

## **The International Water Association (IWA) Conference On Water & Wastewater For Developing Countries**

PWTC, Kuala Lumpur 29 October 2001

I wish to thank the organisers, the International Water Association and Universiti Teknologi Malaysia for inviting me to officially open the Conference today.

2. On behalf of the Malaysian Government, I would like to thank the IWA Governing Board for choosing Malaysia as host of this prestigious Conference. I also wish to welcome the foreign delegates to Malaysia. I hope your short stay here would be enjoyable. You will probably notice that Malaysia is not what it is pictured to be from the media you are familiar with. We are a reasonably developed developing country with a multi-racial and multi-religious society living in peace and relative harmony. In a world in a state of turmoil because of racial and religious differences we are still stable.

3. This Conference is very timely because of several reasons. The first is that we are living in a world where water resources are continuously depleting in terms of quality and quantity. This scenario may well become a source of internal and international conflicts and wars in the future. The logic is simple; water is the source of life and civilisation. The early great civilisations developed around the great rivers, the Nile, the Euphrates, the Indus, the Yangtze and others. On the other hand the shortage of water resources creates fierce competition for clean and fresh water between tribes, groups and nations. Many studies have confirmed this thesis, including studies made by many international agencies such as the World Bank and the United Nations, and concluded that the likelihood of the interstate conflict will increase during the next 15 years as countries struggle to develop and to gain access to water. Yet with 2/3 of the world covered by water, there should be enough water for everyone.

4. Developing countries are often faced with serious problems of getting a supply of good fresh water. There may be rivers, lakes and seas but making the water clean and potable costs a lot of money which developing countries of course do not have. The desalination of sea water for example cost as much as 10 USD per thousand gallons, about 38 Malaysian Ringgit. Only the very rich can afford this. For the poor it is a case of "Water, water everywhere but not a drop to drink". Yet a peaceful world can easily pipe water from melting snow in the north and south to the arid deserts of West Asia, North Africa and elsewhere.

5. I know that this IWA Conference is not about multilateral negotiations, but rather one that is concerned with technical and management issues. However, I hope developing countries would be perceived as part and parcel of the international community which will also be able to contribute to the development of knowledge and know-how on science and technology related to the management of water and wastewater. Developing countries are also rich in opportunities in terms of research, infrastructure development, and human resource development.

6. I believe that the principal thrust for development, in whatever sector including water and wastewater management in developing countries, is dependent on the creation of a strong human resource base to support the development of a knowledge-based economy and enhance productivity and competitiveness. While many developing countries are capable of developing their human resources, many would be too poor to do so without assistance. The rich countries should invest in human resource development in the poor countries because enriching the poor would provide a market and greater opportunities for trade and business for the rich. Besides there is much in terms of knowledge and skills to be gained from operating in the challenging environment of the poor countries.

7. I am told that there will be many scientific papers to be presented by academics, researchers and practitioners from developing countries. This is very commendable and encouraging. Obviously much progress have been made by developing countries, some of whom must have reached the level in developed countries. I know that countries such as South Africa, Turkey, Thailand and also Malaysia are advanced in research related to water and wastewater technology. Countries like India, Bangladesh and Indonesia are endowed with skilled manpower, and in many cases they constitute one of the main sources of manpower for developed countries as well.

8. However, we should broaden the perspective in our contribution to this field. In the past, the opportunity to study at graduate level on water and wastewater management for developing countries was only available in the United Kingdom or the United States. While such opportunities must continue to be welcome, it is essential that we develop the capacity to provide for advanced studies on these subjects in the developing countries as well. This is because the situation and the experience of water management in developing countries are much more relevant to students from other developing countries. In many instances the developed

countries have forgotten the difficulties they experienced in the early years of their development.

9. The University of Technology of Malaysia has started a programme on environmental engineering particularly on water and wastewater management for developing countries since 1990 at masters and doctoral levels. This programme at present is well attended by students from foreign countries. To make the programme more appropriate to the global needs, I hope it will be further developed so as to remain relevant to changing situations in developing countries.

10. Apart from the human resource development, this Conference should also address environmental and resource issues in an integrated and holistic manner. Our policies in developing countries or towards developing countries should take into consideration the need to identify prudent, cost-effective and appropriate management approaches that yield multiple benefits in order to ensure that development is sustainable and resilient. In realising this, our regulatory and management agencies should adopt early preventive measures and apply acceptable principles to address environment and natural resource management issues. It should also put in place the enabling conditions for effective policy change, and this should include strategies to create opportunities for the private sector to uphold and take environmental mitigation measures.

