

*If the misery of our poor be caused not
by the laws of nature, but by our
institutions, great is our sin.*

Charles Darwin

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Line of buckets waiting to be filled by a slow tap at a water distribution point in Kansay, near Ngorongoro, Tanzania. People will carry these buckets of water up to 3 miles each way to and from their homes

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CHAPTER 2

The Challenges of Water Governance

By

UNDP

(United Nations Development Programme)

With

IFAD

(International Fund for Agricultural Development)



Top: Hydraulic drilling stations, equipped with manual pumps, are gradually replacing the less sanitary, traditional village wells, as seen here in northern Côte d'Ivoire.



Above: Pipeline in the outskirts of Gangtok, Sikkim, India

Below: Fishermen preparing their nets for fishing on Surma River, Bangladesh



Key messages:

In many countries water governance is in a state of confusion: in some countries there is a total lack of water institutions, and others display fragmented institutional structures or conflicting decision-making structures. In many places conflicting upstream and downstream interests regarding riparian rights and access to water resources are pressing issues that need immediate attention; in many other cases there are strong tendencies to divert public resources for personal gain, or unpredictability in the use of laws and regulations and licensing practices impede markets and voluntary action and encourage corruption.

- Good water governance is a complex process, influenced by a given country's overall standard of governance, its customs, mores, and politics and conditions, events within and around it (e.g. conflict) and by developments in the global economy. There is no blueprint for good water governance.
- Reforms of water governance are being driven by internal pressures on water resources and environmental threats, growing population and the focus of the international community on poverty alleviation and socio-economic development (e.g. Millennium Development Goals). However the rate of reform is patchy and slow.
- There are significant and serious gaps in developing countries between land and water use policies and governance *and* between policy-making and its implementation, often due to institutional resistance to change, corruption, etc.
- In the water sector, as worldwide, corruption is pervasive, though shortage of information about its extent in the water sector prevents a full picture from being obtained. It has had little attention to date in the water sector and much remains to be done.
- Increasing recognition is accorded to the right to water, in terms of a human right to a supply of safe water, the role of water rights in helping to deal with local competition for water and in dealing with social, economic and environmental problems.
- The privatization of water services displays uneven results. Many multinational water companies are currently decreasing their activities in developing countries. The potential of local small-scale companies and civil society organizations to help improve water services has largely been overlooked by governments and donors.
- Many governments recognize the need to localize water management but fail to delegate adequate powers and resources to make it work. Local groups and individuals are often without access to information, are excluded from water decision-making, and thus lack a capacity to act.



Part 1. Water Governance Today

A basic insight – which has not yet garnered enough attention – is that the insufficiency of water (particularly for drinking water supply and sanitation), is primarily driven by an inefficient supply of services rather than by water shortages. Lack of basic services is often due to mismanagement, corruption, lack of appropriate institutions, bureaucratic inertia and a shortage of new investments in building human capacity, as well as physical infrastructure. Water supply and sanitation have recently received more international attention than water for food production, despite the fact that in most developing countries agriculture accounts for 80 percent of total water use. It is increasingly agreed in development circles that water shortages and increasing pollution are to a large extent socially and politically induced challenges, which means that there are issues that can be addressed by changes in water demand and use and through increased awareness, education and water policy reforms. The water crisis is thus increasingly about how we, as individuals, and as part of a collective society, govern the access to and control over water resources and their benefits.

In many places of the world, a staggering 30 to 40 percent of water or more goes unaccounted for due to water leakages in pipes and canals and illegal tapping

Water governance is an overarching theme of the World Water Development Report. This chapter will present the state of and trends in key governance variables, such as ongoing water reform work and its implementation, the impacts of corruption on water development and water governance from below. Citizens and organized interests are demanding much more transparency and influence in water decision-making.

It will also illustrate that very complex and dynamic events and processes external to the water sector define how we relate to water. Changes in water use patterns are continuously redefined through such things as culture, macroeconomic and development trends, processes of democratization and social and political stability or unrest. This chapter will also look at how water governance is undertaken in practice and discuss and analyse various settings related to water and power politics. Examples are provided that point at complex urban and rural water use dynamics, the increasing need for integrated approaches to water, the range of international targets for local actions and the multitude of stakeholder interests. Finally, some overarching challenges are identified, which are taken up by the ensuing chapters and relate to specific water governance issues, challenges and potential solutions with respect to their fields.

1a. The water–poverty link

How societies choose to govern their water resources has profound impacts on people's lives and their ability to prosper, as well as on environmental sustainability. On the ground, this means that some groups or individuals will benefit while others will lose out when water allocation changes are made. Having a fair water

provision can, for many people, be a matter of daily survival. How and for whom water is being governed has impacts on river flows, groundwater tables and pollution levels, affecting both upstream and tail-end water users. The capacity of countries to pursue poverty reduction strategies and Integrated Water Resources Management (IWRM) plans, meet new demands and manage conflicts and risks depends to a large extent on their ability to promote and put into place sound and effective governance systems.

Improved governance is essentially about improving people's livelihood opportunities, while providing the backbone for governments worldwide to alleviate poverty and increase the chances of sustainable development. **Box 2.1** provides an example of how governance, development and livelihood opportunities can be linked in practice.

One of the most striking features of the link between water and poverty is that each year, thousands of African and Asian children die from water- and sanitation-related diseases (see **Chapter 6**). In the poorest countries, one out of every five children fails to reach his or her fifth birthday, mainly due to infectious and environmental diseases that arise from poor water quality. Over the last two decades, the number and scale of water-related disasters – either too much water (floods) or too little (droughts) – have increased greatly because of changing climate patterns (see **Chapters 4** and **10**). Many countries in sub-Saharan Africa and the Indian and Pacific oceans, along with low-lying Small Island States, are the most vulnerable to climate change, because widespread poverty limits their capabilities to adapt to climate variability. Too

Over the last two decades, the number and scale of water-related disasters (either too much water or too little) has greatly increased due to changing climate patterns

often, those affected by such disasters are the poor, who do not have the means to escape poverty traps.

1b. The four dimensions of water governance

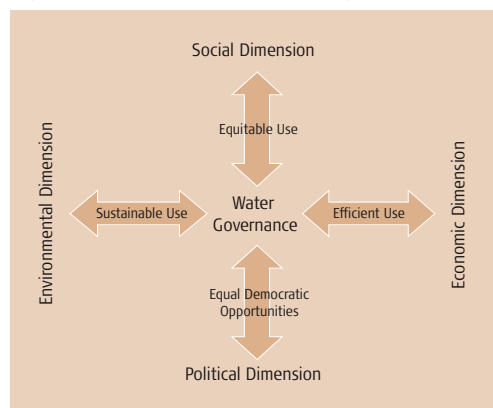
The conceptual development of water management has paved the way for an IWRM approach (see **Figure 2.1**), which is considered by many as an appropriate vehicle to resolve the world's water challenges. As defined by the Global Water Partnership (GWP), IWRM is 'a process which promotes the co-ordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems' (GWP, 2000). IWRM should be seen as a comprehensive approach to the development and management of water, addressing its management both as a resource and the framework for provision of water services (see also **Chapter 1**).

- The social dimension points to the equitable use of water resources. Apart from being unevenly distributed in time and space, water is also unevenly distributed among various socio-economic strata of society in both rural and urban settlements. How water quality and quantity and related services are allocated and distributed have direct impacts on people's health as well as on their livelihood opportunities. It is estimated that daily water use per inhabitant totals 600 L in residential areas of North America and Japan and between 250 L and 350 L in Europe, while daily water use per inhabitant in sub-Saharan Africa averages just 10 L to 20 L. Currently, 1.1 billion people lack sufficient access to safe drinking water, and 2.6 billion people lack access to basic sanitation (see **Chapter 6**). People in slums have very limited access to safe water for household uses. A slum dweller may only have 5 L to 10 L per day at his or her disposal (see **Chapter 3**). A middle- or high-income household in the same city, however, may use some 50 L to 150 L per day, if not more. Similarly, water for food production often benefits large-scale farmers to the detriment of small-scale and landless farmers (see **Chapter 7**).
- The economic dimension draws attention to the efficient use of water resources and the role of water in overall economic growth (see **Chapter 12**). Prospects for aggressive poverty reduction and economic growth remain highly dependent on water and other natural resources. Studies have illustrated that per capita incomes and the quality of governance

are strongly positively correlated across countries. Better governance exerts a powerful effect on per capita incomes. As recently as 200 years ago, per capita incomes were not very different across countries. Today's wide income gaps across countries reflect the fact that countries that are currently rich have grown rapidly over the past two centuries, while those that are poor have not. It has been suggested that a substantial fraction of these vast income gaps is due to 'deep historical differences in institutional quality' (Kaufmann and Kraay, 2003). Water use efficiency in developing countries is very low in both urban and rural areas, and there is great room for improving the water situation through improved water distribution and management.

- The political empowerment dimension points at granting water stakeholders and citizens at large equal democratic opportunities to influence and monitor political processes and outcomes. At both national and international levels, marginalized citizens, such as indigenous people, women, slum dwellers, etc., are rarely recognized as legitimate stakeholders in water-related decision-making, and typically lack voices, institutions and capacities for promoting their water interests to the outside world (see **Chapter 13**). Empowering women, as well as other socially, economically and politically weak groups, is critical to achieving more focused and effective water management and actions to ensure greater equity.
- The environmental sustainability dimension shows that improved governance allows for enhanced sustainable use of water resources and ecosystem integrity (see

Figure 2.1: Dimensions of water governance



Source: Tropp, 2005.

BOX 2.1: GENDER, POVERTY, IMPROVED GOVERNANCE AND WATER ACCESS IN PUNJAB, PAKISTAN

In Punjab, women and children are often the most affected by the lack of access to water. The Government of Pakistan has implemented the Punjab Rural Water Supply and Sanitation Sector Project. The project has provided safe drinking water and drainage facilities to about 800,000 people by using a community-based, demand-driven approach, wherein the local people participated from planning through construction and eventually became fully responsible for operation and maintenance work. The project also

implied strict implementation of water fees. Both men and women formed and were part of community-based organizations to implement the water-related activities and promote other development and livelihood activities. The main impact of the project was to free women and children from the hard labour of carrying water. Other positive impacts included increased household income by an average of 24 percent. It was reported that 45 percent of the time saved from carrying water is spent on income-generating

activities. In addition, there is a reported 90 percent decrease in water-related diseases and as much as an 80 percent increase in the enrolment of school children in some communities. The Punjab project demonstrates that it is possible to combine an efficient and large-scale extension of services with actions to improve governance and that it is critical for any development effort to involve both women and men.

Source: Soussan, 2003.

Chapter 5). The sufficient flow of quality water is critical to maintaining ecosystem functions and services and sustaining groundwater aquifers, wetlands, and other wildlife habitats. A worrisome sign is that water quality appears to have declined worldwide in most regions with intensive agriculture and large urban and industrial areas (see **Chapters 7** and **8**). With the reduction and pollution of natural habitats, the diversity of freshwater flora and fauna is becoming increasingly threatened. Poor people's livelihood opportunities, in particular, depend directly upon sustained access to natural resources, including water – especially since they tend to live in marginalized areas that are prone to pollution, droughts and floods. The essential role of water for maintaining a healthy environment is being increasingly emphasized in the change of attitudes towards wetlands, which is an encouraging sign.

Decisions about water are being made by the minute around the world within urban and rural households, neighbourhoods, small businesses, corporate boardrooms, and in the offices of local, state and national governments, as well as on the international scale. The particular settings vary, as do the people and groups involved.

Water decisions are anchored in governance systems across three levels: government, civil society and the private sector. Facilitating dynamic interactions among them is critical for developed and developing countries alike.¹ The water sector is a part of a broader society and its politics and is thus affected by decisions that lie outside of the water sector. The governance of water in

particular can be said to be made up of the range of political, social, economic and administrative systems that are in place, which directly or indirectly affect the use, development and management of water resources and the delivery of water services at different levels of society. Governance systems determine who gets what water, when and how and decide who has the right to water and related services and their benefits. The representation of various interests in water decision-making and the role of politics are important components in addressing governance dynamics.

Water is power, and those who control the flow of water in time and space can exercise this power in various ways. It is often claimed that clean water tends to gravitate towards the rich and wastewater towards the poor. Sandra Postel has aptly noted that 'water grabs and power plays are legendary in the western United States'. The water tensions of the American west have been captured in popular movies such as *Chinatown*, where farmers were being 'sucked dry' by Los Angeles (Postel, 1999). As water demands and uses increase at exponential rates due to population growth, stakes rise in many parts of the world. As opportunities to expand water supplies decrease, competition over current supplies escalate, creating the need for improved governance (see **Chapter 11**).

The way in which societies govern their water resources has profound impacts on settlements, livelihoods and environmental sustainability, yet governance has traditionally not received the same attention as technical issues. Any water governance system must be able to allocate water to ensure food and security but also be

Water is power, and those who control the flow of water in time and space can exercise this power in various ways

1. The United Nations Development Programme (UNDP) defines governance as 'the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises the mechanisms, processes and institutions, through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences'.

Annually, between 1995 and 1999, governments around the world privatized an average of thirty-six water supply or wastewater treatment systems

able to assess for whom and what purposes water is provided. In practice, trade-offs have to be made and the allocation of benefits and costs clarified. In short, governance is about making choices, decisions and trade-offs. Governance addresses the relationship between organizations and social groups involved in water decision-making, both horizontally, across sectors and between urban and rural areas, and vertically, from local to international levels. Operating principles include downward and upward accountability, transparency, participation, equity, rule of law, ethics and responsiveness (see **Box 2.2**). Governance is therefore *not* limited to 'government' but includes the roles of the private sector and civil society. The character of relationships (and the formal and informal rules and regulations guiding such relationships) and the nature of information flow between different social actors and organizations are both key features of governance (Rogers and Hall, 2003; GWP, 2003).

Water governance is sometimes equated with the actual water policy in place, but governance is more; it is about the exercise of power in policy-making and whether or not to implement particular policies. Which actors were involved in influencing the policy in question? Was the policy developed in a participatory and transparent fashion? Can revenues and public and bureaucratic support be raised to implement the policy? These are just some of the important questions involved, but they indicate that governance is about the process of decision-making, its content and the likelihood of policies and decisions to be implemented. To be able to understand why water is allocated in different ways, it is necessary to look into the dynamics of policy and decision-making, informal and formal legislation, collective action, negotiation and consensus-building and how these interact with other institutions.

1c. Privatization, conflicts and democratization

The past decades have witnessed tremendous social, political and economic changes. The end of the cold war and the process of decolonization continue to shape current societal events. Globalization and the increasing speed of information exchange have had tremendous impacts on societies. Terrorism has also had a major impact on how countries interact with each other and on how governments interact with their citizens. Some commentators worry that we are heading towards a more closed 'barbed-wire' society in an effort to keep out

threats, while others feel that our new means of communication and economic growth make for more open societies (see **Chapter 1**).

The way we perceive and govern our water resources is also rooted in culture. But although water is considered by most cultures to be something critical for all life, with a prominent place in cultural and religious beliefs, it is something of a paradox that water is often taken for granted and is increasingly polluted, with many people having limited access to clean drinking water and water for productive activities.

The development of governance and management systems within the water sector is closely related to overall development trends in which the role of the state has shifted from the provider to the enabler of development and welfare (the 'rolling back of the state'). By 2000, national, provincial and local governments in ninety-three countries had begun to privatize drinking water and wastewater services. Between 1995 and 1999, governments around the world privatized an average of thirty-six water supply or wastewater treatment systems annually (WRI, 2003). Despite the push for increased privatization, the water-services sector remains one of the last public 'bastions'. Water still remains an area that is generally heavily dependent on public investment and regulations in developed and developing countries alike.

War and social and political unrest demolish people's lives and livelihood, as well as destroy important water resources, disrupting water services and impacting negatively on governance. Between 1990 and 2000, 118 armed conflicts worldwide claimed approximately 6 million lives. War will have long-term effects and will continue to affect people's livelihood opportunities and access to natural resources and public services many years after the actual conflict has ended. In 2001 it was estimated that some 12 million refugees and 5 million 'internally displaced persons' were forced to settle in resource-scarce areas, putting further pressure on people, water and the environment (WRI, 2003). Recent conflicts in Kosovo, Afghanistan and Iraq have led to the destruction of economically vital water infrastructures, and many people are deprived of safe drinking water and basic sanitation as well as sufficient water for productive uses (WRI, 2003; see also **Chapters 1, 3 and 11**).

