



# Sankalpa Rural Development Society

## Recharging borewells, crops and lives

Area of operation: Gadag, Dharwad, Uttar Kannada, Haveri, Belgaum.



<b>Name of the Organisation</b>	Sankalpa Rural Development Society
<b>Type</b>	Non-profit
<b>In the Sandbox</b>	Since 2009
<b>Recognition</b>	Among 'Top 5 Rural Innovations of the Year' 2012, awarded by NABARD





SRDS uses a catchment pond that can store upto 3 lakh litres, to channel all the rain water, a 10X10X10 pit that acts as a primary filter around the borewell and tiny slits through the casing pipe to percolate water without loss.

"This is the 29th borewell that I have built and finally, it works," says Devendrappa, a 57-year-old farmer who has been trying his luck with bore wells to irrigate his land for over 30 years now.

In his seven hectare farm in Varur, Dharwad district, where he grows wheat, maize, sugarcane and soyabean and 160 varieties of mango, 116 bamboo trees and 120 teak trees, the traditional farmer had always depended on irregular rainfall for his farms.

Borewells looked like the only solution in Hubli and Dharwad. And that's when Sikander Meeranayak, founder of non-profit Sankalpa Rural Development Society (SRDS) came up with an innovative way of doing direct borewell recharge at a fraction of the cost of digging one.

## The Sandbox Story

When SRDS started operations to recharge defunct borewells in and around Hubli in 2009, the water shortage was acute. Almost 70% of the borewells had dried up in the area that received 997 cms of rainfall every year, water tables had sunk to 400 to 500 feet and farmers like Devendrappa were fast selling off their lands to repay their debts.

Like most rural innovation that emerges out of a personal problem and enormous passion to tackle it,

SRDS started off as a one-man show – of Meeranayak. Since childhood, Meeranayak saw inadequate irrigation facilities and low water tables in Kotamuchagi, Gadag district, a drought prone area he grew up in.

## The Innovation: Affordable Borewell Recharge

Meeranayak's ingenious method uses a catchment pond that can store upto 3 lakh litres, to channel all the rain water, a 10X10X10 pit that acts as a primary filter around the borewell and tiny slits through the casing pipe to percolate water without loss.

The technique is very affordable: recharge requires an investment of around Rs.30,000-Rs.35,000 on an average while building a new borewell costs Rs.1,00,000-Rs.1,50,000.

Four years and two good rain seasons later, as the SRDS method of recharge has slowly gained the trust of farmers and the results look impressive: 305 borewells recharged, 5,75,00,000 litres of water harvested and farms in 12 villages reaping good harvests.

"My harvest has increased drastically over last three years," says Devendrappa. From harvest out of 40% of total land area, he now has good crop from almost 100%

of the land - annual profits go upto Rs. 8 lakhs and after deducting expenses on the farm and his home, Devendrappa manages to save at least 1.5 lakhs, a far cry from his debt-ridden state three years ago.

## Adoption: Education, Awareness And Convincing Farmers

Despite the obvious returns through low costs, less labour requirement, a bountiful harvest and water savings, implementing borewell recharge in rural areas was a tough journey for the SRDS team.

The SRDS brand was not recognised. Digging a new borewell also seemed like the easier solution as farmers obtained easy borewell loans from the bank. Convincing them to opt for a new technology was a big challenge.

"We didn't know that borewells could be recharged. I didn't understand the model well but Sikander

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"I struggled to irrigate even one acre two years ago. But with SRDS solution implemented on one borewell, today, I am able to irrigate all seven acres. And I have even started growing more water intensive crops like banana" – Chittaranjan, farmer

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demonstrated it to us and explained the benefits. It had been two drought years and I had nothing to lose. I thought to give it a try," says Devendrappa.

The Deshpande Foundation (DF) brand helped SRDS gain the initial trust of the farmers. "People knew about DF and kind of work they do. So whenever we told people about our association with the foundation, they trusted us," says Meeranayak.

The team built on their initial recharge successes through roadshows, press conferences and taluk level farmer meets where

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stories were showcased and problems discussed. A NABARD award last year for "Top 5 rural innovations" also helped SRDS earn significant trust among the farmers.

Meeranayak spends a substantial portion of his time just meeting farmers, discussing their challenges, talking to them about their fields' productivity, water requirements and so on, before offering his solution.

"You can't see results instantly. People expect some kind of magic which is not possible." It takes 4-5 days to implement one borewell recharge but one rainfall season for it to start working.

The multiplier effect of bore well recharge is also seen through a definite change in the water table after rains, enabling the farmer to grow crops even in dry summer months. "I struggled to irrigate

even one acre two years ago. But with SRDS solution implemented on one borewell, today, I am able to irrigate all seven acres. And I have even started growing more water intensive crops like banana," says Chittaranjan, one of Meeranayak's customers.

### The Impact:

The subsidies offered for digging borewells made it challenging for the SRDS team – most farmers expected the technology for free. Initially SRDS subsidised the technology to farmers by 50%. Two years and 60 borewells later, there was enough evidence for farmers to look at – now farmers who have the finance can opt for the technology. In case the farmer is unable to afford the cost of Rs. 40,000, SRDS walks the mile to talk to local banks and approve loans. An effort is also ongoing with local banks to make direct borewell recharge an official item on the loan list.

Funds from Deshpande Foundation were used in the initial years to create a critical number of borewells to demonstrate the impact. Once proof of concept and reasonable scale had been achieved, it was logical to try and expand markets.

DF advised Meeranayak to "utilize the funds to create awareness, conduct exposure trips, farmer exchange platforms and engage with media to popularize the concept of borewell recharge." It was difficult in the beginning but now, Sikander and his team of six members are never short of work.

