

# Irrigation Management Transfer: Problems in Implementation

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[(Society for Peoples' Participation in Ecosystem Management)]

## Introduction

THE NECESSITY FOR transferring water management and maintenance responsibilities to farmers' groups at the tertiary level for efficient utilization of stored waters, especially in major and medium projects, was realized by the policymakers in India in the early eighties and was incorporated in the National Water Policy, 1987. The Policy also suggested that the NGOs should be involved in this task, as far as possible.

SOPPECOM (Society for Peoples' Participation in Ecosystem Management), an NGO, acting on this policy declaration formed a Cooperative Water Users' Society in the command of Mula Project, Maharashtra in 1988. The society was a success, despite many teething troubles and now 15 more societies are being promoted on a neighboring distributary (command: 6,000 ha) with a view to form later an Apex Society to take over the management and maintenance of the distributary and regulating supplies to member societies. The problems encountered in this transfer process and the needed solutions are narrated in this paper.

## Issues

The major issues, based on the experience of the past seven years, may be summarized as:

1. Need for a firm policy declaration and consequent reorientation of the bureaucracy.
2. Motivational points for rallying the farmers: Benefits and costs of irrigation management transfer.
3. Legal form and backup.
4. Size of the society; organizational manageability and financial viability.
5. Physical system; present status, sharing of costs of rehabilitation and routine maintenance.
6. Memorandum of Understanding between irrigation agency and the society.
7. Scaling up of the participatory system.

## Need for a Firm and Committed Policy Declaration

In any irrigation system (specially major and medium) which is tightly controlled and regulated in all the aspects (water allotment, distribution, fee collection, crop planning, etc.), any steps towards participatory involvement of the end users have to be enunciated by the Government (the ultimate owner) and widely disseminated among the end users. Unless the Government comes forward with a clear-cut policy that the Government has decided to transfer the management to the farmers' organizations in a phased manner and within a fixed time frame, the farmers are not likely to come together and form Water Users' Associations/Societies (WUAs), as they feel discriminated against those who are not organized into WUAs.

Policies for changing the institutional frame of water management must emanate from the owner, i.e., the Irrigation Agency. After all, as of today, project 'waters' are owned, controlled and regulated by the State. However, in elaborating a major policy change, especially in countries like India where there are wide diversities in the social situations and agro-climatic conditions, analysis of field data on these aspects is a necessity. The broad policy statement should have enough flexibility to meet the ground realities. It is only after the analysis of pilot experiments that details should be filled in and a detailed policy enunciated.

A policy change such as Management Transfer to Farmers affects other Government Departments as well. The Maharashtra experience shows that a serious dialogue with the concerned departments like Cooperation, Agriculture,

Rural Development is necessary to remove the hurdles in the process. Thus, in Maharashtra it took 15 months for a Non Governmental Organization (NGO) to convince the Co-operative Department to change the procedures relating to registration, bye-laws and monitoring, etc., of Cooperative Societies. Unless the procedures are streamlined, promoters, irrigators, NGOs, etc., have to run from pillar to post for performing simple but essential tasks. A transparent information system is needed to expand the reach and to impart visibility and credibility in handing over of water management to WUAs.

Primary responsibility for delivering waters at the stated time and in agreed quantity at the points from where the farmers' groups would take over the management must be assumed by the Irrigation Agency. Additionally, the Government should take overall responsibility for irrigation sector management including policy reform, regulation and institutional and financial aspects of the program.

Unfortunately, quite a few officials of the Irrigation Agency look to farmer participation as a 'loss' of power and interference in the existing setup. It is, therefore, necessary to reorient bureaucracy, especially, its lower echelons. This is bound to be a slow process, but could be accelerated by a firm commitment to management transfer along with reorientation training.

### **Motivational Problems**

Building WUAs at the grass root levels is a technical and long-drawn social process and cannot be done by issuing 'orders.' Persons who would contact farmers and motivate them need training. Persons who are already in Government service have to be given reorientation, if such tasks are assigned to them. In any case, present staff of the Irrigation Agency used to the 'dependency syndrome' in their dealings with the irrigators cannot perform these tasks effectively.

