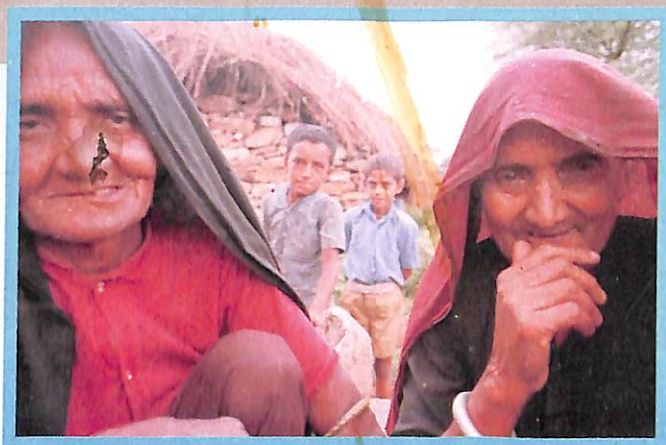
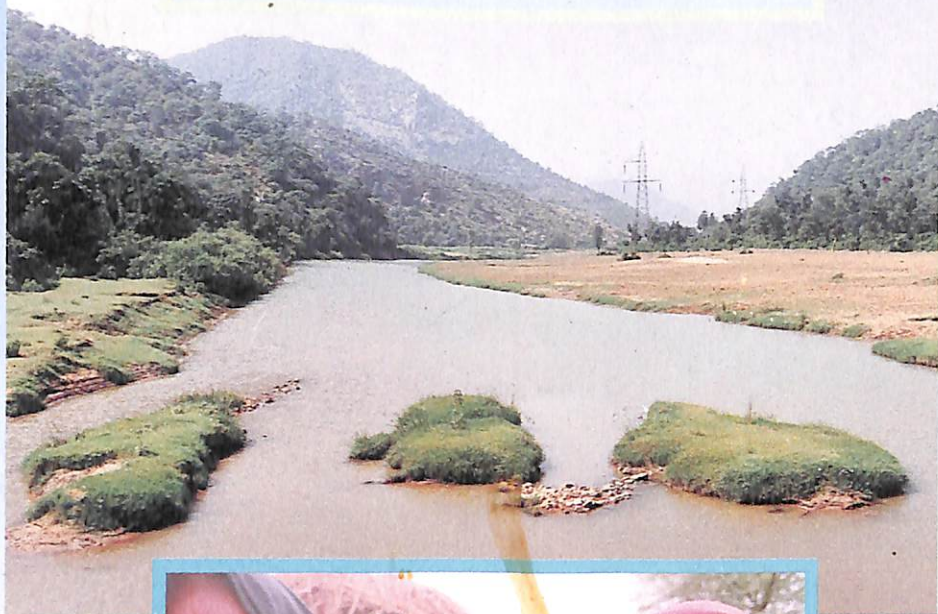
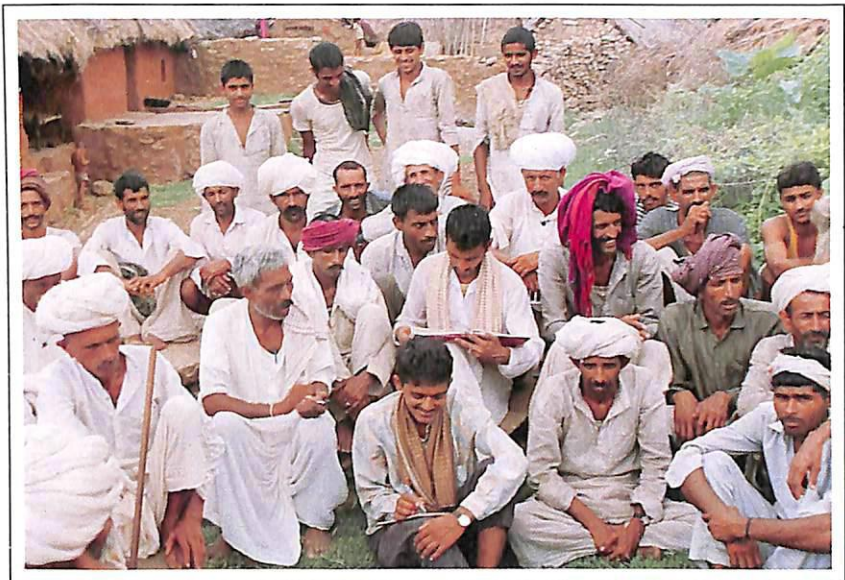


REJUVENATING THE RUPAREL

VIR SINGH





Gram sabha meeting in Duhar Mala to discuss forest and water conservation

Elated women gathered next to the Ghatiwala Johad which they built



PREFACE

The Ruparel, continually flowing now, presents a sight that is too pleasant to be put in words. It is overwhelming, for one like me, witness over the last fifteen years to its dried up stone-ridden course. Having it to continually flow was like a dream (which happily now has come true). Those days we were working on a **Johad** project in the Ruparel catchment area : the very idea of a river being no more tormented me no end. In 1985, I, along with my fellow activists was staying in a hut in a **Dhani** named **Chirawaton ka Guwada**, in the vicinity of **Indok**, a village that was part of the catchment area. Our hut was close to Pema Ram Meena's house. We received immense affection from Ram Sahai, Pema Ram, Ram Pratap and their kith and kin : the affection has since been transformed into mutual trust and respect.

The well adjacent to our hut was a well *sans* water. We would look deep into the well, but no water to meet and welcome the searching eyes. We had it dug ten feet deeper and it obliged us with only as much as was essential to take care of the basic needs of the five of us. And it would dry up during the summer days, compelling us to fetch water from Pema Ram's well.

Consequent upon my incessant efforts, the people of Radimanyala village under Kanhaiya Gurjar's leadership had a **Johad** constructed with the help of TBS workers. This inspired Ram Pratap Meena, a postman, to part with some money and raise some contributions from the villagers for construction of another **Johad** of course with the help of TBS. Around that time, at Ganpat Gurjar's initiative a **Johad** was built at **Kraska ki Dhani**. These were the initial attempts that made people from the neighbouring areas to come to us for construction of **Johads**.

Those were the days when our fellow workers- Gopal, Jagdish, Shravan and others, were combing through the **Duharmala** forests to know first hand the plight of the villagers. All these villages were literally deserted during the summer. Shravan succeeded in enlisting the co-operation of the villagers at Rahakamala, Tolawas mala, Ghatimala. Dependable activists

started coming up and forth : Hira Lal, Ram Kumar, Gyarsi and Phoola were the notable male and female activists. Their contribution to the conservation of water and forest, and to reclamation of land was very significant— also in the sense that they motivated more and more people to come forth, and it led to a chain of johads, as of today numbering about 400 in the catchment area of the Ruparel. All credit for this goes to the hard work, perseverance and integrity of the activists and the villagers. It is the experience, energy and hardwork of the villagers that has made it possible to rejuvenate the Ruparel. Needless to say that this rejuvenation did not take place overnight. It just could not. I am thankful to Mr. Veer Singh, a young journalist, for weaving this historic process into a story— story of rebirth of a river. I am thankful to the **Sariska Palace** for making available to us a historic photograph. Prof. Mohan Shrotriya has gone through and edited the manuscript. I am thankful to him, too.

SIDA's financial assistance to us for construction of johads in the Ruparel catchment area has been maximal. TBS as well as the people of this area are deeply indebted to **SIDA**. During the initial phase, it was **ICCO** that extended financial assistance to us. That was one of the worst drought phases. We are grateful to **ICCO** for the same. **Inter corporation**, Jaipur has assisted us in three village-phases of the river— Duharmala, Rahkamala and Nangal Hedi. We wish to record over sense of gratitude to **Inter Corporation**. The expanding greenery, the flourishing people and extending forests and the ever — flowing river— all together make over heart swell with pride, motivating us to rededicate ourselves to the cause of sand, water and forest. We actually owe it to Nature.

Gopal Singh and Jagdish Gurjar are working overtime to consolidate the gains in respect of the Ruparel. They are being ably assisted by Suleiman Khan, Uma, Darkali, Brajraj, Chandri Bairwa, Hira Lal Gujar, Jawahar, Shamsuddin, Fattoo Khan, Badami, Gaindi, Shobha Ram, Laxman Yadav, Jagdish Pandit, Gajraj Singh, Fateh Singh, Deep Chand Pandit, Ram Dayal Gurjar, Shравan Sharma, Ram Khilari, Dholi, Ram Swaroop, Rajendra Singh, Mishri Lal— all of them are dedicated workers. I feel honoured putting on record my sense of gratitude to all of them.

Rajendra Singh

REJUVENATING THE RUPAREL

Executive Summary

This is the story of how the Tarun Bharat Sangh (TBS), a voluntary organization with extensive operations in Alwar District in the state of Rajasthan, organized village folk in the drought-stricken Ruparel river basin to bring the river back to life. The road to recovery has been a bumpy one but in the end, the benefits of forest and water conservation are there for all to see.

The key to the sustainability of these projects is that the villagers themselves have planned and executed them, so that the exit of TBS does not spell the end of conservation. The immediate benefits — more water, better agriculture, return to animal rearing, better health, etc. — are clearly evident to the area's residents. More important in the long run will be how these people manage their relationship with the forests, streams and hills that surround them.

