

**Status of Irrigation Management Transfer in India**

**Water Users' Association in Left  
Bank Canal of Baldeva Medium  
Irrigation Project : Farmer's  
Experience**

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## Foreword

This booklet is one of the series of short narratives about farmers' efforts to create and manage water user associations. The purpose of the series is to provide other farmers in the state with succinct, readable, and interesting information about these efforts that might enable farmers to improve their access to the irrigation services. This study is being published in both Gujarati and English. See the back cover for information about the other narratives in this series.

This narrative was written by Suresh M. Prajapati under the guidance of IIMA and IIMI team members. He lived with the farmers described here from October, 1994 to April, 1995. While there, he interviewed and observed the farmers in order to document the water user association and irrigation management transfer process at this site. The information presented here reflects the ideas and opinions of the farmers themselves.

Suresh M. Prajapati's effort was part of the study on Status of Irrigation management Transfer in India being carried out from 1993 to 1995 by the Indian Institute of Management, Ahmedabad, and the International Irrigation Management Institute, Colombo, with funding from the Ford Foundation. The study investigated and documented the policies and activities of agencies, non-governmental organizations, and others with regard to promoting irrigation management transfer from the government to farmers. The overall goal was to contribute to formulation of effective policies and programs with regard to irrigation management transfer in India. In addition to this series of short narratives, study results are reported in more traditional research reports and other forms.

The primary members of the IIMA/IIMI study team were Shashi Kolavalli, Amarial Kalro, Gopal Naik, and S. Ramnarayan from IIMA, and Jeffrey D. Brewer, R. Sakthivadivel, and K.V. Raju from IIMI. Editing in Gujarati was carried out by Barin Mehta. The edited first

draft was translated into English and reviewed by the study team, particularly by S. Ramnarayan and K.V. Raju.

The members of the study team, including Suresh M. Prajapati, wish to thank the people of Village Baldeva, concerned government and non-governmental agencies who gave their hospitality and time to answer questions and explain how things work without expecting compensation. We sincerely hope that their experiences will be useful to others.

Jeffrey D. Brewer  
IIMI

Gopal Naik  
IIMA

## **Water Users' Association in Left Bank Canal of Baldeva Medium Irrigation Project : Farmers' Experience**

There are many places in India where farmers face problems in irrigation, although there may be heavy rainfall in the areas. Baldeva was one such place where the farmers could grow monsoon crops alone. As a result, the poor farmers migrated from their villages to nearby cities for daily wages, after the rainy season. The situation has changed dramatically in the recent past.

### **Community**

Baldeva is a village in Valiya taluka in Bharuch district. There is a dam across the river Tokri in the middle of three hills on the border of Baldeva. Two canals come out from the dam of which the right bank canal has been put out of use by the forest department, so irrigation is possible only on the left bank canal. There are six villages situated on the left bank canal. They are Ambadungali, Baldeva, Aathkhol, Kambodia, Chaswad, and Punjabnagari. For all the villages of this area, there is only one government health care centre. Chaswad and Kambodia villages are situated near the highway. Ambadungali and Baldeva are situated near the dam. Opposite Baldeva, Aathkhol is situated in the southern part, where the Kathiawadis dominate. Frequent famines in Saurashtra is the major reason for the migration of the Kathiawadi community. Tribal live in Ambadungli and both tribal and high caste people live in the rest of the villages.

High caste families live in a different part of the village in houses built of brick and mortar. Rest of the people live in houses made up of clay, dung and cane. For two or three neighbouring villages, there is one combined panchayat office. There is a primary school in Chaswad and Aathkhol, and a sugar mill and a dairy in Chaswad village.

People of this village can be divided into three classes: rich farmers, ordinary farmers, and landless people. Many farmers belonging to high

castes and a few tribal farmers can be counted among the rich farmers. Agriculture and dairy are their major occupations. Landless people work on farms or homes of high caste people.

