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WATER USERS ASSOCIATIONS IN MAHARASHTRA, INDIA -- ACHIEVEMENTS, CHALLENGES AND WAY AHEAD

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INTRODUCTION

Maharashtra State is situated in the southwest of India. It is the third largest State (30.8 Mha) with the second largest population (97 million) in the country. Agriculture has been the prominent occupation to provide food and fiber to the growing population of the State. The State economy is dependent upon agricultural production. Irrigation facility is regarded as the key element of irrigated agriculture.

CLIMATE AND RAINFALL

The State has a tropical climate. The annual rainfall varies from 400 mm to 6000 mm, with a state average of 1300 mm of which, 88% falls during June to September and remaining between Octobers to December. It has a great impact on State's water resources planning.

SURFACE WATER RESOURCES

The geographical area of the State is divided into basins drained by the rivers Krishna, Godavari, Tapi, Narmada and narrow basins of west flowing rivers of Konkan. The average annual availability in above basins is 163.82 billion cubic meters (BCM), out of which permissible use as per interstate tribunal award is 125.94 BCM.

3.1 Irrigation potential created

Hardly 0.274 million hectares (Mha) irrigation potential was created in the State during pre-plan period i.e. prior to 1950. As agriculture is the prominent occupation, the State has concentrated upon construction of irrigation projects. There was manifold increase in irrigation potential creation. By 2011, the State has created 4.8 Mha irrigation potential (State Sector) using surface water resources. The State has constructed almost 2700 major, medium and minor irrigation projects, and has around 40% of the country's total number of dams. The ultimate irrigation potential, through both surface water and ground water resources, has been estimated as 12.6 Mha.

4. HISTORICAL DEVELOPMENT OF PIM

Maharashtra has a long tradition of participatory irrigation management. Phad systems in Northern Maharashtra and Ex-Malgujari tanks in Eastern Vidarbha are living examples of it.

4.1 Phad System

The Phad system on canals has been implemented since the medieval period on Panzara, Girna, Mosam & Burai rivers, which flow through Nasik & Dhule districts. Water is diverted by constructing *bandharas* across these rivers. Several beneficiaries belong to a single Phad. A sole crop is used to be grown in a Phad: perennial crop in the first Phad, two seasonals in the second, seasonals in the third whereas a crop would be grown in the fourth in case water is available. The crops are rotated in different Phads in a 4-year cycle.

4.2 Malgujari Tanks

The tenure of Gond kings saw the creation of series of tanks in Vidarbha. It is given to understand that nearly 10,000 tanks had been constructed nearly 300 to 350 years back in the districts of Chandrapur, Gadchiroli, Bhandara

& Nagpur in Wainaganga Basin through the entirely private enterprise of the Kohali community i.e. by deploying their own money and efforts.

4.2.1 Development in post-independence period

To encourage participation in irrigation management by farmers, the then Bombay Province in 1947 had created canal advisory committee, block level water committee and corporate body of landowners. The experiences of various trials and pilot studies are briefly summarised below.

In 1976, Maharashtra Irrigation Act-1976 has come into force. The chapter III, section 60, of the act provides for modalities in which water committees are proposed to be formed and to whom water is to be supplied on volumetric basis.

Considering National Water Policy-1987 and Maharashtra Irrigation Act-1976, the Government of Maharashtra initiated pilot project of establishing water users' associations. In 1989, on Mula project Shri. Datta Sahakari Water Users Association has been established in Nevasa Taluka of Ahmednagar Disrtict. The same year 3 WUAs were established in Waghad project of Nashik District.

5. ACHIVEMENTS;--STATUS OF PIM IN MAHARASHTRA

The State has broadly divided into six regions viz. Konkan, Western Maharashtra, North Maharashtra, Marathwada, Nagpur and Amravati. These regions have different geographical, social, agro-climatic scenario, which certainly has had an impact on PIM development in the State. The progress of development of WUAs in the State is given below (Table 1).

Status of formation of Water User's Association under MMISF ACT ,2005 & Co-operative Act, 1960 in the State as on December 2011

Table_1

Project	WUA which have Started Functioning		WUA whose Agreement is done		Registered WUA, Agreement is yet to be done		Proposed WUA		Total number of WUA	
	No.	CCA (ha.)	No.	CCA (ha.)	No.	CCA (ha.)	No.	CCA (ha.)	No.	CCA (ha.)
Under MMISF Act, 2005(new act) Major & Medium Irrigation Projects (A)										
Within CAD Projects	899	372725	-	-	30	16472	-	-	929	389197
Outside CAD Projects	402	193804	-	-	89	27071	-	-	491	220875.41
Total	1301	566529	-	-	119	43543.4	-	-	1420	610072.41
Minor Irrigation Projects (B)										
	258	109187	-	-	-	-	-	-	258	109187
Total A+B	**1559**	**675716**	**-**	**-**	**119**	43543.4	**-**	**-**	**1678**	**719259**
Under Co-operative Act,1960 Major & Medium Irrigation Projects (A)										