The resolution of conflict and social and political instability can sometimes yield unexpected opportunities

BOX 2.2: CRITERIA FOR EFFECTIVE GOVERNANCE

- **Participation:** all citizens, both men and women, should have a voice, directly or through intermediary organizations representing their interests, throughout the processes of policy- and decision-making. Broad-based participation hinges upon national and local governments following an inclusive approach.
- **Effectiveness and efficiency:** processes and institutions should produce results that meet needs while making the best use of resources.
- **Responsiveness:** institutions and processes should serve all stakeholders and respond properly to changes in demand and preferences, or other new circumstances.
- **Transparency:** information should flow freely in society. Processes, institutions and information must be directly accessible to those concerned.
- **Rule of law:** legal frameworks should be fair and enforced impartially, especially laws on human rights.
- **Integration:** water governance should enhance and promote integrated and holistic approaches.
- **Equity:** all groups in society, both men and women, should have the opportunities to improve their well-being.
- **Accountability:** governments, the private sector and civil society organizations should be accountable to the public or the interests they are representing.
- **Ethical considerations:** water governance has to be based on the ethical principles of the societies in which it functions, for example, by respecting traditional water rights.
- **Coherency:** taking into account the increasing complexity of water resources issues, appropriate policies and actions must be coherent, consistent and easily understood.

Source: UN, 2003.

for fundamental changes in society that can lead to improved policy-making, which in turn can benefit a nation's water prospects (see **Chapter 14**). The political changes in South Africa in the early 1990s and the emergence of a democratic system have allowed for reform of the water sector in the areas of policy, organizational structure, water rights and legislation. South African water reform is a very comprehensive and innovative approach to water management, allowing for more holistic, people-centred and ecological approaches to the governance of water. It also aims at redistributing water resources to the benefit of poor people.

Democratization, macroeconomic changes, population growth and other demographic changes, and social and political instability often have much greater impacts on water use and demands than any water policy itself. Global market conditions and trade regimes are factors that affect crop choices and thus also have serious implications for water use and demands in agriculture. Market liberalization can contribute to improving the water situation for many people but can also increase pressures to overexploit water and the environment. The importance for water professionals to increase their understanding of social, economic and political conditions external to the water sector that have both

direct and indirect impacts on how water is being used and governed is highlighted in Waterbury's study of cooperation among the Nile Basin countries (2002; see also **Chapter 11**).

Improved governance and water shortages: A double challenge

Increasing water demands will lead to a decline of per capita supply in the future. Currently, an estimated twenty-six countries with a combined population of more than 350 million people are located in regions with severe water scarcity where the available water resources seem to be sufficient to meet reasonable water needs for development activities, *but* only if these countries take appropriate water demand and supply management measures. In many countries, there will also be additional, sometimes severe, local water scarcities, even within countries that have sufficient aggregate water resources, such as within the US and India.

A comparison of water shortages and governance challenges shows that many countries, particularly in the Middle East and North Africa, are facing a double challenge. It is also evident that countries that have bountiful water resources are facing governance challenges to provide water and sanitation services *and*

...partial democratization, without the appropriate checks and balances can, potentially lead to an increase in the exploitation of water, land and forests through patronage politics

protect water resources. For example, countries in Central Africa, which have ample water resources, have not been able to provide their citizens with a sufficient supply of water; hence the point that water provision is often less a question of available water resources than of properly functioning institutions and proper infrastructure management. Despite limited democratic provisions in some countries, water can still be managed in more democratic ways at the local level, such as through water-user associations or other types of local organizations.

It has been suggested that partial democratization, without the appropriate checks and balances, can, at least in the short run, lead to an increase in the exploitation of water, land and forests through patronage politics. It has also been suggested that within well-established democratic polities, politicians can make environmental 'pay-offs' to groups that financially support the campaigns of a particular party or candidate. These 'pay-offs' can include, for example, circumventing certain environmental regulations and allowing the lax enforcement of pollution control (WRI, 2003). Despite the fact that democracy has flourished in Western Europe, more than half of European cities are currently exploiting groundwater at unsustainable rates. Chronic water shortages already affect 4.5 million people in Catalonia, where authorities are pressing for the construction of a pipeline to divert water from the Rhone in France to Barcelona. It is thus apparent that many water development 'principles' – IWRM, participation, transparency, community involvement and decentralization – require improved governance in order to be successfully implemented. It is unlikely that effective participation and transparency within the water sector will take place unless there are overall changes in how societies and political systems function.

Water policy reform, IWRM implementation and meeting the Millennium Development Goals (MDGs) all require that we address issues in the water and development interface, as well as issues that have traditionally been considered outside the scope of water. If we wish to increase stakeholder participation, make decentralization more effective and hold water agencies and utilities accountable, enhanced democratization is required. Yet fairly little is known about the local and practical links between water shortages and democratization. The general notion is that democratization is beneficial to improved water governance and would open up for more transparency, decentralization and participation. But in

which ways? How big an impact would it make? And what type of democratization makes the biggest impact? The cases of India (low levels of water services) and southern Spain (dwindling groundwater) indicate that democracy itself is not sufficient. It also depends on how political rights and civil liberties are exercised, as well as on other factors, such as demographic development, economic growth, institutional effectiveness and how welfare is generated and distributed within and between societies. This does not mean that water managers should refrain from trying to make a difference, but rather underlines an urgent need to collaborate with new actors outside the water realm and establish more inclusive water development networks. Political change has to begin somewhere, and in some cases the promotion of improved water governance may even serve as an avant-garde for inducing broad-based reform. It has been pointed out that cooperative water development in the Netherlands in the earlier part of the twentieth century was an important part of nation-building for the modern Dutch welfare state (Delli Priscoli, 2004).

Improved governance and impacts on water resources management and related services are both complex and dynamic. If a country lacks essential freedoms, like the freedom of speech and the right to organize, promoting participatory approaches in water development programmes is compromised. If citizens cannot access basic information on water quantity and quality, it seriously curtails their chances of halting environmentally unsound water projects or to hold relevant government agencies accountable. In southern India, due to tensions over sharing water from the Cauvery River between the states of Karnataka and Tamil Nadu, information on basic hydrological data is frequently withheld by the responsible authorities (see **Chapter 11**).

1d. International responses to improve water governance

The concept of water governance has gained a lot of ground and evolved over the past decade. Within the international political arena the concept has evolved from a political taboo in North–South development cooperation dialogue to gain wider acceptance as a critical issue at international, national and local levels. The framing of water challenges in terms of governance has allowed a broadening of the water agenda to include the scrutiny of democratization processes, corruption, power imbalances between rich and poor countries and between rich and poor people. Governance and politics are

BOX 2.3: DEVELOPING INDICATORS FOR ASSESSING GOVERNANCE

During recent years, the international water community has centre-staged governance as the most important challenge to improve water management and services provision. A serious weakness is that very few, if any, robust indicators exist to monitor and assess trends for water governance. A key challenge for all development actors is to publish disaggregated data on water governance issues to assess if countries are on the right track in their reform efforts. Water governance indicators should be useful to national stakeholders as a tool for priority setting, and strengthening the responsiveness of institutions and processes to the water needs of water users.

There has been great progress in quantifying and standardizing governance indicators. The progress in research, measurement and indicator development has helped identify the many components of governance. Improved governance can result in higher economic growth, more productive investments, lower transaction costs and more effective implementation of policies and legislation (UN Millennium Project, 2005). Thus, if a country's governance is improved through increased transparency, strengthening of local democracy, improvements in the judiciary system etc., such changes will also spill over to the water sector. But due to limited research and indicator development there is currently little evidence that can help us understand to what extent and how this is occurring. It is thus critical that the water governance knowledge base be enhanced on, among other things: What type of governance is favourable to improved water resources management and water services provisions? Are some governance components more critical to address than others to improve water supply and sanitation coverage as well as the sustainable use of water resources?

The development and application of appropriate water governance indicators will make a major contribution to the type of water policy interventions that are required by governments and the whole development community. Here we highlight some attempts and definitions of good governance.

■ **Country policy and institutional**

assessments: The World Bank evaluates economic management (debt, macroeconomic and fiscal policies), structural policies (trade, financial, private sector strategies), policies for social inclusion and equity and public sector management and institutions (rule of law, financial management, efficiency of public administration, transparency, accountability, corruption).

■ **Freedom House:** The Freedom in the World rankings measure political freedoms and civil liberties. Political freedoms are measured by the right to vote, compete for public office, and elect representatives who have a decisive vote on public policies. Civil liberties include the freedom to develop opinions, institutions, and personal autonomy without interference from the state.

■ **International Country Risk Guide:** The International Country Risk Guide ranks political, economic, and financial risks. Political risks include government stability, socio-economic conditions, investment profile, corruption, conflict, quality of bureaucracy, democratic accountability, law and order, and the presence of religion and the military in government. Economic risk measurements include per capita gross domestic product (GDP), GDP growth, inflation, and fiscal policies. Financial risk measurements include

foreign debt, trade balances, official reserves, and exchange rate stability.

■ **Governance Matters:** These data sets, produced by the Global Governance group at the World Bank Institute, rank seven aspects of governance: voice and accountability, political stability, absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.

■ **Millennium Challenge Account:** The Millennium Challenge Account was announced by the US Government in 2002 as a new foreign aid programme to assist countries that are relatively well governed. Governance is measured based on three broad categories: ruling justly, investing in people, and encouraging economic freedoms. Ruling justly is measured by scores on civil liberties, political freedoms, voice and accountability, government effectiveness, rule of law, and control of corruption. Investing in people is measured by public spending devoted to health and education, primary completion rates, and immunization rates. Encouraging economic freedoms is measured by fiscal and trade balances and the investor climate.

■ **Transparency International:** Transparency International ranks countries on the basis of a Corruption Perceptions Index, a composite index that measures the degree to which corruption is perceived to exist among public officials, politicians and the private sector.

Source: UN Millennium Project, 2005. For additional information on existing governance indicators see, UNDP, 2004c. This guide provides, among other things, an outline of existing governance-related indicators.

10 percent – or some US \$300 million – of the total aid in the water sector is directed to support the development of water policy, planning and programmes

Life on the Mekong River, Viet Nam



increasingly viewed as an integral part of water crises and thus as a part of resolving them (see **Box 2.3**).

An important part of the work of bilateral and multilateral organizations has been to support the enhancement of capacities to strengthen national and local water agendas and policies, investment priorities, while providing useful examples for scaling up activities. Despite these efforts, water is not considered a main priority in most countries. Investment in the water sector is still at a very low level in developing countries, and despite promises of action-oriented outcomes by the world's governments at the WSSD, much remains to be done about water governance issues in donor budgets.

According to statistics from the Organisation for Economic Co-operation and Development (OECD), total aid to the water sector during recent years has averaged approximately US \$3 billion a year. An additional US \$1 to 1.5 billion a year is allocated to the water sector in the form of non-concessional lending, mainly by the World Bank.

Over three-quarters of the aid to the water sector is allocated to water supply and sanitation. The bulk of the aid for water supply and sanitation is allocated to a handful of large projects undertaken in urban areas. While such support is, of course, much needed and desired, it is disheartening from a governance point of view that only about 10 percent – or some US \$300 million – of the total aid in the water sector is directed to support the development of water policy, planning and programmes.

The statistics also show that many countries where a large portion of the population have insufficient access to safe water received very little of the aid. Only 12 percent of total aid to the water sector in 2000–01 went to countries where less than 60 percent of the population has access to an improved water source, which includes most of the least developed countries. On the positive side, aid allocated to various types of low-cost and small-scale technologies (for example, treadle pumps, gravity-fed systems, rainwater harvesting, sustainable small-scale sanitation, etc.) seems to be increasing (OECD, 2002).

In 1999, the World Bank and the International Monetary Fund (IMF) started to develop a new framework for giving low-interest loans and debt relief to forty-two of the poorest countries in the world. The poor countries that want to be a part of this must formulate and put in place what is called a Poverty Reduction Strategy Paper (PRSP). The strategy is supposed to indicate how a government will use the funds for targeted poverty reduction in their country. The process leading to a PRSP is also supposed to be based on broad multi-stakeholder and participatory processes for their design, implementation and monitoring. It is seen as critical that PRSPs are driven and owned by the forty-two countries in question. In essence, the PRSPs represent a means of securing resources for development priorities and serve as countries' long-term development strategy. Both multi- and bilateral donors are increasingly using PRSPs to coordinate their development cooperation and to achieve coherence in development objectives with recipient governments. Considering the fact that PRSPs represent long-term development strategies, it is worrisome that water resources issues and related services have so far received very low priority in their design. Two PRSP assessments show that the key initial planning and resource commitments needed to achieve water-related targets are not being met. Water targets are not linked to key strategies that prioritize and fund action (see **Box 2.4**).

Within the water sector, there is a widespread belief that we now have most of the needed principles in place in order to make a lasting improvement to the world's water resources situation, which will also make a major contribution to the overall work of alleviating poverty. What is lacking today are the concerted actions and the means for effective implementation of various water policies and development programmes. The implementation of countries' existing water policies would go a long way in meeting the MDGs and the water targets set in Johannesburg.

BOX 2.4: WATER IN POVERTY REDUCTION STRATEGY PAPERS (PRSPs)

A recent study by the Overseas Development Institute (ODI) and WaterAid on the extent to which water supply and sanitation (WSS) was given priority in PRSPs in sub-Saharan Africa concluded: 'WSS had been inadequately reflected both in terms of the process of PRSP preparation and the content of emerging PRSPs'. In total, seventeen African PRSPs were examined, and of these, only Uganda showed a high level of priority to water supply and sanitation (see **Chapter 14**). This is surprising, given the international prominence given to these issues through the MDG on water and sanitation and a strong demand from rural and urban communities to urgently improve water-related services. There are several reasons that can explain this, including a limited understanding of the social and economic benefits of improved water and sanitation, weak poverty diagnosis and limited dialogue and interaction between central ministries, local

governments and local communities within the sector. In other words, water supply and sanitation issues are under-represented in PRSPs, partly because the water sector has failed to articulate the needs and potential impacts on poverty of investments in this sector and partly due to critical national decision-makers' limited understanding of the issues.

A water resources assessment of nine Asian PRSPs found similar results. In the Asian cases, water resource issues, such as floods and droughts, as well as water supply and sanitation and irrigation, were frequently present in the analysis of issues in the PRSPs but were more rarely reflected in the programmes for action or priorities for investment. The failure of key water advocates and decision-makers has again been cited as the main reason for this. However, it is important not to forget key economic decision-makers outside the water sector, as well as their

failure to fully appreciate the importance of improved water resources management and water supply and sanitation for social and economic development. A wider assessment of forty interim and full PRSPs by the World Bank confirms this. The assessment showed that natural resources management and environmental protection were only included in limited ways. There were some exceptions, however, like in Mozambique where the protection and management of environmental and natural resources was seen as being prioritized. The assessment also indicated that the result for full or final PRSPs was slightly better than for the interim version, suggesting that priority issues of natural resources and environment improved as consultations were wider and more thorough.

Sources: Frans and Soussan, 2003; Bojò and Reddy, 2002; Slaymaker and Newborne, 2004.



Training around a new water pump with an instructor during water and sanitation programme in Budari, Uganda



Water policies and reforms have too often been driven by assumptions about the need to increase supplies through investing in physical infrastructure

Part 2. Water Governance in Practice: Trends in Reform and Rights

Governance is one of the biggest challenges within the water sector: Why and how are certain decisions made? What stakeholders are involved? What principles, rules and regulations (formal and informal institutions) apply? Governance is process-oriented and thus intrinsically linked to politics and preoccupied with how various actors relate to each other. Because of the varying characteristics of water resources and the myriad socio-economic and political frameworks, governing mechanisms vary considerably across countries, including differences such as the reformed items, the pace at which countries are moving towards implementing water reforms, the level of the reform and the degree of targeting environmental and social objectives.

2a. National water policies in the making

Reform of the water sector is now taking place in many countries around the world. Reasons for reforms can vary according to the particular situation. In most cases, water reforms in a particular sector appear to be associated with a larger reform agenda. For example, pricing reforms are often complicated by financial constraints and cost recovery affects the fiscal budget. In Pakistan, the central government has to subsidize the budgets of the irrigation departments and in Morocco the public budget used to be the sole source of funding of water services provided mainly by irrigation districts. The Republic of Yemen, where macroeconomic measures accompanied water reforms, provides a good example of the importance of having a wide-ranging agenda for reform (Wambia, 2000; Diao and Roe, 2000; Ward, 2000). In the case of South Africa, water reform was made part and parcel of the overall political changes in the early 1990s (see **Chapter 14**).