About the Ruparel river basin

Literally translated, Ruparel means "full of beauty." Today, the river has been able to live up to that name thanks to sustained conservation efforts. Most of the Ruparel river basin falls within Alwar District in northeast Rajasthan. The basin, covering 3250 square kilometres, encompasses about 250 villages. The 90-kilometre Ruparel river flows eastward out of the Sariska hills, home to the famous Sariska National Park, which is about four hours' drive from Delhi.

The ridge area of the Sariska hills, the focus of this report, occupies an estimated 612 square kilometres and houses a wide variety of plants and animals. With many areas in Sariska yet to be documented, research findings indicate that there are about 12,000 species of flora and 5,000 species of fauna. Sariska is a biodiversity *hotspot* as many species are found only in this area.



Ghatiwala village is in the ridge area of the Sariska hills,
the upper catchment area of the Ruparel

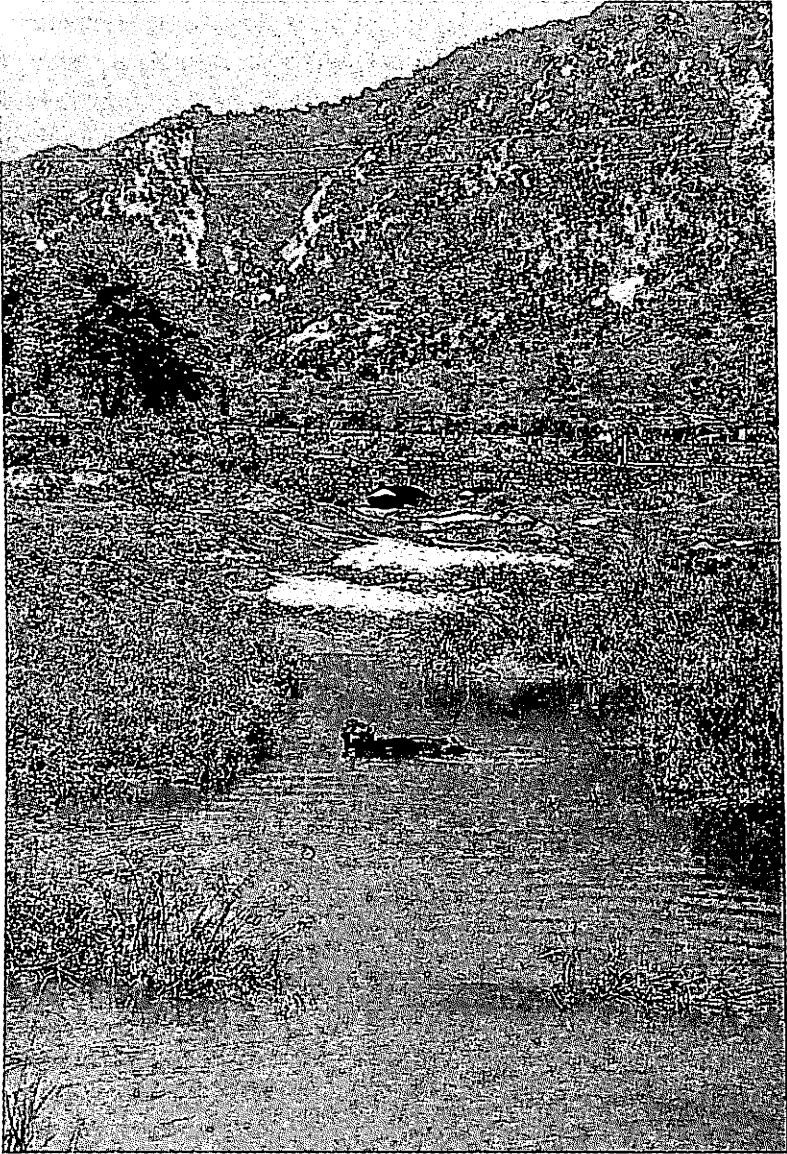
Historically, the Aravalli Hills, of which Sariska is a part, have shielded most of northeastern Rajasthan from the Thar Desert in the west. During the last three to four decades, however, the functions of these hills as a buffer and as a protector of biodiversity have been severely undermined because of human activity. The most damaging outcome of land degradation in the Sariska ridge area has been the loss of water storage capacity. Most of the 22 inches of rainfall in the year falls during the monsoon (July to September). It is the gradual loss of storage capacity in the catchment area that caused the Ruparel river to dry up 30 years ago, flowing only during the monsoon months.

Flow of the river

The first tributary begins near the village of Mala Tolawas, high up on a ridge in the northwest Sariska hills. This rivulet courses through Reh ka Mala, Ghatiwala, Duhar Mala and Nangal Heri before joining another stream at Kushalgarh. This other stream originates in the Major hills, in the southwestern part of the Ruparel basin, flowing through Udai Nath, Amra ka Bas, Jodhavas and other places before reaching Kushalgarh to form the Ruparel river.

The third tributary flows down from the north, passing through Lauj, Kanpura and Raika before joining the Ruparel at Madhogarh. The fourth tributary also flows southward, originating near Adheera, then coursing through Dehlavas and Bakhatpura before emptying into a small lake, the Silised.

At Kushalgarh, the Ruparel is more than 15 feet wide in places. By the time it reaches Barah, 9 kilometres



The third tributary joins the main river at Madhogarh

downstream, it is more than 90 feet wide. Here, the water is divided into two halves. Half flows northeast as the Kritim Dhara, emptying into the Jaisamand lake. The other half flows eastward as the main Ruparel river. This is joined by

another stream at Pathrora. This stream originates in the Kraska hills, in the southern part of the Ruparel basin. It begins at the village of Kraska, then flows past Malakhera before joining the main Ruparel river at Pathrora. The Ruparel then passes Bhadal and Sitapur before collecting in a dam at Sikri Patti *Bandh*, in Bharatpur District of Rajasthan.

For the purpose of analysis, villages of the Ruparel river basin can be classified into three groups: ridge area, mid-stream and downstream villages. While TBS began its work in 1985 in villages in the ridge area — the major focus of this report — the effects of these conservation efforts were felt in all of the villages downstream.

Communities living in the area

Two lower-caste communities, Gurjars and Meenas, dominate the area. Gurjar villages are mostly found in hilly regions because they are mainly engaged in raising animals. Meenas have also reared animals in the past, but a majority now rely on agriculture for a living. They live in hilly tracts as well as flat lands in the mid-stream area of the Ruparel. Gurjars and Meenas traditionally had a deep bond with their natural environment. This bond was weakened after Independence when the government asserted its rights over forests. Government officials allowed private contractors to fell trees. Ownership of the forests, which was formerly in the hands of the local Gurjar community, was diluted by the interventions of the government's forest department. In time, local residents felt they had little to gain from conserving the forests as decisions about resource – use had been snatched out of their hands.



Gurjar women of Duhar Mala village

Today, families make do with what little land they have. The average land holding per household is between 1 and 1.5 acres, while the number of cows and buffaloes ranges from 10 to 15 per household. Both Gurjars and Meenas directly depend on forests for grass, fuelwood, leaves and

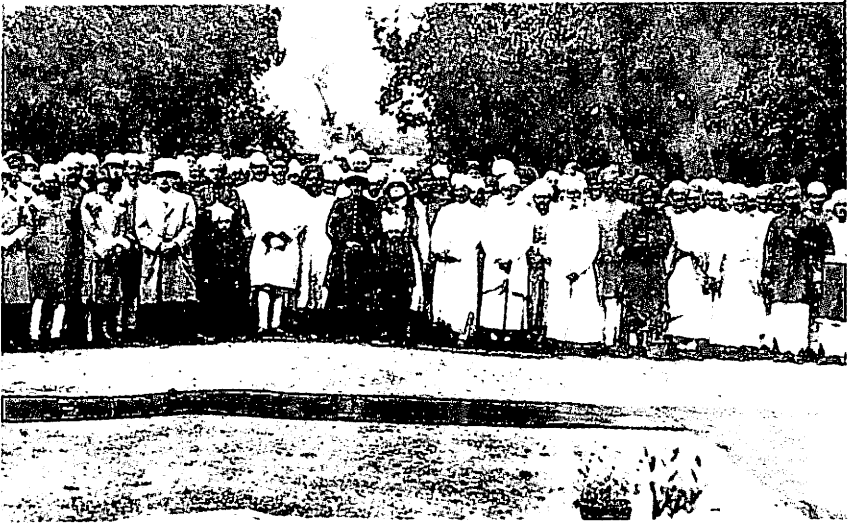


Gurjars of Nangal Heri village

honey. The lower reaches of the Ruparel are home to a number of agrarian communities, including Meos (Muslims), Jats and Rajputs.

