IRRIGATION MANAGEMENT NETWORK

IRRIGATION PANCHAYATS IN MADHYA PRADESH: A CASE STUDY

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Network Paper 21

October 1992

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ISSN: 0951 189X

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IRRIGATION PANCHAYATS IN MADHYA PRADESH: A CASE STUDY

K V Raju

1. INTRODUCTION

In Madhya Pradesh, the formation of Irrigation Panchayats (IPs) is compulsory under the Madhya Pradesh Irrigation Act, modified in 1974. IPs have been functioning for 50-60 years in both major and medium canal irrigation systems, mainly in the rice-growing Chattisgarh region. The size of each IP usually coincides with a village size. As of 1990, in the Mahanadi Command Area, there were 736 IPs, with a total irrigated area of 183,000 hectares (ha). Each IP has a small committee elected once in three years and serves on an average 251 ha.

The genesis of irrigation in Chattisgarh region lies in the famines of the last century. The Mahanadi Canal Project began in 1905, when a scheme was discussed to divert part of the monsoon flow of the Mahanadi river, to irrigate wet-season *(kharif)* crops. The project began supplying water in 1915 and was completed in 1925. In the Chattisgarh region, local self-government had a long history. So the Panchayat idea was spontaneously developed for the local distribution of canal water.

2. THE PROVISIONS OF THE MADHYA PRADESH IRRIGATION ACT

The Madhya Pradesh Irrigation Act, 1931, defines the functions and powers of IPs. An IP is established for every village or *chak*, and at the discretion of the Collector, for a group of villages in the command area of the canal. Such Panchayats consist of a *sarpanch* and two or more members elected by the permanent holders and occupiers of the land from among themselves. Elections are subject to approval by the Collector, who can nominate one member of any Panchayat and, with written justification, dismiss any member and to dissolve any Panchayat subject to an appeal.

The IPs:

(a) assist the Irrigation Department in the construction of water-courses, in recording and checking irrigation, and in settling disputes;

(b) collect irrigation revenue and remit it to the treasurer; and

(c) arrange for the maintenance and repair of water-courses.

Fines can be levied by the IP for default on maintenance duties, water rates, damage to structures and illegal use of water. Money collected must be spent by the IP, on irrigation or on any public work in the village, with the collector's approval.

An agreement may be made between the state government and the permanent landowners for the supply of water for irrigation. This may be either short (less than a year) or long term, at rates fixed by the state government. The short term agreement can be cancelled by mutual consent with a minimum of two-thirds majority. The Superintending Engineer may, after giving notice, cancel an irrigation agreement if irrigators fail to maintain their water courses in proper repair. However, the Act does not clarify whether the state government can cancel an irrigation agreement for non-payment of water charges.

IP officials are remunerated for responsibilities through commission:

(i) For revenue collection, at the rate of 3% for the first Rs 1000 of canal revenue collected, and 2% for all sums in excess of this amount collected;

(ii) For administrative work, for which the maximum sum payable is Rs 0.2 per ha assessed or irrigated.

A weak link of the Act is that water rates are payable on land under agreement, whether or not it has been sown or irrigated. Most conflicts and complaints which arise in IPs are due to inadequate water supply. Nevertheless, the Act forbids claims for compensation against the government for loss arising from either inadequate or excess irrigation water.

How justifiable is this? The emphasis is on powers of the authority, rather than on execution of its duties. Users have no say, and have been given no

opportunity to debate this Act. A considerable percentage of annual collections may fall in this 'pay - even if you do not eat' category.

Not all villages in the Mahanadi Command Area form IPs and arrange agreements, because water supply is inadequate. For example, in Mahanadi Head Works Sub-Division, while irrigation was designed for 138 villages, 26 villages stayed out of agreements due to poor water supply. There is very little growth in the number of IPs in the last decade, and the data shows that not all IPs renew their agreements, probably for the same reason. However, more than 96% of the villages under Mahanadi Command Area have formed IPs, and 99% of the total IPs were functioning in 1990. Their performance in terms of water distribution, water revenue collection, and in resolving conflicts varies. There is no readily available data to assess this performance.