Repeated interactions with the farmers are needed by way of discussions with individuals, or groups of farmers for removing the doubts or apprehensions about the need for taking over management, rousing them out of inertia and dependency on the Government for every developmental activity and educating them on the possible benefits and costs. While promoting a WUA, comprehensive discussion of costs and benefits is necessary. This discussion should be as detailed as possible so that every farmer knows what costs he has to bear and what benefits he is entitled to. Unless benefits exceed costs significantly, no organizational development is possible.

Among the talking points on benefits would be the virtual ownership of water, determination of frequency, adequacy, equity, etc., by the groups, choice of crops, savings in water charges, (if volumetric system is adopted), time saving in contacting the irrigation officials and payments of irrigation fees, as now the society's office would be located in the village and collective strength in negotiating the ongoing problems with the Irrigation Agency. Similarly, the costs also should be spelt out. This would include office expenses, salaries of watermen, secretary, etc. Experience shows on an annual basis, these costs amount to Rs. 40/45,000 ([\\$]1,500) for a society with a jurisdiction of 500 ha ([\\$] 3 per ha).

Societies and the members are happy with the freedom/choice of crops within the given allocation of water. The earlier practice of crop regulation by the Agency led to abuses. The freedom/choice of crops gives them confidence and feeling of ownership of water and is a very important aspect influencing the decisions of the farmers to organize themselves into groups.

No decision should be thrust on the farmers. They should not be rushed into forming the WUA unless and until they are fully convinced and all their doubts cleared. Sometimes it is worthwhile to allow them some time to ponder over the various issues and come to conclusions about what is good for them and what it costs.

Our experience shows that farmers are initially reluctant to take over irrigation management because of inherent resistance to any change; further, they have no confidence that they will be able to manage the system, as they have no experience nor are they trained for the job. At this stage, intense motivational efforts have to be made. In the first two years in Mula command, the NGO helped the farmers in preparing schedules of water supplies and in maintaining proper records. There is, therefore, a need for transition period of joint management during which both the farmers and officials will learn to adjust to the new procedures and will acquire the necessary skills.

### **Legal Backup**

Farmer groups so formed should have the status of legal person. This is necessary as certain agreements on volumes, rates, payments, etc., have to be entered into. Under our existing setup, such agreements cannot be entered into with individuals or informal groups. Of course, in India quite a large number of informal groups are working successfully. But it may be noted that they work because of the weight of tradition. These associations have been working for the past couple of centuries or even more. The only substitute for the weight of tradition

under the given circumstances is the 'force of law.' However, this is an enabling provision and by itself is not a guarantee for sustained and conflict-free working.

The question of what form the legal backup should take, i.e., either cooperative, company, trust, or a registered society is a matter of choice. In Maharashtra, the farmers have opted for the cooperative form, as they were familiar with this form in other economic activities.

In the existing irrigation legislation in several States, powers, duties and responsibilities of various officers are defined in respect of management of water distribution. With the introduction of WUAs in between irrigation bureaucracy and the individual irrigators, it is necessary to delegate some of these powers to the groups, as far as their jurisdiction is concerned. In Maharashtra, a newly formed Society was threatened with a notice for damaging a field due to overflow in the channel. If the incident has happened in earlier days or elsewhere, the Canal Officer had adequate powers to deal with it. The lesson from this incident is that powers under the Irrigation Act have to be delegated if WUAs are to perform efficiently. The State Government is seriously considering the empowerment of the Societies in this respect.

### **Size of WUAs and Organizational Problems**

The question is raised at what level - branch, distributary, minor, lateral, outlet - WUAs should be organized. Should it be a top-down or bottom-up process? Our experience shows that WUA formation process should always be bottom-up. The primary unit should be a lateral/minor commanding about 500- 1000 ha. As far as possible, jurisdiction should be defined on the basis of hydraulic unit rather than village. The primary base unit should be Minor, as the costs of management per ha would be less. From the general management point of view, a WUA should not be too large (membership exceeding 1000 is likely to be non-cohesive, personal contacts lessened) nor too small (consideration of 'overhead' costs). Maharashtra and Tamil Nadu experience shows that about 2000 ha jurisdiction is the limit. However, in extreme circumstances (social, economic) these limits may be relaxed. Another constraint on the size is the design of the physical system.

