

In Conversation: David Brooks on Water Scarcity and Local-level Management



David Brooks by a water cistern in Israel. The cistern is part of a Nabatean prehistoric water system that was being studied in order to learn about traditional water harvesting. (Photo courtesy of David Brooks.)

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David B. Brooks is the author of the recent book WATER: Local-level Management, published by the International Development Research Centre (IDRC) as part of the series In Focus: From Research to Policy. This book summarizes the results of three decades of IDRC-supported research on water supply. It examines responses to water scarcities that have been mounted at the community or local level — in households, farmers' fields, villages, and city neighbourhoods. (For further information see Water: Local-level Management.)

A specialist in natural resources who works with IDRC in Ottawa, Canada, Dr Brooks has a background in geology and economics and was the founding director of Canada's Office of Energy Conservation. His main research interests lie in ways to move toward more sustainable development in the production and use of minerals, energy, and water.

If there was one single message that you hope readers will draw out of this book, what would it be?

That there is no silver bullet for managing the water shortages facing many countries, but there is one aspect that has not been sufficiently recognized as part of the solution: water management at the local or community level. While sound water management requires action from all levels, I hope this book will stimulate the research and experimentation necessary to determine when and where community-based water management can be efficient, equitable, and sustainable.

What is meant by local water management? Why is it so critical?

One-third of the world's population will face severe water scarcity within the next 25 years. It's more vital than ever to get the most from the water we have. The need to manage the demand for water becomes all the more crucial when you consider that the best and cheapest sources of water have already been tapped, and the scope for future supply-side engineering is limited. This situation creates a great opportunity for local water management because it operates so directly through conservation and efficiency. We all use much more water than we need. Local management plays a role in controlling leaky pipes, in household use, and local gardens. Irrigation at night rather than during the daytime to help prevent water from evaporating is another example.

At what scale does local management take place?

Local management could be based in a tribe, an ethnic group, or a political entity. It need be no larger than a neighbourhood or a community or a village. Urban areas, which would be linked through such systems as pipelines, offer the greatest unexploited potential for improving and exploring local management.

A recurring theme in your book is good governance. How would you describe this concept? How does it apply to managing demand at the local level?

It is governance that is based on scientific analysis, that takes into account stakeholder views, that is relatively transparent and that monitors results. It lets you adjust decisions over time. Only when the difficult issues of research and governance are considered together can knowledge and policy inform each other. Only then can the fullest potential of local water management be realized. One of the most important aspects of good governance at the local level is the rapid feedback from the community to the officials and the opportunities to make adjustments and corrections.

How big a role can local management play, given the influence of economic and political factors at the regional, national, and international levels?

Local management is certainly an essential component in managing the world's water crisis. In fact, the Ministerial Declaration from the International Water Conference on Fresh Water that took place in Bonn Germany last year highlighted the role of local water management.

But, of course, water management is not a panacea. The old slogan 'think globally but act locally' still applies strongly to water, but you couldn't generalize on how big a role local management plays in all circumstances. This is why successful local water management requires close collaboration between communities and their 'senior' governments. The challenge is to find the appropriate balance between senior, intermediate, and local levels of management.

Can water management policies take both large-scale and local management strategies into account?

Local strategies can complement wider-reaching water management approaches. There are local strategies that can be scaled up, such as shared water storage among neighbourhoods. In some cases, local strategies can offer cheaper and more effective alternatives to the large-scale, centralized, capital-heavy approaches that have dominated in the past – and that too often failed to deliver on their promises. This is where it's exciting to combine modern hydrological models with traditional knowledge and figure out how you can put the two together. It's not management science but it takes a lot of innovative thinking to come up with good policies.

What are some mistaken assumptions about local water management?

One faulty and dangerous assumption has been that you don't need to pay attention to local views and traditional management. Even if some traditional methods in developing countries are no longer effective because of changing circumstances, it's very important to understand the theory behind the local choices in order to influence change. By and large, water has been managed exclusively from the top down. We're not urging a reversal, but this book does point to the relatively unrecognized potential for managing water at the local level. Both are needed.

What sources of information did you use for this study?

The book brings together a lot of existing research – 30 years of mainly IDRC-supported field research in water in at least 50 developing countries. I was directly involved in some of these projects over the past 14 years since I worked with IDRC, and was familiar with many others. Two interns also assisted in reviewing the IDRC water portfolio. We also looked, though in less depth, at research results from such organizations as the International Water Management Institute and the International Food Policy Research Institute.

We examined projects in small-scale water supply; wastewater treatment and reuse; and watershed management and irrigation. IDRC research in the first two decades focused mainly on technical solutions, such as designing better hand pumps or modeling aquifers, rather than on water management. But when we looked at these projects from a different perspective, we found that local water management played a role in the outcomes. More recent IDRC projects have put greater emphasis on participatory research and community-based approaches. Our study has gleaned indications of greater or lesser success with local involvement.

What new insights does your book offer?

This book offers real results on the impact of local-level water management. I don't think there's another book that deals with this topic quite as directly. The book includes numerous short case studies that show the promise of local water management. We know, for example, that by involving local people we can often improve the design of systems and that in rural areas, nongovernmental organizations are typically more effective at getting fresh water to people than are most government programs. These kinds of lessons are immediately helpful for making better management decisions and in marking paths for future investigation.

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