The average number of elected members (3.3) per IP is static over the years. The total area under IPs in the Mahanadi Command Area varies between 445,000-460,000.

Change has been experienced in annual water revenue collected and thus in commission paid to IPs. At command area level, collections have reduced to 11% of target (1989-90) from 53% (1986-87). At the head-works division, collection has deteriorated badly, falling to 20% from as high as 94% in 1987-88, and 106% (including arrears) in 1985-86. In Telansatti village collections gradually declined to 5% from 73% in 1984-85, and 90% in 1986-87. These trends appear all over the Command Area. Unlike previous fluctuations attributed to natural calamities, present problems stem from political motives to waive the arrears. During the 1989-90 elections, two major political parties assured the waiving of farmers debts, including irrigation charges, in their manifesto. The decline in water rates collection also reflects drought conditions in 1988-89 and 1989-90. Nevertheless, the trend is to postpone payments and hope debts will be waived in the next elections. In 1989-90, arrears totalled Rs 365,000. Commission paid to IPs is low and declining over the years, from 3.32% in 1983-84 to 2.78% in 1986-87, suggesting few IP officials now collect revenues over 1000 Rs.

The irrationality of low commissions for IPs can be demonstrated hypothetically. If the Department appoints a waterman for the present functions of IPs at the rate of Rs 20 per day, for eight months, in 736 IPs, it totals Rs 35.32 lakhs. This is 22% of the annual target of water revenue and constitutes 43% of the actual annual collections of 1983-84 and 1986-87

respectively. IPs, however, are paid only 2-4% of the actual annual collection. At the elected member level, the commission received for their work does not even match 3-5 days wages fixed at government daily rates.

However, both field level and supervisory officials of the Department, whole-heartedly accept and support the pivotal role being played by IPs: they take responsibilities in water distribution and maintenance below the outlet; the IPs resolve conflict; they assist in collection of water revenue, which without IPs is very difficult for the Department; manpower requirement has been reduced considerably: 736 watermen, for eight months a year, with government fixed wage rates, would be otherwise required; and the Department has an easy contact point in the *sarpanch*, reducing time in the field.

However, the Department does not seem to be serious about collection of arrears. In 1986 a scheme was launched to encourage better performance from both IPs and field officials by providing a 'best performance' award if water revenue collection is 100%. Field officials were supposed to get an appreciation certificate if collection is more than 90% in their jurisdiction. There was a major response. Upper Mahanadi sub-division alone in 1986 collected Rs 10,003,000, three times more than the normal collections. A head-works sub-division totalled Rs 2,750,000 during the same year. Around 40 IPs won the award. However, field officials did not receive certificates.

On withdrawal of the scheme after one year, head-works sub-division's collection dropped by four and a half times, and there was widespread disappointment among field officials. Why was the scheme withdrawn? Senior officials of the Department felt the scheme affected routine work of field officers, including the canal Deputy Collector, Sub-engineers or Section officers, and the *Irrigation Amin*, who controls water distribution. Field officers, however, disagree with this analysis. Insufficient evidence was available to determine whether field officers work was affected or not.

3. A FIELD STUDY OF PROBLEMS

Three IPs, located at different distributaries, were selected for field observations, including a good, bad and average example based on sub-divisional officer's guidance.

Telansatti Village formed its IP in 1968, with an agreement for 574 acres and 190 voters. The original design had only five outlets in the village, but due to distribution and drainage problems farmers carved out two more outlets. This initially facilitated flow, but after some time only three outlets could get water. The remaining four outlets are now dry most of the time. One of the local sub-minors is old, unlined and not properly graded for gravity flow. Repeated requests for assistance made by farmers through the IP have not yielded results. Farmers were unable to mobilise sufficient money for repairs.

Each family contributes one person's labour for one or two days *shramdan* to clean the field channels. The *sarpanch* estimated the work of *shramdan* is worth nearly Rs 4000 per year. The farmers have practised this maintenance since the IP began.

