WATER PRICING FOR IRRIGATION AND DRAINAGE: CAN WE GET FARMERS TO PAY?

by K. William Easter

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I. Introduction

• Two basic objectives for collecting water fees

➢ Cost recovery

➢ Efficient water use
II. Past Performance

- Historically low cost recovery and fee collection rate

- Steps have been taken to improve cost recovery
Reasons for Low Water Fees and Collection Rates

- No link between fees collected and funds allocated to a given irrigation project
- Lack of farmer participation in planning and management of the project
- Poor communication and information flow between farmers and irrigation operators
- Poor water delivery service (timing and quantity inadequate)
- No penalties for nonpayment of fees
Reasons for Low Water Fees and Collection Rates

- No penalties for managers who provide poor service
- Low priority given to fee collection
- Low priority given to efficient water use
- Low priority given to system O&M
- Small size and very low incomes of irrigated farms
- Corruption of irrigation officials
III. Successful Systems

- Measures of System Performance
  - Percentage of fees collected
  - Level of fee relative to O&M costs
  - Water use per hectare over time
  - Area irrigated by system over time
  - Type of water pricing (area based or volumetric)
A. Mexico

- Establish tradable water rights
- Establish WUAs and participatory management
  - Financial self-sufficiency target
  - Increase water charges
  - Investment in infrastructure
  - Farmers pay before receiving water
  - Skilled technical staff
  - Staff assist members in obtaining inputs
- Collection rate over 90%
B. India-Katepurna, Maharashtra

Goals: improve service and encourage efficiency

- Repair the canal system
- Promoted WUAs and participatory management
- Provide training for farmers and project personnel
- Installed a system of volumetric measurement
- To plan the irrigation schedule ahead of time
- Public awareness campaign

Results: 7.7 million m$^3$ are being saved annually
C. China-Nanyao and Bayi IDs

- Water districts are financially autonomous
- A two part fee system designed to cover fixed and variable costs
- A system of mutual obligations
- VIMG in the district collects the fees
- Collection rates increase from **85%** to **93%** in Nanyao in **1993**
- Collection rates jump from **5%** to almost **100%** in Bayi ID
**Bayi District:**
- Sideline businesses to finance the irrigation system
- Water cut-off if farmers don’t pay
- Staff fined if right amount of water not delivered on time
- VIMG gets bonus for using less water
- Farmers fined for illegally opening gates

**Nanyao District:**
- Farmers pay in advance but get refund if water not delivered on time
- VIMG gets bonus if fees paid early and will be penalized if fees paid late
D. China- Awati, Xinjiang

- Reorganized the irrigation government agency into a financial autonomous enterprise
- Staff’s salary is tied to the fees collected
- WUA’s are established in each village
- Water charges increased by 50%
- Water usage exceeds the quota pay doubled price
- Collection rate increase to 98%
- Water saving an average 50m³/mu (667m²)
E. China-Shangdong I

How does the system work?

- Prepaid IC card controlling system
- Open and close the gate by inserting and withdrawing the card from the server machine
- Print out receipt recording the amount of water used
- 100% collection rate
- Be able to repay the investment within one year
- More than 200,000 machines installed province wide
- An annual saving of 5 billion m³ of irrigation water
E. China-Shandong II

Benefits of the system:

- Improve measure and control over irrigation water
- Reduced the administrative cost
- Transparent in terms of the water used and the amount of charges paid
- Farmers have control over how much water they use
- Charges are based on volume and encourage efficiency
F. Spain--Mula

- Water account and water teller system
- Farmers can program opening and closing of the irrigation gates
- Major infrastructure investments
- A decline in water loss of 88%
IV. Other concerns

- Small farm size and cheap food policy
- Costs allocation for multi-purpose project
- What share should farmers pay?
- What do you do about a culture of non-payment and water stealing?
- For efficient water use, do we really need water markets?
V. Conclusion

• Farmers need to understand the long-run advantages of improving the system
• Make it difficult for irrigators not to pay the water fees
• Assure farmers that their water fees will be used to improve the system
• For efficiency, pricing should be tied to water use
• Education and training programs
• Incentives for farmers to pay and for staff to provide better services