


Institutionalizing Agricultural Water Management at Local Level in Sri Lanka What have we learn?

Eng.(Mrs) K.R.S.Perera
Ministry of Agriculture Development & Agrarian
Services
Sri Lanka.

Out Line of the Presentation

- ✓ Introduction.
 - ✓ Major Challenges in improving water Productivity.
 - ✓ Major Drivers.
 - ✓ Major Policies Implemented.
 - ✓ Water User Associations & Strengthening their capacities.
 - ✓ Other Partnerships
 - ✓ Conclusion
- 

Introduction.

“ Let not even a drop of water
obtained from rain, flow to the
sea without benefiting mankind “

Parakramabahu the Great

(1153 – 1186) AD



General Data

- Population of Sri Lanka - 19.5 Mil (CBSL-2004)
- Cultivated Area - 1.86 Mill Ha. (DCS – 2003)
- Irrigated Land - 632,000 Ha , & 90% with Paddy
- River Basins - 103
- Mean Annual rainfall - 1861 mm
- Major Irrigation Schemes - 335,026 Ha (rice)
- Minor Irrigation Schemes - 117,433 Ha (rice)
- Rain-fed - 229,257 Ha (rice)

Major Challenges in improving water productivity

Water productivity is measured by Irrigation duty and the yield.

- **Irrigation Duty –**

The average duty Yala 1.1m-2.8m

Maha 0.7m – 1.9m

High water duty recorded 4.5m in Yala in
“Kaltota Scheme” Ratnapura

(Data not available except few major schemes)

Water loss due to land preparation, conveyance, and using traditional methods, not using water measuring devices

□ Paddy Yield –

Increasing trend → 1.5 tons/ha (1950)
4.0 tons/ha (2001)

(DCS-2004)

Yield in Major Schemes - 4.23 t/ha

Yield in Minor Schemes - 3.45 t/ha

Yield in rain-fed - 3.02 t/ha

Low productivity and low profitability tends the low investment by farmers

Other major challenges are high cost of seed paddy and fertilizer, low soil fertility lack of modern technology and deviation of young generation from agriculture, etc.

□ **Climate Variation**

Annual Rainfall decrease by 7% in two seasons
1931-60 & 1961-90.(Jayathilake -2005)

- Change in seasonal rainfall pattern
- Reducing number of rainy days
- High intensity of rainfall
- Experienced long dry periods
- More drought situations in dry zone areas
- Frequent floods & damages to the irrigation infrastructures

❑ **Agricultural Water Management**

Introduced in early 1980's by the government and in some donor funded projects.

Some irrigation systems achieved better cropping intensities, higher water use efficiencies. Eg: Kirindi Oya in Hambantota and Rajangana Scheme in Kurunegala

With the scarcity of water, FO's automatically tend to use water management .

In Perennial schemes (excess water available) difficult to introduce WM

In Minor irrigations schemes with the rehabilitation programs the water management is incorporated and the FO's practices it well.

Poor physical conditions of the infrastructures tend farmers giving up WM.

Major Drivers

- Water usage for land preparation in paddy was reduced by the awareness programs, and scheduling the cultivation to start with the 1st rain of the season.
- During rehabilitation process, canal lining introduced to reduce conveyance losses.
- Introduced 28 improved short term paddy varieties during last two decades by dept. of Agriculture.
- Re-activate the “Kanna meeting” (cultivation meeting) to get legally recognized decisions on cultivation.
- Participatory Irrigation Management introduced.
In Major schemes below DC level O&M practices to FO's and entire MI scheme to FO's. Eg:- Welangiriya Wewa in Kurunegala District.

Major Drivers

- Rehabilitation & Modernization of Irrigation Systems
 - Dahasak Maha Wew program (10,000 tank rehab.)
 - Granary Area program (Improve Agri Production)
 - Walawe Left bank rehab. (Duel canal system)
 - Dam safety and water resource project (early warning system)
- Fertilizer sub city program
 - Chemical & Organic fertilizer , using straws
- Climatic Change – Data Collection and studies are been carried out by relevant agencies and Universities.

Major Policies Implemented.

❖ Agriculture Policy

The policy includes efficient water management, efficiency of rain-fed agriculture, conserve water resources, safeguard irrigation reservoirs, promote PIM

❖ Irrigation Act

No Irrigation policy but in the act joint management and turn over the systems were included under PIM

❖ Agrarian Act

Minor irrigation management and farmer participation on O&M is included.

Major Policies Implemented.

❖ Water Resources Policy

Sri Lanka has been working on this since 1990 and this was subjected to many criticisms and debates & yet in progress. (Environment policy & Water shed policy included some parts of water resources)

❖ National Goals

1. Greater efficiency in irrigation water management thro' farmer participation
2. Increasing productivity thro' crop diversification.
3. Rehabilitation of Minor Irrigation systems
4. Drainage and flood protection improvements.

Water User Associations

- No separate water User Associations but Farmer organizations acts as WUS and appoint a water master from FO members.
- In Major schemes, Irrigation Department is responsible for water distribution upto DC level, and beyond that FO takes the responsibility.
- In Minor schemes, Water master appointed by the FO's is responsible for water distribution.
- In Mahaweli systems, at national level water management secretariat will allocate the water weekly to the macro systems, by considering the requirement for irrigation, power, drinking . Beyond that the district officers in charge upto DC level and then by farmers take over.
- From time to time relevant agencies strengthen the capacity of farmer organizations & water masters by training, awareness etc.

Other Partnerships

- Sri Lanka collaborates closely with several international organizations related to water resources such as;
IWMI, FAO, WFP, UNESCO and World water assessment program, International commission for large dams etc. to build capacities, development activities and research work.

Conclusion

- ✓ The public participation in decision making in irrigation management increased with the past interventions. The emphasis on water management is reduced and very poor field level water management monitoring system exists.
- ✓ Inadequate policies for the country effects the good governance of the resource.
- ✓ Inadequate investments in agriculture and water resources development specially on water management aspects.
- ✓ Issue on water sharing between uses and users especially in droughts.
- ✓ Non availability of comprehensive data base and access difficulties to data and information.
- ✓ No method for water resource data publication.
- ✓ Lack of modern technology or technology transfer

Thank you.

28.1.2009

