

**SUMMARY OF DISCUSSIONS AT THE INTERNATIONAL WORKSHOP ON
WATER GOVERNANCE***
Lee Kuan Yew School of Public Policy
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The International Workshop on Water Governance was organised within the framework of the Singapore International Water Week by the Institute of Water Policy of Lee Kuan Yew School of Public Policy in Singapore and the Third World Centre for Water Management in Mexico.

The focus of this workshop was on water governance. It included three main presentations to set the scene for discussions on the various issues associated with water governance and a panel session to identify critical and priority aspects of water governance from different water resource sectors and from diverse disciplines and perspectives.

In his welcoming address, Dr. K. E. Seetharam, Director of the Institute of Water Policy, Lee Kuan Yew School of Public Policy emphasised the importance of public policies and good water governance. Dr. Woochong Um, Director, Asian Development Bank, in his opening address stressed the relevance and need for meaningful water policy dialogues in terms of water governance.

The main presentations included plans, objectives and outputs of the workshop as well as an overview of the approaches, issues, experiences and shortcomings of water governance by Prof. Asit K. Biswas (Distinguished Visiting Professor, Lee Kuan Yew School of Public Policy, Singapore; Scientific Advisor to the Government of Aragon, Spain; and President, Third World Centre for Water Management, Mexico). The two other main presentations were on perspectives on water governance from the agricultural sector by Dr. David Molden (Deputy Director General, International Water Management Institute, Colombo), and on urban water management sector by Dr. Cecilia Tortajada (Visiting Professor, Lee Kuan Yew School of Public Policy, Singapore, and Scientific Director, International Centre for Water and Environment, Zaragoza). The session was chaired by Dr. Alexander Zehnder, President of the Alberta Water Research Institute in Edmonton, Alberta, Canada.

The panel session was chaired by Prof. Asit K. Biswas, and the panelists included the six eminent personalities:

Prof. Kishore Mahbubani, Dean, Lee Kuan Yew School of Public Policy, Singapore
Mr. Gee Paw Tan, Chairman, Public Utilities Board, Singapore.

* Notes for preparation of this summary were taken by Peng Shugang, Vinesh Kumar and Chong Su Li, students of the Water Policy and Governance course at the Lee Kuan Yew School of Public Policy, Singapore.

Prof. Alexander Zehnder, President, Alberta Water Research Institute, Canada.
Dr. Mahmoud Abu-Zeid, President, Arab Water Council, Cairo, Egypt.
Dr. Dieter Ernst, CEO, Wasser Berlin, Germany.
Mr. Gérard Payen, President, Aquafed, France.

The workshop ended with remarks from Prof. Biswas on the future follow-up activities on water governance that will be carried out by the Institute of Water Policy and the Third World Centre for Water Management after the discussions of the current workshop. Following is a brief review of water governance, and the summary of key outcomes of the above workshop.

Concept of Governance

The global interest in environmental and social issues has increased since the convening of the United Nations Conference on the Human Environment in Stockholm in 1972. At the time of the Stockholm Conference, only 11 countries had institutional arrangements for managing environmental issues. Exactly 20 years later, when the United Nations convened its next global Conference on the Environment and Development, in Rio de Janeiro, nearly all its member countries had established institutional mechanisms to manage environmental issues at the national level. One of the aspects that contributed to this development was the countries' individual and collective recognition of the increasing degradation of their natural resources and the inevitable long-term adverse linkages this would have for their future economic development, efforts on poverty alleviation and overall quality of life of their populations. This awareness prompted political attention towards social and environmental issues at the national and international levels which resulted in several world-wide gatherings to analyse development and environment related issues. Unfortunately, more than 17 years after the Rio meeting increasing environmental degradation suggests that many developed and developing countries have still not managed to formulate and implement proper public policies that address environmental issues within their overall economic and social frameworks.

