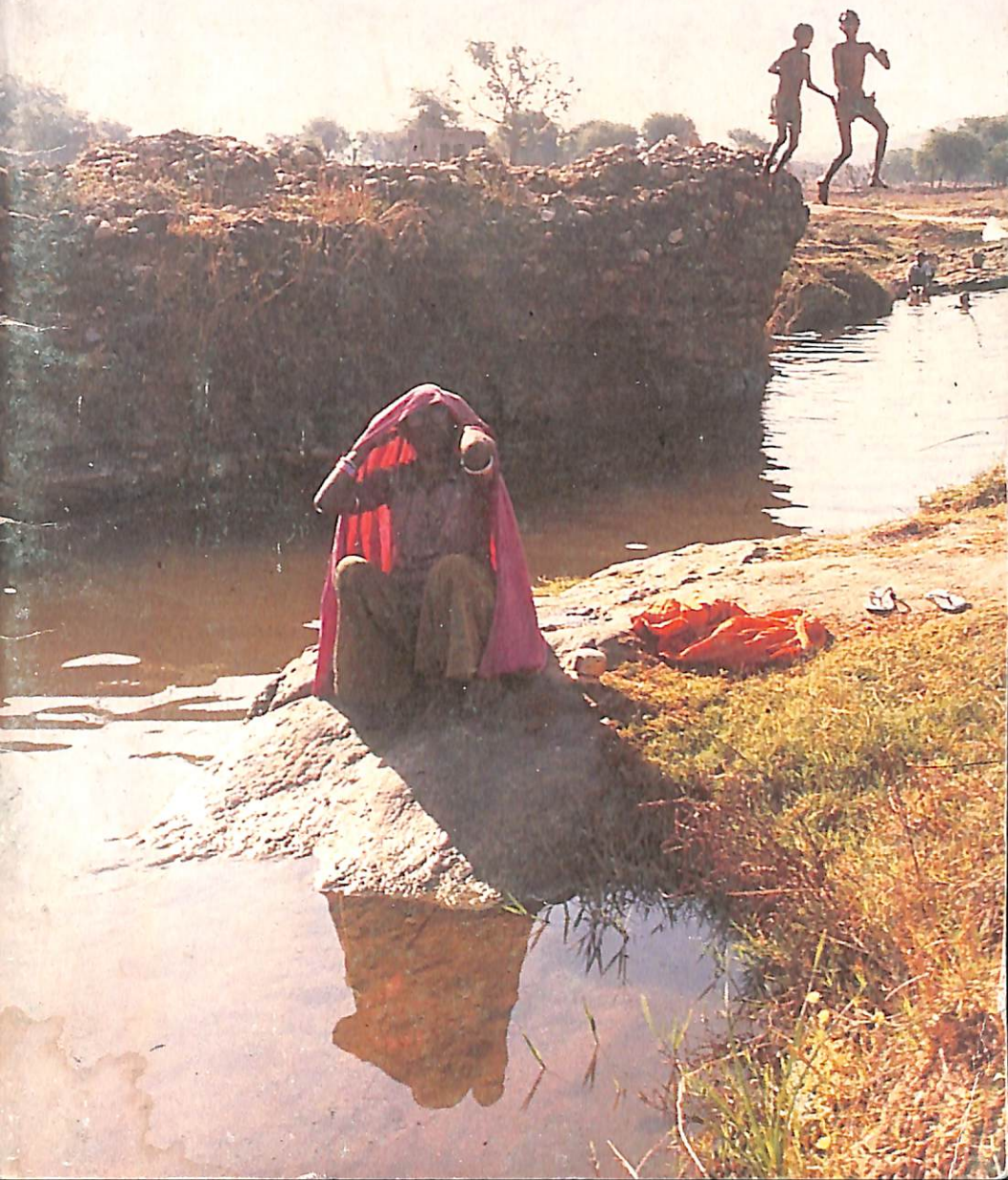
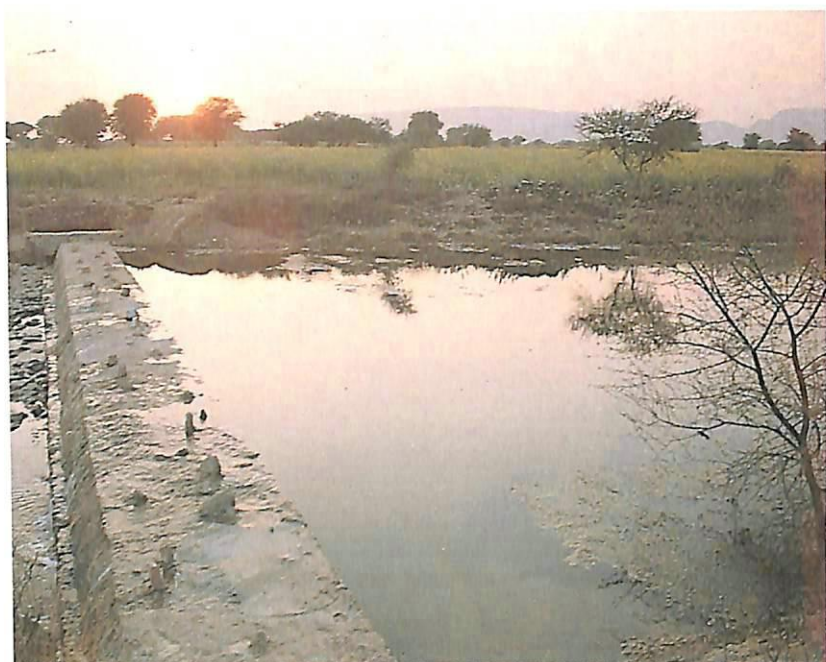


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FROM DEATH TO REBIRTH**

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## ABOUT AUTHOR

**J**ashbhai is a physicist. He took his doctorate from the Carnegie-Mellon University, Pittsburgh, U.S.A. Later, he worked as a post-doctoral fellow and research associate in three universities of America, namely, Northwestern University, Evanston, Rice University, Houston and Ohio University, Athens. In India, he taught at several places, the principal ones being Tata Institute of Fundamental Research (TIFR), Bombay, Indian Institute of Technology (IIT), Kanpur, IIT, Bombay and Bombay University Department of Chemical Technology (BUDCT), Bombay. He took voluntary retirement at the age of 45, to pursue his other interests. Apart from his research papers, articles in various journals, he wrote several books, of which two are of general interest. He does social work individually, within the limitations of his personal capacity. He is at present in his 70th year. □



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## ACKNOWLEDGMENT

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**Front Cover** : Rivulet Arvari

अरवरी नदी

**Back Cover** : Well known environmental specialists and villagers of

Hamirpur sitting on the bank of Rivulet Arvari

अरवरी नदी के किनारे बैठे देश के जाने-माने पर्यावरणविद् एवं

हमीरपुर गाँववासी

# STORY OF A RIVULET ARVARI FROM DEATH TO REBIRTH

**T**his is a story of a small river Arvari in the District of Alwar in the State of Rajasthan. This river had dried up for years and has come to life in recent years. The story of this river's rebirth is told to me by the inmates of **Tarun Bharat Sangh**. And, I narrate it here. Before, I narrate the story, the readers might want to know something about **Tarun Bharat Sangh (TBS)** below.

**Tarun Bharat Sangh** is situated between two villages whose names are **Bheekampura** and **Kishori** respectively. The nearest big town is Thanagazi which is about 20 km from Bheekampura-Kishori. The city of Alwar is about 40 km from Thanagazi. Sariska, the pride of Rajasthan, and one of the famous sanctuaries of India is

just 8 km from Thanagazi. This is then, the ideal location of TBS, which is just half a kilometer from the outer boundary of Sariska.

**Tarun Bharat Sangh** came into existence in the University of Rajasthan, Jaipur in 1975. The members of TBS came to Bheekampura in 1985. They undertook the survey of the region between 1985-1987. It is then, they decided to begin the rural watershed work in the nearby villages. Since then TBS has grown big and its activities are numerous that its account is placed in Appendix-I. Interested readers should refer to it.

Now we begin with the story of the rivulet Arvari. The first step to make this stream alive was taken in 1987 by constructing a small water harvesting structure, called Johad (in Rajasthan), in a village Bhavta. Later, seeing the advantages of Johads, many villagers came forward to build such structures in their own areas. In 1988, Johads came up in several villages, such as, Bhuriavas, Dumli, Khadata, Khatala, Samatsar, Chosla, Lalpura. This trend continued during the years 1989 to 1991. More Johads were constructed in places such as Palasana, Joge-ki-dhani, Hamirpur, Samra, Natata, Kaled, Jagnathpura and many others. Now there was simply a craze for Johads. And, to this date, there are 200 Johads in the catchment area of the river Arvari.

Water, in the Johads, raised the water-table in the entire catchment area of the river. This, in turn, enriched the forest in the same area. Forests and scrubs helped to retard the run-offs of monsoon waters. This way, in a decade, the river Arvari came to life from a dried up, dead water-course. Today, the river-flow continues the year round. At

places, the river is full of fishes, which attain a length of 2 feet and weigh up to 7 kg. There are lush green fields of wheat, gram and mustard on its banks in winter. It is a joy to observe this remarkable change.

The major portion of the catchment area and more than half of the river Arvari's length is in the Thanagazi block of the Alwar District. Hence, to get a glimpse of the topography and other relevant information of the region we refer to the geography of the Alwar District as compiled by others and whose original source is not known to me.