The *sarpanch* maintains a register of all transactions related to the IP. He purchased the register with his own money. The previous *sarpanch* issued plain paper receipts and used the money for personal expenses. The farmers complained to the District Collector, who held fresh elections to appoint the present *sarpanch*. Since then printed receipts have been provided for water fee payments.

All farmer-voters meet before the *kharif* season to decide water requirements and timing. Paddy is the main crop in the *kharif* season. In the *rabi* (dry season) season, only some farmers opt for fodder or pulse production. Farmers using groundwater irrigation, harvest two crops per year.

The IP, with village agreement, has appointed three *banihars* (water guard), one for each of the three minors serving a total area of 573 ha. A *banihar* earns approximately Rs 5 per ha for water distribution in his jurisdiction. He requests help from farmers during a crisis, to personally supervise irrigation of their fields. The *banihar* forms a group of farmers during the crisis to supervise, in shifts, the smooth flow of water at the head reach.

Dandesara Village got irrigation facilities in 1962, followed by the formation of the IP, with an agreement for 263.50 ha, and a membership of 168. The village has a total of 650 ha of agricultural land, and a population of 1100.

The *sarpanch* has been in post for the last five years. Unusually, both the *sarpanch* and one committee member are under 35 years old. The *sarpanch*

has a small shop and trading business as his main occupation, leaving little time to supervise water distribution. He is emphatic about the poor incentive of low commission to do his work, and collection of water revenue is falling each year. The *sarpanch* did not volunteer but was chosen through a lottery method after the death of his predecessor. The IP feels arrears should be collected by the Department.

Dandesara village has lower water fee collection and less cooperation from voters than Telansatti village, and has not appointed *banihars*. Farmers manage water distribution individually. Efforts were made, particularly by tail-enders, to appoint *hanihars*, but the head reach farmers would not agree to pay *banihars'* fees. The *sarpanch* and one member, being young, were unable to resolve the conflicts. The main problems are unlined canals, high water travel time, seepage losses, land levelling, and tail-ender problems.

Chhati village has a comparatively larger area of 1717 ha under agreement. The IP was formed in 1962, by 656 voters out of a total population of 3000. The total agricultural area is 2200 ha. Here the *sarpanch,* elected in 1962, retained his position till 1984 by members' demand. This long-established *sarpanch* made a habit of visiting fields to check the water distribution, and continues as a member. His impartiality, service-oriented philosophy and helpfulness, led to his long term position as *sarpanch.* Today he is worried about the sorry state of affairs in IPs, observing the decline in public-spirit and the way dissatisfaction at low commission influences the actions of elected members. This retired *sarpanch* is even against increasing commission. This may be because Chhati village, being larger, generates comparatively more commission. *Banihars* are not appointed, as the *sarpanch* reasons he can supervise water distribution together with the farmers.

Farmers' Evaluation of IPs

The *sarpanch*, elected members and voters of all three IPs were consulted during field visits. All support the important role being played by the IP, and see it as a major local institution. The following discussion summarises their main points.

Water supply is not fully assured. In spite of having only one-season irrigation per year, most conflicts are due to inadequate water. Old and unlined canals intensify this problem. Necessary on-farm development works were not carried out in any of the villages observed, and improved methods

of irrigation were not taught. IPs also need support with other inputs. Presently, distance to sale outlets, and non-availability of agricultural inputs on time, limit farmers' returns. Production losses are claimed to be a contributory factor to defaults in payment.

The *kharif* cropping pattern is dominated by paddy. A small area is cultivated in *rabi* for wheat, pulses, and fodder crops, but most lands are kept fallow, unless farmers have access to groundwater. Generally, paddy is broadcast giving lower yields. The impact of the Training and Visit (T&V) system, demonstration plots, 'lab to land' programmes and other agricultural extension schemes are minimal, with farmers hardly aware of such efforts. There is little crop diversification. However, in recent years, about 10% of the rice crop is transplanted from seedlings grown in nurseries where water is assured (high yield varities [HYVs]) that give an average of 2.9 tonnes per ha, while local varieties yield 1.8 tonnes per ha.