Water policies have too often been driven by assumptions about the need to increase supplies through investing in physical infrastructure. Current water sector reform, particularly in developing countries, has increasingly tried to balance issues of infrastructure and technology with governance and management issues, such as multi-stakeholder participation, as well as measures for enhancing demand management, decentralization and various elements of integrated and basin management approaches. Another example includes water reform in Nicaragua, where current water legislation covers a wide range of issues from water rights, participation and economic incentive instruments to technology.

In recent water sector reform – in South Africa, Zimbabwe, Kazakhstan and the European Union (EU) Water Framework

Directive management, for example – the basin level constitutes an important component of improved integrated management of water. Kazakhstan, for example, has established eight river basin organizations that are responsible for water resources governance and use, water plan preparation, water allocation and permit provision (see **Chapter 14**). The ongoing water reform in Kazakhstan also includes provisions for public involvement and decentralization that can take the form of local self-governance (UNDP – Kazakhstan, 2003). In many cases, water management at the basin level also extends to the management of river basins and groundwater aquifers shared between sovereign states. The increased water cooperation between nations will require building mutual trust as well as long-term commitments from the parties involved. Normally, this necessitates a whole sequence of cooperative actions that can start off with agreeing on methodologies and standards for collecting hydrological data and joint monitoring plans. Other actions can include the harmonization of water policies and joint water management plans. It is important that transboundary water management not stop with cooperation at a technical level, but that such cooperation ‘spill-over’ to joint development plans for a river basin or even to broader issues of sharing the benefits of river basins and groundwater aquifers. There is currently a wide range of various sub-regional river basin commissions on all continents; however, their mandates and impacts on water resources use efficiency and sustainability vary to a great extent (see **Chapter 11**).

Despite the growing call for integrated approaches, there is, in reality, limited practical experience of how it can be implemented. In the overall context of IWRM, relevant challenges to and opportunities for an improved integration of land and water governance have, surprisingly, received little attention. It has proven difficult

BOX 2.5: INTEGRATING LAND AND WATER GOVERNANCE

In spite of its obvious importance, the knowledge base on land and water governance is weak. A recent study undertaken by the International Fund for Agricultural Development (IFAD, 2004) examined several case studies in which the links between land and water governance were identified as a key to successful development.

- One typical, poor community in Zimbabwe wished to improve livelihoods by investing in small-scale irrigation. However, they lacked the financial capital to do this and were unable to borrow money because they had no collateral for the loan. Normally, ownership of the land is sufficient security for a loan but in Zimbabwe all land titles are vested in the president, so this option was not available to them. To overcome this investment problem, the community, with international support, sought technical assistance from a regional platform for advocacy, the Women's Land and Water Rights in Southern Africa (WLWRSa), which also helped to secure community water rights

for irrigation. In return, WLWRSa uses this field experience to support its advocacy and increase its legitimacy.

- In Bangladesh, major reforms in the governance of inland public water bodies, supported by several external agencies, have significantly improved the livelihoods of poor landless fishermen. Inland fisheries are critically important for food security and livelihoods, but access to lakes by poor, landless fishermen is problematic, because they require access rights to the shores as well. The wealthy tend to dominate the annual leasing arrangements, leaving most fishermen to work as share catchers with minimal reward. The lack of secure tenure means there is no incentive for them to invest in the lakes, so they remain in a poor, unproductive state. Over the past fourteen years, the situation has improved significantly following a package of reforms that introduced long-term lake and shore lease arrangements for the poor, decentralized resource management to

fishing groups and limited group membership to those below a set poverty limit to protect the poor. All this encouraged investment in the lakes, resulting in the improvement of lake productivity, fish stocking levels, fishermen's incomes and infrastructure. Women also benefited by the introduction of further reforms on ponds, which gave them full access to inputs and benefits.

These and other cases indicate, among other things, that local participation and empowerment are critical for making changes and that external partners can play an important role in achieving the desired impact on awareness and resulting policy changes. They also indicate that enhanced local participation has made a positive difference for women, which has been beneficial for both equity and efficiency in the work of the communities.

Sources: IFAD, 2004, www.ifad.org/events/water; NRSF, 2004.

to integrate or coordinate land and water in a meaningful way, particularly for the rural and urban poor who have been socially and politically marginalized, and largely excluded from access to land, water resources management and related services. The benefits of integrating land and water in decision-making are illustrated in **Box 2.5**.

Similar challenges (not having proper tenure and access to water services) are found within urban slums where local authorities do not provide proper public services, such as water, sanitation, transportation and electricity. Major questions remain to be worked out to put effective IWRM into practice, again in ways explicitly linked to governance issues (Moench et al., 2003):

- Who is in charge of integration? Who implements integration? What are the roles and responsibilities of governments, the private sector and civil society and the international community?
- Who decides what interests should be reflected in IWRM plans and policies? How should policy processes be governed to ensure that relevant stakeholder interests are duly reflected?
- How should conflicting interests and disputes be resolved? What are the appropriate formal and informal institutions and conflict resolution mechanisms for efficient and equitable water decisions?
- Is there really a need to integrate all water issues? Some water management issues, such as waste disposal control from a sewage treatment plant, will not need the same level of integrated decision-making as a major water allocation decision to construct a large-scale dam or irrigation scheme along a transboundary river.

Meeting the Johannesburg target on IWRM plans

Putting into place strategic and well-planned water projects will help countries to set the right priorities and undertake actions required to meet the Johannesburg target. These plans can thus become critical instruments for achieving domestic political targets as well as targets agreed on in the international arena, like the MDGs or regional transboundary water cooperation agreements. If we take the status of the recent Johannesburg target to 'develop integrated water resource management and water efficiency plans by 2005, with support to developing countries' as a proxy for improved reform and governance in the water sector, it reveals that progress is taking place but that much remains to be done.

At the end of 2003, an 'informal stakeholder baseline survey' was conducted by the GWP on the status of water sector reform processes in various countries of the world. The survey was conducted in 108 countries² and provides a number of qualitative elements allowing an assessment of countries' readiness to meet the 2005 Johannesburg implementation plan target on IWRM Plan preparation. In this respect, the level of awareness, political support and the countries' capacity to build on past and ongoing processes relating to water-related reforms and rely on existing multi-stakeholder platforms were some of the components that were assessed.

The survey provides a snapshot of where countries stand in terms of adapting and reforming their water management systems towards more sustainable water management practices. The pilot results show that of the 108 countries surveyed to date, about 10 percent have made good progress towards more integrated approaches and 50 percent have taken some steps in this direction but need to increase their efforts, while the remaining 40 percent remain at the initial stages of the process (see **Table 2.1**).

Several countries have begun, or have already been through, the process of putting into place IWRM elements. South Africa, Uganda and Burkina Faso have, with international assistance, gone through multi-year IWRM planning processes resulting in new national policies, strategies and laws for their water resources development and management. Other countries in Africa have also been identified as having good opportunities to advance their water agenda. For example, water legislation is being prepared in Congo-Brazzaville and Malawi, where the opportunity can be seized to promote

integrated approaches towards water management. Similar opportunities exist in Asia, such as with China's water policy work, and the water reform processes in countries like Sri Lanka and Pakistan. Development has also been rapid in Central Asia, where, for example, Kazakhstan and Kyrgyzstan have made headway towards developing IWRM approaches. In Latin America, Brazil's wastewater reform is an example of IWRM processes. Many of these are now in or on the verge of the implementation stage. Other countries in Latin America have also made headway (see **Chapter 14**). There are, for example, favourable political and institutional conditions in Honduras where the multi-stakeholder Water Platform (Platforma del Agua de Honduras) provides momentum to advance IWRM approaches and other water-related issues.

This qualitative assessment does not, however, allow for regional or country comparisons, as exemplified by the cases of Viet Nam and Sierra Leone, which have both been classified as in the initial stages of developing IWRM approaches. Sierra Leone is a conflict-ridden country where the main focus is on building peace and stability and reconstructing basic services such as water supply and sanitation; it is thus far from engaging in developing IWRM approaches. Viet Nam, on the other hand, has showed progress in recent years. In 1988, it adopted a national water act and a National Water Resources Council, and three river basin organizations were established in 2000 and 2001. It is clear that water is fairly high on the political agenda and Viet Nam is in a good position to advance implementation as well as incorporation of IWRM approaches.

The assessment indicated that the countries that have made the most progress in adapting and reforming their water management systems towards more sustainable water management practices have often started by focusing on specific water challenges, such as coping with perennial droughts or finding ways to increase water for agriculture while still ensuring access to domestic water in burgeoning urban areas. South Africa, for example, developed comprehensive policies, legislation and strategies starting in 1994, focusing outward from drinking water (and later on sanitation) to give expression to the political, economic and social aspirations and values of the new democratic political paradigm.

Recently, there have also been other IWRM plan assessments initiated to measure how much progress

2. Forty-five in Africa, forty-one in Asia and the Pacific and twenty-two in Latin America. For more information on this assessment see: www.gwpforum.org

Table 2.1: Country readiness to meet the Johannesburg target on IWRM planning by 2005

Region	Number of countries surveyed	Good progress	Some steps	Initial stage
Africa				
Central Africa	7		3	4
Eastern Africa	5	1	2	2
Med (North Africa)	5	1	3	1
Southern Africa	12	2	5	5
West Africa	16	2	4	10
<i>Total</i>	45	6	17	22
Asia and Pacific				
Central Asia	8	2	4	2
China	1	1		
South Asia	6		4	2
Southeast Asia	8		4	4
Pacific	18	2	8	8
<i>Total</i>	41	5	20	16
Latin America and the Caribbean				
Caribbean	6		6	
Central America	7	2	3	2
South America	9	1	5	3
<i>Total</i>	22	3	14	5
Total	108	14	51	43

Source: GWP, 2003.

countries have made towards adopting and implementing IWRM. A 2005 study of the status of IWRM plans in the Arab States indicated that progress is very uneven in the region. Some places, such as Jordan, Egypt, the Palestinian Autonomous Territories, Yemen and Tunisia, have national water policies, plans or strategies in place that incorporate many elements of IWRM. Eleven out of the twenty-two countries included in the study need major water policy enhancements to put IWRM plans in place. For most of these eleven countries, the study identified ambition and ongoing efforts to further progress of developing IWRM plans. For six of the countries included in the study the situation seems to be less progressive, with some of the countries even lacking ongoing efforts to develop IWRM plans (Arab Water Council, 2005).

It is important to stress that, even though many countries lack IWRM elements in their water reform attempts and aspirations, this should not refrain them from acting. It is more realistic to implement reforms incrementally than to await the 'perfect' policy document that may never get past the drawing board. **Box 2.6** highlights the fact that making and implementing water policy can take very different paths.

Water policies, politics and resistance

No reform is stronger than its weakest link, which is to say, implementation. Recent years have seen the development of sophisticated water policies and plans in many parts of the world, such as in South Africa, in Europe with the EU Water Framework Directive and in Chile with water privatization. Some of the reforms in developing countries have been assisted by the international community and have frequently been motivated, at least in part, by the active international debate on these issues. These achievements also need to be balanced, however, by a recognition that policy changes at the national level have often only been imperfectly followed through to effective implementation. A recent example is Zimbabwe, where the actual content of water reform is considered progressive, but where reform has stalled due to recent political instability and weak implementation capacity.

There is a tendency to separate policy-making processes from implementation. The notion is that policy-making is ascribed to decision-makers, while implementation is linked to administrative capacity. This kind of thinking is too rigid and fails to acknowledge that policies are often modified as they move through public administrations and

It is more realistic to implement reforms incrementally than to await the 'perfect' policy document that may never get past the drawing board

BOX 2.6: THE POLICY PROCESS: DECISION-MAKING VERSUS IMPLEMENTATION

The making of water policy involves a multitude of decisions, actors and processes. Two different models of the policy-making process are delineated: the first model shows the linear and idealized input-output version of policy-making. Typical stages for policy are inputs that constitute the basis for formulation of policy, the content of the policy, implementation and a feedback loop to input. While these stages can be identified in the policy process, the second model displays a more realistic version of how policy-making is done. Policy-making is not a straightforward linear process, but rather a 'messy' business, in which various actors with different interests, stakes and powers are trying to influence the policy outcome while different policy stages are interlinked and sometimes done in a simultaneous fashion. What the policy process looks like, what actors are involved and other concerns differ among various development contexts and depend on what water challenges the policy is intended to address. The non-linear model shows some of the critical factors that are shaping policy formulation and implementation.

In practice, decision-making for water is done by and through various kinds of organizations and formal and informal regulations, such as water licensing or customary allocation decisions. Many organizations are formally constituted and have legal rights and responsibilities, while many are informal and less visible to the observer. Local

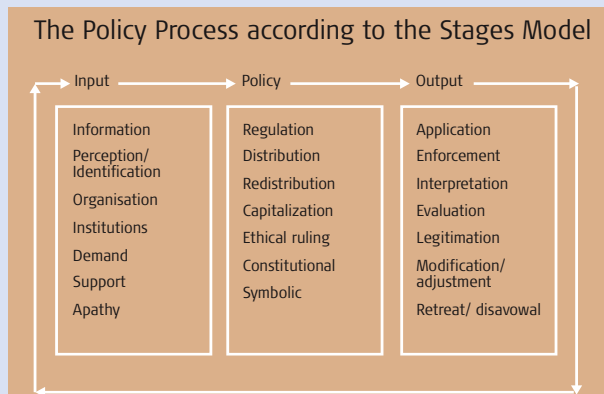
levels are critical, since implementation must ultimately take place in local urban and rural settings. How these organizations function and their relationship dynamics both have an impact on water governance and the possibilities of more effective governance.

At the local level, many local entities are involved in water decision-making: irrigation, environmental and health departments and agencies, urban development agencies, rural and urban planning agencies, regulatory agencies, public water utilities, water-user associations, consumer groups and other types of NGOs, religious groups, farmer organizations and unions, municipalities, community leaders and local entrepreneurs, etc.

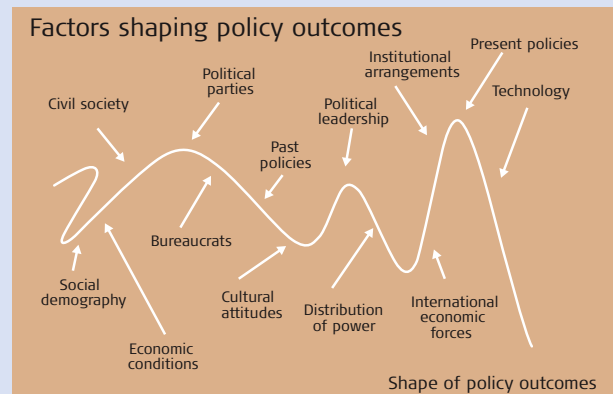
At the national level, parliaments, governments and their ministries, consumer groups, research institutes, NGOs and other interest groups, trade unions, private businesses, etc., play critical roles.

The international level and external pressures can many times have a critical influence on water reform in developing countries. Such influence may take the form of pressure to comply with a structure imposed by an international development agency as part of a large investment project. It can also take the form of loan conditionality. These are common features in structural adjustment projects that enhance price reforms in various sectors. Other types of

conditionality can be found in big national water resource projects that include large components of institutional or pricing reforms, as was the case in Pakistan and Mexico. Although not yet common or widely used in the water sector, several trade agreements that affect the agriculture sector may impose the restructuring of a price system in one country as part of a condition for that country to join the regional agreement. An example of such regional cooperation is the recent European Water Framework Directive (see **Chapter 14**). This is a legislative piece that will guide European water policies in the coming decades. In the specific case of the European Union, water-related economic dependencies (agriculture) and likely water-related environmental externalities are a driving force behind regional agreements (DFID, 2002). Another set of organizations that can affect domestic policies is regional river basin commissions (The Mekong River Commission and The Nile Basin Initiative are two examples). Various kinds of international NGOs are also important actors for advocacy and promoting cooperation and research. Also multinational water companies are now playing an important role in developing countries' policy development and implementation. There is a plethora of water organizations from the very local setting up to the global scale. The effectiveness of these organizations and how they relate to each other and other organizational entities determine governance outcomes.

The linear policy model

Source: Gooch and Huitema, 2004.

The non-linear policy model

national bureaucracies to local levels for ultimate enforcement. Policy implementers can respond to policy change in different ways: they can implement reforms fully or partly, or if internal reform resistance is high in combination with lax monitoring from policy-making levels, they can ignore new policies altogether. It is clear, then, that policy-makers should not escape the responsibility of implementation and making sure that adequate capacities and financing is available for effective implementation.

