Study on Analysis of Sustainable Water Resource Use in Asia

GCP/RAS/241/JPN

Project Achievements

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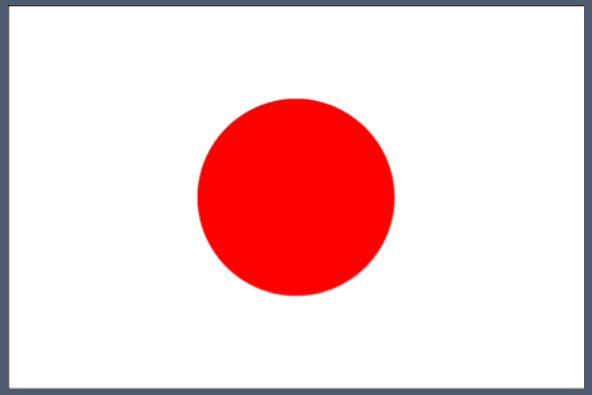


Project Activities Summary

- **Case studies and dialogues**
  - Complete for all four basins (Bang Pakong, Cau, Kedah/Muda, Yellow)
- **Website continually updated**

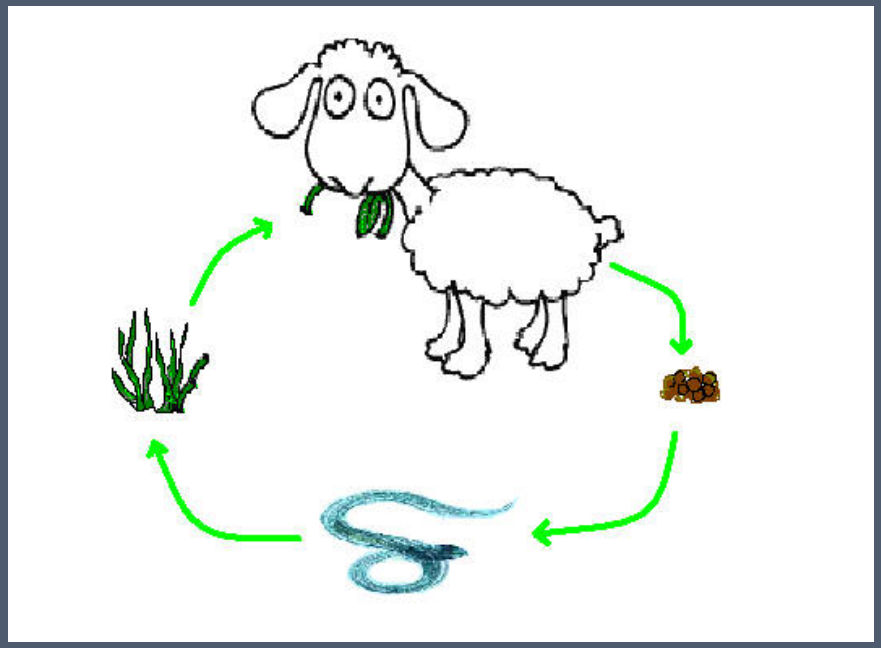
  Over 300 subscribers
  - www.asia-water.org
- **1st Regional Advisory Team meeting**
  - Held May 2011, Peking University
- **1st e-conference**
  - Held between May-July 2011
- **Main technical publication**
  - First draft completed October-November 2011
- **2nd Regional Advisory Team meeting**
  - Held June 2012 in Gujarat, India
- **Closing Workshop**
  - August 2012
- **Publications (in press)**
  - 1. Policy Brief and
  - 2. Technical Publication
  - Released in August-September 2012
  - Presented at the Stockholm International Water Week

Quick Recap – Key Issues and Challenges

- Irrigation has contributed much to food security, poverty and economic development, but many systems are in decline and increasingly ill-equipped to provide the service the modern farmer needs.
- Water conservation policies, strategies and investments are still often founded on a misunderstanding and many investments or reforms are not performing as hoped (PIM, canal lining, water pricing, etc.)



- We need to double food production with scarcer water and land resources, while protecting ecosystems.
- Big increases in agricultural water productivity are needed.
- There is greater interconnectedness between the water cycle, ecosystems and users.
- Decision-making is extremely complex.



- Problems are becoming wicked.
- There is a widening gap between official irrigation discourse and on-the-ground reality.
- There are many conflicting policy objectives and incoherent policies.
- Financial needs for capital investments, maintenance and management are enormous, the time is right for a new Framework for Action.

2nd Regional Advisory Team meeting

Objectives

1. Carry out an in-depth and detailed discussion on policy difficulties and dilemmas in order to:

- Clarify definitions, share illustrative examples and identify linkages
- Relate the questions on dilemmas and difficulties to specific issues and details of reform, investment, financial arrangements on which policymakers have to weigh options and make decisions etc.
- Discuss potential options, solutions and guidance for policy-makers facing these dilemmas and difficulties
- Promote pragmatic and feasible pathways

2nd Regional Advisory Team meeting

2. Design a series of policy tools to help policy-makers craft a coherent set of effective and feasible policies.

3. Brainstorm different ideas for implementing a system of water rights in practice.

4. Prioritize areas for future thematic work with regard to agricultural water management including suggestions as to design, partnerships, budgets, activities and outputs.

Setting the boundaries

- The current situation is one of:
  1. poor quality infrastructure and under-funded O&M;
  2. moderately motivated and under-valued staff working in difficult conditions;
  3. less water than we originally thought;
  4. commercialization of agriculture, demographic trends, rising prices, etc.

- We need to think about which of these problems governments are ready and willing to remediate. This sets the boundaries for the immediate future.

