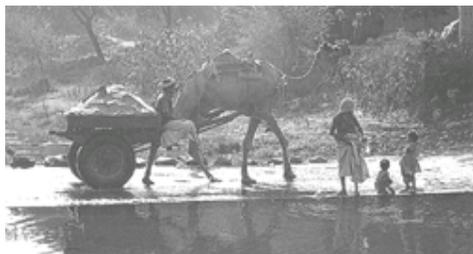


Coming back to life

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When villages work with each other to regenerate the environment, there are unexpected blessings. Sometimes, they are as big as a river



And now they need to build a b The story of Arvari's revival is the story of the 70 villages in its 503-sq km watershed. Trailing the 45-km river is a journey back in time. As the river slices through lush green fields, the villagers constantly recall its past: "It was dead, like the skeleton of a 100-year-old person. The fields on its banks were barren."

In the 18th century, according to the Alwar State gazetteer, Arvari was known as the Pratapgarh Nala and was considered the main groundwater recharge stream for the villages on its banks. Today, nobody can remember seeing it flow except during the monsoon. But the dead river's course was intact underground, the result of seasonal run-off.

Of the two main sources of the river, one stream originates near Bhaonta-Koylala and the other near village Agar. The two streams meet near the Ajabgarh-Pratapgarh road at Palsana-ka-pahad. From here to its confluence in the reservoir of a dam on the river Sainthal, the river is known as Arvari.

In 1986, when the villagers of Bhaonta-Koylala built a huge johad to catch the gush of water from the surrounding hill-slopes, hardly anybody knew that it was the origin of the river and by conserving rainwater, they were injecting life into the river. Since 1986, 238 water harvesting structures have come up in 70 villages in Arvari's watershed (see map on p38: Water: a lesson in magic). "After seeing the benefits of the dam in Bhaonta, we contributed 50 per cent to build a johad at the source of the river, which in 1987 itself got filled up with water," says Manwa of village Kaled, downstream of Bhaonta-Koylala. This johad, like the one in Bhaonta-Koylala, recharged the natural drainage of the river at source. "We never realised that we were recharging a river. Our effort was just to catch and allow water to percolate underground," says Rajendra Singh.

Beginning with the Jogiwala johad on a monsoon stream flowing into Arvari in the valley, many smaller johads were constructed by villagers. These structures were collectively recharging groundwater, as was noticeable in the water table of wells. Some 70 villages were harvesting water and checking run-off in the catchment area along the river's course. "Each and every monsoon stream was dammed and virtually all hills slopes were treated to stop run-off and soil erosion," says Arjun Patel of Bhaonta.

Villagers talk about Arvari's rebirth as if it was the birth of a child. "Like a child, it, too, remained in the womb as we started recharging the earth with water," explains Dhanua. Indeed, Arvari's gradual way to a perennial life is similar to that of a child learning to walk. In 1990, it flowed till October. In 1991 till January next year. In 1992 till February next year. In 1993 till March next year. In 1994 it flowed till April next year. But in 1995 the flow did not cease. It has been perennial since.

Says R N Athavale, emeritus scientist with the National Geophysical Research Institute at Hyderabad, "It should be noted that the run-off has not been substantially reduced. It is just that the run-off is spread out over a period of

time. The river has turned perennial mainly because of this regulated distribution of run-off" (see box on p38: Tiny difference that made a miracle).

Bhaonta-Koylala: the first village upstream

Bhaonta-Koylala lost its heartbeat in the 1980s, say the villagers. Four consecutive years of drought had ravaged these twin villages, located on the periphery of the Sariska Tiger Reserve and sandwiched between two mountain chains. The Aravalli was prominent and grotesque without the green. There were vast expanses of barren lands, filled with pebbles swept down by gushing water. Moreover, the officials of the tiger reserve were harassing the villagers in the name of wildlife protection. They had served the villagers a notice of eviction (see box on p39: People's Sanctuary).

The wells, 30 of them, were empty. There was no source of water. "Even the machines (diesel water pumps) failed to bring up water from the wells. There was just a trace of water at 200 hath (the length of the forearm)," says Rupa, who came as a bride to Bhaonta 35 years ago. An old johad lay buried in silt.

Only about 30 per cent of the 221 hectares of land was cultivable; only seven per cent of agricultural fields were irrigated. The villages used to take only one crop; which, too, was rain-fed. Crop failure was a regular feature. In 1986, the parched villages heard the story of Gopalpura, which is 20 km away. In 1986, the annual Pani Yatra of tbs passed through these villages, spreading the wisdom of building johads.