Because reforms change the status quo, one can expect both support for and opposition to reform agendas by affected groups. Institutional reforms generate the active involvement of interest groups that may be affected directly or indirectly. In some cases, the implementing agency may not have a reform agenda that coincides with that of the government initiating the reform. For example, a stakeholder analysis of the parties involved in a proposed pricing reform for the capital of Honduras, Tegucigalpa, shows that the public agency in charge of supplying water to the city was a major opponent to the reform. A main aim of the agency was to seek continued power over water allocation and administration. Interestingly, the case of Tegucigalpa also showed that the main support for reform was provided and driven by external international development agencies, but in this case, this was not sufficient for reform to take effect. It was noted that for the reform to go forward, it would require the support from critical national power centres, such as the president and key government ministries. (Strand, 2000; DFID, 2002). A similar situation of opposing reform is described by Wambia (2000) in the case of Pakistan, where certain government agencies along with ministries opposed reform because it was felt that it would affect them negatively. Part of the reform was to transfer power and financial resources from the irrigation ministry and its regional offices to what were called Area Boards.

In governance systems that foster a non-implementation policy climate, decision-making tends to be discretionary, unpredictable and largely non-conducive to influence by citizens. The implementation and allocation of resources tend to benefit the ruling elite or certain groups or individuals tightly connected to the ruling elite. Many civil society actors in developing countries are well aware of limited government commitment and capacities to follow through on policy development and external pressures. As a result, many NGOs and other civil society actors,

particularly those lacking political and financial clout, do not find it very worthwhile to engage in policy processes. Many NGOs tend to argue that the value of influencing a policy that will not be implemented is not worth the effort. Since limited implementation also opens up for discretionary decision-making, many NGOs instead attempt to manoeuvre in a highly informal local and national political setting, often through face-to-face relationships, through which they can influence decision-making in favour of their cause. Consequently, due to more discretionary and ad hoc decision-making, many NGOs in developing countries feel that it is better to influence the implementation of a policy through informal means rather than through policy content. There can be many other barriers, both overt and hidden, to the effective implementation of policy: the lack of capabilities in or resources available to government departments; resistance by sceptical officials; pressure by interest groups, such as industrialists or farmers; problems with other aspects of law and policy that can block effective implementation, such as changes of land management practices that also affect water resources. In the various international attempts to promote policy development, such developing country policy realities have yet to be fully acknowledged.

Water policy reform ahead: Where to begin?

So while there has been progress in water policy development during the past decade, this progress is uneven and considerable challenges remain. Many government reforms fail because once implemented, they yield unsatisfactory outcomes because they never get past implementation. How can the prospects for success be improved? It has been noted that 'a reform programme will be successful if there is economic rationality in its design, political sensitivity in its implementation and close and constant attention to political-economic interactions and socio-institutional factors, so as to determine in each case the dynamics to follow' (Cordova, 1994). In particular, there needs to be a more complete understanding of the forces that lead to policy development in the first place and, critically, a concerted drive to make sure that policies are followed through to implementation. There also needs to be effective feedback and assessment mechanisms, so that the consequences of policy implementation can inform future policy development. There are many components that are critical for successful policy reform. For example, some studies in policy implementation suggest that in order to maximize the likelihood of success, or minimize

...policy-makers should not escape the responsibility of implementation and making sure that adequate capacities and financing is available for effective implementation

The limited funding opportunities in low-income countries expose domestic decision-makers and policy development to pressure from international lending institutes and donors

failure, it is critical to address three key strategic issues: keeping the scope of change narrow, limiting the role of aid donors and giving reform firm leadership while simultaneously allowing for line management discretion (Polidano, 2001).

Some critical issues for overcoming policy obstacles are outlined below:

- **Acknowledge the role of politics and develop strategies accordingly:** Even though most reforms require technical input the process itself is essentially political and thus involves political compromises, bargaining and negotiated outcomes. In most cases, the proper packaging, sequencing, alliance building and communication of reform can lead to more tolerable reform content that can be more easily implemented. The power balance between critical political, social and economic actors will have a significant impact on reform outcomes.
- **Secure high-level political support and commitment:** Without high-level political commitment to undertake reform, it will be very difficult to go from policy formulation to implementation. The whole government needs to be involved to ensure that sufficient resources and capacities are provided to achieve the reform objectives.
- **Focus on process and seize the moment:** Management of the policy process, which has so far received very little attention, is just as important. Some policy studies suggest that the process is even more important than the actual policy content. The timing of a reform is important. According to the 'crisis hypothesis', a perceived or real crisis due to floods and droughts is needed to create conditions under which it is politically possible to undertake the reform. The 'honeymoon hypothesis' suggests that it is easier to implement a reform immediately after a government takes office (Williamson, 1994).
- **Participation and inclusiveness:** Effective policy formulation and implementation requires transparency and inclusiveness. For example, does media and civil society advocacy representing the needs and interests of vulnerable groups, such as indigenous people, women and children and threatened ecosystems, influence the timing and content of decisions on policy changes? Inclusiveness and active engagement do not

only refer to civil society but also to different government agencies at various levels.

- **National ownership of policy process and content:** The limited funding opportunities in low-income countries expose domestic decision-makers and policy development to pressure from international lending institutes and donors. If a country does not develop a certain 'internationally' required policy, it may face difficulties attracting international loans and development project funds. It is not uncommon in many low-income countries that due to external pressure they are required to put into place policies, plans and development programmes that lack 'national ownership' and have little chance of actually being implemented.
- **Allow for incremental change and proper time for successful reform:** Reforms should be well prepared, because once they are in place, they are often difficult to modify. If possible, keep the reform as simple as possible and avoid addressing many reform objectives at the same time. Reform is an incremental process, which sometimes can be painstakingly slow, and managing policy processes is laborious and time-consuming and should not be underestimated. Although policy reform is an ongoing process and modification occurs over time, it is important that the main thrust of the policy can be sustained over time.
- **Compensate policy reform losers:** Adequate compensation mechanisms, negotiated with stakeholders, are an important part of a reform. Those who are losing out considerably in a reform should be adequately compensated: paying a fair amount of compensation is important for building support and avoiding social and political clashes that can jeopardize or slow down the reform. In the case of water pricing reforms, several groups or issues, such as the poor, or the environment, may need to be specifically addressed. For example, addressing the needs of poor people may mean including a differentiated tariff structure.
- **Improve coordination:** Uncoordinated donor activities increase the risk of overloading the capacity of governments and slow down reform work. Donors should also allow greater flexibility in the design and implementation of reforms and allow for more experimentation by governments. Different



forms of tension and competition among various government agencies are common. It is thus critical that the political leadership of reform is intact to allow for an effective coordination and a broad buy-in from central government agencies down to local regional and local administrations.

- **Monitor implementation and impacts:** The monitoring of policy reform and implementation is an area often neglected by governments. Some attempts have been made towards more systematic monitoring of the progress and impact of water reform, but there still remains much work to be done in this area in order to actually examine if claimed progress in water reform also impacts positively on sustainable water resource use and improved water services. Effective monitoring will also imply that policies can be fine-tuned, allowing for financial reallocation between reform priorities.

2b. Water rights

Ownership or the right to use a resource means power and control. While it may seem simple, water rights and ownership often have a complex relationship with water governance. How property rights are defined, who benefits from these rights and how they are enforced are all central issues that need further clarification in current water policies and legislation. Insecurity of water rights, mismatches between formal legislation and informal customary water rights, and an unequal distribution of water rights are frequent sources of conflict that can lead to poor decisions on efficient water resource use and equitable allocation. Also, the problem of managing dwindling groundwater supplies or fish stocks – which many times lack clear user rights – is a problematic water governance challenge.

Water rights can be defined as 'authorized demands to use (part of) a flow of surface water and groundwater. Including certain privileges, restrictions, obligations and sanctions accompanying this authorization, among which a key element is the power to take part in collective decision-making about system management and direction' (Beccar et al., 2002). Water rights are inextricably linked to property.

Well-defined and coherent water rights are fundamental to dealing with situations of increased competition between water users, an important issue, which is addressed in more detail in **Chapter 11**. Water management is a complex activity; it is a mobile resource

that is attached to many different and sometimes competing, economic, social and environmental values. While water users compete for the same resource and struggle for increasing control, they also need to cooperate if they want to make effective use of water and sustain the water's quantity and quality in the long run. This often occurs in 'pluralistic' legal contexts, where formal and informal normative systems sometimes clash. For example, in South Africa, water management moved from a pre-colonial collective activity to a publicly regulated resource under Roman-Dutch law. It was then transformed under Anglo-Saxon jurisprudence when it was captured as a private resource to the benefit of a small minority. A main objective of the current 1998 Water Act in South Africa is to redistribute water rights by granting water permits to sections of society that were previously discriminated against.³ The minimization and resolution of water conflicts and disputes require clear and coherent water rights that contain management principles and strategies that can cooperate with fluctuations of water supply and demand.

It has been noted, for example, that water rights provide the backbone of water management strategies in small-scale agriculture and in many local contexts basing their water use on customary traditions. Water rights define who has access to water and in what ways the user can take part in local water decision-making. They also specify roles and responsibilities regarding operation, maintenance, monitoring and policing. In this sense, water rights manifest social relationships and local power structures of who is included or excluded from the benefits of water and what the various rights and responsibilities include. Water management practices in the Andes, for example, have shown that social and political inequalities can prevent successful collective action. However, this also showed that collective management of water can lead to more equitable water distribution, in addition to strengthening the bargaining position of weaker stakeholders (Boelens and Hoogendam, 2002). The critical importance of water rights is not unique to small-scale agriculture or indigenous systems but is equally relevant to society at large.

From a formal legal point of view, water is considered a property that belongs to the state in many countries. Many governments have largely ignored informal customary or traditional water rights. This oversight was initiated during colonialism and continued under state-led

While it may seem simple, water rights and ownership often have a complex relationship with water governance

3. See www.thewaterpage.com/leestemaker.htm

...there is a consensus that the establishment of well-defined and coherent water rights can lead to a number of social, economic and environmental benefits...

development and the 'green revolution'. For example, in many developing countries, the state is in charge of large-scale irrigation networks and the distribution of water permits. But in a parallel track, water rights are still considered by many local farmers and other water users a common property where communities manage water based on traditional rights. In some places, water rights are also being privatized, and water markets that include tradable rights are being set up. This multiplicity of water rights can lead to confusing and conflicting situations of entitlement roles and responsibilities among government agencies as well as unclear guidelines on operation and maintenance. There are far too many cases where water resources and related networks and infrastructure are, in practical terms, roughly equal to open access property (no one's property), which can result in a 'tragedy of the commons'. This can ultimately result in a management breakdown where no user or government feels responsible for sustaining surface- and groundwater resources (quantity and quality) and related infrastructure. Thus, within a single country, water rights can take multiple shapes and range from customary laws and local practices, government regulations and bureaucratic procedures to privatization and tradable water rights. Water reform should increasingly acknowledge this multiplicity of water rights, which would offer better and more realistic ways of improving current water distribution.

Despite the various views on the water rights continuum, there is a consensus that the establishment of well-defined and coherent water rights can lead to a number of social, economic and environmental benefits:

- It can promote equitable water use between existing user groups and facilitate improved access to water by groups that have been previously denied formal or informal water rights.
- It can improve the efficiency of existing water supply allocations. For example, those requiring additional water resources, such as growing cities, can increasingly meet their needs by acquiring the water rights of those who are using water for low value purposes.
- It can provide a basis for improving hydrological data and information to manage the resource more effectively.
- It increases the willingness to take economic risks to invest in improved water management and practices in both rural and urban contexts, thus impacting positively on productive livelihood opportunities. It can also reduce the pressure on water resources, as it is likely that those with water rights have incentives for sustaining water.

Custom and tradition in water rights

Local customs and traditions are important factors in defining community water management, allocation and conflict mediation. Customary rights are often based on community traditions and norms. In many cases, customary rights represent functioning water resources management decision-making systems that determine local water use and attached rights and obligations. For example, in the Andes in Latin America there is a multiplicity of local customary decision-making systems for community irrigation regarding who gets what water, when and how (Beccar, 2002). Customary rights can govern a number of water-related local social and economic activities, such as irrigation, household water, fisheries, livestock, plants and animals, funeral practices and the environmental services provided by watersheds. Generally, customary rights are not static but can evolve over time as a response to formal legislation and changing local hydrological and socio-economic conditions. Beccar (2002) has noted that often enough, customary rights are not taken into account in formal water rights legislation and development projects. A study conducted in the Pangani River Basin in Tanzania revealed that out of 2,265 water abstractions, only 171 were based on formal water rights (Hodgson, 2004). This can lead to clashes between formal and informal rights and rules and render legislation and development projects less effective. Enhancing local decision-making capacities and reflecting customary water management and rights in formal legislation in relation to irrigation practices and other water-related activities can create a more genuine way of recognizing local customary water rights and management systems (Beccar, 2002).

For example, customary water user rights are acknowledged in Japanese river law (see **Chapter 14**). The user rights in Japan are of two types, 'Permitted Water Rights' and 'Customary Water Rights'. Permitted Water Rights are granted by the River Administrator to the water user in pursuance of the River Law, while Customary Water Rights are awarded to river water users whose usage goes back to a time before the River Law

was established (in 1896). Users with Customary Water Rights are obliged to notify to the River Administrator details of their water usage such as the purpose for which river water is used, the quantity used, the conditions of usage and the intake position on the river. The majority of Customary Water Rights are for agricultural irrigation water. At present, Customary Water Rights account for roughly 70 percent of the water rights for irrigated agriculture. Since 1960, there has been an increasing demand for domestic and industrial water and the conciliation of water rights in times of drought has become an important issue. Consequently, rules were established to try to protect the established Customary Water Rights and adjust water use under the New Water Law that came into effect in 1964. The Amended River Law of 1997 incorporated further measures to reconcile different water uses in order to avoid conflict in extreme droughts (Kataoka, 2005).

Importantly, there is a danger of romanticizing customary rights and rules by expecting them to automatically take into account the needs of the whole community. It has frequently been noted that customary ways of allocating and managing water resources can mirror unequal local power relations (Hodgson, 2004). In such cases, it should be an imperative of formal judiciary systems to make sure that powerless and economically weak groups are protected against local inequities in water distribution and management. More than anything, though, the lesson to be learned is that it is impossible to fully tap the potential benefits from water projects and management without taking into account customary water rights and local ways of managing water resources. Taking into account local water practices should form a part of any water reform to minimize the social and economic costs that can be associated with local opposition to water reforms and development projects.

2c. Water as a human right

It has been estimated that in order to ensure our basic needs, every individual needs 20 to 50 litres of water free from harmful contaminants each and every day (UN, 2003).

Over the last three decades, water has been addressed in a number of international conferences, which have recognized that water is a basic human need and some have gone as far as explicitly affirming the right to water. The right to water was only implicitly endorsed in the 1948 Universal Declaration of Human Rights (UNDHR). In 1977, the Mar del Plata Action Plan stated: 'all peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs'.⁴ The recognition of water as a right continued with the 1989 Convention of the Rights of the Child (CRC).⁵ Article 24 of the CRC, paralleling Article 25 of the Universal Declaration of Human Rights, provides that a child has the right to enjoy the highest attainable standard of health. Measures taken to secure this right, include 'combat[ing] disease and malnutrition ... through, inter alia, ... the provision of adequate nutritious foods and clean drinking water'.

In 2002 the United Nations Committee on Economic, Social and Cultural Rights (ICESCR) adopted the General Comment on the right to water (see **Box 2.7**). The Committee emphasized the government's legal responsibility to fulfil the right and defined water as a social, cultural and economic good in addition to being an economic commodity. The right to water applies primarily to water of acceptable quality and quantity 'for personal and domestic uses' – in effect an emphasis on 'affordable' water supply and sanitation. The need for access to water for farming and other productive uses is

4. United Nations Water Conference held at Mar del Plata, Argentina, 7–18 March 1977.

5. www.unhcr.ch/html/menu2/6/crc/treaties/crc.htm

BOX 2.7: THE RIGHT TO WATER: GENERAL COMMENT 15

The United Nations affirmed the right to water on 26 November 2002, noting that such a right is 'indispensable for leading a life in human dignity' and 'a prerequisite for the realization of other human rights'. Through its General Comment 15, the Committee on Economic, Social and Cultural Rights of the United Nations Economic and Social Council stated: 'the human

right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.' While the right to water has been implicit in the rights to health, housing, food, life, and dignity already enshrined in other international conventions, such as the International Bill of Human Rights and the Convention on the Rights

of the Child, General Comment 15 is the first to focus explicitly on the right to water and the responsibilities that governments have in delivering clean water and adequate sanitation services to all.