In the area of water resources, the dominant trends of the decades of the 1970s and 1980s were on development of infrastructure. During the early 1990s, the focus shifted to the management of water resources, still largely along the sectoral lines. By the end of the decade, the concept of coordinated water resources management encompassing a multi-sectoral approach and a wider range of social and environmental issues became the main trend. It was recognised that many of the activities related to a broader approach to water resources management had not much to gain from a paradigm which focused primarily on the construction of water infrastructures. The new policies were expected to take into consideration social, environmental and economic aspects that would result in more effective regulations, incentives, investment plans, environmental protection and poverty alleviation. The emphasis of the international community started to shift from sub-sectoral and project-based development projects to broader issues like water demand management, public-private partnerships, protection of the environment and participation of stakeholders.

With time, the focuses of the discussions have changed, discourses have ebbed and flowed, and new our modified paradigms have been proposed. In spite of this, water development practices have still had somewhat limited impacts on poverty alleviation,

and the global environmental situation has continued to deteriorate. In other words, deeds have not matched the words of the national and international leaders and their institutions (Tortajada 2007a, b). In terms of concepts and paradigms, it is now governance, and mostly varying concepts of “good governance,” that have permeated the global development discourse. Extremely challenging and complex, governance is regarded as an umbrella concept that considers multi-faceted processes where societal goals are pursued through the interaction of all interested actors in specific fields of development which require the promotion of decision-making dialogues and the participation of multiple stakeholders. It takes into consideration how governments and social organisations interact, how they relate to citizens, how decisions are taken, and how accountability is rendered (Graham et al., 2003).

Governance as a concept

Governance has been used mostly as an umbrella concept and no agreed definition exists. Governance is not synonymous with government. It is instead a complex process that considers multi-level participation beyond the state, where decision-making includes not only public institutions, but also private sector, civil society and the society in general. Good governance frameworks refer to new processes and methods of governing and changed conditions of ordered rule on which the actions and inactions of all parties concerned are transparent and accountable. It embraces the relationships between governments and societies, including laws, regulations, institutions, and formal and informal interactions which affect the ways in which governance systems function, stressing the importance of involving more voices, responsibilities, transparency and accountability of formal and informal organisations associated in any process.

Because of its complexity, good governance clearly does not just appear has to be carefully planned. It is the culmination of multi-faceted, long-term processes that have to be properly planned and nurtured. For good governance to develop, overall conditions and the general environment must be made appropriate; parties concerned must be amenable to collective decision-making; effective and functional organisations need to be developed; and policy, legal and political frameworks must be suitable to the goals that are being pursued for the common good (Rhodes, 1996; Kooiman, 2003; Tiihonen, 2004).[†]

[†] In terms of definitions, each organisation has described “governance” in terms of its own interests. For example, the Organisation for Economic Co-operation and Development (OECD), considers governance to be the use of political authority and exercise of control in a society in relation to the management of its resources for social and economic development (OECD, 1995). The World Bank defines governance as the way in which power is exercised in the management of the economic and social resources of any country. It takes into consideration the countries’ political regimes, the processes by which authority is exercised in the management of economic and social resources for development of the nation, and the capacity of governments to formulate and implement policies and allocate functions. The World Bank has set three goals for good governance which include empowering citizens to hold governments accountable through participation and decentralisation; enabling governments to respond to new demands by building capacity; and enforcing compliance with the rule of law and greater transparency (World Bank, 1994).

The United Nations Development Programme (UNDP) considers governance as the exercise of economic, political and administrative authority to manage the affairs of any country at all levels, and the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences (UNDP, 1997). Similar to other international organisations, UNDP considers that good governance requires participation,

Since governance-related issues are not just public or private, but are frequently shared, governance activities at all levels become diffused over various societal actors whose relationships with each other are constantly changing. The challenge for anyone involved in governing and governance is to make public, private and societal actors, participate actively and directly at solving problems and creating opportunities under both normative and institutional frameworks that provide the foundations for any activity. For these complex interrelationships to succeed they have to take into consideration that they are interdependent and that no single actor, public or private, has the knowledge, information or power to solve the changing societal challenges on one's own. This is because no actor has the sufficient knowledge or wherewithal to make the necessary instruments effective on his own or sufficient action potential to unilaterally dominate the decision-making arena (Kooiman, 2003).

