

CONSERVING ENVIRONMENT RESOURCES AND ENHANCING LIVELIHOODS

WATERSHED APPROACH TO LIVELIHOOD ENHANCEMENT

Phagi, Rajasthan
Amravati, Maharashtra
Medak, Telengana
Kolar, Karnataka



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Water Scenario (in villages)

- ❖ Is the driest part of the district
- ❖ Is suffering from a disproportionately poor availability of water
- ❖ Population growth rate in the villages is high and the supply however, has remained unchanged
- ❖ Primary source is the scanty and uncertain rainfall, confined to just two months of the year
- ❖ The industries present in the area used lot of ground water for their production with no recharging and conservation measures in place.

.....Most areas can be categorized as semi arid, which implies that the area is suffering from recurrent water scarcity.

Objective

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

Before



After





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ADOPTED APPROACH AND METHODOLOGY

A step by step approach has been adopted to assess the situation on ground & develop the design of the project –

❖ ***Collection of Data & preparation of maps***

Data need assessment

Data collection – village/panchayat/block level

Data analysis

❖ ***Resource analysis***

❖ ***Implementation strategy***

DATA COLLECTION & PREPARATION OF MAPS

- ❖ Detailed PRA maps were developed for each village
- ❖ Individual maps for all the selected villages and topographic maps covering the project area were collected from respective agencies
- ❖ Remote Sensing data and maps were collected from National Remote Sensing Agency (NRSA)

All the three kinds of maps were superimposed to develop a base map for the project area

The information was plotted on the base map through using GIS techniques to develop the :

- Present Land Use Map
- Current Ground Water Scenario Map, and
- Watershed Map

BHIMPURA VILLAGE, PHAGI, RAJASTHAN

After rains



Before rains



VILLAGE AWANDIA, PHAGI, RAJASTHAN



Before rains



After rains

VILLAGE SULTANIA, PHAGI, RAJASTHAN



Before construction



After rains

VILLAGE SULTANIA, PHAGI, RAJASTHAN



Before rains



After rains

AMRAVATI, MAHARASHTRA KOLAR, KARNATAKA



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Completed structures before rains

MEDAK, TELENGANA



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The Site



During rains

KOLAR – VILLAGE KUNIBANDE



The site



Completed structure

KOLAR – VILLAGE KADRIPURA



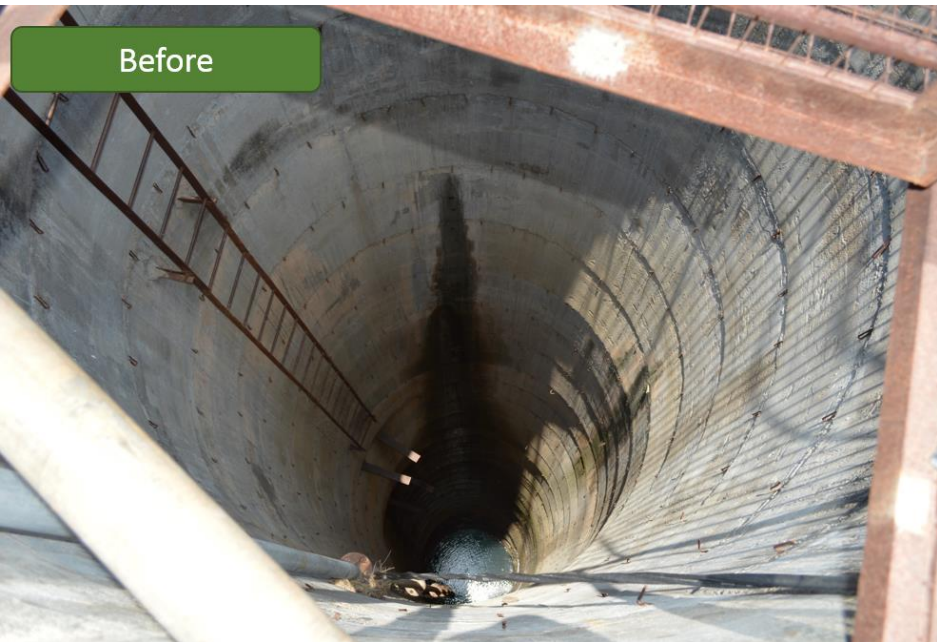
The site



Completed structure

- The intervention ensured water availability for:
 - Drinking (wells got recharged)
 - Sanitation (water available in toilets)
 - Livestock (water available for animals)
 - Agriculture (increased soil moisture and thereby improved cropping pattern)