Present water rates (Rs 32 per acre paddy) are thought to be just right, but could be increased slightly, if the money was spent on improving water courses and lining canals by the Department. The IPs could share expenditure incurred on improving the canal system, but would need to pay in installments.

Collection of arrears is irregular. However, the IPs feel it should be "collected in a strict manner by the Irrigation Department". If necessary, the IP committee can cooperate with the Department in this, but cannot handle all the arrears problems for social reasons. Additional (legal) powers are required to collect arrears, deal with defaulters, and resolve conflicts. These are difficult to use in a close-knit, village society where one cannot, even as an elected *member/sarpanch*, act as a policeman. What is needed is mutual understanding and a persuasive capacity, backed regularly by Department officials.

The IPs' commission ranges from 1-4%. At this rate, an elected member gets less than three days wages (as per government norms), in return for duties on and off for 240 days, of which 60 days in January-March are intensive. Thus, all three IPs want an increase in their commission. The annual commission received of Rs 0.2 per ha is equivalent to 2% of the annual total collection. It has not been changed since the British period, while irrigation water rates have increased thirteen fold in the same period.

4. PROSPECTS FOR IMPROVEMENT THROUGH REHABILITATION

Most of the canal structures in the existing areas of Mahanadi Command Area require rehabilitation. Any substantial increase in peak canal discharge or change in canal cross sections will make structures even more unsuitable for further service. Canal modernisation and lining is in progress. Under the World Bank assistance and guidelines, the Department has further developed the command area, by constructing a micro-distribution network *(disnet)* from 40 ha down to 8 ha *chaks*. Previously, cultivators obtained water by field to field irrigation beyond the outlets. In the *disnet* development, delivery of water is extended to conveyance channels by constructing water courses within the outlet command. A sub-minor is constructed for a 40 ha *chak*, which starts from the outlets of minor. This 40 ha *chak* is further divided into *sub-chaks* by constructing turnouts for individual *sub-chaks*. A 14,810 ha area is identified for *disnet* development under the Mahanadi Feeder Command Development. It is proposed to include lining work in the *disnet* development down to the 8 ha level for an area of 1500 ha.

A President is to be elected for each *sub-chak* and *chak*. The President elected at *chak* level *has to be a tail-ender*. However, this approach may change the jurisdiction of earlier IPs, using a hydraulic boundary approach where previously boundaries were hydraulic or administrative. The initial appraisal reports by the World Bank in 1981 did not make clear reference to the IPs, even though these were long-standing local institutions.

At the time of the field visit, the Rotational Water Distribution Schedule had just begun in a pilot site. As schedule, based on landholding size, is prepared, showing the date and time of water deliveries to each cultivator. Water travelling time, at the rate of 5 minutes per turnout, and thus 2 hours per week as calculated by farmers, was added to the schedule.

However, under the new *disnet* development, problems persist. Compensation has not been paid to owners for land utilised for the construction of minors and sub-minors according to an official. Hence, deprived landowners frequently agitate and demolish the structures. A Department circular has indicated it does not intend to pay any compensation!

5. SOME POLICY ISSUES

There is a growing recognition that farmers' organisations and their active participation in water management will improve irrigation performance. The organisation and participation may be in a number of ways and at different levels. In this case study IPs at village level have three main tasks: (1) water distribution; (2) collection of water revenue; and (3) resolving conflicts. Observations indicate that farmers' emphasis is on the first activity.

A major policy issue for IPs is whether to retain their present form and functions, which have existed for five to six decades and have almost become customary. The priority should be to build on existing IP structures with some modifications.

Organisationally, existing IPs remain as individual units, with hardly any horizontal or vertical integration. This creates problems, particularly during crisis periods, such as droughts, when there are standing crops. In the past, police action has been necessary to maintain the distribution system between Panchayats.