Regarding civil society, governance enables it to play a role both as a responsible stakeholder and as an increasingly important force for reforms and development processes. Nevertheless, involving civil society as a stakeholder is a very complex political, philosophical and technical task for institution building in any country, mainly because of its multi-dimensional and multi-stakeholder nature. Responsibilities cannot just be transferred from the state to the society simply because there is no one monolithic group known as "society": society is composed of heterogeneous groups of individuals, citizens, organised associations and unorganised communities with very complex relationships and varied interests. The complexities of these inter-relationships between the actors, and institutions and their continuing dynamism, and evolution, have meant that the governance discourses can mostly be only implemented to a certain extent, and that its application often remains mainly theoretical in nature and concerns mostly the development of strategies and principles but not so much the difficult execution or implementation phase (Tiihonen, 2004).

The changing dynamics of governance has meant that the identification of the development needs and the implementation of programmes have to take place in the form of partnerships and within the context of full understanding and appreciation of the intersectoral linkages. Consequently, country development strategies have to search for

transparency and accountability, and that it should promote the rule of law. Governance encompasses the state, but also the private sector and the civil society organisations.

The Commission on Global Governance regards governance as a multi-level phenomenon. It describes it as the sum of the ways in which individuals and institutions, public and private, manage their common affairs through a continuing process that accommodates conflicting and diverse interests while fostering cooperative actions. In other words, governance refers to the many channels through which 'commands' flow in the form of goals framed, directives issued and policies pursued. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements to which people and institutions either have agreed to or perceive to be in their interest (Commission on Global Governance, 1995).

The European Union has established its own concept of governance in the White Paper on European Governance. The term 'European Governance' refers to the rules, processes and behaviour that affect the way in which powers regarding openness, participation, accountability, effectiveness and coherence are exercised in the European Community. Multi-level governance identifies the challenge of articulating the action of independent public actors at different geographic levels towards shared objectives. Since the idea of governance highlights the involvement of regional, local and non-governmental actors in the policy-making process, it is increasingly clear that the success of the decision-making and the acceptability of its rules depend on such actors being involved.

agreements, commitments and contributions, not only from governments at different levels but also from domestic and foreign private sectors, development agencies and the stakeholder groups of the civil society.

Given the importance that governance has acquired within the international community in recent years, resources in the form of aid are being directed towards strengthening the relations between the state and the different non-state actors, especially in developing countries. For example, in 1998, the ODA for government and civil society from regional development banks represented 35.3% of total multilateral finance, becoming only 8.9% in 2005. In contrast, aid from the World Bank for these same areas increased from 4.7% in 1998 to 11.3% in 2005.

Water governance

As is the case for the overall concept of governance, that of water governance is still evolving. At present, there is no universally agreed definition for water governance, and its ethical implications and political dimensions are all a matter of national and international debate. The result is that different people and institutions are using the concept in different ways, and within varying cultural, economic, social, legal and political contexts.

Water governance can be perceived, in its broadest sense, as comprising all social, political economic and administrative organisations and institutions, as well as their relationships to water resources development and management. It is concerned with how institutions operate and how regulations affect political actions and societal concerns through formal and informal instruments (UNDESA et al., 2003).

UNDP (2004) considers water governance to include political, economic and social processes and institutions through which governments, private sector and the civil society make decisions about how best to use, allocate, develop and manage water resources. It refers to a range of political, social, economic, and administrative systems that are in place to develop and manage water resources and the delivery of water services at different levels of society and for different uses. It comprises of mechanisms, processes, and institutions through which all involved stakeholders, including citizens and interest groups, articulate their priorities, exercise their legal rights, meet their obligations and mediate their differences. It emphasises the causality of water-related problems by pointing out not only the natural limitations of the water supply or lack of financing and appropriate technologies, but rather from profound failures in water governance, such as the ways in which individuals and societies have assigned value to, made decisions about, and managed the water resources available to them.