Source: The full text of this General Comment is available at: www.unhcr.ch/tbs/doc.nsf/0/a5458d1d1bbd713fc1256cc400389e94?Opendocument

...a human right to water might have the unintentional effect of causing disputes between neighbouring countries that share water

acknowledged, but while 'water is required for a range of different purposes' (e.g., to secure economic production and livelihoods), 'priority in the allocation of water must be given to the right to water for personal and domestic uses'.

The General Comment provides for a 'progressive realization' of the right and acknowledges that there can be constraints due to water scarcities. It also refers to the role of donors and their responsibility to assist by providing financial and technical assistance. It is important not to confuse the right to water with water rights. Moreover, it would be wrong to interpret the General Comment as a right to free water. The Comment is clear on this and includes provisions regarding the 'economic accessibility' of water and water services defined as 'affordable'.

Only a few countries have made formal legal commitments to acknowledge a right to water, but even fewer have matched an explicit right to water in their constitutions with actual implementation (Centre on Housing Rights and Evictions, 2004). One such example is South Africa. Section 27 (1b) of the Bill of Rights of the Constitution of South Africa states: 'Everyone has the right to have access to sufficient food and water.'⁶ Water policies and measures to implement this right in South Africa are now being developed (see **Chapter 14**).

There are current signs that the human right to water is gaining more national and international recognition. According to the Centre on Housing Rights and Evictions (2004), some of the more recent progress includes the following:

- In 2004, a Uruguayan referendum enacted the human right to water into the Constitution when more than 64 percent of the population voted in favour of the amendment. Kenya, in its 2004 draft constitution, is now considering the explicit inclusion of the right to water and sanitation in its legislation.
- Courts in India, Argentina, Brazil and South Africa have, in some cases, reversed decisions to disconnect water supply to poor people who cannot afford to pay.
- The Millennium Project Task Force on Water and Sanitation recommended that the international community explore ways to the right to water to influence national policy on water and sanitation.

Does it make a difference to recognize water as a human right?

The international community has for a long time explicitly acknowledged a human right to food. However, people continue to die of starvation and nearly a billion people remain undernourished. Does explicitly acknowledging a human right to water make a practical difference in people's lives?

Recognizing water as a human right can have a significant impact on national water law, policy, advocacy and development programmes. It can also be a way of promoting an enhanced effort by the international community and local governments to improve water resources management and to meet the MDGs on water supply and sanitation. It could further serve as a means to increase the pressure to translate the right to water into specific national and international legal obligations and responsibilities: 'To emphasize the human right of access to drinking water does more than emphasize its importance. It grounds the priority on the bedrock of social and economic rights, it emphasizes the obligations of states parties to ensure access, and it identifies the obligations of states parties to provide support internationally as well as nationally' (Jolly, 1998). Potentially, it can also support national and international legal frameworks that regulate access to water and contribute to water conflict resolution. Finally, explicitly acknowledging a human right to water can help to place water issues higher up on political agendas around the world.

But going beyond the legal sense of water as a human right, many critical practical questions remain for meaningful implementation: what aspects should such a right entail? What are the concrete economic and social benefits? What practical mechanisms would be required for its effective implementation? How can such a right be implemented if particular localities lack the hydrological necessities? Who should pay for it? Should the responsibility be placed on governments alone, or should it also be held by individuals, communities and private actors (Scanlon et al., 2004)? Some of the concerns that have been expressed include the fact that issues of water obligation and responsibility (e.g., the obligation not to pollute) are not sufficiently emphasized and minimum rights to water (for example 40 L/capita/day) can provide excuses for governments to 'lock' water provision at that level. As was previously noted, daily per capita water consumption in Europe and North America averages some 250 L to 600 L. It is thus clear that from

6. www.info.gov.za/documents/constitution/1996/96cons2.htm

a development perspective more water or increased water use efficiency is required, apart from meeting basic needs. So far, the debate on water as a human right has revolved around safe drinking water, but very little on sanitation. Furthermore, basic water needs for direct economic activities, such as agricultural and industrial production, have not been a part of the water as a human right agenda.

Concern has also been raised that a human right to water might have the unintentional effect of causing disputes between neighbouring countries that share water. According to the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses, a country is not permitted to exploit a shared water resource in a manner that deprives individuals in a neighbouring country of access to their basic human needs (see **Chapter 11**). In practice, this kind of conflict seems unlikely to arise.

At the national level, governments are responsible for providing for adequate water supply and sanitation to their citizens and ensuring that citizens comply with existing water legislation. In practical terms, this means that relevant stakeholders participate in decision-making and that decisions are made transparent and information available, so that citizens can act on the information that is being provided to them. But to what extent do governments have an obligation to provide the right to water to their citizens? While the many international declarations and formal conference statements supporting a right to water do not directly require states to meet individual water requirements, Article 2(1) of the ICESCR binds governments to provide the institutional, economic and social environment necessary to help individuals to progressively realize those rights. It has been argued that

under certain circumstances, such as when individuals are unable to meet basic needs for reasons beyond their control, including natural disasters, discrimination, economic impoverishment or disability, governments should provide for basic water needs. Under such circumstances, the meeting of basic water needs may take precedence over other spending for economic development. It may also require new financial resources to be made available (Gleick, 1996).

According to a recent study, several cases (Centre on Housing Rights and Evictions, 2004) from both developed and developing countries demonstrate that there is a legally enforceable right to water. The Menores Comunidad Paynemil and Valentina Norte Colony cases from Argentina have required states to address the pollution of drinking water sources, as illustrated in **Boxes 2.8** and **2.9**. Cases from other parts of the world also suggest that taking the issue to court can be a successful way of addressing local water concerns. For example, court cases in India led the authorities to reconsider plans for digging wells on a set of islands. Local concerns raised the possibility that it might affect the water quality. In another case, local Indian authorities were ordered by the court to take immediate action to address the problem of inadequate sanitation. These cases show, among other things, that the effective implementation of water as a human right requires that the judiciary system function and that relevant water information be made accessible to the public.

2d. Is corruption draining the water sector?

Within public service institutions for water, corruption remains one of the least addressed challenges. Historically, bilateral and multilateral organizations and their clients have more or less tacitly accepted corruption

BOX 2.8: SAFEGUARDING WATER SUPPLY TO LOW-INCOME GROUPS

In the City of Cordoba, the water supply of nineteen low-income families was disconnected by a water service company on the grounds of non-payment. As a response, the families sued the water service company. They argued that the disconnection was illegal and that the company had failed to comply with its regulatory obligation to provide 50 L of water per day, which was to be supplied whether or

not payment was made. They also claimed that even the minimum supply of 50 L was inadequate. The families requested the court to obligate the company to provide at least 200 L of water daily per family. The Judge rejected the argument that the decision by the company to cut or restrict the supply of water on the grounds of non-payment was illegal. However, the Judge recognized that the contractual

obligation to provide a minimum of 50 L of water in all circumstances was clearly insufficient for a standard family and therefore required the company to provide a minimum of 200 L per household.

Source: Centre on Housing Rights and Evictions, 2004.

BOX 2.9: SAFEGUARDING THE RIGHT TO SAFE WATER SUPPLY

The Paynemil Mapuche Community in Neuquen, Argentina, 1995

People in the community discovered that the company's plant was polluting the local water source. The community, together with a university institute, filed complaints to six different local authorities about the potential heavy-metal pollution of the aquifers from which the community extracted its drinking water. As a part of the complaint, case studies were presented that showed that the water was non-potable. Studies ordered by local authorities showed that many children also had high levels of heavy metals (lead and mercury) in their bloodstream and urine. The public agents in the Provincial Ministry of Health brought the issue to a higher political level when they communicated their concern to the Health Minister. It was recognized that the water was unfit for human consumption and that traditional disinfection methods, such as boiling and filtering, were inappropriate. It was recommended that the

Minister intervene in order to provide water for the Community. In March 1997, the issue became a court case:

[T]he Children's Public Defender, filed an *accion de amparo* (a special expedited procedure) against the Government, arguing that the Province had neglected to fulfil its obligation to protect and guarantee the good state of health of the population. The court of first instance accepted the Public Defender's arguments and ordered the Provincial Executive Power to: (1) provide – within two days notice of the decision – 250 litres of drinking water per inhabitant per day; (2) ensure – within 45 days – the provision of drinking water to the affected people by any appropriate means; (3) set up – within 7 days – a procedure to determine whether the health of the population had been damaged by the existence of heavy metals, and in such a case, to provide the necessary treatment; and (4) take steps to protect the environment from pollution.

In May 1997, the Provincial Court of Appeals confirmed in all its terms the above-mentioned decision. Both courts based their decisions on the fact that the Government had not taken any reasonable measures to tackle the pollution problem that seriously affected the health of the Paynemil, even though it was well informed about the situation. The Court of Appeals stated: 'even though the Government has performed some activities as to the pollution situation, in fact there has been a failure in adopting timely measures in accordance with the gravity of the problem'. The Court of Appeals noted that, due to the serious consequences brought about by the pollution of water, any delay in providing resources and in adopting those steps necessary to reverse the present situation constituted an illegal omission violating the Paynemil community's constitutional rights to health and to a safe environment.

Source: Centre on Housing Rights and Evictions, 2004.

in public service delivery. Corruption has been seen as a 'necessary evil' and sometimes something that could 'grease the wheels' of development efforts. In recent years, there has been an important shift in thinking, and anti-corruption measures are now viewed as central to equitable and sustainable development. There is now also a growing body of research showing that corrupt practices are detrimental to economic efficiency and social equity and thus limit the scope for development opportunities.

Corruption is a symptom of poor governance in both private and public spheres.⁷ In many countries, the legislative framework and judiciary systems are often inadequate and too weak. When this is combined with, for example, low wages, huge income disparities (both within and between countries) and accountability and transparency shortcomings, personal economic gains can be stronger than concern for the well-being of citizens, in terms of providing water-related services and the sustainable development of water resources. From an institutional perspective, corruption arises when public officials have wide authority, little accountability and

perverse incentives and when their accountability responds to informal patron-client linkages rather than adhering to existing rules, regulations and contracts. In countries where corruption is common and visible, there is often a high social acceptance of and tolerance towards corrupt practices that can lead to a deep-rooted 'culture of corruption'. It may even go as far as those engaging in it believing they have a right and entitlement to the benefits they reap and that working within the public sector is perceived as a fairly legitimate opportunity to enrich oneself and further one's personal or family interests.

Corruption undermines development efforts and makes it harder and much more costly to reach various national and international development targets, such as the MDGs. Fighting corruption is therefore not only a national priority but also a global challenge.

Corruption and its consequences for development and water service provision

More than US \$1 trillion is paid in bribes each year worldwide in both rich and developing countries, according

7. The United Nations Development Programme (UNDP) defines corruption as 'The misuse of public power, office or authority for private benefit – through bribery, extortion, influence peddling, nepotism, fraud, speed money or embezzlement. Although corruption is often considered a sin of government and public servants, it also prevails in the private sector'. Corruption is not only about exchange of money and services, it also takes the form of cronyism, nepotism and various kinds of kickbacks. (TI, 2004, UNDP, 2004a.)

to estimates by the World Bank Institute (WBI, 2004). This is almost equal to the combined GDP of low-income countries. The \$1 trillion figure, calculated using 2001–02 economic data, compares with an estimated size of the world economy at that time of just over US \$30 trillion and does not include embezzlement of public funds or theft of public assets. It is very difficult to assess the extent of worldwide embezzlement of public funds, which is a very serious issue in many settings. For example, Transparency International (TI) estimates that former Indonesian leader Suharto embezzled anywhere between US \$15 and 35 billion from his country, while Marcos in the Philippines, Mobutu in Zaire and Abacha in Nigeria may have embezzled up to US \$5 billion each (TI, 2004).⁸

The estimation of global corruption costs does not take into account indirect costs in the form of alternative uses of funds for reducing poverty and economic inequalities and providing water, health care, education, etc. WBI research suggests that countries that tackle corruption and improve their rule of law can increase their national incomes by as much as four times in the long term, in addition to drastically improving service provision, such as water supply, sanitation and health.

Corruption costs the water sector millions of dollars every year. It siphons off scarce monetary resources and diminishes a country's prospects for providing water and sanitation for all. Corruption has several negative water development consequences (UNDP, 2004a):

- It reduces economic growth and discourages investments within the water sector. It undermines

performance and effectiveness of both public and private sectors. The undermining of public and private institutions leads to inefficient and unequal allocation and distribution of water resources and related services.

- It decreases and diverts government revenues that could be used to strengthen budgets and improve water and other services, especially for poor people.
- It renders rules and regulations ineffective, thereby contributing to increased water pollution and over-abstraction of ground and surface water. It also breeds impunity and dilutes public integrity. Discretionary powers and uncertainties in policy and law enforcement create unpredictability and inequalities and can also lead to bypassing the rule of law and justice system.

Corruption is thus a serious problem within the water sector, but empirical evidence is still insufficient to make generalizations of the magnitude of the problem and by how much exactly it contributes to unsustainable uses of water resources, water pollution and how much it drains water development efforts. Corruption takes place in all countries, but in some countries, it occurs on a more systematic basis and is often seen as a part of how business is done between public agencies and citizens, and between public agencies and the private sector, as well as within the public sector itself. Typical features of systems prone to corruption include the following (UNDP, 2004a):

- concentration of political powers in the executive branch and private and public monopolies, in combination with weak or non-existing checks and

8. The global NGO, Transparency International (TI), was formed in 1993. TI has played an important role in putting the corruption issue on international as well as national agendas. It publicizes annual reports and a corruption index on the status of corruption in the world. The World Bank Institute (WBI) has also developed corruption indices. Another anti-corruption instrument in place is the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions.

BOX 2.10: CORRUPTION IN THE IRRIGATION SECTOR IN PAKISTAN

Agriculture is the largest sector in Pakistan's economy. It contributes one quarter of the country's gross domestic product (GDP) and employs almost half of the labour force. Agricultural production is highly dependent on irrigation, and the Indus Basin Irrigation System and groundwater resources irrigate 80 percent of Pakistan's cropland.

One important factor that hampers productivity in the rural sector is the difficulty of acquiring access to irrigation water, especially for tail-

enders and small farmers in general. It has been observed that land inequality in rural Pakistan also reinforces inequities in access to critical resources like canal irrigation. Although canal irrigation substantially increases productivity, the pricing regime and delivery mechanism for canal water clearly benefits those who have large holdings. In addition, the flat-rate pricing mechanism for water often leads to wasteful and inefficient water use in a situation where water for irrigation is a highly valuable and scarce resource. Moreover, the ability to influence

officials of the irrigation department to divert water to the highest bidder allows those with larger land holdings to skew water distribution in their favour. As a result, this can impose a threefold cost on the poor: they must pay water charges whether or not they get water, pay bribes to get the water which is their right, and suffer lower productivity due to uncertain and erratic water supplies.

Sources: World Bank, 2004 and *Daily Times*, Pakistan, 12 July 2004.

BOX 2.11: CORRUPTION IN THE WATER SUPPLY AND SANITATION SECTORS IN INDIA

A more systematic effort to map petty corruption and its *modus operandi* in India's water sector has recently been made.

Results show the following:

- 41 percent of the customer respondents had made more than one small payment (median payment US \$0.45) in the past six months to falsify metre reading to lower bills.
- 30 percent of the customer respondents had made more than one small payment (median payment US \$1.90) in the past six months to expedite repair work.
- 12 percent of the customer respondents had made payment (median payment US \$22) to expedite new water and sanitation connections.

The revenues lost due to falsifying water metres accumulates to large sums over time. This is money that alternatively could be spent on improved operation and maintenance, new investments to improve water and sanitation systems for economically weak groups, etc. Such alternative costs are rarely taken into account in corruption equations.

The study also indicates the frequency of side payments from contractors to public officials within the water and sanitation sector. According to public official respondents, side payments occur on a frequent basis:

- 17 percent said that it takes place every time
- 33 percent claimed it was quite common
- 8 percent said that it takes place about half the time
- 17 percent said that it occurs occasionally
- 25 percent said that it occurs infrequently/never.

The value of the kickbacks to public officials normally ranged from 6 percent to 11 percent of the contract value. The study also suggests that side payments for transfers of staff occur on a frequent basis. Interestingly, side payments for promotions were less common.

Source: Davis, 2004.

balances, poor transparency of decision-making and restricted access to information

- discretionary decision-making within both public and private sectors
- lack of accountability and weak systems of oversight and enforcement
- soft social control systems that provide a breeding ground for acceptance and tolerance for corrupt activities.

