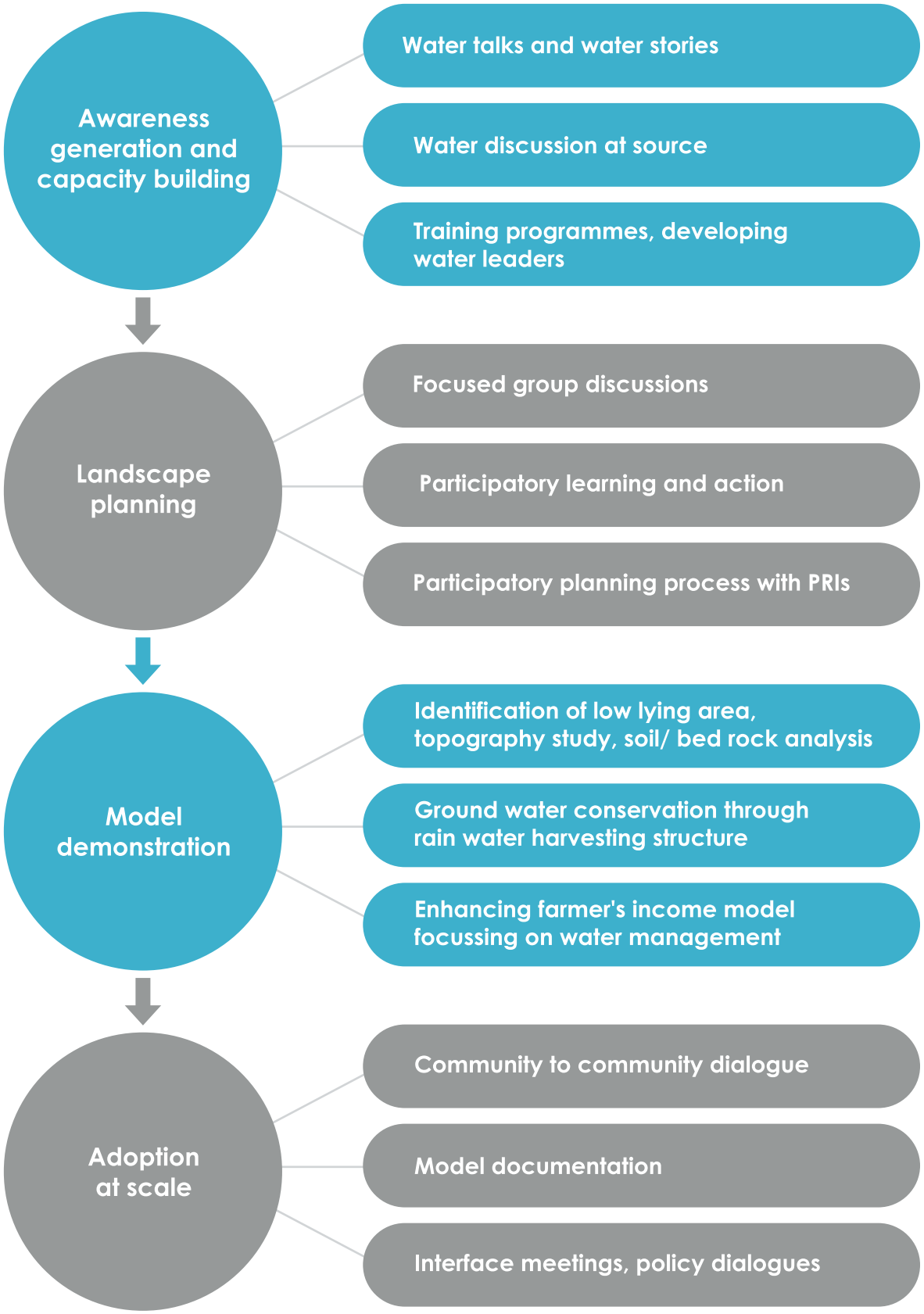
To ensure sustainability the project includes the following three major principles:

- **Participatory:** The project is implemented through community engagement to achieve the objectives and ensure sustainability after the project is completed. Focused group discussions were undertaken with the community to understand their preference and what is best for this region. This helped in understanding the change in biodiversity, its causes and how it adversely affected their lifestyle.

