



Water knowledge and the formation of policy bubbles



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1. Water pricing: how to produce sticky knowledge
2. Participatory irrigation management and transfer
3. Some commonalities in the production of knowledge in the water policy domain

Molle, F., Berkoff, J. 2007. **Water pricing in irrigated agriculture: The lifetime of an idea**. In F. Molle and J. Berkoff (Eds.) "*Irrigation water pricing: The gap between theory and practice*". Comprehensive Assessment of Water Management in Agriculture. CABI: Wallingford, UK and Cambridge, MA, USA.

Molle, F. 2008. **Nirvana concepts, narratives and policy models: Insights from the water sector**. *Water Alternatives* 1(1): 131-156.

Molle, F.; Ghazouani, W. and Rap, E. 2014. **Water Users Associations in public irrigation schemes: A review of the literature for the Near-East Region**. IWMI Research Report.

Water pricing in agriculture: what for ?

1

Financial tool

* **Cost –recovery**

Ensure sustainability
of the scheme

Economic tool

* **Conservation**

- Elicit water savings
- Technological change
- Crop shifts

* **Raise economic productivity**

- Shift to high-value crops
- Sectoral reallocation

Environmental tool

Sustainability

- Water quality and
pollution control

Water pricing : the lifetime of an idea

Colonial
period

Post
2WW II

1985-6

Return on
investment
;

Maintain
social
stability
and avoid
famines

In theory, model
of capitalistic
investment

In practice,
overriding
political
decisions
(independence,
food security,
Cold War,...)

Consensus:

Ensure O&M

No savings to
be expected

Payment is not
sufficient: it
must be a
biding factor in
increased
accountability
between
farmers and
managers

The **ADB** held a regional seminar (ADB, 1986b) and commissioned **IIMI** to carry out a regional study (Small *et al.*, 1986).

USAID commissioned a report on 'Irrigation pricing and management' (Carruthers *et al.*, 1985)

A **World Bank** study collected from a few country-level analyses and concluded that 'it is time to take a more pragmatic and comprehensive approach to this issue' (World Bank, 1986);

FAO and **USAID** (1986) conducted an expert consultation on irrigation water charges.

The primacy of management. By far the most important mechanism for achieving rational water use is by careful control of distribution and by allocations that broadly meet crop requirements.

Control of supply a prerequisite. 'Many of the frequently cited inefficiencies of water use in irrigation projects stem more from inadequate control over the distribution of the supply of water than from failure to regulated demand through prices.

Financial autonomy. 'The way in which fees are assessed, collected and expended is more important than the actual level of fees in improving system efficiency and effectiveness.

Contextualized cost recovery. The principle of charging for water should be contextualized to consider ability to pay and the overall taxation of agriculture, indirect charges often providing an indirect (but straightforward) means to recover investment costs.

Water pricing : the lifetime of an idea

Colonial
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Post
2WW II

1985-6

1990-200
0+

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Dublin;

Proposal for a
regulation
through
economic tools:
three objectives
for pricing

World Bank et al.
Drums, world
conferences

«political
bubble»

This Commission has pinpointed two areas that need to be **given immediate and high priority if the world is to escape the doom of the current water arithmetic**. These are **full-cost pricing of water**, coupled with innovative approaches to subsidies, and technological innovation.



Efficient water pricing policies have a demonstrable impact on the water demand of different uses. As a result of changes in water demand, efficient water pricing reduces the pressure on water resources. This is particularly true for the agricultural sector

European
Commission, 2000

Wolfensohn (2000)

