

Irrigation Management Turnover: A User's Perspective The Case of the Indira Gandhi Canal, Rajasthan, India

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Indira Gandhi Nahar Pariyojana (IGNP): A Background

THE STATE OF Rajasthan located in the North-West of the Indian Union has a total area of 34.2 million square kilometres, and is the second largest state in the country. The state is diagonally divided by the Aravalli ranges in two distinct parts- the north-west and the south-east. The north-west part of the state is arid, and over 90 percent of the Thar desert is located in north-west Rajasthan. Rainfall is variable and erratic in this region varying between 7 centimetres annually in Jaisalmer to about 30 centimetres in Jodhpur. There are no sources of surface water supply, and there is an acute problem of drinking water, leave alone the requirement of water for cultivation. The Rajasthan Canal, (renamed as the IGNP in November 1984) was expected to transform this.

The IGNP is a post-partition phenomenon, necessitated by the need to utilise the three eastern rivers of Indus basin, as much as it was a "...chance offshoot of Pakistan's effort in trying to ...by pass the Ferozepur Head-works and leave high and dry the Eastern and the Gang canal colony in Bikaner State" [(Sain, 1978, p.292)]. The canal was also conceived in a hurry "as it was considered essential that India should be in a position to use the river supplies withdrawn from Pakistan at the earliest possible..." (Ibid, p.294). A proposal for the construction of the headworks at Harike, and a canal to "...irrigate more than seven million acres of desert land..." was proposed to the Government of India (GOI) in October 1948 (Ibid, P.128).

The first feasibility report was prepared in 1951, and the Harike head works were completed in 1953. The Indus Water Treaty of 1960 formalised India's exclusive right to the three eastern rivers- Sutlej, Ravi and Beas. While negotiations were on for the treaty, an inter-state agreement on sharing of Ravi and the Beas rivers (as Sutlej was to be used exclusively for the Bhakra Nangal project) in 1955 fixed the share of Rajasthan at 8 Million Acre Feet (MAF) or, almost half of the available supplies, in view of its need. Subsequently, in 1981 a re-assessment of the mean flow in the rivers enabled a higher share of 8.6 MAF to Rajasthan (GOR, 1990-1 and WAPCOS, 1989).

Of the total water available to the state of Rajasthan, the share of the IGNP is 7.59 MAF, and of this 6.72 MAF (88.5 percent) is to be utilised for irrigation and 0.87 MAF (11.5 percent) is to be utilised for drinking and industrial purposes. The IGNP seeks to provide irrigation and drinking water to the districts of Sri Ganganagar, Bikaner, Jaisalmer, Churu, Jodhpur and Barmer. The canal will provide a perennial irrigation for 1.545 million hectares.

The Planning Commission of Government Of India (GOI) approved the project for Rs 66.43 crores in 1957. The canal as mentioned above was conceived in a hurry, and the "over riding consideration at the time was one of growing more food to make up for the irrigated areas lost due to the partition of the country. Other considerations like the overall environmental or social impacts of irrigation projects were of secondary importance, if they featured in the calculations at all" (URMUL Trust, 1992). The initial proposal was intended to provide irrigation to about 1.358 million hectares of culturable command area, of which only 0.364 million hectares were to receive perennial irrigation (GOR, 1990-1). The project proposal in 1957 envisaged a construction of 649 kilometre (km) long canal (204 km of feeder canal and 445 km of main canal). The feeder canal in the Punjab portion was to be lined whereas the main canal in Rajasthan was to be unlined. The project was scheduled to be completed by 1968-9 (GOR, 1984).

The Indus water treaty, and the decision to line the entire length of the main canal in Rajasthan to save about 2,700 cusecs of conveyance losses allowed expansion in the scope of the project (GOR, 1984). Subsequently, there have been many other modifications and additions to the project leading to constant revision of the project estimates. The revised estimated cost of the project at 1992 prices is Rs 4,600 crores, and the expenditure up to March 1993 was Rs 1,600 crores (GOR, 1994).

For administrative purposes the total command area of the project has been divided into two stages and sub-divided into phases. Of the 7.59 MAF of water available to the IGNP, 3.59 MAF has been earmarked for Stage I of the project and 4 MAF for the Stage II of the project. The salient features of the IGNP are given in Table 1. It may be observed from the table that the command area of the Stage II is almost double that of the command area of Stage I whereas, at 80 percent intensity compared to the 110 percent intensity of irrigation in Stage I, only 4 MAF of water has been allotted. Restated, roughly half of the water allotted to Stage I of the canal has been allotted to Stage II of the canal. Table 2 provides details of the achievements in IGNP until March 1993.

