

Conference Report

Sixth Stockholm Water Symposium, Safeguarding Water Resources for Tomorrow: New Solutions to World Problems, 4–9 August 1996, Stockholm, Sweden

Vital Need for a Freshwater Revolution

The lack of public insight and absence of serious concern about the magnitude of the looming freshwater challenges is devastating. All over the world an undermining of this valuable resource is taking place. Agenda 21 indicates an existing will to act but we are still failing to implement sustainable solutions. A major initiative is called for to bring about the needed changes in attitudes and behaviours and mobilize public opinion—a Freshwater Revolution. The challenges are clear and formidable. If effective this initiative could bring about the necessary pressure on the political systems at national and international level.

In other environmental fields, conventions have been shown to be effective in changing attitudes and behaviours on an international scale. Given the challenges facing the freshwater sector it is difficult to see what other means could activate the Freshwater Revolution and achieve the needed changes within the available time frame. Virtually all other sectors of the environment are now covered, or soon will be, by a convention, protocol, or similar pact. Yet freshwater, the lifeblood of the global ecosystem, has seemingly lagged behind.

Keys to Success

The symposium focused on how to go from the approaches of the past to a more integrated and sustainable resource management. Where are the buttons to push that will stop the ongoing undermining of the world's freshwater resources and minimize the effects of today's failing policies? It is not lack of analysis and diagnosis that generally limits success; the key problem is often a lack of effective strategies for implementation. Moving towards sustainable development is no painfree process. A crucial question is in fact how to reduce the implementation difficulties between what is considered desirable from a scientific/diagnosis point of view, and what is seen as politically possible to achieve. More focus has to be put on the original freshwater resource, i.e. the precipitation over the river basin. This is the resource divided between highly water consuming plant production and polluting but less water consuming societal water uses in municipalities and industry.

Efforts needed to make possible better policies include the following:

- to encourage engagement of sub-sectors involved, allowing them to interact and take responsibility in trying to jointly protect the resource base;
- to get crucial stakeholders like the business, industrial and agricultural sectors—all contributing in different ways to the current undermining of land and water productivity—to take greater part in water resources planning and decision making;
- to secure enforcement as a necessary complement to laws and regulations;
- to make use of the environmental impact assessment technique as a tool to ensure the compatibility of sectoral plans;
- to secure adequate status for freshwater issues. Freshwater still remains ‘the odd man out’ on the international environmental agenda;
- to facilitate the next generation of scientists to become more active in trying to establish communicative bridges;
- to allow the leaders of tomorrow represented by young scientists to enter the scene and act as advocates for the future. They should be seen as guardians of change.

Pollution far from Control

A worldwide overview was given of how groundwater pollution is expanding and intensifying through the transfer of pollutants from urban and industrial point sources and from diffuse sources linked to a variety of land uses. In Third World countries, groundwater pollution is accelerating due to lack of understanding, lack of capability and lack of economic resources. It was shown that the risk of groundwater contamination from pit latrines is greater than generally assumed: pathogenic organisms may spread far beyond the so-called ‘safe’ distance between pit latrine and well. In the industrialized countries, the degradation of groundwater from agricultural chemicals continues to aggravate; in Scandinavia, for example, pollution is now reaching deep aquifers.

Although it is well known how environmental sanitation measures can reduce the risk of water-related diseases, Third World sanitation has met with large time delays. It was agreed that human excreta has a potential for reuse as fertilizer and soil conditioner, and that the barriers to improved health through better sanitation and water management are more social and political than technical.

Human Capability and Public Understanding

Development of human as well as institutional capacity has to be seen as a long-term process with clearly enunciated short-, medium-, and long-term goals. Many poor countries have a desperate shortage of competent water professionals, suffer from an incomplete understanding of their problems, and also lack a realistic assessment of capacity-building requirements. At the same time, exchange of experiences and transfer of technology through networks between countries having similar social, economic and technical conditions could complement traditional technical assistance.

Among key issues for effective water resources management, the responsibility of the scientific community was also identified. There is an evident need to achieve more than rhetorical bridges between scientific disciplines, between science and policy/decision making, and between science and society at large. It

was agreed that generally the major constraint in long-term stable water resources management is not lack of knowledge but transfer of that knowledge in a clear and understandable form to policy makers and decision makers. Decision makers and politicians have to be given the opportunity to understand the implications of their own decisions.

Also the public has to be able to understand the risks they are taking. It is therefore urgent to make the general public understand how freshwater controls their lives as well as the life of their children and grandchildren. To this end scientists, technologists and engineers have to integrate their results and translate them into easily understandable terms and clear messages.

Bridge Building to Facilitate a Holistic Approach

Well-integrated land and water policies have to build on an ecosystem approach, acknowledging water's role as the bloodstream of the biosphere. This necessitates an operationalization of environmental sustainability and a clarification of the 'requirements' of valued aquatic ecosystem in terms of water flow and quality. A level of ecorealism has to be developed, paying due attention to differences between various world regions in terms of priority setting and focus (food security vs environmental issues, water quality vs water supply issues).

Communication is essential to bridge subsectoral perspectives. Local platforms have to be created for stakeholder dialogue, so-called 'tables of negotiation' between sectoral and other interests. It is important to establish situations of interactive learning processes; learning to listen is as essential as self-reflection. A common language has to be achieved through mutual education of scientists, politicians and the public.