



Rejuvenating Lives

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

Lift Irrigation – Lifting the Status of Small Landholders’ Farms

Introduction

The single most vital component in initiating successful farming is the availability of irrigation to the farmers based on their need and over which the farmers have their control. The constraints of small farm plots can be overcome by the provision of timely irrigation which can influence the productively positively. Flowing streams are an important source of irrigation especially for farmers, whose farms are in the vicinity of such streams. ASA has been working on promoting Lift Irrigation System (LIS) by forming water users’ groups made of small farmers owing one to two acres to meet their irrigation needs in different parts of eastern Madhya Pradesh and Chhattisgarh.

The Specifics

A major highlight of ASA’s Irrigation program is the efforts towards the promotion of LIS to cater to the irrigation needs of small and marginal farmers especially in the tribal-dominated districts of eastern Madhya Pradesh and Chhattisgarh. Under the LIS component, ASA mobilizes 15-20 small and marginal farmers with small landholdings into a water users’ group. The LIS fetches the water from a nearby stream through motor pumps into the main delivery chamber located at the uppermost point in the area and feeds it to the fields of member farmers. Each LIS irrigates an area of few hectares which improves the productivity and yields resulting in better farm incomes. The financing structure of an LIS comprises 90 percent of funding by ASA and 10 percent contribution by member farmers mainly in the form of labor.

The main advantages of LIS are

- Irrigation is possible at a higher level
- Almost no land acquisition issues
- Low-water losses
- Lower manpower utilization

The years of working on the provision of irrigation to small landholders have led ASA to develop expertise in different irrigation technologies including LIS. ASA utilizes this accumulated technical expertise on aspects of appropriate technique, planning, designing and execution for developing well-functioning LIS. The technical expertise is vital since there have been many reported instances of unplanned LIS adversely impacting the groundwater level from the Sub-continent in recent years. The dwindling groundwater level renders operation and maintenance of an LI system getting expensive with each passing year. The participation of the beneficiaries lies at the heart of the success of the LIS. Hence, ASA ensures the participation of LIS users from the very inception, construction, operationalization, and handover. Appropriate capacity building efforts are undertaken so that the beneficiary farmers are capable of the operation and maintenance after the exit of ASA from the project.

Benefits

- The main positive effects of the LIS comprise:



Increase in yields with the availability of irrigation leading to augmented incomes



Caters to the drinking water needs and water for livestock



Stabilized agriculture as water is available whenever needed



Longer engagement on the farms reduces the need for local labor and migration

Figures at a Glance

*As on 31st March 2020



168 Lift Irrigation Systems developed



3886 hectares irrigated



2878 farmers benefitted



Lift irrigation offers succor to water deficient farms

The Story of “Makarkund Sinchai Udvahan Yojna”

Bakhheradona village in Mandla district is dominated by small and marginal tribal farmers. A group of small farmers in this village experienced severe livelihood pressure as their farming was marred by a paucity of timely irrigation. They had little capital to arrange for individual irrigation resources. Aware of ASA and its work on irrigation provision, the group approached ASA with a request to develop a LI project on a nearby tributary of the river Narmada. Witnessing the urgent need of the scheme, ASA agreed to develop an LIS, which was completed in 2012 and covers 40 hectares of land belonging to 42 farmers. The farmers contributed their labor during the construction of the system. ASA evolved a water user group (WUG) for the post-operation and maintenance of the system comprising all the 42 beneficiary farmers. A maintenance fees of INR. 500/ per farmer per season is charged by the WUG. At the outlet level, there are small user groups of farmers comprising five to six farmers for proper water distribution. The LIS initially was powered by a 15 HP motor, which became dysfunctional in 2015 and was replaced with a new 12.5 HP motor by farmers themselves. The LIS has fulfilled the longstanding requirement of irrigation. One witnesses the increase in the cropping intensity as farmers not only have supplementary irrigation during the monsoon season but also cultivate their land in winter season and summers growing cereal crops and vegetables getting higher production and incomes. The annual ritual of forced migration to urban centers such as Mandla, Jabalpur, and Nagpur has significantly reduced. “Before the LIS, I was barely able to grow any crop that brought home any money. Little paddy using rainwater was all I could get from my small field of 2 acres. The LIS came in as a big easement to my water woes. Now I am able to earn, INR 25,000/- annually by tilling my land through the year. I also produce vegetables for my family’s nutrition. I am involved in paddy, wheat, and gram seed production and sell the seeds to the ASA created FPO called “Mandla Tribal Farmers Producer Company Limited”. Life is much better as water availability has meant that the annual march to cities for work has ceased,” **Ashok Kumar Dhurve, beneficiary, “Makarkund Sinchai Udvahan Yojna”**.

“The situation of my 2-acre field was the same as any farmer without access to water. I was hardly able to get any cash through it but only some amount of rain irrigated paddy. Work under MGNREGA and local labor was the only option to get by. The LIS has activated the agriculture in my field to the whole year as I earn INR 30,000/- growing paddy, wheat, and vegetables. Now I have cash in hand to spend on my children’s education and buying quality farm inputs in a timely manner,” **Baliram Nandan, beneficiary, “Makarkund Sinchai Udvahan Yojna”**.



Lift Irrigation offers Succor to Water Deficient Farms

The tale of “Kevai Jal Udhvan Samiti”, Janudi Village, Anuppur District

ASA has taken the benefits of the LIS to Anuppur district, which is around 250 km to the east of Mandla. The area is populated by a large number of farmers with very small landholdings with a low level of resources needed to undertake profitable farming. This picture was mirrored in Janudi village in Kotma block of the Anuppur district, where one is witness to large tracts of farm land either left idle or little operations during seasonal rains. Under these circumstances, ASA identified a site for LIS nearby a stream in Janudi village from which few farmers pumped water with great difficulty. ASA explained the benefits of the system to a group of nine farmers, who found it to be an appropriate solution to their irrigation constraints. With the active involvement of the nine farmers during the construction, ASA completed and made the system operational in early 2019. Named as “Kevai Jal Udhvan Samiti”, the LIS provides irrigation to 14 hectares belonging to nine farmers. As is the norm with any community asset, ASA has developed a user group for the upkeep and operating the system. The users are slowly deriving the irrigation benefits of the system. ASA plans to let the system stabilize for some time and then extend the coverage to other farmers soon. The current users are optimistic about the positive effects that the system will bring especially checking the yearly travel to other locations for livelihood.

“I used to pump water from the stream with great effort to irrigate 1 acre of my 4-acre land before the LIS became operational. The system has helped me save the diesel cost of operating the pump as well as water use by 50 percent. I use to grow cauliflower on 1 acre, which bore me 25 quintals earlier, which has now increased to 50 quintals earning me INR 50,000/-. On remaining 3 acres, I grew paddy getting just 20 quintals but now I hope to see the production go up to 60 to 70 quintals, which will significantly increase my income”, Ram Prasad Kevat, beneficiary, “Kevai Jal Udhvan Samiti”.

During the pre-LIS days, my farming activity comprised of growing black gram (urad dal) on ½ acre for self consumption and sesame on other ½ acre producing one quintal, which earned me INR 12,000/-. 1 acre of the plot was left idle. With water availability, I plan to expand farming to the entire plot and all the three cropping seasons. I expect the scale-up to earn me INR 70,000/- which will have a major bearing on my and my family’s quality of life, Ramcharam Kevat, beneficiary, “Kevai Jal Udhvan Samiti”.

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