Two examples of corruption in the water and sanitation and irrigation sectors are provided in **Boxes 2.10** and **2.11**. While these examples are not intended to suggest that any one country or water sub-sector is worse than the rest, it is important to note that many countries that face severe water challenges are also ranked as corrupt countries.⁹

In places where corruption is endemic, the consequences are disproportionately borne by the poor, who have no resources to compete with those able and willing to pay bribes. In the end, corruption 'tightens the shackles of poverty' on countries or groups that can least afford it (UNDP, 2004a). Although in theory citizens have an option to stay out of corruption, it is often difficult to do so, since the choice can be between having access to

drinking water and going thirsty or having sufficient irrigation water for agricultural crop production or losing crops and farming income. Buying water from private water vendors is in general more costly than the municipal water supply. Water is something everybody needs, and there is no substitute for it. Thus, in reality, citizens often have few alternatives to bribing officials for receiving water and sanitation services.

Abating corruption

The global response to abate corruption has recently picked up speed. Many bilateral and multilateral organizations, governments, civil-society organizations and private businesses are currently developing internal and external governance guidelines, codes of conduct and sponsor anti-corruption/improved governance research and development programmes. In 2003, the United Nations Convention against Corruption was adopted by the General Assembly by resolution 58/4 of 31 October 2003. A major breakthrough of the Convention is that countries agreed on asset-recovery, which is stated explicitly as 'a fundamental principle of the Convention'. This is a particularly important issue for many developing countries where high-level corruption has plundered national wealth, and where resources are badly needed for reconstruction and the rehabilitation of societies under new governments. As of 11 October 2004, the Convention has 140 signatories and has entered into force. As a spin-off of the Convention work, the Global Compact adopted in 2004 a tenth principle on

9. For the most current corruption index, see: www.transparency.org/

corruption: 'Business should work against corruption in all its forms, including extortion and bribery.'

The battle against corruption is multi-faceted and requires actions at many levels in the form of public sector reform, increased salaries among public officials, strict enforcement of existing rules and regulations, improved accountability and transparency, multilateral cooperation and coordination to track financial flows and monitor international contracts, etc.¹⁰

Progress has been made in fighting corruption in some areas, but much still needs to be done. The main challenges lie ahead, and will require committed leadership from governments, the private sector and civil society backed by citizens' support to push ahead for effective anti-corruption measures and reform. Even though corruption in the water sector is facilitated by general inadequacies or a break-down of governance systems, private, public, local, national and international water decision-makers should all take responsibility for initiating and implementing adequate anti-corruption measures in the water sector. It is believed that changes within one sector can 'spill-over' and make a contribution to wider reforms of governance systems.

2e. Privatization of water services

The opening up of the water services sector to private competition is a part of water sector reform of many developing countries. This had not been possible without overall economic reforms of liberalizing and decentralizing economies that was initiated in the late 1980s and early 1990s. The ongoing water reforms in Ghana, India, Kenya, Niger, South Africa, Tanzania and Uganda, for example, are part and parcel of current economic and decentralization reforms where management and financial responsibilities are transferred to local governments, states or provinces.

The mobilization and effective use of existing financial resources necessary to manage water resources and water supply and sanitation services are major challenges facing public and private water decision-makers and managers around the world. Ultimately, the responsibility for financing the water resource infrastructure and water management needs rests with local or national governments. However, this does not automatically imply that funds necessarily have to come from governments. Investment from private and other external sources, such as donors and international lending institutions, is, and will continue to be, frequently required.

The current situation in many developing countries is problematic where even basic water functions, such as operation and maintenance of drinking water supply and sanitation utilities, are not adequately funded. Adequate investments for improved water resources management or ecosystem maintenance is typically even harder to obtain. In many developing countries, investment in water management and services is funded through insufficient and insecure sources by central governments with very limited funds. Water charges collected on the basis of resource use are often paid into a 'general exchequer', which can lead to lost opportunities to redefine financial roles and responsibilities between different water users and government agencies (Rogers and Hall, 2003).

Considerable discussion remains over public and private water services, institutional arrangements and the application of economic instruments to make water services delivery more efficient and equitable. Increased privatization, which in many cases has implied rising water prices, is in many social settings a heavily politicized issue that is creating social and political discontent, and sometimes outright violence, the most cited case being that in Cochabamba, Bolivia. There are also other cases where private operators have faced social protests against increasing user fees or private firms' performance. This has led to a situation where operations are handed back to public authorities. For example, Trinidad and Tobago is reforming its water sector, now with a strong reluctance to re-introduce private operators. There are, however, also examples, as in Port Vila, Vanuatu, where privatization can improve low-income households' access to water services. Experience demonstrates, among other things, the need for a well-planned concession contract, enforcement of regulatory powers and strong commitment by political leaders and participation by communities (see **Box 2.12**).

Private enterprises within the water supply sector skyrocketed during the 1990s. It went from almost none in the early 1990s to the current more than 2,350 private enterprises (UNDP, 2003). Until recently there have been expectations that the private sector will continue to expand its investments in developing countries. Estimation suggests that the private sector spent US \$25 billion on water supply and sanitation in developing countries between 1990 and 1997, compared with US \$297 million in 1984–90. Most of this investment was in Latin America and Asia, whereas Africa received less than one percent

The opening up of the water services sector to private competition is a part of water sector reform of many developing countries

10. See WBI recommendations at www.worldbank.org/wbi/governance

of the total investments made (UNEP, 2004). It now seems like this trend of increased privatization is reversing. Interestingly, many of the big multinational water companies are questioning their own role in increasing their investments in developing countries and playing an active role in resolving the water supply and sanitation crisis of many developing countries. Due to the political and economic high-risk operations, shrinking profit margins (in part due to currency instability), and increasing criticism affecting firms' business image, many of the multinational private water companies have started to retreat from water services contracts and

investments in developing countries. Saur, for example, has pulled out from some African countries like Mozambique and Zimbabwe. Another example is in 2003 when Suez started to downsize its water investments in developing countries with one-third of current investment levels. Likewise, other companies like Veolia and Thames Water are reconsidering their commitment in developing countries. In 2004, Thames Water pulled out from its water operations in Shanghai and is also facing difficulties in Jakarta, where it was involved in Jakarta's water privatization, which began in 1997, but where the company has not been able to

BOX 2.12: EXPERIENCES IN PRIVATE SECTOR INVOLVEMENT IN WATER SUPPLY AND SANITATION

Experiences in Côte d'Ivoire, Guinea and Senegal

In 2001 there was an assessment made of the results of water privatization in three African countries: Côte d'Ivoire, Guinea and Senegal. The contractual arrangements that were applied varied from medium-term leases to long-term concession contracts. All three countries displayed similar results from the privatization process: the connection rates had increased, and there were also tangible improvements for billing and collection of revenue. However, increased tariffs had made water supplies unaffordable for many of the poorest sections of society, which led to people getting disconnected from water supply due to inability to pay. It was also unclear to what extent poor people had benefited from water network connection expansions. Experiences confirmed that very poor sections normally tend to be excluded from being a part of privatized service extension. To provide the poorest section of society with adequate water services is typically viewed as a high-risk enterprise that largely lacks opportunities for economic return. Similar experiences have also been found in other places, such as in greater Buenos Aires, Argentina and in Bolivia.

Port Vila, Vanuatu: Water concession with pro-poor elements

In Port Vila, the poorest of the urban poor reside in overcrowded, informal, impermanent

housing on the city periphery. In many cases, conflicts over land tenure beyond the municipal boundary put a strain on the extension of services. Water supplies in many areas are comprised of hand-dug wells and shallow bores. In 1994, Union Electrique du Vanuatu (UNELCO, a subsidiary of Ondeo Services) signed a forty-year concession contract to supply water and electricity to Port Vila. A total investment of US \$11.6 million was anticipated during the contract period, with US \$580,000 per year for the first five years.

The concession aims at providing a 'self-regulatory system', where the government monitors the concession and facilitates the extension of services to new consumers. A structured fixed-tariff system was established to ensure affordable water rates for poorer sections of society as well. For low-income households, the US \$0.20 per cubic metre (m³) paid goes into a special fund to finance free connections. But households will still have to pay the quarterly consumption bill.

The company is regularly monitored by the government and provides regular financial reports and investment plans for five-year periods to the government for approval. In this particular case, UNELCO and the government has improved the water supply network and extended uninterrupted, affordable water services to many new households. Prior to the

contract, intermittent water supply was often common, but in most cases, water is now available 24 hours per day, and unaccounted-for water has decreased dramatically from 50 to 23 percent. The water tariff for the first 50 m³ per month was reduced to US \$0.58 per m³ from US \$0.75 per m³. It has been reported that annual economic losses of up to US \$440,000 in 1991 have been turned into a surplus of US \$12,000 in 2000. Private sector involvement seems to work well in this small urban center. Groundwater not requiring treatment is inexpensive; tariffs are relatively higher than in other Asian cities; and the relatively high cost-recovery facilitates free connections for the poor. Some of the components that have made this enterprise work for poor people include a pro-poor concessional approach, with a clear investment plan and targets of network expansion; multiple service levels; and cross-subsidized connection fees. The government has shown a strong commitment and enforced its regulatory powers. In addition, the study also indicates the importance of strong community leadership, active participation by recipient communities and a high degree of awareness among water services consumers in general.

Sources: ADB, 2002; Mehta and Miroso-Canal, 2004. For more accounts of water services privatization in urban areas, see also UN-HABITAT, 2004.

make profit. Resistance from consumers and political unease have delayed planned rises of water rates, and the company also brought on bad publicity due to allegations of inadequate service performance. Many of the multinational water companies are consequently focusing even more on the less risky markets of Europe and North America.¹¹

The private sector has been more effective at handling issues of efficiency in water distribution systems, like decreasing unaccounted-for water, improved billing and increased revenue collection than at meeting issues of equity of water distribution through the extension of water networks. Rapidly increased water charges have in some cases implied that poor people are being disconnected from services. Those who have benefited from private water services in developing countries are predominantly those living in relatively affluent urban pockets. Cost recovery for water services related to irrigation and water supply and sanitation in rural, peri-urban and slum areas has proven to be a much more complicated task and is often considered to be less economically viable. Often, the extension of services to poorer sections of society is not a part of public-private contracts. It is evident that the private sector is facing similar difficulties as many developing country governments are unable to reach poor people with improved water services. The record of private sector involvement has been mixed, and there are often wide gaps between the effectiveness of regulatory powers and private sector operations.

Weak regulatory powers and poor governance

The increasing privatization has implied a new division of roles: governments are increasingly becoming the service regulator, while the private sector becomes the service provider. Many governments in developing countries operate with a low regulatory capacity for enforcement of contracts and the distribution and monitoring of water licensing and permits. With regulatory functions often vested with government agencies, also responsible for water services provision, conflicts arise regarding service quality and a government agency's independence may be called into question. Successful water services privatization will require a clear set of rules that promotes both equity and efficiency in water distribution, effectively enforced by an independent government regulator adequately equipped with authority, finances and human capacities.

This development has taken place in both middle-income countries, like South Africa, and in some of the world's poorest countries, such as Niger. Obviously, these countries have different regulatory capacities. The regulatory authority is absent in Niger, while it is relatively effective in South Africa (Mehta and Miroso-Canal, 2004). Adequate and enforced regulatory frameworks are critical for successfully increasing private sector involvement in water service delivery. But despite this insight, in many countries, privatization is taking place without a balance between financially strong private companies and financially strained government agencies with low institutional capacities. Some of the multinational companies that government authorities are going in to contract with and are supposed to regulate can sometimes have bigger annual turnover than the GDP of the country. For example, in 2002 the water-related revenue of Vivendi Environment exceeded the GDP of countries like Côte d'Ivoire and Kenya (Mehta and Miroso-Canal, 2004). Such economic asymmetry can have an effect on the negotiation powers of going in to contracts and how contracts are interpreted once they are implemented. Governments, including donors, should increasingly support the establishment of independent and strong regulatory authorities in order to facilitate the enforcement of concessions or other types of arrangements between the public and private sectors.

Sound governance practices create enabling environments, which encourage equitable and efficient public and private sector investment. Beyond providing general support to achieve good governance conditions, specific attention should be directed to efforts that reduce risk and facilitate healthy capital markets, especially domestically. Some additional points on using improved governance to mobilize financial resources (Rogers and Hall, 2003):

- Water should be recognized as an economic, social, and environmental good; the full costs of water management and water services must be acknowledged, and the costs should be transparent and affordable (through tariffs, cross-subsidies, taxes, etc., see **Chapter 12**). All costs and benefits of improved water management and services should be taken into account.
- Capital should be made available at all levels, such as micro-credit, revolving loan programmes and the issuing of local bonds.

*Sound
governance
practices create
enabling
environments,
which
encourage
equitable and
efficient public
and private
sector
investment*

11. *The Economist*, The flood dries up: International water companies, August 28 2004; Mehta and Canal, 2004.

Recent trends indicate that water multinationals are scaling down their investment plans in developing countries

- It is essential to have institutional clarity regarding water access and allocation: water rights and permits, regulatory frameworks and management responsibilities.
- Decision-making systems that are transparent, inclusive and that can be held accountable are necessary.

The importance of improved governance can be illustrated with Porto Alegre, Brazil, where the opening up of decision-making processes, such as participatory budgeting, led to improved governance systems (see **Box 2.13**). Controversies that have surrounded some of the public-private water service contracts could have been reduced if the contracting process had been open to public scrutiny.

Untapped potentials – local small-scale water companies

The bulk of discussions on the need for improved financing and increased privatization of water services has focused on the role of multinational companies. However, privately operated water utilities (excluding small-scale local operators) only supply approximately 5 to 10 percent of the world's population with drinking water and even less with sanitation (McGranahan, 2004a). Very little attention has been paid to increasing capacities and incentives of domestic water operators and local entrepreneurs or to exploring the role of local communities and various kinds of water user associations and community-based organizations. Multinational companies' comparative advantage is to construct, operate and manage large-scale infrastructure for drinking water and sanitation, hydropower and irrigation. In many instances, such large-scale infrastructure development

remains economically unviable. It is becoming increasingly acknowledged that many water multinationals, as well as governments, so far have not been able to provide the type of technology that developing countries need to meet the MDGs on water and sanitation or other international and national water targets. Considering the billions of people who are underserved with sufficient water supply and sanitation one can conclude that there exists huge demand for small-scale improvements as well as application of large-scale solutions where appropriate. Local entrepreneurs, communities and local organizations should increasingly be viewed as important stakeholders who can contribute to meeting the MDGs and other international water targets.

There is currently an increasing number of examples of private companies in developing countries that are involved in the water sector to provide more appropriate small-scale technology and where consumers may have greater opportunities to decide on technologies applied. It has been noted that small-scale independent water networks are best documented and perhaps also most common in Latin America. For example, in Paraguay it has been estimated that small-scale operators serve about 9 percent of the population. In other countries the coverage tends to be considerably lower but significant enough to compete with larger water providers (Solo, 2003). The small-scale water networks have mainly emerged due to failing public utilities. A study on the role of small-scale enterprises and water user associations in providing water supply to rural areas in Morocco showed that there are big potentials for both local entrepreneurs and stakeholders to be involved in a meaningful way. The potential of local entrepreneurs has also been noted in other contexts, such as in Uganda. In 1991, water services management

BOX 2.13: IMPROVED GOVERNANCE FOR BETTER WATER SERVICES IN BRAZIL

In Porto Alegre, Brazil, in the past decade, US \$140 million was invested in water and sanitation systems, 80 percent of which was generated through tariffs. The tariff system includes cross-subsidies and a minimum water supply requirement of 10 m³ per month for low income households, but they only have to pay the cost of 4 m³. There are different tariff levels depending on income. Large consumers, like factories and shops, pay higher rates. It is

reported that 99.5 percent of the city is supplied with water of a good quality, and 84 percent of the city's sewage is being treated. Interestingly, this part of Brazil is known for being wealthier and having less social inequality than many other parts of Brazil; furthermore, there is a vibrant associational life. Hence, it seems like the governance system coupled with existing levels of wealth and civil society vibrancy has made it possible to raise required

investments to improve water supply and sanitation. Hence, it seems to be less of a question of whether or not a service should be public or private, and more a question of the strength of existing institutions and how well they can carry out public service tasks that benefit the whole society.

Source: Mehta and Miroso-Canal, 2004.

BOX 2.14: THE ACTIVE ROLE OF WATER USER ASSOCIATIONS IN MOROCCO

Involving private companies in the management of urban water supply is considered one of the options for improving services in developing countries. But what about the management of rural water supply? How can small-scale entrepreneurs and other local actors be involved in a meaningful way? An example is provided from Morocco.