"The village, already pushed to the wall, decided to replicate the Gopalpura experiment," says Kanheyalal, whose father convinced the villagers of Bhaonta-Koylala to form a gram sabha. On March 6, 1987, the village formed its gram sabha. Its first task was to convince the surrounding villages to protect forests and to repair old johads through voluntary labour. tbs was just contributing 25 per cent of the costs of these projects. Then came the aam sabha (general assembly) of eight villages, which decided to take control of their own development and not to depend on the government any more. "As such, the government did not exist here. So we unanimously decided to work for ourselves," remembers Sunder Lal, chief of the gram sabha.

The villagers and some tbs workers searched for the natural drainage of the village to arrest run-off. An old johad was found, buried under silt, on the slope of the surrounding hills. In 1988 the johad's repair was started. By the time monsoon arrived, the johad was filled with water. But soil erosion threatened its survival. So it was decided to regenerate forest in the catchment area. In the first year, sprouts of different trees appeared around the johad due to the moist soil. The villagers imposed a ban on stray grazing and felling green trees.

The villages decided to build a new johad. Villagers contributed 70 per cent to the cost. "Villagers toiled for days and months, voluntarily, while the tbs workers also showed the same zeal," says Sunder Baba. The water level in the wells downstream rose by about one metre the following year.

In 1990 the villages started work on their most ambitious water harvesting structure: a 244-metre-long concrete dam in the upper catchment of the Aravalli to stop water right there before it moves downwards. It was completed in three years. The villagers contributed 70 per cent of the cost. Even before construction was completed by 1994, its impact was already visible. What they had given to the river, the river was returning.

"We had realised that if we captured water there, it would percolate faster as we are at a higher level, benefiting the villages downstream," says Sunder Lal. The poor villagers with little water had the heart to think about the water needs of villages downstream. This understanding of the needs of others went a long way in nourishing the watershed of Arvari.

Hamirpura: a village downstream

Every full-moon night, villagers of Hamirpura, downstream of Bhaonta-Koylala, gather on the bank of river Arvari to feed the fish in the river. The revival of this tradition was preceded by the revival of the traditional of building johads.

In the 1980s the village had no men. "There was not a drop of water. Crop failure led villagers to migrate to urban areas," remembers Shanti, whose husband stayed in Jaipur for years. "My children and I were on the brink of death." Silt from the denuded hills had clogged all rainwater harvesting structures in the village. "Aravalli was scavenged by timber traders. Within a decade, it was denuded," says Roodamal Meena, a resident. The water level had gone down to almost 90 metres in the 70 wells in the village. "Even if you wanted to irrigate your land from the wells, the money spent on diesel for the pumpsets was prohibitive," says Chittar Singh, a member of the gram sabha.

Of the 127 hectares of land with access to water, only 18 per cent was cultivated. Migration rate was high, up to 50 per cent for at least eight months a year. One of these migrating villagers was Roodamal Meena. In 1988 he went to Gopalpura to visit a relative and to find out where to migrate for better earnings. "I was surprised. A single johad had changed the lives of the villagers. There was water, and hope of a better life," he remembers.

tbs offered help. The gram sabha was formed, and villagers decided to restore old johads. Some 15 johads and mini-dams were built. Now, groundwater table is about 9 metres under the surface in the 70 wells of the village in the summer. During the monsoon, it rises by about 4.5 metres. Migration has stopped now. "I cultivate my lands now, and the yield has doubled," says Chittar Singh.

Amid this prosperity, the village decided to build a dam across the main course of the Arvari in the summer of 1995. "Villagers are now aware of the movement of groundwater and keep in mind the sites of other johads while selecting the site of a new one. The idea is to recharge Arvari," says Roodamal.

After estimating the submergence area, it was found that the five bighas (12,541 sq metres) of Roodamal's agricultural land would be submerged. "I agreed without hesitation. After all, it was for the benefit of the village," says Roodamal. "It was unprecedented. Roodamal's sacrifice was inspirational and the bond among the villagers grew stronger," says Rajendra Singh.

The dam was completed in 1997. But much before that, Arvari had started flowing throughout the year. "I am proud that Arvari got a new lease of life on my land. It gives me a never-ending attachment with the river," says Roodamal.

Roodamal's attitude and that of Bhaonta-Koylala in thinking about villages downstream sums up the effort and the sacrifices made by individuals and villages to create a common resource like the Arvari. Now, it has become important that the villagers get together to preserve and gainfully use what they have created (see box on p41: The Arvari Parliament). Otherwise, a truly outstanding success story may again give way to the exploitation that the region had witnessed in the earlier half of the century under the rule of kings who were the puppets of the British colonialists or the apathy of the bureaucracy which followed the country's independence. Alwar's rural people have done all the hard work. It is consolidation time now.

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