- **Social Equity:** Putting last first is desirable and how their needs can be met to bring equity and equality at local level is the key focus of the project. The tribal and marginalized communities were given priority by ensuring that the project focused primarily on the small and marginal farmers of tribal community and other sections of the community. Gender responsive processes are core of the project and ensured proactive participation of men and women in every step of the project.

- **Trans-disciplinary:** The project intervention was facilitated by a team of subject experts with a wide lens of diversity, inter-linkages and sustainability. The team included an agriculturist, an engineer, an enterprise development specialist and an evaluation expert.

Approach adopted in implementation of field activities



ANNEXURE – I

Letter from Sarpanch

OFFICE OF THE GRAMPANCHAYATH MAMMADNAGAR

Mandal Kowdipally, Dist. Medak.

గ్రామ పంచాయతి కార్యాలయము మమ్మద్‌నగర్

మం॥ కొడిపల్లి, జి॥ మెదక్.

లేఖ నెం._____ తేది : 12-05-2018

From :

శ్రీమతి బాన్సువాడ దివ్య మహిపాల్ రెడ్డి
సర్పంచ్

To,

శ్రీ/శ్రీమతి_____

_____

_____

విషయము :

We are thankful to **Advit Foundation NGO** for digging a water structure for rain water storage in our village Mohammad Nagar@Munirai , Kowdipally Mandal, Medak District. The storage capacity created is 10,000 cu m. more than 3,000 people from the village will get benefitted from this water.

This structure was made in March – Apr 2018 with funding and support from Pernod Ricard India Charitable Foundation. The Panchayath was presented a Certificate for Handholding by the Pernod Ricard representatives on an event organised at the village on May 29, 2018.

The village Panchayath is very thankful for this work done in the village and in future we look forward to your more support and funding for our village development.

12/5/18

సర్పంచ్
గ్రా॥పం॥ మమ్మద్‌నగర్
మం॥ కొడిపల్లి జి॥ మెదక్

Local Governance consent letter

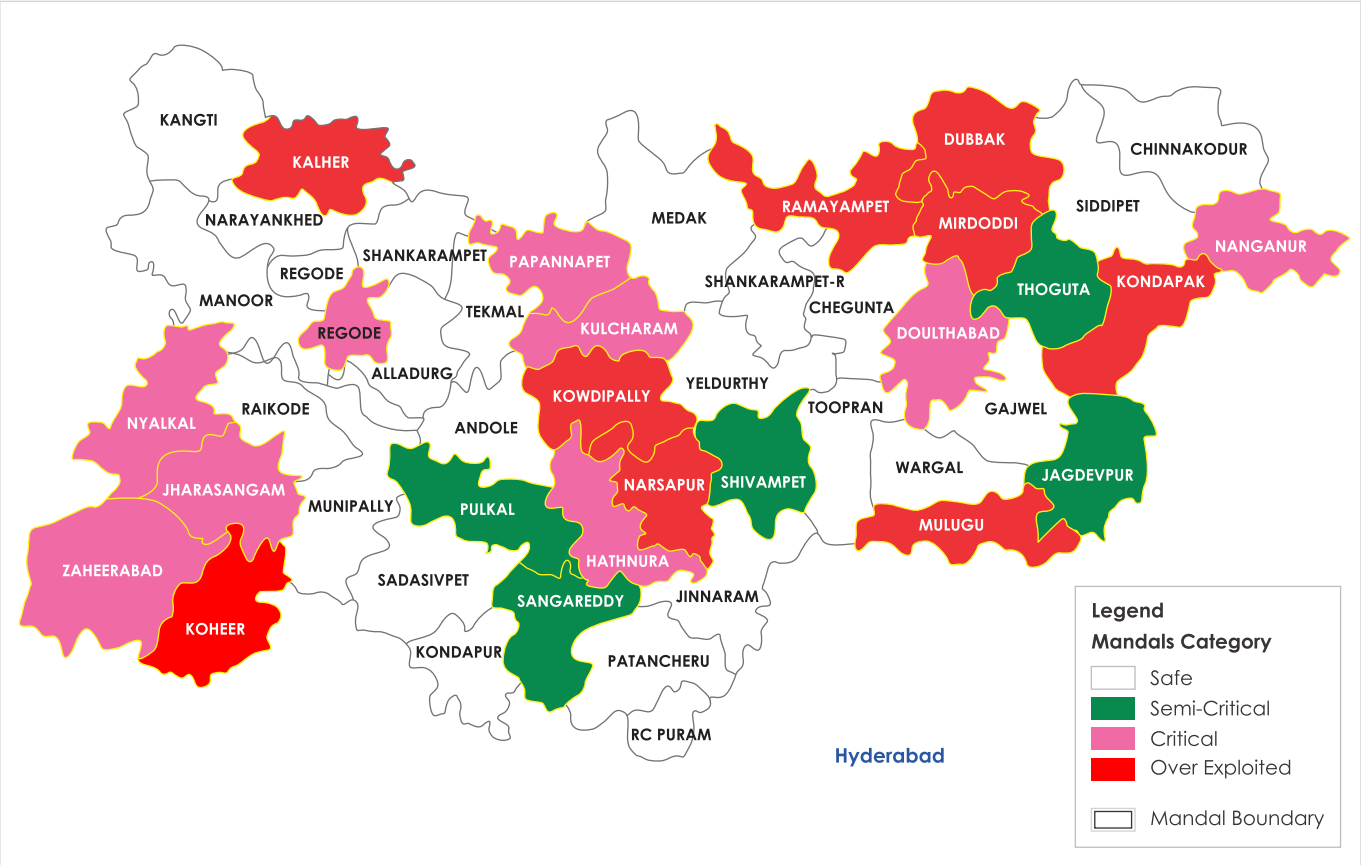
Resolutions తీర్మాణములు : గ్రామ పంచాయతి కార్యాలయము మహ్మద్‌నగర్, మం॥ కౌడిపల్లి, జి॥ మెదక్.