Water governance and water management are interdependent issues in the sense that effective governance systems are meant to enable practical management tools to be applied properly as the situations require. Partnerships between the public and private sectors, participation of stakeholders, and economic or regulatory instruments will not be effective unless there are administrative and management mechanisms in place, as well as commitments and involvements of governments, private sector groups and civil society organisations. Even though reform of water institutions and policies are taking place in many countries, the progress in nearly all cases has been somewhat slow and limited, and often unpredictable. In most of the countries of the developing world, water

institutions do not function properly, and most of them display fragmented institutional arrangements and overlapping and/or conflicting decision-making structures. Some even consider that water governance as the framework within which integrated water resources management can be applied (Rogers and Hall, 2003). While some claim that integrated approaches are of fundamental importance to manage water in more efficient ways, the fact remains that their implementation has remained incomplete and unsatisfactory in all countries, developed or developing, after some 60 years of trying.

It is true that involvement in policy formulation, coordination, communication and information exchange between administrations and stakeholders at various levels would contribute to a better knowledge of each others' policy objectives, working modalities and mechanisms available for implementation. However, decisions should first be coherent with a broad set of principles leading to a more progressive and efficient and equitable management of water resources. For example, it is expected that by directly involving users of water in the governance of the resource, the knowledge on which this participation is based will be more meaningful than otherwise may have been possible, since local stakeholders may often be more familiar with the peculiarities of local economic, social, cultural and environmental situations. It might also mean that users involved may accept the regulations as appropriate and consistent with their values and interests and may also be more willing to comply with them (Kooiman, 2003). Nevertheless, in practice rather than in theory, many stakeholders, including water users associations, NGOs and local communities, may build on local knowledge and networks, but may often lack support, funds, institutional and technical capacities or even membership to significantly contribute to the management of water resources. Therefore, the means for enabling and coordinating the effective roles of stakeholders in water governance remains as an imperative but elusive challenge that has to be solved before the concept of governance can become a reality.

Water management is evidently not an issue that can be approached only from within the water sector, or only from the perspective of one single stakeholder or sector. It is instead a development challenge that requires the cooperation, collaboration and coordination from within and outside the water sector as well as from the multiple interested parties. As important as the meaning of the concept of water governance is, countries and sectors are trying to implement it when they have still not solved some of their long-standing and rampant social and economical problems that have been confronting them for decades. In the water sector, non-functional water institutions, deficient legislations, and overall inefficiency in managing water resources in most developing countries, have been well-known constraints for decades. With the involvement of multiple actors in the arena of water resources planning, development and management, and the introduction of ethical issues such as responsibility, accountability, transparency, equity and fairness, the challenges associated in making good water governance a reality has become even more and more complex. It now remains to be seen how the countries, their governments and their societies, can make the best of the opportunity of having multi-stakeholder participation and consideration of ethical, social and environmental issues to achieve the much-needed reforms in the water sector.

Seeking improved patterns of governance within an environment of different interests, dissimilar values and norms, and many times absence of consensus about even goals and objectives, represent formidable challenges that require extraordinary measures of

coordination, cooperation and compromises not only from the different levels of governments but also from private sectors and social stakeholders in general. Therefore, the way forward for implementation of the concept of good water governance is to realise the importance of planning and implementing frameworks within specific social, economic, environmental and cultural conditions, including processes and mechanisms of interaction between state and non-state actors looking for efficiency and mutual responsibilities.

Water governance: summary of key outcomes of the workshop

Indicators for good governance were initially developed with the objective to assess the performance of public and private institutions, primarily from economic and financial viewpoints. However, as important as the concept of good governance is to all development-related activities, the fact that it is both subjective and objective, makes exceedingly difficult to develop a meaningful framework which can be implemented. In fact, there are simply too many issues related to governance that remain unresolved and somewhat nebulous and which still require better definition, appreciation and understanding. For example, if participation is important, how do we get informal institutions, including citizens, involved in decision-making that renders fruitful results? If the above sectors do get involved, can we ensure that the outcomes achieved will be useful, and better than otherwise may have been the case? Should participation be considered as an end by itself, or as a means to an end? Who should be the participants that should be involved? Should the participants be only from the area where specific water developments affect their lives, or should they include people from outside the region, or even the country? If people from outside the region, or even the country, are to be considered to be stakeholders of a project, what importance should be given to their views compared to the people from the project-affected areas? These are fundamental questions that need to be discussed and answered. Unfortunately, debates and discussions on such fundamental and complex issues have not yet been started, let alone answered.

