



The EMPOWERS Approach to Water Governance

Background and Key Concepts



Produced by EMPOWERS, a project co-funded by
the European Union MEDA Water Programme

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Acronyms and abbreviations

| | |
|----------|--|
| CSO | Civil society organisation |
| EC | European Commission |
| EMPOWERS | Euro-Mediterranean Participatory Water Resources Scenarios |
| GWP | Global Water Partnership |
| INWRDAM | Inter-Islamic Network for Water Resources Development and Management |
| IRC | IRC International Water and Sanitation Centre |
| IWRM | Integrated water resources management |
| MEDA | Mediterranean Regional Programme for Local Water Management |
| MENA | Middle East and North Africa |
| NGO | Non-governmental organisation |
| SDCA | Stakeholder dialogue and concerted action |
| UNFPA | United Nations Population Fund |
| UNDP | United Nations Development Programme |

Preface

This booklet provides an explanation of the conceptual background to the EMPOWERS approach to water governance and is a companion volume to The EMPOWERS Approach to Water Governance: Guidelines, Methods and Tools.

While it is not essential to read this booklet before using the methods and tools, it will help to develop a deeper understanding of the approach and of the issues and problems that those working to improve water governance need to address.

The EMPOWERS approach taken as a whole is new, or at least, newly articulated, but it brings together many components adapted from well-proven methodologies in the fields of project management, business management and rural development. The approach also builds on existing sets of guidelines such as the EC Guidelines for Water Resources Development Cooperation (EC, 1998) and the RAAKS guidelines (Engel and Salomon, 1997).

Work on these components has taken place in countries in several continents. It was further developed through the EMPOWERS (Euro-Med Participatory Water Resource Scenarios) Project, a four year, multi-partner project that worked at governorate, district and village level in Egypt, Jordan and Palestine, supported by the European Commission's MEDA financing mechanism. The aim was to improve long-term access and rights to water for underprivileged populations in local communities, within a context of improved local water governance, and to achieve more sustainable, efficient and equitable access to and use of water resources.

Taking as a starting point the challenge of the 2nd World Water Forum to 'turn vision into action', and the need for practical tools to improve water governance, EMPOWERS undertook action research to strengthen dialogue between water stakeholders, using a strategic management approach based on scenario-building.

Action research was chosen as the most appropriate methodology, given the need to turn the abstract concepts of integrated water resources management (IWRM) into practical tools that would help water stakeholders to improve their day-to-day work with, and use of, water. The EMPOWERS project had four main objectives:

- Increasing the influence of stakeholders (particularly the poorest and most marginalised) on the planning and decision-making process for the use and management of water resources,
- Enhancing vertical and horizontal linkages and information flows between water stakeholders,
- Demonstrating the effectiveness of the approach through pilot projects,
- Documenting the learning process.

These activities were carried out by a wide range of government, non-government and civil-society stakeholders, brought together within a learning alliance (Moriarty *et al.* in Smits *et al.* 2007), and supported by a facilitation team.

The approach and the guidelines that emerged from it were developed by the people for whom they are designed: local government officials, NGO and civil society organisation (CSO) staff, water user associations, and staff from academic institutes. Although they reflect organisational and governance realities in the MENA region, the guidelines are sufficiently generic to be of wider interest in other countries within MENA and outside it. Training based upon the guidelines has been well received across the MENA region, while the methods and tools have been used in settings as diverse as Nigeria, India and Malta. That said, water governance always has to be explored, understood and re-developed locally in each country. Solutions cannot be prescribed from outside.

This booklet looks at the nature of water governance and its role in IWRM. It examines how stakeholder dialogue can improve the nature of multi-stakeholder platforms. It outlines how the role of the expert is changing from someone who provides solutions to someone who helps stakeholders to address their problems and to develop their own solutions.

A major strength of the EMPOWERS approach is that it provides a framework for specialists to support a stakeholder-driven process, overcoming the failings of approaches that focus entirely on top-down decision making by specialists or bottom-up intuitive decision making.

Issues of equity are addressed and efforts towards including marginalised sectors of communities in decision-making processes are assessed. The conclusion is that mainstreaming gender and making water governance pro-poor need time, resources and champions.

