



turbulent waters



JAL BHAGIRATHI FOUNDATION

ABOUT



JAL BHAGIRATHI FOUNDATION

Jal Bhagirathi Foundation (JBF) was instituted as a Trust on January 15, 2002. The organization has taken up the responsibility of creating an environment of Gram Swaraj – a dynamic, self-reliant and responsive village community, positioning its work and learning at the national level for further replication thus contributing towards the ongoing debate on pro-poor policies and the creation of village republics.

The strategy of the Foundation involves ecological restoration, economic revival, strengthening democratic governance through village-level institutions, developing a cadre of local volunteers, networking with government agencies, research organizations and non-governmental organizations to facilitate policy reforms.

The organizational structure is a unique integration of a village-level volunteers' pool and a professional resource base, both complementing each other's effort. Presently, the village-level volunteers are being assisted by the professional and technical workforce to effectively adopt the right-based approach by sensitizing and mobilizing communities, and by planning, implementing and monitoring development interventions for strengthening democratic decentralization in the region.

JBF is proactively functioning in Jodhpur, Barmer and Pali districts.

The Foundation has a Board of Trustees comprising four members:

HH Maharaja Gaj Singh is the Chairman, Shri Rajendra Singh is the Vice Chairman,

Shri Prithvi Raj Singh is the Managing Trustee and HH Maharani Hemlata Rajye is a Trustee.



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Turbulent Waters

turbulent waters

The entire human population of over six billion as well as all the living beings with which we share our planet rely on merely 0.5 per cent of the total freshwater available on Earth. The needs of humans vary from water for drinking and sanitation to productive purposes such as agriculture, fisheries, industry, and energy generation. Water bodies also contribute to tourism, transport, entertainment, and

landscaping. The growing demand for water for diverse applications has put unprecedented pressure on this vital resource. The perpetration of any form of inequity or imbalance in access to this life-supporting resource leads to a clash of interests and resultant conflicts.

Apart from being an essential resource, water is also used as a sink for industrial and urban waste. Toxic pollutants are often found in freshwater bodies, streams, and rivers,

especially when the relevant regulatory institutions fail to check and penalize the polluters. The fact that water is a life-supporting resource as well as an economic resource makes the situation more complex.

In India, where the right to water is not enshrined as a fundamental right in the Constitution, courts at both the state and the federal levels have interpreted Article 21 of the Constitution, which guarantees the



right to life, as encompassing the right to safe and sufficient water and sanitation. However, skewed social structures, the nexus between vested interests, and short-sighted policies often lead to the violation of even this fundamental right. The struggles that ensue are, therefore,



high-stake conflicts that often lead to violent clashes between groups of contenders.

The problem is exacerbated when property rights are not clearly defined. In India, surface water is

owned and controlled by the state but the people residing by such bodies of water also enjoy traditional rights for its use. On the other hand, groundwater continues to be an open-access resource.

Conflicts over water are reported in growing intensity and frequency from all parts of the country and beyond and at all levels of society, and are playing havoc with the lives of large numbers of people.

This monograph presents six case studies of recent conflicts in India, and is based on secondary data—articles and reports published in the print media such as journals and newspapers as well as those appearing on the Internet. They are drawn from both water-scarce areas as well as relatively better-endowed

regions of the country, and look at the three most common areas of such conflicts:

- Between rural and urban areas, where water from rural areas is taken to meet the increasing demand in towns and cities, thereby leaving the rural areas with even less water for purposes of drinking and livelihoods;
- Competing inter-sectoral water claims such as instances where an industry exploits the water resource, resulting in falling levels for neighbouring communities; and
- Conflicts triggered by policy decisions, for instance, due to the absence of clear ownership rights to water.

The case studies highlight the following points:

- the high social cost of conflicts
- the underlying issues and causes of conflicts



- the measures initiated by various stakeholder groups to minimize damage and/or restore justice
- the conflict-resolution mechanisms used by various actors, including confrontation, mass mobilization, public debate, multi-stakeholder dialogue, non-violent protest, advocacy, and public interest litigation.

The case studies point to the near absence of rational policy decisions that consider the interests of all stakeholders, in particular the weaker sections and women. Such behaviour has been corroborated by research studies on political models of policy making where the concept of ‘iron triangles’ highlights the nexus between politicians,



technical professionals, bureaucrats, and other vested interests. These iron triangles become exclusive clubs where policy decisions are taken by the representatives of these groups to the exclusion of the masses that are affected the most. The initiatives taken by some of the actors in the cases described here show how to improve the participation of local communities

in decisions that affect their lives and livelihoods, thereby strengthening the democratic and policy-making processes.

An analysis of the case studies suggests the need for urgent reforms in the water sector and calls for a close scrutiny of the policy-making process. An analysis of the latter, particularly in the water sector, would help to show how participation of local communities in the decision-making process could be strengthened. The role of governmental and quasi-governmental institutions becomes critical in facilitating negotiated settlements between multi-stakeholder groups. The case studies can help us in drawing lessons for averting similar conflicts in other times and places and in reflecting on the policy-making and conflict-resolution processes with a



view to strengthening them and making them more inclusive.

This monograph will be of interest to all policy makers, regulators, users, researchers, and activists concerned about the equitable distribution and sustainable use of water.

Whose Water?

Lava ka Baas describes the organization of a mass-based local



struggle against administrative, legal, and technical hurdles put forward by the state irrigation department and the local administration to suppress community efforts aimed at meeting local water demands.

Indira Gandhi Canal narrates the ongoing struggle of a rural community demanding its share of water for irrigation according to an allocation arrangement worked out by the state government. Lack of adequate surface water flow due to intra-state water conflict and erratic rainfall have led the state government to shift its priority from irrigation to drinking water, thereby leading to local unrest.

Indira Gandhi Canal recounts the struggle of the local community to access water due to the state's effort to transform desert 'wasteland' into an 'agriculturally productive area' through controlled irrigation, extensive promotion of cash crops, and other interventions.

Sheonath River examines the selling of a stretch of a river by the state government to a private industrial firm. The firm has the exclusive right to supply water to an industrial area and prohibits

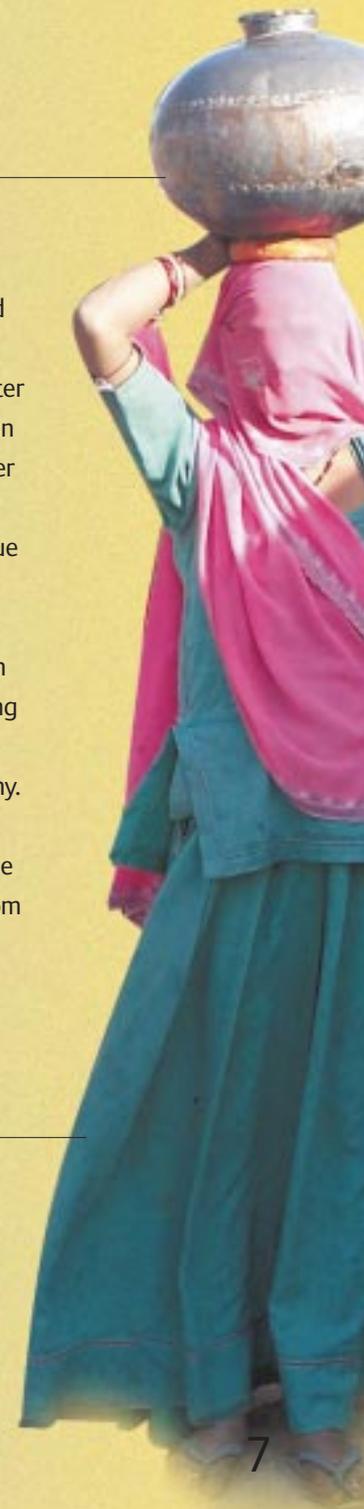


the local rural community from exercising its rightful access to water.

Kaladera documents the sustained protest of the local people against commercial exploitation of groundwater by the Coca-Cola Company, resulting in depleted groundwater resources, water pollution, and soil degradation.

The Palar Basin describes the value of multi-stakeholder dialogue in resolving a conflict that is a manifestation of rapid industrialization and incessant groundwater use, leading to its depletion and pollution and ultimately damaging the local economy.

The Bisalpur Dam depicts the struggle of the local people against the state's prioritization in using water from a dam for urban consumption while bypassing the overwhelming rural demand.



Lava Ka Baas

Struggle between the local community and the state's irrigation department over rights to water resources

turbulent waters

The struggle over the right to access surface-water resources took place in Lava ka Baas, a small settlement near Thanagazi block in Alwar district, Rajasthan, India. The conflict between the Rajasthan state's irrigation department and the villagers was over a small earthen embankment, approximately 225 m in length and 15.5 m in width, built on Udayanth ka Nala and described in the district revenue records as a *gairmumkin nallah*

(meaning an occasional river). The earthen structure was constructed in the catchment area of the Ruparel river. The river water is shared between Alwar and Bharatpur districts.