Accountability and transparency are fundamental elements of good governance. However, how should accountability be approached and to whom should the project authorities be accountable? Equally, there is a general consensus that transparency is desirable, but to whom: government institutions, elected representatives and/or the general public? What process or processes should be instituted to ensure that accountability is genuine and relevant to the appropriate groups, especially as the transparency requirements for different groups are likely to be somewhat different?

At present, some of the common features to achieve the so-called good governance in the water sector are said to be functional institutions within a multi-sector, multi-level perspective in order to avoid major gaps or overlaps in policy, planning and funding as well as formulation and implementation of policies, laws and regulations. Management and budgetary practices are still expected to deliver services with tariff structures that balance affordability, equity and sustainability; and proper reporting and monitoring at regular intervals are yet to apply not only to formal institutions, but also to informal institutions, such as NGOs and citizens groups. Additionally, who should check that these tasks are objectively, adequately and equitably carried out?

Agricultural water management

In the field of agriculture, a challenge that seriously limits the operationalisation of the concept of water governance is the fact that the focus in the water sector is still in the construction of new projects and not yet on the management of the resource. It is still necessary to move from the construction-oriented focus to management. Only afterwards, it may be possible to understand the formal and informal nature of the elements of water governance, including its institutions, regulations, partners, and direct and indirect instruments to work towards public policy goals.

Some of the challenges in the agricultural water management sector include the lack of management of any type of transitions; the need to work with the informal nature of water economies which already exist in many countries; the fact that we have reached the upper limits of water use in many basins of the world and our systems have thus become much less flexible; that transboundary water management requires broader views which should include social and environmental concerns; and that we continue seeing water in isolation from other policy levers outside the water sector, such as the energy or food sectors, which could provide us with further insights for efficient agricultural water governance. We have mostly failed so far to align incentives to different people or institutions with different, and may even, conflicting goals and agenda.

Some prescriptions for improved water governance include treating water as an economic good; declaring water as a state property and create water rights; introducing new implementable water laws and policies; establishing effective participatory structures and processes; and managing water at the basin level.

In many countries, especially in Africa, global paradigms may have become a hindrance rather than provide solutions. Prescriptions for improved governance show too little evidence so far that the accepted paradigms are working over the long-term. Some examples include the consideration of water as an economic good in Tanzania and Sri Lanka with flat water tax tariffs; water rights in sub-Saharan Africa; overall water management at basin level; and participatory structures that still have not delivered useful results.

Tried and tested solutions developed for one context, may or may not be applicable to other locations simply because technical, social, economic and environmental conditions are very different. They may not be easily transferable. There are limits to “best practices” and we may have to start looking for good and implementable solutions such as indirect public policy instruments (Jyotigram in India), build on success from the informal sector (Zhang He in China) and promote institutional innovations that rationalize incentives and reduce transaction costs (Zhang He and Jyotigram). Successful marriage between instruments from the informal and formal sectors, are likely to result in the improvement of water infrastructure and services through improved investment patterns and management practices, and also to more formal arrangements when appropriate. Overall, it should be remembered that without good water governance, it will not be possible to achieve water security on a long-terms basis in any country.

Urban water management

From the late 1990s to the present, water management trends have included, at least in theory, the implementation of concepts such as sustainable development, river basin management and integrated water resources management. Emphasis has often been placed on multi-sector approaches, as well as on social and environmental issues, with increasing importance given to governance-related issues. In terms of water management in urban areas, attempting integrated approaches has made water management goals even more complex to implement than ever before, particularly in the context of large urban agglomerations because of their scales. With the added expectations of promoting good water governance, even more complex processes have been introduced (such as transparency and accountability, or multilevel participation and multilevel decision-making), even when it has not been possible to solve the most basic and pressing needs in terms of water supply and sanitation.