The puzzling feature of the project is the attitude to considerations of equity. That this was a factor in the mind of the policy planners cannot be questioned, since there are specific provisions for reserving of 50 percent of the land for the landless, and among them, preference to scheduled castes. Yet nowhere in the project documents does

this find specific mention, and certainly, in the way that the project has been implemented, there is nothing that would lead us to believe that there was any interest in actually altering the power balance, and empowering the poor.

THE STATE ORGANISATIONAL STRUCTURE

For the execution of the IGNP including the colonisation of the area covered by the project, a Committee of Direction (COD) and a Canal Board (CB) (since renamed as the Indira Gandhi Nahar Board [IGNB]) was set up in 1958. The COD was to lay down the overall policy in regard to the execution of the canal project, allied works and the development of the area covered by the project, and was headed by the Chief Minister of the state. The CB was proposed to be in overall charge of project and the development of the project area in accordance with the policies laid down by the COD. However, there have been many changes since the time this was proposed.

At present, there are four different departments of the state which are engaged in the management of the IGNP. The colonisation wing of the Revenue Department is concerned with the colonisation and the allotment of land in the command. The engineering wing of the IGNB is in-charge of the construction of the main canal. The Command Area Development Authority (CADA), set up in 1974 is responsible for the construction of the distribution systems, the allocation of water and maintenance between 75 to 189 km of the main canal in Stage I and the Stage II of the project. The irrigation department of the state handles the allocation and maintenance between 0 to 74 km of the main canal in Stage I of the project.

The coordination of the administrative details of these departments is done by the Chairman of IGNB, who is also the Administrator of the project, and is an ex-officio commissioner and Secretary to the state government in the Indira Gandhi Nahar Department. The Board is composed of 14 members including the Chairman, and consists of representatives from the union ministry of water resources, central water commission, and the heads of various line departments. The COD was reconstituted in 1987, and at present is headed by the Chief Secretary to the state. This committee formulates/reviews the policy matters relating to the project. The committee consists of 13 members and is composed largely by the Secretaries of various departments connected in one way or the other with the IGNP like the Secretaries of irrigation, forest, drinking water and colonisation; etc (for details see Ramanathan, et.al.[1992]).

While, officially it is said that there is good coordination between the various departments engaged in the management of the canal, the ground reality is very different. The colonisation department allocates land unmindful of the construction of the water courses by the CADA and vice-versa. The forest department often does not consult the CADA in its afforestation programme. But, a more important problem that confronts the user is the difficulty in identifying his point of articulation. Very often, the user has to meet the officials of all the departments concerned for redressal of problems, and involves considerable amount of money and time that has to be spent by the user.

THE NGO

The Urmul Trust is a Non Governmental Organisation (NGO) working in the western desert districts of Rajasthan, India (see Map 1 for project area). The organisation was promoted by the URMUL dairy, a milk cooperative. The Board of Trustees includes representatives of village milk cooperative societies. Starting with a limited objective of providing cost effective primary health care services to families of cooperative members, it has diversified into a variety of sectors (income supplementation through spinning and weaving; primary non-formal education; and natural resource management, especially of common lands, and mainly through womens' groups), and today works with over 150,000 people in about 300 villages.

For several years, the organisation had been concerned that the problems of the IGNP were being glossed over, and real serious attention was not being paid to issues of land tenure, nutrition, and waterlogging.

To discuss these issues, and others that local people felt were important, URMUL organised a three day workshop in February, 1991. Invited to the event were local farmers, government officials from all the various departments that made up the megalithic IGNP, journalists, researchers, and some activists from other NGOs.

The government official response, made by the then Chairman of the IGNB, was two fold. One, it would be unfair to judge the merits of such a large project on the basis of a small sample of farmers present at the workshop. The other point was that in case the situation was as bleak as was being pointed out, farmers had only themselves to blame, for having over utilised their water allowance - and if farmers were prepared to organise themselves, the IGNP would be willing to hand over water distribution and O & M.