Baldeva has an interesting practice known as partnership farming. Ordinary farmers who do not have enough money to buy seeds for sowing lend their land to rich farmers but provide labour input. The rich farmers pay all the expenses and share the profit equally. If the ordinary farmer does not put in labour, the profit is shared in the ratio of 70:30, the major share going to the rich farmer.

Besides agriculture, a few people are connected with dairy and diamond businesses. Education standards are very low and among women literacy is nearly zero. The community has very little interest in politics.

### **Problems of Irrigation**

Paddy, cottonseed, soyabean, tuvar (*Cajanus indicus*) groundnut, and sugarcane are the major crops in this area. Sugarcane requires more water so only rich farmers who have irrigation facilities can cultivate sugarcane. Water problem is serious during summer for others.

To address this problem, the government built a dam across the river Tokri, on the border of Baldeva village. Construction work on the dam was completed in 1979. But, the construction of canals remained incomplete, and so the farmers could not get water. Whenever some rich farmers suggested, water was released in the river and with the help of pumps they lifted the water and irrigated their lands. Thus only rich farmers were the beneficiaries.

### **Constitution of the Society**

In 1990, a water distribution co-operative society was established near Baldeva village under the Pingot Irrigation project. Pingot project had also faced the same problems as described earlier. Although a dam was built years ago, farmers could not get water from it. With the help of Aga

Khan Rural Support Programme (India) (AKRSP), a voluntary organization, water users' association was formed and thus farmers could get water. Farmers of Baldeva also started thinking along similar lines. Some of leading farmers decided to take help from AKRSP. After some initial hesitation, other farmers also joined in approaching the organization.

The AKRSP started negotiations with the government about the Baldeva scheme. Meetings were held at different villages, and gradually rapport was established. Members had to pay one rupee as membership fee to become a member of the society.

The government was also inspired by the success of the Pingot scheme. And so Baldeva and three other schemes were assigned to the AKRSP. If the whole project succeeded at one place, it would become a unique example of partnership for irrigation in the state.

The Government entered into agreement with AKRSP and the Society. Some important details of the agreement are presented here.

1. The dam and the canal are given as they are to AKRSP for the purpose of water distribution. The government would remain the owner of the dam and the canal.
2. The AKRSP will not charge less than that decided by the government.
3. Rest of the work for the canal would be given to the AKRSP if it wanted to. Work would have to be done according to the government design and will be given according to rates fixed by the government.
4. According to government rules, expenses for repairs and maintenance will be paid to AKRSP.
5. The AKRSP will form a union of farmers. Its purpose will be the distribution of water.

The society was formally registered on March 22, 1993. After the society was registered, the next step was to prepare the constitution of the society and elect representatives. The first president of the society was Mr. Sanmukhbhai (native of Baldeva), vice-president Mr. Mukesh Dasji (native of Kambodia) and Secretary Mr. Ranchodbhai (president of the Baldeva Panchayat). All were elected unanimously.

An executive committee was formed by choosing one representative from each village. Sub committees were also constituted for different subjects like maintenance of regular accounts, resolution of problems, penalty, etc.

## **Water Distribution System**

### ***Planning of Water***

The voluntary association and the executive committee of the society, decide the date of release of water in the canal in consultation with irrigation department. After the society was formed, the community organizer of AKRSP, the committee members of the society, and the representatives of the irrigation department collectively decide the date of rotation. In this matter, however, the irrigation department shows less interest.

WALMI, Anand, decides the days of rotation taking into account the stock of water in the dam and cropping pattern. WALMI informs the irrigation department how much area can be irrigated and suggests to the society to accept the applications from farmers of this area. But, the society accepts more applications than recommended by WALMI. Mr. Ranchodbhai says "The calculation of WALMI is wrong. More area can be irrigated". The government engineer also agrees with this view.

The irrigation department does not have any instrument to measure the stock of water. But, water is released as per the marks on the measuring scale in the main gate, farmers also demand water according to the mark. According to the engineer, if 10 marks of water is released, it means a release of nearly 15 cusecs.