### **1. Geography of Alwar District**

**Location and climate :** *Alwar District is located in the north-east of Rajasthan, Western India, between 27° 15' and 28° 15' N latitudes and 76° 15' and 77° 0' E longitudes. Temperatures of the area fluctuate from 0°C during some cold winter nights to as high as 49°C during summer season. Mean relative humidity during fall weather is 63% while average annual rainfall is around 620 mm. 90% of the rainfall occurs during monsoon months (July to September).*

*Topographically, the Alwar tract may be divided into two zones (a) Hilly area comprising Thanagazi, Rajgarh, Bansur and parts of Mandawar, Behror and Alwar-Sadar Tehsils and (b) the remaining parts having more or less plains like appearance with very small and low hill like terraces or plateaus. The well-known Sariska Tiger Reserve encompasses about 866 sq. km area in Thanagazi, Rajgarh and Alwar-Sadar Tehsils. Total area of district Alwar is 8,380 sq. km with a population of 22,96,580 living in its 1991 villages and 5 towns.*

**Vegetation and biodiversity of the district :** *Climatically Alwar District is semi-arid with a meagre 620 mm. annual average rainfall. Forests found here are deciduous in nature, most trees having shrub like appearance with low height, small leaves and thorny branches and stems so typical of desert vegetation. Biological diversity of Alwar is one of the most significant in entire Rajasthan and even in entire India. As many as over 12000 wild species of flora and over 5000 wild species of fauna are found in this area. This is when a number of biologically rich areas of the district such as Sariska have not yet been completely surveyed and explored. This diversity is not only significant, but is unique too. Many species of plants as well as animals, found here are believed to be endemic. A great range of medicinal plants and shrubs are found in the district. In the case of fauna also, endemism is high among groups like reptile and aves as well as invertebrates and insects. (Dhaberia, personal communication)*

**Present state of conservation :** *The present situation of natural vegetation and its biological diversity in the district is extremely poor and so disrupted that it is difficult to even assess it properly. This destruction of biodiversity is being caused by many factors and reasons; but policies and laws introduced and enforced by government play a significant role in this regard. Floods, droughts, desertification, etc. also affect and degrade biological diversity. The destruction of biodiversity is in turn producing adverse effects on climate and human welfare. Currently at least 3% of the recorded wild flora and an approximately larger fraction of wild fauna are on the threatened list. Many of them are on the border of extinction. For example, among trees the most important species Chandan (*Santalum album*) and Kadamb (*Anthocaphalus indicus*) are on the verge of extinction. Similarly, many species of mammals, such as Tiger, Leopard and Four-horned antelope (*Tetracerus Quadricornis*) are threatened species. And this should not surprise one, for in the last few decades, this region has lost about 70% of*



its forest. This happened due to abandoning of traditional conservation and management practices for natural resources and biological diversity. Habitat and ecological destruction through encroachment, hunting, wood stealing, over exploitation, poisoning by pesticides, and chemical fertilizers, excessive zoological and botanical collections, displacement of indigenous species by exotics, mining and quarrying have all contributed to this colossal destruction. Almost all government policies, rules, regulations, and schemes end up working in a negative direction, especially at grassroot levels. Today, even in traditional communities, village institution and traditional system of natural resources conservation and management stand seriously deteriorated. The new value system and enforced state control over land, have placed communities aside and away from management of natural resources and conservation of flora and fauna.

Since, there is no adequate record of wild biodiversity in past, no one can say for sure as to how many species we have already lost. There must be hundreds of species of wild flora and fauna which have gone forever, unsung and unrecorded because we do not even know that they existed. The process continues for a number of species and sub-species as habitats which have scarcely been explored continue to be destroyed.

## **2. Ethnic features of communities of Alwar District**

Most of the ethnic groups and subgroups of Indo-gangetic plains are found in this district. But two major communities, namely Gujars and Meena tribes are prominent in this tract. The hamlets of Gujar tribes are found more in hilly regions because their main occupation is animal-husbandry. Meena is a scheduled tribe of the area and is primarily engaged in agriculture. However, after agriculture, animal-husbandry is the second occupation of Meena tribe. Gujars are nature lovers and prefer wilderness for their

*habitat. The average land holding per household is between 1 and 1.5 hectare, while the number of cows and buffaloes ranges between 10 and 15 per household. Both Gujars and Meena have direct dependence on forest resources including grasses, fuel wood, leaves, honey etc. Both communities are known for their interest in conservation and their traditional skills, strength and self-discipline.*

### **3. Government efforts at conservation**

*In princely states forest and other natural resources were managed by a complex mix of practices and traditions. Formal official activities regarding natural resources management and conservation started only after the Independence. In 1956 soon after formation of present day Rajasthan State, Sariska which had already been declared as a 'Shikargarh' (hunting reserve) by Maharaja Mangal Singh in 1885 was converted into a*



Women discussing on reforestation and water conservation at village Lal Pura

*'Sanctuary'. Finally Sariska became a 'Tiger Project' area and a 'National Park' in the seventies. Thus the level of official efforts, laws, policies, activities, boundaries etc. in context to 'Sariska' have changed from time to time. This has had severe implications for the villages in the surrounding area as well as for natural resources of Alwar.*

## **RIVER ARVARI**

The river Arvari, as noted earlier, originates in the Thanagazi block of Alwar. The northern catchment area of the river is around Kankad-ki-dhani. Of the two sources of the river, one source stream originates near the village Bhavta and the other source stream originates near the village Agar. Also, near the village Amka, there is a third stream, quite close to the second one, that gets lost in the ground. Thus, the two remaining source streams meet near the Ajabgarh-Pratapgarh road, at a place called Palasana-ka-Pahad. From this point on the river is known as Arvari. This rivulet runs down to the village, Hamirpur and meets Nahar-Nala, a stream from the west. At this place, TBS, has built a small dam whose length is 500 feet and the height is 11 feet. The small lake, the dam forms, is named Jabbar-Sagar, whose submergence extends up to 3 kms upstream. The over-flowing water now makes its way downstream and meets Samrawala-Nala, a stream coming from the East, just north of the village Samra. Another stream, called Gujro-ki-dhani, which too comes from the East, meets Arvari south of Samra. A western stream, named Nijrawali-dhani, also joins Arvari north of the village Kaled. At Kaled, TBS has constructed another small dam, whose length is 250 feet and the height is 12 feet and a small lake named Kunj Sagar, is formed and its submergence also extends up to 3 km upstream. The water flowing over the dam continues its course downstream and leaves the Thanagazi block of Alwar and enters

into the Jamva-Ramgarh block of Jaipur near the village Basi. South of Basi, comes another sizable stream from the village Dageeta, which is located in the Jamva-Ramgarh Wildlife Sanctuary of the Jaipur District. This stream joins and augments the river Arvari. The augmented river Arvari further joins an equally big tributary near the place called Romewala - the tributary having its origin around the village Lothabas in the west and then passing through the Jaitpur-Gujrun, Rasayawala and Rayanwala regions. By this time, Arvari becomes a river in her own right and gets lost in her own big reservoir, Sainthal Sagar, which came into existence due to a large dam on the same river.

Here ends the story of the reborn river Arvari, which gave hope, happiness and health to all the residents of some 70 villages on her banks – 35 villages in the Thanagazi block of Alwar and 35 villages in the Jamva-Ramgarh block of Jaipur. Let this noble river bring peace and prosperity in the whole region.



Arvari flowing over the Jabbar Sagar Dam at Hamirpur



The revival of the Arvari has provided the womenfolk with gainful employment

## **Bandh, Anicut, Johad and Medbandhi on the Arvari River**

1. Bavdiwala Johad; 2. Sadhu Gurjar ka Bandh, **Amka**;
3. Rampal-ka-Anicut; 4. Rajonath-ka-Anicut, **Narhat**;
5. Kankarwali Johadi, **Kankar ka Guwara**; 6. Namkyawala Bandh, **Dholi danthi**;
7. Gopal Das ka Johad, **Chandla ki Dhani**;
8. Kana Gurjar ka Bandh, **Dabka**;
9. Jamburi wali Johadi, **Jatya ka Haar**;
10. Dhina Johad ka pas wali Johadi;
11. Hardeva ki Dhani ka Johad, **Hardeva ki Dhani**;
12. Dudika ki Dhani ka Johad;
13. Bhagwana ka Johad, **Dudika ki dhani**;
14. Baudi wali Johadi, **Ranawala**;
15. Pila Johad, **Bhadaz**;
16. Sama khora ka Johad;
17. School ki Johadi;
18. Pachveer wala Johad, **Chausala**;
19. Khora wali Johadi, **Galasya ki dhani**;
20. Pachveera wali Johadi;
21. Khanga Gurjar ka Bandh, **Toda**;
22. Bandi Johadi;
23. Chocha wali Johadi;
24. Nahar Singh ka Bandh;
25. Thakura wala Bandh;
26. Kani wala Bandh;