This was the first time the government actually made a reference to IMT : the efforts thus far had been on "controlled participation", the formation of "official" farmers' organisations to certify to the quality of construction of the water courses in Stage I and II. These *samities* (associations) had long ago lost their legitimacy in the eyes

of the farmers, being perceived as a nexus between a small but powerful elite among the farmers, and the civil engineers of the CADA/IGNP - an issue discussed later (see The Chak Samities of the CADA).

At the workshop itself a consensus evolved on both these points. It was decided to do a "popular survey", and produce a Citizen's Report on the state of the Canal, incorporating the perceptions of all those who had been affected by this massive project, the largest public investment in the State since independence. The research would also explore ways that people felt would be appropriate for the participatory management of the system.

The "Nahar Yatra" as it was called was held in September the same year, and lasted seventeen days. The yatra started out as a task to document change from the perspective of the people in the area but, was transformed into a people's court, with all manner of people testifying to their experiences, and the large number of people present would vouchsafe their authenticity. It covered virtually the entire command area, from the head reaches at Ganganagar to the tail at Jaisalmer. Two hundred persons, mainly local people, stayed on the Yatra throughout - but at every halt were joined by at least twice as many, including women.

EMERGING PROBLEMS IN IGNP

On the yatra, three major concerns emerged from local people.

The first was that the benefits of the Canal had gone to a small minority : the vast majority were not even participants in this process. The most stark example of this reality was in the "colonisation" or settlement policy of the State Government. With low density of population prior to the introduction of the canal, a large number of people had to be settled from "outside". Apart from the low density, the bureaucrats in far away Jaipur viewed the local inhabitants as a nomadic population with no fixed residence and no knowledge of agriculture. The indigenous population who were transhumant pastoralists and cultivate one crop annually, were denied land in most instances (For a representative view of this mind set see Mathur, 1981).

However, when it came to allotment of land, according to the admission of the Deputy Commissioner, Nachna, the policy of the government is to keep the best land for auction, and allocate the rest to "landless" and local people. One cannot find fault with the need of the government to raise resources to fund the project, and reserve lands for auction. But why the best ? Why not the worst ? The special allottee, who buys land at the market value, can afford the cost of infrastructure, and land levelling, and those at the head, and with better land, will benefit from this externality.

The second issue that came up everywhere was the phenomenal incidence of corruption. Everywhere it was the same story : there was poor quality construction because the engineers had made money on selling cement, and tendering for and purchasing inferior quality bricks; hundreds of people had become victims of "double allotment", because corrupt administrators had reallocated the same land to two, sometimes three people, leaving them with their life savings spent, and caught in expensive legal wrangles; land had been acquired, without compensation; water allowances were changed by the patwari (last grade irrigation employee) for a consideration. There was a sense of impotence, powerlessness, as if the farmers were incidental to the whole scheme of things.

The third issue was of waterlogging, and the environmental fragility of the area. Already over 10,000 hectares are permanently waterlogged, as per the admission of the government - the yatra experience indicated that this figure could be much higher, and was increasing very fast, even in the barren low water allowance areas of Stage II. Waterlogging has created displacement, and marginalised families, forcing them into poverty. Water logging apart from being visually evident, is manifest in the government records, on rise in the water table (see [Table 3]).

In addition to these three basic issues there were several other concerns that came up. Many were related to the nature of settlement, the inadequate provision and the improper location of the Chak (a unit of land irrigated by a single canal outlet) abadies (the areas demarcated for residences), and the lack of a service infrastructure, whether primary schools, or health centres and even drinking water facilities.

It is in this context that the idea of IMT has to be located.

Beneficiary Participation in IGNP

In the case of a large system like the IGNP, which irrigates sparsely populated areas that have been artificially settled - "colonised"- attempts to engineer participation have to take into account the difficulty in working with groups that have not yet defined their norms, and relationships - except in purely economic terms. Traditional institutions like the laas (collective work in the fields, usually at harvest time) do not exist, and traditional structures such as common grazing lands, common village ponds, and wells, have either ceased to exist, or lost their relevance. In the IGNP area, even cremation grounds have not been spared, and have come under plough - as the original inhabitants of the area have been dispersed all over. Without these traditional fora, to make decisions

and settle grievances, the situation has become one in which the next phase of the continuum, after the atomized relationship the individual farmer has with the multi-tiered bureaucracy, is straightaway one of mass action at the political level. Sometimes these have been effective, such as the agitation launched to waive the instalments towards payments for construction of the water courses in Stage II: but sometimes they have served to do no more than to break the back of an already demoralized people - such as those involved in the struggle to get compensation for lands that had become waterlogged in the Suratgadha area in the 1980s.