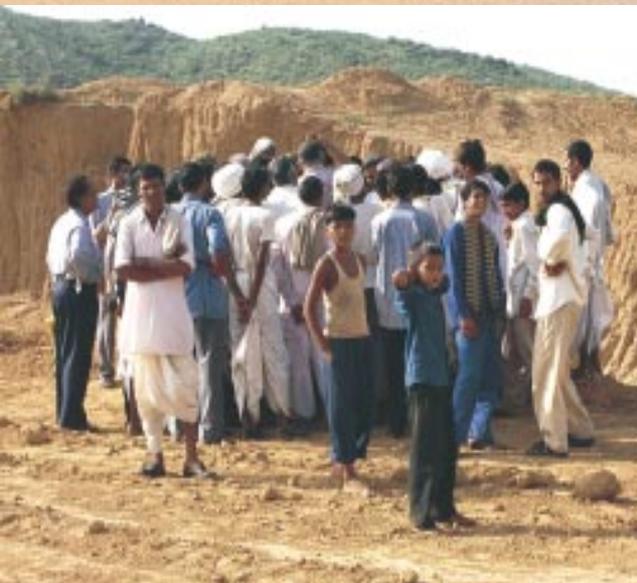
Background

Lava ka Baas was grossly water stressed. The village had just one handpump to meet the water requirements of the entire human and animal population of the region. Therefore, propelled by a sheer state of desperation, the villagers decided to

tackle the problem on their own. The villagers partnered with Tarun Bharat Sangh, a local non-government organization (NGO), and decided to construct a *johad* (earthen water-harvesting structure). A total of Rs. 0.3 million was collected from the adjoining seven villages through local contributions for building the structure, and the remaining Rs. 0.5 million was sourced by Tarun Bharat Sangh from P.K. Rajgarhia, an industrialist from Churu. The construction work commenced in March 2001 and was completed by mid-June. In



just 15 days of the first monsoon shower in 2001, the groundwater level in downstream wells had risen, and the villagers after a long time experienced a life situation other than water stress. Things were moving smoothly until the *gram sabha* (village council) decided to share news about their achievement



Rajasthan irrigation department stating that the earthen structure that it had helped to build in Lava ka Baas was both technically unsafe and illegal. A period of 15 days was given for removing the structure, failing which action would be taken under Sections 55 (3) and 58(2), Rajasthan Irrigation and Drainage Act, 1954. These sections state:

55-Offences under the act: Whoever, without proper authority and voluntarily does any of the following, that is to say – (3) Interferes with or alters the flow of water in any river or stream, so as to endanger, damage or render less useful any irrigation or drainage work; Shall be liable, on conviction before a magistrate, to a fine not exceeding one hundred rupees or to an imprisonment not exceeding one month or both, for

the first offence, and to a fine not exceeding five hundred rupees or to imprisonment not exceeding three months or to both for a subsequent offence.

58 – Power to arrest without warrant: any person in charge of, or employed upon, any irrigation or drainage work may remove from the lands or buildings belonging thereto, or may take into custody and take forthwith before a magistrate or to the nearest police station, to be dealt with according to law any person who within his view commits any of the following offences- (2) without proper authority interferes with the supply or flow of water in or from any irrigation or drainage work or in any river or stream, so as to endanger, damage or render less useful any irrigation or drainage work. The irrigation department's report of 29 June 2001 details the technical and legal problems with the structure. In its

with the chief minister, Ashok Gehlot, by inviting him to inaugurate the *johad*.

Highlights of the conflict

On 20 June 2001, Tarun Bharat Sangh received a notice from the



assessment of the legal issues involved, it says that the structure is in violation of the 1910 agreement between the erstwhile states of Alwar and Bharatpur. The 1910 agreement actually was a dispute-settlement strategy under which it was decided that the Ruparel river would be divided on the basis of 45:55 between Alwar and Bharatpur respectively. The irrigation department highlighted the following issues in its report:

- The construction of the earthen structure contravened the agreement.
- The water-harvesting structure could lead to a water shortage and have a negative impact on agriculture in Bharatpur, and this in turn could lead to civil unrest in that district.

On 1 July 2001, the district administration along with engineers from the irrigation department, and backed by the police force, visited the site to direct the breaking of the *johad*. Their arrival ignited a fiery determination among the villagers to fight back. Villagers reacted with cries of, 'They can kill us, but they cannot demolish the *johad*', and 'The government never asked us how we survived three consecutive droughts. But when we did something on our own, they want to demolish it', and many more. These expressions of public anger made the situation extremely tense. However, the intervention by the chief minister of Rajasthan, Ashok Gehlot, and the chief secretary, Inderjit Khanna, at the instance of the Centre for Science and Environment, a Delhi-based NGO, stopped the structure from being demolished. Instead of demolishing the

structure, the irrigation department directed that the existing spillway of the structure should be deepened to drain out the water collected in the reservoir in order to reduce the water impounded and thus make the structure safe.

The villagers deepened the spillway by digging a channel with a further depth of 2.6 m based on the directions given by the administration, and thus lowered the height of the spillway by 10.2 m from the maximum height of the structure, leaving an impoundment with a depth of about 3.5 m. But the problem persisted. The local administration kept insisting that the spillway needed to be deepened even further as the earlier depth of the structure was inadequate. Their intention was to ensure that the spillway would be deepened in such a way that most of the water in the *johad* would drain out and in the process make the entire structure redundant.



Existing status

The structure in Lava ka Baas was breached on 10 July 2003 as torrential rains lashed north-eastern Rajasthan. The Rajasthan irrigation department was content as their prediction of the dam not being safe had come true within three years of its construction. However, the government failed to acknowledge the breach of seven other dams—Khari Johad, Banna ka Johad, and Khadiwala Baba ka Johad in



collapse. For instance, the government maintained a studied silence on the breach of the dam at Samra Sagar during the first rains in June; this dam had been built by the irrigation department a few kilometres down in Pratapgarh tehsil, and its construction had cost at least seven times more than the *johad* in Lava ka Baas.

The collapse of their *johad* came as a severe blow to the villagers, who had learned their first lessons in village self-reliance and self-confidence during this endeavour. The *johad* had been built on a shoestring budget, with money from an industrialist donor and with contributions from the residents of seven villages, and had provided the local people crops worth many times that amount. Until the first week of July 2003, 15 pump sets were engaged simultaneously in taking out water from the dam to distances up to 5 km.

The devastation came even as the attempts of the Johad Bachao Sangarsh Samiti (Save the Check-dam Agitation Committee) to reinforce the dam were frustrated by the tehsil authorities on a complaint from the irrigation department. The villagers had started de-silting and reinforcing the base of the dam on 1 June 2003. Within a couple of days, the irrigation department authorities from both Alwar and Bharatpur districts got the work stopped. The villagers, who refused to give up easily, started operating at night, deploying five tractors to bring the earth. However, they were caught again and finally gave up. The district administration stopped the work because a writ was pending against the dam in the Rajasthan High Court, and the district administration had to ensure the status quo of the structure.

The beneficiaries of the Lava ka Baas

Todi Nijara village; Balai ki Johad and Sankada ka Bandh in Mundiawas; Ghanka dam in Ghanka; and Phuta Bandh in Bhangdoli—that were upstream of the *johad* at Lava ka Baas, and which were responsible for its





dam—who number between 20,000 and 25,000 from the adjoining six villages and the tehsil town of Thanagazi—are now clueless about the future of the dam as well as their livelihood.

Conflict-remedial strategies

In 2001, the Centre for Science and Environment with the support of Tarun Bharat Sangh launched a concentrated media and civil society campaign against the state irrigation department’s policy of demolishing the structure at Lava ka Baas. The advocacy campaign was directed at generating public opinion and creating public pressure and conducting a detailed technical, legal, and administrative study to counter the state irrigation department’s claim and justification

for making the structure redundant.

For executing the campaign, the following strategies were adopted:

- Information pertaining to Lava ka Baas was put on the Web, and was updated at frequent intervals
- An online signature campaign was initiated to mobilize public opinion on a global level
- The media was involved in publicizing the realities surrounding the conflict
- Groups of eminent people from the fields of agriculture, irrigation engineering, natural resource management, and law were taken to the village, where they looked into the various technical, legal, and administrative issues. They later met the chief minister of Rajasthan and shared their views with him; this was followed by a press conference.

- Documenting the entire experience as a report for future reference
- A dual strategy of dialogue and confrontation accompanied by extreme transparency was adopted to put across the facts to the concerned officials, peoples’ representatives, and global citizens
- Tarun Bharat Sangh in partnership with the local people formed an informal village-based people’s association during the conflict in order to:
 - protect the *johad* from possible demolition by the state irrigation department and the local administration;
 - increase mass support by involving people from the surrounding villages;
 - present the factual details of the entire struggle to the outside world; and



- enhance the functioning of the *johad* through regular maintenance.

Summary of critical learnings

The legal, technical, and administrative issues that had once threatened to stifle the community efforts of the local people in their struggle to meet their water demands were momentarily laid to rest thanks to the people's constant fight, backed by



local support groups and a concentrated media and civil society campaign. However, similar forms of mass mobilization and external support were required even after the conflict had been eased just to ensure that the

people's struggle would be taken to its logical conclusion. At present, the local people, despite their best efforts, are the ultimate sufferers. They have not only lost out on financial and psychological gains but they are also currently in a difficult situation, unable to formulate any strategies for the future.

