

## PGWM WASSAN FIELD VISIT NOTE

### Case study 1:

Malkaipeta Thanda, a small tribal hamlet of Lambadi community in Ibrahimpur village, Ranga Reddy district in Andhra Pradesh. Agriculture being the main source of livelihood for the community was largely dependent on the limited available water resources. During lean periods the community used migrate to nearby and distant towns to meet their livelihoods. Groundwater exploitation through various mechanisms of drilling, digging of bore wells was leading to heavy investment losses. The rural poor and marginalized farmers were the main sufferers due to the rampant overexploitation of groundwater which is a common pool resource.



**Photograph : WASSAN’s Groundwater sharing through bore well collectivization in Malkaipeta Thanda.**

In this context WASSAN organization accepted the challenge to explore and implement the alternatives on ground for conservation, efficient use, and equitable distribution of this precious natural resource. Common sharing, social regulations, technical support and scientific understanding are some of the key principles which lead to the groundwater collectivization through bore well pooling experimentation. The effort was to pool up the groundwater from bore well farmers and share it with all other farmers who don’t have access to water, thereby providing critical irrigation to the rainfed crops.

Factors that influenced the bore well farmers to share the groundwater:

- Pooling the bore wells and sharing water would avoid competitive borewell drilling and further eliminate the unnecessary investments and loss of capital.
- The borewell owner is assured for earlier cropped area but with cultivation of low water intensive crops.
- Water thus saved will provide critical irrigation to the rainfed area, which includes lands of both borewell owners and others.
- In case there is bore well failure, back-up arrangement is assured as the bore wells are pooled.

- Community is motivated to use micro irrigation systems (sprinklers and drips).

WASSAN further emphasized the need for groundwater sharing based on following points:

- Facilitated the village level institutions on community management of groundwater through monitoring water levels, bore well yields and regulations.
- Improving the groundwater recharge through convergence with various other programmes and ensuring protection of key recharge areas.
- Reducing water losses by adopting effective irrigation systems and methods.
- Ensuring the food and fodder security for livelihood needs.

Water sharing norms:

- ❖ Pooling up of bore wells through a common pipeline network for sharing.
- ❖ Water to be shared among all irrespective of having the ownership of bore well.
- ❖ Crop plans based on availability of water in agreement with the members.
- ❖ Reduction of area under paddy.
- ❖ Sharing the water to protect the kharif crop of non-bore well farmers.
- ❖ Ensuring cultivation of acreage of bore well owner.
- ❖ Creating general fund for maintenance of pipeline, repairs etc with a bank account.

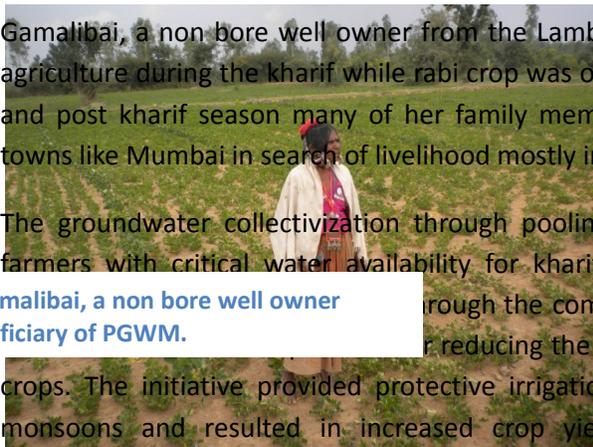
*The bore well owners contribute Rs. 200 per acre of irrigated land and other water users from the pooled water resources will pay Rs. 1000 per acre per year.*

### Case study 2:

Gamalibai, a non bore well owner from the Lambadi community, earlier was dependent on rainfall for agriculture during the kharif while rabi crop was on soil moisture or left to fate. During low rainfall years and post kharif season many of her family members used to migrate to Hyderabad or other distant towns like Mumbai in search of livelihood mostly in construction industry.

The groundwater collectivization through pooling of bore wells has assured non bore well owning farmers with critical water availability for kharif crop and also assured the rabi crops. The critical water availability is ensured through the common pipeline network. All the farmers in the pipeline network are benefiting from reducing the water losses and labour requirement for irrigating the crops. The initiative provided protective irrigation, ensured timely sowing especially during delayed monsoons and resulted in increased crop yields (thereby increased income) with groundwater conservation and reduced electricity consumption. This has further lead to reverse migration of many families in Malkai Peta Thanda. This type of interventions will enable and support participatory groundwater management by community for drinking water and livelihoods.

**Next steps:**



**Photograph : Gamalibai, a non bore well owner currently a beneficiary of PGWM.**

- Further in-depth studies on aquifer characterization are required to sustain the groundwater collectivization through bore wells experiment. In this regard ACWADAM and ACT can further facilitate the WASSAN team to mainstream it in their work on natural resources.
- The current focus of groundwater collectivization is on critical support to kharif crops, ensuring crop success in kharif and rabi season, equitable access, and distribution. Groundwater resource sustainability components need to be incorporated in this framework.
- Data generation, database management and data utilization for larger good of groundwater management is in place. In addition data analysis, data visualization skills need further refinement to highlight the specific aspects and lead towards better decision support systems for community based groundwater management.

#### Additional Photographs:



Photograph : Hydrogeological maps developed by Local Resource Persons after training from WASSAN staff.



Photograph : Malkaipeta thanda recharge area and structure.



Photograph : Interaction with WASSAN team and field resource personnel.