



According to President John F. Kennedy, the person who can solve the water problems of the world should receive two Nobel prizes, one for peace and the other for science. More than four decades after his death, the world is realising the complexity and urgency of the water-related problems facing humanity, and the relevance of his remark.

Some feel that water problems of the world are primarily for the developing world: such problems have long been resolved in the OECD countries. This assumption is fundamentally incorrect for several reasons, only a few of which will be discussed here.

First, even though water contamination due to point sources, such as waste pipes, has been solved in most OECD countries, more diffuse non-point pollution still continues to be a major problem. For example, the Gulf of Mexico now has a dead zone which at certain times could cover some 22,000 km². Leaching of agricultural nutrients, carried subsequently by rivers like the Mississippi to the Gulf, has created this hypoxic (oxygen-depleted) zone.

Point sources of water pollution are still an important problem in a few OECD countries, particularly in rural and smaller urban areas. As new members join the OECD, the organisation as a whole needs to consider the health and environmental aspects of water quality management more widely.

Second, water infrastructure in all the OECD countries is ageing fast, and needs extensive and expensive rehabilitation. For example, the US Environmental Protection Agency has estimated that the country will need an *additional* \$23 billion per annum for the next 20 years to keep the US water and wastewater infrastructure functional and in compliance with the necessary regulations. The situation is very similar in all OECD countries. This is an important funding gap on which not only more public debate is needed, but also research in terms of

Asit K. Biswas, President of the Third World Centre for Water Management, Mexico, and

Cecilia Tortajada, Scientific Director of the International Centre for Water, Zaragoza, Spain*

Water is a growing challenge for all countries, and a fresh, more coherent approach to tackling it is now needed.

finding better economic, technical and management solutions.

Third, the discussions on water-related issues in international fora mostly centre on the availability of clean drinking water in the developing world. Viewed only in this very narrow, albeit very essential, context, water is not a serious issue for the OECD countries. However, drinking water constitutes significantly less than 10% of global water use. The rest is used for food, energy and environmental purposes and to promote regional development, which are all important issues for OECD countries.

Water is a cross-sectoral issue, and its efficient use and management will depend more and more on policies in other development sectors. For example, water and electricity sectors are closely interlinked. No large-scale electricity generation is possible without water, either through hydroelectric power, or through cooling water requirements for thermal and nuclear power plants. For an OECD country like France, the energy sector is a major user of water. Similarly, the water sector is a prodigious user of electricity. In a country like Mexico, it uses nearly a quarter of the electricity generated. Yet, very few, if any country, including in the OECD area, have developed energy policies which explicitly consider water, and vice versa.

Similarly, the production of biofuels has significant water implications, both in terms of quantity and quality. It is now generally accepted that increasing production of biofuels in the US is likely to extend the dead zone in the Gulf of Mexico due to higher rates of leaching of agrochemicals from such production. In a rapidly changing world, the dimensions and extent of water problems are changing as well. Such new and emerging water-related problems will require additional intensified attention from the OECD countries.

Fourth, efficient water management due to climate change is a serious consideration for the future. Throughout

history, climate has always fluctuated. When climate change considerations are superimposed over the usual climatic fluctuation, the problems become more complex.

For water management, it is not of much practical use to say that global temperatures will increase by a few degrees, or there will be more extreme climatic events. At our present state of knowledge, it is not possible to predict

For water management, it is not of much practical use to say that global temperatures will increase by a few degrees

with any confidence the expected annual average changes in rainfall and temperature over an individual country, let alone over a river basin. Furthermore, more information on likely variations in rainfall will be essential for future water, agricultural, energy and environmental management.

The OECD must play an important role to bring such key development-related issues to the attention of national and international policymakers and scientists, so that our knowledge-base is expanded, and appropriate, cost-effective solutions are found.

The OECD should establish itself as a leading international institution on specific, forward-looking water-related policies, especially in those important areas where other institutions have not given, and are unlikely to give, adequate leadership. True, the OECD has already acquired a good reputation for its work on water policies. Nevertheless, it is very heartening to note that Secretary-General Angel Gurría has specifically identified water, health and migration as priority areas of work. It should be noted that there are significant cross-linkages between these three areas as well.

Policymakers should do more to co-ordinate water, energy, food and

environmental policies, especially in terms of their symbiotic relationships: how different resources affect and interrelate with each other. Such interlinkages and interrelationships have not until now been explicitly considered in policies in any comprehensive manner. Accordingly, the present business-as-usual approaches are likely to become increasingly inefficient and ineffective, especially in social, economic and environmental terms.

The rapidly changing global landscape means that water management practices and processes will face increasingly complex and intersectoral challenges from other resource and development sectors, the types of which have seldom been faced in the past. Meeting these challenges successfully in a timely manner will require new mindsets, innovative approaches, and “business-unusual” solutions.

We are convinced that OECD is one of the very few institutions, if not the only institution, which has the necessary knowledge, breadth of expertise and scientific and technological know-how to define reliably water and water-associated problems of the future and then propose implementable solutions.

The OECD has to address the complex water-related issues facing the world in the coming years. The organisation simply has no other choice if it is to fulfill its mandate and meet its global expectations. ■

***Asit K. Biswas** is also the 2006 Stockholm Water Prize Laureate. An advisor to 18 governments, his work has been translated into 32 languages. **Cecilia Tortajada** is also the President of the International Water Resources Association.

References

- Biswas, Asit K., and Seetharam, K. (2008), “Asian Water Development Outlook: Achieving Water Security for Asia”, *International Journal of Water Resources Development*, Vol 24, No1, pp 145–176.
- See www.thirdworldcentre.org and IWRA at <http://196.36.166.88/iwra/>