Water supply in rural areas of Morocco has developed much more slowly than in urban areas. Coverage in rural areas has been estimated at 40 percent. The central water authority Office National de l'Eau Potable (ONEP) faces challenges of increasing water supply coverage and sustaining such efforts. ONEP is now exploring measures of decentralizing, delegating and sub-contracting

rural water supply. A pilot study reveals that small-scale entrepreneurs (one to five employees) and water user organizations have a big potential role in improving rural water supply. Small-scale entrepreneurs have a significant role to play in pumping station operations, maintenance and caretaking, leakage control, repairs and maintenance of major pipes, maintenance of local piped network, standpipes and household connections, water metre reading, and water quality surveillance. Through the survey it became apparent that small-scale entrepreneurs have some technical experience but lack experience with commercial management. Communities preferred local entrepreneurs that they know. Interestingly, the entrepreneurs had a strong preference for service contracts rather than management

contracts. The service contract has the advantage of offering the operator a relatively 'safe' income, as it does not rely on the amount of water sold and its price. Management contracts normally insist that incomes are based on tariff and quantity of water sold and thus provide a more uncertain situation of future incomes. It was also clear from the study that water user associations have an important role to play in maintaining local water networks as well as mobilizing communities. Interestingly, water user associations were, along with local authorities, considered to play a significant role in commercial management of water, such as consumer administration, metre reading, and control of free-riders.

Source: Brikké, 2004.

contracts were awarded to local companies in Uganda for the management of water supplies in nine small towns. Prior to this, the World Bank had invested in infrastructure improvements. By 2003, the contracting out of water supplies management had extended to twenty-four towns. The basis for these management contracts can be traced back to the legal and institutional reforms undertaken in Uganda during the 1990s. There are indications that these management contracts have reached some of their objectives. Since a large share of the urban poor live in small cities and towns this example can illustrate that there is a potential for local small-scale companies to reach underserved, low-income households in urban areas (McGranahan, 2004b).

Local private enterprises often have several advantages: (1) knowledge of local conditions; (2) local procurement, production and employment; (3) medium and small-scale operation that can have a positive impact on services in secondary cities and towns as well as rural villages; (4)

niche markets and a multiplicity of appropriate technologies that can be explored in a more effective way. However, a greater involvement of local enterprises in operating water and sanitation utilities does not automatically mean that services to poor people will improve. There is not yet any conclusive evidence that local small-scale water network operators would be more effective than other types of set-ups to reach poor people and informal settlements (McGranahan, 2004b). The effectiveness of reaching poor people will continue to depend on the nature of contracts, sound governance systems, increased investments and enhanced local water management capacities. A disadvantage is that local entrepreneurs in many developing countries are inexperienced in managing and operating utilities (McGranahan, 2004b). As seen in the case of rural water supply in Morocco (see **Box 2.14**), there may also in other contexts be preferences and capacities that favour service contracts with the public sector rather than managing and operating utilities.



Part 3. Decentralization of Water Control and Decision-making

Principle 10 of Agenda 21 (UN, 1992) states:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Yet the implementation of these rights has not kept pace with the expectations generated by this international declaration. The absence of information or mechanisms for participation and redress result in decisions that adversely impact, exclude, and are consequently opposed by, affected communities. Such decisions are rarely effective, frequently illegitimate and unjust, and undermine the ability to integrate environmental concerns into development processes. As the UN Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-making, and Access to Justice in Environmental Matters in Member States (the Aarhus Convention) indicates, no country has fully developed policies or the organizational capacity to implement all pillars of Principle 10. This is even more true in many developing countries where transparency and inclusiveness in decision-making have a shorter history and often face stronger resistance by special interests inside and outside governments.

In the last decade or so, there has been a recognition that if efforts to improve the quantity or quality of water supply are to be successful, not only must they be technically sound and economically feasible, but they must also deal directly with poverty alleviation, local empowerment and environmental sustainability. In this regard, it has been recognized that local organizations and communities that are direct water users have strong local hydrological and socio-economic knowledge and also have the most at stake in water decisions.

The importance of participation and bottom-up approaches and the critical role of local community initiatives for resolving water challenges have been demonstrated by the Anwari River Parliament in

Rajasthan, India. The river parliament, formed in 1998, is based on a community-centred river basin approach and consists of some seventy villages and forty-six micro watersheds. The parliament meets twice a year and aims at a wide range of objectives, such as sustainable management of water resources, managing soil fertility and land erosion, stopping illegal mining activities, generating self-employment and alternative livelihood options, promoting women's groups and increasing agricultural productivity through application of local seeds and manure. It is reported that there have been positive social, economic and environmental impacts. Among other things, patterns of resource use are regulated, and there is also a platform to resolve disputes related to the allocation and management of water, forest and land (Moench et al., 2003).

Several alternative methods of widening and deepening people's participation are emerging in different countries to address water-related and other development challenges. Reforms regarding increasing inclusiveness in water decision-making are applied to the water sector in various degrees and forms.

3a. Benefits of decentralization

The concept of decentralization has evolved over time and acquired different interpretations. In a simplistic way, decentralization can be said to be a means of dispersing decision-making closer to the point of where the practical work is done. It has, among other things, been defined as the primary strategy for transferring responsibility from the central government to sub-national levels of government and representing a fundamental change in the institutional framework in which political, social and economic decisions are made (Rondinelli et al., 1984).

The term has now come to be used in senses that deviate in many ways from this characterization, since decentralization currently also refers to the transfer of responsibilities to civil society and the private sector. Decentralization should thus generally be perceived as a process in which the government relinquishes some of its decision-making powers and management responsibilities to lower levels of government, private sector or community and civil society organizations.

When it works well, decentralization has many benefits: it can allow for a democratization of decision-making through improved stakeholder inclusiveness, transparency and accountability. Appropriately implemented, it can empower people, particularly those lacking the social and political clout and financial means to have a voice and take part in decisions that define their livelihood opportunities. It can also encourage the integration of traditional knowledge and practices with innovative technologies and science to promote fair and efficient management of water resources and services.

Decentralized systems can make governments more responsive. It is more likely that local public sector officials will be held accountable by the local consumers of services than by central government officials. It can thus promote government agency responsiveness to address water services and administrative shortcomings. The existence of autonomous and flexible local governments can promote the production of appropriate and innovative practices. Similarly, local governments can be better positioned to work with local NGOs and other volunteer, community-based organizations in identifying problems and defining solutions. Decentralizing decisions can also lead to easier public access to water information, which also entails lower costs to citizens for obtaining information about government performance for local government services than for central government.

As pointed out, decentralization done appropriately can lead to increased democratization and bring decisions closer to water users. But there is also an economic efficiency rationale behind decentralization that often goes hand-in-hand with aims of democratizing decision-making. It is assumed that bringing decisions closer to water users can lead to better water resources allocation as well as services provision. In a highly centralized system of public goods and services, there is often a lack of reliable information about the actual costs of those services and to what extent services are being subsidized.

Moreover, there is limited information on performance and quality of services of public sector agencies. In contrast, the allocation of resources to public sector services is likely to be more efficient under a decentralized regime, with the assumption that local public institutions are more likely to have better information on citizens' preferences and needs, such as water demands among various user groups and the willingness and capability to pay for improved services. Another way of decentralizing is to make the direct water users more responsible for water management. For example, benefits of local community participation and the use of traditional water managers to mediate water conflicts, allocate water in efficient and equitable ways and maintain irrigation infrastructure have been demonstrated in the case of irrigation management in India. Such experiences can also serve as an entry point for decentralizing of irrigation-management responsibilities. The local modalities and premises for water allocation, management practices and mechanisms for dispute resolution can differ.

3b. Decentralization in practice

Despite ongoing reform work, many countries still lack legal provisions for local government water responsibility in water resources management/development. A survey of forty-two countries in Africa, Asia, Europe and Latin America indicates that twenty-four countries are lacking legal provisions for local government responsibility. However, in some countries, the legal provisions for local water resources management are fairly strong. For example, in Mongolia, regional and local governors have responsibilities for water management and plans for water collection, restoration and use. The water laws in Viet Nam call for more integrated approaches and have decentralized irrigation management to local water committees.¹²

What does the practice of decentralization tell us?

Decentralization of the power to manage water (not just read metres and fix leaks) does not come easily. There are at times very strong social and political forces, both inside and outside government, which benefit from preserving status quo. A number of studies confirm the general hypothesis emerging from research that the theory and rhetoric of decentralization frequently fails to match the willingness of central governments and their attached agencies to relinquish power (Olowu and Wunsch, 2003).

Years of centralized authority may have undermined old traditional resource management systems, as in the case

Decentralization can empower people, particularly those lacking the social and political clout and financial means to have a voice and take part in decisions that define their livelihood opportunities

12. These figures are based on Water Law and Standards. See: www.waterlawstandards.org

BOX 2.15: TRADITIONAL SYSTEMS UNDER THREAT IN INDIA

In the Indian States of Karnataka, Andhra Pradesh and Tamil Nadu, traditional water managers are called *Neerkatti*. They manage water tanks for irrigation. Their knowledge of the terrain, drainage and irrigation needs is much beyond that of present-day water engineers. Their role begins before the monsoon. The tank, which is common property, requires collective action to be maintained. The *Neerkattis* decide upon the date on which the community assists to desilt the tank and clean the catchment. They size up the work required and divide the labour among tank beneficiaries. With the first monsoon shower, they take stock of water availability and decide upon per capita allocation and what type of crops to grow. The *Neerkattis* ensure supply to every field on a rotational basis. How this is done can vary. In one village the tail-end users receive water first. The lands located closer to the tank will benefit from seepage water. The duration of irrigation depends on the crop being grown. If a crop begins to dry, *Neerkattis* have the authority to divert water to drying fields, even by closing the diversion to all other fields. They can also have other functions related to crop management. To minimize the risk of partisanship, the *Neerkattis* do not enjoy any formal political power or own land linked to the water-tank system.

Similar systems with traditional water managers are also found in other parts of India, such as in Ladakh, Uttaranchal and Maharashtra. For example, in Maharashtra's cooperative irrigation system, the Cultivator Committees appoint water managers. The post is often hereditary to ensure loyalty to local practice. To ensure neutrality in irrigation decision-making, landless village residents are usually chosen. Their task is to look after, regulate and maintain water flows in the main, distributary and field canals. The water managers play a critical role in resolving water disputes thanks to their knowledge of water flows in different canal systems. In some villages in Ladakh, a contract is written between the traditional water managers and villages. The contract stipulates obligations and responsibilities and the impartiality of the water managers. Water managers also supervise maintenance and mediate conflicts. If there are any serious disputes, the matter can be referred to other village institutions. How water is allocated differs. In some places, there has been a kind of lottery system developed to ensure impartial allocation. In other places, irrigation water is prioritized to the farmer who tills the land first, irrespective of location.

The role of traditional water managers has been greatly reduced over the past fifty years, mainly due to water becoming a state property. Irrigation management is consequently run by government departments and has shifted to a government induced trend from surface-water to groundwater irrigation. Consequently, traditional tank irrigation infrastructure has degraded, and canals have clogged up. Traditional water management often clashes with formal water licensing practices and regulations, hence creating uncertainties in management responsibilities. The governments of Andhra Pradesh and Tamil Nadu have recently enacted legislation to enhance participatory irrigation management, stemming from growing water disputes and the need to revive water tanks. However, the legislation has largely implied the creation of thousands of water user associations (70,000 in Andhra Pradesh alone) without reviving the role of traditional water managers. These water user associations have had very mixed results. Traditional water management knowledge is increasingly being lost.

Source: Centre for Science and Environment, 2003.

of years of colonial rule followed by centralized authority (**Box 2.15**). Past centralization of water decision-making in India has led to local ways of managing water resources being increasingly lost. In such cases, civil society of local water management institutions must be reinvented and reformulated.

Observed trends show many governments to be unwilling to decentralize adequate powers and resources to local bodies, which can severely stifle local bodies' options to manage water resources and deliver services. It has also been observed that governments may take back powers and financial resources from local bodies, often in response to pressure from bureaucrats and legislators unhappy with the loss of power (Manor, 2003). For example, in the Middle East

and North Africa, many cases of participatory irrigation management (PIM) indicate that governments give PIM rhetorical support, but in practice, they do not provide appropriate incentive structures, institutional mechanisms or regulations to allow for effective local irrigation management. Despite the evidence that PIM works, some governments are less enthusiastic about local water management than they claim to be. Several case studies demonstrate that with the application of PIM, water-use efficiency can increase by up to 30 to 50 percent and that the energy use for pumping was cut in half (Attia, 2004). Other, less well-documented benefits can include a reduction in local water conflict and a sense of community and individual empowerment that is said to improve family health and well-being (Brooks, 2002).

Other studies have looked at the potential of decentralization to enhance democratic participation and the empowerment of marginalized groups, including women. They demonstrate that democratic decentralization has a very mixed record as a means of reducing poverty. It has been noted that it may help to reduce poverty that arises from inequalities between regions but often does less to reduce poverty that arises from inequalities within regions. Recent evidence suggests that the impact of decentralization may be more positive than previously thought, particularly for women. There is clear evidence that the presence of significant numbers of women in local decision-making bodies sometimes increases the quantity and quality of crucial services, such as ante- and postnatal care (Manor, 2003).

3c. Information, development and access

People's participation in and access to relevant water information are essential preconditions for successful decentralization. One of the reasons why decentralization is claimed to be conducive to efficiency and equity in water allocation and distribution is because it enables local-level services to be tailored according to local needs and demands. What are the mechanisms through which local needs, demands and knowledge can be made known to decision-makers? The only feasible way is to have an inclusive and transparent process of local and central decision-making through which various stakeholders can voice their

rights and preferences. This point has been underlined in a comparison between successful and unsuccessful cases of community-based resource management in Mexico. Two different features of successful management were identified: the first emphasized the important role of vigorous, regular and well-attended community assemblies and the second stressed the importance of accounting and reporting practices that provide community members with a sufficient flow of information (Klooster, 2000). The difference in water services that such vigorous and transparent local community assemblies can make has also been reported from other parts of Latin America. A case study (Rosensweig, 2001) of the small town of Itagua, Paraguay showed that community-based water boards were successful in improving water services.

3d. Degree of public participation in water decision-making

The weak levels of participation and access to information have also been confirmed in a number of country surveys carried out by The Access Initiative (TAI) in 2001-03. **Table 2.2** shows that legal provisions for participation are weak.

In this first round of national assessments undertaken by TAI, access to information on water quality monitoring and the degree of public participation in water decision-making processes emerged as key areas for improvement in most countries.¹³



UNICEF school project in a camp for internally displaced persons in Sudan

Table 2.2: Public participation rights in constitutional and legal frameworks

Indicators	Weak	Intermediate	Strong
Constitutional guarantees to public participation	Constitution does not explicitly guarantee right to public participation in decision-making: Chile, Hungary, India, Indonesia, Mexico, South Africa, United States	No value offered: only two indicator choices were 'strong' and 'weak'	Constitution guarantees the right to public participation in decision-making: Thailand, Uganda
Comprehensiveness of notice and comment in different types of decision-making processes	Types of policy- and project-level decisions requiring public notice and comment are not specified: Indonesia, Thailand	Types of project-level decisions requiring public notice and comment are specified, but types of policy-level decisions are not: Chile, Hungary, India, Uganda	Types of both policy- and project-level decisions requiring public notice and comment are specified: Mexico, South Africa, United States
Public notice and comment requirements for environmental impact assessments	No requirement for public notice and comment for Environmental Impact Assessments (EIAs): Thailand	EIAs require public notice and comment at final stage: Hungary, India, Indonesia, Mexico, Uganda	EIAs require public notice and comment at various stages: Chile, South Africa, United States

Source: The Access Initiative, National Team Reports, see WRI, 2002.

13. In 2001-03, TAI conducted pilot assessments in nine countries to test its methodology and identify needs for improved access to information and participation. For example, a number of sub-indicators were used to evaluate a number of characteristics of public participation in specific decision-making cases. Some of these indicators examine the law and regulations governing public participation. Others focus on practice illustrated by selected decision-making processes. The results described here are based on the assessments found at www.accessinitiative.org

...the public rarely has easy access to useful information about the quality of drinking and surface water

The TAI pilot assessments indicated the following:

- Public participation rights are insufficiently articulated in most pilot country legal and constitutional frameworks.
- National-level environmental policy-making cases recorded the strongest rankings for quality and accessibility.
- Regional or local planning processes demonstrated intermediate or strong levels of accessibility but considerable variability in the quality of effort made by public authorities.
- In productive, extractive, infrastructure and other sectors at the national level in the pilot countries, decision-making is generally less accessible to the public.
- Project-level decisions recorded highly variable public participation, in terms of both quality and accessibility.
- Participation tends to be weak at the earliest stages of decision-making and in the monitoring of implementation or review of performance.
- Decision-making processes usually place the onus of initiating participation on the public or affected communities.
- Meaningful public participation improves decisions. In the cases where the pilot-country government invested in supporting meaningful participation and actively solicited input – or where civil society organized, initiated a dialogue or provided input to which the government responded – the decisions adopted incorporated environmental and social aspects.