27. Kani ki medbandhi; 28. Sankda ka Bandh; 29. Babaji wala Bandh, **Bhanwata**; 30. Ramkishan Bhopa ka Bandh; 31. Narain Bhopa ka Bandh; 32. Chaju Bhopa ka Bandh; 33. Dhana lomodka Anicut; 34. Kolyali Johadi; 35. Khanyali Johadi; 36. Arjun ka Anicut; 37. Sharwan Bhopa ka Bandh; 38. Sharwan Bhopa ki medbandhi; 39. Gopal Tanwar ka Anicut; 40. Harsahay ka Anicut, **Kolayala**; 41. Musana wali Johadi; 42. Bishana ka Kuya ka ikswali Johadi; 43. Pokhar patal ka Bandh; 44. Badwala Guwara ki Johadi; 45. School wali Johadi; 46. Bharta ki dhani ka Johad; 47. Muchand Balayee ka Anicut; 48. Pheta wala khet ki medbhandi; 49. Bhadri Gurjar ki medbandhi; 50. Doda wali Johadi; 51. Bhopa ki dhani ki Johadi; 52. Harsiwas wala Johad; 53. Kankarwali Johadi, **Bhuriyawa**; 54. Ghati tala ki Johadi; 55. Nabha wali Johadi; 56. Panna Gurjar ka Anicut, **Khardata**; 57. Lalakala ki Johadi; 58. Raigarawali Johadi; 59. Ramdhan Meena ka Anicut; 60. Ghiri wala khet ki medbhandi; 61. Ganwa wali Johadi; 62. Gopi Meena ka Anicut, **Dumoli**; 63. Hari Singh ka Anicut; 64. Mool Singh ka Anicut, **Khatala**; 65. Ramprasad Meena ka Bandh; 66. Pipal wali Johadi; 67. Pachveera wali Johadi; 68. Chokidara wala Johad, **Sanwatsar**; 69. Jhalra wala Johad; 70. Pachveera ki Johadi; 71. Nal wali Johadi; 72. Bandh wali Johadi, **Nangel**; 73. Radi wali Johadi; 74. Khodawala Bandh, **Chawa ka was**; 75. Gudheyawala Johad; 76. Ram talayi; 77. Pagdi uper ki Johadi; 78. Gasi ka Anicut; 79. Mahadev ka Anicut; 80. Taja wala Anicut, **Darolai**; 81. Lalpura ka Johad; 82. Lalpura ki Choti Johadi, **Lalpura**; 83. Sanjyanath ka Johad; 84. Ganwa wali Johadi; 85. Gurjara ka Guwada wali Johadi, **Palsana**; 86. Talwada ki Johadi, **Chandpura**; 87. Benada ka Johad; 88. Mandayawali Johadi; 89. Dadi wala Bandh; 90. Rudaka khet ki medbandi; 91. Jogio ka Johad-I; 92. Jogio ka Johad-II; 93. Gali ka Johad; 94. Khairu wala ki medbandhi; 95. Bhagirath ka Anicut; 96. Jabar Sagar; 97. Bewdi Bandh; 98. Bayesa Bandh; 99. Badri Bandh; 100. Nayma wali

medbandhi-I; 101. Nayma wali medbandhi-II; 102. Lamoda ka Johad; 103. Sadak ka pas ka Johad; 104. Chari wala Bandh; 105. Nagrakala ki medbandhi; 106. Adwa ki medbandhi; 107. Bharthari wala Johad, 108. Ghati wala Johad; 109. Chetr Meena ka khet ki medbandhi; 110. Nayamwala Bandh; 111. Ramkumar ka Bandh, **Hamirpur**; 112. Mota wala Johad, **Paidyala**; 113. Pipal wali Johadi; 114. Ghuggi wali Johadi; 115. Jhadkha wala Bandh-I; 116. Jhadkha wala Bandh-II; 117. Jagarnathpura wala Bandh, **Jagarnathpura**; 118. Mulchand Meena ka Anicut; 119. Bhatala ka Bandh; 120. Ghati wala Johad, 121. Thighrya wali Johadi, 122. Patwari ka Bandh; 123. Bhodhu ka Bandh; 124. Rawta ka Bandh; 125. Ghara ka Bandh; 126. Kalu ka Bandh; 127. Dkalyaka ka Bandh; 128. Lalolaye ka Johad; 129. Kotiyo ka Johad; 130. Modala ka Bandh; 131. Kadla ki Johadi; 132. Asudhal ki pati; 133. Nalka Bandh; 134. Nalka Guwadaki Johadi; 135. Sharwan Meena ka Bandh, **Samra**; 136. Kamala ka Johad, **Pipalay**; 137. Dandh ka Johad; 138. Kala khet ka Johad; 139. Khati wali Johadi; 140. Maliayo ka Johad; 141. Kunj Sagar; 142. Dokriwali Talaye; 143. Chorala Bandh; 144. Manayakala Bandh-I; 145. Manayakala Bandh-II; 146. Ronjali Talayi; 147. Ghankdaya wala Bandh; 148. Chandhala ka Johad; 149. Khari kund ka Johad; 150. Khan ka Johad; 151. Pipalwali Talayi; 152. Kalidab ka Johad, **Kaled**; 153. Raval Bandh; 154. Lamoda ka Bandh, **Davkadavra**; 155. Kundayala ka Johad; 156. New Bandh; 157. Uparla Johad-I; 158. Uaparla Johad-II; 159. Samla kayar ka Johad; 160. Bajrala Johad; 161. Baksa Gujar ka Bandh; 162. Parbhat ki medbandhi; 163. Gajdeesh Gurjar ka khet ki medbandhi; 164. Kumharo wala Bandh, 165. Mulchand Gujar ka Bandh; 166. Damol Singh ka khet ki medbandhi, **Jatpur Gujran**; 167. Bhojaykal ka Anicut; 168. Palakua ka Johad; 169. Cheelawala Bandh; 170. Phtalika Johad; 171. Ghojar wali Talayi; 172. Kankad wala Bandh; 173. Bara wala Bandh;

174. Kankri wala Bandh; 175. Badayala Bandh; 176. Gangaram ka Johad; 177. Babaji ka Johad, **Nitata**; 178. Pachveera ka Johad, **Raysar**; 179. Pipalwala Johad; 180. Badi Johadi; 181. Master ji ka Johad, **Khanya**; 182. Tajaji ka Johad; 183. Solkala Bandh, **Bassi**; 184. Munglali Johadi; 185. Karayli Johadi; 186. Jadayala Johad **Dagota**; 187. Kagola Bandh; 188. Kamalawala Bandh, **Neemla**; 189. Bharu Meena ka khet ki medbandhi, **Shrinagar**; 190. Dakav wala khet ka Bandh; 191. Nari wala khet ka Bandh; 192. Mulchand ka khet ki medbandhi **Thali**; 193. Kasolayla wala Bandh; 194. Ramjilal ka Bandh; 195. Sukdav Meena ka Bandh, **Ramayala**; 196. Nath ji ki Johadi; 197. Sadak uprla Bandh, **Kisnala**; 198. Koliahli Johadi, **Riksa (Jagtsar)**; 199. Bhagwan ka khet ka Bandh, **Chatarpura**; 200. Nimdekala Bandh; 201. Hanuman chokidar ka khet ki medbandhi, **Gheri**.

#### **Further Additions During April-June 1997**

202. Laxman Nminai, **Hamirpur**; 203. Girdhari Meena ke Khet ki Maid-I; 204. Girdhari Meena ke Khet ki Maid-I; 205. Nandi Ka Bandh, **Mandala**; 206. Randham Regar Ka Khet Ki med-I; 207. Randham Regar Ka Khet Ki med-II; 208. Randham Regar Ka Khet Ki med-III; 209. Gopal Sharma Ka Bandh; 210. Gopal Sharma ka khet ki med, **Hamirpur**; 211. Radhala ka bandh; 212. Mulchand Meena ka anicut, Samara; 213. Kumharon ka khet ki med, **Jaitpur Gujran**; 214. Chhaju Meena ka khet ki med, **Hamirpur**; 215. Shrawan Meena ka bandh, **Thagargya**; 216. Brahmanon ka johad; 217. Prabhu Sharma ka bandh, **Rasala**; 218. Khatikan ka johad; 219. Ramji lal sharma ka khet ki med; 220. Nyali Nala ka Bandh; 221. Nahariwala bandh; 222. Kalyan barana ka khet ki med; **Thali**; 223. Chhotu Khatik ka khet ki med-I; **Nabhala**; 224. Chhotu Khatik ka khet ki med-II; 225. Chhotu Khatik ka khet ki med-III, **Thali**; 226. Nabhula ka anicut, **Nabhala**; 227. Dukhbhanjan ka talab, **Thali**; 228. Bhagawan ka Anicut, **Chatarpura**; 229. Kala khet ka johad, **Manpura**; 230. Puenweeran ki Johadi, **Panchbadi**; 231. Sravan



Bhopa ki medbandi, **Kolyala**; 232. Hanuman yhakidar ka khet ki med, **Jheeri**; 233. Bharata Gurgar ka Jahad, **Jaipur Gujran**; 234. Jhotala ka Johad, **Nitata**; 235. Deo Narayan Ka Khet ki mad; 236. Ram Kalyan ka khet ki med; 237. Jagadish ka khet ki med; 238. Thakadar ka Johad, **Deo Ka Deovara**

## QUESTION OF ARVARI'S OWNERSHIP

**T**he river Arvari came to life in 1994. Then, there arose the question of Arvari's ownership. Before that, nobody bothered about its existence. It was a dead dry water-course through which water flowed down only during the rainy days in the monsoon months. Now, the Government of Rajasthan claimed the river. Obviously, the people of the area could not agree with the Government officers' claim because they (people) gave life to the river. Here is then, the dilemma of Justice.

No doubt the river Arvari belongs to India under the jurisdiction of the Government of Rajasthan. And, in this sense, the Rajasthan Government's claim to the river is right. But then, the Government officers ought to know that the river Arvari is not their personal property that they can dispose it off as they like. The river is there for the good of the people residing on her banks. The Government's acts are there to use the river for the good of the people. They are not there to fetch revenue for the Government. Nor they are there to subjugate people. In this case, the river has come to life very recently. The aquatic life has just begun to thrive. And, here are the Government servants who are out to nip in bud all life in the river. This too, by taking shelter behind some acts, which, in

fact, are there to regulate their power so that they do not misuse them. Forgetting the rationale of the Government's acts, the officers took a course which in the long run will harm the river and will bring disrepute to the Government they serve. Let us see their doings.