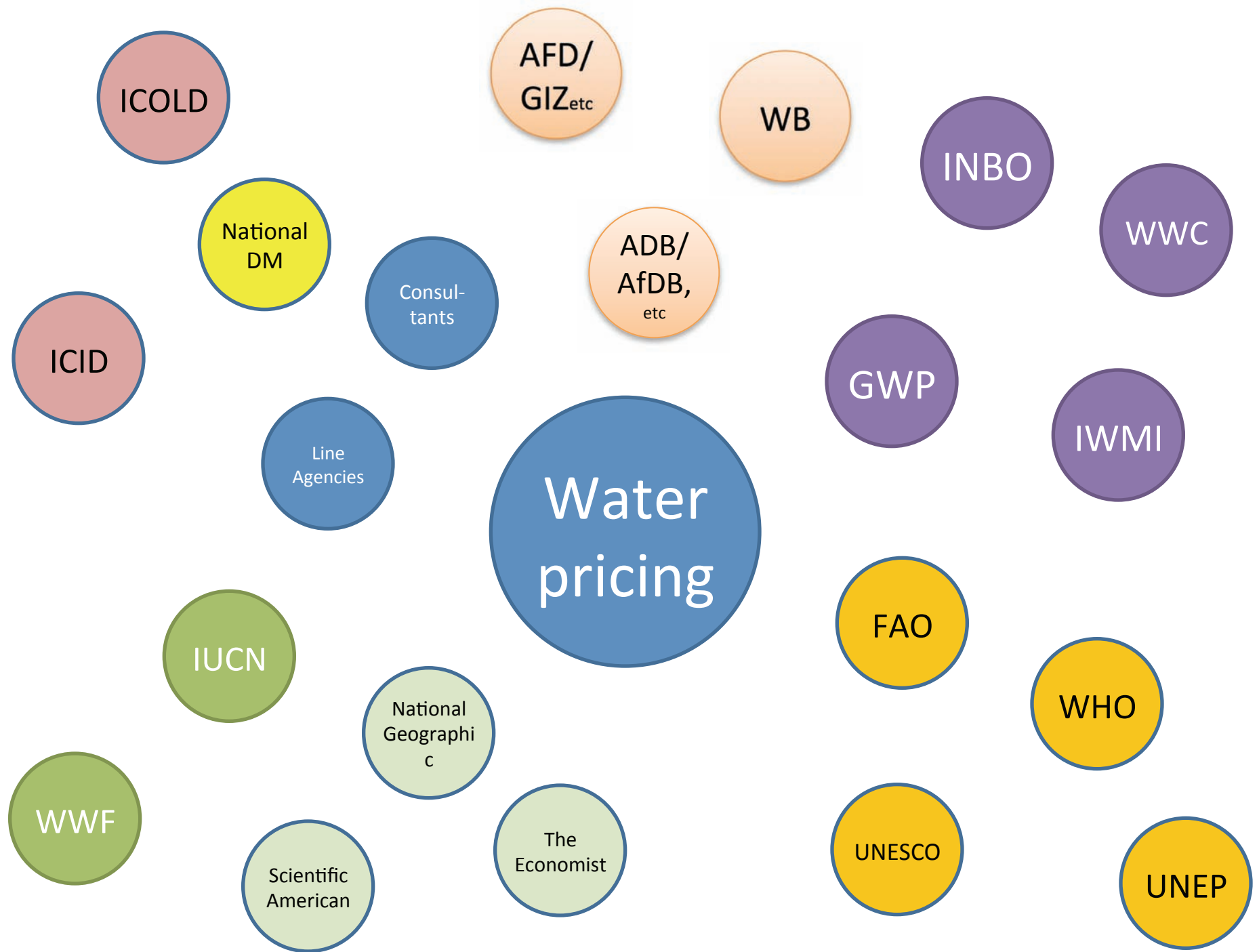
"The biggest problem with water is the waste of water through lack of charging"

Cosgrove and
Rijsberman 2000

"Users do not value water provided free or almost free and so waste it"

"water is consistently undervalued, and as a result is chronically overused"

