



## Water management in Latin America: Personal reflections before the Mexico Forum

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It is difficult to generalise on the water problems of Latin American countries and their solutions. Problems could be similar, but the solutions may be different. This is because the countries are not homogeneous in terms of topography, climate, and social, cultural and environmental conditions. They are also at different stages of development, with differing political and economic realities. Management, technical and administrative capacities vary widely, as do their institutional arrangements, and legal and regulatory frameworks.

In spite of this diversity, certain commonalities can be observed. On the eve of the 4th World Water Forum in Mexico City, some personal reflections on these issues are in order.

### *Water crisis*

Much has been written in recent years on a possible crisis that the developing world may face because of physical water scarcities. Our view is different.

If the world faces a water crisis, it is unlikely to be because of scarcities, but because of continuing poor management practices. Certain parts of the world may face difficulties because of limited supplies of water available, but these can be overcome by prudent management practices. With rapid advances in technology (biotechnology, desalination, and so on), increasing reuse and improved management practices, if a water crisis occurs, it will be man-made and thus avoidable. What the world is facing is not a water crisis, but a crisis in water management.

### *Water quality management*

While a crisis caused by physical scarcities is avoidable, the situation is serious for water quality, an issue that continues to receive inadequate attention in the developing world. Statistics quoted by international institutions on the extent of wastewater treatment in Latin America are mostly erroneous and optimistic. Analyses carried out by our Centre indicate that less than 10 per cent of point sources of wastewater in the Latin American region is now properly treated and disposed of in an environmentally acceptable manner. Comparative figures from the international institutions

have been around 25-35 per cent, which have created a false sense of complacency.

These figures relate only to point sources of pollution: non-point sources, which are now the greatest source of pollution in the OECD countries, are not considered. Control of non-point sources of pollution in Latin America, like the rest of the developing world, has mostly been ineffective. Accordingly, if both point and non-point sources of water pollution are considered, the future appears grim. Already nearly all water bodies near centres of population are heavily contaminated, and the economic and social costs of such contaminations are extremely high. Accordingly, if the world faces a water crisis in the coming years, it will be because of continuing neglect of water quality.

### *Water and regional development*

Water plays an important part in the economic development of a region, a fact that has been ignored even by the water profession. Properly planned water projects have acted, and can act, as an engine for development of an impoverished region. Such an approach can help millions of people to escape poverty by increasing employment opportunities and providing better social services and improved nutrition. Water development is not an end by itself: it is a means to an end, the end being how to improve the overall quality of life of the people through a multitude of pathways where water can act as a catalyst.

The recent debate on "dams or no dams" has been mostly counter-productive. It has adversely affected millions of people in the developing world, including Latin America, by delaying much-needed development. No well balanced individual can argue with the fact that there could be good and bad dams, and discussion should focus on how to construct good dams that are economically efficient, socially desirable and environmentally acceptable. Depending on the conditions in a specific location, an appropriate decision should be taken in terms of large or small dam, or another alternative. Overall, it is not an 'either/or' answer. In certain conditions, small can be beautiful, but in other conditions, it could be downright ugly. Similarly, big could be magnificent, but it could be a disaster. The solutions are always case-specific.



During the recent debate on dams, an issue that has often been neglected is the continuing exponential demand for energy in the developing world. From Brazil to China, Mexico to Turkey, and Argentina to India, the electricity demands are increasing at 7-12 per cent annually. If people in developing countries are to reach an acceptable quality of life, their energy requirements must be met. For example, for India, its Finance Minister, Palaniappan Chidambaram, said in his budget speech on 28 February 2006, that power shortages reduced India's overall output in 2005, by Rps 3 trillion (approximately \$67 billion), which is equivalent to 9 per cent of the country's output. If the aspirations of its people are to be met, not only this shortfall in power has to be met, but also the additional demands in the coming years. The situation is similar for the Latin American countries as well.

Hydropower has had a comparatively lower profile in the many developing countries recently for a variety of reasons, among others, improper energy planning, opposition from NGOs (often from outside the country), inappropriate government policies, incorrect approaches to development, and lack of investment support from bilateral and multilateral institutions.

The overall attitude to dams in general, and hydropower in particular, has started to change during the post-2000 period. The roles of hydropower in the economic development of the nations have to be reassessed by both its proponents and opponents. The proponents must accept that hydropower projects must meet the requirements of modern society, including objective analyses of the benefits and costs of the projects and the nature of the beneficiaries. The opponents must realise that their dogmatic approaches against all dams are fundamentally erroneous, economically unacceptable and socially disruptive.

#### *South-South knowledge transfer*

A major problem of water management in Latin America is that very few people know what is happening in this vast region. Mexican water professionals may know what are the latest developments in the USA or the UK, but they are not aware of the progress made in Brazil, Chile or Costa Rica, and vice versa. The social, economic, environmental and institutional conditions are somewhat similar. Accordingly, exchange of knowledge and experiences within this region are urgently needed, especially as these are likely to be more appropriate, compared with the solutions from the North, with vastly differing conditions.

Furthermore, in recent years, countries like Brazil and Chile have developed new and innovative solutions for many of their water problems, and countries as diverse as Costa Rica and Colombia have made commendable progress in specific areas. Unfortunately, these advances are basically unknown beyond their national borders, and often even within their borders.

In addition, considerable official rhetoric emanates from certain countries as to how wonderful their water management practices have been. On close scrutiny, these claims turn out to be economical with truth. One can cite many such examples, which are then repeated by international institutions without any assessment, thus giving such claims legitimacy. It is thus essential to 'separate the wheat from the chaff'.

Because of this unsatisfactory situation, our Centre is synthesizing knowledge from the region in specific areas of water management, to determine what works, where and why; and equally, what is not working and thereasons for this. The results of these studies indicate that many Latin American countries have made important breakthroughs in certain areas of water management, which are mostly unknown to the water profession.

#### *Concluding remarks*

In conclusion, the world of water management is likely to change more during the next 20 years, compared with the past 2000 years. Unlike the past, the main forces for these changes are likely to come from outside the sector on which the water professionals will have very limited control. These would include forces like globalization, information and communication revolution, energy, changes in the structure of population (rather than overall numbers), technological developments, and changing social perceptions and aspirations. None of these issues have so far been seriously considered by the water profession. A review of the programme of the Fourth World Water Forum indicates that these new emerging and critical areas are unfortunately still absent.

Large-scale conferences should not continue with a business-as-usual approach, even though it is now evident that tomorrow's water problems can no longer be solved with yesterday's knowledge-base and day-before-yesterday's experience. Water problems of the future will be vastly more complex and different from the past. If these problems are to be properly anticipated and solved, it will require new mindsets and innovative approaches. We call for these fundamental needs of the future to be discussed at the Forum, along with any expectations of finding some realistic solutions.

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