Note on Participatory Irrigation Management in Maharashtra

Maharashtra is supposed to have the highest number of large and medium irrigation projects in the country. Till 1995 apparently the Rs. 20,000 crores were spent on developing surface water potential in Maharashtra. This is only the public investment. The private investments made by farmers in the form of wells, motors, pipelines, etc., are not included in he above figure. The official figures show that the total irrigation potential created in the state is about 6 M ha. Of this, about 4 Mha is the surface water potential and the remaining 2 million is the groundwater potential created. But all of us know that irrespective of spending so much money and developing the water resource, Maharashtra is quite far from solving its water problem. Vast majority of the people in the state have been out of the reach of the water facilities. Nearly 16 to 20 thousand villages in Maharashtra face drinking water scarcity. More than one-third area in the state faces drought conditions once in every 3-4 years. With irrigation it was expected that people's livelihoods would get stabilised and open up the path of prosperity. Experience shows something different. People have to still migrate to meet their livelihood needs or have to depend on employment guarantee schemes.

There are many reasons for this. Under utilisation of the created irrigation potential is one of such reasons. Coupled with this the designed cropping pattern was never implemented. The cropping pattern became sugarcane dominated and it is said that more than 50% of the irrigation water is used by sugarcane. Studies as well as experience show that there is a widening gap between the potential and actual yield of irrigated agriculture. In fact, the productivity of irrigated agriculture has been declining over time. Productivity per unit of water has been also very low. Vast tracts of prime agriculture land have gone out of production primarily because of waterlogging and salination. In Maharashtra more than 5.3 lakh ha (about 2% of the land area) has been thus affected. This is more so in the upper reaches of the command areas. While the tailend farmers do not get water, there has been a steady decline in the quality of irrigation service and the system cannot deliver water as per crop requirements. Canals and distribution systems have not been maintained properly and most of these systems cannot carry the designed discharge. Another area of concern was the ever increasing financial losses to the state exchequer. The present practice of subsidized and crop-area based irrigation pricing does not promote efficiency and wastage of water. Also the water charges actually collected very often

cannot meet even the operation and maintenance cost. In some of the states the money spent on staff salary to collect the water charges is much more than the money actually collected! Corruption is all pervading – bottom to top -- and paying the irrigation officials and staff to get water or to get it out of turn is something the farmers have come to accept. In short the water sector is in a deep crisis.

The issue is how to break out of this crisis. In the 80s there has been lot of debate and discussions about what should be done or what could be the solution. By mid-80s many of the experts on irrigation identified lack of participation of the actual users in the irrigation management as the main reason for the crisis. Thus, unless the water users directly participate in the different aspects of the management of irrigation water, we would not be able to reform the irrigation sector. Because of this realization the Ministry of Water Resources, Government of India issued a circular to all the states emphasizing the need for collective efforts by farmers for water management. In 1987 Centre for Applied Systems Analysis in Development (CASAD), based in Pune, decided to launch an Action Research Programme, on the lines indicated in the above mentioned circular, in one minor canal of the Mula Irrigation project in Ahmednagar district. This Action Research Programme was taken up in close collaboration with the Irrigation Department.

Though in the earlier days there has been farmer managed irrigation system – one of the good examples being the Phad systems in Dhule and Nashik districts – in the modern context there is no experience of farmers managing the irrigation system. Hence there was a need to take up a pilot project and experiment and see whether it is really possible for the farmers to manage the irrigation system. Unless this can be demonstrated in some place no body will take the concept of user participation seriously. Thus CASAD and later Society for Promoting Participative Ecosystem Management (SOPPECOM) helped organize the first Water Users' Association (WUA) in Maharashtra. This was set up on Minor 7 of the Mula Right Bank Canal which provides water to Chanda and Rastapur villages in Ahmednagar district covering an area of about 500 ha. The work began in 1987. Finally after two years of motivating the farmers, and doing the necessary paper work and procedures like collecting the share capital, putting together the 7/12 of the members to show that the members own land in the command area, etc., the Shri Datta Co-operative Water

Distribution Society got registered and became functional in 1989. Thus the history of participatory irrigation management in Maharashtra began with Shri Datta Society.

Seeing the success of this WUA many more efforts followed. For example SOPPECOM took the lead in forming another 20 WUAs on Distributary 4 of Mula project with the idea that all these minors would form a Federal Society at the distributary level with an area of about 5000 ha and take water at the distributary head and then distribute it to the member minor-level WUAs. Similarly, in Ozar, Nashik district, Samaj Parivartan Kendra, with technical support from SOPPECOM, took the lead in forming three WUAs on the tail end of the Waghad project. Later the movement for participatory irrigation management spread, though very slowly, and now as per official figures there are about 500 functional WUAs in the state and another 2000 or so at various stages of formation. One can say that SOPPECOM and Samaj Parivartan Kendra have been the pioneers of participatory irrigation management in the state. Unfortunately not many NGOs have shown interest in this area.