- The struggle slowed down considerably after the demolition order was quashed, whereas it should have addressed and highlighted the second-generation issues, for instance, inability to undertake repair and conservation measures for the structure and the impact of the state's directives on the water-conservation measures in the region. Steps such as the strengthening of the structure and its regular maintenance were proposed in the technical report, but these were not addressed with the required zeal and vigour.

- Unlike what had occurred during the initial phase of the conflict, the informal village-based people's association—Johad Bachao Sangharsh Samiti and the local voluntary organization, Tarun Bharat Sangh—did not communicate the ground realities to the outside world at a time when the villagers were being prevented from carrying out the regular maintenance work. In the absence of frequent updates, only restricted mobilization could take place. This mobilization was inadequate in terms of exerting pressure on the state to withdraw its interference in Lava ka Baas.
- After the breach of the structure, the people of Lava ka Baas and the adjoining six villages have suffered the most, and are currently uncertain about their future. The devastation caused in the village was briefly covered by the media. After the monsoon of 2003, there has been no update from any quarter about the plight of the people of Lava ka Baas.



Indira Gandhi Canal

Interstate and intra-state water dynamics incite mass pandemonium for water

turbulent waters

The September 2004 protest in the peri-urban towns—Gharsana, Rawla, and Khajola—and the adjacent villages of Sriganganagar district in Rajasthan. was a violent consequence of the five-year-old water problem in the region. Sriganganagar district lies in the Thar desert, but the region is most unlike a desert area. The Indira Gandhi Nahar Project transformed Sriganganagar from a water-sensitive to a water-compulsive district in the 1970s.

Background

The Indira Gandhi Nahar Project is one of the largest projects in the world aiming to de-desertify and transform desert ‘wasteland’ into agriculturally productive land. The project objectives include drought proofing, provision of drinking water, afforestation, employment generation, rehabilitation, development and protection of animal wealth, and increased agricultural productivity. The construction of the Indira Gandhi Nahar Project

commenced in 1958, and the government started allotting land to farmers in the early 1970s. The project had planned allocating 14,100 cusec of water in two stages from the Pong dam in the Harike lake in Punjab. In Stage I of the project, 5.23 cusec of water per 1,000 acre land was allocated in the districts of Sriganganagar, Hanumangarh, and Bikaner. In Stage II, water was allocated to Jaisalmer, Barmer, Jodhpur, and Nagaur at the rate of 3



cusec per 1,000 acre land. The total command areas of the Indira Gandhi Nahar Project was 2.8 million hectares, of which 1.3 million was covered in Stage I and the remaining in Stage II. Earlier, there was a clear distinction in the pattern of water use in Stage I and Stage II. Agriculture was given preference in Stage I and drinking water was the priority in Stage II.

With irrigation being the priority in Stage I, farmers in the Rawla-Gharsana region—with mainly three types of soil (sandy loam, loam sand, and loam) and



with water in abundance—were encouraged to take up the cultivation of cash crops such as cotton and mustard along with barley, maize, and wheat. In addition to exporting cotton and oilseeds, the Rawla-Gharsana

region also developed into a small-scale industrial township, with numerous cotton and oilseeds processing units. Agriculture prospered, trade skyrocketed, and production levels of related industries rose. Thus the many opportunities available here coupled with the region's general prosperity attracted people from the adjoining districts as well as from other states. Consequently, the population of Rawla rose from merely 253 in 1971 to 12,325 in 2001. With the sharp increase in the population levels, the water requirement also multiplied proportionately.

Highlights of the conflict

The protests and demonstrations that got underway in Gharsana, Rawla, and Khajola in September 2004 took an ugly turn on 27 October 2004

when four farmers were killed and about 30 were injured in police firing in Rawla and Gharsana towns. The farmers were protesting an alleged reduction in their water allowance from the Indira Gandhi Nahar Project. While defending the police action, the state government denies any such reduction. It holds scarce rainfall, population increase, and growing consumption responsible for the water crisis. However, the reality is far from what the state government claims. The problem started brewing five years back when the water allocation for Stage I was reduced gradually. Simultaneously, the government passed an order that water from the canal was to be used only for drinking purposes and warned that police action would be taken against any people who lifted water from the canal for irrigation purposes. As per the initial arrangement, Stage I was allocated 5.23 cusec of water, which was subsequently reduced to 3.5 cusec. As a



result, water was being made available after a long period of 30 to 35 days for a short duration of 3 to 4 days, and that too only for satisfying the drinking water requirements of the local people. In contrast, the region in the past had been receiving water continuously for 15 days, with a dry period of a maximum of 7 to 8 days. The limited supply of water had a negative impact on the social structure, economic growth, and political arrangements. These effects were manifested in the following forms:

- The farmers who had once benefited from the agricultural growth resulting from the canal now face huge losses, almost as high as 200 per cent, especially with cotton and mustard production registering an all-time low. As a result, a total of 9 cotton and oil processing units out of the 12 were either sold or shut down.

- The huge labour force faced unemployment and was forced to migrate.
- The state government has been losing Rs. 30 million annually in sales tax.
- The local economy of the Rawla–Gharsana area dipped from Rs. 60 million to Rs. 25 million.
- In the Rawla–Gharsana region, 35 per cent of the commission agents were forced to close their operations.
- Local farmers are finding it difficult to survive because of the financial burden of paying off the loans they had taken for farming activities.

Frustrated by the increasing severity of water-related problems in the region, people cutting across all occupations—farming, trading, and labour—came together for the first time under one banner, the Kisan Vyapari Mazdoor Sangarsh Samiti, and

initiated an agitation demanding a greater share of water.

The Kisan Vyapari Mazdoor Sangarsh Samiti was able to garner the active support of political parties and thousands of villagers. They demonstrated in front of the offices of the tehsildar (block revenue officer) and the sub-divisional magistrate. Instances of government officials at the block office being kept hostage for a few hours were also reported. The strategy of the demonstrators was primarily aimed at being heard by the concerned authorities and forcing them to take appropriate action. The protestors were against the policy of the state government of limited release of the allotted share of water in the Stage I areas. According to them, water was being diverted to Stage II areas for irrigation purposes in the constituencies of politicians.



On 26 October 2004, the local administration adopted coercive measures to squash the public protest. In retaliation, the protestors ransacked the sub-divisional magistrate's residence and the tehsildar's office. This led to the arrest of the protestors, and curfew was enforced in Gharsana, Rawla, Anupnagar, and Suratgarh. To gain control over the demonstration, the state government arrested the key people. However, the strategy of the government backfired as many more



people joined the ongoing demonstration, by going on hunger strikes and voluntarily courting arrests. Simultaneously, farmers from the Stage II areas also threatened to join

the agitation. The situation was getting out of control rapidly, and the state government was forced to explore options for restoring the state of affairs in the district and simultaneously preventing the agitation from spreading to other areas.

Existing status

The water-related conflict in Sriganganagar district was triggered by more than one reason, contrary to the existing belief among the locals. First, the Indira Gandhi Nahar Project was receiving a limited and reduced share of water from Punjab. According to official sources, the capacity of the project is 18,000 cusecs, but Rajasthan was receiving only 5,203 cusec from Punjab, far below the total potential. A total of 2,070 cusec of water was allocated for drinking purposes, and the remaining was allocated for irrigation in both the



stages. As per the original allotment, 8,200 and 5,900 cusecs of water were earmarked for irrigation in both the stages. Second, increasing the command area of the Indira Gandhi Nahar Project from 2.8 million acres to 4.5 million acres as a strategy of political patronage proved to be counterproductive. However, there are facts that corroborate the claim that the increase in the command area was merely executed on paper. Erratic rainfall has also been responsible for inducing water scarcity in the region. Finally, the Punjab Termination of Water Agreements Act, which was passed unanimously by the Punjab Assembly on 12 July 2004, cancelling all previous agreements on the use of the waters of the Ravi and the Beas rivers while allowing the new bill to protect the



'existing free use' of water by the non-riparian states of Haryana and Rajasthan, has also been one of the main reasons for exacerbating the existing problem.

In order to overcome the problem, the state government constituted an expert committee that included four representatives of the Sangarsh Samiti, which was conducting the agitation. The agitation was called off after an agreement was reached with the government in December 2004. It seemed at first that this four-month-long agitation had ended in success. But after the government reneged on most of its commitments, the agitation resumed in June–July 2005 when the quantum of water released was found to be insufficient for irrigation. Soon after, an eight-day-long *mahaparav* (sit-in demonstration) by nearly one

lakh farmers in Jaipur, the capital of Rajasthan state, was organized. It ended on the evening of 8 September 2005, with the state government reaching an agreement with the agitating farmers.

A settlement between the *sangharsh samiti* (struggle committee) of the farmers and the government of Rajasthan was reached when the government conceded the following main demands of the farmers:

- Withdrawal of 40 per cent hike in electricity tariff;
- Uninterrupted and regular power supply for agricultural purposes;
- Release of all the leaders arrested and jailed during the agitation in Sriganganagar; and
- Starting negotiations on the supply of water during the Indira Gandhi Nahar Project Stage I.

