



Manuvikasa

Harvesting Prosperity through Farm Ponds

Area of operation: Uttar Kannada



Name of the Organisation	Manuvikasa
Type	Non-profit Trust
In the Sandbox	Since 2011
Focus areas	All-round development of disadvantaged populations through water harvesting, SRI cultivation, community empowerment and support of SHGs, home based education to the differently abled, support for education and environment preservation
The numbers	530 tanks across 2100 acres benefitting 960 farmers, 250 farmers cultivating through SRI technique, formation of 160 SHGs, micro-credit to the tune of 40 lakhs.

It fit the dictionary definition of the mythical land overflowing with milk and honey: with 81% of total area under thick forest cover, rolling hills, rich biodiversity, bountiful natural springs, yielding terrain and favourable climate, Uttara Kannada, Karnataka's hill district, lent itself inherently to prosperity.

Yet, as Ganapathi Bhat discovered during his many NSS trips to volunteer in the forests of Sirsi and Siddapur in the Western Ghats, the richness of the land did not translate to better living for the local tribes who practised agriculture or depended on valuable but forbidden non-timber forest produce. The fields suffered from erratic rainfall and acute water shortage, seasonal agriculture fetched meagre returns, farmers had little access to markets and the vanishing biodiversity and strict forest laws rendered local tribes helpless.

Many families did not send their children to school; education was a distant second priority when the locals were still struggling to eke a living. "I saw the usual signs-widespread migration of men to cities to work as manual labour, struggling landless farmers, non-earning women members and a dysfunctional education system. We wanted to tackle the problem from the roots," reminisces Bhat.

Thus began 'Manuvikasa', an NGO that Bhat started in 2003, at the

age of 21, to work in the Uttara Kannada and Haveri districts and empower local populations to lead a dignified life through environmental development, sustainable agriculture, education and natural resource conservation.

The Genesis: Supporting Women's Groups

Manuvikasa, meaning 'human development', began in Sirsi by providing training and access to micro-credit for women to start small dairy or cattle rearing operations. "The SHG groups were forcing women to sell phenyl and soap and moving them away from traditional occupations like goat herding which they were skilled at," says Bhat. The NGO also held regular meetings to train women on legal education, awareness about their rights and the importance of education, issues close to Bhat's heart. During the course of these meetings, Bhat realised that to even start talking about rights or education, they had to enable the population to earn a sustainable livelihood, and for that, agriculture had to be made viable.

In 2011, Manuvikasa sought help from Desphande Foundation for a seed grant and advice to support a simple innovation that would go on to transform the lives of over 500 small farmers including women in just a year's time: farm ponds.