తేది	క్రమ సంఖ్య	సభ్యుల పేరు		సభ్యుల సంతకాలు	విషయ నిర్ణయము	చర్యలు తీర్మాణములు
	1.	శ్రీమతి లావుడ్యా బద్మ మహిపాల్‌రెడ్డి	సర్పంచ్			
	2.	కొండపురం యాదయ్య	ఉప-సర్పంచ్	»	Construction of Water Storage & percolation 10,000 Cubic meter pit by ADVIT Foundation Delhi	Date 10/04/2015 To Advit Foundation Sanction Letter for Creating Water Storage This is to Sanction Setup of Water Conservation Structure in village Mohammadnagar Mandal Kowdipally District Medak. The Structure will be Constructed by Gramakhal identified dam area for rain water collection. Total Storage capacity created by the company will not be less than 10,000 Cubic mtrs. This area is largely agriculture baated. The rain water Collected will be used by farmers and rain water accumulation will also help in ground water recharge in this area.
	3.	శ్రీమతి తుడుం పాలమ్మ	సభ్యురాలు			
	4.	మంతూరి బాలకిష్టా గౌడ్	సభ్యులు			
	5.	శ్రీమతి దాకలి లావణ్య	సభ్యురాలు			
	6.	కొనింటి సర్పంలు	సభ్యులు			
	7.	శ్రీమతి బురిగారి అంజమ్మ	సభ్యురాలు			
	8.	మొండి నంద్య	సభ్యులు			
	9.	శ్రీమతి కాట్రోత్ సాలి	సభ్యురాలు			
	10.	శ్రీమతి రమావత్ రేణుక	"			
	11.	బోగ్యారి గంగయ్య	సభ్యులు			
	12.	శ్రీమతి రమావత్ నీలి	సభ్యురాలు			
	13.	కొర్ర బుద్రు	సభ్యులు			

ANNEXURE – II

Medak – baseline report

Categorization of Mandals in Medak (2008-09) with respect to ground water development