The river Arvari began to flow for the full year in 1994. Since then, the aquatic life began to establish itself in the river. Towards the end of 1996, a fisherman noticed big fishes in the Arvari river. He approached the Rajasthan Government's fish department for the fishing rights. The contract for fishing was given to a fisherman named Latif on November 21, 1996. Latif, after obtaining the contract, went to Hamirpur to fish. The residents of Hamirpur were outraged. They told Latif that they had made the river and they won't allow him to fish in their river. Latif left Hamirpur and went downstreams to Samra the same day. Latif put his boats in water, but people gathered round and seized the boats. Since then, people maintain thorough vigilance and to this date (March 15, 1997) they haven't allowed Latif to fish in their waters.

Latif went to Alwar and lodged a complaint before the officers of the Rajasthan Government's fishing department. On November 30, 1996, Latif took officers and police to Hamirpur. The party went down the river and made the survey. Later, they gathered the people of Hamirpur and threatened them of dire consequences if they did not allow Latif to fish. During the conversation, the police party came to know about TBS support to them.

On December 2, 1996, the Department of Fishery, Government of Rajasthan served a notice to TBS and asked it to reply within a week. The notice was received by TBS on December 9, 1996. The notice made the following observation :

- ◆ The river belongs to the Government of Rajasthan.
- ◆ TBS is a party to the present agitation.
- ◆ The Fishery Department was giving fishing rights to fishermen for the past several years. (This was a big lie).  
And,
- ◆ If TBS continues to support the river Arvari's present agitation, then it would need to face dire consequences.

On December 15, 1996, TBS sent its rejoinder. It made the following points :

- ◆ The Arvari People Movement is right but TBS is not a party to it.
- ◆ The Fishery Department supply earlier contracts to TBS, so that it could see the terms.

The Fishery Department could not furnish the earlier contracts because it had none. The Arvari river was then a dry river course. Anyway, on December 17, 1996, the officers of the Fishery Department came to TBS for talks. TBS reiterated its stand and gave to the officers the copy of its rejoinder, the peoples' memorandum and a copy of TBS-worker's letter, which was sent earlier. Finally, during the talks, it was decided that the TBS should arrange a meeting between the area people and the officers.

Accordingly, on December 25, 1996, a meeting between the people and the officers took place at Hamirpur. The people told the officers that the river is theirs and they will not allow any fisherman to fish in their waters. The officers noted down whatever the people said. At the end, TBS functionaries and the people signed the notes. They thought that their view will be presented before the Government and the officers will help them as per the promise.

To the people's surprise, on January 27, 1997 the tehsildar came with the officers, the contractor and the policemen to inform the people that the legal steps will be taken against any person who will obstruct the fisherman from fishing. Also, legal steps were instituted against all the signatories.

People were prepared for any eventuality because they had organized themselves well since November 22, 1996. Thus, on January 28, 1997, a huge meeting took place in Hamirpur's Thai and people once again resolved to fight for their rights on the river. They declared "Satyagrah" against the Rajasthan Government. The agitation is on to this day.

The Arvari river came to life but its and its peoples' struggle continued (upto March, 1997).

Since March 1997 the struggle which was based on Satyagrah has finally brought results. People have won. The Government had to withdraw and cancel the contract of fishing. Now it will be a biodiversity protected area and the people have expressed their solidarity about it. People insist on the principle of live and let live even in relation to the fish and call it 'Jeeva Daya' i.e., mercy for every living being.

On 11th April, 1997, environmentalist from various parts of India gathered at Hamirpur to celebrate this victory of the people's Satyagraha.

## **Hamirpur Village (Alwar District)**

*As reported by Damandeep Singh  
in Indian Express of June 10, 1997*

In the harsh, low-rainfall, arid slopes of the Aravalli hills of Rajasthan, a minor conservation miracle has occurred. Aravari river, which had been completely dry for years altogether,

has come back to life through the concerted efforts of villagers assisted by a local voluntary group, Tarun Bharat Sangh (TBS).

The movement is really a decade old, though the river has only recently come back to life. It is one of perseverance, of attempts by villagers to improve their own livelihood and living conditions and in doing so aiding the rebirth of a perennial river in this unforgiving climate.

Nathu Ram, an old man of Hamirpur village, upstream of the river, where the villagers and TBS have constructed the 50 feet wide and 11 feet high Jabar Sagar Dam, said that in his six decades of life in the village he had only seen wells drying up and cattle dying. "Earlier we had to take the cattle out for water and grazing, but now we have plenty of water all the year round and productivity of the land is increased by three to four times." "Frankly we had no idea that we would revive such a big river when we began work in the villages of the region," admitted Rajendra Singh director of TBS rather candidly. "All we wanted to do was to work on reviving traditional water bodies of the villages called 'johads', as there was a tremendous demand for water in this dry region, as well as to protect the trees, forests and wildlife of the region."

Alwar district collector Deepak Upreti said the organisation had done very good work in places for soil and water conservation and "their approach of involving villagers was commendable. We feel organisations such as TBS should definitely be encouraged."

TBS started work in this region over a decade ago and efforts have borne fruit. Unlike the government programmes, their strategy was quite clear : Villagers had to be stake holders in whatever activity was undertaken which ensured its survival and long-term sustainability.

Organisation is a Gandhian voluntary group that started working on its own in the Alwar district and its work was later supported and funded by groups from Switzerland, the Netherlands and Germany.

Residents of Hamirpur paid nearly a fourth of the cost of the Dam besides contributing their labour. Every family contributed with labour, some also contributing monetarily, about Rs. 900 per family. The Dam is not the only the activity undertaken by the villagers of this region. They built and repaired nearly 1500 water structures including, johads, check dams, anicuts in the region, with nearly 200 being in the catchment of Arvari alone.

When water began gushing in small streams and nallahs along the course of the Arvari about two years ago, it became clear to the people that something major was happening. Singh said it was fortuitous that they began work from upstream region of the river which not only brought water back in the wells because of percolation from the johads, but the excess followed downstream into the channels of the streams which became the river.

TBS also simultaneously emphasised that though the water works were important, the villagers had to promise to help revive and protect the forests of the region. "We explained that if there would be no forests the rain, when it falls, would wash away the top soil from their farms and damage the water bodies that the villagers were building. Trees would also help in trapping the rainwater which would percolate into the ground and recharge their wells and, later the river," said Singh.

The villagers readily agreed and evolved their own rules on protection of not only the village common lands and trees

*[continued on page 29]*

Condition of the region before the arrival of TBS. In short we write : BEFORE

Condition of the region after the reconstruction by TBS. In short we write : AFTER



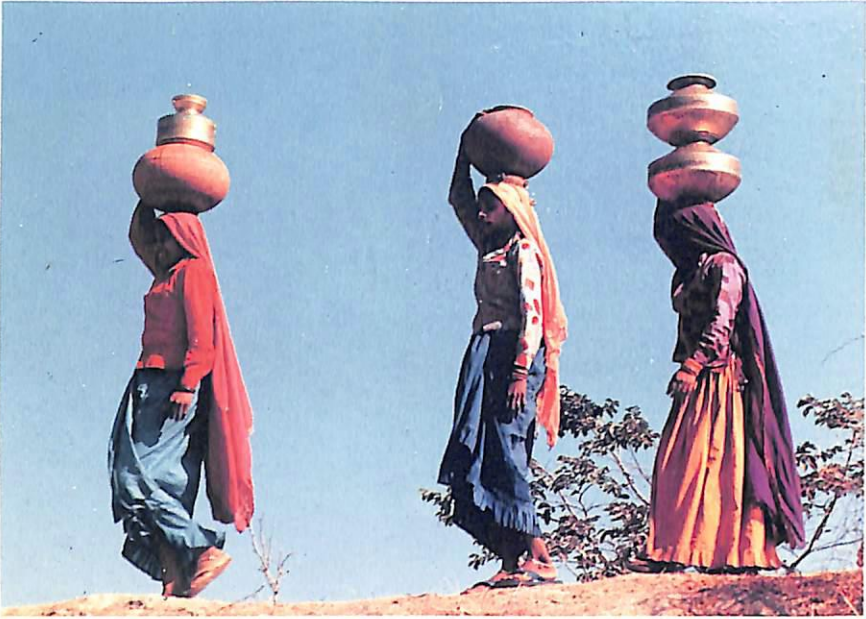
⬆️ BEFORE

Dry Topography of Bhavta



⬆️ AFTER

Lush Green Topography of Bhavta



 BEFORE

Women going to fetch water (Hamirpur Area)



