

Effective Water Governance

By PETER ROGERS and ALAN W HALL

**Global Water Partnership
Technical Committee (TEC)**



Global Water Partnership (GWP), established in 1996, is an international network open to all organisations involved in water resources management: developed and developing country government institutions, agencies of the United Nations, bi- and multilateral development banks, professional associations, research institutions, non-governmental organisations, and the private sector. GWP was created to foster Integrated Water Resources Management (IWRM), which aims to ensure the co-ordinated development and management of water, land, and related resources by maximising economic and social welfare without compromising the sustainability of vital environmental systems.

GWP promotes IWRM by creating fora at global, regional, and national levels, designed to support stakeholders in the practical implementation of IWRM. The Partnership's governance includes the Technical Committee (TEC), a group of 12 internationally recognised professionals and scientists skilled in the different aspects of water management. This committee, whose members come from different regions of the world, provides technical support and advice to the other governance arms and to the Partnership as a whole. The TEC has been charged with developing an analytical framework of the water sector and proposing actions that will promote sustainable water resources management. The TEC maintains an open channel with its mirror bodies, the GWP Regional Technical Advisory Committees (RTACs) around the world to facilitate application of IWRM regionally and nationally. The Chairs of the RTACs participate in the work of TEC.

Worldwide adoption and application of IWRM requires changing the way business is conducted by the international water resources community, particularly the way investments are made. To effect changes of this nature and scope, new ways to address the global, regional, and conceptual aspects and agendas of implementing actions are required.

This series, published by the GWP Secretariat in Stockholm has been created to disseminate the papers written and commissioned by the TEC to address the conceptual agenda. Issues and sub-issues with them, such as the understanding and definition of IWRM, water for food security, public-private partnerships, and water as an economic good have been addressed in these papers.

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PREAMBLE



Valencia's Water Court, engraved by Tomas Rocafort, 1831. The judges use a bench rather than chairs.

Governance is about effectively implementing socially acceptable allocation and regulation and is thus intensely political. Governance is a more inclusive concept than government *per se*; it embraces the relationship between a society and its government. Governance generally involves mediating behaviour via values, norms, and, where possible, through laws. The concept of governance of course encompasses laws, regulations, and institutions but it also relates to government policies and actions, to domestic activities, and to networks of influence, including international market forces, the private sector and civil society. These in turn are affected by the political systems within which they function. National sovereignty, social values or political ideology may have a strong impact on attempts to change governance arrangements related to the water sector, as is the case for example, with land and water rights or corruption.

The goal of this paper is to present a coherent discussion of water governance, and show how it relates to water management and development. In the last few years the concept of integrated water resources management (IWRM) has been accepted as a means to ensure equitable, economically sound and environmentally sustainable management of water resources and provision of water services. This approach is defined by GWP as: a process which promotes the co-ordinated

development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital eco-systems (GWP, 2000). IWRM demands a new framework within which there may be a need for significant changes in existing interactions between politics, laws, regulations, institutions, civil society, and the consumer-voter. The capacity to make these changes depends therefore on changes in governance.

This paper has been developed by the GWP as part of the Dialogue on Effective Water Governance. It is aimed at water professionals who increasingly need to be familiar with issues of governance as they strive to work outside the water sector. Governance is much debated but is probably not familiar to the water community; the paper thus sets out in Section 1 the present thinking on governance. It draws on current thinking by Kooiman (1993), Keohane and Ostrom (1995), Pierre (2000) and others but does not profess to be an exhaustive analysis and does not address the wider areas of 'good governance' such as democracy, electoral systems and sovereignty. In Section 2 the particular aspects of water governance are addressed and this covers both the management of water as a natural resource and the use of water for social or productive purposes. Section 3 gives some ideas on how to achieve effective water governance taking account of governance both within and outside the water sector. It does not pretend to be complete; indeed, one purpose of this paper is to stimulate more practical ideas and solutions. Finally, Section 4 gathers some observations on water governance that need to be taken into account when reforming systems and provides some examples of actions presently underway.

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1. WHAT IS GOVERNANCE?



Governance is 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. (United Nations Development Programme 2001)

Water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society. (Global Water Partnership 2002)

Governance relates to the broad social system of governing, which includes, but is not restricted to, the narrower perspective of *government* as the main decision-making political entity. There is no single definition of governance and different approaches may be followed. Some may see governance as essentially preoccupied with questions of financial accountability and administrative efficiency. Others may focus on broader political concerns related to democracy, human rights and participatory processes. There are also those who look at governance with a focus on the match and mismatch between the politico-administrative system and the ecological system or in terms of operation and management of services. Governance is already practised in all countries and the aim is to make it more effective. To achieve more effective water governance it is necessary to create an enabling environment, which facilitates efficient private and public sector initiatives and stakeholder involvement in articulating needs.

Governance covers the manner in which *allocative and regulatory* politics are exercised in the management of resources (natural, economic, and social) and broadly embraces the formal and informal institutions¹ by which authority is exercised. The new term for discussing this combination of formal and informal institutions is *distributed governance*

¹ Institutions are interpreted here to include both the formal (codified and legally adopted) and the informal (traditionally, locally agreed and non-codified).

(Kooiman, 1993), which is discussed later. There is a profoundly political element to governance, which involves balancing various interests and facing political realities.

Although politics may set the agenda, the priorities and the vision, people need governance systems that give the political vision credibility and ownership. Finally, management structures must be established to carry out the day-to-day tasks.

Governance as an enforcement mechanism

The need for collective action, and the organisation of government, stems from the realisation that without collective enforcement of institutions, such as property rights, the anarchy which is likely to result would only serve to consign human life to one of nastiness, brutishness and, ultimately, short-termism. In a world inhabited by imperfect people, collective organisation is required to balance the positive and negative aspects and prevent ‘*bad*’ people from doing harm as much as enabling ‘*good*’ people to do good (noting, of course, that the ‘*good*’ and ‘*bad*’ people may be at different times the same people). The existence of government, however, is insufficient in itself. If it is assumed that the players of the ‘game of politics’ are the same as their fellow human beings, in terms of being self-seeking and opportunistic, constraints are required (either electoral, constitutional, legal or other) to ensure that the political process is not used for exploitative purposes.

Who is really in charge: models of Government systems

Governance can take many different forms depending on the economic, cultural and traditional political norms of a country and the behaviour of the legislature and legislators. In some countries politicians and the bureaucracy bargain over legislation and the focus is typically at the executive branch, with the elected legislature hardly in the picture. In other countries the behaviour of parliamentarians is critical with the focus on the elected assembly. To understand democratic political behaviour is to understand that parliamentarians are “*single-minded seekers of re-election*”. Their goals are to improve the welfare of their constituents in the shortest possible time frame in order to ensure their re-election. This emphasises the need for robust governance systems to capture the benefits and avoid the dangers of such short-term interests. Legislators can only deal with limited information and they deal with

this by specialising in a particular and limited area; in other domains they take their cues from other sources of information (agencies, colleagues, networks, committee reports, etc) that they have learned to trust.

One of the key elements of governance is to create a framework (institutional and administrative) within which strangers or people with different interests can peacefully discuss and agree to co-operate and co-ordinate their actions. Some form of binding arbitration is needed to break irreconcilable differences and this would ultimately reside in government and the judicial system or within the UN and multi-lateral agreements at the international level.

Good Governance matters

Governance matters a great deal for economic, social and environmental outcomes. Some necessary conditions for good governance are inclusiveness, accountability, participation, transparency, predictability and responsiveness. When the governing system does not fulfil these conditions we talk in terms of *poor governance*. Poor governance leads to increased political and social risk, institutional failure and rigidity and a deterioration in the capacity to cope with shared problems. Of course, governance systems should facilitate action and not create an obstacle to development. Getting the right balance is a source of constant debate and an ongoing process that will be continually changing over time.