Postel 1992



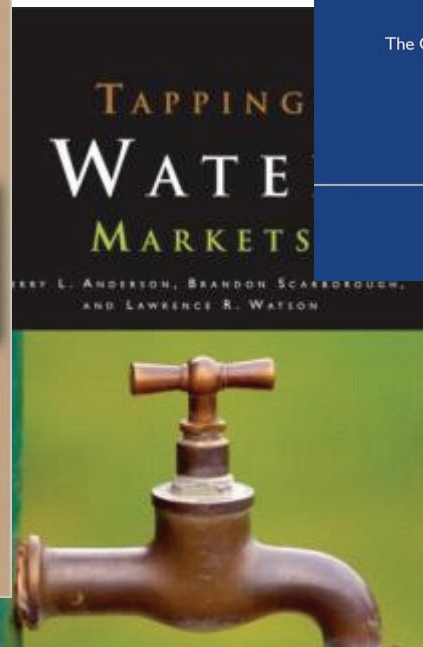
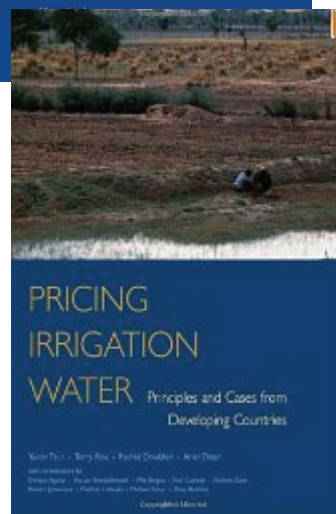
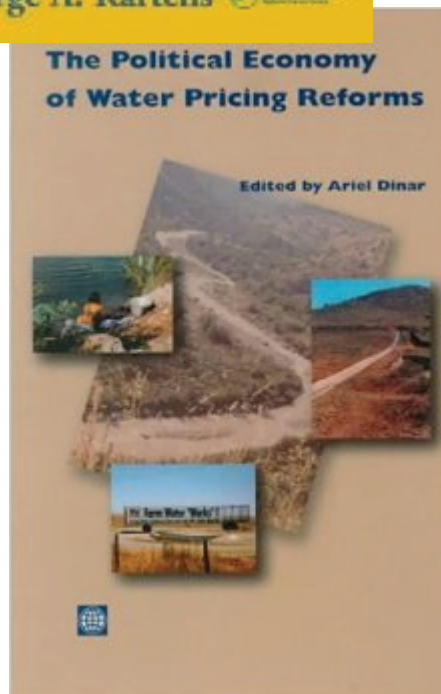
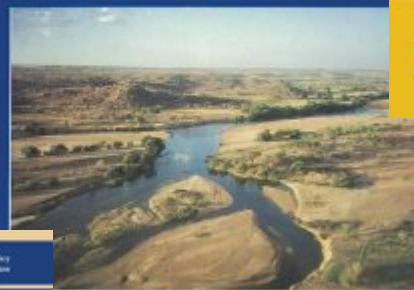
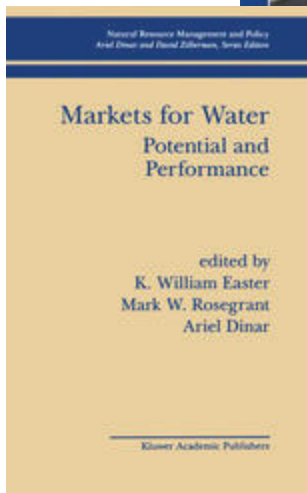
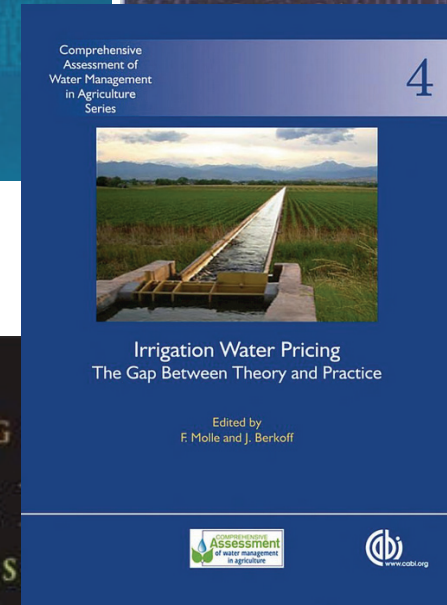
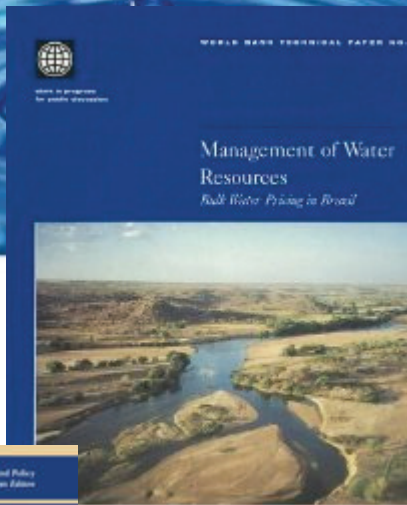
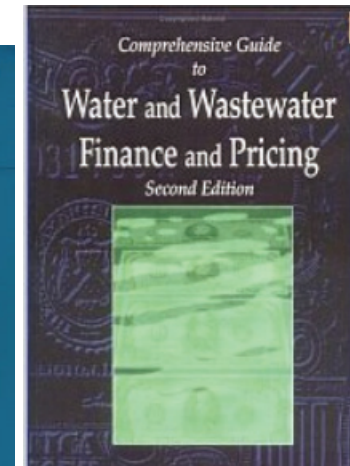
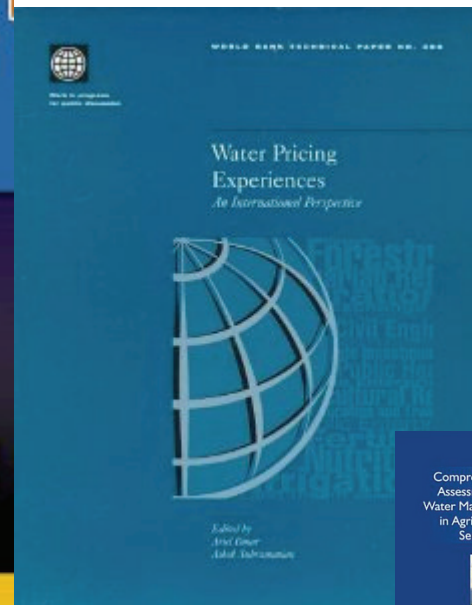
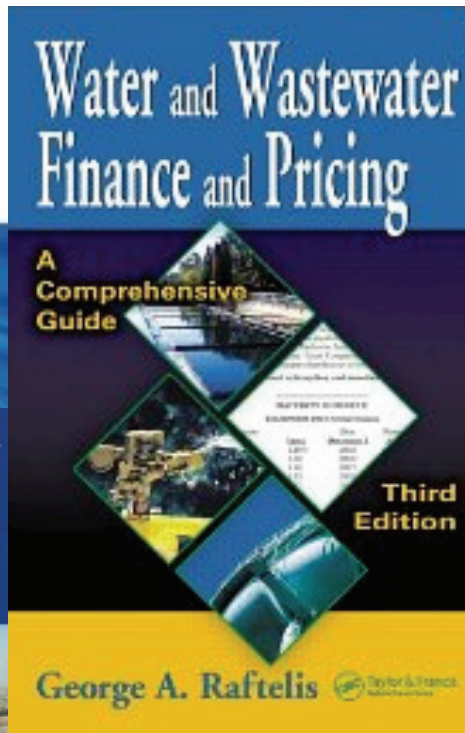
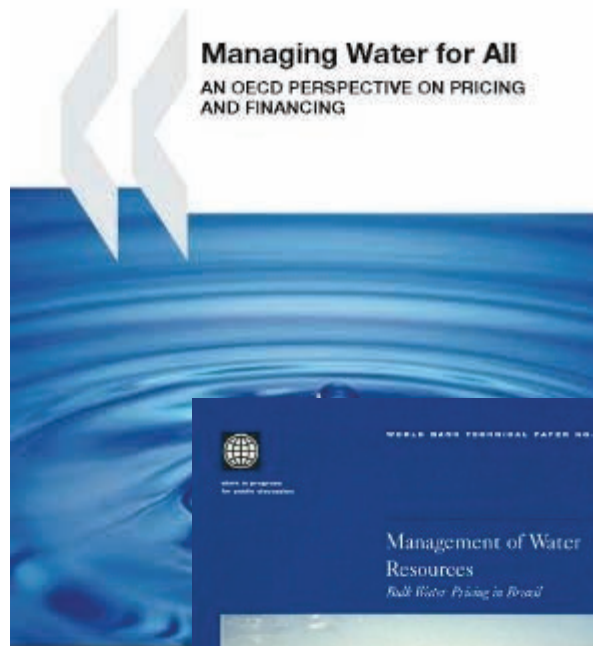
- Doomsday prophecies (**scare game**)

