

Water conservation to improve livelihoods and protect the environment

Story of Village Ghool

Tehsil Lawa, District Chakwal



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Fateh Khan is a 70-year old resident of Ghool village in Lawa tehsil of Chakwal district. He was forced to leave and then return to his village many times only because of unavailability of water.

This village, like most others in the district, depends totally on rain water for living and agriculture. “Last time, I migrated three years ago as no water was available for my family and cattle. I spent two months in Soon Valley along with some of my family members, three buffalos, and two cows with a friend. The rest of the family and cattle stayed at the village”.



The last decade or so has been even worse. “Weather patterns have changed during the last decade or so. The rainy season has not only become unpredictable but its volume has also decreased significantly. I migrated four times only in the last one decade. A good number of people in the village also migrated this year because we had very late rains this year.”

Wearing a white shalwar qameez and a turban, sporting a small beard and a smile on his face, Khan has seen many of his friends leaving the village permanently only because of unavailability of water for their families, cattle and lands. “It is very painful to see your people leaving the village for finding water. We only pray for more and more rains because that is the only way we can survive and live together,” he says.

The landscape, while traveling on the road that leads to the village situated around 70 kilometers from Tala Gang, is beautiful. Miles and miles of land with patches of vegetation and small barren mountains of Salt Range can be seen on both sides of the road. At some points where rain water is stored in natural or manmade ponds and small dams, the vegetation becomes more concentrated, herds of sheep and goats, the mainstay of the local economy, become more visible while some acres of cultivated land with new plants of crops coming out of ground can also be seen.

It is also one of the most arid areas of the country. Agriculture here totally depends on rainwater as underground water is either unavailable or too deep. In some areas, people have been using diesel engine-run tubewells to suck ground water but it is costly. The area is thinly populated and very backward. No electricity is available in these villages while healthcare and education facilities are also below standard.

The elderly Khan does not want his grandchildren to leave their families in search of water and it seems his dream has come true. His face shines with joy while showing new mini dams and water harvesting ponds constructed in his village. Pakistan Poverty alleviation Fund (PPAF) has provided a major chunk of funds to build five mini dams and restructure 13 water harvesting ponds in the village to preserve rain water.

National Rural Support Program (NRSP) is the implementing partner of PPAF while local community is the executing agency of the project. The project was completed in June 2012 and a good quantity of water has been stored in these structures. A drinking water scheme installed a few years ago to provide water to three villages was un-operational since 2010. It is working now as water from one of the dams is filtered through conventional ways and lifted with the help of turbine to a tank built on a hill top from where it is distributed to households through pipes. "I think the water reserved in these structures is enough to survive for the next three-four months and in the meanwhile there will be more rains", says Khan.

The village Ghool houses 720 households and a population of 4350 people. Situated in union council Lawa, it consists of 17,230 acres of land out of which only 3,220 is cultivable. Wheat, groundnuts, grams, pulses and forages are the main crops in the area. The average landholding size is 4-5 acres per household.

The yield in the area is very low as no permanent water source to irrigate crops is available. Most of the people get only one crop a year. So, livestock is the mainstay of their livelihood. NRSP started working with the local community in the year 2000. At the very first stage, it mobilised the community to understand their problems and to find indigenous solutions.

That encouraged the locals to form community organisations (COs). There are 21 COs consisting of both male and female activists in the village. These organisations have also formed a Village Development Organisation (VDO) which is the executing body. The PPAF has so far completed 79 projects of irrigation and agriculture, pipe irrigation, dug-wells, rain water harvesting ponds, mini dams and check dams in Lawa union council with the help of NRSP and local community at the total cost of about Rs 64.86 million. "All projects are executed by the local communities under supervision of NRSP. NRSP believes that development cannot be sustainable without involvement of the local community in all phases, including planning and execution".

Under the project, 156 community organisations and eight village organizations were formed with an average of 20 members in each CO. They have contributed 20 percent of the cost of these projects 10 percent in form of labour while 10 percent in shape of hard cash. It gives the community sense of ownership of the projects and now they are responsible to take care of these projects.

Mini dams in Ghool village have a capacity to store 300,000 square feet each while the ponds also have the capacity to store over 100,000 CFT water each. "More than 500 families have benefited from the project. Our first priority is to provide drinking water to

human beings and then to livestock but the remaining water can be used for agriculture purposes,” he says.

It is great news for a village from where at least 100 families have migrated during the last one decade or so only because of unavailability of water. “You cannot imagine how this water is going to change our lives,” says Muhammad Khalid Iqbal, manager VDO Ghool. “This year half of the village had migrated as we had late rains. We bring water from Lawa town which is situated 22 km from the village and it costs us 4-5 rupees per liter. Cattle are in the worst condition during such situations. We have to travel 5-6 kms to find water for cattle.”

He says in such situation a majority of families migrate with their cattle to Soon valley to their friends and families. “Those who do not have friends and families in such areas are forced to camp in jungle close to water.”

The area has observed at least three severe droughts during the last one decade. “We suffer multiple losses during droughts, there’s hardly a crop while prices of cattle drop at least by 50 percent as fodder and water become precious”, he says.

Jehan Khan, resident of Ghool, says that the greatest miracle he has seen in his 35 years of life is the small green patch growing outside the thatched hut he calls home. For him and his fellow farmers, all residents of Ghool village in the arid district of Chakwal, these sparse fields are a sight they never expected to see in their lifetimes.

“Growing vegetables and fodder in any village in the entire Lawa tehsil was impossible, simply because we rely only on rainwater and the rains just haven’t been coming,” says Jehan Khan.