Recommendations

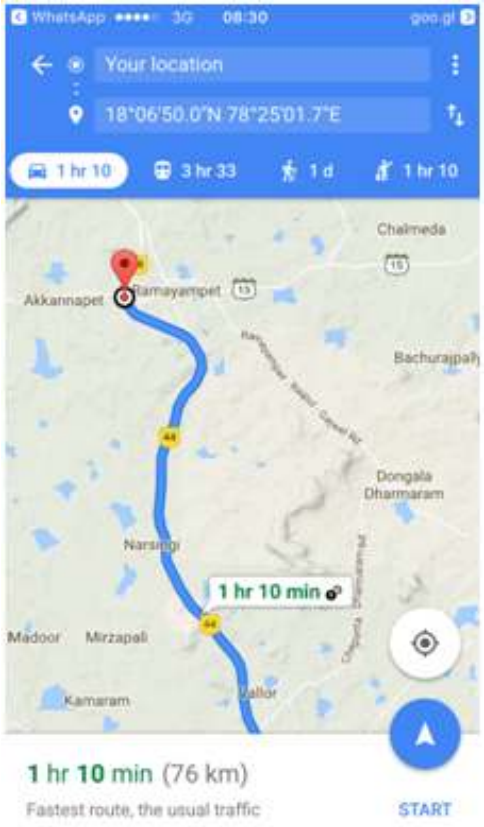
As per our observations based on the primary survey, and with reference to the water shed report published in 2013 by the Ground Water Board, the ground water management strategy should be adopted such that optimal utilization of ground water resource and implementation of artificial recharge schemes and maintenance at village/ mandal level is essential.

Large scale artificial recharge structures like percolation tanks, check dams, farm ponds, embankment structures should be taken up on watershed basis with sound technical background so as to augment ground water storage. It is important to take up artificial recharge structures based on the topography, soil, slope, surface runoff available and hydro-geological conditions rather than target oriented in achieving the numbers.

Proposed project locations based on our visit

Following 3 locations have been identified to initiate Water Project in Medak (located on the Medak Ramayapet road):