Conflict-remedial strategies

The people from the peri-urban towns of Gharsana, Rawla, and Khajola and the adjacent villages of Sriganganagar district have been coping with water scarcity since 1999, anxiously waiting for the district and state administration to attend to their problems. However, there was no response from the government. In the absence of any proactive intervention, the local people organized themselves under the Kisan Vyapari Mazdoor Sangarsh Samiti to make their problems known to all. Despite their initial efforts to draw the attention of the local administration through non-violent strategies, the administration remained unmoved and unresponsive. It was under conditions of utter desperation that the members of the Kisan Vyapari Mazdoor Sangarsh Samiti adopted violent means to get their



message across to the authorities. Their strategy did yield results, but not before innocent people lost their lives. The agitation finally stirred the local administration into action, and they were forced to explore alternatives for resolving the existing problem. People claim that if the agitation had not been staged, the problem of water scarcity would have continued to exist along with the state government's passive stand. The second round of agitation in Jaipur in September 2005 sent a clear



message to the state authorities that the victims of intra-state and interstate water conflicts wanted proactive measures to be adopted in order to resolve the five-year-old water problem in the region, along

with other pending issues concerning the farming community.

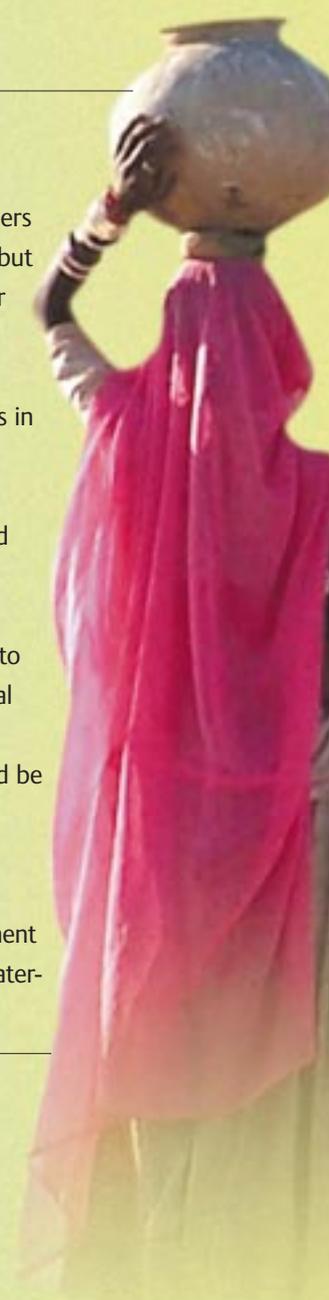
Summary of critical learnings

The water conflict in Sriganganagar has definitely been an experiential learning for the state authorities and the local administration in terms of dealing with a complicated water-related conflict. In retrospect, the strategies adopted by the district administration at the behest of the state government could have been far more proactive in diffusing the escalating water conflict. The state government should:

- Concentrate on long-term solutions rather than investing time and effort in resolving the issue through short-term strategies. The Kisan Vyapari Mazdoor Sangarsh Samiti has experienced the impact of agitations at the district level. Therefore, any future lapse on the part of

the state government just might motivate them to initiate another agitation.

- Work along with the various stakeholders in not only identifying a feasible solution but also in orienting them with regard to their inherent constraints and limitations in the Indira Gandhi Nahar Project.
- Review the present water requirements in the region, and through a participatory process work out a fresh allocation in a transparent manner while keeping in mind limitations and alternative strategies.
- Initiate a dialogue with the central government and the Punjab government to ensure water availability as per the original allocation under the Indira Gandhi Nahar Project. The crisis in Sriganganagar should be the basis of all future deliberations.
- Realize that the present crisis is due to water scarcity. Therefore, the situation demands that alternative water-management strategies should be popularized in the water-stressed regions.



Sheonath River

Violating human rights by commercializing river water

turbulent waters

Riparian rights uphold the right to use water resources of communities and individuals located closer to the resource. Such rights have always been recognized in India. In spite of the general acceptance of such rights, it is interesting that once the water is stopped through dams or is sold to industrial firms by the state, riparian rights cease to exist. The people of nearby villages do not have the right to use the water that they have traditionally been using; the dammed water becomes the sole

property of the government and the sold water becomes the property of industrial firms. And between the two—the government and the industrial firm—they decide how water is to be allocated and how much is to be given to whom. The state plays a key role in this decision. This scenario is illustrated appropriately in the case of a recent conflict in Chhattisgarh involving the state government, which had sold a part of the river Sheonath to a private industrial firm; this prevented the local rural community staying on either side of the river from

gaining access to water for agricultural and fishing purposes.

Background

The Sheonath river enters the state of Chhattisgarh in Durg district and joins the Mahanadi river at Shivrinarayan. It has the distinction of being the first river in the country to be privatized. A 23.6-km stretch of the Sheonath river in Durg district was contracted to Radius Water Limited, part of Kailash Engineering Limited, for a period of 22 years. The river has been a source of livelihood for farmers



and fishermen living on both sides for centuries. But with the new ownership, the age-old relationship between the local community and the river has been disrupted. Farmers were not allowed to cultivate the land along the 23.6-km stretch; installation of pumps and tube wells for drawing river water and groundwater even a kilometre from the river was prohibited; and



people were not allowed to fish, bathe, or wash clothes in the river. For all practical purposes, the river was out of bound for the locals.

It all started in 1998 when a build-own-operate-transfer agreement was signed between the government of undivided Madhya Pradesh and Kailash Soni, chief executive officer, Radius Water Limited. Thanks to the 22-year (renewable) 'concession', Soni controls the stretch of the river that runs mostly through Mohlai village, and has a monopoly on the supply of water in the Borai industrial area, near Durg town. The agreement covers the use of groundwater as well. Metres have been installed on tube wells supplying water to the local industrial units, which have to pay Radius Water Limited for the water they use.

The first river privatization effort in India has had a chequered history. The

Borai Industrial Growth Centre, located on the banks of the Sheonath, was set up in 1989, and the water for it was to be drawn from the river. Since the Sheonath is not a perennial river, the government of the undivided state of Madhya Pradesh had committed to the release of water to the industrial units from the Kharkhara reservoir on the Sheonath between September and July when the river is in flow. But to store water for future use, it was necessary to build a barrage at a cost of Rs. 1.1 crores. Owing to the paucity of funds, the project was put off.

In 1992, pressure by the industrial units to revive the project forced the Madhya Pradesh government to set up the Madhya Pradesh Audyogik Kendra Vikas Nigam (now called the Chhattisgarh State Industrial



Development Corporation Limited) as the nodal agency and to re-estimate the project costs. As the costs had escalated four times, to Rs. 4.5 crores in the intervening three years, the project was shelved once again. Over this period, the water requirements of the industrial units—distilleries, a sponge iron plant, and a thermal power plant—nearly doubled, to 3.75 million litres. This demand included the requirement of 3.6 million litres of a single unit, which was promised the required water under an agreement it had entered into with the nodal agency.

In 1996, under mounting pressure from the industrial units, including the water-intensive Bhilwara Synthetics, Khoday Distilleries, and Food Park (Western Foods), the project was once again

revived and the costs estimated. Now the costs had risen to Rs. 7.5 crores. Unable to raise this money, the nodal agency asked the bulk consumers to contribute 50 per cent of the costs of the barrage. It promised to supply water to the industrial units at a fixed rate for a long period and also to adjust their share against the water bills. Since the industrial units were not ready to accept these conditions, the project was once again back on the shelf.

Finally, in 1998, succumbing to pressure from the bulk consumers, the government decided to involve the private sector. It thus signed a 22-year lease with Radius, giving the company the right to a 23.6-km stretch of the Sheonath and undertaking to supply the Borai Industrial Growth Centre water from July until September through the nodal agency. The project,

called the Rasmada scheme, was commissioned in April 2001. The company is committed to supplying 40 million litres of water at Rs. 12.60 a litre to the industries, the railway station, and a railway colony through the nodal agency, which will pay Radius irrespective of whether or not it collects the money from the industries using the water. The nodal agency paid Rs. 4.13 crores to the company between November 2002 and February 2003, but has recovered only Rs. 1.29 crores from the industries.

Existing status

Having spent Rs. 39 crores to construct an integrated water supply system by building a dam with pumping stations, distribution lines, and effluent treatment plants, Kailash Soni is now looking for other sources of revenue from the river, such as fisheries. The



200-m high dam has 3-m tall gates that operate automatically with a flood-regulating barrier system. The water spreads over 3 km, forming a reservoir. According to the local people, trees have been planted around the reservoir by the company



who depend on the river for their survival, as they have been doing for generations, now find themselves without a livelihood. People are now forced to go hungry for a few days in a week. They are agitating against the Chhattisgarh government, seeking the termination of the contract with Radius Water Company. The people, supported by activists, social workers, and Left parties, want their livelihood systems restored.

Activists from the National Alliance of People's Movements, the All India Youth Federation, the Nadi Ghati Sangharsha Samiti, and the Chhattisgarh Mukti Morcha have been mobilizing people living along the river. People from several villages, including Mohlai, Kekro Koli, Bedwa Pathra, Vagrums Nala, Basik Hai, and Chatarri, have joined the

struggle. On 1 November 2003, a massive public rally was organized by the Sheonath Nadi Mukti Andolan and the Youth Federation. The protestors marched to all the affected villages in order to raise awareness and to motivate the affected people to join the movement.

