



FARMER'S PARTICIPATION IN IRRIGATION MANAGEMENT

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1. GENERAL

1.1. Utilization of the created irrigation potential and its productivity is not suffering because of lack of technical know how. The most important area, which is not receiving its due importance, is to create an appropriate organization, to frame adequate rules and tools and to develop proper relationship with the farmer clients. A lot of discussion, thinking and research is required to be done towards this and to evolve a suitable pattern satisfying the needs of a project of a region.

1.2. Participation is sharing the power of decision –making, sharing of responsibility and sharing of cost and benefits. To hand over the water at the outlet cannot be said as farmer's participation.

1.3. For achieving efficiency in water management and creating a self-sustaining system, minor changes will not suffice in administration. Main point of importance is that farmer should get involved in the management of irrigation system and recovery of water charges. Hence farmer will have to participate in the management of the irrigation. Participatory irrigation management is the only solution. The farmers can participate by becoming members of the Water Users Association (WUA).

2. INTRODUCTION

2.1. Top driven irrigation bureaucracy is managing traditionally the irrigation sector; the authorities responsible for managing irrigation system progressively distanced themselves from the farmers.

2.2. The formation of WUA's with subsequent system turn over to them is the corner stone of the proposed reform strategy. The farmer can better manage minor and tertiary irrigation system than a distant bureaucracy which neither has the staff numbers, detailed local knowledge or incentive to perform these tasks. Handing over the irrigation system to WUA's enables the hand on management required allows participation in decision making in the management of the main system by stake holder and set the stage for progressively higher level of management by farmers including eventually fully autonomous farmer managed irrigation commands.

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3. NECESSITY

3.1 Maintenance of the field conveyance system is a huge and gigantic task. It is just not possible and economical for the government to assume this responsibility of operation and maintenance of the field conveyance system.

3.2 Let us take the example of a canal system. If the over all discharge is 15000 cusec there may be roughly 15000 outlets of 40 hector size. If one person is operating even ten outlets then also 1500 numbers men are required to only operate the outlets. With the reduction of size of outlet command to 10 hector block the need for operation person will be 6000 numbers. In addition much higher number will be needed to maintain the system, which will not be economically feasible.

4. DESIRABILITY

- (1) By involvement of farmers in the process of irrigation water management cost will reduce.
- (2) Distribution will be better when the farmers will organize and do it themselves.
- (3) The conflicts in distribution will reduce when farmers will organize and do this job.
- (4) The user clients will become self-reliant.
- (5) Volumetric supplies can be given and waste avoided.
- (6) Farmers blaming the department and department blaming the farmers for all its ills will be reduced.
- (7) By working in close harmony the differences in the goal of farmer and department will reduce.
- (8) Farmers will develop a feeling of belongingness with the system for better and economical upkeep.

5. BASIC ISSUES INVOLVED

There are some basic issues, which need serious thought and research for involving farmers in irrigation management process and developing a replicable model for the Indian conditions.

5.1. ACCOUNTABILITY

What should be the accountability of such a farmers society, to whom the society should be answerable? Whether this society should be answerable to the irrigation department or the functionaries of the department should be answerable to the society. If the department functionaries have to be answerable to the society what should be the level upto which they may be answerable to the society. Should there be then a dual control over such functionaries?

Alternatively it may be considered appropriate that upto certain level the functionaries of the department may be answerable to the society also and there after the society may

be answerable to some higher level of the department .If it is so then what should be these levels.

5.2. SIZE OF COMMAND WITH SOCIETY

What should be the size of command in society? How big should be the membership number for the successful functioning of the society? It should be big enough to render services economically and small enough to be easily manageable able seek cooperation of the individual members. In the light of the experience gained from the existing successful societies and according to the local conditions this size has to be fixed.

5.3. HYDRAULIC V/S ADMINISTRATIVE UNIT

It is convenient to form societies based on existing administrative units because of the existence of age-old bonds in the community of the same village. It is very difficult to forge cooperation amongst different villages. Unfortunately water resources in the nature do not respect political boundaries. Their distribution can be planned only basin or sub-basin wise. The canal system has to follow the watershed lines, which run across the village boundaries. The outlet command of even one outlet covering a 40 Ha block often covers more than one or two villages. Therefore for the formation of a society even of the smallest size we have to cut across such man made boundaries.