 AFTER

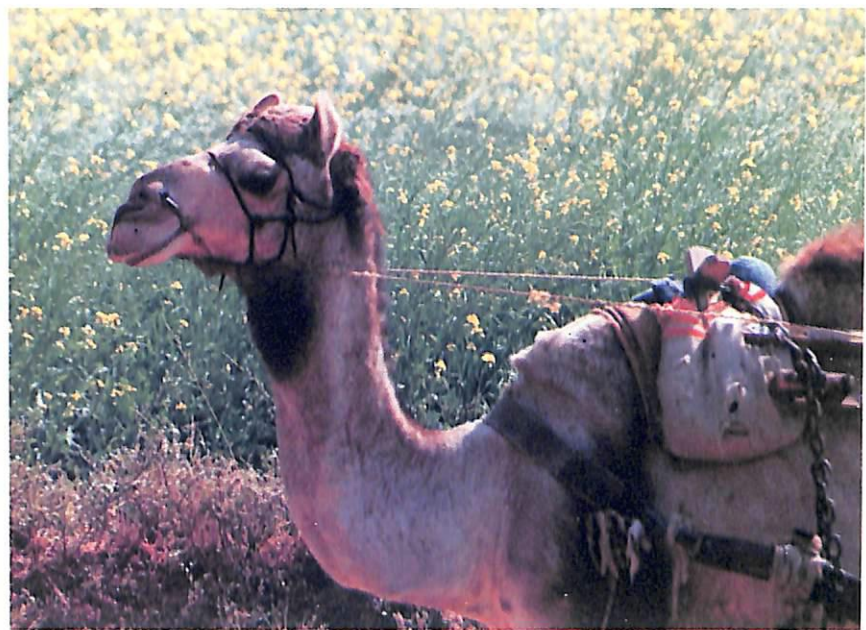
Women watching water and fishes at their door-steps (Hamirpur Area)





⬆ BEFORE A camel among the stones

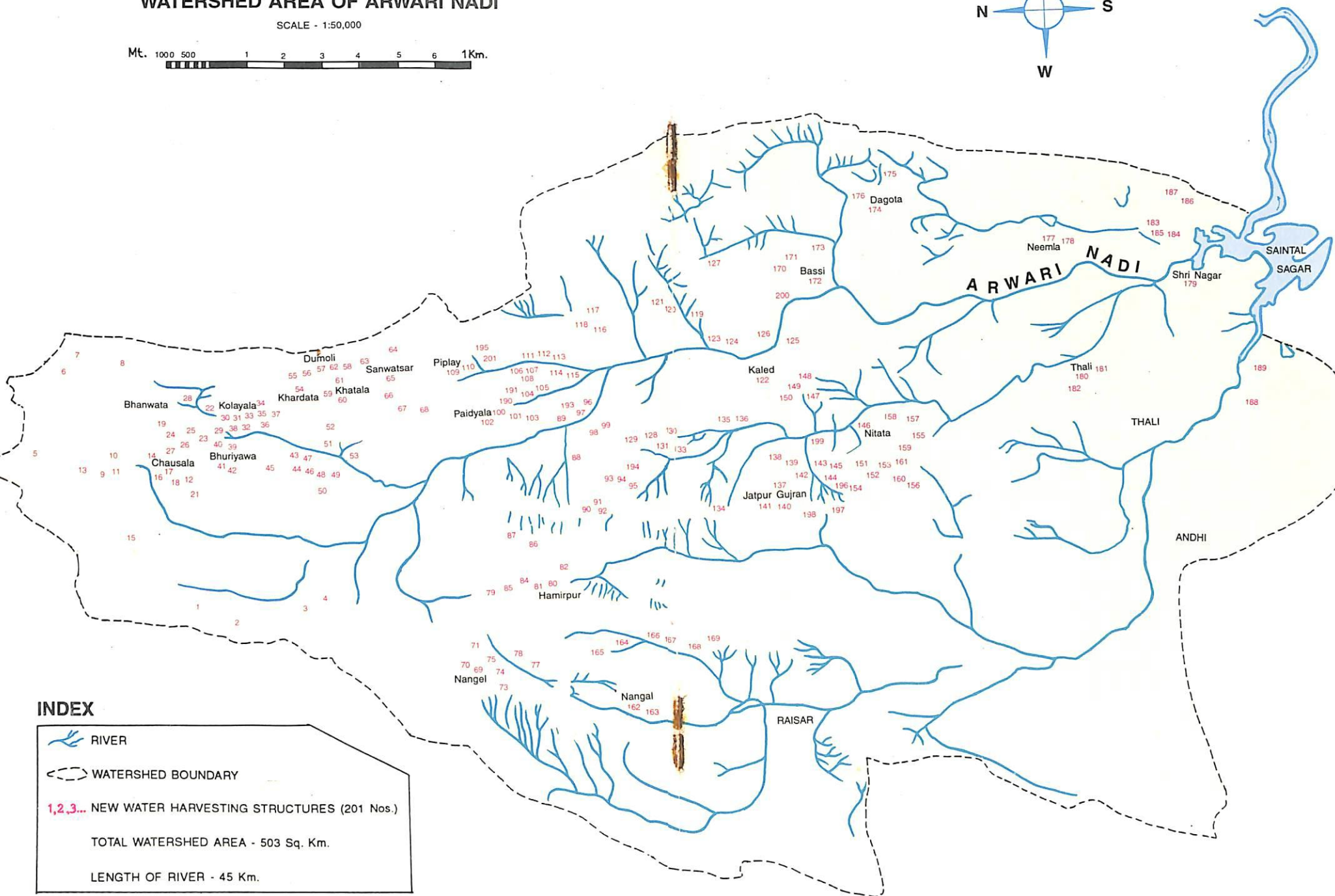
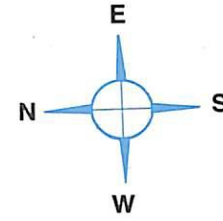
⬇ AFTER A camel among the lush green field



# WATERSHED AREA OF ARWARI NADI

SCALE - 1:50,000

Mt. 1000 500 1 2 3 4 5 6 1Km.



## INDEX

RIVER

WATERSHED BOUNDARY

1,2,3... NEW WATER HARVESTING STRUCTURES (201 Nos.)

TOTAL WATERSHED AREA - 503 Sq. Km.

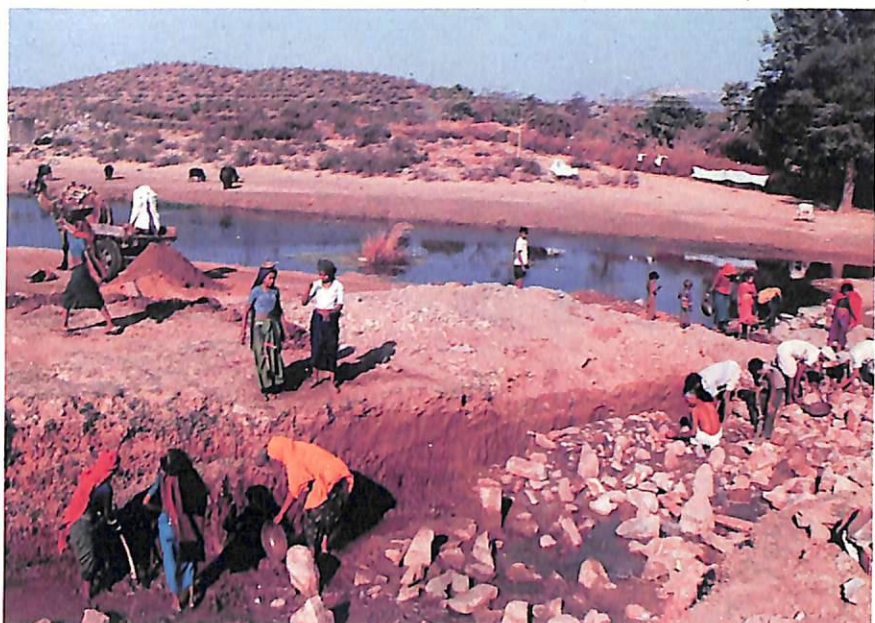
LENGTH OF RIVER - 45 Km.



TBS trained Civil Engineers on Arvari River

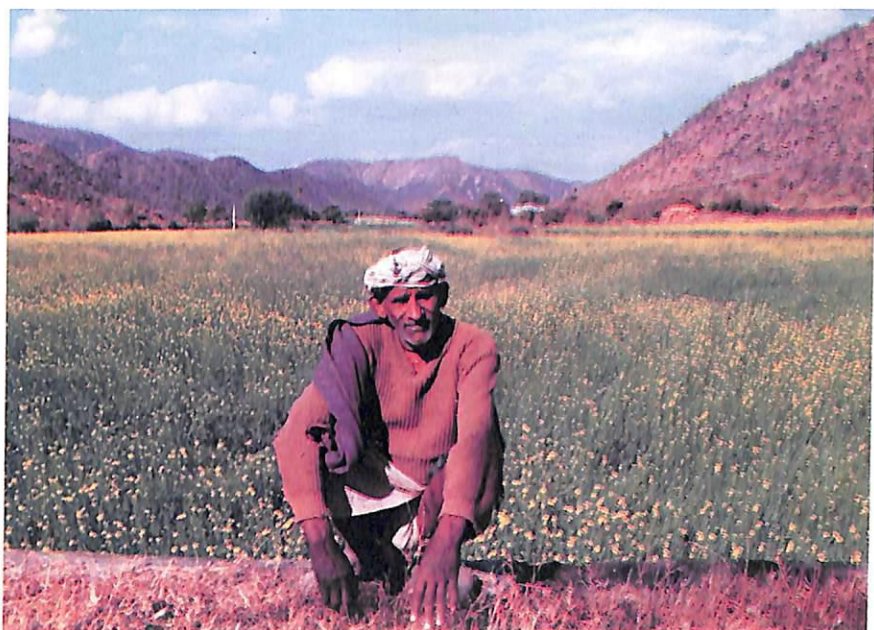
Jabbar Sagar Dam during construction (Hamirpur)





Kaled during construction period

A farmer in his changed field





Women at the side of recharged-well

Resolve to protest at village Devka-Devra (Beginning of Satyagrah)



but also the barren lands classified as "forests" under the control of the forest department. Fines were instituted for those found as much as carry an axe in their "protected areas."