The Chak Samities of the CADA

In the official literature available from the IGP departments, the importance of the beneficiary participation is recognised. For instance, one of the documents states that "people's reflection is a critical input in the implementation of the project programs. Projects are mostly designed and constructed based on some top-thrust idea underrating the capabilities of the farmers.... Control by beneficiaries over the amount, quantity and especially the distribution of benefits from development activities represents the ultimate confirmation of participation and is directly related to those benefits becoming self-sustaining " (CADA, 1987).

In recognition of this need to evolve participation, according to the officials, 2,877 chak samities (decision making bodies) have been formed in Stage I of the canal, and 603 samities in Stage II of the canal till June 1994. In Stage I the samities are formed by the extension wing of the agricultural department, a part of the CADA; and in Stage II the samities are formed by the irrigation department. The samities consist of one President and four members. According to the official documents, these samities run training programs for their members to enable the latter to adopt new technologies and better management practices.

Most of these samities however, remain only on paper. A survey undertaken in 1990 in Hanumangarh and Lunkaransar regions of Stage I revealed that the samities had not been formed in many areas. Wherever, they had been officially formed, they had been rendered inoperative almost immediately. The delay in the formation of chak samities in many parts of Stage II, even ten years after the construction of the canal had been completed, had defeated the very purpose for which they were conceived; viz., monitoring the quality of construction of water courses.

One of the reasons for the ineffectiveness of the chak samities is that no provision in the Rajasthan Irrigation and Drainage Act, 1954 or the Rajasthan Irrigation and Drainage Rules, 1955 recognises the identity of a group of farmers as a unit. No authority or rights are conferred to the farmer groups to enable them to discharge their intended obligations, but farmers' responsibilities and the penalties that can be imposed on them are specified. In 1973, the state government set up water distribution committees at the district level for water distribution/utilisation. These were ineffective as the members of the committees were mostly government officials or elected public representatives. These committees often became offices for politicians to be accommodated. They lacked the organisation for day to day functioning, and they neither had the authority nor the resources to monitor the functioning of the canal.

While this has been the experience of the chak samities officially constituted by the CADA, attempts have been made by URMUL Trust, to engage in participation. This as mentioned above emerged out of its effort to document the impact of the canal on the people, especially the poor.

Community Organisation Efforts by URMUL

Most of URMUL's work has been in the unirrigated areas, around the issue of common property resources - usually grazing lands, and rain water harvesting catchments. The method of work has been to use a member of the group that would benefit from the project as an insider catalyst, usually by providing some training input, and sometimes by providing financial support to cover the costs of travel, and in some cases, a stipend or an allowance. This member would have the responsibility of calling the meetings and keeping the minutes.

A savings and credit programme is an important adjunct to all community organisation efforts. The advantages of linking in with a self-managed credit programme are many, but there are two factors that are most important. Firstly, it allows the group to leverage upto as much as four times the amount they had saved in the form of low interest bank credit. More importantly, the savings and credit program provides a continuous activity around which organisational efforts can focus. The group has to meet at least once every month, and recovery mechanisms using peer pressure can become the foundation for common action programs in the future.

In the command areas, URMUL has formed Chak Samities in both Stage I and Stage II areas, both with different foci. In Stage I, a revolving fund is provided for purchase of seeds, fertiliser and pesticide, repayable in one instalment within six months, at slightly less than the market rate (loans are provided in the URMUL financed cooperatives at 18%; the market rate is 24%). In addition, one Chak Samiti has been given advances to clear debts

to Government, failing the payment of which lands would have been confiscated, or the farmers would have been involved in long, expensive legal disputes.

In Stage II the revolving funds have been used to level land, usually using tractors belonging to URMUL. In that case the Chak Samiti really benefits, because although the URMUL tractors charge less than the market rate for levelling, part of the profits that are earned is transferred to the general account of the Chak Samiti.

The most important process element in this strategy is the regularity of monthly meetings - the meeting is always held on a fixed date - and the structured training that the groups are exposed to, in the form of institutional visits, as well as access to information, in the form of a regular flow of visitors from the extension establishment.