VILLAGE PACHALA



Recharging of wells

2006 Designed and constructed 5 check dams in Phagi dist, Rajasthan

Village Bhimpura

Village Sanwal

Village Kiratpura

Village Navalkishorepura

Village Chandawas

Created 34, 286 cu m of water storage capacity

2013 Designed and constructed 3 water ponds in Phagi dist, Rajasthan

Village Awandia

Village Sawan ka baas

Village Jodinda bhojpura

Created 89, 000 cu m of water storage capacity

2015/16 Replicated and constructed 5 water more ponds in Phagi dist, Rajasthan

Village Pachala

Village Awandia

Village Sawan ka baas

Village Sultania (2 structures)

Created 90, 000 cu m of water storage capacity

PROJECT VILLAGES

2017/18 Replicated and constructed 4 more water structures

Village Amravati, Amravati, Maharashtra

Village Mahammadnagar, Medak, Telengana

Village Kadripura, Kolar, Karnataka

Village Kunnibande, Kolar, Karnataka

Created ~35, 000 cu m of water storage capacity

WATER MONITORING LAB, PACHALA



Sample collection: Water quality of wells



Water availability and impact on agriculture





Water availability and impact on livestock



Community toilets have been constructed with water tanks





Set up of solar mobile charging stations

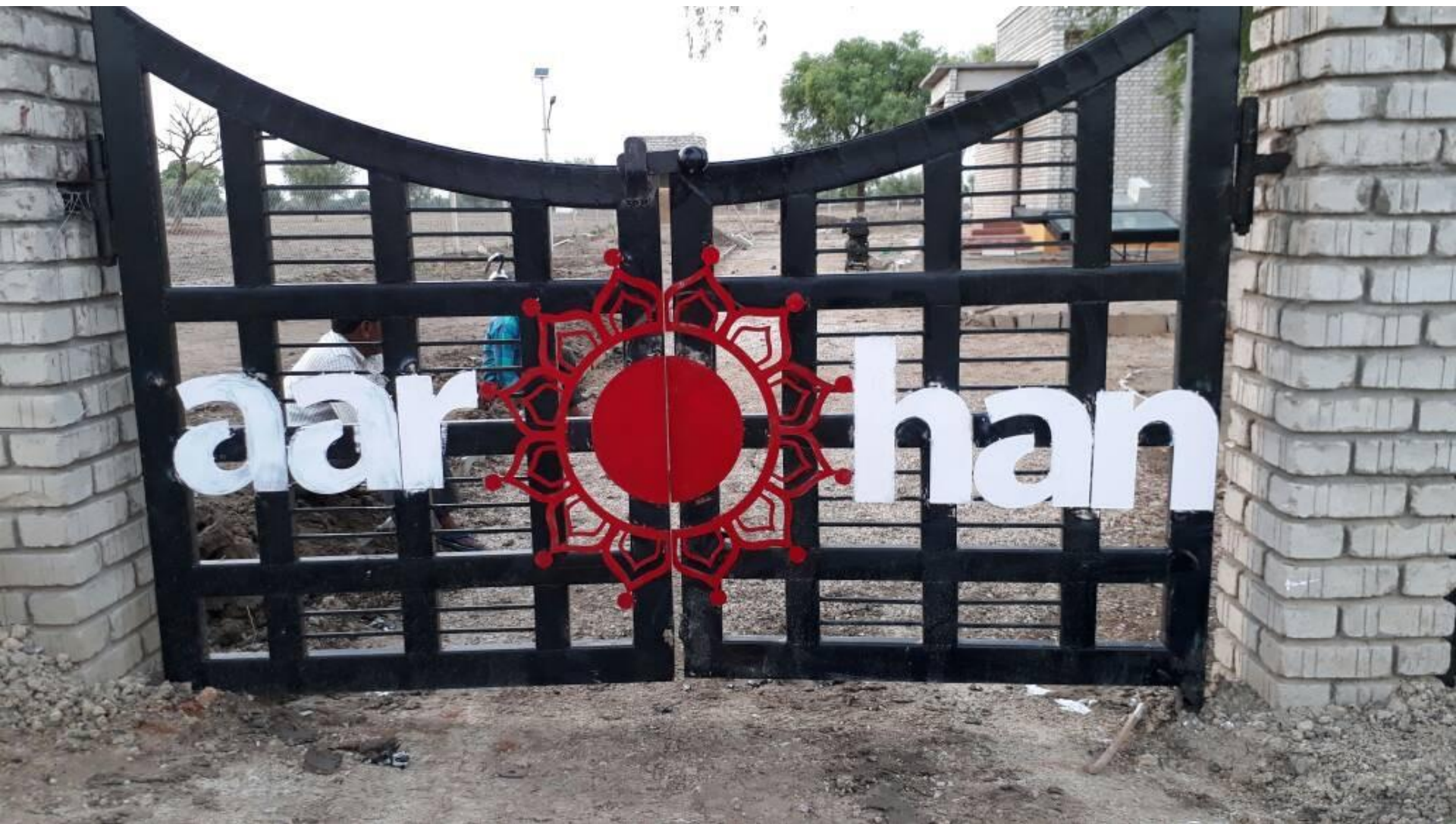


Set up of solar home lighting systems



Undertaken tree plantation in the villages





Advit's Rural Self Employment Training Centre
Village Pachala, Phagi

- The objective of this centre is to generate self employment in rural areas through demonstration and training for capacity building
- It is set up to mitigate the unemployment and underemployment among the rural youth
- The trainings and skill upgradation programmes are geared towards entrepreneurship development
 - Upgrade existing skills
 - Introduce new skills



a a r a h a n

Advit's Rural Self Employment Training Centre

TRAININGS ONGOING

Solar mobile charging station installation and training



Mason training



Biogas installation and training



Solar cooker installation and training



Community income enhancement initiatives

Spice grinding, Handmade paper bag making





Energy access and women empowerment:

