



Editorial

Over a short period of only about 10 years, the Stockholm Water Symposium has unquestionably become the premier annual water event of the world. Water professionals from all disciplines and backgrounds and from all parts of the world congregate to discuss global, regional, national and local water-related issues on a multidisciplinary and multisectoral basis. Leading water-related professional organizations such as the International Water Resources Association, World Water Council and Global Water Partnership have started to co-sponsor the various workshops within the framework of this Symposium or around it.

It is indeed a great tribute to the organizers of the Stockholm Water Symposium that within a decade much of the global discussion on water has now shifted from the United Nations to Stockholm. New ideas and concepts and new initiatives now regularly spring from Stockholm. This has meant that it is essential for water professionals to make an annual pilgrimage to Sweden every August if they wish to stay up to date with the latest ideas and development in the area of water resources.

Within the context of the 1999 Stockholm Water Symposium, the Third World Centre for Water Management, International Water Resources Association, United Nations Centre for Human Settlement and Stockholm International Water Institute co-sponsored a workshop on 'Challenges to Urban Water Management'? It was co-chaired by Prof. Asit K. Biswas (President, Third World Centre for Water Management, Mexico City) and Mr Kalyan Ray (Head, Infrastructure Division, UNCHS, Nairobi). Cecilia Tortajada (Vice-President, Third World Centre for Water Management) and Peter Soderbaum (Professor, Malardalen University, Sweden) were the rapporteurs.

The main objectives of the workshop were to analyse economic, environmental, political and institutional concerns and issues which developing countries are facing at present to provide clean water, sanitation facilities and flood management to ever-increasing urban centres. Present alternatives and solutions were discussed.

Abstracts were solicited and some 40 were received from all over the world. From this, and through a peer review process, only about 20% were selected. Following their presentation in Stockholm, and the resulting discussion, the authors were asked to revise their papers. These revised papers are published in this Special Issue.

Case studies of arid and non-arid developing countries and countries in transition were analysed. The presentations focused on a somewhat similar set of issues regardless of the geographical conditions. African countries, as well as those located in the Arabian Peninsula, Eastern Europe, Asia and Latin America, all seem to share similar concerns. They often suffer from absence of efficient institutions; lack of appropriate regulations or sectoral policies and their implementation mechanisms; inappropriate management practices; and too much

centralization. They often do not foster public–private partnerships; encourage application of demand management practices; and do not give adequate attention to education and capacity building. All these are complex issues which cannot be resolved on a short-term, *ad hoc* basis. An integrated and comprehensive long-term approach is necessary.

While the main problems in countries such as Bangladesh were related to management of floods and severe water quality problems, arid countries like Saudi Arabia focused on development of technology and expertise to construct and provide potable water to its entire population. The workshop participants generally agreed that long-term solutions lie not only in construction of new infrastructure but also in concurrent implementation of demand management and conservation practices, and development of appropriate strategies and regulatory frameworks, and transformation of existing institutions to become increasingly efficient. Without such an integrated and concerted approach, sustainable water management in the urban centres of developing countries will simply not be possible.

Regarding institutional development, it was argued that traditional programmes on capacity building could result in even worst bureaucratization of organizations. Institutions often emphasize quantitative targets at the cost of quality of services provided. Well-documented research presented during the workshop indicated direct relationships between the structures of the institutions and their effectiveness in terms of providing acceptable urban water management.

Two of the papers reviewed how environmental degradation in terms of the water sector is already threatening economic development. Current practices like environmental impact assessment were considered to be ineffective in Mexico and São Paulo.

It was argued by some participants that geographical units for water management needed to be reviewed. They may not necessarily be in terms of river basins for a variety of political, institutional, legal and cultural reasons. In some cases, the units could perhaps be best managed by administrative regions. This is an area that needs further serious consideration, especially in terms of urban water management.

The workshop discussed extensively the advantages and disadvantages of both public and private ownership of urban water systems. There was general agreement that neither the public nor the private sector alone can resolve the urban water problems successfully: there has to be public–private partnership. The form and nature of the partnership may vary from one country to another, and even from one state to another in certain countries. There is thus no one single solution. Additional research needs to be carried out on the nature and type of implementable regulatory frameworks that need to be developed for specific countries, and also how to ensure that the interests of both the urban poor and the private sector investors could be simultaneously protected. Dogmatic approaches, in favour of either the public or private sector, are unlikely to be successful on a long-term basis.

It was unanimously agreed that there is no single solution to the problems of urban water management in the developing world. The solutions developed must be site-specific, and must specifically address the climatic, economic, social, environmental and cultural conditions of the areas concerned. Transfer of experience, technology and management practices from developed to

developing countries has not proved to be as effective as initially expected for several reasons. Thus, site-specific and cost-effective strategies need to be developed and implemented.

It was also agreed that a major challenge to urban water management in developing countries will be timely availability of affordable investment funds. The World Bank currently provides a total loan of US\$2.9 billion per year to the water sector. While no reasonable estimate currently exists for investment requirements for urban water management for all developing countries of the world, it is likely to be several hundred times the current World Bank support. For example, estimates carried out by the Third World Centre for Water Management indicate that only about 6% of wastewater generated in Latin America is properly treated. The investment needed to increase wastewater treatment even to 50% for Latin America alone is likely to be astronomical. Simultaneously, the human resources necessary to operate wastewater treatment plants and manage water quality programmes in the region would be very substantial. Countries do not at present have adequate capacity and expertise to manage substantial increases in wastewater management, even if the necessary investment funds were made available by a miracle. These are important issues that require urgent consideration in the coming years.

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