One or two sub-minor or distributary-based organisations may start on an experimental basis. A group of these organisations can form two or three tiered vertical structures of an overall organisation with an apex body to exclusively handle IPs. The outlet committees, though essential, cannot fulfill the role of this broad organisational structure alone: as a small entity, they can play useful supportive roles.

The present commission incentives do not evoke sufficient interest among the elected body to encourage an active role. In addition to increasing the commission percentage, the *sarpanch* and members should be provided with all books and formats to maintain the necessary accounts. Presently, most of the records are maintained informally.

The IPs function of water distribution remains below the outlet. Irrespective of the number of outlets in a village, the village boundary is an administrative area, rather than a hydraulic boundary. It is desirable, for successful function, to broaden the administration boundary on hydraulic lines but keep it linked to meaningful social boundaries, e.g. one organisation for one sub-minor or distributary, based on farmer's consent.

Local organisations, based on hydraulic or social boundaries, should also have a multi-purpose role in order to influence farmers' participation. The organisation should provide seeds, fertiliser, and pesticides, and coordinate with credit and marketing institutions. This supportive role can contribute to controlling spiralling defaulting of water payments. It also helps to earn support, rather than demand, for various tasks of the organisation. Instructions from the bureaucracy are less likely to be sustainable, or supported, than those from a well-structured farmers' organisation, as is evident from other irrigated areas.

In Kerala, the prevalence of small holdings probably encourages farmers in group action for procuring inputs and services. The agricultural division in the Command Area Development Authority trains members of farmers' organisation committees to handle their responsibilities. It also takes them to neighbouring states to show working farmers' organisations. Even in a dry-land area, as in Karimnagar in Andhra Pradesh, the Mulkanoor multi-purpose cooperative society is managed successfully by farmers. This supplies inputs and assists in marketing agricultural produce, besides other activities. The farmers' organisation in the 'action research' area (Thirivaroor) of the Irrigation Management and Training Institute, besides training in water distribution, lends pesticide sprayers, arranges seeds distribution, and plans to purchase a tractor for individual hire. On members' demand, it constructed a threshing floor for paddy. The successful lift irrigation cooperatives in Maharashtra maintain their own book-keeping quite professionally. They also arrange bank loans if necessary, and adhere to bank repayment schedules.

IPs in the MCA need organisational restructuring. Intensive training should be provided for IP committee members on their role and responsibilities, organisation structure, interaction with other IPs, the conduct of meetings and use of information from the membership, decision-making processes, and interaction with the Department and its personnel. There are advantages in developing a structure of IPs leading to a project level committee. Over a period of time there should be opportunities to upgrade skills and handle larger issues. There could be experimentation, with farmers' consent, with irrigation organisers appointed as catalysts. If the Irrigation Department and Agricultural Department can spare interested assistant engineers to act as village level workers, they may play a catalyst role after intensive training. Overall monitoring of this process should be with an autonomous body, maybe an NGO to begin with, at every minor level (a group of IPs).

Later, at distributory level, there should be a memorandum of understanding with the Department regarding water delivery, water revenue collection, regular operation and maintenance, proportionate commission as against revenue collection, regular elections to IP committee, powers to procure and distribute inputs, and to handle on-farm development works. These types of memorandum are being used in Maharashtra, Tamil Nadu, Bihar, and Gujarat at present. In Madhya Pradesh, there is only a people's organisation at the bottom (IP) and a bureaucratic body (collectors office) at the top, with poor linkages. In the collector's office, IPs do not necessarily have priority. People dealing with IPs may not even be professionally trained for the job. Little effort has been invested in reviving the IPs or training them for its improved function.

As important as evolution of ideas and programmes, is political support for change, both at high and at local levels. Once a programme is launched its continuation and further evolution depend on recurrent inputs and ideas.

A state-level workshop was held in February 1991 on 'farmers' organisations', at the Water and Land Management Institute, Bhopal. This made a number of general recommendations on the role and needs of IPs, and practical recommendations for the project, which reflect many points raised in this paper. Further details are given in the original paper, which is available from the author. We hope 'follow-up' on these recommendations can be reported through the Irrigation Management Network in the future.

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