Within CAD Projects	690	241557	88	39327	421	157753	429	211500	1628	650137
Outside CAD Projects	356	12086	95	26212	582	214128	2290	742846	3323	1104042
Total	1046	362413	183	65539	1003	371881	2719	954346	4951	1754179
Minor Irrigation Projects (B)										
	363	121000	83	32634	424	141489	987	320344	1857	615467
Total A+B	1409	483413	266	98173	1427	513370	3706	1274690	6808	2369646
State level Under New Act(MMISF Act 2005 & Co-operative Act (1+2)	2968	1159129	266	98173	1546	556913	3706	1274690	8486	3088905

5.1 Success stories of PIM

There are many success stories of PIM. Waghad Project, Nashik is a medium project having CCA 9642 ha. As stated earlier, PIM started with 3 WUA in tail end, now WUAs are formed all over the command area. The WUAs have formed project level WUA, which is successfully managing irrigation of the entire project since last six years. Similarly, Katepurna Project, (Akola), Manar Project, (Nanded), Kukadi Project, (Pune) and Bagh-Itiadoh Project, (Gondia) have shown remarkable improvement in project performance with PIM. The Pimpalnare Project (Nashik), Tekepar LIS, (Bhandara) and Pentakli Project (Buldhana), Benikre (Kolhapur) are successful examples, exhibiting improvement in utilisation and diversification as a result of practicing PIM.

6.0 CHALLENGES

Government of Maharashtra (GoM) has now made mandatory to supply water for irrigation through WUAs only. So far 2968 WUAs are functioning on 1159 thousand ha, while 5518 WUAs covering 1930 Thousand ha are under various stages of formation. The real challenge however lies in making WUAs self-sustainable.

It is observed that the impact of PIM is restricted to few success stories. It is our objective to upscale it without loosing its quality and impact. There are challenges in up scaling, some of which are as below.

6.1 Challenges in up scaling of PIM

- Simple procedure for formation of WUAs
- Time bound rehabilitation of canal system before transfer to WUAs
- Huge requirement of funds for rehabilitation
- Training and capacity building of members of WUAs as well as field officers
- Re-engineering of lower level management staff
- Political will and commitment of the Department
- Self-sustainable design of WUAs
- Conflict management among WUAs and with canal officers
- Monitoring and evaluation

7 REFORMS INITIATED BY THE GOM

The GoM has been pioneer in implementation of PIM. There are number of successful examples of PIM. The approach of Maharashtra has been gradual but convincing. During last few years, GoM has initiated a number of reform measures supporting PIM.

In July 2001, GoM has taken policy decision to supply water for irrigation through WUAs only (with a timeframe). The supply of water will be on bulk volumetric basis. The volumetric measurement of water for irrigation is in

vogue in Maharashtra since 15-20 years. The farmers are well aware about volumetric measurement. Farmers have freedom to grow any crop within the water quota given to WUA.

The participation of farmers is not only sought for management but farmers are involved in planning, construction of minors also. It has been made mandatory to form WUAs before construction of minors having discharge <1m3/sec.

The GOM has set up the Maharashtra Water Resources Regulatory Authority (MWRRA) to regulate water resources within the State. It will facilitate and ensure judicious, equitable and sustainable management of water resources of the State.

7.1 Maharashtra Management of Irrigation System by Farmers Act 2005

To overcome difficulties as mentioned above and to empower WUAs, the GoM has enacted the Maharashtra Management of Irrigation Systems by Farmers (MMISF) Act 2005.

7.1.1 Salient Features of MMISF Act 2005

MMISF has various innovative provisions to strengthen the PIM initiative. The MMISF enactment laid down simple and easy procedure for formation of WUAs. The registration of society will be done by the Water Resources Department itself.

Salient features of the Act are as follows:

- Water for irrigation shall be supplied to WUAs only
- All landholders or leaseholders must be member of WUAs (unlike earlier 51% of landholders or 51% users).
- Water will be supplied on volumetric basis
- WUAs have freedom of cropping pattern
- Adequate representation to tail enders and women members is provided in the Management committee of WUA
- Time bound programme of completion of rehabilitation works before transfer to WUAs

7.2 Steps taken by GoM to strengthen PIM

Maharashtra has a long tradition of co-operative movement in the State. The co-operative movement has been very successful in finance sector (e.g. banking) as well as industrial sector (sugar factories). The co-operative movement is a way of life for everybody in Maharashtra.

In irrigation management, farmers have already welcomed PIM approach but it has not so far been adopted on big scale due to limitations discussed earlier. But with assured flow of funds for rehabilitation, an exclusive enactment for PIM on scene, there will be no difficulty in mass implementation of PIM. There are number of good examples of WUAs promoted and supported by field officers. Top level as well as middle level officers are convinced about PIM and there will be positive support from the Department's side.

GoM has taken a number of initiatives to facilitate effective and speedy implementation of PIM. Some important initiatives are as follows:

7.2.1 WUA model

As described earlier, MMISF act has taken utmost care to provide WUAs model, which will be self-sustainable and also have adequate authority to discharge functions smoothly. There will be a legal agreement between WUAs and competent authority, safeguarding due interest of WUAs with commitment to provide bulk water use entitlement. The appropriate powers of canal officers (Section Officers, Deputy Engineers and Executive Engineers) are

delegated to WUAs as per provision of the act. Now WUAs will have to deal with only WRD for registration, auditing functioning etc. WRD provide full technical support in initial years to facilitate working of WUAs.

