

Why is Integrated River Basin Management Reform Failing to Stick?

It's generally agreed that an approach to managing water that is integrated and basin-wide, rather than sectoral and territorial, makes good sense. So why are Integrated River Basin Management (IRBM) models failing to stick in so many developing-country basins?

IRBM models that have been successful in the USA, Europe and Australia are increasingly being imposed on river basins in Africa and Asia by well-intentioned governments and donors. But the experiences of many countries suggest that this reform has failed to bring basins any closer to achieving IRBM.

A recent IWMI report highlights the bad fit between the IRBM models promoted and the realities and priorities of developing-country river basins as a root cause of this failure. These models are not adapted to the very different hydrologic, demographic, socio-economic and organizational conditions that prevail in the developing world.

"It's an entirely different ball game from IRBM in western countries," explains Dr. Tushaar Shah, leader of India's IWMI-Tata Water Policy Program. "For reform to succeed in developing countries such as India, you have to find ways of influencing huge numbers of small-scale water users who depend on rain-fed agriculture and private or community water storage, without much mediation from public agencies or service providers."

Creating basin organizations is not enough

Research identifies a narrow focus on the formation of basin-level institutions as another factor in the failure of IRBM reform—particularly when this means simply changing the mandate of existing irrigation agencies.

The lesson: Creating institutions for river basin management does not guarantee IRBM. For example, China's Basin Management Committees were established in the 1950s with the aim of generating hydropower, mitigating flood damage and providing facilities for navigation. But in the end they have focused only on irrigation.

Says Shah: "We have so many examples of IRBM failures in Asia, but despite this, basin-level institutions are still held up by many influential organizations as the best, even the only model for water management—regardless of the context."

This does not mean that basin-level institutions have no role to play in the developing world. But river basin organizations by themselves cannot be expected to address the

more fundamental challenges that water sectors in developing countries must contend with.

Addressing developing-country priorities

The big success stories of IRBM, such as the USA's Tennessee Valley Authority and Australia's Murray-Darling Basin, have focused on rivers, lakes, and reservoirs ("blue water") and on improving the productivity of large publicly managed systems. This means they have not had to address many of the challenges central to the sustainable and productive use of water in developing countries. These include:

Challenge 1. Regulating the Informal Water Sector

How to regulate vast numbers of small-scale users who are not linked into public institutions? One possibility, suggests Shah, is to find ways of underpinning macro-level institutions with nested organizations of users at the grassroots.

Challenge 2. Improving the Productivity of "Green Water"

For countries such as India and China, where the population density is high both upstream and downstream, increasing the productivity of water diverted from rivers is less important than being able to capture rainfall and store water effectively in the soil profile ("green water").

Challenge 3. Managing Groundwater

In South Asia, Southeast Asia and Northern China, protecting groundwater from over-exploitation by millions of small unlicensed pumpers is an increasingly pressing issue. Community initiatives for groundwater recharge may offer the most immediate hope for reversing damage in areas where water tables are dropping as much as a meter per year.

Challenge 4. Water Scarcity

The heart of the problem in most water-scarce countries is too many people living off a limited natural resource base. Getting more crop, cash and jobs per drop is part of the answer; the other is generating off-farm livelihoods in rural areas.

Says Shah: "Answers to the developing world's most pressing water issues—lack of access to water, vulnerability to drought, shrinking aquifers—may fall largely outside of what are traditionally defined as 'institutions'. Communities tend to find their own solutions and will have to play a large role in any successful IRBM strategy."

Related reading:

- *Limits to Leapfrogging: Issues in Transposing Successful River Basin Management Institutions in the Developing World*, by T. Shah, D. Molden and R. Sakthivadivel.
- IWMI-TATA Water Policy Briefing Issue 3: *The Challenge of Integrated River Basin Management in India*.

www.iwmi.org/iwmi-tata

DIFFERENT RIVER BASIN REALITIES DEMAND DIFFERENT SOLUTIONS

Developed country river basins—dominant characteristics

- Temperate climate, higher river-stream density (with Australia as a notable exception)
- Population concentrated downstream in valleys
- Water rights clearly defined; based on riparian doctrine and prior appropriation
- Focus on water found in rivers and lakes
- Small numbers of large-scale stakeholders
- Small percentage of population dependent on farming for livelihoods
- Water users get water from service providers, water provision is in the formal sector—making water resources governance feasible
- Low transaction costs for monitoring water use and collecting water charges

Developing country river basins—dominant characteristics

- Extreme climate, higher mean temperature, lower stream density
- Population high both upstream in catchment areas and downstream in valleys
- Water rights often not clearly defined; based on land ownership
- Focus on water stored in soil profile or aquifers
- Vast numbers of small-scale stakeholders
- Large percentage of population dependent on farming for livelihoods (as well as subsistence)
- Water users get water without mediation from public agencies or organized service providers—making enforcing water legislation difficult
- High transaction costs for monitoring water use and collecting water charges