

Where's the water?

If there is a flaw in David Molden, Charlotte De Fraiture, and Frank Rijsberman's "Water Scarcity: The Food Factor" (*Issues*, Summer 2007) and in the seminal encyclopedic comprehensive assessment from which it is drawn, it is in the pervasive assumption that human behavior can and will change in the right direction. Given the acute and compelling nature of the problems and the overwhelming importance of the subject to every living being on Earth, there exists in these prescriptions confidence that "Surely, humans will somehow do the right thing." Alas, sentences preceded by surely rarely describe a sure thing!

The article could as well be titled "Food Scarcity: the Water Factor." We know already that many populations in many countries are struggling to feed themselves with currently inadequate amounts of water. We see already what declining precipitation, rising temperatures, and increased flood and drought are doing to their food production. We see in only short decades ahead the acceleration of these trends as the natural dams of glaciers and mountain snow melt and disappear.

The study is compelling, the 700-strong research team awe-inspiring, the argumentation trenchant, and the solutions described neither impossible nor out of reach—if we want them to happen. For the moment, we the relatively better off can, as always, find ways to protect ourselves from this series of emerging threats and nuisances: paying more for food, buying water, building cisterns, digging further underground, and securing property where lakes and rivers are pristine. Water is indeed the divide between poverty and prosperity.

It is one of the ultimate ironies that our whole tradition of governance probably formed around the imperative to manage water: to allocate and protect supplies and tend water infrastructure. Yet the current crises of water seem too difficult, too fraught, and too entrenched in existing power relationships for most governments to be able to take on most of the issues in any meaningful way. Trends in all of these areas are going in the wrong direction. The study does not dwell enough on this. There are hopeful signs: The Australian national government is stepping in to provide the conflict resolution mechanism and fiscal backup for their largest, greatly damaged, essential river basin. A few countries are creating Ministries of Water Resources; more are beginning to write water resource plans.

Plans on paper are a good start. Translating those into action is difficult. Will we stop real estate development in dry areas? Will we stop building in floodplains? Will we really invest in optimizing existing irrigation systems? In removing the worst environmental effects of agricultural intensification? In taking the real steps to stop overfishing? Will we continue to subsidize food, fuel, and fiber production, so that these are not grown where water availability is optimal? The article does seminal service in pointing out that many of these issues are "next-door" questions, essential to but not necessarily seen at first glance as primarily water- or food-related; often not seen as meaningful to our own lives.

We will see these issues play out silently: dry rivers, dead deltas, destocked fisheries, depleted springs and wells. We will also see famine; increased and sometimes violent competition for water, especially within states; more migration; and environmental devastation with fires, dust, and new plagues and blights.

As the world comes to a better understanding of these Earth-threatening issues and the needed directions of changes, we must do more than hope for better policy and practice—we must become advocates, involved and persuasive on behalf of rain-fed farming, for a different set of agricultural incentives and for more transparency about water use and abuse. Surely this will happen before it is indeed too late to prevent such substantial damage to ourselves, to our Earth, and to living things....?

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I entirely agree with David Molden, Charlotte De Fraiture, and Frank Rijsberman that every effort should be made to maximize income and production per unit of water. The government of India has launched for this purpose a More Income and Crop per Drop of Water movement throughout the country this year.

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