

REJUVENATING LIVES

Narratives of success among farming communities that integrated sustainable systems and strategies



WELL INTENTIONED IN WESTERN MADHYA PRADESH

For the poor farmer in rural Madhya Pradesh, a dug well is a boon, for it is the most reliable source of water. The owner has complete access to water without any possibilities of conflict with others. This traditional water harvesting structure has brought immense benefits to small farmers in western Madhya Pradesh when no other source is available, accessible or affordable. Construction of dug wells as private asset has proved to be a popular and advantageous scheme in the livelihood development strategies of Action for Social Advancement (ASA) for resource poor farmers.

After comprehensive land and water resources development of a village, the dug well comes as a natural choice of the farmers for harvesting of sub-surface water recharge. Grant support is provided by ASA based on certain conditions, with priority being accorded to small farmers with weak economic status.



Quick facts

- **2530** dug wells constructed/renovated
- **3694** hectares of land irrigated
- **7155** households benefitted

(Data as on Feb. 2015; ASA's operational area covers the states of Madhya Pradesh, Chhattisgarh, Bihar and Jharkhand)

consumption, and he sold a part of it at a rate of ₹1200 per quintal. For five months a year, he also grows vegetables, including brinjal, radish, green chilli, bottlegourd, fenugreek, spinach and a variety of greens. These he partly sells and partly retains for household consumption. From sale, on an average, he earns ₹400 per day. On average, he sells vegetable to market for over three months a year. The water from the dug well also comes of use as drinking water for cattle.

Harji Pita and his family have been able to realise several dreams. For instance, they are building a new house for his sons. He also bought a new motorcycle and a buffalo last year. Life almost seems like a dream now.

It's farewell to hardships

In the nearby, tribal-dominated village named Lakhia, for 48 year-old Goti Bai, life took a turn after a 25 year-old dug well on her land was renovated. Goti Bai and her husband Kodar Damar owned 2.5 acres of land but cultivation is entirely rainfall-dependent. Migration to the city and working on others' fields as agricultural labour had become their source of income for a large part of the year.

"Life was tough in those days. We would be working for daily wages of as less as ₹60-70. We would be literally homeless most of the year and our children could not study as we would be constantly moving around for work."

Then, in 2009-10, Goti Bai applied to ASA for the renovation of the dug well. ASA supported her in this endeavour and contributed ₹22,000. Goti Bai paid up the remaining ₹23,000. Of course, she had to take a loan from the local moneylender whose interest rates were sky high.

Reaping Dividends Manifold

Multiple reasons to smile

Fifty-five year-old Harji Pita Hemra, resident of village Rajpur in district Ratlam, literally worships the dug well he owns. And the reason is not hard to fathom. Life and fortunes have changed for this farmer owning 12 acres of land ever since his dug well was renovated in 2011. This 25 year-old traditional water harvesting structure had been lying dilapidated. Of the total cost of ₹50,000, ASA contributed ₹22,000 and Harji Pita added the remaining amount.

The dug well is 33-feet deep and irrigates 2 acres of Harji Pita's total land. On this, he has been able to harvest quintals of cotton and grow plenty of vegetables. Last season, on 1.6 acres, he grew 26 quintals of wheat for which he earned ₹40,000. He also grows maize as an intercrop with cotton. Last season, he harvested 15 quintals of maize. It came of use for household

The dug well irrigates the entire 2.5 acres that she owns. She is also careful to practice drip irrigation as a method of economically using water. The couple now grow both *kharif* and *rabi* crops such as cotton and wheat, from which they earn a substantial amount. In addition, she also grows vegetables. Her patch of land is abounding with potatoes, radish, carrots, fenugreek, spinach, garlic etc. Goti Bai is also secure about food and is satisfied that her family gets a nutritious diet. Moreover, she also sells the vegetables from her garden to the Aanganwadi Centre for its mid-day meal.



"My husband bought a motorcycle recently, something which he and I had dreamt of for long. Moreover, I'm happy because after seeing the success of my dug well, several farmers in my village demanded for dug wells. Now, in this village, there are 15 dug wells constructed between 2009 and 2014. The village is witnessing a prosperous time."

Goti Bai also grows marigold flowers on a portion of the land that is irrigated by the dug well. She earns almost ₹20,000 every year from sale of these flowers. There's another feather to her cap. In 2010, another organization gave her plants, manure

and training to create a *Wadi* on which to grow pomegranate, mangoes, guavas and lemon. The land on which this *Waadi* is thriving too is being irrigated by the renovated dug well. Her gross income from agriculture is over ₹1 lakh per year.