Prophecies of the '**coming**' (Lavelle and Kurlantzick, 2002), '**creeping**' (Falkenmark, 2001), '**impending**' (Rosegrant *et al.*, 2002), or '**looming**' (UNESCO, 2000) **water crises** and the need to escape the **doom of the current water arithmetic** (Cosgrove, 2000)

- Name the villains (**Blame game**)

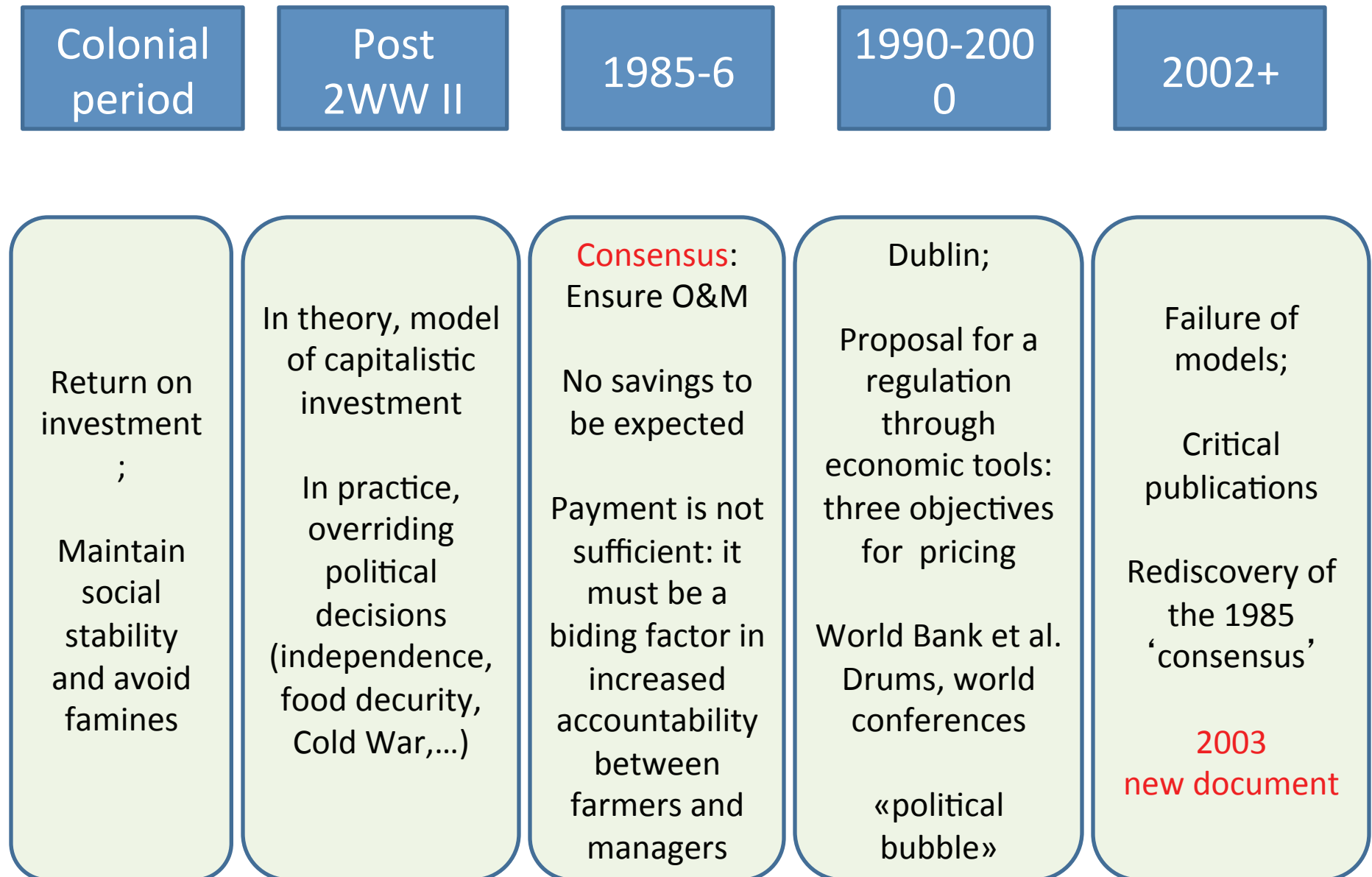
Farmers 'take the Lion's share' and waste water because they are not aware of its value, they have outdated technologies and practices

