

## Foreword

The 21st century will be the Asian century. This momentum is now unstoppable. Asian economies will continue to grow rapidly. The big question in Asia is whether Asians will develop intelligent and innovative public policies to both sustain this growth and develop better societies.

This is where the Lee Kuan Yew School of Public Policy of the National University of Singapore can make a huge difference. Even though we are barely eight years old, we have been recognized as one of Asia's best schools of public policy, providing valuable graduate education, as well as research and thought leadership on many key challenges facing Asia and the world.

One huge challenge is water. Historically, in spite of its being a strategic issue, water has not been given the attention it deserves, not only in Asia, but also all over the world. In our region, water is even more relevant because of the fast economic growth our countries are witnessing, not just China and India but also many other Asian countries. In addition, we have to deal with the extremely seasonal nature of rainfall. Many governments are thus confronted with the urgent need to support the growing water-related demands of increasing populations and industrial, energy, and agricultural activities with sources of water that are rapidly becoming scarce, over-exploited, and polluted.

The issues related to water quality policy and management are numerous and complex. They have an impact on every productive sector of the Asian countries, many times beyond their borders, and also on the quality of life of the growing populations. Therefore, it is important to put in place an overall policy, management, and governance strategy that considers not only the water sector but also other sectors which have an impact on the way water resources are used, managed, and governed.

Given the complexity and difficulty of these challenges, this publication on *Water Quality Policy and Management in Asia* could not be more timely. Asian societies have progressed rapidly, ever since the Meiji Restoration in Japan, by learning best practices from each other. This is also how Singapore developed. It learnt voraciously from other countries. In the process, it has ended up developing one of the best public policy laboratories in the world, with the world recognizing that Singapore has some of the best public policies in the world in a variety of areas. This is why Matt Miller (2010) of the *Washington Post* wrote, "Singapore achieves world-class results thanks to a bold, unconventional synthesis of liberal and conservative approaches."

In the field of water, Singapore's success was globally acknowledged when the Public Utilities Board won the prestigious Stockholm Industry Water Award at the World Water Week in Stockholm in 2007. Given Singapore's unique expertise in water, the school felt

that it would be a good idea to set up the Institute of Water Policy to do in-depth research on water issues and share best practices with the world.

There can be no doubt that Asia faces many challenges on the water front. One example is the River Ganges in India. It is often claimed that the main constraint on control of water pollution in developing countries is the lack of investment funds. This has certainly not been the case with the failed effort to clean up this river, for which some US\$450 million was spent during the 1980s and 1990s. The river is more polluted now than ever in history, and the government of India has recently announced a US\$2.33 billion project for a second attempt to clean up the Ganges, with the help of a US\$1 billion loan from the World Bank. The rest of the funds are expected to come from the five affected states in India: Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal. Only time will tell how successful this attempt will be. One thing is certain, however. If the appropriate policies, management practices, and governance considerations are not essential components of the strategy for cleaning the river, no investment funds will ever be enough to achieve this goal.

Another example is China, where water quality challenges have been growing for several decades. The government has thus decided to allocate, in its 12th five-year plan (for 2011–2015), a budget of US\$1.33 billion for water quality management.

This special issue analyzes the present situation in terms of water quality in Asia in general, and in some countries and areas in particular, especially China, India, Malaysia, Indonesia, Thailand, Japan, and the Mekong region. The importance of including economic incentives in the basket of policy alternatives to motivate improvements in water quality is discussed with examples from several Asian countries. Issues like emerging contaminants and their implications for human and ecosystem health, which are mostly ignored at present, are also discussed comprehensively.

Water quality policies and their legal and institutional requirements are also discussed. In nearly all cases, it is evident that there are serious gaps in the policies, which are affecting the efficiency of their implementation. With respect to institutions, their responsibilities tend to overlap with each other, both vertically and horizontally, as a result of which implementation of any policy decision leaves much to be desired. With respect to laws and regulations, they are often in conflict with each other, and many are either too weak to make a difference, or so stringent that they are almost impossible to implement. Overall, the analyses indicate that the countries are lagging well behind what is needed to tackle the accelerating problem of water quality deterioration in nearly all the Asian countries.

Since water quality is an important factor for the economic and social development of any country, the question that needs to be asked and answered is why these issues have been mostly ignored in the past and are continuing to be neglected at present. The overall quality of the Asian water bodies, especially those within and around urban centres, is continuing to deteriorate. If the current trends continue for another decade or so, most Asian countries will face a crisis in water quality which no other generation in history has had to face.

There can be no doubt that water is an important component in ensuring sustainable economic and social development of the Asian countries. Good water policies can contribute to the food, energy, and environmental security of these countries and can alleviate poverty, especially in South Asia, where a significant percentage of the world's poor live. This is why water policy is an important aspect of study and research at the school. As the 21st century evolves towards becoming the Asian century, the countries in the region must formulate and implement good and efficient water policies in terms of both the quality and quantity of this resource.

This special issue is a serious attempt by the school to bring together leading experts from different disciplines and sectors to assess the nature and magnitude of the problems, analyze the opportunities for and constraints on managing them, and develop a comprehensive and coordinated policy framework within which they can be successfully resolved. We realize this will be a difficult and arduous process, but it is one we are determined to tackle. I thus invite everyone interested in this subject to join us in our quest for developing appropriate policy frameworks to solve this complex problem in a timely and cost-effective manner.

Please let me conclude by congratulating the editors and writers of this volume. In particular, I would like to pay special tribute to Dr Asit Biswas and Dr Cecilia Tortajada, both of whom have contributed and are contributing enormously to the Lee Kuan Yew School of Public Policy.

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## Reference

Miller, M. (2010) What we can learn from Singapore's health-care model, Washington Post, 3 March. Available at: <http://www.washingtonpost.com/wp-dyn/content/article/2010/03/03/AR2010030301396.html?hpid=opinionsbox1>