Some of the salient features of the Maharashtra experience are: 1) WUAs in the state are essentially voluntary organizations formed by the farmers and registered under the Co-operative Societies Act; 2) No WUA may be registered unless 51 percent of the farmers (or owners of 51 percent of the area) in the jurisdiction of the proposed WUA become founding members and pay the requisite fees; 3) Before handing over water management to the WUA an Agreement/ Memorandum of Understanding (MoU) has to be signed jointly by the Society and Irrigation Department. Among other things, the MoU specifies the seasonal/annual quotas, methods of measurement, delivery system, water fees to be paid to the Department, incentives/penalties for early/delayed payments, rights, duties, responsibilities of the concerned parties, etc.; 4) Water is delivered to the WUA at the Minor head (i.e. in the jurisdiction of WUA) on a volumetric basis. Similarly, rates are based on volume delivered to the Societies. Though the Government fixes volumetric rates for payment to the Department, the WUA is free to determine the rates to be paid by the farmers to the WUA; 5) Once the quotas are fixed for each WUA, the Department does not insist on a given crop pattern. In other words, WUA has complete freedom of cropping. In fact Maharashtra is the only state which has got volumetric supply and pricing for WUAs; 6) The

WUAs are given financial incentives in the form of about 20 to 25% cut in the water bill to be paid to Irrigation Department and also certain amount of management subsidy is also given on a per ha basis.

In the 90s the concept of PIM also spread to other states like Gujarat, Andhra Pradesh, Karnataka, Orissa, Madhya Pradesh, Rajasthan and many other states. Many of them have also passed Acts in support of participatory irrigation management.

Experience and various studies show that the overall impact of WUAs has been very positive. For example corruption has been eliminated to a great extent; the farmers generally get water as per the pre-decided rotation, in many cases irrigation efficiency has improved, the situation of the canals is much better because of the regular maintenance by the WUAs. In fact the spectacular impact has been on water tariff collection. The experience is that by and large there is 100% water charges are paid to the Irrigation department by the WUAs especially where NGOs have taken the lead in forming the WUAs.

The Ozar WUAS have gone even beyond the conventional functions of WUAs. For example they have constructed small check dams on the nallas in the command area. These check dams help to harvest local rain water and also store part of the water they get from Waghad dam. This has made the local water system more stable and assured and the farmers can by and large give irrigation as per the requirements of different crops. They have also gone for conjunctive use of surface and ground water. The WUAs charge the farmers on an hourly basis and this has checked wastage of water and brought in more efficiency. In one of the WUAs the members also pay a water charge to the WUA for using water from their own wells because they know that the well water is basically recharged water. Thus they have been able to bring the wells in the command area under the jurisdiction of the WUA. They have formed WUAS to cover the entire command area of the Waghad project and the management of the entire project has been handed over to the federation of the WUAs. This is the first and only case of project transfer in Maharashtra, and probably in India too.

Recently Maharashtra has enacted the Maharashtra Management of Irrigation Systems by Farmers Act 2005. It is expected that this legislation would give a fillip to participatory irrigation management in the state.

One of the wider issues that we need to consider is the issue of the strategy that is being adopted for participatory irrigation management. Two broad strategies may be identified: the legislative strategy and the motivational strategy. The Andhra Pradesh and Madhya Pradesh experience broadly exemplifies the legislative strategy. It concentrates on a rapid and extensive introduction of participatory irrigation management through legislative measures. In contrast, the Maharashtra and Gujarat experience mainly exemplifies the motivational strategy, though in Maharashtra there is an Act in place. The emphasis is on first building up awareness, creating motivation and then introducing participatory irrigation management. These strategies could also be contrasted as top-down and bottom-up strategies respectively. The former is also called the `big bang approach'.

The achievements of both these strategies may be seen to be complementary. The legislative strategy has been successful in introducing PIM on a large scale. However, the performance has been poor, in that there is no great expansion in benefits in the before and after PIM situations. Not much has changed on the ground, and if nothing much is done about it, farmers are bound to see it as one more regime change with very little grassroots relevance. In contrast, the Maharashtra and Gujarat strategy has achieved spectacular results, and Mula Minor 7, Katepurna and Ozar in Maharashtra and societies formed by the DSC and AKRSP in Gujarat and the like have provided inspiration and guidance to many PIM efforts. However, in this strategy, the rate of expansion of PIM has been very small and the proportionate area covered by PIM is insignificant in relation to the total irrigated area in these states.

What seems to be clear from the experience of the two strategies is that in the absence of a supporting and enabling legislation there is little chance of PIM extending itself to large areas. However, we need to take into account the experience and learning that the motivational strategy has accumulated and integrate that learning with the legislative and policy measures. How these strategies can be integrated in a synergetic manner is an issue that needs debate and deliberation.

Also more attention needs to be given to issues of integrated water resource development and use, also needs to take into account non-irrigation needs and their provision, equity issues and gender issues are also generally missing from the present practice and policy guidelines related to participatory irrigation management. Also

presently the emphasis is only on the tertiary level (like minor level) participatory management. The full impact can be got only if participatory management can be extend to higher and higher levels like distributary, branch canals and ultimately to project level. Only if we bring all these issues into the functioning of WUAs we can make WUAs instruments of restructuring the water sector in more sustainable, equitable lines and also make them instruments of decentralised governance. Otherwise they would remain instruments of mere "transfer' of irrigation systems to water users. In fact the Ozar experience shows the way ahead if we have to make WUAs instruments of restructuring the water sector.

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