All this has qualitatively changed the life of the villagers. Bardi Devi of Hamirpur, says that she had to walk over two kilometers just to fetch water but now there is water in river and in the wells. Children splash about in the river, women wash clothes, men have leisurely baths and even the animals have a ghat to bathe and drink.

Things have improved to such an extent that people who had earlier migrated out to live in slums of Delhi and Ahmedabad are returning to surrounding villages, said Kunj Bihari Sharma of the adjacent village. "Even the river has come alive with fish that are two feet in length and weigh up to 10 kg," he adds.

The fish too are protected and those found fishing are fined. The fisheries department of the government, on hearing of the fish had awarded a contract to Jaipur businessman to fish in the river. When he arrived in the winter the villagers drove him away saying that they had revived the river and the fish were protected according to their code.

Arvari, alive with fish, lined with trees resonating with the sound of chirping birds is alive once again and villagers are determined to keep it that way from now on.

### *Appendix-I*

#### **TARUN BHARAT SANGH**

TARUN BHARAT SANGH is a registered Non-Government Organization (NGO) funded by the following agencies :

Interkerkelijka Organisatie Voor Ontwikktingssaman werking (ICCO),  
P.O. Box 151, 3700 Adzeist, THE NETHERLANDS. □ Swiss



A Bandh on Arvari river at Bhavta

Organisatie for Development and Cooperation (SDC), Embassy of Switzerland in India, P.O. Box 392 NEW DELHI 110001. □ Inter Cooperation, C-51 Priyadarshi Marg, Tilak Nagar, JAIPUR 302004. □ Oxfam (India) Trust, F/13 Goyal Complex, Opp. Ashima Tower, VASTRAPUR AHMEDABAD 380054. □ Swedish Integrated Development Agency (SIDA), Embassy of Sweden, NEW DELHI 110021. □ Deutche Gesellschaft fur Technisch Zusammenarbeit (GTZ) GTZ Office, D/319, Defence Colony, NEW DELHI 110024. □ Council for Advancement of People's Action and Rural Technology (CPART), India Habitat Center, Zone-V, 2nd Floor, Lodhi Road, NEW DELHI 110003. □ Central Social Welfare Board Samaj (CSWB), Kalyan Bhawan, B-12, Tara Crescent, Institutional Area South of I.I.T., NEW DELHI 110016. □ Watershed Department, Government of Rajasthan, Krishipanth Bhawan, Vaniki Path, JAIPUR 302001

### **Membership/General Assembly**

Membership is open to all the villages of in the district of Alwar and the adjoining areas. Each village then sends its

representative or representatives. At present, there are 500 representatives from some 200 villages. These 500 members form the General Assembly. The Assembly meets every year in the month of October (1 and 2), during Gandhi's birthday.

## **Governing Board (1997)**

This body has 7 members, 5 men and 2 women. Their names are :

Shri Anupam Misra (President), Gandhi Peace Foundation 221, Dindayal Upadhyaya Marg, New Delhi-110002. □ Shri Bhupendra Nath Bhatia (Vice-President), 286, Adarsh Nagar Jaipur-302004. □ Shri Rajendra Singh (General Secretary and Executive-Coordinator), Bheekampura-Kishori-301022. □ Shri Sidha Raj Daddha (Sarvodaya Leader), Choura Rasta, Jaipur-302003 □ Shri Laxman Singh (Treasurer), Gampast, Lapodia-303008. □ Shrimati Kasturi Devi, Bheekampura-Kishori-301022. □ Shrimati Meena Singh, 34/24, Siddharth Path, Mansarover, Jaipur-302011.

## **WORKERS**

### **1. Staff for natural resource management-NRM**

Coordinator	1	1 male	
Supervisory Staff	3	3 male	
Intermediate Workers	9	4 male	5 female
Field Workers (Forest & W.L.)	2	1 male	1 female
<b>Total</b>	<b>15</b>	<b>9 male</b>	<b>6 female</b>

TBS trains local villagers and employs them from time to time

### **2. Staff for training program**

Coordinator	1	1 male	
Trainer	1		1 female
Documentation Assistant	1	1 male	
Researcher	1	1 male	
<b>Total</b>	<b>4</b>	<b>3 male</b>	<b>1 female</b>

TBS trains villagers and engages them as part-time workers from time to time. They are considered as resource personnel specialist.



### 3. Staff for agricultural program

Coordinator	1	1 male
Innovator and Tester	1	1 male
Incharge (demonstration)	1	1 male
Total	3	3 male

### 4. Staff for women development program

Coordinator	1	1 female
Supervisory staff	2	2 female
Total	3	3 female

There are about 70 village-unpaid-health-workers (Dais) and 60 unpaid women organizers.

### 5. Staff for health program

Coordinator	1	1 male	
Ayurvedic Doctor	2	1 male	1 female
Ayurvedic Pharmacist	1	1 male	
Total	4	3 male	1 female

TBS has trained 42 Health-Workers who carry Health-Kit and treat villagers in their homes.

### 6. Staff for organising new institutions

Coordinator	1	1 male	
Educators	4	1 male	3 female
Other	2	2 male	
Total	7	4 male	3 female

TBS has organized 95 Village-Level-Institutions, 15 District-Level-Institutions, 1 Farmer Forum and 1 Women Forum.

### 7. Staff for village industry

Coordinator	1	1 male
Other Staff	4	4 male
Total	5	5 male

Emergency relief is undertaken by this coordinator. No specific person is assigned for emergency.

## 8. Staff for administration

Coordinator	1	1 male
Controllor	1	1 male
Accountant	1	1 male
Adm. Assistant	1	1 male
Cashier	1	1 male
Computer Operators	2	2 male
<b>Total</b>	<b>7</b>	<b>7 male</b>

Field payments are done through intermediate workers listed under coordinator. (NRM).

<b>FULL STAFF</b>	<b>Number</b>	<b>Male</b>	<b>Female</b>
General Secretary	1	1	
NRM	15	9	6
Training	4	3	1
Agriculture	3	3	—
Women	3	—	3
Health	4	3	1
New Development	7	4	3
Industrial Production	5	5	—
Administration	7	7	—
<b>Total</b>	<b>49</b>	<b>35</b>	<b>14</b>

## ACTIVITIES

### 1. Rural Watershed Program

TARUN BHARAT SANGH is involved in Rural Watershed Development Program in the District of Alwar and the adjoining areas. It specializes in the construction of small reservoirs which are known as Johads.

### 2. Forest conservation and wildlife protection program

Johads recharge the soil in adjacent areas which sustains the growth of flora, the trees and reinforces the forest. The tree

planting program is also undertaken, keeping in mind the enrichment of biodiversity.

### **3. Flood Management Program**

The construction of Johads involves mud-embankments along the river's drainage system. This helps in controlling the floods.

### **4. Rural Employment Program**

The construction of Johads provides employment to villagers and thereby creates confidence in self-reliance. Spinning and cloth-weaving is encouraged to support the rural self-employment program.

### **5. Rural farm program**

Johads are constructed basically to promote agriculture in the rural areas. Agriculture needs manure and farm management. To meet manure requirements composting is encouraged. Improvement in farm management is done through traditional seed conservation. Obviously, surface-water management is taken care of by Johads.

### **6. Rural Health Care Program**

Emphasis is on the following :

- ◆ To identify herbal plants in Thanagazi Block.
- ◆ To set up a pharmacy to prepare 180 drugs. And to convert the present hospital into an Ayurvedic Hospital.
- ◆ To prepare Ayurvedic-Health kit and to train Health-Workers to carry and use this kit in the villages.
- ◆ To plant herbal trees in a field and create a Herbal Garden.
- ◆ To render whatever health care service TBS can provide to local population.

- ◆ Train local dais (midwives) and use them to propagate personal hygiene, pre and post natal care and family planning.

The final aim of the program is to teach the villagers how to prepare Ayurvedic medicines themselves and use them effectively. This leads to self-reliance in health-care.

## **7. Rural Education program for women**

For the present, TBS has opened four girl schools in four villages. To help the working young women, TBS has established 14 creches in 14 villages. The final aim is to extend this program to many more villages.

## **The Focal Point of Water Management and Community Shramdan.**

When in 1985 TBS volunteers arrived in Bheekampura, the land in Thanagazi was bleak and deserted. Even in winter, the few pipal and babul trees looked withered along the dusty roads. The Aravallis rising all along the plains, looked deserted. There were a few forest patches at the foot hills where the rain water ran down quickly along the hillsides, collected and then trickled away. It looked as if there was an imbalance waiting to be righted. Over years, the hills were scavenged of trees, as there were rich deposits of stone mainly marble. Everywhere the gashes from mining operations were visible. The greenery had all but vanished with rock and sand pouring down during the rains leaving huge gaps on the hill sides.

Initially TBS first focussed on village Gopalpura. Like most of Rajasthan in 1985-86, this village was also in the grip of a severe drought. Wells were dry, top soil had eroded, and water had to be fetched from 1.5 kms away. Agriculture was uneconomical. The result was that able bodied men had migrated

to Ahmedabad and Delhi in search of work. TBS touched by the misery, approached the BDO and the Junior Engineer for assistance as irrigation was under the latter's jurisdiction, and the existing village check dams were in a state of disrepair.

While the BDO and the JEN pleaded that they could do nothing from government funds, they assured them of technical help, if the villagers did the work voluntarily. TBS returned to Gopalpura determined to mobilise the villagers, who were persuaded to offer *shramdan* (voluntary labour). As a test case, a village johad was taken up for desilting, and deepening. This was in 1985. Two years later, the villagers could see the results of this reconstruction. the monsoon of 1986 came and went, and the water level in the johad was higher than before, and it was retained for a longer period than before. This enthused the villagers for a bigger task, that of masonry repair. The JEN provided them the technical guidance and supervision, and together with TBS's encouragement and liasioning, the reconstructed johad was a complete success. It was incredible for the villagers, because for generations they had not witnessed such a transformation. It was further incredible that it had all been achieved due to their shramdan, and the catalytic help of the TBS.