5.4. ORGANIZATION OF THE SOCIETY

What type of organization the society should have? Should it be an extension of the existing departmental hierarchy or it should be an independent institution with its own aims, objectives and programmes. Will the department be willing to shed some of its powers and responsibilities? To what extent the powers are needed by the society and should be handed over to it? What type or relationship it should be having with the department in the over all interest of the health and efficient functioning of the society. All these areas need a careful study and thorough debating before reaching any conclusion.

5.5. HOW TO ENSURE SOCIAL JUSTICE

Bigger established organizations are better equipped to resist undue pressures from outside and ensure better social justice. Some new born in democratic setup can easily be enticed by a power block to follow their line. If it is allowed to so happen it may rather become an instrument of injustice to the poor and powerless and may become an instrument for promoting corruption in the society.

There is thus a strong need to study the existing social environment of the area which is likely to be taken up for the formation of such a society. The areas where the existing environment is not conducive to so co-operatives and the co-operatives are not likely to be productive may be excluded from the programme in the first instance.

5.6. HOW TO ENSURE FAIRLY PREDICTABLE SUPPLIES OF WATER

Unfortunately the supplies of existing canal system particularly of river diversion system is quite unpredictable as regards time and quantity. When the farmers are not sure of getting the allotted quantity of water it become very difficult for the societies to survive on such systems. What are the ways to introduce flexibility to the system at an affordable cost? Different ways may have to be devised for different situations. Some prediction may even be possible in the present structure of the system.

Unauthorised irrigation, the law and order situation in general and too much frustration in the staff and the important contributing factors to unpredictability and inefficiency. The system will have to be kept properly maintained and with proper structuring and professional management, the staff working can be motivated to work and improve its performance.

5.7. GAINS TO FARMERS/DEPARTMENT

Before coming for the formation of a `society`, the farmer naturally think, what they will be gaining from doing so? The Department the existing bureaucratic set up may on the other hand feel reluctant in parting with their power. Why at all they should allow farmers to interfere in their working. Why farmers on the other hand should take all the pains for managing and maintaining the system?

In India the root of democracy have now spread deep and wide in general have refused to accept the domination of the government department, some poor and powerless yet feel that the power to manage the water should remain with government department failing which they may further get exploited in the hands of influential few. It has become impossible even to apply existing laws on such a mass scale to check unauthorized practices in irrigation, to cuts and buns in the canals, to reduce fluctuations and to feed the tail reaches. To make strict coercive rules to check the large-scale irregularities and to apply them with a massive force on the vast majority of the irrigators may not be possible in an open and free society like ours. The only remedy then left is to make the farmers responsible for its management.

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The farmer on the other hand by assuming this responsibility will become more self reliant, will be saving on maintenance and distribution charges and with a sense of belonging they will be protecting their works and saving on huge repair cost. The efficient application of water will also reduce the cost of water, energy and save costly fertilizer from getting leached down due to excessive application of water.

5.8. LIBERAL USES OF WATER IN THE BEGINNING OF A PROJECT

Whenever a new project is on its way to completion i.e. part of its distribution system having been completed, the entire available water is pushed to the part already completed. As a result the farmer of that area start suddenly getting water and that too, much more in quantity than what they will be getting on its completion. Sometimes due to some hindrance in construction on the remaining part of the system, this situation continues for so many years. The farmers in these areas start growing paddy against the present and assumed cropping pattern in the project. It becomes impossible later on to reduce the supplies and bring them back to the proposed cropping pattern. In such areas where the liberal use to water becomes a practice, it is very difficult to form 'societies' and bring them back to disciplined use of water.

Care has thus to be exercised right from the inception of the project that the farmers do not develop such practices and the disciplined use is there as a habit. Thus it becomes easier to encourage formation of farmer's co-operatives on new areas than on areas already having a practice misuse or undisciplined use of water.

5.9. EXTENT TO WHICH FARMERS BE INVOLVED

To what extent the farmers should be involved in the management of a project in the Indian conditions is a matter needing thought and discussions. Different experiments may be conducted about the extent of their involvement and most successful model be picked up for wider application. The physical areas for their involvement are the Outlet, Minor, Distributory, Branch canal.

