



Rejuvenating Lives

Chronicles of agricultural transformation on the fields of small and marginal farmers

Dug well: An individual irrigation asset that is greening the farms of small landholders

Introduction

Dug wells are a conventional means of irrigation that are still widely used by the small and marginal farmers across the developing world. Dug wells make a world of difference to the farmers who don't have access to a perennial water source such as rivers. The fact that dug wells can be constructed using locally available material and implements render them as an affordable proposition for the farmers. Action for Social Advancement (ASA) with its emphasis on providing irrigation resources to small and marginal farmers across all its points of presence including eastern Madhya Pradesh has been extensively working on facilitating dug wells construction for long.

Benefits

The numerous benefits of the dug wells which harness the sub-surface water comprise continued farm engagement of the farmers through cropping seasons resulting in higher yields, productivity, and incomes. Dug wells enable the farmers to introduce newer crops on their fields, which offer more potential for profits along with vital income-earning crops. Dug wells lead to high ownership and self-sufficiency among the farmers since they are an individual asset, which gradually ignites the spirit of entrepreneurship among them. The areas with dug wells experience reduced conflicts over water sharing. The income augmentation of dug wells contributes to lower dependence on money lenders, who charge exorbitant rates of interest and perpetuate the poverty through debt trap. They also contribute in reducing the distress migration. The farmers are able to purchase timely agricultural inputs. The assured irrigation also provides the confidence to small landholders to invest in other productive assets such as water pumps and small livestock. Lastly, the farmers experience an overall improvement in their quality of life with the purchase of personal household items and improved funding on children's education.

The Specifics

ASA, backed by numerous years of ground-level experience and deep insights, acknowledges the criticality of small-scale irrigation resources for small landholders. Hence, the underlying premise of ASA's dug well program is to endow small and marginal cultivators with an asset that plays a long-lasting role in easing off the poverty burden of the least favored section of farmers. ASA offers a subsidy of INR 30,000-45,000/- as per the area and geo-hydrological scenario while the balance cost of INR 45,000-55,000/- is contributed by the benefiting farmer majorly through labor.

Figures at a Glance

*As on 31st March 2020



3606 dug wells constructed



7535 hectares irrigated



10144 farmers benefitted



Triggering the Irrigation Benefits

The reverberations of the ASA's dug well program are being felt by small landholders across its operational areas including the various districts of eastern Madhya Pradesh such as Mandla, Dindori, and Anuppur. 56-year-old Ratilal Uike in Dhoranala Ranntola village of Mandla district has experienced first-hand how the presence of a dug well on his small field of 4 acres turned the tide in his favor when it was installed by ASA's assistance in 2017. Before he had the dug well, he was left at the mercy of monsoon showers to meet his irrigation needs and practiced single-season farming. The seasonal rains allowed him to produce a measly yield of 12.5 quintals of paddy per acre over a patch of 3 acres. The irrigation security has provided the much-needed production boost as Ratilal now gets a yield of 22 quintals per acre on 3 acres. He is also able to grow wheat over 1 acre, which produces enough for the consumption of his family that has seven members. More importantly, he has successfully expanded his crop basket with the inclusion of various vegetables which not only provides fresh and nutritious supply for self-consumption but also for sale in the local market. The dug well irrigation has shot his farm income to INR 80,000/- per annum in comparison to meagre money he earned earlier while keeping him engaged throughout the year. Buoyed by positive agricultural outcomes, he is gearing to further scale-up his farming by including newer cereals and vegetable crops along with improved varieties of seeds.

Jauher Singh, a 50-year-old fellow farmer from the same village narrates a similar tale of the positive shift in his farming courtesy the dug well. Jauher, a recipient of ASA's assistance for the dug well construction in 2017, was forced to migrate for the better part of the year for economic reasons in absence of a year-long irrigation resource. The farm operations on his field of 5 acres would cease after the wet months when he would engage in growing paddy using traditional farming techniques over a portion of his land, which was only sufficient to be consumed by his family. The dug well has meant prolonged farm work as he has been able to successfully expand his cultivable area as well as yields during rainy season as well as winter months when he grows wheat along with vegetables. Today, his farm receipts stand at INR 55,000/- annually, which is a significant jump from almost nil as compared to non-dug well days. His migration period has reduced significantly. Jauher intends to buy his own pump and pipe, which he currently rents out to ensure further efficiency of the dug well alongside intensifying his agricultural efforts.

“From almost nil farm income, I am able to earn decently through agriculture with the availability of water. My need to migrate has reduced. I plan to buy a pump and pipe to irrigate farm from my dug well which I rent it out at the moment from my savings and further intensify my agricultural efforts.”
Jauher Singh, Dug Well User:

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Triggering the Irrigation Benefits

Nearly 100 km away in Devargarh village of Mehandwani block in Dindori district, 30-year-old Sundiyabai Dhurve, who is the sole person to till her small plot of 1.5 acres, testifies the gains from the dug well. She constructed a dug well in early 2018 with ASA's assistance. The preceding period saw little agricultural activity on her field as she could eke out only 1.5 quintals of paddy in the rainy period. The dug well-based irrigation has ensued in doubling the paddy yields while giving Sundiyabai the scope to cultivate wheat and red lentils in the winters along with enriching her plot with vegetables such as tomatoes and chilies. The increased production is taking care of the family's food needs and helping her save money spent earlier in the purchase of cereals and vegetables.

In the interiors of Anuppur district, Dujibai Singh, a 40-year-old farmer in Bhalwahi village of Kotma block used to practice sustenance farming and cultivate paddy on her 3-acre plot in monsoon season giving her a paltry production of 15 quintals which was used for her family's consumption. She kept herself busy during the remaining months by taking up working as local labor and taking up 50 days of work under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). With ASA's aid, she constructed a dug well on her farm in late 2017, which has provided her an agricultural momentum with the expansion of farming activities. In 2018, while the paddy production was not up to her expectations since her pump developed some issues and she could not provide proper irrigation to her farm, the real effect of the dug well was visible when Dujibai grew wheat and produced 35 quintals along with producing 1.5 quintals of chickpeas (chana) in the winter period by which time, her pump was fully operational after repairs. The sale of the outputs fetched Dujibai INR 55,000/-. Dujibai has also got a transformer built through a government scheme near her farm by contributing INR 35,000/-. This has provided electricity to operate her motor pump and she doesn't need to buy diesel for the pump thus saving her money. She plans to further diversify her farming and include newer crops to further boost her income.

"Due to the dug well, my farming is not just confined for sustenance but earning me an income. I don't work as labor on other people's farm as I am totally engaged in the agriculture throughout,"
Dujibai Singh, Dug Well User.

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