In most cities of the developing world clean water is both scarce and expensive to produce; large sectors of the population in densely populated urban areas do not have access to potable water, and even larger sectors of the population do not have access to sanitation. The situation normally includes non-revenue water, many times up to 40–60 percent, infrastructure either scarce or becoming complex and deteriorating, water supplies largely underpriced, and investments needs possibly reaching billions of dollars. All the above issues are the result of lack of appropriate water and land resources management, and adequate institutions and policies which address them beyond the short-term. An important constraint is that, in spite of its importance for development, water is not the only infrastructural development needed in urban areas: transportation, energy and housing many times take priority for the development of the cities.

There are alternatives to improve the governance of urban areas to provide citizens with better access to clean water and other services, as well as improved environmental conditions. The Organisation for Economic Co-operation and Development (OECD), for example, suggests that governance-related issues should be addressed at the metropolitan area level in order to maximize the potential of an urban region. Nevertheless, for its implementation, OECD also recognises serious limitations such as fragmentation of the administrative jurisdictions, strain on the financial and fiscal ability of local authorities, and lack of decision-making processes that are transparent and accountable, not to mention the inability for institutions to achieve coordination and communication.

Urban areas face challenges that require immediate action, and governance has become one of the most pressing ones. In order to be sustainable, urban areas need, in addition to economic growth and implementable social and environmental policies, proper governance systems which include efficient systems and adequate mechanisms for broader and meaningful participation. All of these aspects are intertwined with the various roles that water plays in urban development as an important cross-cutting contributor to all the other sectors. This is the reason why the process of water governance has become so complex and critical.

In order to ensure good water governance, it is necessary to draw lessons by analysing outcomes from cases around the world which can be considered as examples of good or bad governance. In an Asian context of urban water management, water utilities in Tokyo, Singapore and Phnom Penh stand as cases of good governance, where

remarkable progress was made within a period of 10 to 20 years, albeit over different periods of time. What were the enabling conditions that ensured that such remarkable progress could be made within only one or two decades? For example, Phnom Penh Water Supply Authority can be considered to be an outstanding institution by any standard in the developing world. There are also cases of not so good water governance in several Middle Eastern countries, where, in spite of the claim that severe water scarcity problems exist, the water utilities still have 40 to 60 percent of unaccounted for losses, and daily per capita water is often more than 250 litres, which are nearly double of several European cities.

What is urgently needed is some “reverse engineering” to determine why and how cities like Tokyo, Singapore and Phnom Penh succeeded to make remarkable transformations within a limited timeframe as a result of which they have become world class utilities. Similarly, it will be desirable to find out why many other utilities have failed, especially where availability of funds has not been a major issue for the last several decades. Such reverse engineering is likely to throw new light on good water governance in the urban sector, which may be very different to the current somewhat academic debate on this topic. The Institute of Water Policy of the Lee Kuan Yew School of Public Policy and the Third World Centre for Water Management are now conducting such a joint study on the reverse engineering of Singapore and Phnom Penh utilities. Preliminary results indicate that, at least for these two utilities, the current understanding debate of good water governance may have to be reconsidered, rephrased and restructured. Equally, the Asian Development Bank and the Institute of Water Policy of the Lee Kuan Yew School of Public Policy are carrying out activities like identification and analyses of case studies of good practices for urban water management in Asia; hosting regional meetings on improving water governance; and developing an executive leadership programme for urban water managers. ADB is also preparing a report on the Asian Water Development Outlook for the 2010 Asia Pacific Water Summit. The focus of this summit is on water security, since there will be no long-term water security without good water governance.

Panel Discussions

The main issues discussed in the panel session can be summarised as follows.