The activities for the involvement are Operation, Maintenance, Constructions, Planning and Design.

6. PARTICIPATORY IRRIGATION MANAGEMENT IN U.P. BY PACT (U.P. WATER SECTOR RECONSTRUCTING PROJECT)

6.1. As per the U.P. government at resolve as stated in the State water policy, PIM is going to be introduced in Jaunpur Branch Command area and Bahraich Dy of Imamganj Branch Command area under the project. In this connection, WUA's will be framed and activated. These WUA's will participate in Rehabilitation of canals and drainage system. These WUA's will do the following:

- (1) Participatory water distribution in 1st stage by outlet committee.
- (2) Transfer of Minor canals to WUA's in 2nd stage by minor committee.
- (3) Making WUA's capable for collection of water charges and financial management.
- (4) Volumetric charges will be introduced and charge measured at the head of the minor canal will be charged. This method will avoid defects of the area measurement based charging system.
- (5) In the last stage, Distributaries, branches and canals will be transferred to the WUA's.

6.2. OBJECT OF THE U.P. WATER SECTOR RESTRUCTURING PROJECT:

In short the objectives of UPWSRP are as follows:

- (1) Accelerate the productivity of water-better water management.
- (2) To increase yield of crops.
- (3) To increase income of farmers-poverty alleviation.
- (4) To bridge the gap between irrigation potential created and actual utilization.
- (5) To use water equitably and efficiently.
- (6) To instill amongst farmers a sense of ownership of project and water.
- (7) To hand over M & R and management of canals to WUA's achieve-
 - (a) Increase in quality
 - (b) Appropriate use of funds
 - (c) Decrease dependence on Government
 - (d) Downsize Government's administration
 - (e) Achieve significant reduction in Government expenditure
 - (f) Obtain help from International Organization
 - (g) Streamline water management.

6.3. STRATEGY FOR PIM

1- Approach

- (1) By law legislation- Top to Bottom approach
- (2) By motivation approach- Bottom to Up approach.

2- Principles of PIM

- (1) Restructuring the Government department
- (2) Empower water user association
- (3) Farmer's Financial control
- (4) Create mutually accountable partnership
- (5) Redesign Government assistance to stimulate local investment
- (6) Development choice of the service provider

3- Factors for success

- (1) Enabling Environment
 - (a) Policy document
 - (b) Committed leadership
 - (c) Committed administration

- (d) Committed executive workforce
- (e) Enthusiastic Farmer
- (2) Transfer Implementation
 - (f) Involvement of farmer through WUA in decision making
 - (g) Use of local leadership
 - (h) Changing of agencies
 - (i) Monitory of WUA`s
 - (j) Confidence building measures
- (3) Intensive training Awareness campaign
 - (k) Awareness about water scarcity to farmers
 - (l) Awareness about participation to farmers as well as officers/officials
 - (m) Training on day to day working to farmers
 - (n) Training to officers/officials to get ready for emergency trend in duties.

7. FORMATION OF FARMERS COOPERATIVE

- (1) Any aid given by the govt. to society acts favorably to its formation and survival.
- (2) Government giving water to the society at a lower rate proves a good incentive ti its formation.
- (3) If at all there is binding on society to distribute water to its member on a fixed rate the recovery rate should be economically viable. It should be comparatively advantageous to members and profitable to societies to meet its running expenses.
- (4) Rehabilitation of an old scheme before handing over, works as a good incentive for farmers to unite and form a cooperative.
- (5) If the govt. comes forward and bears the risk of loss to society during initial years, it finds a very favorable response among the members of the society.
- (6) In case some processing industry is attached to the society, the income of its member grows. This acts as a binding force for the members to come forward and remain united.
- (7) It is easier to form farmers cooperatives by creating suitable conditions on a new project then on an old one where wastage, misuse, wrong cropping pattern and inequity is in distribution has become and way of life.
- (8) Other appropriate incentives according to local conditions may also find a favorable response.

7.2. MEMBERSHIP SUPPORT

- (1) Homogeneity of members

In case the member of the society are of the same caste and status it is called homogenous. Better the homogeneity better will be the bon in its members, which will act favorably to its formation and survival.

(2) Educational status

If the educational status of the members is better, it will be easier to bring them together and run a cooperative.