- Cookstoves
- Solar cookers





Skill trainings to community:
- Spices
- Paper bag making



UPGRADING
EXISTING SKILLS:
Block making and
block printing





Encouraging entrepreneurship:
Set up of Solar PCM dryers



High value products: dried tomatoes,
bananas, onion, bitterguard, chillies



Working with the potters:
Improving kiln design and
efficiency



Converting agriculture waste to briquettes



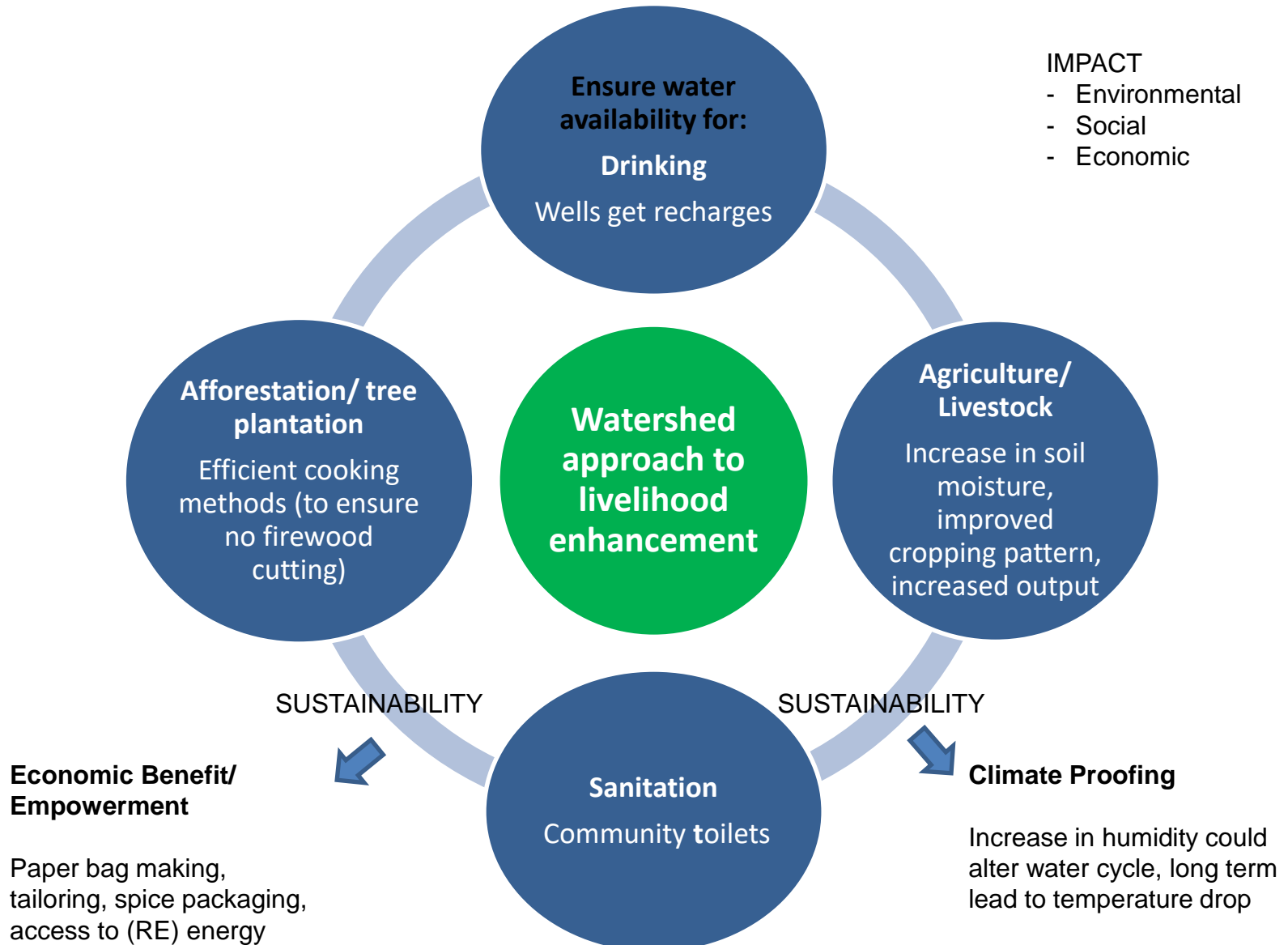
- The water initiative ensures water availability
 - for drinking, sanitation, agriculture and livestock. As the water scenario improved in the region, the scope and the need for other development activities emerged.
- Benefits:
 - Developed degraded lands.
 - Overall socio economic development of the poor.
 - Mitigating drought conditions.
 - Employment generation and poverty alleviation.
- Achievements:
 - Created water storage capacity of more than 2,50,000 cubic metre.
 - Improved availability of water led to increase in agriculture and livestock output thereby leading to better income.
 - Electrified 2,500 households with solar home lighting systems.
 - Constructed more than 20 community toilets.
 - Trained more than 1000 individuals from rural areas on renewable energy and livelihood enhancing skills such as solar mobile charging, solar cookers, solar dryers, biogas systems, spice processing and hand-made paper bag making.

- ❖ The water table of the region has improved. There is water for more than 8 months in the villages.
- ❖ Thereby the women have to walk lesser to get water.
- ❖ There is water for the cattle all through the year now.
- ❖ The soil moisture has increased. So the cropping pattern has become twice a year and thereby the income has enhanced.
- ❖ The structures made ensure water is available for agriculture, drinking, sanitation and livestock