Restoring a dam which was 1,400 ft long, and 20 ft high with a width of 50 ft was hard work for a household population of 350 families. With 10,000 mandays and with sharing the cost of pucca repairs to the sluices and overflow systems, the tank was then restored to irrigate upto 600 bighas of agricultural land and service the population's domestic needs comfortably. Taking their inspiration from Gopalpura, Govindpura followed suit. CASA a development agency, offered food-for-work assistance and with 20,000 mandays, the 2000x15x5 feet dam was fully restored.

These two illustrations give evidence of people's commitment to community self-help, which is proclaimed in the democratic statements of the policy, and enunciated in the constitutional right to freedom of speech and of action. Gopalpura and Govindpura, illustrated what the first five year plan for Community Development had aimed at in 1952. The polity and strategy of India's first plan stressed that lasting benefits could occur only if the community participated. This was practically demonstrated in the villages of Gopalpura and Govindpura with villagers using their own decisionmaking powers, labour and management skills.

Power brokers could not stand the successful community development action and so heckled the TBS and the villagers, reversing the previous positive technical help given. The State Irrigation Department discovered to their chagrin, that their negligence was made transparent. Therefore, they irrationally declared the restored structure as illegal. Through sheer persistence, the government was finally made to revoke the order. Today in 1997 the tables are turned. It is the government that requests TBS and villagers to restore their dams, and even gives funds. Bureaucracy had neither the motivation or the community spirit to do what they should have ordinarily done as a course of routine. Now in 315 villages over 1500 water harvesting structures have been restored or newly built. It must be stressed that activities related to the johads are planned, decided, implemented, monitored and evaluated by the community.

### **The strategy used by TBS**

TBS by constant dialogue with the villagers around Bhikampur began to evolve a method of working with the people. Their strategy gradually crystallised into five principles.

The first was that the effort had to be a collective one in which all villagers would participate and benefit proportionately.

The second was that this collective wisdom would be conceived in an atmosphere where informal communication took place, and each and every one had an equal opportunity to talk and to be heard with respect.

The third was that once having taken a decision it would be strictly enforced, and the community would have its own self-discipline.

The fourth was that the community would be both collectively and individually responsible to implement the decision.

The fifth was that the community would only use outside help as a catalyst for their guidance and for the facilitation of the work process.

These were lofty tenets. How could a group of mostly illiterate and poor subsistence farmers, shepherd, blacksmiths, carpet weavers, who could hardly eke out a livelihood, arrive at such deep seated principles, of what in modern days we give such sophisticated terms as involvement, responsibility-taking, ownership and accountability.

Rajendera Singh, General Secretary, TBS talking about the numerous examples in the life span of the TBS clarified that it did not need to use such high sounding principles. He demonstrated how TBS lived by these tenets. In his simple matter-of-fact way says :

“We realised early on that just organising people to come together to listen to *bhashans* (speeches) would only end up in

empty words, and we would lose credibility. We did not want to do the work for them. It would be disrespectful to their dignity and make them dependent upon us as their forefathers were in the previous generations dependent upon the *daan* (favours) of the rajas, and the mercies of the tehsildar the patwari and *bhagwan* (God) knows who else—and yes, the dreaded moneylenders.

How could we get the villagers to form their own decision-making groups? How could we help them understand the system so that they could withstand the erosion of the community ethics? They had been ruled by outsiders for so long. They forgot how to make their own decisions in an informal traditional panchayat. With the new structure of the Indian Democratic Republic, there were many departments. There was the BDO, the official panchayat sarpanch and the many extension workers, but it seemed that they were concerned with their own glory. We talked to a few elders. They seemed to agree that having a *charcha* (discussion) on these issues would be a good thing.

“Yes let us call Ram Babu, he has been our *buzurg* (elder) for so long, also Lakhan bhai they said. And so came the names of the respected elders and their families .. a cultural norm which the bureaucracy only pays lip service to by calling for representation which creates vested interests. Soon these informal *hookah*-smoking turbaned gentlemen gathered around, and in no time at all they talked about their issues, and then stopped and looked enquiringly at the TBS members, as if asking them for solutions. Instead TBS member said mildly :

“How can you tackle problems, how can you get the materials you need ? ”

“the government”

“they have not done so for so long”

“then who”



“...what about you yourselves... yes, why not ? There is need for labour. Surely you can give and ... the materials.... we can find out where to get lime and boulders at the least price”.

An so went the discussion, till eventually the group found that they could provide most of every thing, except technical help. They also needed financial assistance to buy material. TBS was very firm that in some way the community should bear at least 25% of the cost of repair. When TBS worked out the benefits, the community eventually agreed to contribute. Thus the work of building Johads started.

## **WORK-DONE (1985-1997)/MONEY SPENT**

**TARUN BHARAT SANGH** began its preliminary work in 1985. Since then, till this day (1997), it has constructed 1500 Johads and has spent Rs. 4 crores on them. People's contribution covers only labour charges whereas TBS contribution covers part of labour charges as well as the material for the construction. This way Rs. 15 crores which includes land cost have been spent on 1500 Johads. The major contribution of 11 crore came from the people themselves. This is indeed praiseworthy.

During 1996 monsoon, Ramgarh and Kot-Kasim Block of Alwar district were ravaged by floods. TBS undertook flood relief work and repaired 10 or more Johads. The repair work cost them Rs. 3 lakhs.

In 1989, TBS members decided to build their own campus between Bheekampura and Kishori. People themselves came forward and presented 50 bighas of land for the desired purpose. Today 30 bighas of land are reserved for the forest, 17 bighas are used for agricultural work, and 3 bighas are occupied by the buildings.

- ◆ The building-complex consists of the following buildings :
- ◆ Double storey-office-building 100x60 sq. ft.
- ◆ Double-storey residential-quarters (20 rooms) 200x100 sq. ft.
- ◆ Hospital-building : 400x150 sq. ft.
- ◆ Training-complex : 200x150 sq. ft. and
- ◆ Guest house : 60x60 sq. ft.

In all, TBS has spent 15 lakhs of rupees on the building-complex. The Hospital-building houses a X-ray machine whose cost is about two and half lakhs of rupees. It is also equipped with various necessary accessories whose cost is about Rs. 2 lakhs. In a way, it is a good hospital for a way-out place.

Ayurvedic Hospital has four Vaidyas in Bheekampura-Kishori itself. These Vaidyas receive guidance from 7 other qualified Vaidyas who are occupying outstanding positions in the various Ayurvedic institutions of India. So far, TBS workers have identified and listed 135 plants in the Thanagazi block. They have also trained 45 Village Health Workers. They had organized a Lok-Vaidya conference in 1995 in which 52 Lok-Vaidyas came from the adjoining areas.

### **Social Impact on the Region**

It is time we ask : what impact TBS has made on the community it has served for more than a decade ? The first point to note is : the Government of Rajasthan has reclassified the Thanagazi block as white-zone which was classified earlier as dark-zone. This, in itself, is a significant testimony. Another testimony became apparent during the 1996 flood in the Alwar district. The Thanagazi-Rajgarh block which was protected by Johads suffered practically no damage whereas Ramgarh-Kot-Kasim block which was not served by Johads suffered severe damage. These two prominent evidences are gratifying to TBS.

There are other fallouts of TBS work : Food grain production has increased four-fold; although, number of cattle in the region has not increased, milk production is doubled. Wells are recharged and there is no scarcity of drinking water for human beings and cattle.

Before TBS undertook work in the region, the forest cover was 5%. It has increased now to 40%. In the vicinity of the village Bhavta, two leopards were sighted. In fact there were none earlier. Some portions of rivulets are full of fishes now. This is really wonderful. Johads have given employment to many over the years.

In other programmes of TBS, 200 women are self-employed in spinning and weaving, 150 girls between 5 and 14 years are studying in 4 schools. The local community has given the buildings and TBS has spent 5 lakhs of rupees on teachers' salaries over the past ten years. In 14 creches, there are 500 children in the age group 0 to 5. TBS has spent Rs. 25 lakhs so far to look after these children. TBS has been providing milk and snacks for the past ten years, as also for the women attendants' salaries.

This is then, in brief, the achievement of Tarun Bharat Sangh. This achievement is also shared by the funding agencies who have contributed in all Rs. 4 crores so far.

## *Appendix-II*

### **THE JOHAD AS THE PIVOT OF DEVELOPMENT**

TBS has not suddenly hit upon the johads as the primary task. They had done a great deal of spade work before setting upon the water management system as the pivot of solution finding to the economic problems of the community. There was a

rich heritage of water harvesting in Rajasthan. In earlier times the area around the Aravalli hills was known as "Khandavprashth, which was full of johads (water tanks) said to have been built by the Pandavas who had spent some time in the forests. The inhabitants of the Khandavprashth depended on forests for fuel wood, fodder and timber, and on water for from springs, streams and ponds. From excavation around Bhangarh in the district, it appeared that the johad also served as a centre of major social activities. Most of the johads in the Aravallis are built along the contours of mountain slopes for arresting and storing the flow of rain water. The johads were skillfully built such that its concave shape with width more at the point where the mainstream contributes the run off as compared to the rest of the hills contour, ensured a supply of stored water. The term johad is derived from the word bravery. The building of a johad was a socio-religious event and served socio-religious community functions. During the colonial period the building and maintenance of johads was not supported. Shri Anupam Mishra wrote in his article "*aj bhi khare hai talab*", that in the state of Mysore it was the Raja who paid for the maintenance of 39,000 johads, which the British reduced by 50%, and which were handed over to the PWD by the Indian administration. Due to lack of interest in realising how important the johads were for the survival of rural communities, their maintenance by 1970 was completely abandoned. TBS had observed from various evaluating agencies the importance of a johad in the life of a rural community. Having adequate and regular water in johad increased agricultural acreage and productivity, increased the yield of annual produce, augmented water streams, recharged ground water, and water in wells and ponds prevented soil erosion, and increased water retention. These effects could in general affect the quality of life of villagers especially women and children (Rajendra Singh, and Dinesh Singh Role of regional streams and village ponds in NCR. An experience from Aravalli Hills Mimeo 1990), and so armed with this technical,

economics and social information the TBS tackled this life saving problem of water in arid Thanagazi.