11. Malaysia has very extensive experience in implementing integrated development programmes on a sustainable basis. In the Eighth Malaysia Plan (2001- 2005), the Government of Malaysia will strengthen the database for environmental decision-making by introducing the use of sustainable development indicators. This will enable the Government to better ascertain environmental impacts and plan appropriate preventive and remedial actions. This covers important areas particularly forestry, energy generation, agricultural and industrial development, as well as urbanisation.

12. In water and wastewater management, the Government has set up the National Water Resources Council in 1998 to ensure that water resources will be managed more efficiently and effectively from an integrated perspective. We have already adopted river basin management approach, and no longer perceive rivers alone and in isolation. Our main target is to improve river water quality while maintaining the flow rate at the required level using regulated dams etc. By improving the quality of water in rivers, more water could be obtained from downstream parts of the rivers for treatment and to meet ever increasing demands for water. Other uses of the rivers such as for recreational, aesthetic and agricultural purposes

could also be enhanced. In our case, effective river basin management strategies include regulatory protection of rivers, control of polluting discharges, and establishment of water quality standards, through monitoring and enforcement of river water quality. In addition, many new regulations and policies have been put in place to address issues of waste reduction, reuse and recycling.

13. Most, developing countries are facing water stress including water-rich countries such as Malaysia. This is due to an uneven distribution of population and industries which result in water deficits in the more developed and thickly populated areas, while there is excess in less populated areas. In Malaysia the States of Selangor, Penang, Perlis, Malacca and Kuala Lumpur are in deficit and cross-border transfer of water from other states becomes necessary.

14. Water stress can also be due to pollution caused by uncontrolled developments in the areas adjacent to rivers and waterways. Development upstream and especially near the sources is particularly damaging as usually water supply is from upstream areas. The management of water catchment areas is therefore crucial to the total management of the water supply.

15. We appreciate the concern of the environmentalists who want to keep the rivers in their pristine state. However it is not always possible to do so in a country that is developing as fast as Malaysia. We need living space for our expanding population. The approach should not be through stopping development but through careful planning and due consideration for the preservation of supply and the quality of water. It is entirely possible to do this but it costs money. The people and the Government must bear this cost if we want to preserve the quality of life.

16. Poverty is the greatest cause of water pollution. Traditionally rivers have been regarded as a natural sewage system. Excrement and rubbish are thrown into the rivers to be carried away elsewhere. When populations are small and widely dispersed along the river banks, and the river is wide and fast flowing, throwing waste may not cause serious problems. But as the population grows and the variety of waste increases the rivers can be completely choked with debris. Not only will this result in pollution but floods become more frequent, dispersing the rubbish and endangering the health of the people. Obviously using rivers as sewers and for rubbish disposal is not acceptable. Even though people are poor they must learn to dispose waste by other means. It is entirely possible to do this. It is a problem of culture. If cleanliness is a part of the culture of the

people then the pollution of rivers can be prevented. During a cholera epidemic in my home state, the people were forced to use pit latrines and bury waste. When the epidemic was over people were too shy to use the river for their toilet.

17. Rivers carry silt from the erosion of their banks and beds. When they overflow their banks annually, the silt is deposited on the surrounding land and the soil is enriched and made more fertile. This is the story of the Nile and the Egyptian civilisation. But today floods are not welcome in the built-up areas in the river basin. Siltation ponds serve to mitigate floods and clear the water as the silt drops in the slow-flowing parts of a widened river and siltation ponds. The clearer water flowing into the sea would reduce the tendency for the river mouths to become shallow. At the same time more downstream water can be used for irrigation and even for treatment and consumption, especially industrial applications. The cleaner water brings back the fish and other marine life.

18. Clearly water needs to be properly managed. It is too valuable a resource to be allowed to be polluted, to erode its banks and to flood its basins. It is of course a very important source of power as water driving the turbines is not wasted. It can be used again and again downstream, to generate electricity or to irrigate or to provide water for numerous applications.

19. In many parts of the world the only source of water is deep wells. In many desert countries there appears to be an inexhaustible supply of underground water. It is unlikely that the supply will be depleted when used by small populations. But it is quite possible that massive tapping of underground water for irrigation of vast areas of arid deserts might eventually dry up the underground reservoirs. We do not know yet what will happen but it is well to remember that nature abhors a vacuum. We are tapping a lot of oil, gas and water below the surface and we must someday pay the price.

20. There should perhaps be a policy governing the regulation and management of water resources in developing countries. We do not want to obstruct development but we must be careful and skilful in the management of our water resources. We can learn a lot from each other and we can avoid the mistakes of some developed countries and also our own mistakes from being repeated by other countries.

21. Perhaps there should be a body representing developing countries tasked with research and development of water and wastewater management. I am sure such an organisation can be

of assistance to developing countries in need of advice on water management and environmental management.

22. On this note, I have great pleasure to declare open the IWA Conference and Exhibition on Water and Wastewater Management for Developing Countries.