### ***Method of Application***

Farmers apply to the society directly for water. Initially, the AKRSP used to assist in filling the application and collecting them. But, now the society itself handles this work. The name of the farmer, the area of the land, block number and crops are noted in the application. A last date is fixed for submitting applications, and late applications attract late fee. After collecting the applications, the irrigation department is advised about the total demand. The engineer scrutinizes the applications and sees whether they are from farmers within the command area.

### ***Water Distribution system***

The society takes the entire responsibility for the distribution of water. The irrigation department only does the job of releasing water from the main gate. As per plan, water is released on the fixed day. But prior to that the rules for distribution are formed. Earlier, water used to be released in the entire canal, but its management was difficult and so the canal was divided into four parts : head reach, middle reach, tail reach, and the diversion of the middle reach and known as the minor canal spring.

For proper distribution of water, days are allotted for each part. The allotment of days depends on the demand of respective parts. During the fixed days the respective parts are given water and it has been decided that during this period if any farmer is found taking water by violating the rules, he would be penalized. But in reality, until now only two farmers have been penalized though many farmers were found violating the rules.

The doors are opened one by one for the fixed part and farmers take water from the gate in turn. Farmers who grow groundnut take water first and thereafter those who grow sugarcane take water. In short, the needy farmer takes water first. The second farmer takes water only after the first farmer's land is irrigated. Thus, there is no fixed time limit. As a result, some farmers who grow sugarcane, take more water than required, which

affects the entire water distribution system. This is why water cannot be distributed according the fixed schedule.

Each farmer has a tool of his own for opening the gate. So during the night time, when water is released for the tail reach farmers, farmers in the middle and head reaches also open the gate. As a result, farmers in the tail reach get less water. In the current year, such a situation arose during the second rotation and considering the difficulty in water distribution, the president stopped water supply. Thereafter, a meeting was called, rules were again formed, and water was released. While rules are formed aplenty, but very few follow them.

Other factors affecting water distribution are disparity in land ownership and growing of sugarcane. Mr. Kanubhai of Kambodia said, "There is a misunderstanding that if more water is given, it will produce more sugarcane". According to another farmer, the rich farmers do not take water but their servants. Many servants divert the water to the farm and go to sleep which results in wastage.

Farmers cannot anticipate when exactly water will be supplied, but in a variation of two-three days they get water. Parity is mostly maintained in distribution of water. The society takes care to see that all the farmers are supplied water. Mr. Ranchodbhai said, "There is no inequality between head reach and tail reach, but there is inequality between rich farmers and poor farmers."

Some farmers are dissatisfied with the water distribution system. Mr. Ganibhai said, "Muscle power is needed to get water. Rich farmers get water by creating hurdles in the canal, and the society cannot take action against them."

If there is any dispute among members, it is resolved by the president or vice-president. Some leading farmers also play an important role in resolving disputes. Ranchodbhai is capable of solving many problems of the tribal people residing near the dam.

The vice-president Mr. Mukesh Damji says about the water distribution system, "Water could be distributed judiciously, equally, and properly through the Society only. Since the farmers have the tools for opening the gate, they create obstacles in water distribution". Mr. Kunwarsinhbhai suggests, "The society should lock the gate and the key must be given only to the gate operator." The President of the Society says, "The biggest problem is the absence of a service road. Therefore, it is not possible to keep proper watch.

According to the executive members of the society and the president of the Kambodiya panchayat, a broken pipeline affects water distribution. The total irrigation area is 1155 hectares of which only 350 hectares to 400 hectares area are irrigated. The executive engineer Mr. J M Shah said, "The scheme was planned mainly for monsoon and winter seasons. As the requirement of the local farmers is maximum during summer, they take water and so there is more wastage of water during this period." (In 1995, wastage of water due to losses was sufficient to complete one rotation.) "Secondly, farmers nowadays grow sugarcane which was not taken into consideration before the construction of the dam. Sugarcane needs more water compared to other crops. Farmers are also responsible because they have not become conscious of the need for conservation of water."