- **Models**? Urban sector, or modeling exercises, intentions



Agadir,
conference

Water pricing : the lifetime of an idea



Cracks:

1. The word 'pricing' is absent from the [Bonn Conference \(2001\)](#) 27 recommendations for action
2. The [2002 Stockholm](#) statement that under the title 'Urgent action needed for water security' does not refer to the use of economic instruments in managing water.
3. The [World Water Assessment Program \(UNESCO-WWAP, 2006\)](#) stressed the importance of non-economic goals in irrigation, the potential limitations to volumetric pricing, and the goal of recovering O&M costs only.
4. New [stock-taking literature](#) (Bosworth *et al.* (2002), Cornish and Perry (2003), Hellegers and Perry (2004), Molle and Berkoff (2007))
5. [World Bank internal revisionists](#): 'Pricing promotes efficiency and conservation... but there are few successful examples because of the economic and cultural difficulties of putting a value on a natural resource' (Pitman, 2002).
6. In 2003, the Bank acknowledges the 'yawning gap between simple economic principles... and on-the-ground reality.' ([World Bank, 2003](#))

*It has often been stated that having users pay ‘the full cost of water’ would solve these problems. Experience has shown that the situation is considerably more complex and nuanced, and that it is not enough to just extol the virtues of pricing. This section outlines a different approach – one of ‘**principled pragmatism.**’ ‘Principled’ because economic principles such as **ensuring that users take financial and resource costs into account** when using water, are very important. And ‘pragmatism’ because **solutions need to be tailored** to specific, widely varying natural, cultural, economic and political circumstances (World Bank, 2003).*

Yet the soundness of the theoretical background is constantly reaffirmed (World Bank, 2003). Difficulties in implementing water pricing, however, are often ascribed **to technical or cultural difficulties, and to political resistance of entrenched sectoral**

Crucial differences are overlooked and even made use of to blur the picture between domestic and irrigation water, between classical large-scale surface irrigation and pump irrigation, between government and farmer-managed schemes, between low- and high-tech distribution systems, staple and cash-crop production, and between developed and developing countries

Studies often superficial, with simplistic causalities, or derived from modelling

Possible objectives and benefits **pooled together**

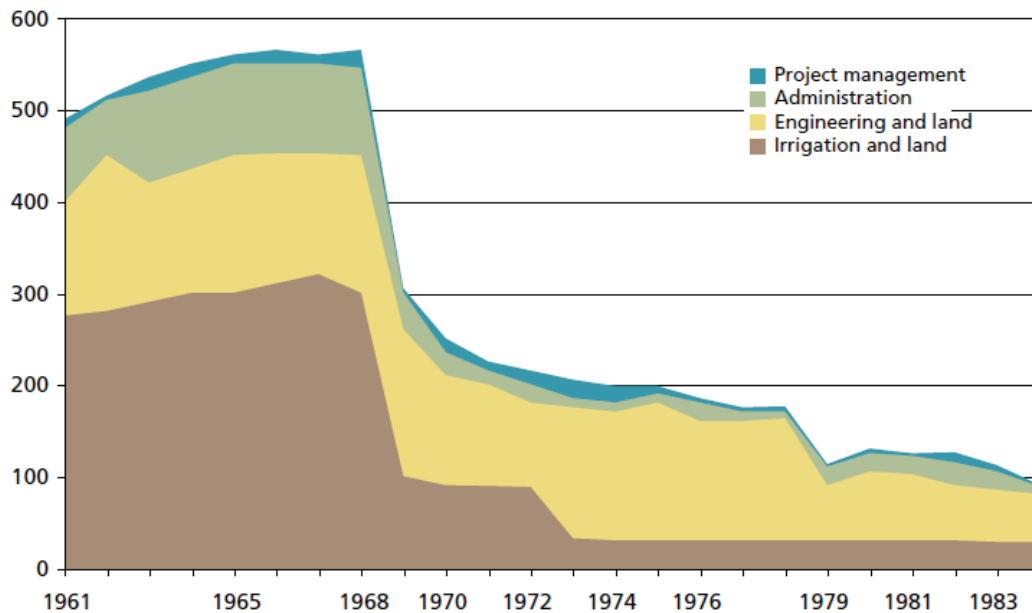
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Participatory Irrigation Management (**PIM**), Water User Associations (**WUAs**), or Irrigation Management Transfer (**IMT**)

Convergence of :

1. work on Farmer-managed irrigation systems and the observation of sophisticated self-governing communal systems
2. Participatory/decentralization rhetoric associated with neoliberal rolling-the-state ideology
3. States' fiscal stress and donors' fatigue with endless scheme rehabilitation