Highlights of the conflicts

With the protests intensifying, the former chief minister, Ajit Jogi, decided, in April 2003, after a ministerial meeting, to cancel the contract. The state government agreed to terminate the contract 'within the legal framework' and pay compensation to the company for the lease period after the Law Department and the Advocate General had given their opinions.

as an additional source of income from timber.

The company claims that it is only for reasons of safety that people are not allowed to use water from the reservoir. But thousands of local people





Though the agreement was signed by the Madhya Pradesh government, the Supreme Court will allow the Chhattisgarh government to review the agreement made by the Madhya Pradesh government. This, according to Ajit Jogi, is particularly important as the contract goes against the interests of the people. According to him, the government is ready to pay any amount to end the contract, but it will at no cost allow the privatization of natural resources.

According to the State Legal Committee, to which the issue was referred, if the government ends the contract with Radius Water Company, it has to pay a compensation of Rs. 400 crores. But the government now points

out that as the company had not taken the approval of the State Water Utilization Committee as mandated, it may not be eligible for compensation.

In April 2003, the government assured the protestors of its intention of terminating the contract, but nothing seems to have happened since then. Radius continues to manage the barrage, and the frequency of public protests has declined and so has their impact.

The controversial privatization of the Sheonath river has now been challenged through the filing of public interest litigation (PIL) in the state's High Court. The PIL contends that selling the river to a private company seven years ago has adversely affected the livelihoods of local fishermen as well as the supply of irrigation and drinking water in the area. The petition was filed

by the Forum for Fact-finding Documentation and Advocacy, a civil society organization based in Raipur, capital of Chhattisgarh. The petitioner argues that the agreement between Radius Water Limited and the state of Madhya Pradesh goes against the central government's water policy. The PIL also contends that due to the company's monopolization of a large stretch of the Sheonath, local fishermen who depended solely on the river for their livelihood were left without any means of income. The company does not allow the villagers to use water from the river for irrigation, or even for their own personal needs. The Forum for Fact-finding Documentation and Advocacy has sought the High Court's directives to quash the agreement between the state of Madhya Pradesh and Radius



Water Limited, as it violates the fundamental right to life and livelihood guaranteed under Article 21 of the Constitution of India and Article 47 (right to proper nutrition) and Article 48A (protection and improvement of environment and safeguarding of forests and wildlife) that are part of the Directive Principles of State Policy. The organization has also sought the High Court's intervention in directing the



concerned authorities to allow the villagers to use water from the river for their daily requirements as an interim measure.

Another privatization case in Chhattisgarh

While the struggle for restoring traditional community rights over natural resources in Durg district was being carried out, another glaring incidence of water exploitation by Jindal Steel and Power Limited from the Kelo river in Raigarh district was exposed. This is a classic example of a private party usurping common property resources, including water bodies, on a massive scale without any checks and balances. Jindal Steel and Power Limited entered Raigarh in 1991 when it established a sponge iron plant with an annual production capacity of 500,000 tons. Apart from this, their production of mild steel was estimated at 400,000 metric tons and ferrochrome at 30,000 metric tons per annum. The company also



produced 75 megawatts of electricity. Once it was established in the area, Jindal Steel and Power Limited started appropriating local resources. It began to pollute the local river on which the villagers depended for their water supply. The Kelo river is the lifeline river of Raigarh, and now this perennial river was being polluted by the discharge of acid mine water and toxic substances. Also, the Jindal plant took water for operating the thermal power plant. Jindal is pumping about 0.88 million cubic metres of water from the river every month, and the amount of groundwater being extracted continues to be unknown.

Conflict-remedial strategies

These two situations of water conflict have opened the debate concerning the





legitimacy of traditional community rights over a river versus the rising demand for water from developing industries. In the case of the Sheonath river, the Radius Water Company cannot be blamed solely for owning the river. They grabbed the opportunity because they considered it a profitable business proposition. The conflict would not have occurred if the government had first appraised the ground situation. It executed the plan without raising the issue with the groups that were dependent on the river for their existence. Neither did they inform the people of Chhattisgarh of their intention of handing over 23.6 km of the

river to a private party. In this case, the conflict cannot be resolved through dialogue between the different stakeholders nor can it be resolved by giving compensation to the villagers for the 20-year period of the contract, especially in the absence of any legal agreement. The only way out is to cancel the contract and provide adequate compensation to the affected parties.

In the case of Jindal Steel and Power Limited, a state-initiated detailed study of the existing problem needs to be undertaken by a neutral multitask group, with the focus on examining all possible aspects of the conflict. The report of the multitask group needs to be placed in the public domain for an informed debate with the objective of identifying mutually agreed upon strategies for

resolving the problem. Apart from the study, the state should create a redressal system whereby the problems of the stakeholders can be heard and related actions can be proposed. In the case of the Kelo river, a multi-stakeholder dialogue is still an option that can be used for addressing the water conflict. However, it depends solely on the state machinery to use the multi-stakeholder dialogue as an effective tool.

Summary of critical learnings

These two examples from Chhattisgarh are merely the tip of the iceberg. With the increasing demand for water from domestic, agricultural, and industrial sectors, water conflicts are bound to occur





more frequently in the future. The state and the central governments should realize that this is the appropriate time to streamline freshwater management and its usage. If existing conflicts are to be settled amicably, and if future conflicts are to be managed in a timely fashion before they escalate out of control, then it is imperative to have fresh guidelines and regulations for water use. The existing guidelines and regulations are not suitable for, or responsive to, the changing water scenario. Therefore, it becomes easy to exploit the resource without literally being termed ‘unconstitutional’.

The process of framing fresh guidelines ought to differ from the earlier strategy. It is actually the marginalized and the disadvantaged sections of society—farmers,

fishermen, and many water-dependent groups—who become the victim of this misuse. Therefore, it will be beneficial to include them along with the other stakeholders in the process of restoring the age-old guidelines and regulations. As long as we remain dependent on obsolete frameworks of functioning, the Kelos and the Sheonaths will continue to emerge in different parts of the country with varying intensity.



Kaladera

Mass protest against commercial exploitation of natural resources

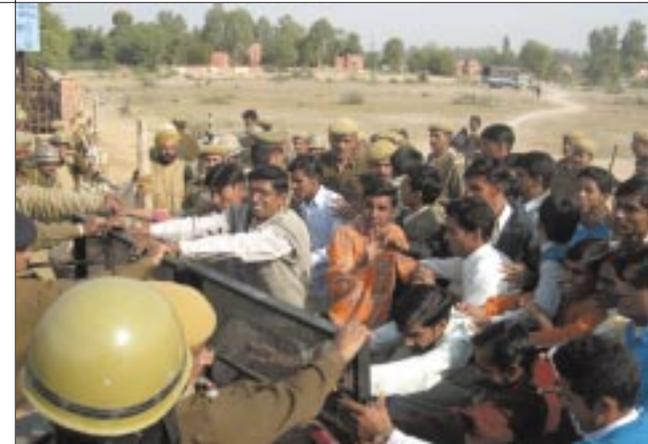
turbulent waters

The problem of the commercial exploitation of water and its distribution in India is growing rapidly. The packaged water business is worth Rs. 1,000 crore, and it is growing at a huge 40–50 per cent annually. According to government sources, there are 1,200 bottling plants and more than 100 brands

of packaged water consisting of local, national, and international brands across the country, competing in the market, extracting huge amounts of groundwater and bottling natural spring water, and denying access to the local communities to their water resources and related livelihoods. And all this is being done practically for free. All the bottling companies pay a

minuscule amount to the government for the use of groundwater.

This profitable business is increasingly becoming a source of conflict between communities and bottling companies as demonstrated in the case of Kaladera, a drought-prone village in Govindgarh block, and located about 40 km from Jaipur, the capital of Rajasthan. The majority of its 12,000–13,000



inhabitants are engaged in agriculture. Coca-Cola literally gets its share of water free—extracting groundwater without any charge—except for a small cess that it pays the state government. In 2000–02 and 2003, the company paid a little over Rs. 5,000 and Rs. 24,246 respectively. This is literally the price that Coca-Cola pays to plunder the natural resource base in and around its installation.



movement was initiated. Over 200 residents of 22 villages adjoining Kaladera congregated and passed a resolution demanding the closure of the Coca-Cola plant located in the vicinity. Subsequently, the protest started making inroads into the affected villages through the *sangharsh samitis* (dissent committees), which were being formed voluntarily and which were headed by village-level coordinators. Later the movement lost its momentum, but was revived in May 2004.

The re-energized movement came under the non-party banner of the Jan Sangharsh Samiti, Rajasthan, supported by the *sangharsh samitis* and a number of organizations in

Rajasthan, including Rajasthan Samagra Seva Sangh, Azaadi Bachao Andolan, Rashtriya Yuva Sanghathan, Rajasthan Kisan Union, Jaipur Gau Samvardhan Samiti, People's Union for Civil Liberties, Rajasthan, Arya Samaj, Mazdoor Kisan Shakti Sanghathan, and CPI-ML (Liberation), Rajasthan.

Immediately after the revival of the movement, a dharna (sit-in protest) was organized, in which more than 2,000 people participated. The dharna was organized to display publicly the brewing dissent among the villagers and to send out a clear message to the state authorities and the Coca-Cola Company.



