

# **Irrigation Institutions: Practices and Challenges**

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# The outline of the presentation

- The drivers
- Forms of irrigation institutions
- Practices of irrigation institutions
- The management bodies of irrigation institutions
- Services provided to irrigation institutions by GO/NGOs
- Challenges
- Way forward

## The drivers

- **The Ministry of Water and Energy (MoWE)/Irrigation Development Commission** is responsible for developing large scale irrigation schemes mainly for public farms, although it is currently also developing large schemes for communities.
- **The Ministry of Agriculture (MoA)** is responsible for developing community-managed small-scale irrigation schemes (up to 250 hectares).

## The drivers

- **Donors** are actively engaged in the irrigation subsector.
- **Intermediary NGOs** are supporting communities in irrigation development
- **Private companies**

## **Forms of irrigation institutions**

- Irrigation Water Users Associations (IWUA)  
(Proclamation No. 841/2014)
- Irrigation cooperatives or water committee  
(cooperatives proclamation (FDRE 1998))
- village based governed by verbal by-laws  
(traditional irrigation schemes)
- private sector commercial farms

# Practices of irrigation institutions

- **Water use activities**
  - Water acquisition
  - Allocation
  - Distribution and
  - Drainage
- **Control structure activities**
  - Design
  - Construction
  - Operation and
  - Maintenance
- **Organizational activities**
  - Conflict management
  - Communication
  - Resource mobilization and
  - Decision making

# The management bodies of irrigation institutions

- **Water Users Association**
  - the general assembly (supreme organ);
  - the management committee;
  - the control committee; and
  - the dispute settlement committee.
- **Village based governed by verbal by-laws**
  - Elders, *Abo-mai*, *Yewha Abat*, etc.
- **Company based departments**

# **Services provided to irrigation institutions by GO/NGOs**

- Construction of infrastructure
- Supervision
- Establishing WUA
- Capacity training
- Extension services
- technical assistance and support

# Internal challenges

- **Water allocation and distribution**
  - Inadequate awareness about how to manage irrigation water with in the field and irrigation scheduling
  - Inequity in water distribution between locations, between socioeconomic groups
  - Application of irrigation flat rate fee v prudent water use (where it exists)

## **Internal challenges**

- **Construction, operation and maintenance**
  - Lack of involvement in design, construction maintenance of the irrigation projects.
  - Lack of basic technical knowledge of using modern irrigation systems such as drip, sprinkler and spate irrigation system.

## Internal challenges

- Faulty canal and drainage design contributed to
  - breaching main canal,
  - wastage of water,
  - water logging,
  - salinisation,
  - soil erosion,
  - unable to irrigate,
- lack of participation in maintenance of the irrigation infrastructures.

# Internal challenges

- The existence of low institutional capacity with respect to development planning, design, implementation, and operation and maintenance including irrigation advisory services.
- Absence of sanction and poor coordination of water users association
- Over irrigating farms- creeping problem of soil salinity
- Seepage
- Canals fill up with silt, shrinking or widening canals

## Internal challenges

- **Conflict management, decision making and gender**
  - Water theft, conflict on land, and water distribution
  - presence of non-member water users, deterred the decision-making processes and the enforcement of rules and regulations for water use, thus create opportunities for **free riders**.
  - The participation of women in WUAs is not satisfactory. Women engagement in Sharecropping.

## External challenges

- In several irrigation schemes in Ethiopia, **cooperatives and water committees** are involved in serving some of the purposes of irrigation water users associations.
- the proclamation requires again the registration as an association of irrigation water users’.
- **What is the progress to this end?**

## External challenges

- Water shortage from the source
- Availability of market products
- Inadequacy of extension support with respect to irrigation management
  
- Interference of local government institutions in the affairs of associations. Irrigation management sits uncomfortably between government bureaucracies and water users.
  
- Transfer of modern Irrigation and drainage Systems to WUA. **What is the progress?**

# Conclusion

- Problems in irrigation systems requires an **interdisciplinary investigation** of technical, institutional, socio-economic and political aspects.
- This calls for the consideration of irrigation system as a “**socio-technical system**”.
- Such an approach gives explicit attention to multiple ways in which **technology shapes social action, and is also shaped by it.**

# Conclusion

- We can understand the social dimensions of an irrigation system in terms of three basic concepts.
  - a) **Social construction:**
    - Irrigation is an arena of struggle where social actors negotiate and decide on the technology choice and management of water.
  - **The issue of water management should be considered at the same time as the physical works.**

# Conclusion

## **b) Social requirements for use**

- Differences in sources of water may require different forms of management. In river diversions water distribution is carried out day and night.
- In dam technology the water allocation practice is dependent on the volume of water stored in the dam.
- **To a considerable degree, the source of water (river, dam or groundwater) and the canal system in use determine the type of organization needed in an irrigation system.**

# Conclusion

## **C) Social effects**

- Irrigation affects people's livelihoods.
- It is very important in irrigation that farmers get water on time with required quantity.
- Unreliable water supply may have a negative effect on the management of an irrigation system.
- Farmers participation in management could be curtailed.

**Thank you**