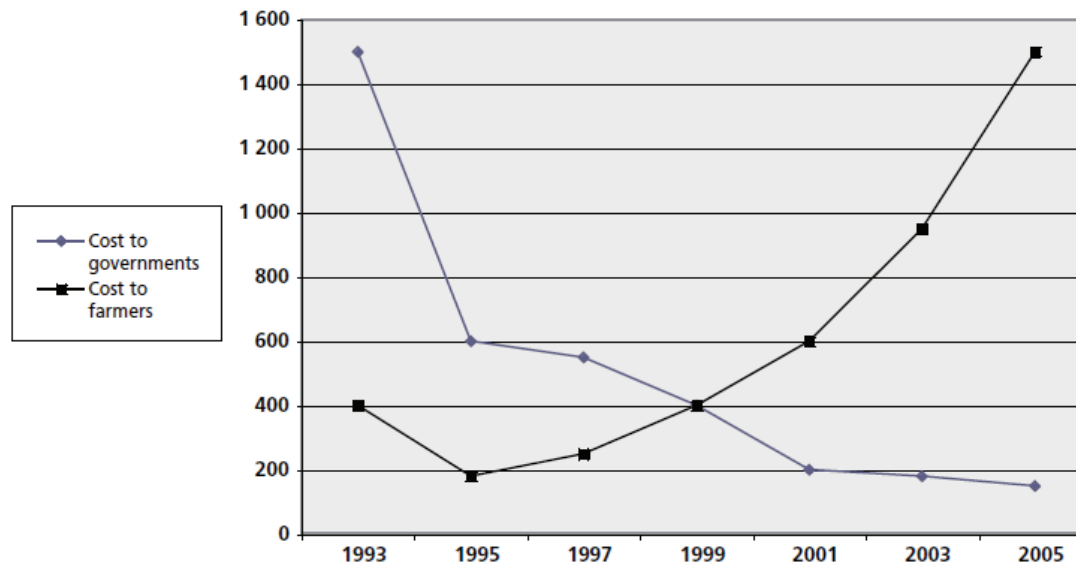
FIGURE 3
Trends in agency staff following IMT implementation, Columbia Basin Project



Irrigation operation and maintenance always require big efforts and form a large financial burden to the government, and this is true in Egypt with the large Nile irrigation system. Therefore, it is of *great desire* to transfer the irrigation management *responsibility* to farmer's organizations for improved and sustainable irrigation service. (M. Abuzeid, former Minister of Irrigation)

source: Svendsen and Vermillion, 1996.

FIGURE 8
Evolution of O&M costs for government and farmers in Ecuador, in 2003 US\$



- An **ideology/rationale** (participation, self-management, cost recovery) and a core objective
- **Models** (NIA in Philippines), IMT in Mexico, Colombia,...
- **Drums/Drummers**: The World Bank, USAID, FAO, IWMI, ADB, etc / Conferences, literature + **INPIM NETWORK** (FAO/World Bank)

Institute/organization www

<http://www.inpim.org>

Brief description of institution/organization

The International Network on Participatory Irrigation Management (INPIM) is a global network for the promotion of people, public, private partnerships in irrigation and water resources management. The Network is non-profit and registered in Washington DC, USA. INPIM was first launched at the First International Seminar on PIM in Mexico, by staff of the World Bank.

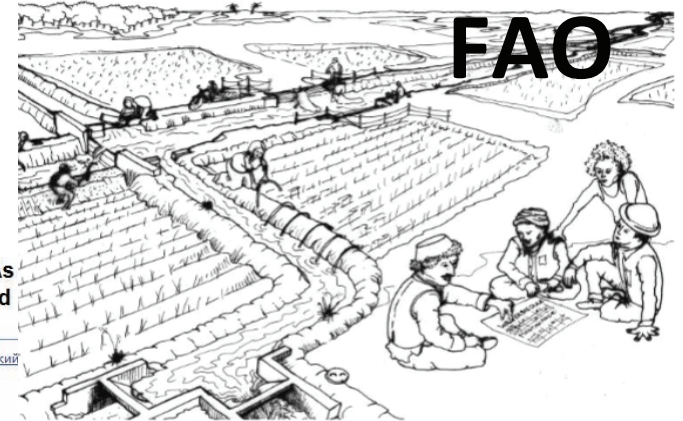


Water Week
March 2003



WATER USERS ASSOCIATION (WUAs) IN AFGHANISTAN REPORT

Module 5: WATER USERS ASSOCIATION



FAO

IFAD Update: Issue 2

Economies in Transition: Transferring Ownership to Smallholders

Water Users Association for Sustainable Water Management

Experiences from the Irrigation Sector, Tami
(Wise practice documents under follow
World Conference on Science contributi
International Hydrological Programme of U

WORLD BANK TECHNICAL PAPER NUMBER 173

Water Users Associations in W Bank-Assisted Irrigation Proj

Kerry J. Byrnes

Lessons Learned in Developing Sustainable WUAs and Forming WUA Federations in Central Asia and the Caucasus



Tajikistan, Turkmenistan and U

Available in: [русский](#)

With grant funding from the Bank-Netherlands Water Partnership Program (BNWPP), the World Bank held a workshop on Water Users Association (WUA) development in the CIS from October 1 to 5, 2007 in the Kyrgyz Republic, with participants from Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan,