Social analysts have shown that there is a strong causal relationship between better governance and better development outcomes such as higher per capita incomes, lower infant mortality and higher literacy (Kaufmann et al., 1999). Poverty reduction is enhanced by a stable and just social order founded on clear institutional rules and effective and equitable markets. Effective governance is thus essential to poverty reduction and can help the poor to help themselves. Poor governance is a barrier to development and hurts the poor through both economic and non-economic channels, making them more vulnerable and unable to adapt to changes. As a result, markets will be weak and distorted thus holding back growth and employment opportunities. Structural and institutional reforms are needed to turn poor governance into more effective governance, including measures such as creating accountability in the use of public funds, building national capacity for better policy formulation, implementation, and enforcement mechanisms. It includes

converting decision-making and implementation into more inclusive processes where civil society and the private sector have clear roles to play with shared responsibilities on the basis of public-private partnerships. The division of labour between the different actors and the sharing of responsibilities and balancing power relations are all part of the same process, that of defining the governing system.

The State and society²

For many years the question has been “*can the State steer society?*” Governance in the past dealt with how the State steered society and the economy through political brokerage (often determined by economic power), defining goals, fiscal measures, setting priorities, etc. In most developing countries, which typically have a strong society and a weak State, this remains the dominant model, increasing the risk of resource mismanagement and financial bad practice.

The question currently posed is “*can society co-ordinate and manage itself?*” This is the essence of *distributed governance*. It looks at co-ordination and the various forms of formal and informal types of State/society interactions and the role of civil society³ and policy networks. This is more society-centred and less ‘Statist’, with governance systems providing the power balance, recognising of course that political power is derived essentially from economic resources and instruments. Today, however, in many developed countries, government no longer exercises a monopoly on the orchestration of governance.

At the beginning of the 21st century, we are thus searching for coherence and accountability in the maze of organisations within national (and international) political systems. However, many of today’s institutions and government systems were developed in the 19th century to supervise States with much more limited functions than today. The developing countries face particular problems as they often have layers of systems – some indigenous and others imported. It is not expected that developing countries can or even should adopt the same systems as industrialised countries but there are basic principles for effective gover-

² This section draws heavily on J Pierre, ed, *Debating Governance*, OUP, 2000.

³ Civil society can be considered to be composed of all general-purpose non-governmental organisations such as professional societies, labour unions, interest groups, trade groups, political parties, and other freely formed clubs and associations. Of course, special-purpose interest groups are also part of civil society. In contemplating water governance, the broadest definition of civil society should be used.

nance that they need to adopt in their own way. The State may need to act quickly to develop the essential infrastructure for development and cannot wait for the ‘ideal’ governance systems to be established. Nevertheless, any development should be done hand in hand with governance reforms that will help to make the development sustainable. Care should be taken, however, not to further weaken an already weak State.

The real reins of power – from hierarchies to devolution

The historical context of governance varies in time and space. In Europe and North America, for example, industry and capital investment backed by a strong State have been the dominant background forces that have shaped governance systems. However, the traditional bases of political power have been eroded in the last 20 years or so and the institutional strength of the State is being challenged. Some recent changes in society have facilitated this weakening of the central State. Some of these changes include:

- fiscal crises within the State (limitations on raising taxes);
- technological advances that facilitate networking and subsidiarity;
- the globalisation process, including deregulation of financial markets and volatility of capital, which restricts the State’s ability to govern/control the economy;
- a more assertive sub-national democracy in cities or semi-autonomous regions;
- excessive workload and responsibilities on smaller government bureaucracies; and
- large concentrations of people and political power in urban areas.

Hierarchical governance: Part of modernisation is generally seen as the evolution of political systems from top-down, hierarchical government systems with centralised institutional settings, to more decentralised administrative forms. There is no evidence that more decentralised systems are necessarily more effective than centralised ones. The real test here is, “*what works in the particular setting?*” There is, however, a perceived ever-widening gap between those countries that have managed to move toward subsidiarity – or the performance of functions at the lowest effective level – and those that remain centralised and stagnant. The forces for change listed above have an even greater impact in poorer countries as expectations rise for a better quality of life. There is a growing dissatisfaction with ineffective but costly State machinery, lack of

vision or leadership, weak financial discipline and political dictates crippling administrative functions. With respect to distributed governance, rich and poor countries are generally growing apart. More mechanisms exist in developed countries to establish the required new governance systems than is the case in most of the less developed countries. There is a great urgency for countries to establish their own governance systems by learning from, but not imitating, inappropriate models from the richer countries with their different historical and cultural backgrounds.

Market-led governance: With the end of the Cold War in the closing decades of the 20th Century, *the market* was proposed by many in the western countries as the solution to economic growth, social equity and environmental problems. This led to deregulation and more involvement of the private sector and a changed role for the civil service and civil society. This institutional restructuring of the State aimed to reduce government command and control functions with more individualism (fewer collective solutions) and *private enterprise and the market* as the superior resource allocation mechanisms. This *market-led* governance model is the immediate background in which we now examine governance with respect to water resources management and the delivery of water services.

Today the honeymoon with the *laissez-faire* market-led model is over and hard questions are being asked. It is considered by many to be too simplistic (hierarchies may not work well but markets do not necessarily work well either in all situations) and not representative of wider societal values. More people are examining what new instruments and new forms of exchange between State and society can be developed to ensure political control and societal support. From this examination, propositions for management in partnership, co-management and co-governance, and distributed governance, have developed.

Distributed governance: At the beginning of the new millennium the State's role of "*directing*" or "*steering*" society is being challenged by cohesive local networks (civil society, private sector) and global networks (international organisations and NGOs) with these same entities also supporting the State in its aims to develop society. This gives a dynamic relationship between different social forces. Many politicians (mainly in the West) see the State increasingly as part of the problem rather than the solution. There are more calls for a return to smaller government, reversing the post second world war ideology of a hierar-

chical central State caring for its citizens. The State no longer believes it can solve societal problems acting alone, particularly socio-environmental ones, and the private sector alone cannot address the problems of the poor and the environment. The *command and control* or *hierarchical* model and the *market-led* governance models are both thus much weakened.

Clearly modern governance sees formal authority being supplemented by an increasing reliance on informal authority, for example, through genuine public-private co-ordination and co-operation to the benefit of both of these as well as the customer/citizen. (Organisations such as the GWP and international NGOs such as Transparency International are examples of such co-operative networks.) The State thus needs to adapt to a new situation and distributed governance is an institutional response to the changed environment. Distributed governance is thus the empirical manifestation of State adaptation to its external environment. It is the conceptual representation of the co-ordination of social systems and specifically the role of the State in that process.

Establishing modern governance systems

Modern governance can be about how to maintain some “steering” capacity in a world full of external (and internal) societal independence. Establishing national legal regulations (the rules of the game) becomes increasingly complex as society becomes full of *informal* institutions. This leads to a proliferation of rules that can undermine the rule of law as a result of the scale, complexity and cost of the legal system itself and its inability to enforce laws. In many developing countries *extra-legal* informal activities flourish as the only alternative to the stultifying State bureaucracies (de Soto, 2000).

Overcoming corruption is clearly an important aspect of governance. Until recently the lack of information and political will has made it difficult to openly discuss this problem which is rife throughout the world and applies equally to the public and private sector. The law can, for example, address the problem of corruption but it is a heavy and expensive instrument, a measure of last resort, as it is difficult and costly to bring people to court. With distributed governance, more open competition, more accountable public administrations and more transparent processes may address the problems of corruption. There are many measures that can be used without recourse to law, including

reduced public sector intervention in the economy, reform of public administration, liberalisation and reduced bureaucracy and fair pay for workers. All these measures can help to reduce the temptation for corruption. Regulators and watchdogs, such as some NGOs, a strong independent media, and self governance (for example, corporate social responsibility, codes of conduct, etc) can produce social sanctions that will deter all but the most unscrupulous from corruption.