- Savanpur Mandal
- Aurangabad Mandal
- Patur Mandal



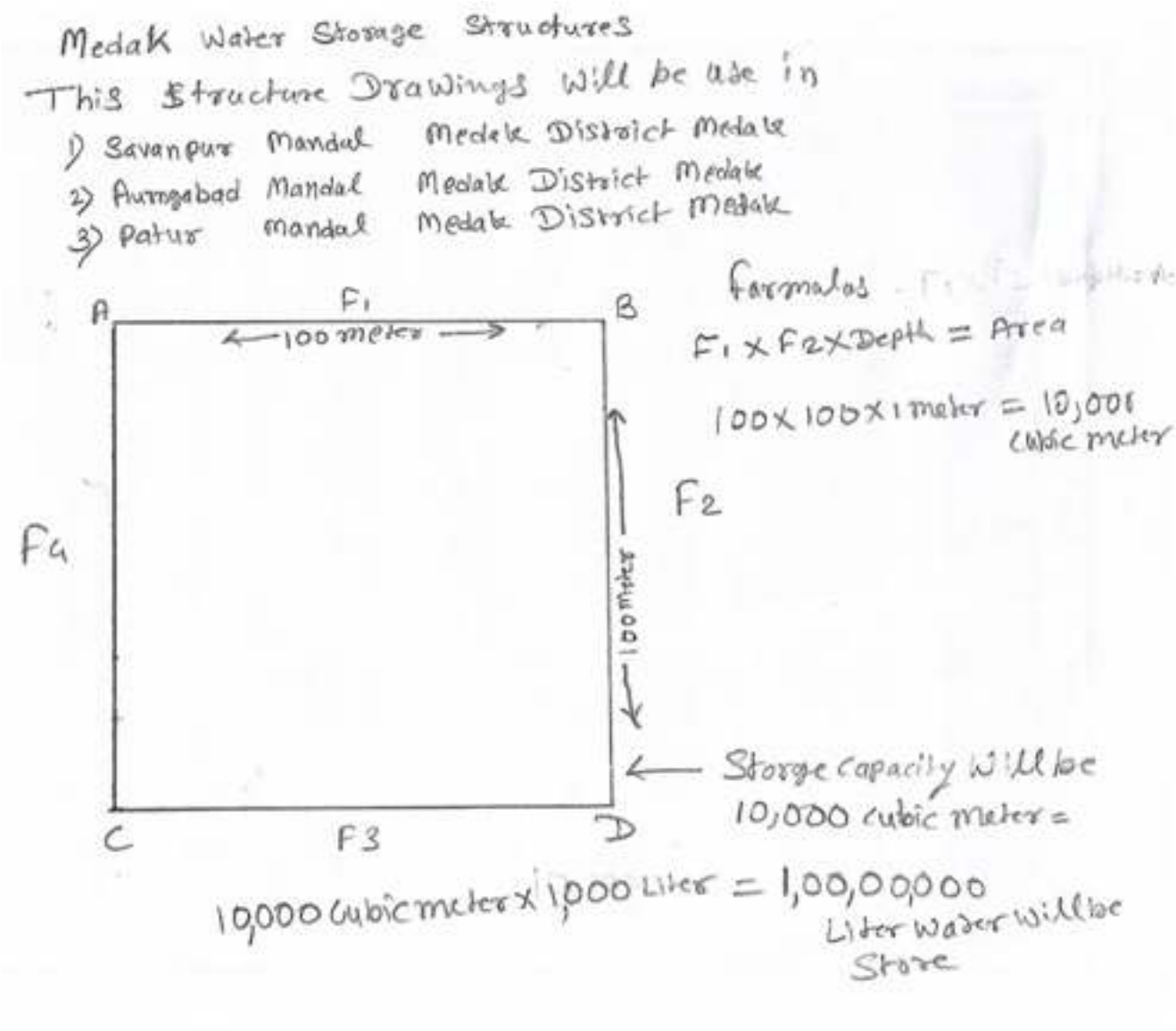
Glimpse of Savanpur Mandal

Glimpse of Aurangabad Mandal

Glimpse of Patur Mandal

The above 3 are low lying areas, identified as dams by the government which can be properly dug and made into a storage/ percolation tank.

Maximum size possible of the water structures in the proposed locations:



Way ahead

- The design details of each of the 3 structures are being prepared by the engineer on ground.
- The government clearances are in process.
- A local representative has been identified who will help in community mobilisation and interaction with the village panchayat.
- Once the above are in place, with consent from Pernod Ricard India the work can be initiated.

ANNEXURE – III

Advit Foundation – a brief profile

Advit Foundation (www.advit.org) is a not for profit development organization, working for Conservation of Environment Resources and Livelihood Enhancement. Advit has sought to conserve environment and empower communities through viable options of sustainable development.

Advit is the managing partner for the Solar Information Centre at The National Institute of Solar Energy Gwalpahari under Ministry of New and Renewable Energy, GoI. It is a training partner with the Electronics Sector Skills Council of India (ESSCI) for Solar Electronics. Advit runs a solar training centre with HARTRON. The organization was also the state nodal partner managing the Rajiv Gandhi Renewable Energy Park in Gurugram for Haryana Government from 2009 - 2015.

With a vision of promoting approaches to sustainability, Advit's work focuses on watershed development, renewable energy promotion, skill upgradation, and entrepreneurial trainings. This is achieved using information and communication systems tools and undertaking environment education and conservation initiatives. Forward linkages are sought through outreach programmes and market connects. 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 environment conservation, entrepreneurial trainings and economic empowerment.

Education

The vision is to create and nurture a learning culture that believes in and breathes change through education. Advit Foundation's rural training centre, Aarohan, has been set up to mitigate the unemployment and underemployment problems among the rural youth in the country. The trainings and skill upgradation programmes are geared towards skill upgradation and entrepreneurship development.

Advit designs and implements environmental programmes pertinent to:

- Holistic village development and skill trainings that help in livelihood enhancement.
- Environment awareness and resource conservation in schools and other educational institutions.
- Facilitating environment compliance in industries - Trainings on occupational health and safety, safe chemical handling and disposal, water conservation, energy audits, industry production process efficiency and resource conservation in production processes.
- Information dissemination and implementation of programmes on energy efficiency, solar, biogas 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 and energy efficiency.

- Overall development of the village and people living in the watershed.
- Conservation, regeneration and judicious use of resources – natural and human.

