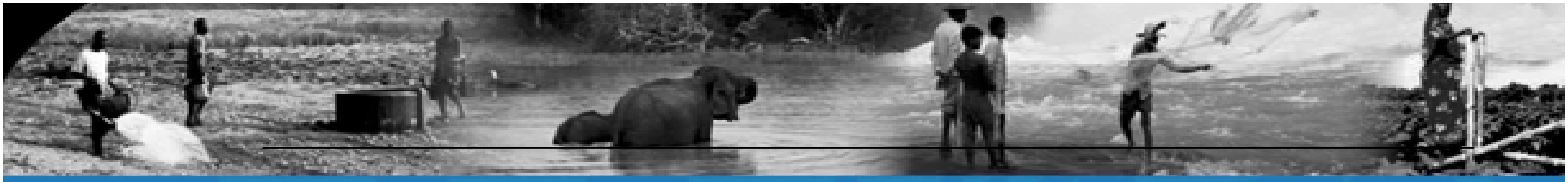
WORLD WATER WEEK

in Stockholm,
August 12–18, 2007

Presentation



COMPREHENSIVE ASSESSMENT: AGRICULTURAL WATER MANAGEMENT AND HEALTH

Peter G. McCornick

International Water Management Institute, Colombo, Sri Lanka

Progress and Prospects on Water: Striving for Sustainability in a Changing World. World Water Week in Stockholm, August 12-18, 2007

IWMI International Water Management Institute

Comprehensive assessment of water management in agriculture

Co-Sponsors

- Critically evaluated past developments, challenges faced and solutions developed
- Enable better informed investment and management decisions in water and agriculture
- Broad multi-institutional partnership of more than 700 practitioners, researchers and policy makers

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Improving water and land resources management for food, livelihoods and nature

It takes a litre of water to produce every calorie, on average

Food demand doubles by 2050

Under business as usual, water demand also doubles

But where it will come from depends on many factors

BROAD CONCLUSIONS FROM THE CA

- More water is needed to grow our food, how much depends on what we do now.
- Major external drivers affecting the challenges
- A third of the world population is already water scarce
- Feeding the world ***and*** maintaining ecosystem services will require radical change
- 1/3 of World's population live in basins which are already over-allocated, less environmental flows, more pollution
- New development means taking water from current users downstream

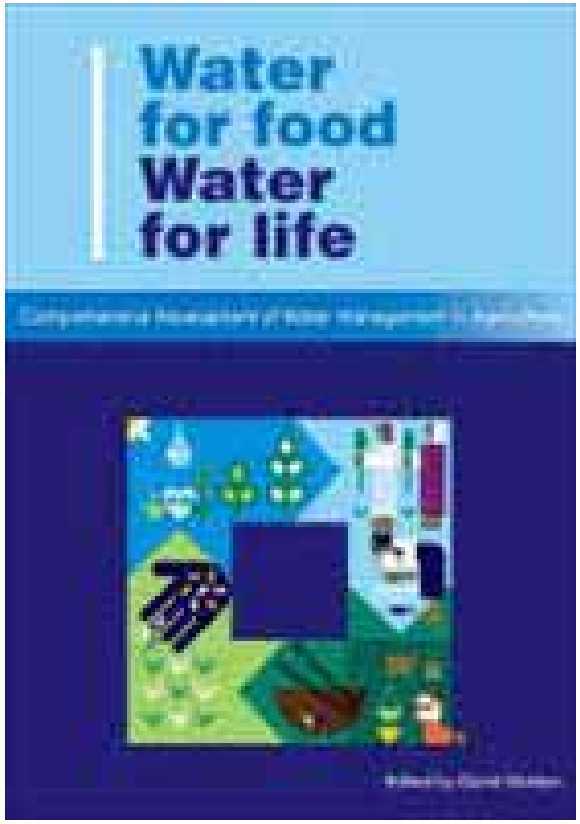
KEY POLICY ACTIONS

1) Change the way we think about water and agriculture
2) Fight poverty by improving access to agricultural water and its use
3) Manage agriculture to enhance ecosystem services
4) Increase the productivity of water
5) Upgrade rainfed systems – a little water can go a long way
6) Adapt yesterday's irrigation to tomorrow's needs
7) Reform the reform process – targeting state institutions

Main Assessment Book Published Now!

Outline

- Summary for Decision Makers
- Section 1- intro
  - Introduction
  - Conceptual Framework
- Section 2 –
  - Impacts & Challenges
  - Scenarios
- Section 3 – Cross-cutting
  - Water Productivity
  - Ecosystems
  - Policies & Institutions
  - Poverty
- Section 4 - Sectoral
  - Rainfed
  - Irrigated
  - Groundwater
  - Low Quality Water
  - Fisheries
  - Livestock
  - Rice
  - Land
  - Basins



- Book series (8) to be published this year
  - water productivity
  - groundwater
  - coastal zones
  - land
  - water pricing
  - water laws
  - rainfed agriculture
  - basins
- First three have been published

Series of Issue Briefs Now being Produced

1. Reaping what we sow: Acting now to reduce the negative environmental consequences of agriculture
2. A little water can go a long way: Reducing rural poverty through better management of rainwater
3. Making a difference in water management: A minimum agenda on gender mainstreaming for researchers, practitioners and gender experts
4. Opening up options in closing river basins
5. Rice cultivation in the 21st century: How to feed more people, reduce poverty, and protect ecosystem services
6. Investing in irrigation: Why, how, and how much?
7. Reforming reform: Effective approaches to improving policies and institutions
8. Integrating livestock and water management to maximize benefits
9. Sustaining inland fisheries: Synergies and tradeoffs with water for agriculture
10. Managing water by managing land: Why addressing land degradation is necessary to improve water productivity and rural livelihoods

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Issue Brief #11 -- Health Risks and Opportunities in Agriculture Water Planning and Management

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Improving water and land resources management for food, livelihoods and nature

IMPORTANCE OF FACTORING HEALTH ISSUES INTO AGRICULTURAL WATER MANAGEMENT

RISKS

- Create habitat for disease vectors, eg. mosquitoes, snails, etc
- Reduce quantity and quality of domestic water supply
- Expose field worker, community and consumer to pathogens, heavy metals and other toxins wastewater is use for agriculture

OPPORTUNITIES

- Environmental control to reduce disease vectors
- Enhanced availability of water for non-agricultural uses
- Safer use of nutrient-rich wastewater for agriculture
- Increased income and household food security

OPPORTUNITIES

- Fighting vector-borne diseases
- Links between irrigation and domestic water supplies
- Making wastewater irrigation safer
- Incorporating health into water management and planning

REDUCE VECTOR BORNE DISEASES

Target	Measures
Reduce habitats for disease vectors (i.e. stagnant and slow-flowing water)	Repair leaking canals Drain or fill in seepage pools and burrow pits near agricultural fields Redesign hydraulic structures into free-draining ones Clear canals, structures and drains of vegetation and silt Avoid open storage reservoirs Promote rotational flows Alternative irrigation techniques (sprinkler, drip)
Reduce people-vector contact	Site villages away from (potential) breeding sites Stable livestock between people and breeding sites Screen windows and eaves Health centers equipped and functional before construction of the water system and health staff are trained Treat in-migrating laborers from high-transmission areas
Reduce contact with water sources where schistosomiasis	Construct crossings for canals and drains Provide safe laundry and bathing sites