Similarly, there has been a proliferation of non-accountable civil society and non-governmental organisations that call for action from a narrow platform but have no responsibility for the consequences of the actions they propose. The governance vacuum left by the weakness of legitimate local government has been filled by often well-meaning but non-accountable organisations.

Governments are too often caught up in contradictory roles, being at once provider of services and the guaranteed source of accountability for those services. Local government is often absent or weak and civil society organisations have no legal base. A key element of effective governance is thus institutional reform (affecting both State and social institutions) in order to devolve as many functions of the State as possible to society and democratising as many as possible of the organisations in civil society. This could mean a move towards a society with a limited but strong government and a politicised (and voluntary) civil society; thus moving from top-down bureaucracies to constitutionally ordered, democratically self-governing associations. The Dublin principles[†] manifestly reflect this concept of distributed governance.

Governance systems must be established that overcome the legitimacy and accountability problems of marketisation. This can be achieved through the establishment of self-governing rules and networks so there are independent checks and balances. However, western governance is often founded on a social fabric of equitable sharing and strong public watchdogs that may not be readily transferred to developing countries. Governance systems balance power and priorities. Gov-

[†] The 1992 Dublin principles that guide the IWRM approach are:

- Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.
- Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels.
- Women play a central role in the provision, management and safeguarding of water.
- Water has an economic value in all its competing uses and should be recognized as an economic good.

ernment may “decide” how to structure society with incentives (for example, budgets using money as motivation). But they need to take into account internal and external pressures and economic forces, including civil society aspirations and priorities, internationally agreed conventions or declarations, decentralisation and regional co-operation as well as donor priorities (for poorer countries), macro policy (finance and planning) and short-term political priorities.

Establishing effective governance systems has been a key aspect of development co-operation for many years and all major donors and development banks as well as private investors increasingly take account of governance when assessing the efficiency and effectiveness of their investments. The fact that private investors are prepared to pay companies (for example, the Economist Intelligence Unit) for governance information illustrates the importance of governance to their decisions. The process is, however, slow and can lead to resentment to interference in national sovereignty as it is usually centred on the highest political level. By focusing governance issues specifically at the water sector more practical and manageable solutions may be possible.

2. THE GOVERNANCE OF WATER

Since the Dublin conference in 1992, significant international goals have been set that relate to water governance. At the 2000 World Water Forum in The Hague, the GWP Framework for Action (GWP, 2000) stated that *the water crisis is often a crisis of governance*, and identified making water governance effective as one of the highest priorities for action. The 2000 Hague Ministerial Declaration reinforced this view and called for *governing water wisely to ensure good governance, so that the involvement of the public and the interests of all stakeholders are included in the management of water resources*. At the Bonn 2001 Freshwater Conference the ministers recommended action in three areas, with water governance as the most important. They proposed that *each country should have in place applicable arrangements for the governance of water affairs at all levels and, where appropriate,*

accelerate water sector reforms. The UN 2000 Millennium Assembly emphasised conservation and stewardship in protecting our common environment and especially *to stop the unsustainable exploitation of water resources, by developing water management strategies at the regional, national and local levels, which promote both equitable access and adequate supplies.* This was endorsed at the World Summit on Sustainable Development in 2002 where Heads of State agreed a specific target *to prepare IWRM and water efficiency plans by 2005.* To be meaningful these plans will need to take cognisance of prevailing governance systems and allow for necessary reforms.

What is water governance about?

The term “water governance” needs to be carefully defined, as it may not be readily understood. It is also important to identify the attributes that make water governance “effective”. The Global Water Partnership defines water governance as follows:

Water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society.

The notion of governance for water includes the ability to design public policies and institutional frameworks that are socially accepted and mobilise social resources in support of them. Water policy *and the process for its formulation* must have as its goal the sustainable development of water resources, and to make its implementation effective, the key actors/stakeholders must be involved in the process. Governance aspects overlap with technical and economic aspects of water, but governance points us to the political and administrative elements of solving a problem or exploiting an opportunity. Governance of water is a subset of the more general issue of the creation of a nation’s physical and institutional infrastructure and of the still more general issue of social co-operation.

Water governance is concerned with those political, social and economic organisations and institutions (and their relationships), which are important for water development and management. Given the complexities of water use within society, developing, allocating and managing it *equitably and efficiently* and *ensuring environmental sustainability* requires that the disparate voices are heard and respected in decisions over common waters and use of scarce financial and human resources. Water

governance is concerned with the functions, balances and structures internal to the water sector (*internal governance*). It includes the framing of social agreements on property rights and the structure to administer and enforce them known as the law. Influences also come from civil society and from the “current” government and these are considered parts of the *external governance* of water, which will be discussed later. Although issues can arise for water governance from the economic and technical spheres, in most countries the driving force is *politics*. Effective governance of water resources and water service delivery will require the combined commitment of government and various groups in civil society, particularly at local/community levels, as well as the private sector.

Water governance principles and legal bases

The Dublin Water Principles bring water resources firmly under the State’s function of clarifying and maintaining a system of property rights, and, through the principle of participatory management, asserts the relevance of meaningful decentralisation at the lowest appropriate level. There is increasing pressure to recognise and formalise water rights and this is happening in many countries. Formalising rights raises complex questions about the plurality of claims and the balancing of the distribution of benefits among the social groups. It also imposes responsibilities including in particular that of pollution prevention and financial sustainability. The process of formalisation is often biased in favour of the rich and powerful who may abuse the system and capture rights. Informal ‘rights’, as defined locally with their historical rules and principles, are equally important and improper formalisation may lead to conflict between the formal and traditional. The formalisation of rights may be unnecessary or insufficient to secure access to water resources. The capacity to defend rights against competing claimants is essential for the rights to be meaningful, whether they are formal or informal. An important matter to clarify is to what extent the processes of devolving water rights serve segments of a population, or its entirety.

Water law varies widely

The theoretical bases of governance with regard to water are a subset of theories of collective behaviour. Unfortunately, no one simple theory explains every situation. There is often a marked difference between the

philosophical Continental European and Latin American approaches and the pragmatic US-Anglo Saxon schools of thought. A relatively clear original demarcation of property rights and experimentation with these rights over time has led the US to flexible approaches to water governance. This approach allows for adjustments when economic and social conditions change because it does not aspire to build institutions that cover all possible eventualities. There are also systems that are hybrids of the Civil law (philosophical, descended from Roman law) and Common law (pragmatic, from Britain) approaches, as well as systems with other ancient roots, such as those of the pre-Colombian Americas, India and Islamic countries.

There are also systems of social rights and responsibilities that remain traditional and uncodified, and are not necessarily less strong because they are manifested in cultural expectations rather than written rules. A social perception of equitable sharing is important to governance. The notion of flexibility and equitable sharing is, however, alien to many countries whose governance systems are rigid and do not allow for 'reasonableness'. Adaptive capability is often not present and without enforceable sanctions, poor governance systems favour the strong. This makes it very difficult and even dangerous to translate practices based on flexibility and pragmatism into many developing country governance environments, *unless the prevailing social system can provide adequate sanction against miscreants* (Solanes, 2002).