Once the base WUAs start functioning satisfactorily, steps should be taken to form a Federal Society to take over the next layer of physical system - distributary, branch, etc. The experience in Maharashtra shows that establishment of upper layer societies would not work in the absence of a strong base. Democratic participation to be meaningful has to start from the grass-roots, in this case, Minor. Depending upon local factors, it may be necessary to have committees at the outlet level (command: 40 ha or less). But this should be part of the Society. Small independent entities at this level are financially not viable.

The viability, though by and large, can be interpreted as financial, there are other elements as well- the nature and functioning of conflict resolution mechanism; conflicts between castes, head enders and tail enders; large vs. small; influential vs. socially disadvantaged segments. The experience (limited as it is) shows that the presently functioning societies have been able to take care of the problems. Financial viability veers round the fact that whether enough income is generated to meet the costs. In Maharashtra, for example, member irrigators have paid fully the water fees and service charges without any reservation. This shows that farmers willingly pay the charges which have been agreed upon, provided they get the waters at the right time and right place. Successful societies have ensured water deliveries and hence farmers do not grudge payments. Some societies have built sizable reserve funds also.

Viability concept as applied to internal management and conflict resolution is much more complex. One has to ensure a conducive environment within which societies have to function. This can be done through transparency of their activities. The bye-laws should ensure accessibility for each and every member to the official records. The decisions need to be taken in the open and in consultation with the majority of the members.

One of the surest ways of satisfactory conflict resolution is to anticipate the likely conflicts and frame the rules. The experience shows that once the members agree to a particular method, the offending member agrees to the penalty, as he was a prior party to the methodology of conflict resolution. Instead of resolving conflicts on a case to case basis, it is better to define early the scope and method of conflict resolution. Experience of societies sponsored by SOPPECOM in Mula command corroborates the lessons noted above.

Discipline, as agreed to in the General Body Meeting, is enforced by the irrigators themselves without much hassle than the one enforced by the Agency. In Maharashtra instances are there where irrigators have paid penalties on the offenses committed without any hassle. The decisions of well managed WUAs with openness and transparency in dealings are respected and as such they could contain the emerging conflicts without outside (Government Officers') interference.

Societies, positioned as they are in the village, were able to resolve disputes and conflicts among the irrigators expeditiously and in a mutually satisfying manner. They now need not run to the Section Officer, located anywhere between five to twenty km away. If there are problems, staff of the society would run around. Similarly, they now

need not waste a day or two for submitting applications, getting them sanctioned and for eventual payment of the irrigation fees.

Further, as the operations of WUA are transparent, the irrigator knows through a visit to the office on what date and time he is expected to get waters. In fact, some lower level staff of the Irrigation Department expressed the view that there has been considerable decline in complaints. It appears that given an opportunity and instrument to work with, farmers do solve the problems expeditiously without the intervention of Government machinery, tardy and delay-prone as it is.

### **Physical System**

For genuine participation to emerge, all the facts relating to the physical system (strengths, weaknesses, gaps), and water distribution as presently organized, etc., should be openly shared with the end users. Their problems or difficulties should be noted, appreciated and a line of action within the given resource constraints should be chalked out in consultation with them.

Systems designated for handing over should be reasonably operational - water should reach the tail areas in the command. Experience shows no society is interested in taking over a system which is leaking beyond reasonable limits or is non-functioning. There could be exception to this, i.e., the systems are so deteriorated and the Irrigation Agency is unable to rectify, the irrigators may come forward to repair and maintain without waiting for Government assistance. These are, however, rare occurrences. Experience in Maharashtra shows that there is reluctance to take over such systems. They would rather prefer to accept the existing situation, bad as it is.

Once the societies are in position, the routine repairs and maintenance of the system within the jurisdiction is their responsibility. This task is well performed. However, the system will get clogged, if the Main System Management is neglected. This task has to be done by the Agency.

The Agency has to maintain adequate flows upto the delivery point of WUAs. This task today is not performed due to paucity of funds. Discussions with farmers show they are willing to bear a part of this burden, provided Agency earmarks certain portion of the collected water fees to be assigned for the maintenance of specific portions of the Main System affecting the WUAs. So far no purposive action has been taken, to pursue this suggestion.