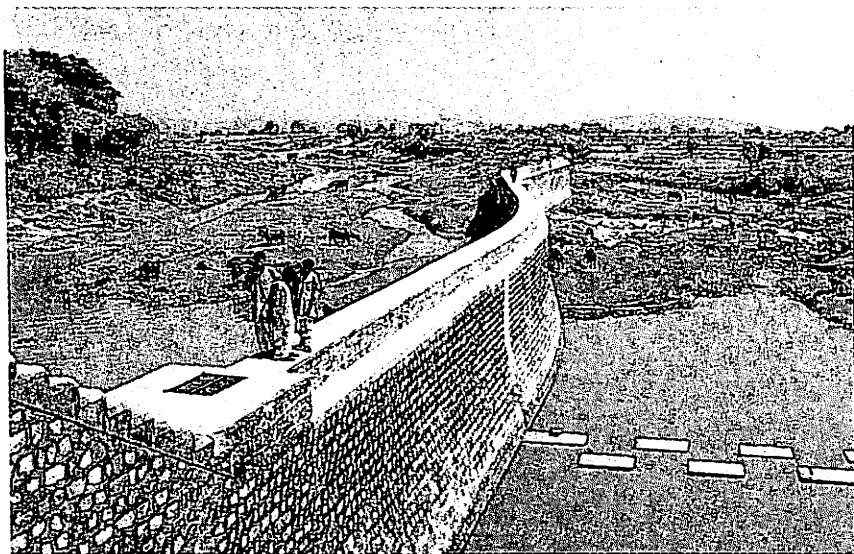
History of the Ruparel

In the first half of this century, the Ruparel was the subject of numerous disputes between the princely states of Bharatpur and Alwar. In 1928, the British colonial government sat in judgement, deciding to divide the water equally between the two states. A wall was built at Natni ka Barah (known today as Barah) to divide the water. The original structure still stands and continues to divide the water.



January, 1928 settlement of Ruparel River water between Alwar & Bharatpur districts

In the decades following the January, 1928 decision, the Ruparel's catchment areas suffered deforestation caused by agriculture, extraction of wood for fuel use, stone quarrying by the construction industry and various other activities.



The historic wall dividing the Ruparel at Baran

The water disputes lost their edge because apart from the monsoon months (July-September), there was no water left in the Ruparel.

Formal efforts at management of natural resources began only after India's independence in 1947. In 1956, soon after the formation of the present-day Rajasthan state, the Sariska Game Reserve — governed until Independence by the local ruler, Maharaja Mangal Singh — was converted by the government into a sanctuary. Sariska then became a "Tiger Project" area and a National Park in 1978, which put several new restrictions on the use of resources in the area. Several villages, including those in the catchment areas of the Ruparel, are still located within the park boundaries. To this day, the use of natural resources continues to be the subject of numerous disputes between villagers and government officials.

After 1947, agricultural activities picked up in the area. Villagers began to clear the jungles, even high up on the ridge at Duhar Mala and Reh ka Mala. More and more people in the ridge areas abandoned animal husbandry in favour of farming. Farmers were able to work the cleared land because leaves helped to retain water in the ground. But after nearly five years, these areas began to suffer from erosion, and the topsoil was washed away. Springs began to dry up as there were no trees and shrubs left to help store water. With productivity falling, many farmers moved to other forested areas and this destructive cycle was repeated.

By the late 1970s, the Ruparel had ceased to be a perennial river, flowing only during the monsoon. The water table had dropped considerably.

Whereas earlier, herdsmen visited the hilly catchment areas of the Ruparel to graze their cattle, the situation became so bad that local residents themselves had to leave their villages, travelling to distant lands in search of grass, fodder and water. Unable to raise crops, farmers from Duhar Mala took their remaining cattle to other areas. Many people from Major village were forced to migrate to Ahmedabad and New Delhi in search of jobs. Others worked as labourers closer to home, but much of the work was seasonal and back-breaking.

The upper catchment areas of the Ruparel basin 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 in 1982 to build a dam across the Ruparel was rejected because that would violate 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 completely deserted as it was close to impossible for the people to support themselves. The Ruparel's catchment area, falling in Thanagazi block of Alwar District, appeared as a **dark zone** in government records, indicating a severe water shortage. The government passed an order banning the digging of wells.

Initial efforts to revive the Ruparel

It was during this fifth year of the drought that a TBS worker chanced upon two Gurjar women, Gyarsi and Phoola, in the ridge area. They were the only remaining

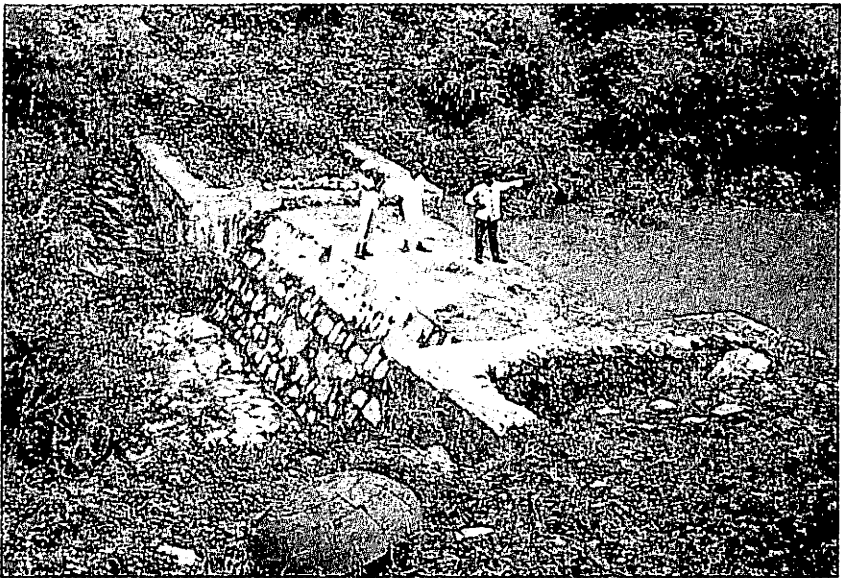


Gyarsi and Phoola, the two Gurjar women of Tolawas Mala. They built the first johad in the catchment area of the Ruparel with the help of TBS.
The women are sitting next to the johad and the forest

residents of Tolawas Mala village and were at a loss to find a way out. "God is angry at us," they told Sarwan Sharma, the TBS worker. They spoke at length about declining water

levels in the area and about streams drying up. Sharma suggested digging a *johad*, a traditional water harvesting structure, to store water.

A *johad* is a semi-circular earthen water pond. It is built along the contours of hill slopes for stopping and storing rain water. A *johad* has a wide base to collect runoff from tiny streams and rivulets. Since *johads* are made of earth, most of the construction cost is taken up by labour.



Sarwan Sharma (centre) inspecting an anicut at Reh ka Mala village with two residents

The women of Tolawas Mala did not initially trust Sharma as they knew nothing about TBS or what its motives were. Their recent experience with outsiders, particularly with government officials, had not been pleasant. As a result, they distrusted all outsiders. Winning the women's trust became Sharma's first task. He offered to work with them. This made him different from government officials in the

villagers' eyes — here was someone willing to do more than just talk.

During the next three to four months, Sharma would visit the women every 10 days or so to supervise construction of the *johad* and himself help with the digging. Gradually, he gained the Gurjar women's trust. The *johad* was ready by the end of 1987. In the first full year of operation, it held water for three months. In the second, water remained in the *johad* for six to seven months. And by the third year, it held water throughout the year.

To revive the Ruparel, TBS deliberately targeted the hilly catchment areas of the river, explains TBS General Secretary Rajendra Singh. "This is the place to concentrate upon if you want to bring about a rebirth." The *johad* built at Tolawas Mala in 1987-88 marked the first step in this direction. In the next 5-6 years, other villages in the area invited TBS to help coordinate efforts to build water storage structures.

TBS began to receive financial assistance from the Swedish International Development Agency (SIDA) in January 1995. Since then, 219 *bandhs* (small dams) and *johads* have been constructed with the help of this money, with half of the labour contributed by villagers. In all, TBS has assisted with the construction of 333 *johads* in the Ruparel basin. Of these, 85 were built before 1994 with the help of Interkerkelijka Organisatie Voor Ontwikkingssaman werking (ICCO) of the Netherlands. In three villages — Duhar ka Mala, Reh ka Mala and Nangal Heri — *johads* were built with the help of a Swiss aid agency, Inter Cooperation.

Before going ahead, it is worth taking note of the enormous strain on the social fabric of villages in the area. The water crisis had been caused by a gradual breakdown of village organization. This was partly because the post-Independence government stepped in to claim most of the area's natural resources. The declaration of Sariska as a National Park is a case in point. Several villages remain inside the park, but use of forest resources for them and for the villages surrounding the park is restricted. Relations with park authorities have been sour. This has been worsened by the fact that the locals derive no direct or indirect benefit from tourism. Even the two hotels inside the park, TBS workers say, have employed staff from elsewhere.

Once villagers were forced to give up control of the area's natural resources, they felt they had no stake in conserving them. As was natural, their link with the natural environment was greatly weakened and their own internal organization, previously devoted to forest conservation and community water storage systems, broke down. Unable to work in their villages, most residents were either forced to take their cattle elsewhere or migrate to cities. Working as manual labourers in urban areas led to loss of self-esteem. But even this work was seasonal, leading to frequent unemployment among those villagers who had decided to stay behind. Many took to alcohol.