Water law is about property rights

The State has an important role to play through its core function of defining property and use rights and responsibilities. In modern pluralistic democratic societies, the foundation of the State rests upon the publicisation⁵ (the term for the shift from the private to the public sphere) of the costly monitoring and policing needed to protect productive assets from being redistributed to intruding claimants. Without this policing, called the law, systems of property would never have advanced beyond appropriative behaviour backed by force. Discussions of water rights usually focus upon the rights of the property right holder and ignore the contingent responsibilities which that holder has with regard to others in society who do not share the rights. These obligations need to be stressed in any discussion of governance. Also, any discussion on

⁵ Also called nationalisation in some countries.

water rights must take account of land use and land ownership as they are often closely linked, sometimes formally through riparian rights, and land owners can affect water through land use changes such as reforestation

Examples of different property rights regimes, with their associated rights and obligations, include:

- *Open Access*

Open access is a regime where no defined group of users or owners are identified and the benefits are available to anyone. Individuals have both privilege (the ability to act without regard to the interests of others) and no right (the incapacity to affect the actions of others) with respect to usage and maintenance of the asset.

- *Common Property*

A management group has been defined and the group has a right to exclude non-members and define the rules of appropriation. Non-members have a duty to abide by the rules. Individual members of the management group have both rights and duties with respect to usage and maintenance of the property and thus hold rights to manage the resource.

- * *Private Property*

Individuals own the resource and have the right to exclude others and transfer rights. They have a duty to refrain from socially unacceptable uses. Others (non-owners) have a duty to respect decisions by the owners and expect that only socially acceptable uses will occur.

- *State Property*

Water is vested in the State – acting for citizens – individuals have a duty to observe use and access rules determined by the controlling agency of the State.

Water resources may start within an *open access* regime but is often appropriated by a group and becomes a *common property* resource. When individuals or groups of individuals share water resources as a common property resource, people are connected in a socio-political, economic and ecological sense (Ostrom, 1999). In a common pool, actions influence those sharing the resource regardless of the property

regime under which the resource is held and from this perspective its governance is distributed.

To control the resource the State tends to appropriate most of the rights from the common property group to create *State property* with a lesser amount owned privately. The State is then faced with the responsibility of how to deploy the resource to the national advantage. A key to water governance at the beginning of the 21st century is how, through politics, the State can achieve this fairly and equitably, without reducing incentives for efficient use of the resource.

Water information networks, consultation, and policy reform

As mentioned earlier, one of the key tasks of governance is to create a framework (institutional and administrative) within which strangers or people with different interests can peacefully discuss and agree to co-operate and co-ordinate their actions. This framework should also reduce the transaction costs of pursuing effective water management. Therefore, information networks (or partnerships) are important and may function in conditions where other governing structures do not. Information networks work best when the following conditions apply and combine (Pierre, 2000):

- Actors need reliable information;
- Quality is difficult to define and measure;
- Commodity is difficult to price;
- Professional discretion and expertise are core values;
- Flexibility to meet localised and varied service demands is needed;
- Cross-sector multi-agency co-operation and production are required;
- Co-operation confronts disparate organisational cultures;
- Actors perceive the value of co-operative strategies;
- Long-term relationships are needed to reduce uncertainty;
- Monitoring and evaluation incur high political and administrative costs; and
- Implementation involves haggling.

Water fits almost all of these conditions and provides a good example of where human networks of concerned groups (for example, government, private sector and civil society) may work better than either hierarchies

or markets alone. Markets represent an important network highly dependent on information.

When proposing changes to water governance systems, it is important to understand and distinguish between the different functional levels in water management: operational, organisational and constitutional. The first focuses on the use or control of water for specific purposes to fulfil specific needs. There are always a plethora of operational enterprises covering domestic water supply, wastewater treatment, hydropower, irrigation, environmental management, tourism, etc and they can be in public or private hands. The organisational level co-ordinates and reduces conflict between these competing enterprises, administers the rules and polices water use and the users in a water system. This function resides within the public sector – and includes for example river basin authorities and regulatory bodies – the latter should be autonomous (within constitutional boundaries) if they are to act impartially. Finally, the constitutional function creates the enabling environment within which the other functions operate. It sets the policies and legislation, taking into account external governance and political imperatives. In many countries such functions are unclear and often governments may be unable or unwilling to exercise their responsibilities. In this case ad hoc arrangements at local government or community level are often established. These are vulnerable as they may lack any formal basis and can be adversely affected by vested interests or by central government policies and laws. A participatory and consultative approach when reforming water governance systems can help to strengthen local government and bring the positive aspects of such arrangements into the formal system and reduce vulnerability.

New forms of water governance

Hydro-geographical boundaries – the river basin – often provide opportunities for modern governance networks. A basin is a closed region where there are incentives for people to come to an agreement on governance systems with water as the focus. Although basins cut across formal jurisdictional boundaries and thus local government and other government entities which do not necessarily work together, the basin society (a river basin agency or commission) could require them to do so. The basin society may thus have specific governing capacities and

needs. National governments acting alone cannot easily allocate and regulate water in a basin, as they are unlikely to appreciate local interests or priorities. Government should, however, provide the rules and regulations and establish a framework for local people to meet. (For example, the basin community has a spatial footprint such as in the Catchment Management Agencies in South Africa and the River Basin Agencies in France). Regulation within a basin must address issues of quality as well as allocate quantity to users. Regulation of other sectoral users such as agriculture and industry is very weak. Preventing pollution from agricultural water use (salinity, nitrates in groundwater) and from industries such as tanneries and mining is becoming increasingly important. In Pakistan, the recently gazetted Sindh water management ordinance recognises the need to regulate irrigated agriculture. Catchment planning and management, combining land and water use, is a means to regulate at the basin level but hitherto the tools have not been readily available to make this practical. New approaches, as found for example in the EU Water Framework Directive and the Streamflow Reduction Strategies in South Africa, are now starting to incorporate this into governance systems.

Water laws and regulation of water utilities are key instruments that have been discussed at length and provide many examples of weak governance. The introduction of laws and their implementation is a political process that relates to political polarisation of society. Good legal and institutional instruments in one country may not work in others, as a result of a weak or inappropriate external governance system. For example, the flexible, pragmatic approach common to the USA does not suit the cultural environment in most developing countries. A common problem is that of weak regulation of utility providers. For example, when strong private water utility owners negotiate provisions that jeopardise benefits to the public (such as extravagant guaranteed returns, fixed exchange rates and interest rates, etc) it can lead to disillusion with private sector involvement in service deliveries. Similarly, public utility owners are often manipulated by governments and can be job havens or cash cows leaving them weak and underfunded with poor services for the public. Strong regulation is thus essential for both public and private utilities with a clear definition of the respective duties of the regulator and operator.

Lower water use, lower conflict levels

It is obvious that the water crises are due to an increase in demand and reducing that demand would help greatly even though there would still be problems of existing levels of resource conflicts and environmental degradation. Demand for water can be reduced voluntarily by using many different technical, social, and economic tools. Essentially, this means that the consumer will change his or her consumption preferences. Regulatory instruments involving permits, restrictions, and allocations to various users and uses can also reduce water demand. For example, total water demand in the USA has declined from a high in 1980, despite large increases in wealth and population. This means that maintaining aquatic environmental quality is getting progressively easier. In this case direct water pricing policies have not brought about this decline. It appears to be largely due to external factors such as higher energy costs and mandated energy efficiency improvements to domestic and commercial water appliances and decline in the value of irrigated crops. Specific water policy measures such as effluent limitations on wastewater discharges and enforcement of federal in-stream water requirements for ecosystem maintenance have also had a significant impact. It is worth noting how well-informed public pressure acted as a driver for policy change and technological innovation to achieve water savings. Each person reduced his or her water use, and overall, this has made a big difference in water availability in USA.

An important matter is the extent to which the processes of publicisation and devolution of water rights serve segments of a population, or its entirety. The issue of Private Sector Participation (PSP) for water services has recently become a contentious issue. From a governance point of view, however, the nature of the supplier is less relevant than the nature of the protection of consumers. Both public and private suppliers, through their mandates, pricing policies and supply norms, can either include or exclude the poorer section of the population. For example, cross-subsidy, if used judiciously, is a useful tool commonly used throughout the world to benefit the poor without adverse impacts on others or on the economy.