"A dug well constructed by my husband's forefathers had been lying dilapidated for ages on the land that my family and I wanted to cultivate. In 2012, ASA supported me in renovating it. Since then, the dug well has been irrigating an acre of land we own. My family's life has changed in multiple ways. We now grow kharif as well as rabi crops. For kharif crops, we use water from the dug well when the rains are not adequate. That is how we grew soybean last season and harvested 4 quintals. We sold the entire lot and earned a total amount of ₹12,000. We also grew chickpea and harvested 4 quintals of it. The Farmer Producer Company bought our entire produce of chickpea at a rate of ₹3000 per quintal. The dug well has been a blessing. Income has changed our lives. I don't have to see my sons leaving for the city every year in search of work. The little ones are happy and healthy too."

– Kamla Mohan Singh, village Samui, district Jhabua



EVALUATING THE DUG WELL: KEY FINDINGS

Evaluation of ASA project on 'Livelihood improvement of tribal communities of Ratlam district (Western Madhya Pradesh) through creation of dug well assets, agriculture development and water management'

- ◆ Water was found available throughout the year in 44 wells out of the total of 80 dug wells (55%) under the project, and water is available for 9-10 months of the year in 35 wells (44%).
- ◆ All households are able to provide protective irrigation for *kharif* crops, assured irrigation fully to *rabi* crops and limited area irrigation to summer crops.
- ◆ Diversification of crops and cropping patterns and practices were observed.
- ◆ Each of the 80 dug wells irrigates an average of 2.5 acres as against the expected 1.5 acres. Double cropped area has increased by about 65% and triple cropped area by 13%. *Rabi* and summer cropping area increased by 78.2% directly due to project efforts.
- ◆ *Rabi* crop area has increased significantly (65%) with wheat, pulse and vegetable crops.
- ◆ Cotton crop farmers are said to be getting better prices (₹200-300 per quintal) due to quality improvement alone. The area under new variety of cotton (DCH-32) is said to have increased considerably.
- ◆ Dug well farmers are able to advance their cropping cycle as they are able to take up early sowing and nursery interventions to prepare saplings.
- ◆ Surplus produce is being marketed locally by farmers, providing cash incomes particularly in the hands of women.
- ◆ Varieties of pulses, such as red gram, black gram, green gram, cow pea, etc. are being consumed on alternate days by a large number of project beneficiaries.
- ◆ Vegetables such as tomato, radish, spinach, ladyginger, fenugreek, spinach, brinjal, ridgegourd and bottlegourd are consumed by villagers almost every day as they are now being produced locally.

(Study conducted by C. Ravi Kumar of Arghyam, Bangalore, in February, 2012 in 6 out of 9 project villages and one control village in Ratlam district, Madhya Pradesh)

Impact assessment of ASA Dug Well Programme

- ◆ Average income per household has increased from ₹20,696 to ₹43,315 per annum, an increase of 209.3%.
- ◆ 58 acres of land was additionally covered through irrigation. This is 241% more land under irrigation post programme. Of this, 17.15% of land was reclaimed as a result of capacity building of farmers, convergence with government schemes and increased access to water.
- ◆ ASA's dug well programme enabled an increase of 21.5 % in total number of wells in the study area. As a result, 41% beneficiaries have round-the-year availability of irrigation facilities, while 2% has irrigation water availability during hot summers i.e. March to June. The remaining 57% have irrigation water up till February.
- ◆ Total land area with irrigation facility has increased. About 85.6% of land is under *kharif* crops, 67.8% of land is under *rabi* crops and 33.2% of land is under cash crops.
- ◆ During *rabi*, merely 6.4 acres of land was cultivable for the wheat production pre-programme. Post dug well, about 72 acres of irrigated land has been brought into cultivation. 80% is now used for wheat cultivation.
- ◆ The proportion of the livestock's namely cow, buffalo, poultry increased by 27.4%, 21.6% and 3.9 % respectively, owing to the programme.
- ◆ Pre-programme, 17% beneficiaries had livestock as alternative source of livelihood. Post-programme, approximately 66.6% beneficiaries are generating additional average income of about ₹13850 per year from livestock product.
- ◆ Average amount of credit supply to individual beneficiaries almost doubled. Previously, about 37% beneficiaries accessed credit supply while post-programme, this increased to 60.7 %.

(Study conducted by Abhishek Semwal in June 2011 with 115 beneficiaries in 18 villages across Ratlam, Jhabua, Barwani districts of Madhya Pradesh)

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