The first step was creating awareness through informal meeting and the people observations that the johads had gone out of use and villagers needed to take some action, as this was their major source of sustenance. The awareness creation went like this.

“Where is your water source ?”

“The johad”

“Is it sufficient ?”

“You can see that it is dry and filthy, we have to use it for drinking and washing, both for ourselves and our animals. This is a curse on us. Our forefathers had at least some water, but now because of the continuous draining of silt from the hills, we get little.”

“How so ?”

“You see those hills. Once the gods favoured us. There was so much greenery that the trees held the water and we got the percolations, except when the monsoon went dry and then we had no other storage. Now the mountains are bare of greenery, and the silt chokes up the johads, and then there is no running water along the nadis which are dry even during the rains as there is no place built to catch the water”

“Why are the johads not cleaned then ?”

“That is the work of the *sarkar*”

“Do you think that waiting for the *sarkar* to do it will be of much help ?”

“They do not even visit us, what to talk about help and then when we ask for clean water there is much delay, too many excuses which we know means that they want *rishwaat* (bribes)”

“Why do you wait for them ?”

“What is the alternative ?”

“In the days when there was no government and you just had the ruler’s patwari, did you depend upon a government ?”

“No, but what is the alternative ?”

“Do it yourselves”

“Are you joking.”

“No. Suppose we were to help you rebuild the johad and reconstruct the dams and build new ones, then ?”

“Show us how ... remember we have no money or materials”

“How is an embankment built ?”

“With stones and lime”

“You have the stones, you just have to buy the lime.”

“Alright let us look at the alternative, if you have enough water for irrigation. How much per crop are you getting now.”

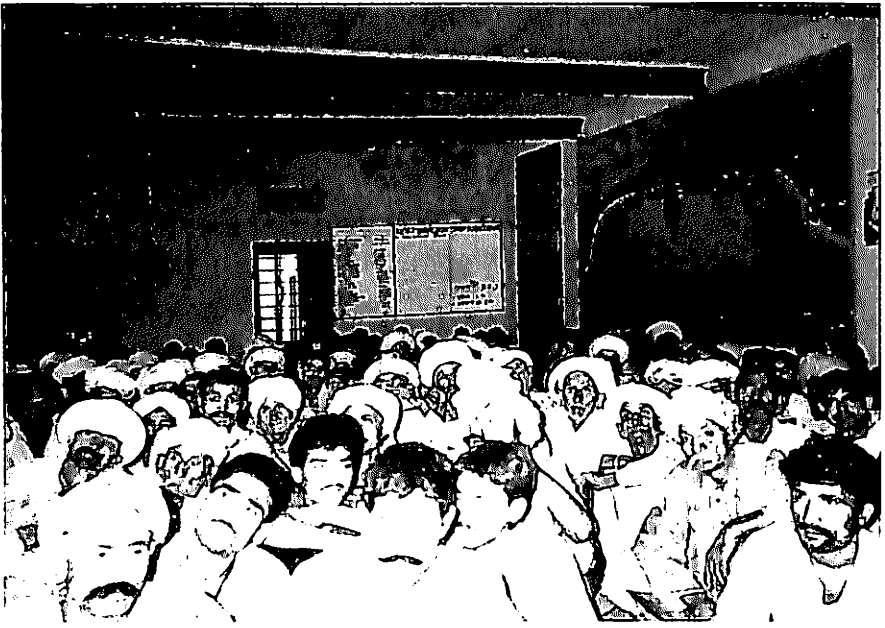
“With one crop that is jowar or makka, only about 3-4 maunds per average bigha”

“How much do you think the yield would be if you had enough irrigation for the crop”

“We don’t know”

“Let us ask Manipal Singhji, he is an agricultural scientist and has studied at a college which teaches how to increase the yield. He says if you have good irrigation you will get 20-25 times as much”

“That we know that we will get more, but where is the good irrigation coming from ?”



The villagers discussing water harvesting structures on Arvari river at TBS

“From the work that you could do. You will need to give your own labour, all the masonry work, contribute to the lime and then after it is restored managing and maintaining it.”

“Sounds good, but the money for the lime”

“We will help you procure it this time .... but you will have to share the expenses, it must be at least 25%”

“Let us see what the first one does”

And among the first ones that were successful was one at Mandalvas. The gram sabha built three johads, two were renovated. The community bore 20-25% of the total cost in the form of labour, the balance was arranged by TBS, and the proud villagers undertook the systematic management of the johads. Within two years the impact was visible. Says Jagdish Bhadiya of the village “I was getting less than Rs. 200 a bigha before the construction of the johads, I now get Rs. 1000 per bigha. Even if the rains are not good I get double the yield. In that village

the agricultural engineer was able to show a profit ratio in the area of 0.5 to 0.8 of the Johads after revitalisation.”

The system was not adhoc nor was it sophisticated. It was within the grasp of the villages. The first thing was to examine the detailed features of the landscape, the catchment area the reservoir for storing water, a suitable site if a new one, soil type and the possible benefits, if it was loamy or sandy, the slope of the stream feeding the johad balancing the johad level with the slope of the flow, the average pressure of flow, the size and shape of the johad. The explanation of these by TBS's workers was demonstrated by the Sangh's creed which is "Do not expect others to do what you cannot do yourself.." a learning by doing technique, at the geographical site. Then the action points are taken by the community. The households directly benefiting are identified, the share of labour required noted on the basis of the land they want irrigated, the construction of pumps for agricultural and domestic purposes, the irrigation channels, the protection walls for the johad to stop animals going through it and so on. When each detail is taken care of, a rough time table is made and the community benefiting from it appoints its own supervisors, assisted by TBS's technical guidance, and liaisoning to facilitate the procurement of materials. □

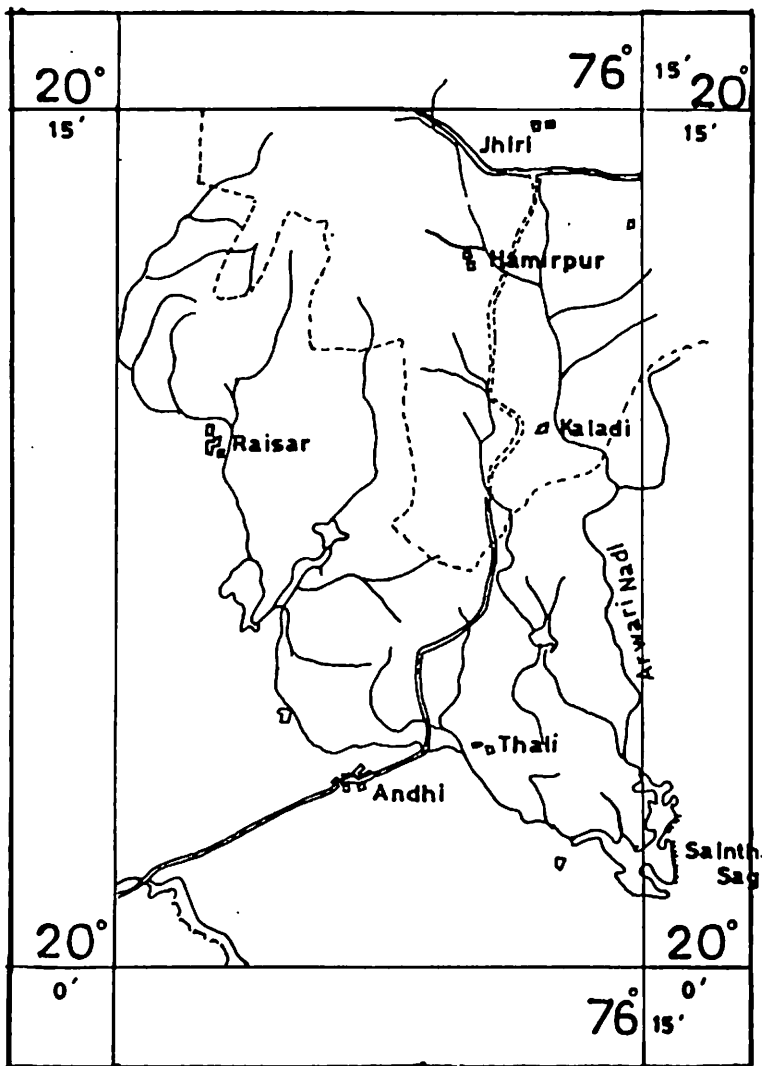


The villagers of Hamirpur discussing strategy of satyagrah






# WATERSHED AREA OF ARWARI NADI

SCALE - 1:250,000



## INDEX

- ..... DISTRICT BOUNDARY
-  TANK
-  RIVER
-  VILLAGE