The once-green catchment areas of the Ruparel, which had earlier attracted nomadic tribes who grazed their cattle there, now saw an out-migration of cattle as well as the village folk. Parents found it hard to get their sons married as people from other areas, even lower-caste communities such as Meenas and Gurjars, did not want their daughters

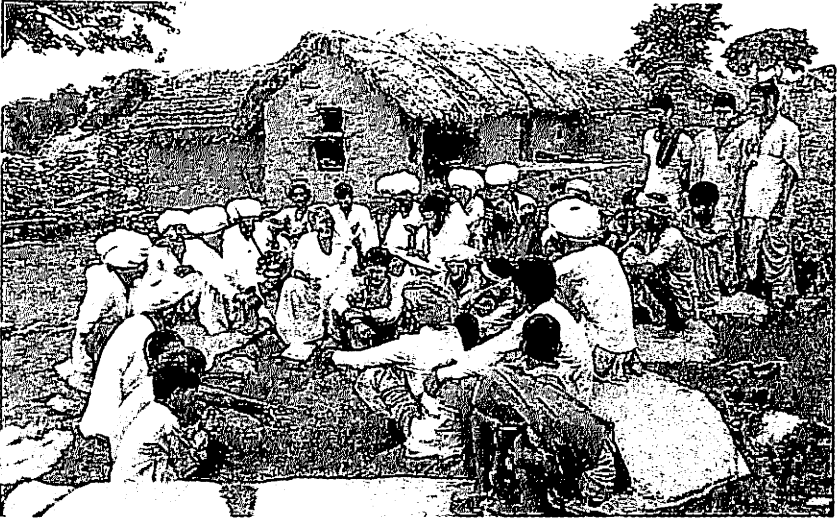
to have to walk several hours each day just to fetch water. This further lowered the spirits of the inhabitants of the area.

As a corollary to their unhappy experience with government officials, the villagers were highly suspicious of outsiders. Convincing the villagers to organize and to contribute free labour to build *johads* would be no easy task. Many villages were controlled by village headmen (*pradhans* and *patels*) who received favours from local officials in exchange for rubber-stamping various government plans. These local power elites often opposed the construction of *johads* as the projects would weaken their domination over village affairs.

Involvement of the Tarun Bharat Sangh

TBS sees itself as an organizer, even a catalyst, for development. It has provided money for the construction of *johads*, but only after villagers have stepped forward to ask for the help and to contribute free labour and, if possible, materials for the projects. TBS tries to ensure that a significant portion of the labour is provided free of charge. In some villages, as much as one-quarter of total expenses are met by the future owners of the *johad*. A *johad* can cost anywhere from Rs. 20,000 to 50,000.

1. **Approaching villagers in their localities.** The story of Sharma's first meeting with the two women of Tolawas Mala is typical of TBS's attempts to have first-hand information about the condition of people in the area. Going directly to villages allowed the organization to target women, who would not be able



TBS's Sarwan Sharma discussing forest conservation at a gram *sabha* meeting at a village on the Sariska ridge

to attend meetings elsewhere. While much of Alwar District, and certainly the Ruparel river basin, were suffering from an acute drought, gaining the trust of villagers was no easy task.



A johad under construction

2. **Promoting interaction between villagers.** TBS organized 'exposure trips' to enable the residents of a village to see for themselves the water storage structures built elsewhere. At the same time, people from villages who had already built *johads* and *bandhs* were also taken to neighbouring villages in *padyatras* (marches) to discuss their success. In many cases, talking to other ordinary village folk made people agree to work with TBS in their own villages.
3. **Organizing people into village assemblies (gram sabhas).** Supporters of new projects were organized into a *gram sabha*, which held regular and open meetings. Attendance was compulsory for everyone involved in the project. Project details such as costs, the amount of free labour to be contributed, etc. were discussed. TBS field workers asked the villagers to form a small committee for day-to-day supervision of the project. Contributions were worked out according

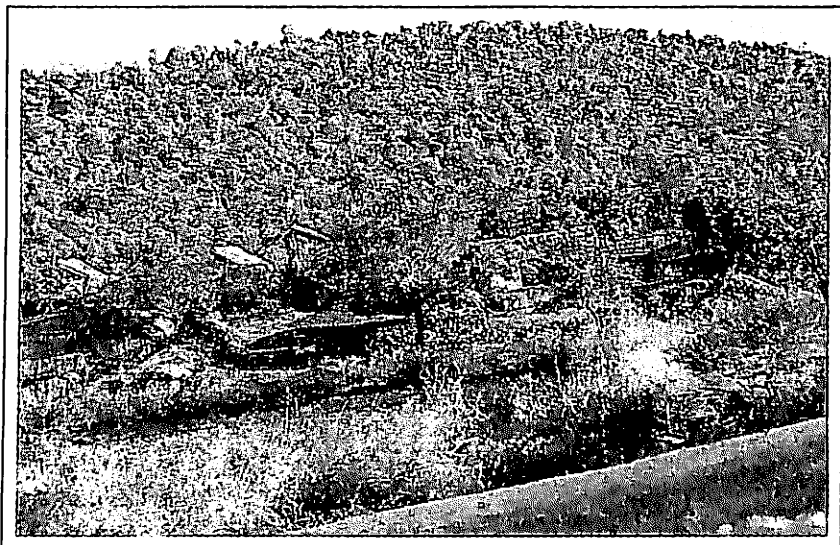


Jagdish Gurjar of TBS overseeing the final construction of a *johad* at Khairhara village with the *sarpanch*, Brajraj Singh. With them, at left, is New NGO representative Aman Singh

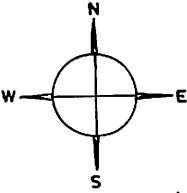


A small dam at Reh ka Mala village

Reh ka Mala village



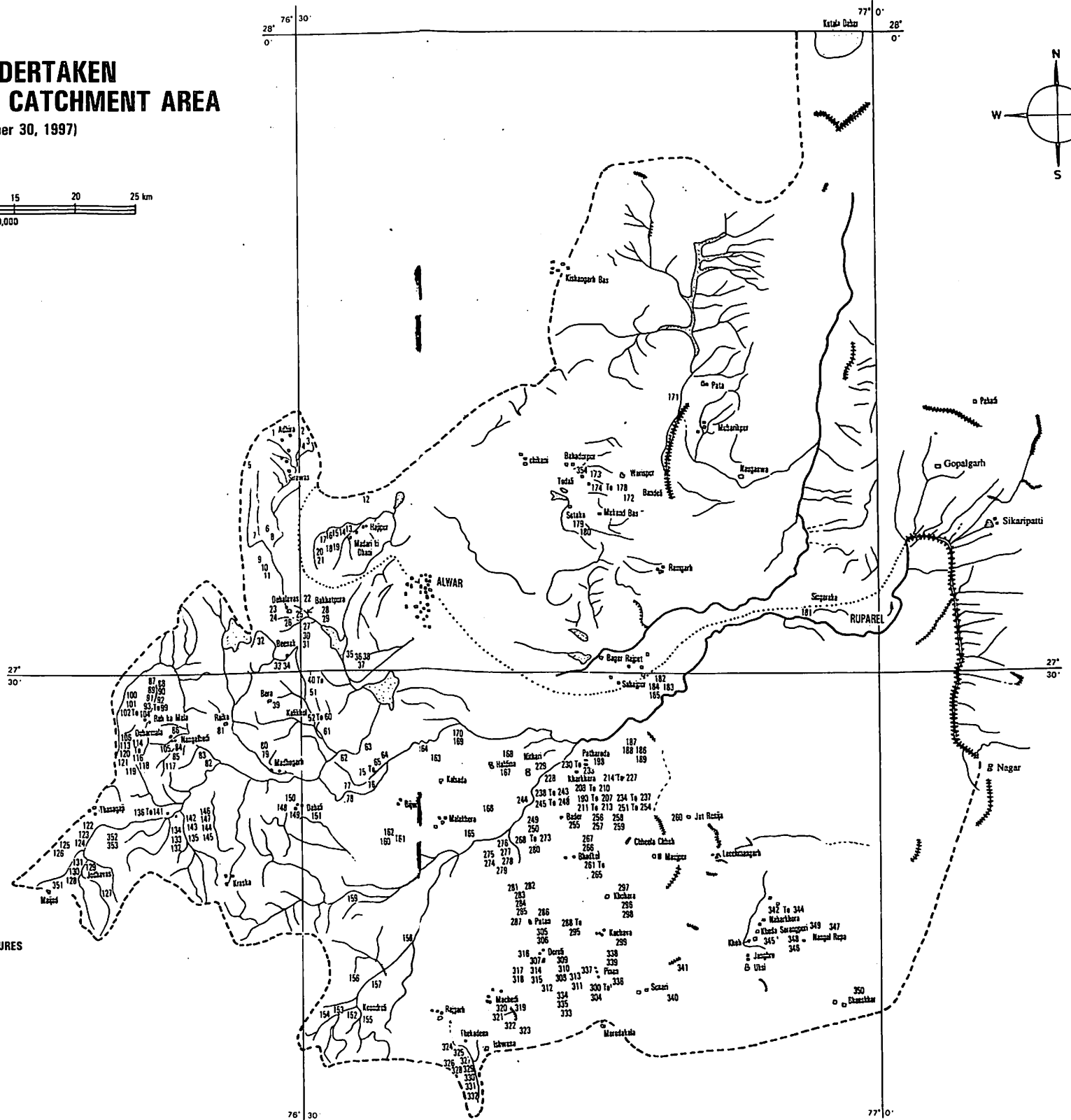
PROJECT UNDERTAKEN WITHIN THE RUPAREL CATCHMENT AREA (1985 to September 30, 1997)