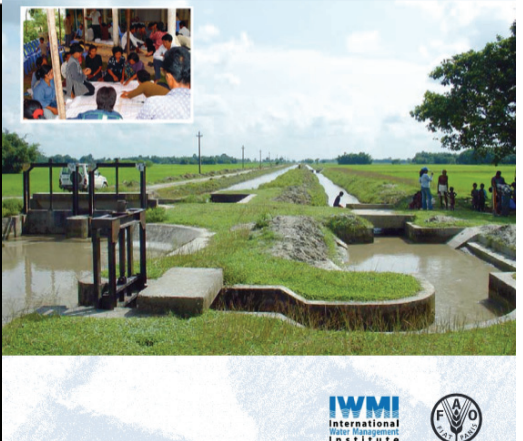
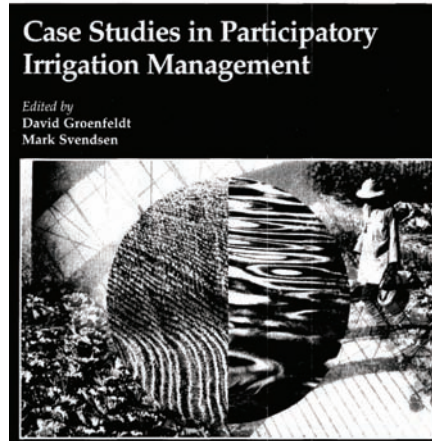
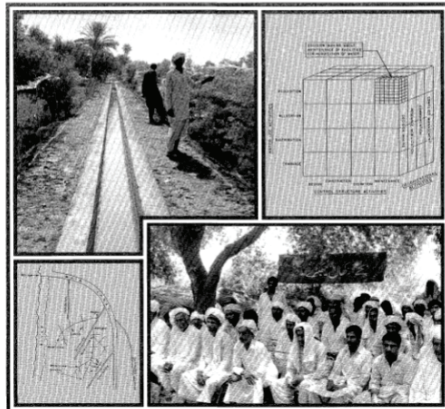
2027
February 2000

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Irrigation management transfer

Worldwide efforts and results

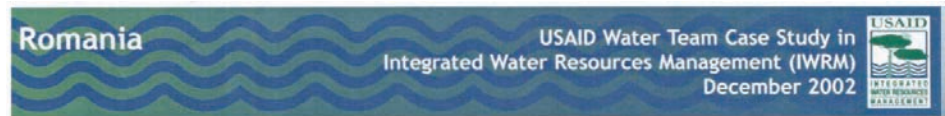
32



Sustainable Water Integrated Management - Support Mechanism (SWIM- SM)

Project funded by the European Union

Module 3: The enabling environment for establishing successful WUAs



Strengthening Water Users Associations

International Workshop on Participatory Irrigation Management: Benefits and **Second Generation Problems**, sponsored in 1997 by the Economic Development Institute of the World Bank (EDI) and the International Irrigation Management Institute (IIMI).

- In general, IMT has **reduced the cost of government** allocations towards the O&M of irrigation systems. However, some irrigation systems were unsustainable...
- The performance of water services in terms of fee collection has been **erratic**.
- Irrigation management transfer **does not necessarily lead** to increases in cropping intensities or yields. There are only a few documented cases where....
- The closer involvement of WUAs has resulted in increased accountability, transparency and responsibility, as has been reported from Mexico and China, **for example**.
- Some governments had high expectations that the private sector would become involved ... It seems now that these projections **were either too optimistic or poorly conceived**,
- **With few exceptions**, the process of capacity building of the staff of WUAs and leading farmers has been **unsatisfactory**

In summary, expected objectives have been met but not to the degree initially expected... In general, there has been a tendency to overstate the objectives and expectations of IMT programmes, creating expectations that have not always been fulfilled (FAO, 2007).

This study indicates that IMT is an approach for irrigation sector reform with **the potential to improve** the sustainability of irrigation systems.

The reform was good but there have been three major constraints.

1. The lack of **political support** in some countries. This has resulted in poor funding of the reforms and inadequate support to the process
2. The lack of **adequate legislation**
3. the lack of **managerial skills within the WUAs**, which has resulted in poor provision of water services.

What we need to do:

1. The need to undertake **national M&E programmes** in order to learn more about how to improve the results obtained is becoming a pressing reality.
2. IMT programmes require strong **political commitment** at the highest possible level for a sustained period of time. Where it is weak, efforts should be made to **strengthen** it
3. The process of IMT should be **adaptive and flexible**
4. IMT programmes generally need systematic **public awareness campaigns**, consultations, and involvement of all key stakeholders.
5. IMT programmes should address the **financial capacity** of WUAs
6. WUAs and irrigation agencies need prolonged **capacity development**


Knowledge production (1)

- The literature often relates experience at the **national level**, and offers a very ‘averaged’ and evened-out view.
- Most of the **literature originates from** persons belonging to ministries, companies, research institutions or aid agencies that are linked to these projects and merely publicize their results in a summary and uncritical manner.
- Most of the assessments are done **while the project/policy is still running**, or a very short time afterwards, and are influenced by the injection of staff and cash that comes with the project.
- There is a **sheer lack of independent, comprehensive, long-term assessments**, which makes it very difficult to discuss the success or sustainability of any reform.
- the complexity of **identifying causal links**: whether yields have increased (or not) after PIM/IMT might be related to a set of variables and causes (prices, rainfall, pests, labor shortage, etc) that are not easy to unpack and have little to do with the reform.