(3) Fear of the risk of loss tends to affects adversely to the formation of the society.

(4) If the financial status of the member is better it will be easier to convince them to cooperate for mutual benefit.

(5) The interest of members is protected they will be motivated for coming together.

(6) Where the members are having other sources of livelihood also, it will be difficult for them to come closer and form a society.

(7) On the whole gain to members in forming a society bring them together. If they would not find a substantial gain by cooperation they will not get motivated to do so.

7.3. LEADERSHIP SUPPORT

The role of leadership is vital to the formation of a society and its subsequent survival. The leadership must have the following qualities to be successful in the task.

(1) It must have enough dedication in doing the job.

(2) It must work with honesty and with a spirit of public service.

(3) It must have proven credibility amongst the members.

(4) It should have a record of social service.

(5) It must have enough influence on local people.

(6) There should be an inbuilt arrangement of conflict management.

7.4. SYSTEM INCENTIVE

The type of system also has its influence on the successful formation of a farmer cooperative and its subsequent survival.

(1) If the existing system is facing difficulties in good operation, maintenance and distribution and is in crises it become easier for the members to come forward and unite and form a cooperative.

(2) A good system with successful warabandi will work unfavorably to the interest of farmers cooperative: People do not feel it necessary to form and manage a cooperative, which is not going to give them adequate incentives.

(3) The system where cash crops and grown, farmer tend to form cooperative for the management of water because the risk involved in failure of crops become substantial.

- (4) Employment of independent irrigator for irrigating the fields ensures more judicious watering and less wastage. It ensures better quality and consequently lowers the number of conflicts. The survival of society thus becomes healthier.
- (5) Non-Remunerative cropping pattern in the command acts unfavorably to the interest of formation of a farmer cooperative.
- (6) Uniform irrigation i.e. enforcement of equity in the system tends to keep the members united.
- (7) Use of catalytic agents in convincing the farmers about the benefits of formation of a society also acts favorably in the community.

8. CONCLUSION

- 8.1. The farmers must be involved in all spheres of the project, right from, planning stage to construction and upto maintenance in all aspects.
- 8.2. Construction of dams, weir barrages and large canals would be extremely difficult for farmers to handle. Government provides us with all available institutional resources, departments, agencies, trained staff etc. that can be used to get things done.
- 8.3. Farmers have some comparative advantages as well. They have direct incentives to manage irrigation water in a productive and sustainable manner, they offer on the ground presence that even the most dedicated off-site agency cannot equal and they have an intimate knowledge about their fellow irrigators.
- 8.4. When farmers are directly involved in the design process whether for new systems or rehabilitation of old ones, they will provide useful design input and they will come away with an understanding of the design logic of the system they will be managing. During construction farmer input has the functions of quality control, costs saving and construction knowledge.
- 8.5. Farmers participation will reduce the cost of operation and maintenance. Farmer can enjoy better service and cost savings, the government incurs less management cost and can then afford to improve in the main system.
- 8.6. The organization that farmers establish for managing their irrigation system constitute a form of social capital that can have spin-off effects in the other aspects of social and economic life. The network of contacts among agency staff and the water user organization leadership, can bring the farming community into closer touch with related services e.g., credit, education opportunities or even political access. And the skill that farmers learn through their experience with their water user organization- accounting, budgeting, planning organizing, constitute a set of knowledge that can be used in many other productive endeavors.
- 8.7. For achieving efficiency in water management and creating a self-sustaining system, minor changes will not suffice in administration. Main point of importance is that farmers should get involved in the management of irrigation system and recovery of water charges. Hence farmer will have to participate in the management of Irrigation. Participatory Irrigation Management is the only solution.

The farmers can participate by becoming members of the Water User's Associations (WUA).

- 8.8. The formation of WUA's with subsequent system turnover to them is the cornerstone of the proposed reform strategy. The farmers can better manage minor and territory Irrigation system than a distant bureaucracy which neither has the staff numbers, detailed local knowledge or incentives to perform, these tasks. Turning over the Irrigation system to WUA's enable the hand on-management required, allows participation in decision making of the main system by the stakeholders and sets the stage for progressing higher level of management by farmers including eventually fully autonomous farmer managed Irrigation Commands.