There is not “one” global structure that can be put in place to ensure good governance in the water sector. This is because societal considerations are different in the different countries and thus each require their own specific solutions. Water governance requires particular policies (including those on appropriate pricing for each city), and good arrangements to develop partnerships between various public entities, between public entities and the private sector, and engagement of the society seeking for support and active involvement.

Broadly speaking, water governance should consider both inter-sectoral water issues and cross-sectoral concerns such as those from the energy, agricultural or environmental sectors. In terms of food security, considerations could broaden from a narrow view on only agricultural water use, to policy considerations on its overall impact on water management, and also on the possible role that virtual water can play in the solution.

The implementation of the concept of water governance requires that the entire water cycle is considered as a system, an overall “system thinking” that is urgently needed, where the entire water cycle is considered and managed under one institution and not fragmented under several institutions, each with different agendas and clients, and overlapping jurisdictions. This often contributes to interinstitutional rivalries and conflicts which, in turn, result in poor governance.

Within this “system thinking”, centralised systems could support the development of strong local institutions that are able to provide better services to all sectors of the society. This includes the role that central governments can play to ensure that local governments have access to financial markets and that targeted subsidies are available so that local governments can plan for their operation on a longer term basis.

Functional and efficient institutions also require partnerships between public and private sectors that combine healthy competition and effective regulations. In fact, regulation and operation of water utilities by the public sectors have provided them with the opportunity to develop the expertise necessary to monitor and regulate effectively the performance of the private sector. Should water supply be entirely controlled by the private sector, the governments would lose the opportunity to develop human resources who are skilled on the overall management of water utilities and thus on the efficient provision of services.

Constraints for efficient and functional water utilities include not only lack of experienced personnel or inadequate finances available, but the fact that most state actors do not have clear targets in terms of water supply and sanitation, and many times they do not even have a clear appreciation of the resources under their control and thus their most efficient use. In terms of pricing policies, there is no agreement as to what is the best alternative: sustainable cost recovery or marginal cost pricing. This is an ongoing debate, and no consensus is likely to be reached in the near future. There are differences of opinions on government interventions, subsidies, marginal pricing, water conservation taxes, flat water tariffs, and ability to pay of the poorest population. These are best decided on case by case basis, depending on the specific conditions of each city and their social, political, economic and environmental requirements.

Provision of services does not only include operational alternatives, but a very complex series of issues that have to be carefully adapted to each specific case, and which include management aspects, governance concerns, and mostly shared decision-making between several actors to suit the local conditions, develop a mix of policies and instruments and encourage human resources skills where the acceleration of socio-economic development is affected by the quality of human resources available. For example, Singapore, a city state which has managed to close the water cycle most efficiently, has implemented specific water demand and supply policies which would not be easily replicable as a whole elsewhere, but which are worth learning from as an example of successful implementation of water governance. In an Asian context, the Institute of Water Policy of Lee Kuan Yew School of Public Policy and the Third World Centre for Water Management has embarked on a study of reverse engineering in order to define what constitute good governance in the urban settings of the successful Asian cities of Singapore, Tokyo and Phnom Penh, from an implementation viewpoint. The study, instead of defining what constitutes good water governance in an urban context which most times becomes mostly an academic exercise, is focusing on what are the

essential qualities that have contributed to good water governance in the above three cities. The results of this study will be an educational experience for other cities which could learn the reasons why these three cities have achieved good governance when most others have failed.

As mentioned, two of the pillars of governance are transparency and accountability in the understanding that they will help to build an efficient system that will be sustainable over the long-term. Instruments such as dissemination of knowledge and information are considered to enhance accountability and transparency of operations both in the public and private sectors and, as such, they should be encouraged both within the institutions and also towards the public. Since governance-related issues are not in the exclusive domain of the government any more, the increasing participation of the private sector and societal actors has made decision-making an exercise which has proved to be exceedingly complex and which still needs to be built.

The three papers presented at the workshop are now being modified on the basis of the discussions at Singapore and additional reflections. The final papers and the results of the Panel discussion will be published as a special theme issue on water governance in the International Journal of Water Resources Development. It is expected that this issue will be published before the next Singapore International Water Week is convened in June 2010.

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