The other base on which farmers have been organised is on the covering of the khalas, or water courses. Farmers located at the tail end of water courses in Stage II get very little water during the kharif, because the dust storms cover the network completely. There are two options - either supply water through piped water systems, or cover the water courses. Piped water systems are very expensive, and would mean treating the expenditure already incurred on the water course as a sunk cost. Also there is no guarantee of their effectiveness - the system installed in Chak 4 AD (Aduri Distributary) has been experiencing problems because of insufficient pressure at the head reaches.

The system followed for covering the water courses is simple. Using a grant from the CADA, URMUL offers to meet 75% of the total cost of materials on account of the covering. The remaining 25%, and the labour is contributed by the members of the Samiti. It is imperative that everybody contribute. It would not be acceptable for instance if one or two rich persons at the tail get together and offer to meet the entire expense.

The farmers are provided information on sources, and quality, and they travel themselves to purchase the material, and make the payments. The loan taken from the revolving fund provided by URMUL (and gradually owned by the group, as their savings volumes increase) is repaid from the gains made from being able to take an additional kharif crop.

The URMUL Samitis have features that distinguish them from the Government sponsored farmers' organisations. They are not open to the entire Chak, but selectively to the poor. In this sense the groups are artificially homogenous. The selection of participants is carried out by URMUL staff who have spent considerable time in the area, and know the communities well. Once the poor are covered, the membership is expanded to cover others who are willing to participate. Women participate, but admittedly mainly those who are female headed households. The meetings are attended by URMUL representatives regardless of the day, whether holiday or not.

The tasks of the URMUL samitis primarily revolve around the management of water, but since they lack official (State Government) sanction, the emphasis is on being organised to get information, and tackle corruption in Government. Two recent examples, from the same Samiti in Stage II (in Ranjitpura). One of the patwaris in the area had a wedding in the family. He was the patwari responsible for filling out the slips for allocation of water, a critical function in a water starved area. Although the area is sparsely settled, a few minutes extra on each allocated turn could make a significant difference in determining the area under cultivation, and the quality of the crop. Banking on this power, this patwari made the farmers an offer they couldn't refuse: would they all deposit 5% of their produce at his house, so he would continue to treat them considerately? Singly, they would have been absolutely impotent. In fact, many people complied with his request immediately. But when the issue figured in one of the initial meetings of the Samiti, on the suggestion of the URMUL representatives there (who also had a stake, since they were tilling land in the area, as tenants) the group decided to take a stand against it, and managed to raise enough money to send a delegation to Bikaner, and complain about the issue.

For the people who were selected, it was the first time that they were going to Bikaner. They had to sit outside the office of the Chief Engineer for almost three days, till he gave them an appointment - but finally managed to get an investigation instituted. As it happened, no action was taken, because before the investigation team arrived, the patwari had enough time to shift the grain that he had received. Some farmers in fact even went on record to say that there had been no pressure, and they were doing it of their own volition. But the impact was felt in other ways. Officials of other departments that had been dealing with the members of the Samiti on an individual basis suddenly became more attentive and respectful, and this attitude persists till date.

In addition to this kind of issue based lobbying, the samitis also take up other aspects like social forestry, provision of inputs and the marketing of outputs. The same Samiti in Ranjitpura organised the procurement of fertiliser at the wholesale rate, which could be done because all the farmers paid the money required as an advance. This kind of trust, as those who have been involved in community development work will testify, is rare. However, the sequencing of the tasks or even the decision of the tasks to be undertaken are decided by the community after consultation amongst them. The broad check-list of tasks is :

- a. distribution of water
- b. maintenance of the physical facilities- water courses, minor?

- c. resolving of disputes
- d. tree plantation/inputs supply/marketing, etc.
- e. education/health
- f. covering of water courses
- g. management of the revolving fund

The educational interface is significant, and warrants a note. The settlements in Stage II (and in the later part of Stage I, including the Lift Canal at Lunkaransar) are still isolated and field-based, unlike the new settlements that have emerged in Stage I. The problem with this kind of dispersion is that it is very expensive to provide any kind of social safety nets. In the field of education, the establishment of a full fledged primary school for each such area would be expensive, and time consuming. (It requires formal approval from the Cabinet, and the State Assembly).