The Sandbox Story

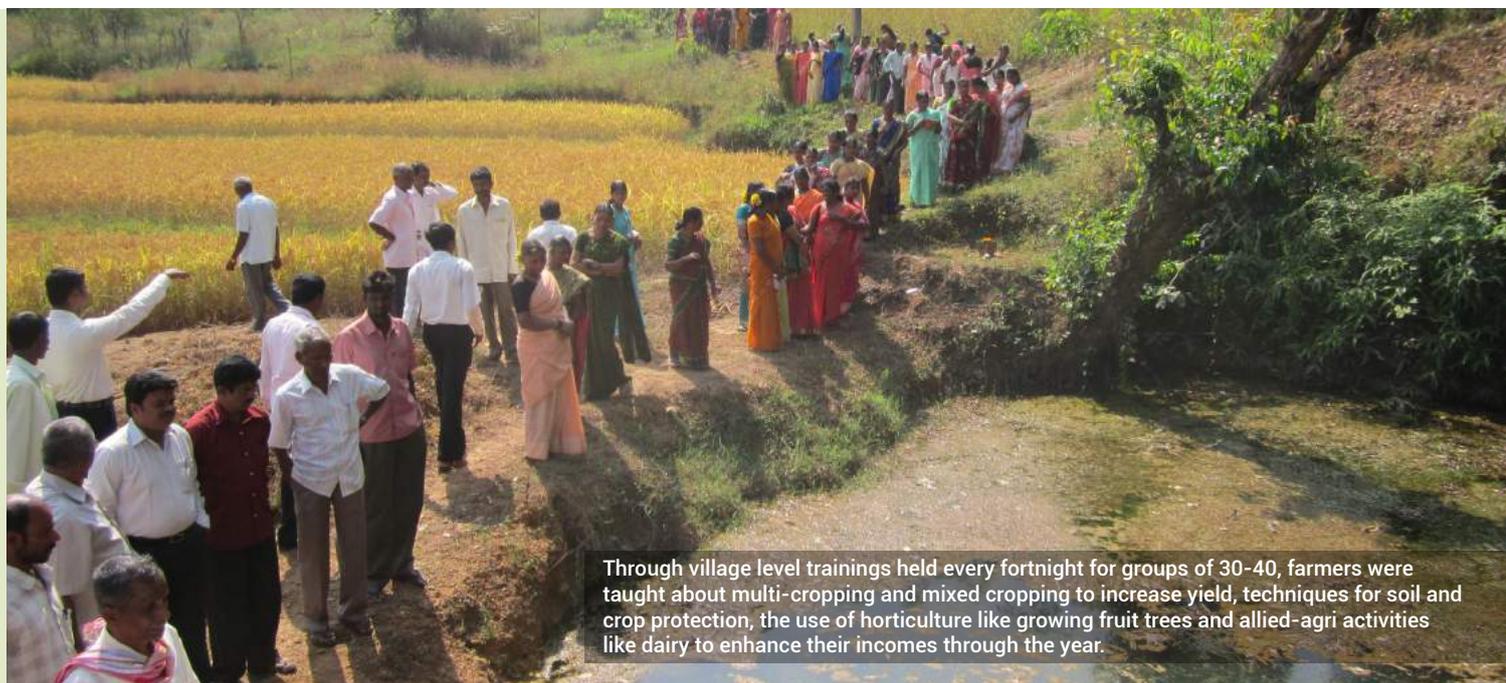
1. Building Farm Ponds For Agri-Development

The First Pond

Bhat found that most traditional farmers in Haveri and Siddapur heavily depended on drying groundwater and wells, when in fact the area was rich in natural springs. After much counselling and convincing of local farmers, the Manuvikasa team started digging tanks on a part of the land: they used water diviners (experts who can detect presence of water by walking over an area) to carry out a thorough assessment followed by building a trench that costed around Rs. 12,000. The tanks stored rainwater which was channeled using the natural undulation of the land. Savings are a huge 40% just from the cost of setting up water pumpsets and the electricity needed to pump water everyday; the enduring value is much higher: stored rainwater that enables farmers to grow multiple crops in a year, more water for the household and animals and groundwater levels that improved dramatically between just 2 monsoon seasons.

Changing The Traditional Farmer Mindset

The first year in operation was an uphill challenge for the Manuvikasa team. "Convincing a farmer to construct a water tank is tough,



Through village level trainings held every fortnight for groups of 30-40, farmers were taught about multi-cropping and mixed cropping to increase yield, techniques for soil and crop protection, the use of horticulture like growing fruit trees and allied-agri activities like dairy to enhance their incomes through the year.



When comparing traditional methods of cultivation with SRI, conventional method gives 2,330 kgs while SRI gives 4,148 kgs of yield per acre with half as much seeds, fertilizer and water input.

because they don't want to waste even an inch of their land," says Bhat. With regular support from the DF team, Manuvikasa developed educational material and distributed it to farmers in the area, got their staff to attend Gram Sabha meetings and talk to the villagers in an effort to popularize the method. A liberal grant from DF with a modest target of 35 tanks over two quarters spurred the team.