### **Survey and Irrigation**

The society surveys the areas to be irrigated by the farmers during the current rotation. During the survey the secretary of the society, the gate operator, the community organizer of AKRSP, and the representative of the irrigation department remain present. After the survey, the society scrutinizes the area and if they find any farmer who has taken more water than applied for, action is taken against the farmer. Instead of using a scale for measuring, they walk in the field and determine the approximate area on the basis of number of steps. But this at times creates problems. For example, Mr. Harmanbhai said, "I do not have as much land as surveyed by the society last year. So I have not paid water charges. But

after being persuaded by the president I paid on the condition that the excess of water charges will be adjusted during the current year."

After the survey, the society gives the data to the irrigation department for scrutiny. If there is any mistake in the calculation of the society, the irrigation department penalizes the society. This means that the entire society has to suffer for the mistakes committed by one farmer. The vice-president had discussed with the chief engineer and instead of penalizing the entire society, suggested to fine the erring farmer. But the chief engineer disagreed and said that it was the responsibility of the society to do a proper survey.

The society charges 50 per cent more than what is charged by the irrigation department. It starts collecting water charges during the time of harvest. After paying the charges of the irrigation department, the excess amount is added to the capital of the society. The Baldeva Irrigation Society is leading in collecting the water charges with 100 per cent recovery. The president said "From the beginning, there has been the system to collect 100 per cent charges. If any farmer has not paid, I talk to him and he pays for my sake." At present the society has deposits of Rs.80,000 in a bank.

### **Repairs and Maintenance**

A proposal was presented to the society for the remaining work of the canal. But the society did not accept the proposal. The president said, "It was our first experience and so we were not aware of that matter. So we did not accept the proposal of the government." Even the voluntary association did not accept the proposal for some reason. The programme coordinator of the association said, "At that time the government told us to finish the work in limited time which was not possible. Our staff was engaged in the Pingot Irrigation Plan, and so we had to reject the proposal."

At last the government took up the work. The society and the voluntary association were not kept away, but were asked to look after the work.

The society has been given the authority by the government to stop work, if it is not properly executed. The society formed a committee only to supervise the work. Though the work progressed under the supervision of both, the work was not satisfactory. Mr. Satishbhai said, "The quality of the material was not good and we also took a sample. We wanted to register a complaint with the government but Mr. Sunilbhai stopped us from doing so, because he did not want to enter into conflict with government workers indirectly."

The Baldeva Irrigation society decided to place the complaint before the executive committee about the quality of the work. Initially verbal complaints were lodged, but now the society sends written complaints, so that it can have a proper record.

The farmers are not satisfied with the quality of the work. They point to the cracks in the chamber during this year which results in water not flowing at some places, the leakage in the pipeline at various places, the obstacles put in the canal to take water due to the high gates of the canal, and time overruns in completing the work.

The main purpose of the government in entrusting the contract to the society was the benefit of farmers of that area. In addition, the government expected the society to maintain quality and to develop a feeling of ownership among the farmers. The farmers and the irrigation area were not benefitted much, though.

All expenses for repairs and maintenance of the canal are borne by the government. The farmers sent a request for reimbursing the expenses to the main office at Ankleshwar. This being the "initial experiment" the government sanctioned it. In this connection Mr. I.K. Oza said, "On our submitting the details of the expenses, these are immediately sanctioned."

If any farmer has any complaint, he presents it to the executive committee. If necessary, the president visits the area and takes a decision. The labourers coming for the repairs are paid wages according to the

government rules. If there is any leakage, the farmers immediately inform the society.

On one occasion, water started flowing out from the outlet. There was a big crack in the outlet, and it was not easy to control the flow of water. This affected the groundnut crop in Aathkhol. The society immediately informed the irrigation department. It was necessary to take help from the farmers as the numbers of labourers the irrigation department could mobilize was not sufficient to complete the work. Government officers and workers of the voluntary association requested the farmers to assist in the repair work and the farmers immediately responded and the repair work became easy.

