

## River of joy

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Rejuvenation of the Ruparel river in Rajasthan has brought about a wave of prosperity in the region. The gains are manifold



Life water: johads such a (Credit: Photographs: Ganesh Pangare /C)it is a feeling that only Lazarus would be familiar with: coming back from death. Or Bhagirath, who brought the Ganga to this world. The rural folk in the villages of district Alwar, Rajasthan, have become the masters of their destiny. And one has to resort to mythology to find metaphors to illustrate their achievements. After three decades of sand, heat and infertility, the basin of the Ruparel river has discovered perennial water, prosperity and abundance. The benefits are not restricted to the

villages. The region's ecology as a whole has witnessed a turnaround that does not have too many parallels in the real world, if any at all.

The assistance in this case, however, did not come through supernatural agencies. It came from the Tarun Bharat Sangh (tbs), a voluntary organisation that has been working in the region for the last 13 years and is funded by a host of reputed international development agencies. The transformation in the region is a result of building *johads* -- traditional earthen structures built to harvest rainwater and store it in small, semicircular ponds. A *johad* has a wide base to collect runoff from tiny streams and rivulets and is built along the contours of hill slopes for stopping and storing water. And the gains from constructing *johads* are there for all to see: the river now has water round the year; the water level in the river basin has risen considerably and women do not have to walk miles to fetch water; farmers have a range of crops to chose from, including those that require large amounts of water; and animals in the Sariska Tiger Reserve (that falls in district Alwar) do not have to search for water to quench their thirst, among other benefits.

However, it was not like this earlier. The basin of the Ruparel river covers some 3,250 sq km and includes about 250 villages. The region was plagued by a range of problems that are only too familiar in most of rural India. Most people living here are from the lower strata of the caste ladder -- particularly Gurjars and Meenas. Gurjars of the region rear cattle and live in the hills. Meenas, on the other hand, are also engaged in farming. Both the communities directly depend on the forests for grass, fuelwood, leaves and honey. Their relationship with the environment is very deep.

This bond was disturbed after India's independence, when the government asserted its rights over the forests, diluting the local Gurjar community's ownership of the forests and its resources. Forest officials became lords and masters, allowing private contractors to fell trees and alienating the people who had conserved the region's ecology. Rampant deforestation in the river basin led to the destruction of its catchment. As agricultural activity picked up, more area began to be cleared as people increasingly moved to agriculture from animal husbandry.

Farmers were able to work the cleared land as leaves helped to retain water in the ground. But after nearly five years of the clearing, the topsoil started getting washed away due to erosion. Springs began to dry up as there were no trees and shrubs left to help recharge the groundwater. With the drop in productivity, many farmers moved to other forested areas, and this destructive cycle was repeated. Stone quarrying by the construction industry also led to the ecological disruption.

In 1956, the Sariska Game Reserve -- governed until independence by the local ruler Maharaja Mangal Singh -- was converted by the government into a sanctuary. Sariska became a national park in 1978, when it was included in "Project Tiger". This put additional restrictions on the entry of villagers and local communities into the forests as their villages fell under the protected area. The use of natural resources and minor forest produce remains a contentious issue even today.

By the 1970s, the Ruparel had ceased to be a perennial river, flowing only during the monsoon. The water table in the river basin dropped considerably. The situation became quite bad for herders who grazed cattle on the hilly catchment areas of the Ruparel. The local residents had to leave their villages and go to distant areas in search of grass, fodder and water. Unable to raise crops, some farmers moved their cattle to other regions. Many started migrating to Delhi (150 km away) and to Ahmedabad in search of jobs. Others worked as labourers closer to home.

The upper catchment areas of the Ruparel were unable to withstand the drought that began in the 1980s. Some villagers recall having had to turn their animals loose as there was just not enough water to go around. A proposal to build a dam across the Ruparel was rejected because it would have violated the Forest and Wildlife Protection Act, which protects the Sariska national park.

By 1987, the fifth year of the drought, most of the villages had been deserted. The river's catchment area, falling in the Thanagazi block of district Alwar, appeared as a "dark zone" in government records indicating severe water shortage. The government passed an order banning the digging of wells.

It was during this fifth year of the drought that Sarwan Sharma, a volunteer worker with tbs, chanced upon two Gurjar women, Gyarsi and Phoola. They were the only remaining residents of Tolawas Mala village and were at a loss to find a way out. "God is angry with us," they told Sharma. They spoke at length about declining water level in the area and about streams drying up. Sharma suggested the digging of a *johad* to store the water. The women were hesitant. Their recent experience with outsiders -- government officials in particular -- had not been pleasant and did not let them trust Sharma.

Winning their confidence became Sharma's first task. He offered to work with them. This marked him as different from government officials in the eyes of the villagers, as someone who was willing to do something and not just talk. During the next three-four months, Sharma visited the village every 10 days or so to supervise the construction of the *johad*. By 1987, Sharma had gained the trust of the village folk and the *johad* was ready as well. In the first year of operation, it held water for three months. In the second, water remained in the *johad* for six-seven months. And by the third year, it held water throughout the year.

To revive the river, tbs specifically targeted the hilly catchment areas of the river, explains Rajendra Singh, general secretary of the voluntary organisation. In the next five-six years, other villages in the area invited tbs to help coordinate efforts to build traditional water storage structures as the villagers had lost their conventional skills of water conservation. tbs provided part of the funds and organisational skills.

There has been no looking back since then. Abandoned farmland has been brought under the plough again. Erosion has decreased considerably. Cattle ownership has increased. People have started returning to the villages as the construction of *johads* has stepped up the job possibilities in the region. Women have been empowered and the relationship of the villagers with their natural environment has improved. Many birds and animals, which had started disappearing from the region, have come back.

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