Knowledge production (2)

- PIM/IMT is by nature a **social process** and the quality of this process –changes in behaviors, social interactions, sense of responsibility, accountability mechanisms, etc. - is very hard to capture on a quantitative scale.
- Equity and reliability of water supply over large areas is also often hard to measure; **official data are poor or dubious**
- **Debate dominated by the drummers**; celebrated in conferences and jamborees; self-referencing
- **The fad becomes a craze**: Donors like IFAD or USAID, money-lenders such as the World Bank or ADB include setting WUAs in loan conditionalities or make them the main target of projects
- **Opportunistic alignments** of (some) farmers ('pilot areas') and line agencies concerned (Big Bang in Andhra Pradesh)
- **INPIM network dies out** – Literature and interest drop

International Network on Electronic Cigarette News

Search here... 



Photographs



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that the FDA is not sure about less dangerous vaping.

The agency is uncertain if smoking is anymore hazardous than vaping. Smoking is a habit that claims 400, 000 lives in America every year. Vaping is the new habit taken by smoker in lieu of smoking. Vaping involves no use or burning of tobacco. There were no reports yet about the major or permanent harms that vaping brings.

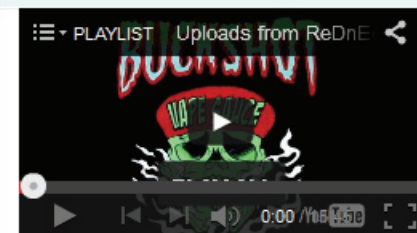
FDA is not convinced that smoking (inhaling nicotine along with thousands of harmful chemicals along with 60 known carcinogens) is worse than vaping (inhaling nicotine with very low levels of other chemicals).

Forbidden To Claim Vaping Is Safer

Many advocates believe that it is even worse that the agency will forbid companies from claiming that ecigs are less dangerous than real cigarettes. They will also not be allowed to inform the consumers that ecigs do not contain tobacco; that they have lower levels of carcinogens; and that they are free of numerous harmful chemicals

some as a leading e-cigarette. If you haven't heard of them before, you should give them a look and try their one of their [starter kits](#).

RedNecks Channel



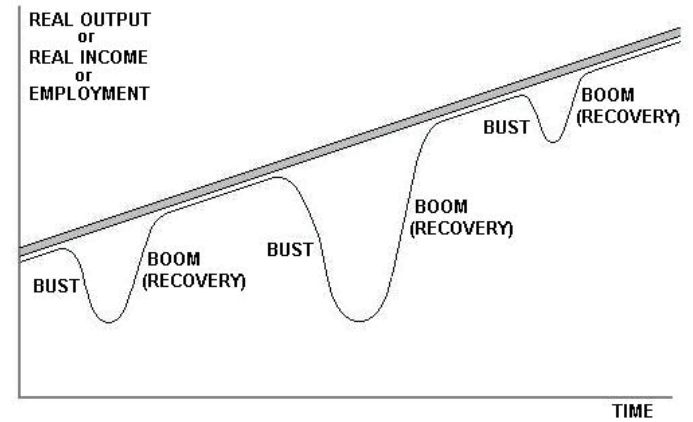
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Some commonalities of knowledge production in water policy

- **Ideological dimension** of the production of knowledge (prices, participation), serving **interests**
- **Paradigm maintenance** (It is not the idea that is wrong/inadequate, it is the world which is not perfect and must be reformed for it to work)
- **Big drums**: World Bank, FAO, GWP, AID agencies, NGOs (IUCN, WWF), etc saturating water conferences and on-line publications
- **Mimicry** among water professionals and agencies; 'trend-chasers' increase **conformity** (it is a risk-minimizing strategy to endorse and further reproduce and strengthen sanctioned concepts). The popularity of a concept is taken as an indirect measure of its worth.
- This strategy is reinforced by the growing **remoteness** of 'experts' from the field (rise of armchair/textbook economics in 'Washington A.C.') and the fondness among students for computer-based science.
- **Explosion** of the field of water studies; hard to remain a specialist

Some commonalities of knowledge production in water policy (2)

- A **few iconic 'models'** and cases declared success-stories provide the initial literature that is endlessly repeated and reproduced
- Absolute **dearth of in-depth long-term analysis** of dynamics on the ground but repeated calls for more M&E (but who really wants to know?)
- Contexts are **loosely mixed** and lessons/observations extrapolated across the board
- Do the policy bubble burst or fades away?** The concept is not 'proved wrong' or dismissed: it generates institutional fatigues and loses its mobilizing power. It is not a neutral game however: it impregnates common wisdom and becomes part of a professional 'common ground'
- The idea is never dead** because it is never wrong: we need to try harder, convince stakeholders, strengthen political will, build capacity of all, etc.



BOOM

BUST

Thank you for your attention

Water pricing > conservation > conditions

1. Is water scarce ?
2. Are losses at the farm level?
3. Are losses lost?
4. Is demand elastic ?
5. Is pricing volumetric?
6. Is supply on-demand ?

Water pricing in agriculture: a “wicked problem” to be contextualized

