



Rejuvenating Lives

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

Shallow Borewell: The compact solution to the irrigation woes of small and marginal farmers

Benefits

A major positive outcome observed among the users of the shallow bore well is their growing confidence with the assured irrigation availability as they can irrigate their land as and when required. The use of shallow bore wells is increasing the irrigated area that is resulting in the increased crop production and productivity of farmers along with enhanced cropping intensity. These have a direct bearing on the agricultural income augmentation of the users.

Introduction

It is an established fact that in Indian agriculture, the irrigation resources are majorly controlled by the large and resource-rich farmers, who have major access to not only public but also private irrigation sources such as canals and tube-wells as compared to small and marginal farmers. The irrigation constraint is a major barrier for small landholders to scale up their agricultural pursuits and are stuck at the lower rung of the farming hierarchy. This scenario is also illustrated in the regions of eastern Madhya Pradesh, where Action for Social Advancement (ASA) is facilitating the spread of low-cost shallow bore well systems coupled with electric water pumps among small landholders for better irrigation access.

The Specifics

ASA is providing the irrigation momentum among the small landholders in eastern Madhya Pradesh and Chhattisgarh through the dissemination of the region appropriate individual irrigation facility of shallow bore well systems. The hydrological-engineering intervention is highly effective for areas with shallow water tables, where water is available at a depth of 25-30 feet. These structures can easily irrigate up to a few acres and are specifically suitable for eastern Madhya Pradesh and Chhattisgarh that are characterized by a high presence of hard rock areas. A major factor in the rapid spread of the shallow bore well is its low-cost per unit, which ranges from INR. 25,000-30,000/-. The program has an embedded subsidy component of INR. 15,000/- provided by ASA with the farmer having to contribute the rest of the amount. As in any ASA program, the motive is to identify and select the most deserving beneficiary, which is achieved through the ASA-promoted local self-help groups (SHGs), the principal mechanism of achieving development in ASA's locations. Another factor contributing to the adoption of the shallow bore wells is that it is easily implementable.

Figures at a Glance

*As on 31st March 2020



1497 shallow bore wells constructed



1841 hectares irrigated



1497 farmers benefitted



Scripting Success through Shallow Borewells

Many resource-deprived farmers who were partnered by ASA for the shallow bore well installation are reaping its benefits in different districts in eastern Madhya Pradesh and Chhattisgarh including Mandla. Mandla is a tribal district situated in the east-central part of Madhya Pradesh. The district has a highly undulating topography and alternates between hillocks and land recesses. Most of the hills are abound by forests. The district consistently ranks among the most backward districts in India. Irrigation access among small landholders is a major bottleneck in the district. Hence, the shallow bore well program of ASA has not come a moment early and is changing the agricultural landscape in the district.

One such village is Mohaniya Patpara, where Khushi Ram Nanda, a 35-year-old marginal farmer is experiencing a sizeable difference in his agricultural output after the installation of the shallow bore well in 2017. Owner of 2 acres of an agricultural plot, the farm operations were confined to just 1 acre and were completely rain-dependent. The production was 6 quintals of paddy and 2.5 quintals of wheat earning him a meagre income of INR 12,000/-, which was hardly enough to meet the requirement of a family of six. The irrigation availability has improved the production of paddy and wheat to 20 quintals and 8 quintals respectively on 1 acre earning him INR 50,000/-. He undertakes vegetable cultivation over another acre, which draws INR 60,000/-. Khushi Ram is elated to see his farm income grow. Now, he doesn't need to do labor work like the past to supplement his income. He has already embarked on the path to further develop his farming. He has purchased a drip set from his enhanced earnings for enhancing the yields. He has bought a small plot of 5 decimals from the savings.

“With the irrigation assured due to shallow bore well, I am keen to enhance my income further by using improved and new cereal and vegetable crops seeds, buying more agricultural land and introducing mechanization in my farming”, Khushi Ram Nanda, Shallow Bore Well User.

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Dhurpal Singh Marko also from Mohaniya Patpara village shares a similar story of farm growth after adopting the shallow bore well. 32 years old Marko owns 2.5 acres of land and was caught in the throes of irrigation deficiency as he practiced rain-dependent farming using traditional methods over 1.5 acres, which delivered just 8 quintals of paddy, all of which was used for consumption of his family. The shallow bore well, which he secured through ASA in early 2018 has enabled him to produce 24 quintals of paddy and 12 quintals of wheat in addition to some vegetables. Dhurpal is able to earn INR 75,000/- by selling his produce. The availability of year-long irrigation has ignited his ambition to stride further on the way to agricultural advancement as he harbors a keen desire to buy additional agricultural land and introduce farming equipment such as drip set on his field.

The benefits of the shallow bore well are also visible in the district of Shahdol, which is around 200 km from Mandla district. The district is predominantly a tribal and hilly area, which is located in eastern Madhya Pradesh with pockets and belt of Sal trees and mixed forests. Shahdol is home to Urmila Mishra, who owns 3 acres of landholding in Chukan village of Kotma block. Bereft of continual irrigation availability, Urmila was stuck in subsistence level paddy production in the rainy season with her husband along with some sesame, which brought her just INR 10,000/-. ASA's shallow bore well intervention on her field is helping realize Urmila's hopes from agriculture. The water availability is leading to a pronounced difference to the agricultural output as she obtains 20 quintals of paddy in monsoons and around 14 quintals of wheat in winter earning her INR 60,000/- farm income. She has started growing Black Gram (urad dal) and vegetables for her family's nutrition.

"Thanks to the shallow bore well, the cereal production such as paddy and wheat has increased sizably. The higher income from agriculture now allows me to buy farm inputs at the right time unlike earlier," Urmila Mishra, Shallow Bore Well User.

Urmila's namesake from the same village, Urmila Singh Kanwar enumerates her shallow bore well-induced farm success. She got attached to ASA's shallow bore well program in 2017 before which her 3 acres field was barren as it was not tilled. She and her husband labored in other people's farms to earn a living. The interaction with ASA's staff gave them hope of working for themselves and converting their barren plot into a productive one. The shallow bore well installation on Urmila's field in 2017 through ASA's help turned her hope into a reality. Now, she and her husband produce 60 quintals of paddy and 30 quintals of wheat along with vegetables, which earn them around 80,000/- annually. She says the days of working for someone as labors are behind them and they can only think of progressing further through their farming.

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