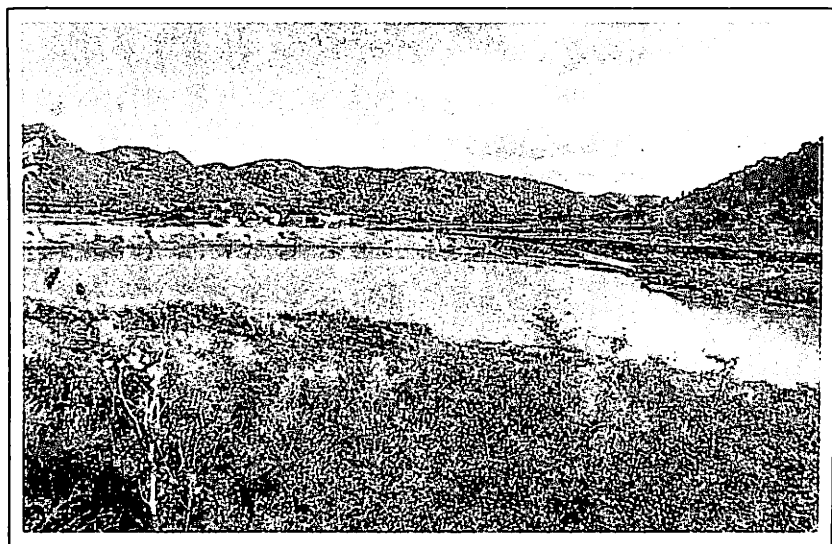


INDEX

- CATCHMENT AREA LIMIT
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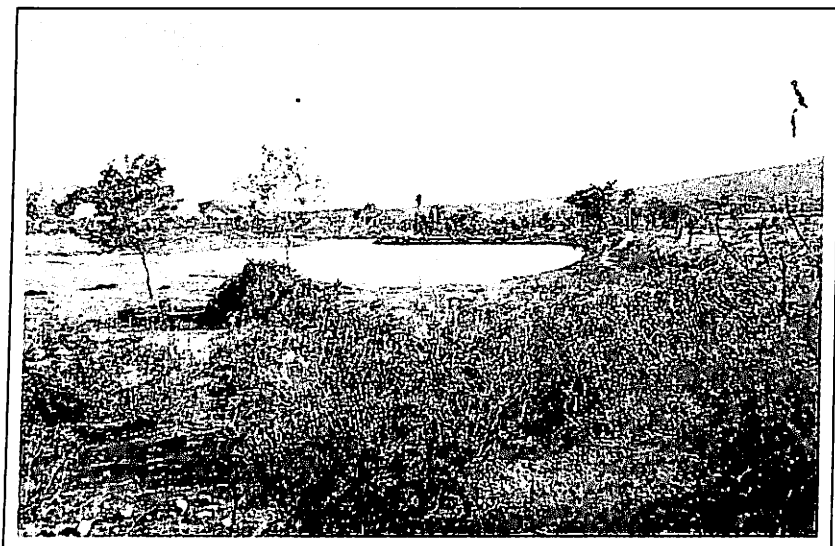
TOTAL CATCHMENT AREA 3250 SQ.KM
LENGTH 90 KM





A johad of Reh ka Mala village

A johad of Duhar Mala village



to how much each family or individual was expected to gain. People were given the option of providing money instead of labour. And if they could not do that, they were told to provide materials.

4. **TBS submitted written project records to villagers to promote transparency.** The

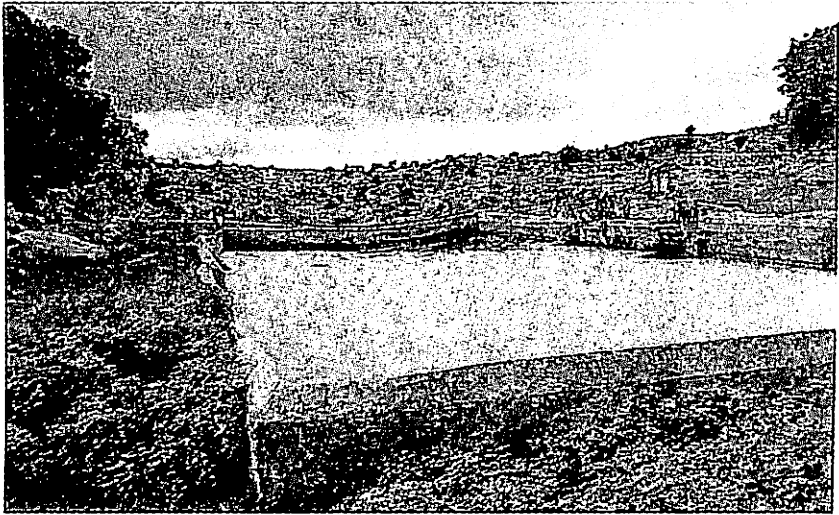


At Duhar Mala village, women find it much easier to collect water from the johad organization stood by the villagers through good times and bad, earning their goodwill. TBS field workers held public ceremonies to honour supporters of conservation projects. This is one of the main reasons why the conservation efforts in the Ruparel catchment area continue to this day, long after TBS has pulled out.

Impact of the Ruparel revival

The revival of the Ruparel has transformed the ecology, economy and lives of people in the river basin. In 1996, less than nine years after TBS started encouraging the

construction of *johads* and *bandhs* in the catchment areas, the Ruparel began to flow all through the year.



Construction of a water tank at Duhar Mala has allowed residents to return and remain in the village throughout the year

1. The water table has risen, greatly reducing the time and effort required to fetch water for daily use.
2. Construction of *johads* and *bandhs* has provided employment. TBS used some of the grant money to pay for labour. This helped villagers generate some income while *johads* were being built.
3. Abandoned farmland has gradually been brought under the plough. Erosion has decreased considerably. Farmers are no longer restricted to crops that consume very little water. Yields have risen.
4. Cattle ownership has increased. People no longer have to let animals go. The fodder supply has increased. Stall feeding has begun in some areas. The availability of surplus milk has allowed villagers to produce *ghee*

(clarified butter) for use in earthen lamps and for selling in the market. Incomes have risen.

5. People have started returning to villages, now that availability of water is guaranteed. Earlier, people were ashamed to leave as migration was driven by unemployment. Now, leaving the village is seen as a sign of prosperity. As a result, people's self-esteem has increased and villages have been reborn, just like the river they depend on.



Building *johads* has improved people's ability to organize. TBS has trained villagers to continue managing forest and water conservation projects



Women have been empowered through participation in conservation projects

6. People now are better organizers and can deal with government officials with greater confidence. Working with TBS has shown them how to mobilize resources. Their experience of building dams and *johads* has taught them a lot about undertaking development projects. Also, the transparency that characterizes TBS-supported projects has made them demand greater openness in government projects. One of the indirect results of water and forest conservation in the Ruparel basin, therefore, is that village folk can now monitor the cost of government projects, based on their own experience. They no longer simply accept what is told to them.
7. Women have been empowered. Women have played a key role in planning and mobilizing resources for the various conservation projects.
8. The people's relationship with their natural



Perennial water-flow has made it easier for cattle to find water

environment has been strengthened. Revival and recharging of the Ruparel has shown them that they have a strong stake in conserving forests and water. TBS has demonstrated to people in the Ruparel basin

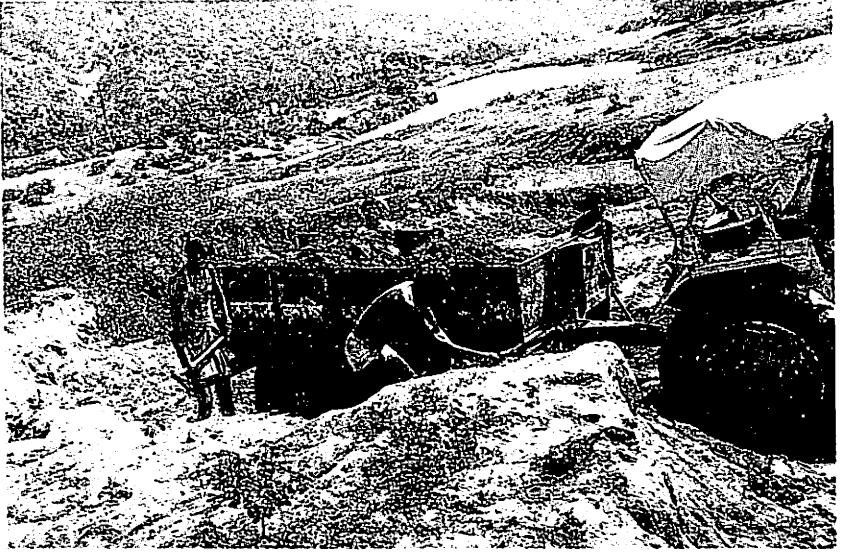
that humans are not masters of the environment but part of it. The two can co-exist.

9. Many birds and animals have returned to the area.

One of the most transformed villages in the catchment area is Duhar Mala, where Gurjar women dug a *johad* ten years ago. Jagdish Gurjar, a TBS fields worker, says village women had to walk up a steep hill just to fetch one *matka* (earthen pot) of water. "It would take them four hours, so they had to fetch water even at night," he says. "Now, thanks to the *johads* around the village, that four-hour ordeal has been reduced to just fifteen minutes."