Today the position is what to repair, [how to maintain is a prerogative of bureaucracy] with no consultations with the end users. With the formation of societies, irrigators are now demanding the right to know how and where the funds are being spent and for what purpose. This is but natural. Farmers feel that whatever expenditure is incurred 'officially' is in inverse proportion to the work done. These abuses can be set right, if there is transparency in the method of working. The procedures should be suitably amended so that the voice of the end users is heard, respected and acted upon.

### **Memorandum of Understanding**

Experience suggests that an Agreement/MoU between the Society and the Agency is a must for successful functioning of WUAs. The officials get transferred, office bearers also change, so it is necessary to have a written document which can be invoked in case of difference of opinion. They cannot function in an amorphous atmosphere wherein the waters are given at the 'pleasure' of the irrigation bureaucracy. The Agreement should highlight the duties and responsibilities of both the parties - providers and users of waters. It should specify the quantum of water WUAs are entitled to, seasonwise, and the persons designated for operational process, persons to whom the disputes could be referred to. It should state the water fees to be paid and also the dates. A clear transparent MoU helps to achieve success in WUAs' functioning.

The question is raised whether volumetric supplies and pricing are a necessity for the success of societies. Maharashtra experience shows that it is necessary. One can envisage a successful WUA based upon crop-area assessment, provided some other conditions are fulfilled. It is the experience that these are not fulfilled. To illustrate : in Maharashtra when an irrigator applies for water, he is charged full irrigation fees of the season, even if he gets one watering or none at all. In such a situation, irrigators/WUAs would certainly prefer to pay for water, which they actually get. Our extensive discussions with the farmers prior to the formation of societies reveal that they are not in favor of the existing system and would prefer to pay for what they get. The lesson is clear: volumetric supplies and pricing will accelerate the WUA formation and the eventual success. Incidentally, the system is strongly advocated in the National Water Policy.

## Scaling Up

With the encouraging results of WUAs at the minor/lateral levels SOPPECOM has now decided to scale up the experiment by forming a Federal Society (FS) comprising all the WUAs on a distributary. The chosen distributary has a command of about 6000 ha and six WUAs are already formed and nine are in the process of registration. Informal discussions with the office-bearers of these 15 WUAs show that the farmers are enthusiastic about the Federal Society. At this stage the broad thinking on operationalizing such a concept is indicated here for wider debate.

The objectives of the Federal Society would be:

- Participation of the farmers in decision making, policy formulation in water distribution, and implementation of water deliveries at the distributary level.
- Creating awareness among the farmers about their right of water, right of information on irrigation related subjects such as water availability, its distribution, crop planning, agricultural inputs including credit.
- Maintaining the irrigation infrastructure so as to improve efficiency, attain equitable distribution and achieving most efficient use of available water from canal.
- Development of groundwater in conjunction with surface waters so as to optimize the water available from precipitation, ground and surface.

The Federal Society shall perform the following functions:

- To receive water in bulk from the Irrigation Agency at the distributary head and distributing it equitably among the WUAs as per the quota fixed in the MoU between WUAs and Irrigation Agency initially and later on as per MoUs between the Federal Society and WUAs.
- To place indent for water on Irrigation Agency for annual, seasonal and rotational use as per crop requirements within the sanctioned quota.
- To maintain and repair the distributary from head regulator up to the off-take points of direct outlets and minors.
- To collect water fees/ service charges from the WUAs as per the volume of water supplied to them and remit the water fees as per agreed rate to the Irrigation Agency.
- To monitor the water use by the respective member WUAs and advise them for improvements, increasing efficiency.
- To collect information about irrigated areas from canals, groundwater, rainfed crops from member WUAs and furnish the same to the Irrigation Agency.
- To store water on the surface, or recharge the same in ground, (whenever there is no demand for crops) for exploiting and distributing the same as per demands and charge the WUAs for the same including charges for storage, energy, evaporation, re-use and services.
- To create a water bank for the member WUAs by purchasing, storing and selling water to meet shortage due to less availability of surface/rain water.
- To improve the environment in the command of the distributary by planting trees, greening the side widths, [borrow] areas and waste lands,
- To promote fish culture in the storages created in the Federal Society's jurisdiction.