The adequate representation is being provided in managing committees of WUAs to members from tail, middle and head along with due representation to women. The WUAs will be given back upto 93% of water charges for management, operation & maintenance of the canal system. This will enable WUAs to become financially stable which will result into self sustainability. The act provides clear and fair arrangement for conflict resolution among members of WUAs and canal officers too. Due opportunity is given to aggrieved party to place their grievances before an impartial forum. Thus the WUA model is one of the best models in the Country which is legally as well as financially sound.

7.2.2 Effective Communication with WUAs

An utmost care is taken in developing effective communication with WUAs. The dialogue between WUA and Department as well as with other WUAs is vital for success of PIM. Therefore it is planned to have workshop twice a year, wherein difficulties and possible solutions are discussed vis-a-vis WUAs, field officers and policy makers. The recommendations of the workshop are discussed and followed up in State level coordination committee under Chairmanship of Secretary (CAD). This mechanism is used for under taking suitable corrective measures in implementation of PIM.

It is also attempted to publish newsletters related to PIM to appraise the developments taking place in PIM in different parts of the State. It is found helpful in exchanging information as well as sharing experience in order to take this movement ahead.

7.2.3 Training and Capacity Building

Training and Capacity Building plays crucial role in taking ahead the PIM movement. Water And Land Management Institute (WALMI) is acting as nodal institute in training which is imparting training to officers, member of WUAs, Training of Trainers (TOT) and is also play role of mother NGO. As WALMI infrastructure may not be sufficient to conduct training of field officers as well as members simultaneously. It is carried out through TOT consisting of experts from irrigation, agriculture and social sciences. These trainers' team is trained at WALMI, which in turn trains functionaries and field officers at field level. The training activity is designed as continuous wherein training will be provided as per needs and with the development of PIM. It has also been attempted to take help of NGOs to nurture the WUAs and facilitate WUAs in discharging their functions.

7.2.4 State level Awards for WUAs

GoM has instituted awards for best performing WUAs at State level and Regional level from 2010. Every year State level campaigns and competitions are undertaken to encourage participation of WUAs in competition and evaluation of WUAs by multi-disciplinary committee. Evaluation is made on basis of water use, utilization, agricultural and social parameters. The award constitutes certificate and handsome amount ($2000 to $12000). The award has resulted in appreciating WUAs efforts and motivating others to work better.

7.2.5 Maharashtra Water Sector Improvement Project

To carry out rehabilitation of canal system in time bound manners, the GOM had taken up Maharashtra Water Sector Improvement Project (MWSIP) with financial assistance of World Bank. The MWSIP envisages transfer of management to WUAs after adequate rehabilitation. To inculcate ownership among farmers, farmers have contributed Rs500/Ha in rehabilitation of the canal system. The system rehabilitation is carried out to carry the designed discharge, through the canal and disnet.The project is in advance stage of completion.

7.2.6 Monitoring and evaluation of WUAs

Last but not of the least important is, monitoring and evaluation of WUAs in the State. It is very important in case of any developmental activity, particularly in social development, wherein timely monitoring evaluation and undertaking corrective action is necessary. If right action is not taken at right time, there will be a lot of damage to

the development accomplished and sometimes it would be difficult to move ahead. Therefore, there is system of monitoring and evaluation through third party directly reporting to decision making level. The consultant collects information through well-designed questionnaire and through Management Information System. The corrective action is taken based on timely feedback. A co-ordination committee is established under Chairmanship of Secretary (CAD) and members are from WUAs, NGOs, policy makers and few field officers, to facilitate working of WUAs. The coordination committee meets at least twice in year.

8. CONCLUSION AND WAY AHEAD

It is not time to discuss whether to go for PIM or not, but to up-scale it without losing it quality and impact. The committed support from WRD and timely efforts is necessary to build capacity of WUAs to shoulder the responsibility. It is also essential to strike harmony between goal and efforts of Govt., NGO and community. The Maharashtra case study could provide insight into important aspects of PIM and possible measures to strengthen WUAs movement.

The GoM had also enacted Maharashtra Water Resources Regulatory Authority Act 2005 to regulate water resources within the State. It facilitates and ensures judicious, equitable and sustainable management of water resources of the State. It provides water use entitlement to WUAs. MWRRA has allocated water use entitlement to WUAs in many projects under MWSIP. MWRRA ensures the enforcement of water entitlement. There is also a provision of transfer of water use entitlements for maximizing irrigation use efficiency. Enforcement of water use entitlements to WUAs will result in increasing efficiency in irrigation sector. MWRRA is also responsible for fixing water tariff criteria .Therefore, MMISF Act coupled with MWRRA Act will consolidate PIM and will ensure the sustainable development and management of water resources in the State.

9. REFERENCES:

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