“WUAs Need Institutional Strengthening”

Presented by Mohan Sharma, Program Director, DSC
Ahmedabad on 7th April, 2016 at IIF1, New Delhi

The Vicious Cycle of Canal Irrigation Management
**Evolution of PIM in India**

- Indian has a long history of State owned Community Managed Irrigation
- National Water Policy of the GoI (1987) advocated farmers participation in mgm. of irrigation systems, particularly in O&M.
- Maharashtra, Gujarat, UP and other states promoted Cooperative Irrigation in 80s-90s
- The MoWR issued Model Act in 1998 to be adopted by state legislatures for new PIM Act/ amending the existing Irrigation Acts for facilitating PIM
- Formation of Water User’s Associations (WUAs) at Minor, Distributary and Project Level.
- Led by AP, about 15 States enacted PIM Act and 63167 WUAs formed covering 14.623 Mha under these Acts.

**Expected roles and responsibilities of WUAs**

- The degree of roles and responsibilities assigned to WUAs vary from state to state
- Some common functions are as under:
  - Regular Operation and maintenance of canals
  - Equitable water distribution amongst the farmers in the command area
  - Maintenance of records (irrigation and financial)
  - Recovery of water charges from the Users (wherever levied)
  - Conflict resolution amongst members
  - Improve water and agriculture productivity
Progress

- Till January 2015, about 84,779 WUAs formed, however there is not much data on their performance.
- Gujarat, Maharashtra, MP, Rajasthan, AP and Bihar have developed many effective WUAs that serve as demonstration platforms.
- DSC studied sixteen successful WUAs promoted by NGOs and the Irrigation Department in the four states including A.P, M.P, Maharashtra and Gujarat in 2012. The key impacts observed are given in next slide:

Contribution to Economic Growth

I. Increased irrigated area by 10% to 36%.
II. Increases food crop area i.e. wheat, paddy
III. Introduction of cash crops such onions, grapes, sugarcane and G.M.Cotton.
IV. Change in crop productivity – wheat, soyabean, maize, cotton and pulses.
V. Dairying - Increase in fodder availability and income (about 47% increase in net income through dairy in M.P.)
VI. In all the four states increase in employment generation and wage rates was observed post PIM.
IMPACT OF PIM IN RBMC

Block Wise Changes in Irrigated areas

<table>
<thead>
<tr>
<th>Block No</th>
<th>Irrigated Areas (Ha)</th>
<th>Difference (Ha)</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2003-04</td>
<td>Year 2007-08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5551</td>
<td>3537</td>
<td>2014</td>
</tr>
<tr>
<td>2</td>
<td>4964</td>
<td>7940</td>
<td>2976</td>
</tr>
<tr>
<td>3</td>
<td>5351</td>
<td>7753</td>
<td>2402</td>
</tr>
<tr>
<td>4</td>
<td>6646</td>
<td>8785</td>
<td>2139</td>
</tr>
<tr>
<td>Total</td>
<td>22512</td>
<td>36412</td>
<td>13900</td>
</tr>
</tbody>
</table>

Water Use Efficiency

<table>
<thead>
<tr>
<th>Year</th>
<th>MCFT/Ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>0.108</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.565</td>
</tr>
<tr>
<td>PIM Impact</td>
<td></td>
</tr>
<tr>
<td>Before PIM</td>
<td>0.340</td>
</tr>
<tr>
<td>After PIM</td>
<td>0.232</td>
</tr>
</tbody>
</table>
Critical analysis of WUA support system in the country

I. Institutional issues – increasing fragmentation in the community, valued based leadership,

II. Ad-hoc capacity building support to WUAs.

III. Lack of political will to implement PIM.

IV. Legal issues – no clear water allocation rights to WUAs, hardly any autonomy to WUAs

V. Technical issues – dilapidated physical system, water logging at head reach while high tail end deprivation and ground water development.

VI. Lack of incentives to promote WUAs: WUAs are seen as a threat, almost no accountability towards facilitation, no serious efforts to build the capacities of the WRD staff to facilitate WUAs.

VII. Financial issues – very little fund availability for O&M, low water rates and even lower water collection rates.

Successful approaches of Gujarat and other states

- Gujarat has been a role model for the White Revolution in the country through Amul Cooperative. It can lead the country for PIM revolution through Dharoi model of PIM – Professor Kirit Parikh, Ex. Member Planning Commission GoI
Success factors

1. Software support

2. Hardware support

Software Support

1) Govt. policies and entitlements that give proper incentives and autonomy to the WUAs for better performance

2) Institution development through Capacity building and hand-holding for 3-5 working years of Preparation, Formation, Growth and Autonomy

3) Capacity building of WRD field functionaries

4) Involvement of NGOs for close facilitation of WUAs and promotion of other allied activities
Hardware Support

- Rehabilitation and up-gradation of canal network
- Water Resource development and irrigation demand management
- Technical interventions to increase on farm water use efficiency
- Allied activities for agriculture livelihood promotion
- Fund allocation for hardware and software activities