The politics of water governance are typically the sociological and economic factors (structures, institutions, etc) that lie outside the provision of water and reflect the more general political make-up of the

country, the water institution's setting. For a water resources manager or water service provider politics is certainly part of his or her governance domain, but is usually not considered directly relevant to their actions.

Governance failures

An underlying theme of social science literature is that all governing structures '*fail*' and all markets and hierarchies have their limitations and also '*fail*'. More effective governance regimes or systems need to be designed/created to overcome *government failure*, *market failure* and *system failure* or a combination of these. For example, water is not a simple economic good; it is sometimes a public good, sometimes a private good and often lies somewhere in-between. Its development can lead to natural monopolies, and it presents major economic and physical side effects or externalities.

Governance failures are listed in Table 1. They are inherent in most countries and have to be addressed. The Global Water Partnership has prepared a ToolBox for IWRM (GWP, 2001) that includes a range of instruments that can be used to address governance failures. Institutional and communication gaps are likely to be the most difficult. An empirical examination of how to overcome the problems caused by market, government and system failures is essential for each specific setting if effective water governance is to be achieved. There are failures that cannot be easily addressed by water sector professionals as they lie outside the water domain: for example, national institutional structures that impede political vision, poor mechanisms for inter-sectoral dialogue, coping with unpriced assets and public goods such as flood control and drought management. The water community nevertheless needs to understand such external governance constraints and engage with non-water organisations to seek solutions.

Governance external to the water sector

Water governance can draw strength from existing governance structures in other sectors in the country, for example through the stabilisation of property rights, broad rules and laws. Certain more general Californian State laws for example, aided the creation of Californian groundwater basins. The end of apartheid in South Africa facilitated significant changes to water laws and the accession of Eastern European countries to the European Union has acted as a spur to improved water

governance. Conversely, if the service provider succeeds, it can also validate and strengthen the politics that made it possible. There are several examples of water governance influencing external governance. The best known of these is perhaps the co-operative water development in The Netherlands in the early part of the 20th century which was an important part of nation building for the modern Dutch welfare state.

It is not surprising that water service providers feel the impact of external governance on their own internal governance. It is not uncommon for services to be paralysed by political interference and conflict. Indeed, external governance may prevent new forms of service provision coming into existence, either through ignorance or vested interests. In extreme circumstances this has even extended to the involvement of organised crime in undermining public water supply providers. Many interventions from the external governance sphere could be constraining, but others could be supportive, integrative and helpful in the longer run. This perspective on governance tells us that political capital developed entirely outside the water sector can be brought to bear within water affairs, for the good or for the ill of the service provider or resource manager. Therefore, a favourable or at least neutral external setting is critical for the success of a water service provider.

Water governance traditionally begins from the social and economic policies set by government. However, with the growing liberalisation of trade, water services are becoming increasingly affected by international trade agreements. Often such trade agreements are negotiated by Trade Ministry officials who know little about water and may not necessarily consult water officials. Recent concern has been expressed by some NGOs about the inclusion of water services in the General Agreement on Trade and Services (GATS) (World Development Movement, 2002). Whilst liberalisation of such services may be beneficial in raising foreign direct investment, countries need to take care in negotiating the rules under the GATS. Government negotiators can place limitations on the commitments it makes in a specific service sector thus restricting the application of GATS rules but this is a complex issue and often developing country negotiators are in a weak position in such negotiations.

Of particular concern is the conflict between promoting trade and protecting the regulatory rights of national government. It is accepted by all that the ability of government to regulate water services providers

is essential for effective private or public sector provision of water services, but the government's right to regulate may be restricted under GATS. Apart from GATS other trade agreements, such as NAFTA, can affect water. For example, the negotiations recently started on the Doha Round of talks on agricultural trade liberalisation could affect water use for food production. Similarly, debt repayments and HIPC (Highly Indebted Poor Countries) agreements may skew a government's ability to allocate budgetary provisions for water services.

3. ACHIEVING EFFECTIVE WATER GOVERNANCE

Judith Tendler (1997) noted that we know a lot more about what constitutes *bad government* than we do about achieving *good government*. Her case studies tend to question some conventional nostrums and preconceptions of how governance should be and drive us back to a close functional analysis of each individual case. Keohane and Ostrom (1995) provide empirical examples of water governance from the USA, Indonesia, Nepal, Mexico, Peru, Philippines, and Sri Lanka. Maass and Anderson (1978) provide in-depth analyses of the development of the governance of irrigation since the 15th century in Valencia, Murcia, and Alicante in Spain. In all of these empirical studies the authors found strong evidence to support the notion that, despite a wide range of property rights regimes, user groups could develop into sustainable institutions over many years (centuries in the case of the Spanish irrigation property rights sharing systems). Essentially, there is a possibility of identifying a level of centralisation and decentralisation and regulation to produce effective water governance. Whilst empirical evidence suggests there can be no dogmatic solutions, it would be helpful to establish some universal attributes that make water governance effective in practice.

New ideas about water governance

There is a growing perception that the governance of water resources and water services functions more effectively with an open social struc-

ture which enables broader participation by civil society, private enterprises and the media, all networking to support and influence government. Moreover, examining the role of networks or distributed governance helps to overcome the sterile debate about private versus public water service delivery and the role of the community. The goal of creating a proper governance system gives the debate a more practical focus. The role of civil society and NGOs in water management and service delivery also becomes clearer as government regulation facilitates local self-governance.

It is important that in designing effective governance systems transaction costs are not unduly increased and action is not stifled. There will always be trade-offs and it is important to get the right balance for each situation rather than seeking the ideal system. In the developed north, governance systems are often unwieldy and can frustrate development but the mature nature of society demands this level of governance. In poorer countries governance systems must not impose too many restrictions on action otherwise economic growth and the provision of basic needs for the poor will be impeded. Too often, well-meaning demands to improve governance can be a brake on development. The economic and social transaction costs of governance may be quite large and care should be taken to ensure that they are within reason and they should be carefully monitored.

There is no single model of effective water governance; indeed to be effective governance systems must fit the social, economic and cultural particularities of each country. Nevertheless, there are some basic principles or attributes that are considered essential for effective water governance:

Principles for effective water governance

Approaches

- **Open and transparent:** Institutions should work in an open manner. They should use language that is accessible and understandable for the general public to increase confidence in complex institutions. In addition to being open, good governance requires that all policy decisions are transparent so that both insiders and outsiders can easily follow the steps taken in the policy formulation. This is particularly important with regard to financial transactions.

- **Inclusive and communicative:** The quality, relevance and effectiveness of government policies depend on ensuring wide participation throughout the policy chain – from conception to implementation. Improved participation is likely to create more confidence in the end result and in the institutions that deliver policies. Participation crucially depends on all levels of government following an inclusive approach when developing and implementing policies. Broad participation is built on social mobilisation and freedom of association and speech, as well as capacities to participate constructively. Transparency and accountability are built on the free flow of information. Governance institutions and systems need to communicate among the actors and stakeholders in very direct ways. Correctly done, this will lead civil society to be socialised into governance over a wide range of issues.
- **Coherent and integrative:** Policies and action must be coherent. The need for harmony and coherence in governance is increasing as the range of tasks has grown and become more diverse. Challenges such as climate and demographic change cross the boundaries of the sectoral policies on which the government has been built. Coherence requires political leadership and a strong responsibility on the part of the institutions at different levels to ensure a consistent approach within a complex system. Water governance should enhance the effectiveness of Integrated Water Resources Management (IWRM). The institutions will have to consider all uses and users within the traditional water sector and also their interconnections with and impacts upon all other potential users and sectors.
- **Equitable and ethical:** All men and women should have opportunities to improve or maintain their well-being. Equity between and among the various interest groups, stakeholders, and consumer-voters needs to be carefully monitored throughout the process of policy development and implementation. It is essential that the penalties for malfeasance are, and are seen to be, equitably applied. Above all, water governance has to be strongly based upon the ethical principles of the society in which it functions and based on the rule of law. This manifests itself most strongly in the issue of justice, property rights for use, access, and ownership of water. Legal and regulatory frameworks should be fair and enforced impartially.

