

Editorial

ALL PEOPLE HAVE ACCESS to water, even if only for survival, but not all can be described as 'water-secure'. For many people (just under 900 million at the last count) water supply is 'unimproved', in other words insufficiently close by to permit sufficient consumption, or of poor quality. Furthermore, for these 'unserved' and for many more who notionally do enjoy an improved water supply, that service is unreliable, costly and therefore far from secure. To add to this scandal of inadequate service, the combined impacts of environmental degradation, population growth, urbanization, rising demands, climate variability and climate change are threatening water security for many communities, regions and nations.

Like food security, water security can be considered at various scales from the individual or household, to the community, the district, region or province, to the nation or international river basin. In this issue of *Waterlines*, our focus is mostly at the household and community level.

Water security broadly consists of three aspects. First, it requires continuing access to a sufficient quantity of water for domestic and livelihood uses, and to support the ecosystems on which people depend. Second, adequate quality of water (for those same three purposes) needs to be assured. Third, it requires that the quality and quantity of the resource itself should not be depleted or compromised. These are demanding requirements in a world which is highly stressed in numerous ways.

Water security as a concept has much in common with both sustainability and with water resource management. Indeed one could argue that water security is the intended goal of measures to improve sustainability of service as well as actions aimed at improved water resource management.

Like sustainability, water security has a time dimension; not a limited time horizon, but one which implies stability for the foreseeable future. Like sustainability, water security encompasses social, institutional, technical, financial and environmental aspects. In terms of a water supply service, both water security and sustainability are concerned with keeping systems working over time.

Like water resource management, water security requires the participation of a wide range of stakeholders from households to international agencies. It also requires an integrated consideration of the linkages between land and catchment management, water management, the quality and quantity of water resources, and their variations with time.

Richard Carter (richardcarter@wateraid.org) is Head of Technical Support at WaterAid, UK

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But water security is also about transforming the situation of the water-insecure – those excluded by poverty, remoteness, disability or invisibility. The main focus of water security, just like the main focus of food security, should be to bring about this transformation: from hunger to sufficiency, from water poverty to water security.

In this issue of *Waterlines* Laura Hucks, our new Water Correspondent, and Lucrezia Koestler et al. in different ways draw attention to the twin challenges of reaching the unserved, but in a sustainable manner. Targeting those who are water-insecure, and doing so in a manner which does not simply tick the box that says ‘coverage statistics improved’ has to be the major imperative for the future. There is a simple logic. If, as the statistics suggest, coverage rates are improving, then logically an ever-greater proportion of effort should be devoted to operation and maintenance, so ensuring security of supply. When or if coverage approaches 100 per cent, logically the majority of effort and expenditure should go on maintaining and supporting those services, and not simply letting them fall into disrepair.

A set of three papers, by Clare Robinson and colleagues, Stephen McIlwaine and Mark Redwood, and Eiman Fadul and Bob Reed focus on the management of water quality. In the first of these the authors discuss participatory approaches to safeguarding the health of farmers using untreated urban wastewater in Bangladesh. The second tackles the same issue in the water-stressed environment of the Middle East and North Africa. The third deals with the water insecurity of immigrant farm workers in the Gezira irrigation scheme of Sudan. These farmers are forced to use irrigation canal water for domestic purposes, so contracting schistosomiasis and other water-related diseases. In all three cases it is clear that exposure to contaminated water poses a significant threat to public health, and that this is an important dimension of water insecurity.

The subject of water quality leads neatly to our ‘Taking stock’ piece by William Carter. He, like many in relief and development agencies, is inundated with well-meaning offers of technical inventions which promise to solve the water crisis at a stroke. Nearly all of them are clever gadgets for cleaning dirty water. However, as William Carter points out, ‘making water clean is usually really, really easy’. So why do inventors and some academics continue to address the easy issue, and shy away from the difficult matter? This, for Carter and the rest of us at the front line of delivering water supply and sanitation services, is just a little to do with the technology and a great deal to do with the software – that messy, context-specific, difficult part of our work which is all about the human factor. Until we get this aspect right, we will not achieve water security in any true sense. And by ‘we’ I mean all those involved, from water consumers (the public), to governments, NGOs, funding agencies, academics and even (re-focused) inventors.

Richard C. Carter