Duhar Mala has been able to regenerate, now that people can once again rear animals and cultivate some of the land. Some 60 to 70 families live in the village around the year. The number of cattle per household has increased with rising incomes. In some other villages in the catchment area, children have started attending school. Whereas people here had to take their animals to the plains for most of the year, they no longer need to leave. Stall-feeding has begun in a few villages. In this area, money earned from the sale of milk and grain goes directly to women. So economic empowerment of women has been brought about. One result is that the overall health of women and children has improved. Undernourishment among children is largely a thing of the past.

Villagers in Madhogarh, in the mid-stream area, have seen the water table rise after the Ruparel became a perennial river. Ranglal, who has known the river for 50 years, says it

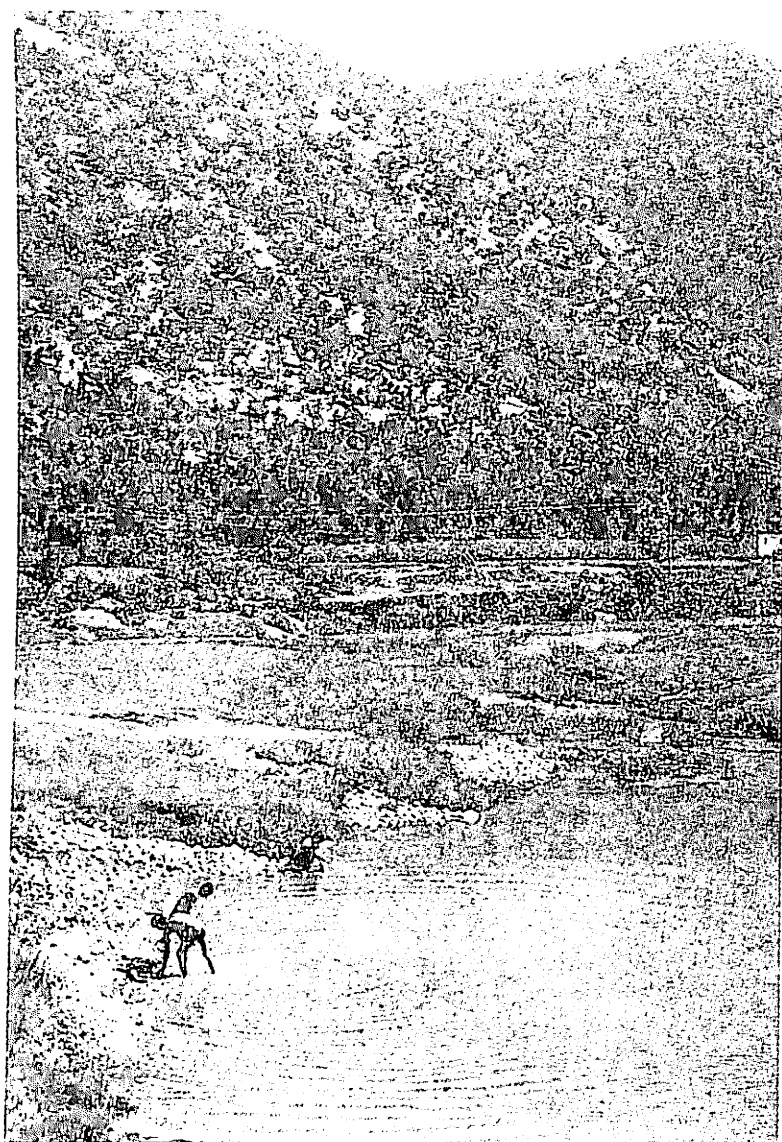


Ranglal and his fellow farmers at Madhogarh collecting fertile soil from the Ruparel river bed

began drying up in the hot summer months about 30 years ago. “When the river dried up, I left home for Alwar in search of work”, he recalls. “I had to dig a well 20 feet deep just to get enough water to drink.” Rejuvenation of the Ruparel has allowed Ranglal and other farmers of Madhogarh to resume farming beside the river.

People in the Sariska hills consider it their *dharma* (sacred duty) to keep the Ruparel alive and clean, says Gopal Singh, a TBS worker. “They have relatives downstream, they have seen the river downstream, and they are happy other people can benefit from their efforts up in the catchment areas.”

One of the many beneficiaries downstream is Suleiman Khan of Pathrora. The water shortage in his village was so



Rejuvenation of the Ruparel has made it a new destination for pilgrims

acute, he says, that people had to turn their animals loose “out of love for the poor creatures”. There was barley enough water left for the villagers to survive on. Fodder was in short supply. There was no wheat left to eat. “Outsiders refused to

marry their daughters to our sons because we had been reduced to stark poverty," recalls Khan. "I, too, would wander around, looking for any work I could find. I often had to do other people's dirty work as I needed to eat."

Now that the water is back, says Khan, he wants to work in his own village. "I want to make an honest living. Now I will get others to work in the fields in my village." In the years leading up to and through the drought, Khan and other farmers were forced to plant only those crops that required very little water, such as mustard and gram. Now, farmers in Pathrora grow wheat, barley, potato, onion, pulses and maize. The animals have started producing more milk, which augments the farmers' incomes. "We have realized the value of the forests around us and have started to protect them."

Chomu village is one of the several in the Ruparel catchment area that have benefited from SIDA-supported projects. Using SIDA assistance channelled through TBS, residents here have built 60-70 *johads* in the last 3-4 years. Brajraj, the village headman, admires TBS for its honesty. "This organization uses each *paisa* honestly. Until people themselves are ready to work, Tarun Bharat Sangh does not take up a project. Since their arrival in our village, our fortunes have taken a turn for the better."

The higher water table in the area has greatly reduced the burden of watering the fields, says Brajraj. Previously, 20 litres of diesel were needed to water one *bigha* (0.71 acres) of land. The well would dry up after one hour of pumping. "Now, with the wells full, we need only 5 litres of diesel to irrigate one *bigha*." Residents of Chomu have learnt from

their *johad*-building experience how to better organize themselves, says Brajraj. "This organization has been able to integrate our different ideas, our different attitudes, into the work. considering all this, I have come to the conclusion that no matter how much opposition there is to good work, it is not difficult to get the work done." Some Chomu residents had opposed the construction of a *johad* in the village pasture. TBS field workers met them and explained the benefits of a *johad* for agriculture. The opponents were eventually won over.

Many other such stories tell of the obstacles that had to be overcome and of the varying results of conservation in the Ruparel river basin. The revival of the river has given a new lease on life to thousands of people as well as the flora and fauna of the area. The correlation of human welfare and a healthy environment has been clearly established in the minds of most people in the immensely important catchment areas of the Ruparel. The challenge now is to strengthen that relationship to ensure that the river lives on.

Mr. Laxman Singh Chauhan of Sariska Palace expresses his joy at the rejuvenation of the river : the perennial flow of the Ruparel fascinates the tourists, both foreign and Indian. It has resulted in more and more people coming to us, lending colour and variety to the place.

Mr. Uday Bhan of the Sariska Tiger Project is happy that the ever-flowing water of the Ruparel has made water available for the wild animals at several points. This has led to the security of the animals. Earlier the animals had to go a long way to a particular point to be able to quench their thirst, falling easy prey to poachers. He adds that now these

animals are not as easily accessible to poachers, and also that the Tiger Project has greatly benefited from the rejuvenation of the Ruparel.

The Banjaras (nomadic people) of the village Barabas, with glow on their faces say: "When the river had stopped flowing, we would stay here only during the monsoon months. The rest of the year we would migrate to others places on the look out for jobs that could keep our body and soul together. It used to be hell of a life, away from home. Now we remain here all through the year and earn enough to ensure subsistence. We can now raise considerably good crops as we have been trained to stop soil erosion. The river water is used for irrigation as well as for the cattle folk.

Two streams meet at a point to the east of Madhogarh. It has been found as an appropriate site for motels and shops to come up to cater to the needs of tourists. The *Kraska Johads* have rejuvenated the *Pandupole* springs and brooks. Likewise, the *Johads* constructed at *Gurjaron ki Dhani*, *Kund* and *Leelunda* have had a positive impact on the *Bhartrahari* springs and brooks.

The Johad at Leelunda was constructed under Darki Mai's leadership. She Says : "prior to the construction, we would spend the nights arranging water for the cattlefolk, and yet we would fail to cope with the needs. Now we do not have to bother about that at all. We women have learnt for the first time what rest and leisure are.

Chandri Bairwa of Kalikhoh (sarpanch of Bakhatpura) is happy that TBS has helped them to contain

the rain water in the reservoirs which has resulted in year-long availability of water. She joyfully adds, "gone are the days when would spend all the day tiring ourselves managing water for ourselves as well as for the cattle folk. Now we have got time to think about other things : roads, children's health and education and keeping the womenfolk gainfully busy. All this shows how the impact of the rejuvenation of the Ruparel is perceived by the beneficiaries : as a catalyst to transformation of the environs leading to a quantitatively transformed life of the people. Dr. Shachi Arya in a recently conducted a Study of the above two villages has brought to the fore these observations that signify a perception change among women.