Performance and operation

- **Accountable:** Roles in the legislative and executive processes need to be clear. Each institution must explain and take responsibility for what it does. But there is also a need for greater clarity and responsibility from all those involved in developing and implementing policy at any level. The “rules of the game” need to be clearly spelled out, as should the consequences for violation of the rules, and have built-in arbitration enforcing mechanisms to ensure that satisfactory solutions can still be reached when seemingly irreconcilable conflicts arise among the stakeholders. Decision-makers in government, the private sector and civil society organisations are accountable to the public, as well as to institutional stakeholders. This accountability differs depending on the organisation and whether the decision is internal or external to an organisation.
- **Efficient:** Classical economic theory demands efficiency in terms of economic efficiency, but there are also concepts of political, social, and environmental efficiency which need to be balanced against simple economic efficiency. It is also essential that governance systems do not impede action, for example, minimising transaction costs will go a long way toward political and economic efficiency.
- **Responsive and sustainable:** Policies must deliver what is needed on the basis of demand, clear objectives, an evaluation of future impact and, where available, of past experience. Responsiveness also requires policies to be implemented in a proportionate manner and decisions to be taken at the most appropriate level. Most importantly, the policies should be incentive-based. This will ensure that there is a clear social or economic gain to be achieved by following the policy. The institutions should also be built with an eye toward long-term sustainability. Water governance must serve future as well as present users of water services.

Using Integrated Water Resources Management (IWRM) tools

The IWRM approach eschews politics and the traditional fragmented and sectoral approach to water and makes a clear distinction between resource management and the water service delivery functions. It should be borne in mind, however, that IWRM is itself a political process, because it deals with reallocating water, the allocation of financial

resources, and the implementation of environmental goals. There is a general agreement in the water community that IWRM provides the only viable way forward for sustainable water use and management – although there are no universal solutions or blueprints and there is much debate on how to put the process into practice. Moreover, IWRM is not applied in a vacuum and the broader picture, as described by governance, provides the context in which the IWRM approach can be applied. The political context, however, affects political will and also political feasibility. Much more work remains to be done to establish effective water governance regimes that will enable IWRM to be applied. This pertains to both the management of water resources and the delivery of water services.

To establish effective water governance systems and put IWRM into practice there is a range of tools available to policy makers and practitioners as described in a large range of literature. The *GWP ToolBox for Integrated Water Resources Management* (GWP, 2001) brings together an array of over fifty tools and references that can be used by practitioners to overcome governance failures (see table 1) and it is supported by experiences from around the world. Different countries will need to identify which management tools or instruments are most important and appropriate given their specific circumstances. To illustrate some important governance messages addressed by the ToolBox three case studies are summarised below.

Governance and institutional reform in Chile

The instruments that have been receiving the most attention in Latin America, for example, are those addressed to market failure. A major emphasis in the Chilean water reforms has been on the correct pricing of the water resource to reflect opportunity costs over and above the tariff. Similar attempts are underway in Costa Rica and Ecuador where downstream users pay the watershed owners and managers for watershed services. Chile (Box 1) has been a world leader in water governance, and as such has had few examples to follow. The external governance of the Chilean experience is instructive since there was a major commitment to development based on an export-oriented open economy. Water just had to follow suit. Many mistakes with openness, transparency, participation, and ecosystem concerns were made in the hurry to get effective water markets established. However, the system is adap-

tive and now these concerns are being addressed twenty years after the initial laws were passed. Twenty years is a very small time span with respect to water policy and governance; it took the US almost two hundred years to finally build in participation and ecosystem concerns into its water governance.

Decentralisation in Mexico

Agriculture remains the highest water user in many countries and there have been few attempts at reform to make water use more efficient because so many farmers (in civil society) make their social/livelihood needs very evident. In both developed and developing countries the sub-sector has strong vested interests and weak governance systems. Governments typically have neither the will nor the resources to oppose the rural political imperatives and the consequences of this for the water sector are major. A determined attempt to address the many related governance issues is well overdue. The Mexican case (Box 2) shows how a formerly strictly hierarchical government irrigation agency can decentralise decision-making and devolve management responsibilities to the level of farmers' groups with water rights and management of publicly owned irrigation systems transferred to Water Users Organisations (WUO) on almost 3 million ha. Although this covers only a part of the irrigated area – and the most sophisticated areas – it is an important step towards decentralisation. By taking a purely sectoral approach, some opportunities for more efficient water uses have been overlooked. However, this provides a stepping stone to greater reform. As we have already stated, developing effective governance systems is a long-term iterative process.

Governance and shared waters

The case of Lake Peipsi (Box 3), a lake shared by Russia and Estonia, is a good example of using IWRM tools in managing transboundary waters and shows how political will and co-operative approaches can lead to sustainable water resources management. It also demonstrates the difficulty of involving local civil society in sensitive political discourse. The first and clearest lesson is that States and governments are likely to get into serious political and social difficulties if they ignore the ideas of participation and openness. The value of distributed governance is demonstrated, although the barriers to change in many coun-

tries indicate that this will evolve slowly over many years.

The Lake Peipsi case also highlights the specific issue of water governance related to the use of shared waters between nation states. This raises special governance problems that cannot be adequately covered here and too often it has been force that dictates decisions and actions. There are, however, increasing examples of water being a catalyst for regional co-operation with negotiation for shared waters based on the benefits that all parties can accrue from any agreement. The recent Agreement on the Incomati and Maputo Rivers in southern Africa is an example. Progress on the Nile Waters Initiative is another example of a patient governance dialogue where the catalyst for negotiations was the benefits of increased security and stability and consequent economic development for all parties rather than water use as such.

Although most negotiations are on a bilateral basis, there are international laws and regional agreements that refer to shared water use and resource management. An important regional convention is for the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), established in 1992 by the UN Economic Commission for Europe. It is intended to strengthen national measures for the protection and ecologically sound management of transboundary surface water and groundwater and obliges parties to prevent, control and reduce water pollution from point and non-point sources. The UN Convention on the Law of the Non-Navigational Uses of International Watercourses is, however, the only comprehensive international legal framework for guiding transboundary water conflicts. The Convention consists of a set of guidelines to encourage bilateral and multilateral co-ordination without sanctions. To date it has been ratified by only sixteen countries and is therefore not fully operational. The potential for conflict over water is increasing and increased international efforts are needed to solve transboundary water conflicts.

Governance and water utilities

Over 90% of domestic water and wastewater services world-wide are provided by the public sector and this is likely to remain the case. Often the services provided are adequate but in some cases they are poor and inadequate finance is available to secure good quality services through the public sector. The introduction of private utility companies to provide domestic water services has raised considerable concern with

some NGOs, public sector unions and others. Too often the debate is ideological and misses the point. All parties accept that business should not own or control fresh water (WBCSD, 2002), however, business can take on responsibility for management of services and even build and own infrastructure under government supervision and regulation – talk of ‘privatisation of water’ is thus misleading and can be mischievous. The private sector has taken over responsibility for the management of services from weak, poorly funded public utilities in several large cities in developed and developing countries. The results have been mixed, but usually showing good economic outcomes and improved distribution to a wider group of citizens. However, one lesson is clear, without the necessary governance framework for regulation, water utilities, whether publicly or privately supplied, will remain inefficient. Too often the performance of the utility operator is overshadowed by the poor governance structures that exist in society. In particular, the public sector operator must work more transparently for the benefit of the consumer and not for the workers or bureaucracy. The process for appointing private operators has to be transparent and governments need to get the support of the user-consumer.