An excellent alternative has been found in the form of the Shiksha Karmi Scheme (SKP), in which local youth (preferably one male, and one female, with eight years of basic schooling) are selected by the community, trained by a local voluntary agency, and paid by the State Government - either directly, or through the voluntary agency. The scheme has to be administered at the local level by an education Committee, and this often overlaps with the Chak Samiti, and has sometimes been the basis around which people have organised themselves. The Scheme has no provision for construction of school buildings, so that input is provided entirely by the community. There is also a self-selection here: those that are better off would have their children educated elsewhere, so only the poor are active participants. A recent evaluation has indicated that the quality of education the children in these schools receive is superior to that provided by the Government primary schooling system. The major benefit of the SKP is that it is the base for human resource development efforts in the area, and will be responsible for seeding future leadership.

In contrast, when the first phase of IMT was decided on in the IGNP, the Kanwar Sain Lift Canal was decided to be the first zone in which the project could be tried on an experimental basis. Doubtless the presence of URMUL, and the fact that the Lift Canal has already been in operation for more than fifteen years contributed to the decision, and also perhaps the fact that the Lunkaransar lift has lands in which mostly the local peoples settle down.

Each distributary was told that they could have one representative on the Government recognized Samiti, and this Samiti would be involved with regulation of water, and maintenance of the system. Almost all the persons who were finally elected as representatives from the eighteen distributaries and minors that make up the Kanwar Sain Lift Canal were elected unopposed, consensus candidates of the Chairmen (there are no women) of the various Chaks. Each distributary/minor would have between five to fifteen Chaks. The Lunkaransar Distributary (which elected one of the authors of this paper as its representative) has fourteen Chaks. The process of election was flawed from the beginning. Without generating a widespread awareness of the role and functions of this new structure among the farmers in the area, it remained like a back room deal. Many of the owners of land, based in Lunkaransar and Bikaner, who understood the implications of being able to get a foot in the door with Government, so they could leverage benefits for themselves personally, took interest, but for those who were working the land as sharecroppers, or as marginal and small farmers, there was little to identify with.

There was in fact a sense of cynicism around, with many small farmers fearing the new dispensation of powerful farmers more than the State Government, which they had come to establish some kind of an equation with.

Coming as it did on the heels of a massive (and successful) protest by a small section of rich farmers against the idea of having a parallel minor (so that those on the distributaries and system branches would not be worse off than those with access to direct outlets in the main system, which worked round the clock, throughout the year), small farmers felt that this was one step back towards feudalism. That is why as the representative of the LKD, they selected a non-local, a representative of a voluntary organisation. Partly to ride on the access that the NGO had to the corridors of power, but also to be able to take a pro-poor stand, which if a local landlord had been elected, would have been difficult.

Once the Samiti started its formal meetings, it became apparent that what was feared in fact was what was happening. Although touted as a "people's body", the meetings were chaired by the Superintending Engineer, who clearly refused to negotiate on substantive issues of water allowance, but was prepared to talk about maintenance only. Why the Lift Canal was sanctioned as much water, and not more, was explained away by passing the responsibility to some higher level water management committee, and constantly the sword of the Bikaner drinking water situation was being held over the heads of the farmers to get them to cooperate. (Apparently the Lift had an excess allowance only because drinking water was being supplied to Bikaner on a regular basis, and when the reservoir was constructed, this allowance would stop. Therefore what to say of additional allowances, be grateful that you're even getting what you are, was the attitude). Other than purely water management issues (changing the RWS from 7 days to 3 and a half days etc.), there was no discussion permissible on issues of settlement, land, or social services, or even extension.

In the meetings that have taken place over the last year, issues of overdrawing water by tampering with the APM figured in every meeting. In the LKD, the Executive Engineer repeatedly pointed out the case of 4 and 6 LKD, which were doing this. To settle the matter once and for all, we organised a meeting of all the fourteen Chairmen at 6 LKD, and tried to get across the point that excess drawing down of water was affecting people at the tail, in 10 and 14 LKD. The point that the 6 LKD farmers had was quite simple. For the last ten years, they had invested in levelling the land, and they had been able to increase the CCA by a significant fraction, but the Government was not listening to their repeated requests to increase water allowances on the basis of the new CCA - so they had taken the law into their own hands.