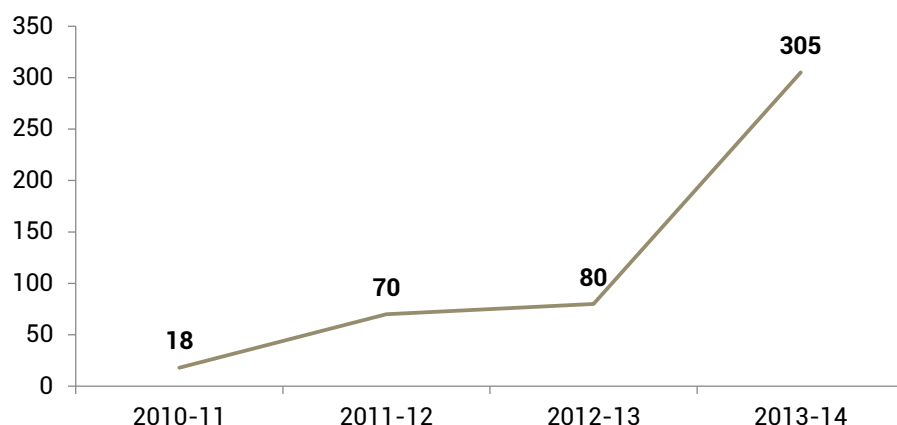
The returns on investment seem to justify the setup costs completely in the areas where it has worked – Devendrappa, who earlier earned around Rs.50,000 from his harvest of banana in a three-acre land, earns around Rs.2,00,000 after the borewell recharge. On an average, the farmers receive three to four times more harvest after borewell recharge.

### Scale: Water Harvesting Beyond Borewell Recharge

Extending the farm recharge technique to regular households, industries and schools in towns like Hubli and cities like Bangalore has helped SRDS earn more revenue out of its operations.

The organisation is now gradually expanding to Andhra Pradesh, Punjab and Maharashtra. The challenge is the small team that

SRDS: Borewell Growth in Hubli Sandbox

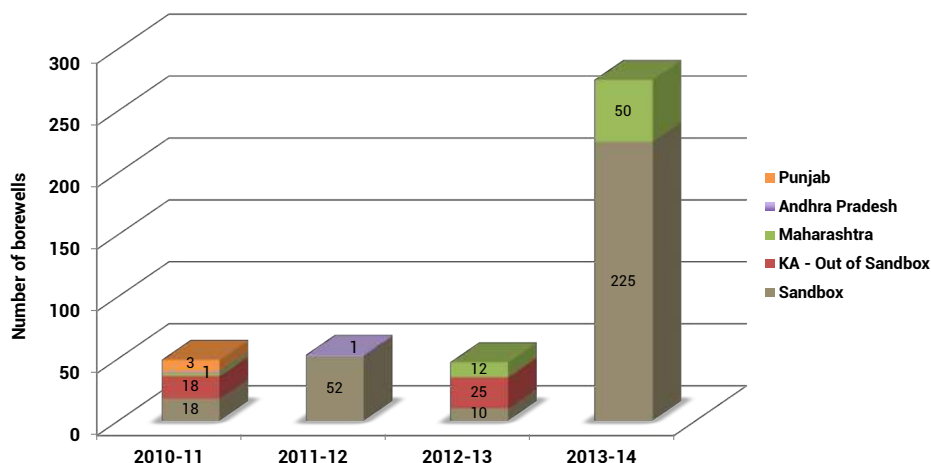




is completely anchored around Sikandar Meeranayak. "My team does not have any educational degree, they have learnt gradually by experimenting and trying. I make the design in most cases and the team implements it," he says.

"We started as an NGO because it was very difficult to convince people initially. It is now apparent that SRDS has to become a for-profit organisation. This is what we are working on," concludes Meeranayak. SRDS is now being incubated out of the Entrepreneurs-In-Residence (EIR) program run by the Deshpande Foundation to support for-profit social enterprises.

SRDS: Borewell Recharge in India



## Making it Count – Sikander Meeranayak

Water issues had always been a part of Sikander Meeranayak's growing years. Hailing from Kotamuchagi District, Gadag, a rural area with documented water issues, Meeranayak witnessed the havoc drought created in the lives of the farmers around him.

"I felt the need to help my community tackle their water issues locally," says Meeranayak.

Meeranayak's entrepreneurial journey started with the Deshpande Fellowship Program in 2003-04. He had few skills back then but was enthusiastic about learning. "Before DFP, I had never even used a computer. I had no English skills, but I wanted to improve myself," he explains. After completing his fellowship program, Meeranayak gained on-ground experience by working on small projects for the state and central government.

Realising that the current method of rampant borewell construction was unsustainable, Sikander decided to come up with affordable solutions that would compel people to take up harvesting.

Meeranayak's journey began at the Deshpande Foundation Centre, where he helped build structures to harvest over 50 lakh litres annually. And then there was no looking back.

"Before my association with the Deshpande Foundation, I was only making RS 3000. Now, I pay my workers up to RS 12,000. I already had a model and only wanted to do social work. But I realized social comes with enterprise. ENTERPRISE. We learned and applied it. Even if we don't get jobs, I learned how to create jobs," he says.

"We have seen far too much drought, we want to end water scarcity in India by 2020. And for that, farmers need to prosper," he says.

## How is Direct Bore well recharge done?

- A 10x10 feet pit is dig and adjoining catchment area is made.
- Stone pitching is done in the pit.
- A 3 inch layer of sand is made at the bottom of the pit.
- Holes are made in the casing pipe and then it is covered with mesh.
- Cement rings are placed around the pipe.
- The remaining pit is covered with sand, stone and jelly.
- Rain water from the catchment area gets transferred to the percolation pit.
- The filtered water seeps in via cement rings
- The water after filtration through the mesh enters the pipe through tiny holes.