The involvement of the private sector in Latin America has had mixed results with some clear success in extending service coverage and quality (Rogers, 2002). However, there are difficulties that have to be overcome. In Cochabamba, Bolivia (Finnegan, 2002), for example, unrealistic objectives, inadequate consultation, corruption, poor contracts and the lack of transparency resulted in a fiasco that has put back the provision of services and probably condemned the local people to a continuing saga of inadequate water services possibly for decades. This was a governance failure and similar failures are common throughout the developing world whether the service provider is public or private. The introduction of private operators needs to be carried out by taking account of the attributes for effective water governance (as given above). Some general principles for good utilities governance include:

- Extensive social and parliamentary debate to reach consensus on private sector participation;
- Design of an adequate system of subsidies to ensure the needs of the poor are satisfied;

- Economic assessment of long term affordability of privatised services, including the impacts that any government guarantees, for example on exchange rates, would eventually have on the efficiency of purveyors and on public deficits;
- Incorporation to the extent possible of effective competition;
- Design to take maximum advantages of economies of scale and scope;
- Assurance of reasonable rates and returns, transferring efficiency gains to the consumers;
- Control of price changes;
- Provision of timely and adequate information to consumers and regulators, including state of the art regulatory accounting;
- Provision of opportunities for meaningful and opportune users' participation;
- Setting up independent and capable regulatory bodies;
- Design of conflict-solving mechanisms that ensure social, environmental and economic factors relevant to governance are adequately considered when adjudicating conflicts.

It is also critical that before considering foreign private sector operators governments take account of any international trade agreements that may affect contractual relations between the parties (see section 2).

4. SOME FINAL OBSERVATIONS



We started with a review of the conceptual and empirical foundations of effective water governance before developing some principles and examining some cases. We have found that while there are many different schools of thought concerning theory, the practice will vary depending on the external environment, developed countries moving towards flexibility and distributed governance systems whilst developing countries are characterised by rigidity and hierarchical and light governance systems. We have noted that both internal and external governance is critical to water resources

development and management and IWRM cannot be applied effectively if the political and external governance systems are not conducive.

Some general observations about effective water governance based upon this paper are:

- *External environment:* Governance depends to a large extent on the underlying political and cultural conditions as well as economic factors and there is no one prescribed approach to governance that will work in all cases. The role of governance mechanisms outside the water sector is critical to the success of water governance within the sector. The importance of international agreements, especially those related to trade, must be understood and water officials must actively engage with their trade counterparts.
- *Partnerships:* Whilst distributed governance and the need to involve civil society and the private sector is promoted, the key role of government and public sector workers is recognised as critical for the proper stewardship of water as a common pool resource. The role of government in sponsoring civil society can be pivotal in good outcomes. The basis for negotiations over shared waters should be the shared benefits and costs for all parties.
- *Stress:* The development of water governance in the developed world was typically driven by internal forces (economy, population, declining resources, political pressures). The developing world is experiencing external pressures from donors, and international NGOs in addition to the same internal pressures as the developed countries.
- *Sequencing:* Institutions, laws, and management systems develop slowly and adapt to often rapidly changing environmental conditions. It is important that countries tackle critical issues first and adopt a pragmatic approach accepting what is politically feasible rather than theoretically the best solution.
- *Simultaneity:* The current rapid pace of economic, social, and environmental change threatens to overwhelm the capacity of developing countries to develop laws, institutions, etc. at a more measured pace.
- *Sustainability:* Because of the simultaneity of pressing development issues, nations must resist the temptation to follow the sequencing of concerns as happened historically in the North. Under present

conditions sustainability and economic development cannot be seen as separable.

Governments face considerable *stress* from the weight of critical water problems. It is important that governments appreciate that they cannot solve these problems working alone. Working with civil society and with the market (especially the local private sector), although less orderly and structured, is the only way forward. Governance systems must permit all stakeholders to engage actively in and solve the growing water problems.

Many water-short developing countries are facing, *simultaneously*, many pressing development issues. The water crisis requires nations to act now to put their governance systems in order. They cannot afford to postpone sustainability goals or follow such gradual *sequencing* of concerns seen in earlier historical cases such as in the USA or Europe. Under present conditions sustainability and development are not separable. Apart from the severity of the crisis that many countries face, the most efficient moment to build sustainability into a water system is in the early stages of its planning and design. This *simultaneity* of problems does not allow governments to remain entrenched in the old hierarchical governance systems. As required under the Plan of Implementation of the WSSD, each country must develop IWRM plans and strategies that set out the sequence of changes needed to meet specific pressures. It is incumbent on the international circle of experienced water managers to provide practical help to those facing intensely stressful situations by shaping and espousing the principles of IWRM, so that they make long-term prudence actually achievable in present real-world circumstances.

More decentralisation is needed in water governance along with a stronger central role in IWRM. This must be accompanied by the necessary financial resources and human capacity development at the local level. A clear demarcation of roles and responsibilities at different levels should be agreed and understood by all parties inside and outside government. Community level involvement is especially important to overcome local environment and development conflicts, property rights, equity and literacy issues. Local government and municipal levels often have deep knowledge of local affairs but are weak and can be bypassed by central authorities or powerful elites. Clear priorities are the involvement of the non-traditional players – strengthening local water associa-

tions, efficient and effective public water resource management and building capacity of stakeholders – and ensuring attractive working conditions that keep workers in the sector and in the country.

Encouraging a water-oriented civil society is one way to encourage voluntary water conservation and intelligent responses to classical regulatory and economic instruments. Creating such “*basin societies*” also creates local watchdogs that can both monitor and support government actions and policies or help to regulate public-private arrangements to overcome some of the institutional weaknesses mentioned in this paper. Involving civil society in a constructive manner also makes the resolution of water conflicts more amenable to arbitration and final settlement.

Actions for improving water governance

To achieve more effective water governance it is necessary to create an enabling environment which facilitates efficient private and public sector initiatives. This requires a coherent legal framework with a strong and autonomous regulatory regime. Clear transactions between stakeholders is needed in a climate of trust with shared responsibility for safeguarding water resources whose management affects many people but at present is the responsibility of none. Actions to make water governance effective include (GWP, 2000):

- Raising political will to overcome obstacles to change;
- Putting integrated water resources management (IWRM) into practice;
- Reforming and developing water institutions;
- Realigning financial and economic practices.

Even with sufficient political will many officials are unsure how to react to the water crisis and there is a need to build trust between different stakeholders and politicians at different levels of authority. During 2002, the GWP, in partnership with the United Nations Development Programme (UNDP) and the International Council for Local Environmental Initiatives (ICLEI) and others, established a “Dialogue on Effective Water Governance” which was launched at the UN World Summit on Sustainable Development as a Type II implementation partnership. The Dialogue aims to facilitate national and local level dialogues to help build distributed governance systems by adding value to existing processes.

The World Water Council is presently preparing a World Water Action Report to catalogue actions that have been undertaken to meet the various international calls for action that have been made since the 2nd World Water Forum in The Hague. Many of these actions are working towards more effective water governance: for example revised laws, institutional reforms, the introduction of economic instruments and social reforms such as gender mainstreaming and decentralisation. The Building Partnerships for Development (BPD) initiative brings together public, private and civil society actors to help communities implement their own development activities and has, for example, examined regulatory issues for each partner. The GWP Central American partnership has discussed water governance with the National Legislative Assembly in Costa Rica and this has led to a process for multi-stakeholder involvement in the drafting of new water laws. The GWP Central and Eastern Europe are looking into the governance aspects of water legislation linked to prospective membership of the European Union.