Processes adopted for promoting and facilitating effective WUAs

- Situation analysis through PRAs, group meetings and secondary data analysis.
- **WUA Formation** - Sequential steps – motivation & awareness, not through lure but through benefits.
- Formation of sub-committees to carry out different tasks
- **Canal Rehabilitation** – Survey, Cost-benefit analysis, resource mobilising, capacity building and quality control
- **Water Distribution** – emphasis on equitable water distribution and irrigation budgeting
- **Institution Management** – membership awareness and leadership, self performance monitoring & audits
- **Agriculture Enhancement** – productivity enhancement, cost reduction, risk mitigation, value addition and market linkages
Institution Strengthening

- Awareness creation - Use of IEC and mass media
- Capacity building - Exposure visits & hand-holding at all stages and training on:
  - Legal aspects
  - Technical aspects
  - Financial-Admin aspects
  - Institutional aspects
  - Agricultural aspects


- Formation of WUA for each Minor Canal Service Area representing minimum 51% of the holders with 51% of Service Area.
- Agreement to turnover Irrigation management
- Repairs through WUA as per joint inspection
- Association is allowed to collect water charges over and above rates fixed by Govt.
- Association receives 50% rebate in water rate towards water rate collection and cost of O & M of canals and administration making it self reliant.
- Supply of water on Volumetric bases (per watering crop area basis).

Investments for canal rehabilitation – Government Rs. 55 million And Rs. 8.5 million as farmers contribution

Investments in Capacity Building of WUAs (2004-2009) provided by NDDB and Govt.

About Rs 15 million utilized for community organising and capacity building.
Role Clarity between different actors

Learning Lessons

I. Adopt People centric policy and entitlements
II. Develop package of incentives for stakeholders including Govt. officers, farmers and other facilitators
III. Development of human resource and their capacity building plan at national, state and village level (WRD and CBOs)
IV. Participatory Water, Land and Agriculture Management (PWLAM)
V. Adopting Area specific approaches and design for PWLAM
VI. Continuous review, monitoring, learning and improvements at all the levels
## Different Typology and PWLAM

### Surface Irrigation System (Public)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Surplus</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ground Water table &amp; source</strong> (Private)</td>
<td><strong>High</strong></td>
<td><strong>Deficit</strong></td>
</tr>
<tr>
<td>Water logging-low yield, Need drainage, land dev., Soil health mgm., SRI, SWI promotion</td>
<td>high tail end deprivation-soil-water-quality issues, low water demand, introduce PINS, extend command area</td>
<td></td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>High pressure on canals groundwater recharge, increase command area, conjunctive use of ground and canal water</td>
<td>high tailend deprivation, water transportation, ground water recharge, drips, value added agriculture</td>
</tr>
</tbody>
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### Physical System

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Good condition</th>
<th>Deteriorated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community &amp; leadership</strong></td>
<td>homogenous/dynamic</td>
<td>canal rehab-upgradation, PIM difficult but possible through technical interventions</td>
</tr>
<tr>
<td><strong>Fragmented/weak</strong></td>
<td>intensive efforts for community mobilisation, encourage new leadership, local Civic Bodies-Enterprise</td>
<td>PIM very difficult, +++ inputs in physical system &amp; com. mob</td>
</tr>
</tbody>
</table>
National PIM Programme

1. Form a National PIM Committee with representatives of 10 States with the largest area served by WUAs.
2. Establish a national concept, approach and acceptance of PIM openly supported by state governments.
3. Require different strategies for different physical and social conditions.
4. Formulate, fund and implement a National PIM programme based on tried and tested PIM principles and practices. This would include conjunctive use of ground water, lift irrigation and agriculture development.
5. All future irrigation projects funded through AIBP funding would include the National PIM program as a key element.

7. A legal framework that provides autonomy for the organizations;
8. A step-by-step process of formation of the organizations;
9. Facilitating capacity building, training and support mechanisms of ID staff members and WUAs, DCs and PCs including developing appropriate IEC materials and training modules.
10. Establishing State-wide PIM Support Units with Field Training Centres with funding for at least 10 years.
11. Strengthening WALMIs and include them as a key resource for training in PIM and water management (including maintenance).
12. Selecting few competent and committed NGOs (as done in Gujarat) in each state and provide funding on the lines similar to that of the watershed programme. (Rs 7500/ha – Rs 5000/ha for canal rehab by WUAs, Rs 1000 for Awareness and Cap. Bldg & Rs 1000 for HR & Adm.)
13. Allowing WUAs to set, collect and manage service fees.
Conclusion

- Crafting community based organizations/Collectives of whatever nature (WUAs, Farmer Interest Groups, Self Help Groups or Panchayats) or purpose (managing water, livelihoods or village governance) is difficult but necessary for the holistic management of water.
- Therefore, need to invest time, money and human resources for building their capacities.
- Just as much as we need schools and colleges, we will need to provide capacity building inputs to the collectives, albeit the syllabi will change with changing times.
- WUAs formed by the Government to carry out tasks the Government wishes done will never be sustainable.
- Farmers will only form a sustainable WUA for management activities if they believe it will be profitable for them.

Members of the WUA will refuse to pay fees if they have no control over the quantum and timeliness of water delivery, amount to be paid and the use of the funds.
- WUAs must be a legal association with clear rights and responsibilities.
- There has to be mutual accountability between the Departments and the WUA.
- If collectives are really useful to the primary members these will survive but maybe in a different form.
- Need to have belief in the need for collectives at the same time also accept the fact that in spite of our best efforts, some of them will wither away.
Thanks...