Background

The recent protest in December 2005 against the Coca-Cola plant in Kaladera can be traced back to February 2003, the year when the





Interestingly, during the dharna at Kaladera, eight of the 24 members of the Kaladera panchayat resigned in protest with the aim of exposing the fraudulent approach adopted by the company in getting the no-objection certificate from the panchayat. The movement spread gradually to adjoining Amer. The social base of the movement in the region began to widen, predominantly among the middle and large landowners.

In Jaipur, on 3 August 2004, hundreds of students and activists marched from Statue Circle to the Rajasthan legislature, demanding the closure of the Coca-Cola plant in Kaladera as well as the closure of

23 new breweries in the state. The Jan Sangharsh Samiti submitted a petition to the chief minister of Rajasthan, asking the state government to disallow the operations of cold drink plants and breweries in the state. A four-day march was held on 25–28 September 2004, beginning in Jaipur and culminating at the Coca-Cola plant in Kaladera. Hundreds of people from different parts of the country courted arrest when the police stopped them short of the Kaladera plant.

Existing status

Depleting water sources coupled with groundwater pollution and soil degradation resulting from the functioning of the Coca-Cola bottling plant led to the protest by local

communities. This rising menace has completely destroyed local agriculture, leading to loss of livelihood in over 50 villages in Chomu and Amer tehsils, including Kaladera, Anop Pura, Kanarpura, Bai Ka Bans, Sabalpura, and Dhinoi villages.

The protesting farmers believe firmly that the Coca-Cola Company, which produces Coke, Fanta, and other soft drink brands along with bottled water, was plundering local water and land resources for commercial purposes, and in the process was depriving local people of their basic needs and livelihood support. Their belief stems from the changing profile of groundwater and land in the region. The entire area was recently declared a 'dark zone', which



means that it is now illegal for people to dig new wells and install pumps, and hence financial institutions have stopped sanctioning loans for this purpose. Most of the wells in the vicinity of the plant with an average depth of 12 and 24 meters have dried up. Due to the rapidly depleting groundwater levels, dug wells have become redundant and hence villagers



are forced to invest in sinking bore wells to ensure water availability for drinking and agricultural purposes. Now with the area being declared a dark zone, even this option has ceased

to exist. Today, agriculturalists have to dig down to a depth of 38 meters to access water. If the exploitation by the bottling plant continues, it has been ascertained that groundwater after five years will be totally inaccessible for the local communities. The extractions by the bottling plant have been increasing with each passing year.

As per a newspaper report dated 17 June 2004, the Central Ground Water Board's hydro-geologist has claimed that the Coca-Cola plant extracted 137,694 cubic metres of water in 2002–03, and drew 174,301 cubic metres in just nine months to December 2003. According to the water professional, the shallow aquifers in the Kaladera region had dried up and deeper aquifers are now



being exploited by the Coca-Cola plant for meeting its requirements. The hydro-geologist disputed Coca-Cola's claim that only two of the four bore wells dug in its factory compound were functional. He stated that the plant has state-of-the-art facilities for drawing water at high speed from all four bore wells. The plant's tube wells can drain groundwater to the last drop. News of this looming water crisis has caused immense anxiety and worry among the local inhabitants.

The declining water table has had the following catastrophic impact on agriculture:

- Groundwater-based irrigation has become an expensive proposition. The capital cost has





increased manifold because of the need for higher horsepower (h.p.) motors to extract groundwater from greater depths. The running costs have also escalated due to higher electricity bills. Farmers have to depend on groundwater in the absence of any alternative irrigation options.

- Decrease in moisture content due to the depleting water table is responsible for the falling productivity levels in the region.
- Limited groundwater and high running costs of the irrigation system have restricted farmers from utilizing all their agricultural land, thereby impacting the annual average income of the family.

Highlights of the conflict

The Rajasthan High Court ruled in November 2004 that all soft drinks in the state must indicate the level of pesticides on the product label in addition to the ingredients. This unprecedented ruling came only three weeks after 2,000 people organized a demonstration demanding the closure of the Coca-Cola bottling plant in Kaladera.

On 11 December 2005, the activists launched a campaign under the banner of the Jan Sangharsh Samiti. They announced that they would lock the factory, holding it responsible for the steep decline in groundwater levels in the region. The activists, who included a large number of women, scuffled with

policemen on being stopped at the entry point of the industrial area, which was 3 km away from the plant. They raised slogans in protest and courted arrest, while some of them tried to stage a dharna at the spot. Four busloads of arrested activists were taken to the police station. Earlier, Ms Medha Patkar of the National Alliance of People's Movements, Mr Rajendra Singh, popularly known as Paani Baba (Water Man), national president of Sarva Seva Sangh, Amarnath Bhai, Arya Samaj leader Satyavrat Samvedi, noted author Ved Vyas, convener of the Jan Sangharsh Samiti and Sarvodaya leader, Sawai Singh, and president of the Jamaat-e-Islami Hind's state unit,

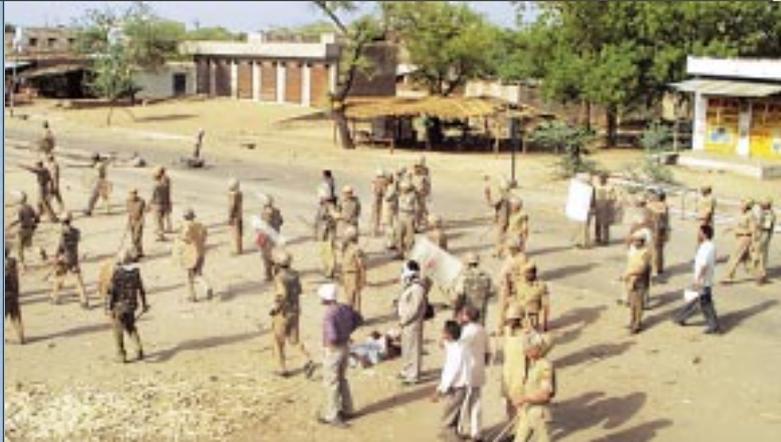


Mohammed Salim, addressed a huge public meeting in the village and registered protests against the continuance of the plant despite the 'public outcry'. The speakers were unanimous in saying that multinational companies were siphoning off the precious natural resources of the country and were exploiting the poor and the marginalized sections of



society. They demanded the immediate termination of the licence granted by the state government to the Coca-Cola Company to operate in the Kaladera industrial area. The growing anti-Coke movement has gathered momentum within the state, and the Rajasthan Jan Sangharsh Samiti has been successful in maintaining the pressure on the state government as well as on the Coca-Cola Company.

This demonstration came less than two weeks after another major protest was held in front of a Coca-Cola plant in Mehdiganj, in the state of Uttar Pradesh. Thousands of people turned out to demand the closure of the plant. Similarly, Coca-Cola is facing the wrath of rights advocacy groups all over the world. While a number of universities



and colleges in the United States have already banned the sale of Coke products on their campuses, mounting pressure from student bodies throughout Europe is pushing hundreds of schools to terminate their contracts with the company as well. Coca-Cola is also under fire in a number of Asian and Latin American countries, where labour unions, peasant groups, and consumer associations are campaigning relentlessly to force the company to pack up and leave.

The anti-Coca-Cola campaign has spread all over India, and so far it has met with some success. In Plachimada in Palakkad district of Kerala, for example, Coca-Cola had to shut down its biggest plant for about



20 months under mounting pressure from community groups.

Conflict-remedial strategies

In February 2003, the protest against the Coca-Cola plant at Kaladera was launched with the support of a handful of villagers. Today, it has been transformed into a massive force—the Rajasthan Jan Sangharsh Samiti. The strategies responsible for the transformation are:

- consolidating mass support by forming village-level sangharsh samitis, with a local village representative acting as

the coordinator. This provided the movement with a reliable and concrete foundation, which was later responsible for:

- orienting and motivating people to join the movement, and
- sourcing crucial information concerning groundwater depletion and land degradation from the villages to showcase the extent of the damage done by the bottling plant.
- involving gram panchayat members in the movement aimed at transforming gram panchayats from dormant groups to pressure groups;
- organizing mass demonstrations and public rallies at regular intervals to draw the attention of the people to the exploitation of all the 50

villages in Chomu and Amer tehsils;

- participating in national-level rallies to highlight the severity of the problems existing in the region;
- networking with local media to draw their attention to the existing reality on the ground;
- involving prominent social activists, senior citizens, religious leaders, and other state-level NGOs to exert pressure on the state government to take action against the company.

Summary of learnings

The three-year-old people's movement against the Coca-Cola bottling plant in Kaladera has exposed the state government's biased and insensitive form of

governance, and in the process it has also raised certain pertinent questions concerning the community's right over local natural resources, questions that have remained unanswered for long. It is outrageous that a state suffering from incessant droughts and perennial water-stress conditions has permitted water-guzzling industries to set up their



units, especially at a time when the state is already witnessing increased conflicts over water. According to the National Commission on Population's District-wise Social Economic Demographic Indicators (2001), of the top 250 districts in India whose households have access to safe drinking water, not a single district is in Rajasthan. Jaipur district is rated 306th out of 569 districts in the country. In such a scenario, the state ought to clarify its objective of adopting the current skewed model of economic development knowing fully well the profile of the principal beneficiary.