Villagers discussing the question of making the forest dense in the Ruparel catchment area.

**Works Carried Out by
Tarun Bharat Sangh
on Ruparel River
(1986 to 30 September, 1997)**

Sl. No.	Bandh/Johad's Name	Village	Sl. No.	Bandh/Johad's Name	Village
1.	Panchdeva Johad	Adhira	26.	Nangavala Johad	"
2.	Tilliwala Johad	"	27.	Aandhavala Johad	"
3.	Ramavatar ka Johad	"	28.	Mansidh ka Johad	Doba
4.	Talawada ka Johad	"	29.	Roopnarain ka Johad	"
5.	Bans ka Mala ka Johad	Dhamala ka bas	30.	Bhagawan Sahay ki Medbandhi	Beenak
6.	Birbal ka Johad (Paharipar)	Sirawas	31.	Chhotetal ki Medbandhi	"
7.	Sirawas ka Johad	"	32.	Gorleel ka Johad	"
8.	Ramtalai	"	33.	Janampuri ka Johad	"
9.	Banswali Nali ka Johad	"	34.	Ramtalai	Beenak
10.	Nalwala Johad	"	35.	Neemadivale Bhomiya ka Johad	Siyodanpura
11.	Harsagar Johad	"	36.	Bagichivali Johadi	Umarain
12.	Mamchand ka Anicut	Dhokadi	37.	Chhotetal ka Anicut	"
13.	Chhaju Bairva ka Anicut	Hajipur	38.	Pachvirvala Johad	"
14.	Hiralal ka Anicut	Madari ki Dhani	39.	Beravala Johad	Kalikhoh
15.	Madia ki Medbandhi	"	40.	Chandri Sirpanch ka Anicut	"
16.	Radhayshyam ki Medbandhi	"	41.	Maularam ki Medbandhi	"
17.	Ratanlal ki Medbandhi-I	"	42.	Meenavala Anicut	"
18.	Ratanlal ki Medbandhi-II	"	43.	Hiralal Bairva ki Medbandhi	"
19.	Mukhran ki Medbandhi	"	44.	Harlal ki Medbandhi	"
20.	Kishan ki Roadwali Medbandhi-I	"	45.	Sadhuram ki Medbandhi	"
21.	Kishan ki Roadwali Medbandhi-II	"	46.	Bodan Tanwar ki Medbandhi	"
22.	Deepsagar	Dehalavas	47.	Dungeram ki Medbandhi-I	"
23.	Panchbirvala Johad	"	48.	Bandya ka Anicut	"
24.	Bagichivali Johadi	"	49.	Bodan Chhavadi ka Anicut	"
25.	Badri ka Anicut	Bakhatpura	50.	Phaganavali Johadi	"

Sl. No.	Bandh/Johad's Name	Village	Sl. No.	Bandh/Johad's Name	Village
51.	Dungaram ki Medbandhi-II	..	81.	Raikavala Johad	Raika
52.	Pahadi Pichhevali dab	..	82.	Prabhuvala Anicut	Savar
53.	Buban ka Anicut	..	83.	Sravan Mukkad ki Medbandhi	..
54.	Ramlal ke Bandhvali Medbandhi	..	84.	Khanwala Bandh(Sitaram ka)	Nangalhedhi
55.	Ramlal ke Khet ki Medbandhi	..	85.	Gorvala Johad	Kho (Nangalhedhi)
56.	Ramkishan ki Medbandhi	..	86.	Papadivala Bandh	Bhurala (Bairavas)
57.	Check Dem	..	87.	Sudvala Johad	Rah ka Mala
58.	Ramkaran Gurjar ki Medbandhi	..	88.	Ronala Johad	..
59.	Badi Lavvala Johad	..	89.	Thoryanli Johadi	..
60.	Har Sagar Johad	..	90.	Dhokanvala Johad	..
61.	Sahab Khan ka Anicut	Akabarpur	91.	Pila Khet ka Johad	..
62.	Kamala Khan ka Bandh	..	92.	Kundlivala Anicut	..
63.	Jagan Bairva ki Medbandhi	Aalapur	93.	Bada Johad	..
64.	Rastewala Johad	Jatoli	94.	Lal Dab ki Chhoti Johadi	..
65.	Muniram ki Medbandhi-I	Ghatitala	95.	Lal Dab ki Badi Johadi	..
66.	Ratiram Gurjar ki Medbandhi	..	96.	Johadivala Johad	..
67.	Kamla (Beva) ka Anicut	..	97.	Jantvala Johad	..
68.	Muniram ki Medbandhi-II	..	98.	Lohadya Johad	..
69.	Jainarayan ki Medbandhi	..	99.	Bandrivala Johad	..
70.	Jaikishan ki Medbandhi	Ghatiwala	100.	Tolavas ka Johad	Tolavas
71.	Harlal Gurjar ki Medbandhi	..	101.	Bhadana ki Bhal ki Johadi	Bhadana ki Bhal
72.	Ganesh Gurjar ki Medbandhi	..	102.	Garavaji ki Johad	Tolas Mala
73.	Sampat Gurjar ka Anicut-I	..	103.	Phutala Johad	..
74.	Sampat Gurjar ka Anicut-II	..	104.	Dadrgasvali Johadi	Duharmala
75.	Mangatu Gurjar ki Medbandhi	..	105.	Ghativala Johad	..
76.	Sitaram ki Medbandhi	..	106.	Jairam kumhar ki Medbandhi-I	Kalakhora
77.	Sravan Gurjar ki Medbandhi	Siya ka Bas	107.	Jairam Kumhar ki Medbandhi-II	..
78.	Harlal Gurjar ki Medbandhi	..	108.	Nanchtu Kumhar ki Medbandhi	..
79.	Chhajuram ki Medbandhi	Madhogad	109.	Ramji lal Gurjar ki Medbandhi	..
80.	Meenavala Johad	..	110.	Ramkaran Gurjar ki Medbandhi	..

Sl. No.	Bandh/Johad's Name	Village	Sl. No.	Bandh/Johad's Name	Village
111.	Hanuman Gurjar ki Medbandhi	..	141.	Kanhyalal ki Medbandhi	Radi Manyala
112.	Kalakhora ka Johad(GuniMundaWala)	..	142.	Dhimanvali Johadi	litunda
113.	Tontyala Johad	Duharmala	143.	Kundwala Johad	Kund
114.	Tanka	..	144.	Johadimala ki Johadi	Kraska
115.	Bada Johad	..	145.	Bada Johad	..
116.	Dadavala Johad	..	146.	Sukola ka Johad	Sukola
117.	Dangravala Johad	..	147.	Kemriwala Johad	..
118.	Naya Johad	..	148.	Nadiwala Johad	Dabali
119.	Bhorali Johadi	..	149.	Bada Johad	..
120.	Ganpat ki Medbandhi	..	150.	Neemdiwala Johad	..
121.	Sunda ki Medbandhi	..	151.	Badiwala Johad	..
122.	Sohan Regar ki Medbandhi-I	Thanagaji	152.	Gramsagar	Koondroli
123.	Sohan Regar ki Medbandhi-II	..	153.	Khatiwali Johadi	..
124.	Sohan Regar ki Medbandhi-III	..	154.	Bhagirath Meena ka Anicut	..
125.	Sravan Mochi(Regar) ki Medbandhi	Bhangdoli	155.	Dahkara ka Johad	Daulatpura
126.	Bheron Sagar	..	156.	Jodhawala Johad	Dangarwada
127.	Udaynath ji ki Johadi	Todi Jodhavas	157.	Patiwale Khet ki Medbandhi	..
128.	Kalyan Sahay ki Medbandhi	Jodhavas	158.	Phateh Baba ka Bandh	Punkhar
129.	Jodhavaswala Johad	..	159.	Gopal, Badri ki Medbandhi	Kitpura
130.	Mishravas ka Johad	..	160.	Badwali Johadi	Khareda
131.	Charkha Jhad ka Bandh	..	161.	Dobawala Johad	..
132.	Pachbirwala Johad	Haripura	162.	Bahanawala Johad	..
133.	Nangavala Johad	..	163.	Bageechiwala Johad	Baniyawali
134.	Pitidabwali Johadi	..	164.	Mahadeviwala Bandh(School Peechhe)	Mohobbatpur
135.	Dholavala Johad	..	165.	Mundyawala Johad	Mundy
136.	Phute Bandh tale ki Johadi	Indoke	166.	Shahidwala Johad	Mirzapur
137.	Pachvirwala Johad	Chidavatn ka guvada	167.	Schoolwala Johad	Haldina
138.	Pappuram ki Medbandhi	..	168.	Ramdevji ka Johad	..
139.	Sundaram ka Bandh	Bhartrihari	169.	Pachbirwala Johad	Kerwada
140.	Manohar ki Medbandhi	..	170.	Bhomiyaji ka Johad	..