Now, things are different. “Look at my potato crop,” he says with obvious pride.



“This is the first time that I cultivated potatoes this year in the month of May and my crop is now nearly ready for harvesting.”

With the availability of a permanent source of water many people in the village have started sowing vegetable seeds for the first time in their lives. “We have also started fish

farming in these water structures. The profit will be divided between the people who own lands of these water dams and ponds and VDO”, he says.

The VDO has planted more than 50,000 plants in the village. “NRSP has changed our lives; we are also planning to set up biogas plants to fulfill our energy needs. It will save our trees and plants which will have good impact on environment and stop land erosion”, he says.

Most of the households of the village consist of one or two rooms but with wide courtyards. They are scattered and streets are uneven. There are toilets only in a few houses. “But with a permanent solution of water problem people will automatically start building latrines. During the last one month or so more than 20 families in the village built latrines in their houses”, says Khalid.

“We are planning to make at least 16 more mini dams in the village, there is no electricity and we wish to install solar electricity in our village. Last year, VDO managed to construct a small pass in the mountain that separates it from Soon Valley. We spent only Rs200,000 to construct that pass but it has decreased our travelling distant to Soon valley from 110 kms to 11 kms”, he says.

Women are the worst effected in drought situation. They travel 4-5 kilometers to fetch drinking water. It is also job of women to take cattle to ponds. “We could only do these two tasks in one day but now with drinking water available at home, we have a lot more time to do other household chores and help our men in the fields”, says Sunar Bibi, 54,



adding, “We have cultivated potatoes and cauliflower for the first time. It feels so good to see plants of these vegetables coming out of our land”, she says. Half of Sunar’s family had migrated to Soon Valley this year but they have returned. “For the first time, they have returned only after two weeks as we collected a lot of water in the village after rains in September. I hope nobody will have to leave the village in the coming years for unavailability of water”, she says.

As a result, agriculture and livestock rearing activities took a huge hit, causing poverty, hunger, malnutrition and disease to spiral out of control. Faced with the choice of staying and starving, many locals decided to pack their meagre belongings and try to find work in the towns and cities. An unprecedented exodus began.

But now, as the field outside Jehan Khan's home testifies. Things have changed. A revolution has come to Chakwal.

"I am able to grow this crop only after water was available from the check dam constructed this year in our village," Jehan Khan says with a smile.



Check dams are small dams that serve as reservoirs of rain water. Such dams are also critical for recharging ground water and raising the underground water level.

Thanks to the construction of these mini-dams and also the construction of a pipeline network, life for the villagers of Chakwal has been transformed. Many have given up their migration plans and many farming families, which had migrated to nearby urban areas in search of livelihood, are returning to the area after hearing that water is, at long last, available.

Given that it's their own lives and livelihood at stake, villagers pool money every month to buy fuel for a diesel engine which pumps water from the dams and into farmlands and households in the many villages of Lawa tehsil.



For Khalid Iqbal, 32, this translates into a saving of Rs18, 000 to Rs20, 000 that he previously used to spend buying fodder for his five cows and two goats.

"After finding myself unable to cultivate our four-acre plot for the last two years, I had decided to migrate along with my family to Rawalpindi to find a job in a factory or hotel. But not that we're finally getting enough water, I'm staying put," he says with a pleased smile.

This dam, and others like it, have been built thanks to the Rs64.867 million 'Drought Mitigation and Preparedness Project (DMPP) that the Pakistan Poverty Alleviation Fund (PPAF) has implemented through the National Rural Support Programme (NRSP).

“So far we have constructed 28 rainwater harvesting ponds, eight mini dams, six check dams, two wells and have implemented 33 pipeline schemes to supply water from these dams and rain ponds to agriculture lands and villages. Nearly 2,716 households are benefiting from these total 79 uplift schemes,” says Kamal Afridi, the senior water and energy expert at the PPAF.

The success that the rain water harvesting structures had in this remote area is a proof that, if climate change cannot be avoided, we can certainly learn to mitigate its worst effects.

The socio economic benefits of the rain water harvesting structures are countless and its environmental benefits are many. These structures have developed a unique ecosystem as people are observing various kinds of birds staging at the water such as Crane, Wood Pigeon, Ruddy Duck, White Headed ducks and many other migratory birds. *“The horrible silence is replaced with soothing sounds of birds and the beautiful butterflies are roaming instead of ugly dust of barren land. We never imagine that nature could be so captivating and we could come so close to it”*, Said Iftikhar Hussain one the villagers. Other wild animals such as Jackal, Fox, Rabbit and many reptiles can be seen frequently in the surroundings of these rain water harvesting structures which were very rare before the construction.

The village organization has introduced 14,000 fish saplings in the water so that people can harvest during the season to meet their food needs and also hatcheries are developed in many water harvesting ponds. Attah Ullah one of the students shared that, *“we just heard of fish before and never had experience of eating but we were very thrilled when it was cooked at home. The next day all the kids in the school share their happiness of eating fish for the first time and how delicious it was”*.

Each reservoir is functioning as a peculiar ecosystem with varied functions and values. Those areas in which people only depend on rain, suffer if they have no water in the season. But such permanent sources of water are a key to bring nature and people together. As Rahmat Khatoon shared, *“Life was so hard for us before as we were limited to fetch water from far flung areas but now it's joyful. We often go to the dam side and to the water ponds in groups to enjoy the time and feel relax around the greenery, looking at the birds signing and inhaling the fresh air- HOW BEAUTIFUL THE NATURE IS”*