Restoring community rights over natural resources in the affected region can only be possible by

shutting down the Coca-Cola bottling plant at Kaladera. And this can only be achieved by intensifying public pressure through mass demonstrations, public rallies, and judicial intervention.



The Palar Basin

Conflicting priorities lead to water dispute

turbulent waters

Unplanned urbanization and rapid industrialization are the two factors responsible for the escalating demand for groundwater, apart from other users and sectors. The increasing demand for groundwater has resulted in water and soil contamination as well as intense conflicts among competing groups of users. The overexploitation of groundwater is also responsible

for the increase in rural indebtedness, unemployment, poverty, social inequity, and conflict in rural India. In most cases, the conflict over water has culminated in a status quo situation, without any hope of restoring normalcy in the affected region. However, the example of the Palar river basin indicates that through multi-stakeholder dialogue (MSD) groundwater conflict can be addressed effectively. The initial stages of the

dialogue have been productive and there is hope that the conflict might be resolved through this strategy.

Background

The Palar is one of the main rivers in Tamil Nadu and covers an area of 18,300 sq km. The main irrigated crops in the region are paddy, sugarcane, and groundnut and the non-irrigated crops are coarse cereals and groundnut in the water-scarce areas. The



traditional irrigation systems in the river basin are largely redundant owing to the emergence of groundwater-based irrigation systems. The groundwater development in the region is almost 92 per cent, catering to agricultural, domestic, and industrial needs.

The Palar basin houses 75 per cent of the total tanning industries in Tamil



Nadu and contributes to more than 30 per cent of the country's total leather exports. The presence of the industry has impacted the availability and quality of groundwater. The total quantity of water used by the tanneries

in the Palar basin amounts to approximately 45 to 50 million litres per day. The effluent discharge has been calculated at 37.5 million litres per day. According to the Asian Development Bank-sponsored study in 1994, the pollutant load of the Palar river is so high as to be frightening:

Pollutant	Pollutant concentration (kilograms per day)
Total Suspended Solids	29,938
Total Dissolved Solids	400,302
Chloride	101,434
Sulphide	3,818
Biological Oxygen Demand	23,496
Chemical Oxygen Demand	70,990
Total Chromium	474
Cyanide	22

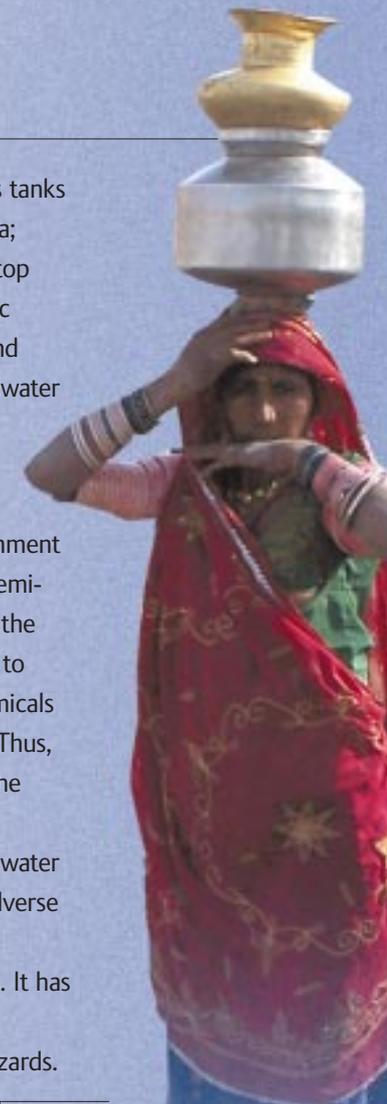
The impact of water pollution resulting from the discharge of industrial waste has been adverse. It has affected the aesthetics of the region; killed off wildlife, including birds



and fish in water bodies such as tanks and ponds; ruined the local flora; deteriorated the quality of the top soil due to accumulation of toxic effluents discharged on land; and pollution of surface and groundwater bodies.

Existing status

In the late 1970s, the Government of India banned the export of semi-finished leather and this forced the tanners to shift from vegetable to chrome tanning and other chemicals for exporting finished-leather. Thus, the environmental damage of the region was initiated. The deteriorating quality of surface water and groundwater has had an adverse impact on agricultural yields, employment, and income levels. It has exposed the human and animal population to various health hazards.



This has given rise to conflicts between farmers and tanners, which even today are widespread.

Highlights of the conflict

The issue of water pollution caused by the leather industry in Tamil Nadu was presented at the Second International Water Tribunal in 1992 in Amsterdam by Muthu who represented the Trust Help. The Tribunal stated clearly that the existing practices being followed by the tanning industries have resulted in the serious contamination of surface water and groundwater, making it unsuitable for drinking purposes. It also stated that large areas of fertile land have been



rendered useless due to salt and chemical pollutants.

During the same period, large sections of farmers with political support organized demonstrations demanding the closure of the tanning industries in the Palar basin. But the protests did not lead to any constructive measures, and the situation continued to remain the same as before.

The filing of public interest litigation against the tanners by the Vellore Citizens' Forum, a civil society group, in the Supreme Court of India instilled some hope among the affected population in the Palar basin. The Supreme Court ruled that none of the tanneries could resume their operations before installing treatment plants in the region. The farmers' lobby was elated, and they demanded the immediate closure of all those tanning industries that did not adhere to the prescribed norms. At present, though many tanneries have treatment plants, the effluent water is either untreated or is under-treated. In other words, despite the Supreme Court's historic verdict, the lack of appropriate enforcement and monitoring mechanisms has become an obstacle in any further





negotiations and in reaching an agreement between the tanners and the farmers.

Conflict-remedial strategies

With all the various opportunities available for holding negotiations between the tanners and the farmers proving to be futile, Prof. S. Janakrajan of the Madras Institute of Development Studies (MIDS), Chennai introduced a MSD process as a result of his action research in the Palar basin. He instituted the MSD as a viable alternative process for restoring the sustainable use of groundwater.

The MSD approach has tremendous potential in resolving deadlocked situations, as seen in the Palar basin. This approach has

emerged in response to the apparent defects and weaknesses of conventional socio-economic and institutional tools aimed at conflict resolution. In situations of conflict as well as in situations of deadlock over the use and abuse of natural resources, the MSD approach provides an extremely useful framework and platform:

- for finding ways of preventing the further degradation of the natural resource in question and for working towards sustainable development with a common agenda within a framework acceptable to all stakeholders, and
- for turning situations of conflict and distrust into opportunities for mutual aid and cooperation.

The first Multi-stakeholder Dialogue meeting of the Palar river



basin was organized in Chennai on 28–29 January 2002. The meeting was attended by over 120 participants, including tannery owners, farmers, representatives of NGOs, bureaucrats, managers of effluent treatment plants, media people, lawyers, doctors, and academics. The basic objectives of this meeting were:

- to take stock of the existing water situation in the Palar basin in the overall context of existing water use and its impact;
- to assess defaulters and examine their positive and negative contributions to the society and the economy;
- to bring the various stakeholders to a common



- platform for a fruitful dialogue;
- to explore collectively various options for preventing the further degradation of water resources in the Palar basin and to identify ways of achieving sustainable development; and
- to find ways of turning situations of conflict and distrust into opportunities for mutual aid and cooperation.

The initial round of discussions was

extremely intense owing to serious differences among the stakeholders. A change in the environment slowly took place, and instead of hostility, mutual concerns were expressed. In the process, remedial strategies for the problem of effluent discharge and environmental pollution were debated and discussed extensively.

The dialogue centred on a series of issues, for instance, finding legal solutions to help the cause; examining technical options for more efficient individualized or centralized effluent treatment plants and exploring alternative cleaner technologies in the tanning process; exploiting governmental opportunities, by applying pressure for the revival of the Loss of Ecology Authority in order to reverse the existing ecological degradation.





At the end of the meeting, it was widely acknowledged that the MSD is a process and not a one-off meeting. There was a general consensus about the need to form a committee from among those who were present so that the dialogue process could be carried further. This resulted in the first Multi-stakeholder Committee, with 24 members representing different stakeholders in the Palar basin. Later the members drew up a charter of objectives for streamlining the functioning of the committee.

The state government had constituted 'The Palar Basin Board' at the recommendation of the World Bank in 2001. This board so far has met only once and no business seems to have been transacted. In contrast, the Multi-stakeholder

Committee has been meeting frequently and has identified the following critical policy issues:

- The committee has agreed unanimously that the closure of tanneries is not the solution. The members have committed themselves to finding solutions not only for pollution but also for restoring the ecology of the basin.
- The different stakeholders have agreed to share information among themselves as well as the details pertaining to tanneries and central effluent treatment plants, and have also agreed to grant open access to tanneries and central effluent treatment plants to the committee members who wish to visit their sites at any time.