Manuvikasa conducted farm visits, used the power of local success stories and spent a lot of time counselling and motivating farmers to shift from old traditional ways of farming to modern methods. A district farmer meet organised with the help of Deshpande Foundation featuring local officials, progressive farmers and DF staff early last year saw over 300 farmers visit from all parts of Karnataka to see the benefits of the method for themselves; adoption almost doubled after.

The First Step Towards Sustainability: Revenue

At the end of the first year, the Manuvikasa team had successfully built 74 tanks, exceeding targets set by 100%. In the second year, the team was encouraged to take on the challenge of constructing 400 tanks, however with Foundation encouragement they decided to bring the cost down of the farm pond. Manuvikasa began toying with an idea to have farmers contribute

upto 60% of the cost. As it turned out, the work of first year had helped establish a strong reputation with the local farmer population; it was relatively easier to convince farmers to pay 40% of Rs. 12,000 for a tank, either from their own pocket, or through NABARD loans that the NGO could help them obtain.

"Moving to a service delivery model also helped us critically think of unit costs. Increased farmer sign-ups helped us negotiate better deals with contractors for the earth digger machine," says Bhat. With advice from DF on pricing, negotiation and cutting costs, Manuvikasa further brought tank building costs down to Rs. 7,000.

Enhanced Incomes Through Allied Activities

Once the tank was installed, the Manuvikasa team started work on capacity building for the farmers. Through village level trainings held every fortnight for groups of 30-40, farmers were taught about multi-cropping and mixed cropping to increase yield, techniques for soil and crop protection, the use of horticulture like growing fruit trees and allied-agri activities like dairy to enhance their incomes through the year.

In two years, Manuvikasa has constructed over 390 tanks and harvested water in 1500 acres of land. Most farmers have seen atleast 30% increase in their crop yields

and many have gone on to grow two crops in a year. "I have a 2 acre land where I grow paddy, ginger, rice, maze, banana and arecanut. After constructing this tank in 2011, I have started to get over 20 quintals per acre of paddy, I even received an award from DF for highest yield," says Basawaraj Madival, a small farmer in Siddapur who also started a cow business on the side for extra income during the non-farm seasons. He has also started following sustainable agriculture methods like proper composting, live fencing, usage of bio pesticides and organic manure besides biogas for energy and slurry for fertilization of land.

As Manuvikasa wondered what they could do to further enhance farmer incomes, a quarterly partnership meet with other non-profits in the Sandbox brought them in contact with AME Foundation, an NGO that was successfully implementing the SRI (System of Rice Intensification) technique in Sirsi, fetching farmer upto 30% increase in yields with a 40% reduction in costs.

"I have a family of 5 and this land is our only source of income. Manuvikasa's water tank has brought my land water throughout the year." – Gauri Laxmanamma



Manuvikasa has reached over 2200 women farmers to date with access to credit, training and environmentally friendly products like solar and smokeless chulhas besides micro-loans from Microgram for various income generation activities.

2. SRI Cultivation: Getting More For Less

Partnering With Ame

System of Rice Intensification is an environmentally friendly method of cultivating paddy in a wide 25x25 cm square pattern to keep optimal space for roots and all leaves photosynthetically active. When comparing traditional methods of cultivation with SRI, conventional method gives 2,330 kgs while SRI gives 4,148 kgs of yield per acre with half as much seeds, fertilizer and water input.

With help from scientists at the Krishi Vigyan Kendra, Hubli, Bhat and his team acquainted themselves with the SRI form of cultivation and realised that SRI in fields with pond water recharge could bring vastly improved returns. Manuvikasa partnered with AME Foundation in the Sandbox to take their staff and 25 farmers through a one-day training covering the SRI technique, seed testing and seed treatment. In the months after, AME experts supported every implementation on the ground for over 360 farmers with average land sizes of ½ an acre each in Uttar Kannada and Haveri.