Finally, it is acknowledged that development in poorer countries is dependent on infrastructure and innovative technological development. Establishing effective water governance is complementary to this and provides the environment to ensure that the equally important investment in physical works is appropriate, long-lasting and effective. It is also recognised that governance requires change, which is often resisted, and by its nature it involves political debate. Achieving effective water governance cannot be undertaken hastily using blueprints imported from overseas; it needs to be developed to suit local conditions with the benefit of lessons learned from all over the world.

Table 1: IWRM TOOLS ADDRESSING GOVERNANCE FAILURES

Governance failures	IWRM tools
<ul style="list-style-type: none"> • Failure to correct market distortions • Inappropriate price regulation • Perverse subsidies to resource users • Inappropriate tax incentives and credits • The existence of upstream downstream externalities (environmental, economic and social) • Over-regulation or under-regulation • Conflicting regulatory regimes • No independence and impartiality of the organisms of regulation • Provision of water services are natural monopolies • Imprecise reflection of consumer preferences systems • Short-sightedness • Voter ignorance and imperfect information • Special interest effects, including political weaknesses and vested interests • Little entrepreneurial incentives for internal efficiency • The inability of the government to control and regulate the sustainable use of water • The non-payment of services linked to water • Bureaucratic obstacles or inertia • Lack of an overall responsible authority • The lack of effective knowledge of the resource, the demands imposed on the it and the current uses that are made of it • Ill defined property rights, unclear ownership • Absence of or inappropriate legislation • Unclear ownership of property rights • Ignorance and uncertainty about water markets, droughts, floods, etc, leading to inability to set prices correctly 	<p>Policies Economic instruments Financing and incentive structures and polluters</p> <p>Regulatory instruments Institutional capacity building</p> <p>Information management Water campaigns and awareness raising</p> <p>Role of the private sector</p> <p>Institutional roles Social change instruments</p> <p>Water resource assessment Plans for IWRM</p> <p>Legislation Water rights</p> <p>Water resource assessment risk assessment and management</p>
<p><i>Note: The IWRM tools and references are from the IWRM ToolBox, 2001 – please note, a revised version of the IWRM ToolBox will be released in 2003 and the above tools may vary slightly.</i></p>	

BOX 1: WATER RESOURCE MANAGEMENT REFORMS IN CHILE

The Chilean approach to water resources development and management and the basis for much of the well-known Chilean reform programme is outlined in the Water Code of 1981. This acknowledges that water is a factor of production in many sectors and must be transferable like any other economic input; It acknowledges the inappropriateness of linking a mobile, flow resource (water) to an immobile, stock resource (land) and the importance of separating water rights from land rights. It treats water rights as any other property rights, allowing for leases and sales between willing buyers and sellers. The Directorates of Water, of irrigation and of planning of the Ministry of Public Works define water management policies, assign water rights, perform hydrological studies and monitoring, and construct the major irrigation infrastructure.

The reforms were carried out in the context of the successful export-oriented, market-based approach to economic development that Chile has followed since the 1970s. The role of the private sector in hydropower development also had a large impact on water policies. The reform programme is generally considered a success, but there are significant resource management problems which the Government of Chile recognises and has started addressing. Conflicts have included consumptive uses and non-consumptive uses not anticipated in the initial assignment of rights, concerns for environment are not adequately addressed in the current system. As scarcity becomes more widespread, there is a need to regularise and formalise traditional water rights, greater attention to the economic management of groundwater and management of the conjunctive use of ground and surface waters, and improve the administrative and judicial system for dealing with water disputes. The Chile experience demonstrates that IWRM is a dynamic and iterative process and needs to be constantly refined.

BOX 2: IRRIGATION REFORM IN MEXICO

This was prompted by policies set out in the National Development Plan (1989-94). The National Water Plan (1975) provided the legal basis for water resources management and development and a new National Water Law was established in 1992 to supersede the Federal Water Law of 1972. A National Water Commission (CAN) was created in 1989 as an Apex body responsible for the administration of water within watersheds and for providing technical support to 32 State offices. “Hydro-social” units were created, called *módulos*, and farmers willing to organise themselves to operate, maintain and manage the *módulo* have to form a non-profit organisation (*Asociación Civil*). The *modulos* are thus legally established Water User Organisations and are entitled to collect and administer the water fees received from users. At a district level, the WUOs may form an organisation (*Sociedad de Responsabilidad Limitada de Interés Público (SRL)*) to operate and maintain main canals, large drains, roads, etc.

The reforms were driven by external governance factors including the membership of NAFTA that forced efficiency improvements in irrigated agriculture to compete with US and Canadian agro-products. This also coincided with a period of rapid economic and social change in Mexico with major political upheavals in the traditional governing party. To date the outcomes have been positive with water fees paid by water users up from 18% (in 1988) to 80% of O&M. Water distribution efficiency rose by 8% to 65%. There has been a general reduction in O&M costs with transfer due to better use of equipment and machinery, and a reduction in personnel of more than 50%. Some 80% of farmers surveyed in four irrigation districts stated that transfer had improved water management. 45% claimed that the fees were high, but most users believed that communication between stakeholders was acceptable. Although some WUOs endure financial difficulties in times of water shortages or heavy rainfall most have achieved financial self-sufficiency. Although it is too soon to make a definite evaluation of the reforms and there are still many difficulties, it does demonstrate that even a complex transfer within a formerly highly centralised government-owned system can be achieved in a relatively short time of about ten years.

BOX 3: MANAGING SHARD WATERS IN THE LAKE PEIPSI/CHUDSKOE BASIN

Following the break-up of the Soviet Union Lake Peipsi became a shared water body and new mechanisms were needed for its management. The environmental quality of Lake Peipsi has been deteriorating for the past fifty years. Political changes and the need for economic co-operation of the lake (for fishing, transport, etc) has stimulated transboundary co-operation following IWRM principles. Lake Peipsi/Chudskoe is situated on the border between Estonia and Russia. The catchment is shared by Russia, Estonia and Latvia. Lake Peipsi has unique natural characteristics – it is shallow, eutrophic and biologically productive, with substantial fish resources and wetlands of international importance (Ramsar site). About 1 million people live in the catchment. In 1997, five years after the border between Estonia and Russia was re-established, the riparian governments signed an *Agreement on the Protection and Sustainable Use of Transboundary Water Bodies*. An intergovernmental commission was established to co-ordinate the implementation of this agreement. Along with the existing formal framework for co-operation in the Lake Peipsi region, a network of regional and local authorities, universities, NGOs and businesses is emerging, providing a good basis for implementing IWRM principles in this region. The Lake Peipsi/Chudskoe experience illustrates the importance of riparian countries having the political will to implement changes; the importance of the development of formal frameworks for co-operation to implement policies relating to water resources.

The importance of international financial and technical assistance to implement national policies dealing with water resources as well as intergovernmental transboundary water agreements; the role of research and educational projects in generating a water knowledge base and developing capacity;

In practice, the effective involvement of civil society was found to be difficult. Even though formal mechanisms for developing co-operation between stakeholders were set up, only a few regional NGOs are actually involved in the work of the Transboundary Water Commission. The capacity of most local NGOs and stakeholder groups is low and external financial support is necessary to improve this situation.

Practical issues (different working languages, different norms) hindered co-operative activities. Co-operation over Lake Peipsi demonstrates how integrated water resource management tools can be applied to transboundary waters shared by countries in transition. It illustrates how a range of tools need to be used together to incorporate IWRM principles into managing the transboundary waters of the Lake Peipsi Basin. In addition, it demonstrates that developing co-operative approaches to water management enables the ecologically sustainable use of natural resources while improving the social and economic conditions and quality of life of people in the region. A distributive governance system is emerging that is a good basis for implementing integrated water resource management principles in the lake basin.

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