- The need to prevent any further pollution in the basin as the first step towards ecological restoration.
- The need to explore a variety of specific potential solutions to some of the most critical water problems. These include the possibility of handing over effluent treatment to a private water treatment company and paying according to the services provided by them.
- The use of mobile cold-storage systems for collecting and transporting raw hides and skins from all over the country so that the pickling process could be avoided (which is the main source of TDS (salt) accumulation in the effluent). Despite its considerable



successes during the first year, many tasks identified by the committee remain unaddressed. These include:

- Developing a relationship with government agencies at all levels with a view to:
 - getting access to official information (database);

- influencing the policies of the government; and
- executing the objectives of the committee with the endorsement and financial support of the government.
- Generating data—both primary and secondary—on all aspects of the basin
- Developing village-level stakeholder units with the objective of:
 - spreading awareness about the need for restoration ecology in the basin;
 - generating primary data in each village concerning crop details, water use, conditions of surface-water and groundwater bodies, groundwater levels, water quality characteristics, water conflicts, encroachments, and so on;
 - developing a monitoring mechanism for preventing further pollution, to regulate water use (both surface water and groundwater); and
 - regulating water markets.





- To sustain the MSD process through periodic Stakeholder Committee meetings

Summary of learnings

The introduction of MSD as a conflict-resolution strategy in the Palar basin with the aim of preventing the existing exploitation of natural resources has set an example for many, especially those who are currently facing similar issues. The use of local human resources in addressing the problem through collective and collaborative means has proved to be far more effective than the state-driven initiatives. The MSD process may be used for resolving deadlocked natural resource-based conflicts, but simultaneously it also has the capacity to administer as well as monitor any future course of action concerning the use of natural resources. This dual impact of the

MSD process is primarily due to its structure and location.

Therefore, going by the Palar basin experience, MSD might just be the tool for resolving future water conflicts at any given level.



The Bisalpur Dam

Quenching urban thirst by crushing rural water requirements

turbulent waters

On 13 June 2005, five farmers—including a pregnant woman—from Sohail, Jeerana, and Bawdi villages were shot dead in Tonk during a road blockage. The protestors were local inhabitants demanding their share of the water from the Bisalpur dam, which was sourcing water from the villages to the city of Jaipur.

Background

The dam that provoked the mass agitation is located on the river Banas, which rises in the Khamnor hills of the Aravalli range and flows along its entire length through Rajasthan. Banas is a major tributary of the river Chambal. The total length of the river is about 512 km. The Bisalpur dam is in Tonk district, located in the north-eastern part of Rajasthan, bordering Jaipur,

Sawai Madhopur, Ajmer, and Bundi districts. The district is a mix of flat and undulating terrain and is divided by the river Banas. The soil is fertile but somewhat sandy, and groundwater is limited. The total population of the district is 1,211,343. The average water table is low, and irrigation potential is limited because of the rock formations in the district. Agriculture



is the main occupation of poor and vulnerable groups, and is characterized by low productivity. People engage in seasonal migration to nearby towns and cities (i.e. Tonk, Jaipur, and Delhi) in search of employment. Due to non-availability of water for irrigation, the poor largely depend on rain-fed agriculture.



The Public Health and Engineering Department, Government of Rajasthan operates the Bisalpur Water Supply Project. The project, implemented under the Rajasthan Urban Infrastructure Development Project (RUIDP) and assisted by ADB, has been designed to deliver water from the existing Bisalpur dam headworks up to Jaipur to reduce the city's dependence on its severely constrained groundwater resources.

The project work includes expansion of the existing pumping station at the headworks, construction of 8.4 km of 2,100-mm diameter raw water pipeline, construction of a new 400 million litres per day water treatment plant, and construction of approximately 97 km of clear water pipeline. Phase I of the proposed water supply project is designed to supply 360 million litres

per day of treated water up to the Jaipur city limits plus 40 million litres per day to villages en route, and also includes construction of pumping stations and a transfer system within the Jaipur city limits to cover the central zones, which face the most serious constraints due to impending groundwater shortages. A subsequent programme for expanding the treatment and pumping capacities is proposed to be taken up during Phase II—approximately five years after the completion of Phase I—which will supply 540 million litres per day treated water to Jaipur city plus 60 million litres per day to the villages. A total of Rs. 556 crores is likely to be spent on Phase I and Rs. 463 crores on Phase II. The Bisalpur dam—envisaging 31,560 million



cubic feet of live storage of water—is already providing drinking water to Ajmer and Nasirabad towns. Though the project was initially launched in 1986 with the aim of supplying water for irrigation as the top priority, water availability was later divided between irrigation and drinking water, with the latter getting a two-thirds portion.

The state was supplying water from Bisalpur to Ajmer, Sawai Madhopur, Kishangarh, and Beawar, but the live storage of water in the dam was out of bounds for the people of the habitation located close to the macro water system. This arrangement infuriated the locals because they were convinced that water from their

tehsil was being given to others without their own pressing needs being met first. Even within the district, there was discrimination with regard to water sharing. Unniara tehsil in Tonk district happens to be the constituency of the state Agriculture Minister, Prabhu Lal Saini, hence the water requirements of the tehsil were being met from Bisalpur dam.

Highlights of the conflict

On 9 June 2005, the farmers submitted a memorandum to the Collector of Tonk (now suspended) and also to the Minister for Irrigation, Sanwarmal Jat, broadly indicating their intention of undertaking a road blockage if their demands for water were not met. The villagers had suggested that the process of taking out tenders for digging canals to connect the Bisalpur dam with the

Todisagar dam should be initiated. The areas that were deprived of water fell within a radius of 40 km in the command area of the Bisalpur dam. The farmers said that canals as long as 70 to 80 km had been dug but the areas closer to the dam had been bypassed. The tube wells that drew water from the Todisagar dam had become useless as the dam itself had dried up. The only option left for the farmers was to agitate or to commit suicide.

On 9 June, street-corner meetings were organized. The next day, a large meeting was held but the government continued to remain unresponsive. Popular discontent had been brewing since April as the locals watched the Bisalpur water being given to Unniara tehsil while Tonk and other tehsils were left out. Angry farmers from Jeerana refused to entertain the MLA



from Malpura, Jeet Ram, who was driven away by the people.

The Bisalpur dam had originally been conceived as an irrigation and drinking water scheme. Its command area extends up to parts of Bhilwara district and also covers parts of Tonk, Bundi, Nasirabad, Ajmer, Jaipur, and Kekdi. For years, the issue of water has been politicized by the party in power



despite underground water levels hitting new lows every year. Electoral promises relating to water distribution and promises to extend the command areas of the existing dams have were never fulfilled. Under the previous

Congress Party government, an agitation over the water problem had been launched, which the Bharatiya Janata Party (BJP) then promised to address if it came to power.

One and a half years have gone by since the BJP came to power, but the people's lives have not changed. As most areas in several districts have been declared part of the 'dark zone', the only option available was to divert water and to expand the command area to an unrealistic and impractical extent. Until five years ago, tube wells needed only 10 h.p. to pump out water; now even 20 h.p. is not enough.

Five people, including a pregnant woman, were mowed down in indiscriminate police firing. Involved in the agitation were 125 villages. Despite the Bisalpur dam being full, the villages within a radius of 15–20 km were prevented from accessing the water. On



the contrary, water was being diverted over a 150-km strength to quench the thirst of urbanites at a time when the nearby villages did not have drinking water and their fields were parched. In such extreme conditions, when successive governments of Rajasthan have refused to provide them water, the villagers have no other option than to migrate to far-off places as labourers. The prevailing water-stress situation has pushed them to agitate. In the process, over 50 people suffered bullet injuries.

Immediately after the firing, the Rajasthan government adopted a dual strategy to crush the just struggle of the peasantry for water. On the one hand, it hounded the activists and leaders of the agitation, threatening them with arrest and so on. On the other hand, it tried to discredit the



struggle by making out that it was a Congress-inspired agitation. At the same time, the state government spread rumours that it was technically not possible to bring water from the Bisalpur dam to the agitating villages.

Conflict-remedial strategies

The affected villagers are disgusted by the political shenanigans that have been going on for years. Before the last state assembly elections, and during the Parivartan Yatra (Journey for Transformation) that travelled through the district, the chief minister had declared that if her party were elected, her government would immediately provide the water of the Bisalpur dam to the adjoining villages. The same promise was

repeated a few months later by the current member of parliament of the area during his election campaign. The peasants have taken matters into their own hands and have stated their intention of digging a canal from the dam to their villages. They are greatly frustrated when they are told that the government is planning to connect all the rivers of India, and yet the distance of 20 km is considered technically unfeasible. The peasants have declared that they will intensify their struggle at all costs.

Summary of the learnings

The present conflict has emerged primarily due to the skewed water-distribution pattern in the state. In order to meet urban water requirements, the state machinery has conveniently alienated the water-stressed zones in rural Rajasthan. This

preferential form of water governance has undoubtedly raised questions about the future water-sharing strategies in the state. In the present day, rapid and unplanned urbanization is an inevitable phenomenon, which then becomes responsible for escalating water demands in urban areas. Is it justified to cater to such increasing urban demands by overlooking the existing water requirements in rural areas?

Second, prohibiting people from accessing water is equivalent to denying them the right to live. Solutions like these do not have longevity. The stress factor might just compel people to draw on the resource despite the existence of regulated sanctions. Therefore, it becomes all the more important for the state to look out for practices that lead to solutions with a more equitable and long-lasting influence.



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