

The world's water future

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The global food crisis of 2007-08 has propelled governments and international agencies into a series of emergency responses [0], designed both to meet the needs of desperate citizens in many of the world's poorest countries and to maintain their own authority in face of a surge of popular protest. The flurry of activity and discussion around the issue has tended to deflect attention from the global problems associated with the source of food: water. If the questions of agriculture, land use, supply, distribution and price that lie at the heart of the food crisis are to be addressed, the clouds over the world's water future must also be taken far more seriously (see Paul Rogers, "The world's food insecurity [0]", 24 April 2008).

There is a slow evolution of understanding among governments that tackling global development requires an integrated focus in which climate change, poverty and food security are among the constituent parts of a whole rather than separable concerns. It remains to be seen whether the G8 summit in Hokkaido on 7-9 July 2008 [1] will advance policy or mere rhetoric in this respect - and whether the leaders and their advisers will recognise how vital water is in relation to these other topics. If they do, they may find that their capacity to make water part of a global-development strategy has been seriously weakened [2] over the past decades by the way that the resources for its management have been allowed to dwindle.

The problem

United Nations member-states are usually too careful to set targets for themselves that may later going to embarrass them. One such target did slip through, however, during late-night negotiations at the World Summit on Sustainable Development [3](WSSD) in Johannesburg in 2002: that all countries should produce integrated water-resource management and water-efficiency plans by 2005.

Three years after the requisite date, the sixteenth annual review of the Commission on Sustainable Development (CSD) found in its May 2008 report that more than half of eighty countries [4] surveyed still had no plan in place. Moreover, many of those that had a plan were not implementing it. Just one more failure of an well-intentioned but impossibly impracticable system of global governance? Yes, but something more.

The problem is that water is a complex subject and its challenges differ widely from one place to another. So there is no generic "roadmap" setting out how water should be managed to

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Mike Muller was invited to CSD16 to address delegates on the issue of improving water management in the face of climate change and other challenges

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contribute to national well-being. This is the precise reason for the initial agreement by countries to design approaches suitable to their particular circumstances.

Something that needs to work is not working. The enormity of the challenge of (for example) sustaining the population of burgeoning cities while producing more food and more energy crops without destroying the natural environment is recognised. It does not take a great deal of technical knowledge to understand that climate change will make this challenge even more acute. The climatic impacts of the increasing use of carbon-emitting energy use include the drying up of rivers and the desiccation of land. This suggests that if energy is the focus for mitigating climate change, water will need to be the focus of adaptation efforts.

The countries who made the WSSD commitment may not have produced the documents promised, but all at least agreed that it was critical to have an integrated approach [5] to the management of the water that underpins so many development projects. A huge amount of work is needed to ensure that competing demands on this limited resource can be balanced.

The priority

The consequences of decades of neglect are now becoming evident. The planning and management of water requires detailed information about how much there is, and where. The dilemma is that, while a great deal has been talked about the importance of water management, the resources spent on building and maintaining "water knowledge" is dwindling.

To make the point, I presented some shocking data to the sixteenth CSD at its review session [6] in New York on 5-16 May 2008. Even a rich country like the United States is allowing its river-gauging network (along with other aspects of its infrastructure) to fall into disuse. In the last decade, 10% of its stations have ceased working; 30% of its planned core of 4,000 stations have either never been built or are not working. In many places, that means that it will be impossible to assess what impact climate change is having on the nation's rivers.

On a global scale, information about the flow in rivers is in a desperate state. The Germany-based Global Runoff Data Centre [7] reports that most of its African and Asian records have not been updated for twenty years, so the chances of monitoring - and thus being able to respond to - the impacts of climate change on river flows are slim.

The Canadian government had - with some fanfare - led a G8 initiative to promote the worldwide monitoring of water quality worldwide and to collect the data as part of a Global Environment Monitoring System [8] (Gems). Then, earlier in 2008, practitioners learned to their horror that local budgeting problems meant that the funds - and the global programme - had effectively been terminated.

In any case, even these ambitious efforts have not been very successful in expanding monitoring to the poorer regions which often face the greatest challenges. Africa and much of

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Asia remain from a data perspective almost empty continents on the Gems maps, their huge water problems notwithstanding.

The situation in individual countries is dramatic. Angola has only twenty river-flow monitoring stations, down from over 150 at independence (and before the long civil war) in 1975 - though there have been repeated attempts to rebuild them. The losses are also human: as South Africa's local government [9] has lost more than a third of its technical staff over five years, the expertise of its national water administration [10] has been gravely damaged.

No wonder there is growing frustration that six years after the Johannesburg summit (and sixteen years after the Earth Summit in Rio [11] in 1992), experts are still debating what should be in a water-management plan and how to determine whether it is complete.

The priority is not to develop new plans but to act to improve water management. But what cannot be measured cannot be managed, so the knowledge- base on which the sector depends must be rebuilt. That will require commitment and resources. A recognition of the problem is key to addressing it. t a time when unpredictable and destructive floods and droughts [12] are affecting ever more communities across the planet, the issue of water and its management needs to be part of the global-development agenda [13]. The G8 would be a good place to start.

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[3] <http://www.worldsummit2002.org/>

[4] <http://www.un.org/esa/sustdev/csd/csd16/members.htm>

[5] <http://www.worldwatercouncil.org/index.php?id=708>

[6] <http://www.un.org/esa/sustdev/csd/review.htm>

[7] <http://grdc.bafg.de/servlet/is/Entry.987.Display/>

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[10] <http://www.dwaf.gov.za/>

[11] <http://www.un.org/geninfo/bp/enviro.html>

[12] <http://www.un.org/esa/sustdev/sdissues/desertification/desert.htm>

[13] <http://www.worldwatercouncil.org/index.php?id=1842>



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