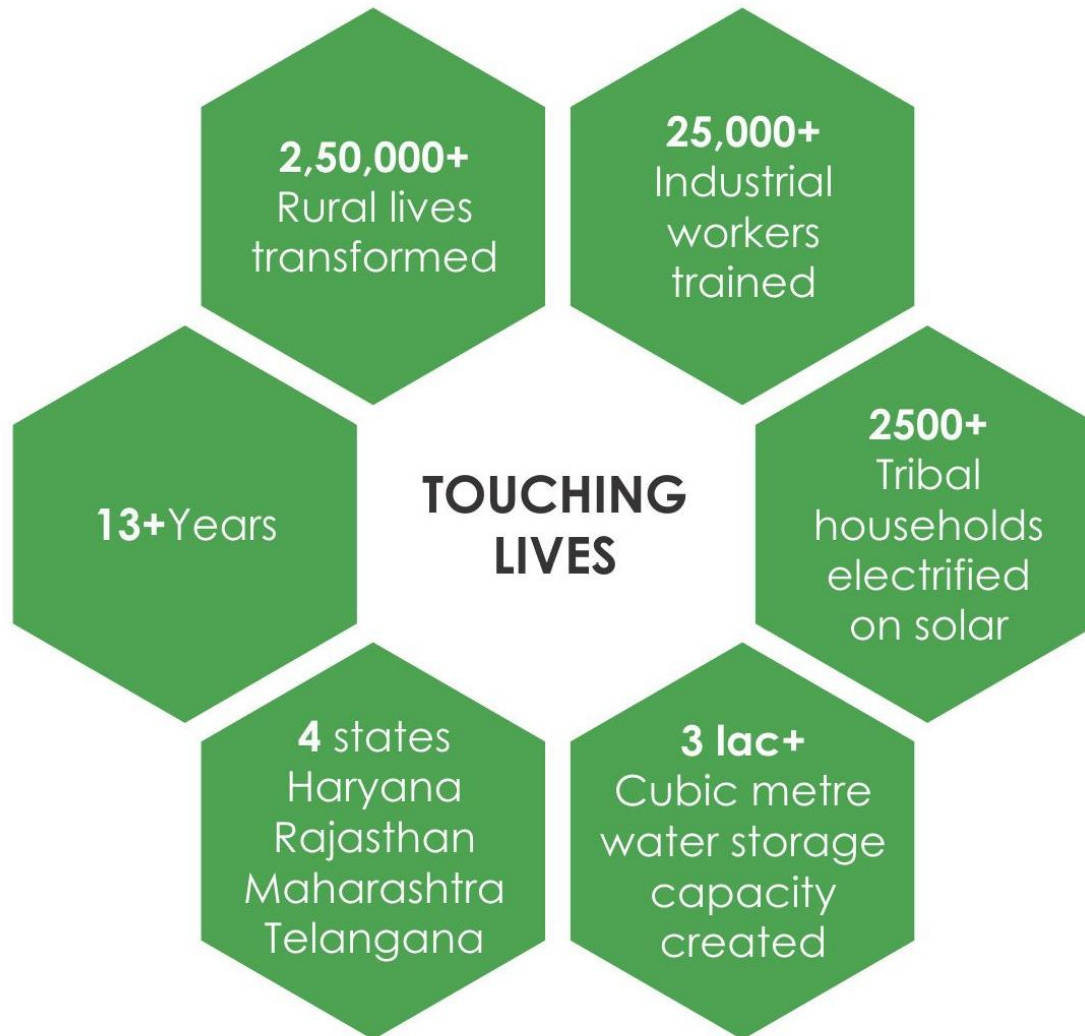
- ❖ Each structure recharges about 1 km radius land area i.e. about 100 wells
- ❖ Total of more than 1,70,000 cubic metre of water storage capacity has been created through these structures
- ❖ Each structure supports at least 4 nearby villages for water
- ❖ Population in each village is more than 500 therefore, more than 40,000 people are being benefited by each structure
- ❖ There is increase in soil moisture. Thereby there is increase in cropping cycles in a year that was earlier 1 in a year.
- ❖ At least 7,000 livestock is benefitted with water availability

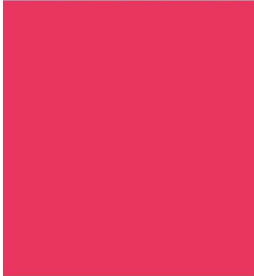
HOLISTIC APPROACH

- IMPACT
- Environmental
 - Social
 - Economic



SET A MODEL IN 4 STATES – 25 VILLAGES





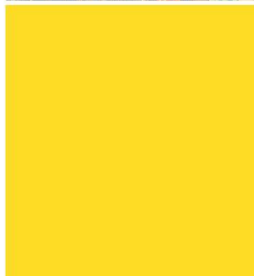
EXPLORE RURAL RAJASTHAN

A community based tourism initiative by Advit Foundation



Empowering Communities Half-day tour from Jaipur

- Experience the joy of making clay pots with local potters.
- Till land, sow seeds or harvest produce with a farmer.
- "Oasis in a desert" - Take a walk along the rain water harvesting check dams, understand their impact in the water scarce area.
- See the Solar and Biogas technology being used by the rural community.
- Walk through the village, see local architecture and interact with the locals.
- Visit **a a r o h a n** – Advit Foundation's rural self-employment training centre. Join hands with the community to make paper and cloth bags, agriculture tools, printing blocks, process spices, compress agriculture waste to make briquettes, paint the traditional way with hand using white mud clay.
- Enjoy a vegetarian authentic Rajasthani lunch at Aarohan.



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