



RAIN WATER HARVESTING INNOVATION

Augmentation of water resources through innovative bore well recharge and rain water harvesting in semi-arid rural regions throughout India.

Summary

Our innovative method of rain water harvesting through borewell recharge is a proven method of restoring the underground water supply (the aquifer) during rainy season to give abundant water for the subsequent dry times.

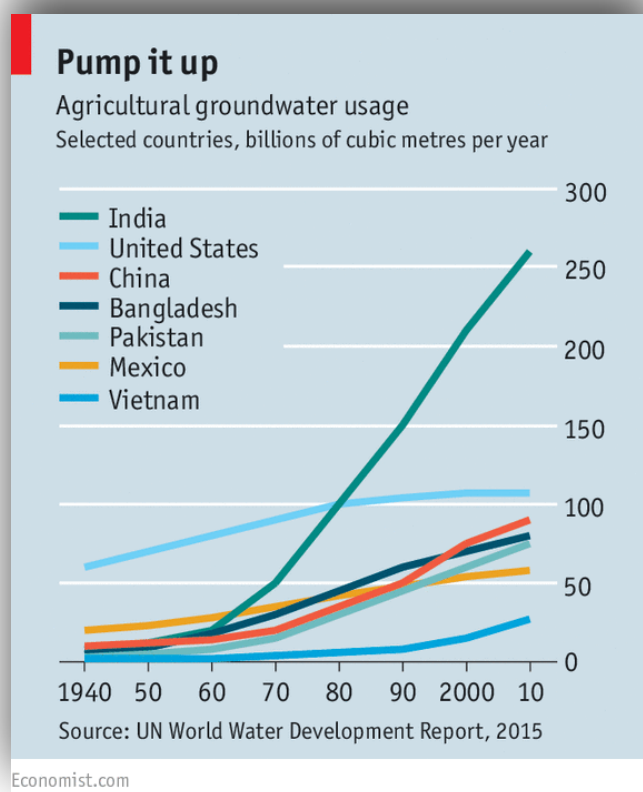
Impact:

- Increase in ground water levels and restoration of flow even in fully dried up borewells.
- Ability to cultivate multiple crop cycles and crop diversification.
- Increased levels of food security and improved livelihood.
- Reclamation of fallow lands.
- Reduction in farmer migration for work.
- Reduced demand for new borewells.
- Increase in employment opportunity for landless labourers.
- Improved quality of underground water.
- Cost effective solution to irrigation needs

Introduction

India has 4% of world's water but 17% of the world's population. Agriculture takes approx 80% of the available water mainly from ground water with availability of that water shrinking steadily. Farmers believe the only choice is to dig more and more bore-wells resulting in further depletion of ground water level. This combined with climate change, and the resulting erratic weather patterns is bringing a sharp fall in agricultural productivity and causing devastating impact on farmers' lives and the livelihoods of those engaged in agricultural activities. Farmer suicide rates are a national disaster with the consequences on their families and communities a far reaching tragedy.

Water is the biggest multiplier in agriculture - with no water the rural economy collapses.



Innovative Solutions through Rain Water Harvesting and Water Management Practice

Sankalpa Rural Development Society (SRDS) has developed an innovative method that is cost-effective and sustainable to replenish water in poorly producing and dried-up bore wells and subsequently, the ground water aquifer. This method of rain water harvesting through bore well recharge is an effective means to channel the monsoon rain water back into the aquifer without the top soil being washed inside. To date, SRDS has rejuvenated 1500 + bore wells in 10 states of India with 90% success rate. The farmer contribution is 50% usually in the form of required materials.

The direct bore well recharge method is cost effective – approx. Rs. 30,000 with 50% contribution from farmer when compared to drilling a new bore well. (1-1.5 lac rupees)

Rationale of the Project

The rationale for the project is as follows:

- The proposed areas of work are semi-arid regions with low and uncertain rainfall.
- The rainwater washes away, taking the topsoil with it. There are no mechanisms to recharge the depleted ground water / aquifer.
- No crop diversity and crop productivity is low due to unavailability of water. Many lands lay fallow with no access to water.
- The rejuvenation of bore wells will provide assured irrigation to enhance the area and increase productivity of agriculture to ensure food security.

Objectives:

To enhance crop diversity and productivity of small farmers through augmentation of water resources to ensure food and livelihood security.

To take up Area Development Programs with Water Harvesting as the central focus.

Target Population:

The primary target population are small and marginal farmers - the direct beneficiaries and secondary beneficiaries are landless people (often women) who are employed as labour on the agricultural lands and the rural community as a whole.

Methodology of Implementation

Small and marginal farmers are selected based on a criteria developed for identification.

The proven Twin Ring Method of harvesting of rainwater is followed. Specific details on implementation are on [our website here](#).

This innovative method has demonstrated:

- Profound increase in ground-water levels and improvement in the quality of bore well water due to dilution of TDS and any toxic materials in the existing water.
- An assured increase in access and availability of water enabling farmers to harvest the water easily, cultivate multiple crop cycles and carry out crop diversification leading to livelihood and food security.

- Reclamation of fallow lands for productive purposes, with additional areas under cultivation.
- An increase in employment opportunities for landless and underprivileged people and a reduction in migration.
- Cost effective use of local materials for the construction.
- Where multiple recharge projects have been done in concentrated areas, a reduction in the demand for new bore wells is seen, thereby reducing reliance on borrowed funds and increase in debt.
- Water Awareness Programs enable farmers to understand the critical need for conservation and sustainable water management thereby producing "more crop per drop of water".
- Farmers now able to cultivate crops out of season with assured access to water and resulting higher income.
- Increase in employment opportunity for landless labourers.
- Restoration of water flow even in fully dried up borewells.



Area Development Model:

An area comprising a number of villages can be targeted with a sustainability approach - beginning with the provision of reliable water sources for the farmers. Community centres providing water management information are set up. Here the farmers can view case studies of successful implementation and hear about the latest technological updates on cropping, soil conservation and effective irrigation such as drip. The Centre will also serve as a centre for knowledge about funding and subsidy access and provide a focus for such activities as basic computer training and English language for the youth of the villages.

The importance of building community cannot be overlooked. To build resilient communities to meet the challenges of climate change the people must be encouraged to work together for the common good, their future and the future of their children.

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