A few glimpses of organisation's work:

- Designed and constructed micro watersheds. Undertaken more than 18 water conservation structures in villages in Phagi, Mandore, Rothwara, Dudu blocks in Rajasthan and Amravati, Maharashtra.
- Undertaking Solar Electrical Training with certification from NSDC and HARTRON. Trained more than 2000 candidates since 2013. Supporting partners have been Ministry of New and Renewable Energy, GoI, RECL, Applied Materials Pvt Ltd.
- B.Voc Training partner with TISS for undertaking Solar Electrical Training.
- Set up Aarohan – rural self employment training centre, at village Pachala in Phagi, Rajasthan.
- Electrified more than 2500 households in the rural parts of Rajasthan and Haryana using solar home lighting systems.
- Undertaken Safe Chemical Handling trainings for workers of apparel, metal, leather and accessories industries all over India.
- Implemented Occupational health and safety trainings for 25 Carpet weaving industries in Panipat, Haryana.
- Runs an environment education and school upgradation programme - Prakriti Eco School programme.
- Undertaken solar electrification of forest guard cabins at Pench and Bandhavgarh forest reserves in Madhya Pradesh.
- Distribution of 100 energy efficient cooking stoves in Phagi.
- Facilitated set up of community toilets in 5 villages in Phagi.
- Facilitated set up of large scale drinking water systems in Behror.
- Facilitated industries to comply with environment standards - Undertaken 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 Gurugram.
- Prepared guide book on Energy efficiency and Carbon responsibility for apparel industries– Knowledge book. Supported by GIZ.
- Implemented a Village Development Programme for NABARD at village Meoka, Haryana.

Our programme centres

Energy Centre

- Solar & biogas promotion
- Resource efficiency in industries
- Solar electrical vocational training

Water Centre

- Watershed development
- Sustainable village development
- Skill upgradation & income enhancement
- Roof top water harvesting

Aarohan: Advit's Rural Self Employment Training Centre

- Skill training and entrepreneurship development
- Women empowerment
- Rural tourism

Eco Initiatives

- Environmental education
- Tree plantation and green space development
- Under-privilleged school upgradation
- Community development initiatives in peri-urban areas

Centre for Learning

- Occupational health & safety training
- Safe chemical handling training
- Project baseline and impact assessment studies
- Awareness sessions on workplace harassment

Touching lives

13+ years	2,50,000+ rural lives transformed	25,000+ industrial workers trained	2500+ tribal households electrified on solar	3 lac+ cu m water storage capacity created	4 states Haryana Rajasthan Maharashtra Telangana

Awards & Empanelment

- Empaneled with TISS CSR Hub.
- 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.
- Managing Partner - Haryana Renewable Energy Development Agency (HAREDA) from 2009-2015.
- Managing Partner - Centre of Excellence on Solar Electronics at National Institute of Solar Energy, MNRE, Govt. of India.
- Training Partner - Electronics Sector Skills Council of India (ESSCI) for Solar Electronics.
- TISS-SVE training-hub partner on solar.

PROJECT FINANCIAL REPORT

Project Name: Water Conservation Project in Medak District, Telangana – 2018-19
Supported by: Pernod Ricard India Pvt. Ltd.

S.No.	Activity	Approved Budget	Actual
1.	Watershed set up cost	17,00,000	17,00,000
	Mounting of signage boards		
2.	Field implementation cost		
	Field engineer cost		
	Field coordinators (2)	70,000	70,000
	Baseline survey to identify locations		
	Travel and transportation of material from land clearing	4,00,000	4,00,000
3.	Maintenance cost after first rains, incidentals	1,00,000	50,000
4.	Project documentation		
	Data collection, monitoring and impact assessment (Govt. liaison prior to implementation and post implementation)	1,00,000	1,00,000
	Documentation, frame work preparation and reporting	1,00,000	1,00,000
	Field survey for undertaking project expansion and government sanctions	1,00,000	1,00,000
	SUB TOTAL (A)	25,70,000	25,20,000
5.	Project implementation cost (15% of Sub-Total A)	3,85,500	3,80,000
	TOTAL	29,55,500	29,00,000
6.	Travel cost		
	Local conveyance, travel, boarding and lodging	1,00,000	1,00,000
	GRAND TOTAL	**30,55,500**	**30,00,000**
	REQUESTED GRANT	**30,00,000**	

advit foundation

www.advit.org

HEAD OFFICE
B-205, Tower-B, Pioneer Urban Square,
Sector-62, Gurugram-122008, Haryana

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

 +91 124 4309490, 91, 92

 +91 124 4824214

 info@advit.org

 http://www.advit.org