Managing Transitions

- What transitions?
  - From planned to market-driven economies
  - From water abundance to water scarcity
  - From informal to formal water economies
  - Rural to urban population shifts
  - From subsistence to commercial farming

Managing Transitions

- Accept that transitions are inevitable
- Be honest about what can be done reasonably well and set priorities in order to focus on those areas
- Closing the gap between rhetoric and reality is critical – we are starting from chaos
- Review regulatory systems and government interventions with transitions in mind – are there obstacles?
- Be explicit about policy choices
- Accept that water use in agriculture is residual and it will always be necessary to adapt to the impacts of decisions made outside the sector...think about the water implications of non-water policies.

Managing Transitions

- Make clear linkages with other policies if possible
- Beware of the complexity of multiple interventions in the agriculture sector (taxes, subsidies, controls, land tenure, etc.)
- Use adaptive management to respond to unintended impacts of policies
- Education can help:
  - transition from subsistence to commercial farming; or
  - facilitate exits from agriculture
- Try and introduce some order into naturally occurring and inevitable transition processes (facilitated consolidation in Malaysia)
- Note that the countries themselves are going through transitions

Defining water rights

- What we're up against:
  - Patchy/non-existent data
  - Millions of disparate users
  - Highly informal water economies
  - Anarchy
  - Poverty
  - Uncertain science and models
  - Declining groundwater tables and environmental health
  - Underfunded management agencies
  - Weak governance: inability to prevent theft or enforce laws

- The debate on this question was rich – it was agreed that this is still an area with a lot of question marks in over-allocated basins with large numbers of small and poor producers, such as:
  - How do we decide on the appropriate ‘cap’ on allocations?
  - How can we use the approaches of individuals in informal economies as building blocks for more sustainable systems?
  - How do we ensure a fair and equitable bargaining process?
  - Water rights as a tool to deal with scarcity?
  - Distributed governance and implications for water sharing?

Some early ideas…

- Step-wise approaches combining investment, social management approaches, technology and legal tools should be further explored.
- Recent developments of mainstreaming alternative or Plan B options into national policy are examples of more pragmatic and effective approaches.
- FAO is following up with an Expert Consultation next year.

Policy Toolbox

- Presented this afternoon...

Future work

- Presented this afternoon...

Project Findings Summarized

- Some water can be saved but not as much as is often claimed.
- There are no silver bullets on the horizon on the productivity or irrigation technology side.
- Volumetric water pricing is not applicable or will not result in significant savings.
- When agricultural water management is already moderately good, things tend to a zero sum game (more efficient technologies, water rights and water pricing often lead to increased water consumption)
- In many basins agriculture will need to shrink to achieve water savings.

Policy Dilemmas and Difficulties

Addressing dilemmas and difficulties is necessary to achieve a coherent set of feasible and effective policies and better water management outcomes.

1. Managing Transitions: supporting continuity or a combination of improvements and exit strategies?
2. Informal water economies: to manage or not to manage?
3. Is the pursuance of agricultural productivity (economic efficiency) always compatible with other strategic goals such as food security, rural stability and equity?
4. Efficiency or resilience and redundancy?
5. Implementation of ideal or second-best/Plan B options?
6. Prioritizing: national objectives, local objectives or basin objectives? How do we better align goals?
7. Realistic financial arrangements and incentives for performance?

Emerging Solutions

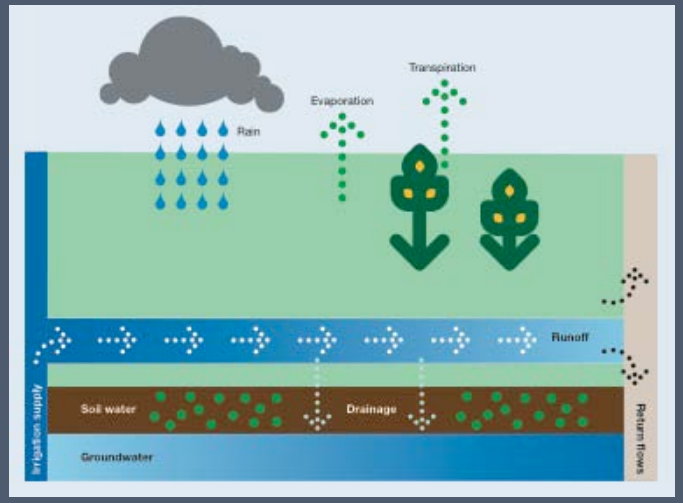
- Water accounting-based approaches
  - ET management for aquifers in Northern China
- Plan B approaches
  - If you cannot ration water or price electricity, ration energy: Gujarat restructuring of electricity grid
  - Participatory groundwater management: Andhra Pradesh
- Innovative legal instruments
  - Regulating ET by banning transplanting in hottest season (Punjab, India)
- Addressing policy dilemmas
  - Hiking pumping prices and redistributing revenue on area basis (policy experiment, China)

Emerging Solutions

- Monitoring of investment results.
- Continue a structured policy dialogue facilitated by visioning exercises:
  - Long-term water security; and
  - Long-term food security
- Supported by forward-looking experimentation (eg: Revitalizing Asia's Irrigation):
- 'Smart' investments
- Recognition of the complex and multiple use nature of irrigation systems and the capacity of the modern farmer to innovate and invest if the service is right.

Towards a new ‘Framework for Action’

- Develop a solid water accounting foundation.



Crop and Water Balance: Comprehensive Assessment of Water Management in Agriculture, IWMI

- Improve the process of decision-making and negotiation among stakeholders.
- Focus on the water, energy and food nexus.

- Develop comprehensive risk management strategies for national food security policies and more generally economic, food and water security.

Develop policy tools to help design a feasible set of effective and coherent policies and interventions that are aligned with triple bottom line goals and can function in a dynamic transition landscape.