We raised this issue in the main Samiti meeting with the Engineers in Lunkaransar, and there was a general reluctance to do anything about this - because the earning potential for low level officials who would be involved with the measurement on a case by case basis (as opposed to if they had to do it for the entire Chak) would be affected. At the same time, the farmers in 4 and 6 LKD were the most powerful economically, and could challenge the system with impunity : there was no possibility of sanction in the hands of the elected Chairman of the LKD, or the general body of farmers.

This exposes the State Government effort as simply one of trying to introduce cost recovery for operation and maintenance of the system. Which is a valid objective, but to cloak that limited objective in the garb of participation, and democratic decentralisation, is being unfair to the whole context of IMT. Now if the experiment does not work, participation will be held to account, rather than the whole attitude behind the exercise.

However, it is important that the participation of the users becomes widespread both in the day to day management of the canal as well as in tackling the larger problems of environment, settlement; etc., to ensure the sustainability of the canal. It may also be pointed out here that the regular O & M of the canal, is met out of the non-plan expenditure of the state, and hence becomes a residual component whereas, the construction of the canal is met out of the plan expenditure. From the official records, while details of the expenditure incurred on construction is available, no details of the expenditure on the regular O & M are available. With poor attention given to the regular maintenance, the rehabilitation of the existing structures motivated by external funding has become the norm. It has thus become a vicious cycle of construction- rehabilitation-and more construction, without involving the users.

To ensure long term sustainability of the canal, some concrete suggestions [are given] for future attempts at IMT in the context of the IGNP:

1. There must be a linkage established between the research and extension staff, and the farmers, through the Samiti. Research and extension can be monitored, and held accountable in this way. The agenda for research and extension can also be determined from here.
2. There must be a system to disseminate information to the community in a public, and transparent manner. For instance, the posting of a copy of the minutes on a notice board will not solve the purpose, neither will mailing it to one Chairman who has a large constituency. It may be worthwhile looking at the potential of radio as a medium.
3. The Government must look at the whole idea of IMT in a holistic context, and be prepared to work through these farmers' organisations on vital issues of land and settlement, rather than just restrict the scope to management of water and O & M.
4. There must be a focus on equity, and popular participation. Samities that are constituted by the Government, or have sanction of the State, should at a minimum follow the constitutional provisions for democratically elected Panchayats : there is a minimum reservation (affirmative action) for women, and scheduled caste and minority groups.
5. Even if the process of IMT confines itself to water management, there should be a genuine devolution of powers to farmers. One of the implications of this would be that the bureaucracy would be accountable to the farmers' organisation, rather than the other way around, as is the case at the moment. Merely making them instruments of state policy would move the process backwards, and could result in vested interests becoming more entrenched.

Table 1. Salient features of IGNP in two stages.

No.	Particulars	Unit	Stage I	Stage II	Total
1	Feeder Canal	Km	-	-	204
2	Main Canal	Km	189	256	445
3	Distribution Systems				
3.1	Flow Area	[Km]	2618	3152	5895
3.2	Lift Area	[Km]	332	1960	2292
4	No. of Lift Schemes	No.	1	6	7
5	Culturable Command Area	Lakh.ha	5.53	11.88	17.41
6	Intensity of Irrigation	Percent	110	80	-
7	Water Allowance [per 1000 acres]	Cusecs	5.50*	3.00	-

Source: WAPCOS, 1989 and GOR, 1990-1

Note : * The water allowance has been subsequently reduced to 3.5 cusecs.

Table 2. Achievement in IGNP upto March 1993.

No.	Particulars	Unit	Achievement
1.	Main Canal	Km	Completed
2.	Distribution Systems		
	Stage I	Km	3,120
	Stage II	Km	1,200
3.	Irrigation Potential		
	Stage I	million ha	0.579
	Stage II	million ha	0.214
4.	Irrigation Achieved		
	Stage I	million ha	0.615
	Stage II	million ha	0.071
5.	Allotment of Land		
	No. of Persons	No.	1,23,835
	Area Allotted	million ha	0.912
6.	Total Investment	US\$ million	530

Source: GOR, 1994.

[Table 3. Missing]

Table 4. Rise in water table in IGNP.

Time Period	IGNP (metres)
1981-2	0.92
1982-3	1.02
1983-4	1.10
1984-5	1.17
1985-6	1.16
1986-7	0.70
1987-8	0.90
1988-9	1.05
Average	1.02

Source: Groundwater Department, Govt. of Rajasthan.

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