Sl. No.	Bandh/Johad's Name	Village	Sl. No.	Bandh/Johad's Name	Village
171.	Ayub Khan ka Machhadikund	Ghativas(Mubarikpur)	201.	Bhutta Khan ki Medbandhi	..
172.	Laldasji ka Tanka	Todali	202.	Mahoor Khan ki Medbandhi	..
173.	Gokuldasji ka uattary Bandh	..	203.	Nabi Khan ki Medhanadi-I	..
174.	Laldas ji ka Bandh	..	204.	Nabi Khan ki Medbandhi-II	..
175.	Neemadiwala Johad (Laldasji ka)	..	205.	Nabi Khan ki Medbandhi-III	..
176.	Pachbirwala Johad	..	206.	Esab Khan ki Medbandhi	..
177.	Gokuldasji ka Bandh	..	207.	Nahar Khora ka Johad	Burjawala
178.	Mangal Bandh	..	208.	Virpur ka fieldwala Bandh	Dwarakpur
179.	Gangagiri Maharaj ka Bandh	Sotaka	209.	Virpur ka Johad	..
180.	Budha Jheentwala Johad	Kaririya	210.	Mamansingh ki Sherwali Medbandhi	..
181.	Singarakawala Johad	Singaraka	211.	Chorsiwala Johad	Sikariyabas
182.	Mandir ke passwala Johad	Jugrawar ka Bas	212.	Kutiwala Johad	Thumrela
183.	Jugrawarwala Bandh	..	213.	Kala Papada ka Johad	Kharkhada
184.	Ramnathsinghwala Johad	..	214.	Puran Singh ki Medbandhi	..
185.	Khubiram ki Medbandhi	..	215.	Devawali Puth ki Medbandhi-I	..
186.	Viswambhar ka uperwala Johad	Khunteta	216.	Devawali Puth ki medbandhi-II	..
187.	Viswambhar ki Medbandhi	..	217.	Ganda Verma ki Medbandhi	..
188.	Babu Khatik ki Medbandhi	..	218.	Hariram Harijan ki Medbandhi	..
189.	Ramlal Bairwa ki Medbandhi	..	219.	Johadiwala Johad	..
190.	Hari Singh ki Medbandhi	Gurjarbas	220.	Bansiwale Khola ka Johad	..
191.	Kailashpuri ka Johad	..	221.	Chhagan Singh ki Medbandhi	..
192.	Dhaniwala Bandh	Patharoda	222.	Babu Singh ki Medbandhi	..
193.	Jhidawali Nali ka Bandh	..	223.	Ramvir Singh ki Medbandhi	..
194.	Rahaman Khan ki Medbandhi	..	224.	Bhopanwala Johad	..
195.	Chavandwala Johad	..	225.	Shahidwala Johad	..
196.	Ghatiwali Nahar ka Bandh	..	226.	Shahid ki Ghatiwala Johad	..
197.	Ghaliwala Bandh	..	227.	Chudsidhwala Johad	..
198.	Pachbirwala Johad	..	228.	Amar Singh ki Medbandhi	Kerwadi
199.	Jahoor Khan ki Medbandhi	..	229.	Khawaniram ki Medbandhi	..
200.	Jumma Khan ki Medbandhi	..	230.	Puranmal Gurjar ki Medbandhi	Palampur

Sl. No.	Bandh/Johad's Name	Village	Sl. No.	Bandh/Johad's Name	Village
231.	Bhajani Gurjar ki Medbandhi	..	262.	Sugarwala Johad	..
232.	Nai Johadi	..	263.	Mulchand ki Medbandhi	..
233.	Prabhu chechi ki Medbandhi	..	264.	Ramkhiladi Bairwa ki Medbandhi	..
234.	Chhajju Singh ki Medbandhi-I	Gothadi Purohitan	265.	Bajarang Singh ki Medbandhi	..
235.	Chhajju Singh ki Medbandhi-II	..	266.	Sarvanik Johad	Ahir ka Tibara
236.	Chhajju Singh ki Medbandhi-III	..	267.	Jherawali Johadi	..
237.	Gorwali Johadi	Guru Gothadi	268.	Salagawali Johadi	..
238.	Sanyawala Johad	Kervawal	269.	Bhudhinwali Johadi	..
239.	Ondalwala Johad	..	270.	Musapur ki Johadi	Kali Pahadi
240.	Tulsi Nath ka Johad	..	271.	Pyarelal ka Johad	..
241.	Pathanwala Johad	..	272.	Shahid Baba ki Johadi	..
242.	Udairam ki Medbandhi	..	273.	Pachbirwali Johadi	..
243.	Sitaram ki Medbandhi	..	274.	Neemadiwali Naya Bandh	Barkheda
244.	Giriraj Singh ki Medbandhi	..	275.	Barkheda ka Naya Bandh	..
245.	Madan Singh ki Medbandhi	Choumu	276.	Polaram ka Johad	..
246.	Sastri Johad	..	277.	Kholawala Bandh	Satana
247.	Ghatawala Naya Bandh	..	278.	Sati Mai ka Johad	..
248.	Ghatabheetar ka Johad	..	279.	Dhanakalawala Johad	..
249.	Khorawala Johad	Bas Bilandi	280.	Kholawala Johad	Navalpura
250.	Khorawala Johad	Nangal Todiya	281.	Morodwala Johad	Morodakala
251.	Neechala Johad	Bader ka Bas	282.	Puran Singh ka Anicut	..
252.	Uperla Johad	..	283.	Bahana Kuanwala Johad	Bileta
253.	Pathanwali Johadi	..	284.	Chimarwala Johad	..
254.	Baniwali Johadi	..	285.	Nalawala Johad	..
255.	Shahidwali Johadi	Gurubas (Bader)	286.	Valkyawala Johad	Valkya
256.	Ganv Aagala Johad	Berala	287.	School Peechewala Johad	Patan
257.	Takiyawala Johad	..	288.	Bairwabas ka Johad	Bairwabas
258.	Kishanwala Johad	Chheela Chhoh	289.	School ke passwala Johad	Binjhari
259.	Dokwala Johad	..	290.	Bhorangi baba ka Johad	..
260.	Jat Rodija ka Johad	Jat Rodija	291.	Ladya ka Johad	..
261.	Bada Johad	Bhadkol	292.	Audiwala Johad	..

Sl. No.	Bandh/Johad's Name	Village	Sl. No.	Bandh/Johad's Name	Village
293.	Ratan Singh ki Medbandhi	Chhota Rajpur	324.	Sukla Meena ka Anicut	Thekadeen
294.	Kalal ka Johad	"	325.	Rameshwar ka Anicut	"
295.	Sainji ka Takiyawala Johad	Kajota	326.	Radhay Shyam ka Anicut	"
296.	Nathu ki Johadi	Khohara	327.	Jagadish ka Bandh	"
297.	Gadbas ka Johad	"	328.	Gabdh Meena ka Dakavala Anicut	"
298.	Dalya ki Dhab	Malawali	329.	Chhotelal ka bandh	"
299.	Kachava ka Johad	Kachava	330.	Srawan Meena ka Anicut	"
300.	Bhutlabas ki Johadi	Lal ka Toda	331.	Lahari Meena ka Chapaleta Bandh	"
301.	Pachbirwala Johad	"	332.	Ramsukha ka Ghoda-Thad ka Bandh	"
302.	Kala Chabutra ka Johad	"	333.	Mandirwali Johadi	Pada
303.	Nangal Bohara ka Johad	Nangal Bohara	334.	Mahantwali Johadi	Hiranoti
304.	Bohara Sagar	"	335.	Naiwali Johadi	"
305.	Bada Johad	Pundra	336.	School Peechhe ka Johad	Pinan
306.	Chhota Johad	"	337.	Bavadiwala Johad	"
307.	Doroli ka Johad	Doroli	338.	Govardhanpura ka Johad	Ujada ka Bas
308.	Badri Bandh	"	339.	Kali Pahadi ka Johad	Kali Pahadi
309.	Bharathari (Bhartrihari) wali Johadi	"	340.	Bavariya Baba ka Johad	Bhoor Pahadi
310.	Dehradaswala Johad	"	341.	Basediwala Johad	Basedi
311.	Bavadiwala Johad	"	342.	Gadadiwala Johad	Bahupada
312.	Dungariwala Johad	"	343.	Kai ka Johad	Bhojya Pada
313.	Jogiyon ke baswala Johad	"	344.	Dandwala Johad	Naharkhora
314.	Bholaram ka Johad	Bhajak ka Bas	345.	Kutiwala Johad	Kheda Sarangpuri
315.	Meedachapadi ka Johad	"	346.	Kakarala Johad	Kheda Neechla
316.	Harla ki Johadi	Manaka	347.	Shedwala Johad,	Sahadi
317.	Ghatawali Johadi	Aandvali	348.	Chavandwala Johad,	Nangal Rupa
318.	Phoota Johad	"	349.	Kurandiwala Johad	"
319.	Machedi ki Johadi	Machedi	350.	Dallawali Pokhar	Bhanokhar
320.	Khatikwali Johadi	"	351.	Gopal Meena ki Medbandhi	Todi
321.	Bhura Siddhwala Johad	"	352.	Radiwali Medbandhi	Amara ka bass
322.	Prem Sagar	Eishwana	353.	Palwali Medbandhi	"
323.	Schoolwali Johadi	"	354.	Kishan ki Badwali Medbandhi	Todali

By Gopal Singh



During the drought, villagers discussing with TBS workers various ways to conserve water

New Johad after one monsoon



FROM DEATH TO REBIRTH



TARUN BHARAT SANGH

Bhikampura, Thanagazi, Alwar-301 022