After the formation of the society, there has been an improvement in the conduct of the government employees. The assistant engineer Mr. Panchal said, " Initially I was working in the area where there was no society but had not evinced much interest. Here the individual complaint becomes a collective complaint. So, we have to give priority to the work of the society."

#### **Benefits to Farmers**

- \* Because of the formation of the society, water distribution has become more judicious.
- \* Conflicts on water distribution have gone down.
- \* The repair/maintenance expenses of the canal have come down to a great extent. The farmers have developed a feeling that the canal is their own and not of the government and if any one is found damaging it, they stop him from doing so.
- \* Since the society takes responsibility for water distribution, there is no need to keep a watchman. So, the government can deploy the staff elsewhere.

- \* The government department is relieved of the responsibility of collecting water charges, and still 100 per cent water charges can be collected.
- \* As more and more farmers are benefitted, irrigated area is increasing and, on the whole, the income of farmers, government, and the society has increased.
- \* Farmers are free from the hassles of dealing with the government department for water and paying of water charges. Society has taken the responsibility for all these matters.
- \* The tribal people who could not talk to government employees and high caste people now work with them.
- \* Because cooperation among people has improved, the people's attitude towards the government and the confidence of government workers have increased.
- \* Officers of the Irrigation Department give more attention to the villagers' complaints and have started visiting the villages. Immediate solutions emerge in these visits as people are aware of the problems.
- \* Initially construction of the canal and pipeline was made according to the government scheme. So, many farmers faced difficulties. Now, the government has made changes after incorporating suggestions from farmers.
- \* The level of water in the nearby wells has gone up and so people have diversified to cash crops, such as sugarcane.
- \* The farmers who were cultivating only monsoon crops earlier have now started cultivating crops two to three times. In the beginning they used to cultivate crops like tuvar, paddy, and soyabean, and the farmers used to get an income of four to five thousand rupees per hectare. Now, they have started cultivating crops like sugarcane and

the income per hectare has increased to eighteen to twenty thousand rupees. Thus, there has been a substantial increase in farmers' income.

### **The Present Condition of the society.**

In 1994-95 rainfall was very heavy. Water was flowing above the outlet of the field channel near the dam. The dam was filled to the brim. Because of the heavy rainfall the canal was damaged. The canal was repaired by the irrigation department.

The complete financial report was read out during the general meeting which was held in the current year. But, the farmers were not interested in financial matters. Most of the farmers do not know anything about the fund position of the society. They are interested only in water.

A meeting was held to decide the date for releasing water. After a very lengthy discussion, a date was agreed upon. Members of the working committee also agreed with the decision. The irrigation department was informed about the date which happened to be a Sunday. The irrigation department decided to release water a day later. The register fixed by WALMI, Anand was also starting from Monday and so the irrigation department decided to release water a day later.

A number of problems arose in the year and water had to be stopped midway during the second rotation. But the rest of the two rotations worked systematically. Another problem arose. The farmers could not control the excess of water when it started flowing into the Zama minor. So the headreach farmers were permitted by the gate operator and consequently one farmer from Zama minor was deprived of irrigation. He complained against it to the president and the result was that the gate operator was suspended. Moreover, all those farmers who had used water against the rule were fined Rs.500/- each and were told that they would not be provided water if the fine was not paid. But all these farmers were poor tribal people, and could not pay the fines. So the society decided to give them water and to collect fine after harvest. Mr. Kanubhai of Aathkhol said, " The fine is only for the sake of records. Until now



nobody has paid the fine and that is why the society cannot follow the rule. There are two reasons. First, if the fine is high, it will become unbearable for the poor tribal people. Second, if the fine is low, the rich farmers will be ready to pay fine and take more water."

In the current year (1994-95), one farmer from Chaswad took water for seven acres of land during the first irrigation. In the second irrigation he asked for water for only three acres. According to the society rule, even if water is taken only once, water charges should be paid for the entire irrigated area.

