

REJUVENATING LIVES

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



TOWARDS SUSTAINABLE LIVELIHOODS, THE CHECK DAM ROUTE



Check dams have proved themselves as appropriate technology for rain water harvesting not only to restore degraded natural base but also to revive agriculture, create sustainable livelihoods and reduce poverty. Action for Social Advancement (ASA) has facilitated the construction of several check dams in western Madhya Pradesh, particularly the districts of Ratlam, Jhabua, Barwani and Alirajpur, with support from government as well as non-governmental donors. From site selection to mobilizing farmers and facilitating participatory irrigation management, ASA has been at the forefront of promoting these small wonders here in the rural hinterland of western Madhya Pradesh.

Quick facts

- 230 check dams constructed by ASA
- 2985 households benefitted
- 2795 hectares of land irrigated
- (Data as on Feb. 2015; ASA's operational area covers the states of Madhya Pradesh, Chhattisgarh, Bihar and Jharkhand)

Traditional Wisdom to the Rescue

Check dam is a masonry weir constructed on rivulets or rivers. There are removable iron gates which are closed at the end of monsoon to store the water flowing through streams. It is typically to harvest the post-monsoonal flow from the stream to be used as irrigation during *rabi* or winter crops. Normally, a check dam provides irrigation to 10-12 hectares of area for winter crops covering an equal number of farmers. Moreover, the water stored improves the recharge of the dug wells and bore wells in the downstream.

Small Wonder, Enormous Impact

Increase in intensity of irrigation

Even if area under cultivation has not increased for all farmers, the intensity of irrigation has increased. The number of times that the crop is watered in a particular season has increased 2-3 times, thus resulting in increase in crop yield. Crops such as cotton require several waterings during its growth. Assured water supply from check dams has made possible the cultivation of cotton even when rainfall is scanty.

"Before the check dam existed, we used to grow only soy bean during kharif. Now, we also grow wheat and bengal gram during rabi as water is available round the year, thanks to the check dam"

— Suresh Solanki, village Bhati Badodiya Khedi, district Ratlam

It is now possible for farmers to grow winter crops due to the presence of check dams.

Dug wells bounce back

Water level in the wells has increased after the construction of check dams. The recharging of dug wells has encouraged and promoted the construction of dug wells in the region.

Increased yield, sowing and cropping areas

Average yield per hectare for almost all crops has increased as has gross cropped area due to availability of water round the year.

Vegetable production

A significant number of farmers have taken to vegetable cultivation. They grow not only for household consumption but also have surplus to market. Increased incomes and improved nutritional status have followed.

"The wheat that we get from PDS is of poor quality. Now that we grow our own wheat, the quality we consume has improved. Moreover, we now grow vegetables, which has improved our diet and nutrition. We also earn additional income from sale of surplus vegetables."

— Pyar Singh, village Danod, district Barwani

Increased water availability for domestic use

Water is now available for cattle and domestic use, thus reducing the drudgery of women in these rural regions.

Water is now everybody's business

In all villages where ASA has facilitated the construction and operation of check dams, the operation and maintenance

of these water harvesting structures are being managed by Water User Groups (WUG). ASA has built the capacities of these groups and equipped them with the skills required for operation and management which is need-based, cost-effective and timely. A sense of ownership has thus been instilled among the beneficiaries.

In village Danod of block Rajpur in district Barwani, the Maa Ambey Jal Upyogkarta Dal (WUG) consists of 13 members. The check dam here irrigates 25 acres of land. The farmers reminisce that they contributed ₹25,000 to the total cost of the construction of the check dam in the form of labour (shramdaan). The WUG members contribute ₹10 every month to the group.

For 22 year-old Jawan Singh, who is a member of Maa Ambey WUG, the check dam has indirectly helped him bring home a beautiful wife! With the increased income from his 6 acres of land that he now irrigates with water from the check dam, he was able to earn surplus. He eloped with the girl of his dreams during the Bhagoria festival and married her after paying a sum of ₹70,000 to her parents.

A Sustainable Strategy

Promoting check dams across the vast drylands of the country can prevent future water conflicts and increase agricultural output, guarantee rural food security, enhance groundwater resources, reduce poverty and bring about cost-effectiveness and other advantages of local management.



Stories of Change

Mukesh Pratap is one of the many farmers who has experienced prosperity following the construction of the check dam in the tribal village of Baledi in district Alirajpur. He irrigates 2 acres of land with the water from the check dam. "Because of assured water supply from the check dam, I was able to grow wheat during *rabi*. Moreover, since the rains were less, I used water for my *kharif* crop (soya bean) from the check dam."

In 2013, he harvested 30 quintals of wheat of which he sold 20 quintals at a rate of ₹1500 per quintals and stored the rest for household consumption. He also sowed a kilo of cotton, which produced 25 quintals of cotton. He sold it at a rate of ₹5000 per quintal.

With the increased income, Mukesh has been able to construct a pucca house for himself, purchase a tractor worth ₹3 lakhs and a motorcycle and dig a borewell near his house which provides drinking water and also irrigates his vegetable garden.



In district Ratlam, in a non-descript, tribal village Bhati Bhadodiya Khedi reeling under poverty and anguish, a check dam has recharged several dug wells. One such dug well belongs to Nathu Solanki, 55, whose 5 acres of land is now irrigated by the water in the recharged dug well.

Says Solanki, "Earlier, when I used to sow wheat on 0.4 acres of land, I used to produce 2 quintals of wheat. But now, since water is available, I reap as much as 8 quintals. Wheat requires to be watered four to five times, which I'm able to assure. In 2009, I grew wheat for the first time. I was able to harvest 50 quintals of which I sold 40 quintals at the rate of ₹1200 per quintal and stored 10 quintals for household consumption."

Drinking water for cattle is now available in plenty. Moreover, the price of land around the village has risen following the construction of the check dam. For the 50 tribal households, happy days are here.

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