## **Water Management**

The Federal Society will collect O&M plans of all the WUAs. The O&M plans for the WUA shall indicate the crop planning, sowing times of different crop varieties, proposed irrigated areas on canals and wells, together with rainfed crops, water requirements at head of the minor/outlets and approximate periods of supply. The O&M plan shall indicate the special crops like seed multiplication, new varieties or pilot for specific crops selected for adaptive trials or different research experiment on crops. The Federal Society shall review/scrutinize the O&M plans of WUAs with the MoUs particularly in respect of water quotas sanctioned for different WUAs and then prepare a consolidated O&M plan for the entire distributary, indicating the total area to be irrigated on canals, wells, and rainfed crops, water requirements for the season and approximate periods of water supply.

The maintenance plan should indicate normal maintenance, watch and ward, oiling, greasing, painting of metal parts, maintenance of service roads and special items like desilting, removing weeds, repairs to lining/structure, gates, etc.

The indents of water from WUAs will be collated to place consolidated indent on the Irrigation Agency for supply of water during the rotation. For this purpose cut-off statements showing the opening/closing of minor will be prepared by the Federal Society, so as to work out optimum flow in the distributary.

If the water sanctioned particularly in the monsoon season is not actually required due to timely and adequate precipitation, the Federal Society can store the same in ponds, en-route storage, quarried or artificially constructed reservoir, or recharge the same in [ground] and maintain credit for water for different WUAs. The stored quantity of water may be released for irrigation immediately in winter season instead of drawing surface water from canals and save and economize the winter season quota which can be drawn at the end of the winter season and stored for the use of hot weather. The Federal Society will work out the cost of pumping the stored water and sell it to the WUAs at appropriate rates.

The Federal Society shall supervise and monitor the water use of the WUAs and advise measures for efficient water use, improving water delivery schedules, application losses, preparation of fields or change in cropping pattern, modify sowing times adoption of matching, etc.

## **Water Accounting**

The Federal Society (FS) will maintain Water Accounts as under:

- Daily receipt and issue of water, showing the water received by the FS at the head of Distributary from the Irrigation Agency, quantity of water issued to the WUAs and the transit, seepage losses.
- Total quantity of water received, issued to the WUAs and the losses at the end of each rotation, season and year.

The FS will also conduct a hydraulic test of the distributary at least once in each season to check the seepage losses by inflow outflow method, which would be useful to check the daily rotational, seasonal and annual losses computed which would include operational and evaporation losses. This will help the FS to undertake repairs of the distributary, particularly the lining and repairs to junctions of masonry structure and earthwork.

## **Water and Financial Budget**

The FS will prepare an Annual Water Budget in September/October of each year when the water position in the reservoir will be known, and present it to the general body for approval. The budget will indicate the total quantity of water likely to be received from the canal and the groundwater and carry-over from the pervious year/season which would be consumed during the year. The water proposed to be released, recharged, stored and reused for Water Bank will also be indicated in the water budget.

The total cost of procuring water from canal, ground and from storages in the command including pumping as well as water fees chargeable to the WUAs, water bank, energy charges cost of establishment, service charges, etc., will be reflected in the budget. The budget will also indicate costs proposed to be incurred on transport, marketing, processing, hire-charges of implements, tree plantation, fisheries and other revenue and expenditures like postage stationery, representations, printing, audit, travel and related expenses, staff salaries, bonus, dividend, interest on bank saving.

## **Maintenance and Repairs**

The FS shall maintain the distributary in proper working order to ensure that it draws the full designed discharge at the head and deliver the same to WUAs with minimum seepage losses. The maintenance will include service roads along the distributary, raising canal banks to maintain designed free boards, oiling/greasing of gears and worms, painting of metal parts, pointing to lining desilting and deweeding. Repairs shall include restoring structural damage to the canal structures and lining.

The FS should undertake special repairs to canal lining or renewal/replacement or extending lining to the distributary as per the necessity, in the reaches where excessive seepage losses are observed during hydraulic testing.

The annual budget should indicate the expected receipts of water fees and proposed expenditure to be incurred on maintenance and repairs separately, and the grants likely to be received from the Irrigation Agency.