Water is misused to a great extent. Farmers are responsible for a major part. In the current year, there was a breach in the canal in the night. The irrigation department came to know about it only the next day and soon repaired. But plenty of water flowed out and big pits and ditches were filled with water near the road. The gate operator did not inform farmers.

In the current year, accounts preparation also posed some problems. The Vice-President was holding large amounts of cash. He could not deposit it in the Bank because the passbook was with a representative of the Aga Khan association. The auditor raised an objection.

### **Organizing Committee**

Organizing committee is a very interesting concept. The Gujarat government has included the Pingot, Baldeva and three other societies under a pilot project. Presidents of the Pingot and Baldeva societies are included in the organizing committee. Till now two meetings have been arranged by the organizing committee at the state level. The president of Baldeva Irrigation society said, "With the forming of the organizing committee, the problems of farmers go to higher levels and are solved immediately. The attitude of farmers towards the Government department has changed." The president of nearby Pingot Irrigation society Mr. Jhaverbhai, said, "The senior officers of the organizing committee all the

time talk in English and I do not understand anything. I just go there to mark my presence and talk about our problems in case if we have any."

Similar to this, there is an organizing committee at the division level. It is a combined committee of the five societies of the pilot project. With the formation of the organizing committee, farmers have come in touch with higher level bureaucracy. The bureaucracy is also aware of the problems of farmers. The attitude of farmers towards the government has changed. Frequent visits of senior officers have made the government employees concentrate more on the problems of farmers. If the employees avoid them, farmers threaten to take the matters to higher level.

### **Future Plans**

The society does not have any plans to broaden its activities beyond irrigation. It will take up other activities only after resolving all the problems of irrigation.

**List of case studies published in local languages under Irrigation Management Transfer Project**

*Case Studies conducted in Gujarat and published in Gujarati*

1. Water Users' Association in Anklav Subminor, Mahi Kadana Project: Farmers' Experience
2. Water Users' Association in Right Bank Canal of Pingot Medium Irrigation Project: Farmers' Experience
3. Water Users' Association in Left Bank Canal of Baldeva Medium Irrigation Project: Farmers' Experience
4. Water Users' Association in Bhestan Minor (Mohini), Ukai Kakrapar Project: Farmers' Experience
5. Water Users' Association in Bhima Lift Irrigation Scheme: Farmers' Experience

*Case Studies conducted in Maharashtra and published in Marathi*

1. Water Users' Association in Phulewadi Lift Irrigation Scheme: Farmers' Experience
2. Water Users' Association in Kadoli Lift Irrigation Scheme: Farmers' Experience
3. Water Users' Association in Minor 7, Mula Project: Farmers' Experience
4. Water Users' Association in Parunde Minor Irrigation Project: Farmers' Experience
5. Water Users' Association in Hadshi Minor Irrigation Project: Farmers' Experience
6. Water Users' Association in Minor 17, 18, 18A, 19 and Distributary 1, Waghad Project: Farmers' Experience
7. Water Users' Association in Minor 10, Bhima Project: Farmers' Experience

*Case Studies conducted in Tamil Nadu and published in Tamil*

1. Water Users' Association in XIth Branch Canal, Periyar Vaigai Project: Farmers' Experience

2. Water Users' Association in Kedar Tank: Farmers' Experience
3. Water Users' Association in Dusi Mamandur Tank: Farmers' Experience
4. Water Users' Association in 28L and 29R Outlets of Mettupalayam distributary in Lower Bhavani Project: Farmers' Experience
5. Water Users' Association in Malayadipalayam Distributary of Parambikulam Aliyar Project: Farmers' Experience
6. Water Users' Association in A9 Mahilanchery Channel (Saliperi), Cauvery-Valappar Project: Farmers' Experience
7. Water Users' Association in Panchanthangipatti Tank: Farmers' Experience
8. Water Users' Association in Pillayarkulam Tank: Farmers' Experience
9. Water Users' Association in Vagaikulam Tank, North Kodaimelalagian Channel, Tambraparani Project: Farmers' Experience

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