In 2004–05, over twenty countries carried out TAI assessments, and thus more information will be available on information disclosure and participation. Some initial results from this next round of assessments have shown specific gaps, particularly in information dissemination among minority groups as well as public involvement in planning processes. As countries develop IWRM plans, it is important to examine the degree to which the public is not simply consulted but rather directly involved in the formulation of the plans.

Box 2.16 highlights two cases regarding access to water information and participation in Ukraine and Estonia. In addition, TAI is beginning the process of

developing water governance indicators to be pilot tested in 2005–06.

3e. Access to water quality information

Information about water may also mobilize public opinion to urge polluters and governments to reduce pollution and improve water quality. It was found in the TAI pilot assessments that the public rarely has easy access to useful information about the quality of drinking and surface water. **Table 2.3** indicates that even if the quality of information is good, the access to it is often very limited. As a result, individuals and communities cannot protect themselves from contaminated water or monitor the improvement of its quality. The TAI pilot assessments on access to water quality information also indicated the following results:

- The water quality monitoring systems assessed had operated for more than three years. All monitoring systems, except those in India, have provided regular reports at least over this period. Some of the monitoring systems have operated for decades. For example, RandWater in South Africa began operations in 1927.
- In terms of the breadth of parameters monitored, monitoring systems are categorized as either comprehensive or basic. In Hungary, India, Mexico, South Africa and the United States, it was found that the chosen systems monitor a comprehensive set of physical, bacterial, chemical and viral parameters in water. Systems in Thailand and Uganda monitor a more basic set.
- The quality of the system for providing water quality information also depends on how the monitoring networks are coordinated. Monitoring systems can cover a single urban area (as in Mexico or Indonesia), entire countries (as in Hungary, India, Chile and Thailand), or selected regions within a country (such as the State of California in the United States).
- In Thailand, the monitoring of drinking water from the tap, by contrast, is divided among several bodies – the Metropolitan Waterworks, Provincial Waterworks Authorities, and the private Universal Utilities Company. The monitoring of bottled water comes under another body – the Food and Drug Administration. In Thailand it was also found that, while some analytical data on the quality of tap water

BOX 2.16: ACCESS TO INFORMATION AND PUBLIC PARTICIPATION IN THE WATER SECTOR**Water-related emergencies in Ukraine**

The case of an emergency in 2000 involving the pollution of groundwater in five settlements of the Pervomaysk district of the Mykolayiv oblast, caused by a number of extremely toxic chemical agents (the so called 'Accident in Boleslavchik'), was assessed. Different indicators were used to estimate access to information for environmental emergencies. Among the indicators, the highest score was given to the presence of information about environmental emergencies on the Internet. This type of information is freely located on the website of the Ministry on Emergencies of Ukraine. However, the public had no access to online information about the impact of this environmental emergency on people's health and environment, especially about its effect on the quality of drinking water. It was rather difficult to find empirical material related to public participation for the chemical sector. The research team of EcoPravo-Kyiv focused on the role of the public in the development of the National Environment Health Action Plan (NEHAP) and the 2002 Ukrainian law, 'On drinking water and water supply system'. Assessment of public participation in decision-

making related to the implementation of policy, strategy, plans, programmes and legislation was made using different indicators. It was found that there was no public participation in developing the above documents for the chemical sector. However, all of the documents were available and accessible to the public.

Drinking water monitoring and regional water plans in Estonia

The access to drinking water monitoring data in a small town in southeast Estonia was assessed, where drinking water problems are known to exist, and these problems are representative of the whole region. The town is also representative in terms of administrative capacity. When compared to air monitoring data, data for drinking water dissemination is not very developed. One of the reasons is perhaps that air monitoring belongs to the jurisdiction of the Ministry of the Environment (where several trainings and projects have been carried out to implement the Aarhus convention), but drinking water falls under the control of the Ministry of Social Affairs. There is a strong legal mandate for drinking water monitoring, but there is a

problem with making this data public. However, the Ministry of Social Affairs has initiated a project for disseminating drinking water monitoring data to the public via the Internet. There are eight sub-basins in Estonia for which the government has started drafting water management plans. The Pandivere basin is located in the central Estonia and is a nitrate-sensitive region. Overall, the public was invited to participate in drafting the water management plan and was given reasonable time for commenting. Public input was incorporated into the final decision. However, from the perspective of the engagement of minorities, the opportunity for public participation was negative. No special efforts were made to invite Russian-speaking people (approximately 5 percent or less of the population in the basin) to participate in the plan's development. Although the law prescribes conditions for participation (e.g., time for commenting, number of meetings, etc.), the law does not say anything about taking special efforts to involve minorities.

Source: The Access Initiative, National Team Reports, EcoPravo, Kiev, Ukraine and Stockholm Environment Institute, Tallinn, Estonia, 2004.

could be obtained from water authorities, the country's Food and Drug Administration (FDA) provides no analytical monitoring on contaminants in bottled water. The FDA only notes the conclusion of its analysis: whether the quality of the drinking water of the selected brand is 'safe'. This policy means that consumers cannot check for the presence of specific contaminants. This lack of detail can be particularly relevant to vulnerable populations such as children, pregnant women, and older people.

- In Hungary, different aspects of drinking and surface water monitoring, however, are managed by different agencies, and neither the system nor the data are coordinated or integrated. The lesson to be drawn from both the Thai and the Hungarian examples is straightforward: unified and integrated systems provide a more coherent picture of water quality and present less of a challenge in obtaining information.
- Information technologies facilitate public access to information. Websites increasingly provide an opportunity for the public to learn more about water quality monitoring issues. In Hungary, the National Health Action Program website provides widespread coverage of environmental and health issues. In California, a website for the Environmental Justice Coalition for Water encourages citizens to become involved in monitoring the water quality in their communities.
- Two countries provide examples of how water data can be disseminated. In South Africa, RandWater has created a website to provide users with updates on water issues. For example, a map highlights areas where water should not be used for drinking without treatment and where contact should be avoided because of microbiological health effects. In the United States, water suppliers disseminate annual reports to customers about their drinking water.

Table 2.3: Quality and accessibility of water data, selected countries

Country	Quality of information ¹	Accessibility
Hungary ²	Intermediate	Weak
India	Intermediate	Weak
Indonesia ³	Weak	Weak
Mexico ⁴	Strong	Weak
South Africa	Intermediate	Intermediate
Thailand	Weak	Weak
Uganda	Weak	Weak
United States: California	Intermediate	Strong

1. Systems score weak when only a few parameters on quality of water are collected.
2. Data from almost all 12 inspectorates and from 7 of 19 public health offices in four weeks; 7 of the 19 offices responded on drinking water.
3. Indonesia submitted a single value for both air and water quality information.
4. Mexico disseminates drinking water information at the state level but not by individual water supply.

Source: The Access Initiative, National Team Reports, 2004.

- Detailed information on drinking and surface water quality, on the other hand, is difficult to obtain in all but two of the pilot countries: the United States and South Africa. Under the 1996 amendments to the Safe Drinking Water Act, the United States requires water suppliers to provide customers with annual reports. These reports are usually mailed with bills; many are also posted on the Internet. Teams in five countries (Hungary, India, Mexico, Thailand and Uganda) found no active dissemination of data on drinking water quality for the public on the Internet or in the press. In Mexico and Uganda, teams could not obtain the

data at all; in India, data could be obtained only through a personal contact.

In short, there are considerable differences in the performance of government agencies in providing information to the public about drinking or surface water quality. Collectively, performance scores in providing water quality information are weak. This should be contrasted to the assessment of information disclosure and public participation with regard to air quality that the assessment found to be strong.

Men fishing at sunset with square nets in Dhaka, Bangladesh



Part 4. Water Governance Ahead

In the past decade, water and its governance have featured prominently on the international political agenda and will continue to be an international priority through 2015 within the Decade on Water for Life. International efforts to foster water institutional reform have included recommendations on good water management practice, and the setting of goals and targets for improved water service provision to the poor and for greater environmental sustainability via the MDG structure. High hopes and expectations are now vested in recent international water targets from the Millennium Summit and the WSSD to improve the water situation for billions of people. It is a paradox that while various international fora have intensified their work towards improving the world's water situation and implementing time-bound water targets, the actual funding to the water sector in developing countries is diminishing, or stagnating at best. Funding from donors remains stagnant, and additional investments from multinational water companies to improve water governance and access to water are currently decreasing. There is very little evidence that governments in developing countries are strengthening their water budgets.

It has been demonstrated that water governance is nested in the setting of overall national governance and is correspondingly influenced, for better or for worse, by that, by the national culture, and by events local to the country and its surrounds (e.g., conflict) and developments in the global economy. Some of the trends of water governance include the following:

- As a response to internal pressures and to pressures from the international community and regional organizations such as the EU, a widespread process of reform of water governance is now underway. Progress is patchy but generally slow, as evidenced by the limited achievements in the production of national IWRM plans and the weak coverage of water in PRSPs. In developing countries there are often significant and serious gaps between policy-making and its implementation, not least because of institutional resistance by public sector water organizations.
- Progress is being made in water rights – in recognizing their importance in dealing with social and economic problems, in recognizing the importance of local traditions and customs, in facilitating the management of local competition for water and in recognition of human rights to safe water.
- Corruption is a major issue in the water sector, as in many other sectors, but the impact of it is not well quantified because of a lack of detailed information. It is one of the least addressed challenges in the sector and much remains to be done.
- Privatization of water services in developing countries has not been able to meet the high expectations on improved and extended water supply and sanitation services. Much of the privatization debate has had a biased focus on multinational water companies. Local and small-scale water companies are mushrooming in both urban and rural settings and their potential to improve water supply and sanitation largely remains unexplored. There is thus a need to refocus privatization to more systematically explore how local water enterprises, including both water companies and civil society organizations, can contribute to improved water services. It is also high time to bring the government back in and re-emphasize its importance in raising and stimulating adequate investment funds, as well as its critical role in regulatory and other governance functions.
- Recent moves by governments in lower-income countries to delegate responsibility for water management to lower levels of administration have had limited success. Progress is slow, governments are not delegating the needed powers and resources and have in some cases taken back the delegated responsibility. Often local governments do not have the capacity to do what is required. Local groups and individuals are hampered by lack of access to key information and frequently by exclusion from participating in water decision-making. There should also be a more sober view on decentralization itself and what types of decentralization are useful for improved water resources management and services provision.



In developing countries there are often significant and serious gaps between policy-making and its implementation, not least because of institutional resistance by public sector water organizations

Decentralization without the right checks and balances may lead to local elites strengthening their positions at the expense of politically and economically marginalized groups.

At present, more effective water institutions are yet to evolve in many countries. Much of the conceptual development and division of roles and responsibilities among government agencies, private businesses and civil society tend to become mired in politics and do not reflect true on-the-ground needs. Governments and donors should increasingly support the establishment of independent and strong regulatory authorities to facilitate enforcement of concessions or other types of arrangements between the public and private sectors. There should be increased efforts to strengthen regulatory capacities as well as to make them independent.

Experience has shown that development can be more deeply rooted in systems where governments, private firms and civil society can work together in various constellations. There needs to be an improved water dialogue between governments, civil society and the private sector. The enhancement of governance, coupled with an integrated management approach, can be a vehicle for increased transparency, participation and a climate of dialogue and trust-building, aimed at increasing negotiation and minimizing differences within the water sector. It is perhaps naive to think that all disputes and differences can be bridged, but a society that claims to attack water problems must make serious efforts to address differences and be able to come up with legitimate institutions and processes that can mediate disputes (by the judiciary system, informal conflict resolution mechanisms and elections), or at least minimize their impacts (compensation to disfavoured groups, etc.).

It has been demonstrated that governance matters for the equitable, efficient and sustainable management of water resources and related services and contributes to achieving international water development targets. Governance systems are intrinsically linked to political processes and power. Therefore, the road to improved governance cannot avoid politics and manoeuvring in highly politicized contexts. Addressing improved water governance is challenging, since it needs to take place within a larger context of reform. Still, stakeholders within the water sector can do their part by striving towards integrated policies that also allow for multi-

stakeholder participation and subsidiarity. Water stakeholders at all levels should not refrain from attempting to play a role in shaping policy outcomes and influencing political will. They must be increasingly prepared to manoeuvre in different social and political contexts. This is not to suggest that water managers should choose political sides, but rather that they should be aware that policy-making and implementation involve politics. By knowing the political game and rules, they can make more strategic inputs into policy-making processes and other decision-making processes. In continuing the work to improve water governance it is critical to have the following items in mind:

- Water sector reform goes hand-in-hand with overall governance reform. It is highly unlikely that more effective participation, transparency, etc. will take a firm root in the water sector, unless the country's overall governance system allows it to do so. As a part of broadening the water agenda, there is an increasing need to harmonize and coordinate international water targets and principles with other international regimes, such as with global or regional trading regimes. Unless water concerns are made part of broader national and international trade processes, stability and democratization, the chances of achieving the international water targets remain difficult. There is thus a need to collaborate with new actors outside the water realm and to form more inclusive water development networks.
- Water reform and implementation is progressing, although sometimes at a painstakingly slow pace. In many developing country settings, the water sector and its institutions are plagued by fragmentation, marginalization and low capacities. Further, the marginalization of water departments and ministries in a country's overall political affairs is the rule rather than the exception. International water targets and national IWRM plans and policies mean little unless they are translated into legislation, institutional reform, participation implementation, sufficient funding, etc. Actions must be intensified towards the implementation of water policies and plans. Increased political commitment to implement existing water policies and legislation would go a long way towards achieving the international water targets.
- The representation and participation of various interests in water decision-making is an important

There is very little evidence that governments in developing countries are strengthening their water budgets

component in addressing urban and rural water and food security and governance dynamics. Issues of power and representation should be made explicit, for example, while negotiating fair compensation to farmers for water transfers to cities.

4a. No blueprint for progress

There is no blueprint for improved governance. With social, political and economic preconditions as a base any society must find its own way of improving governance. Despite the variety in design and implementation of improved governance across the world, there are also certain characteristics of the water sector that must be taken into account:

- Water is a renewable resource, as it reproduces itself through the hydrological cycle. While there is plenty of freshwater at the global scale, there is a challenge of having sufficient water, of the right quality, at the right place and at the right time.
- The nature of water resources is multi-purpose and hydrologically interconnected.
- Water is mainly considered a public good, but due to its multi-purpose nature, it is also at times an economic good. Importantly, water has economic, social and environmental value, which, among other things, calls for dialogue between water users and enhancement of participation and multi-stakeholder processes.
- The provision of water-related services is often characterized as being close to monopoly situations, particularly for water supply and sanitation. This can limit the effectiveness of water markets and can also require regulated price ceilings to protect consumers from monopolistic power abuses.
- The capital-intensive nature of water-related infrastructure is often combined with low-cost recovery and heavy subsidization. Water infrastructure investment is also considered a 'sunk cost', meaning that investments made to provide water services cannot be transferred or redeployed for other purposes, hence increasing capital investment risks.

It is important to develop institutions and governance systems that can effectively respond to situations characterized by variability, risk, uncertainties and change. Conventional water planning remains rigid, and the

challenge remains to develop governance frameworks and institutions that are flexible and adaptive. More attention needs to be given to resilient institutions and approaches that can govern or guide the complex, often surprise-laden, process of water governance central to long-term management at a regional, basin, aquifer or even local level (Moench et al., 2003). This suggests that specific solutions – the ideal solution – may be less relevant and emphasizes the importance of enabling processes and frameworks that can be applied to resolve certain issues in situations of economic or other constraints and in contexts of change, that is, 'second or third best' solutions.

Many countries are currently at a crossroads about whether to provide the required political and financial capital to enhance efforts to improve water governance. 'Business as usual' is no longer a viable option. If investment levels and reform speed are not stepped up, countries' abilities to provide water and sanitation for all, increase food production, while maintaining the environment will be seriously compromised. This will, in the long- and short-run, curtail societies' prospects for development.

...there is a challenge of having sufficient water, of the right quality, at the right place and at the right time



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