“We can visibly see the difference between the two crops. The SRI crop is 3-4 inches taller now and every bunch of paddy is thicker than before,” says Keryamma Keshav,

	Conventional method	SRI method
No: seedlings per clump	4	1
No: tillers per seedling	8.3	55
No: seeds per tiller	114	189z
No: seeds per plant	824	5858
Yield (tonne/Ha)	2.0	7.3

Comparison between SRI and conventional methods

a 45-year-old farmer who opted for the method just 2 months ago and is expecting Rs.32,000 for the same land that was yielding Rs. 14,000 earlier. Bhat says that motivating farmers to try out SRI on small portions of their land before converting entirely helped push adoption numbers.

Bringing Good Produce To The Market

With farmers weaned off chemical fertilizers and pesticides and adopting environmentally sustainable crop growing techniques, a logical next step was reviving indigeneous, hardy varieties of crops like red rice. Manuvikasa collaborated with farmer collective Sahaja Samruddha, another DF grantee, to save heirloom seed varieties. They got over 80 farmers to grow red rice on their farms, premium urban produce that Manuvikasa helped bring to the right markets and platforms. “Going

forward, we want expand our market access service, help these farmers gain access to the right platforms. We hope to grow successfully and share a portion of the profit on the enhanced returns,” says Bhat.

3. Human development through livelihoods, preservation and financial inclusion

For Ganapati Bhat, livelihood enhancement was always a means to reach his end objective of educating children and preserving the environment. Self-help groups have been the central fulcrum on which the organisation works to reach out to its community through changing the mindsets of the women – right from saving money and SRI cultivation to convincing them to send their children to school. The NGO has reached over 2200 women farmers to date with access to credit, training and environmentally friendly

“After constructing this tank in 2011, I have started to get over 20 quintals per acre of paddy, I even received an award from DF for highest yield” – Basavaraj Madival, a farmer from Siddapur taluk.

products like solar and smokeless chulhas. A partnership with MicroGraam has provided loans to the tune of 13 lakhs in areas ranging from fisheries to dairy farming.

With almost 100% of the area covered in Siddapur and Yellapur with the help of DF, Manuvikasa is now planning to expand its work in rest of the Sirsi and Uttar Kannada taluka. At the same time, the NGO is planning to deepen its agriculture work further by helping farmers to diversify their crops by consulting with local scientific experts in figuring out the right mix of orchards, crop cultivation and allied activities in the arid region. Thanks to their work in the Sandbox, the organisation has got additional funding through Credibility Alliance, GiveIndia and UNDP.

The significant impact of working with DF can be seen in Manuvikasa's ability to focus on one activity versus trying to sort out every issue. The non-profit has also consciously moved away as much as possible from grant-based funding, wanting to work on its own revenues and through sustained relationships with farmers.

Area of work	Upto 2012	2013
Small tank development	90	530
SRI method in paddy	30	360
Formation of SHG	60	160
Micro-insurance coverage	400	800
Promotion of red rice	0	80
Micro finance to SHGs	5 Lakhs	40 Lakhs

Table: Snapshot of Manuvikasa's work with livelihoods in the last year

Moving forward Bhat and his team are looking at building an integrated model combining farm ponds, SRI cultivation and Horticulture.

The most far-reaching impact of Manuvikasa's work is a sense of self-assurance and a positive belief among the people that they can sustain themselves through their own innate abilities and entrepreneurial spirit. Through helping a farmer in different phases with technical expertise, affordable credit and supervision, the vision of Manuvikasa is to make farming viable and bring prosperity to them through, the farm pond as the just the first step.

“Be it farmers of community women, people are looking to invest in securing their own future. Gazing outwards for charity or subsidies is completely gone. Isn't that what we want when we say human development?” asks Bhat.

Sandbox Snapshot

DF provided seed funding, mentoring and support to create over 530 farm ponds for water harvesting in Sirsi and Siddapur Taluks benefitting 960 farmers.

With DF support and Sandbox partnerships, Manuvikasa implemented the SRI technique increasing farmer yields by 30% and reducing costs by 40% for over 360 farmers.

In the Sandbox, Manuvikasa went from being an idea driven by passionate people to a social enterprise that was able to move away entirely from relying on grants.