The focus of the EMPOWERS approach is on participatory water governance at local (community or village) and intermediate (district or governorate) level. This is because the authors believe that water governance can only be sustainable if it is based on the agreement and involvement of water users, and that the vast majority of day-to-day decisions around the provision of water services are taken at these intermediate or local levels.

This booklet is divided into four sections.

- 1. Water governance and integrated water resources management** provides an introduction to key concepts in local water governance and integrated water resources management, as well as to a number of critical issues that are dealt with in the guidelines.
- 2. How to achieve and maintain good water governance** considers how to achieve good local water governance and outlines some of the lessons learnt during the development and testing of the approach, both in practical terms and also in terms of broader policy considerations.

- 3. Lessons learnt in water governance** briefly sets out the key lessons learnt in using the EMPOWERS approach.
- 4. The way forward** discusses possible avenues and approaches for using the guidelines. It includes a plea that those who adopt the EMPOWERS approach and associated methods and tools report on successes and failures, to enrich the global learning process and to deepen our understanding of these issues.

1. Water governance and integrated water resources management

What is water governance?

Water managers, water users, and water service providers around the world face multiple challenges in achieving sustainable and equitable water services, drawing on complex and increasingly contested resources. There has been a widespread agreement for the past 15 years on the need for 'integrated water resources management' (IWRM) and much progress has been made in identifying the shape of the problem and possible solutions. However, this agreement has, to some extent, remained at a high and often conceptual level. In particular, there has been a lack of practical tools and approaches to tackle water related problems, especially at the local and intermediate levels where water service providers and water users interact. This is the challenge of water governance.

At its simplest, water governance refers to the entire set of systems that control decision making with regard to water resource development and management. In the language of the Global Water Partnership (GWP), water governance "relates 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" (Rogers and Hall, 2003).

Water governance is about the way in which decisions about water are made: how, by whom, and under what conditions (Moench *et al.*, 2003). It covers both the manner in which decisions about the allocation and regulation of water are made, and the formal and informal institutions by which authority is exercised.

Water governance is, of its nature, a political process, by which we mean that it involves policy choices to balance competing interests about who is entitled to what services, how services are provided, who pays and how competing interests are balanced, as well as decisions about how water resources are protected. Systems of water governance usually reflect political realities at national, provincial and local levels. It is therefore impossible to fully separate discussions of water governance from a wider discussion of the governance of society (as defined below by UNDP).

A definition of governance

The exercise of political, economic and administrative authority in the management of a country's affairs at all levels. Governance comprises the complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations. (UNDP, 1997)

While definitions of governance are relatively uncontroversial, descriptions of what good governance should look like are highly contested. Green (2007) points out that different groups promote different visions of 'good governance' based on ideological reference points. For example, neo-liberals define good governance as being achieved primarily by removing constraints to the smooth operation of the market and minimising the role of government, and bad governance in terms of inadequate markets and excessive government. Others, from a social democratic perspective, define good governance with reference to addressing a democratic deficit, in terms of transparency, accountability and subsidiarity (Merrey *et al.*, 2005).

The EMPOWERS approach aims to improve water governance at the local level of water users (communities) and at the intermediate level of decentralised water managers and service providers in districts and governorates. The guidelines that emerge from the process are designed to support dialogue based processes in which all water users and stakeholders are involved in a shared search for negotiated solutions. They are therefore more in line with the 'social democratic' approach described above. Water governance is, on this basis, 'improved' or 'good' if the process that leads to it is transparent, democratic, equitable, pro-poor, and gendered, and that these approaches are reflected in the outcomes.

Integrated water resources management (IWRM)

"IWRM is a process which promotes the coordinated 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 ecosystems." (GWP, 2000)

The EMPOWERS approach starts with what water means to people in their local environment. However, it is also important to see the 'big picture' of water governance within the framework of integrated water resources management (IWRM).

The principles of IWRM were laid out and accepted at the 1992 International Conference on Water and the Environment (ICWE) in Dublin. The 'Dublin principles' start from an understanding of water as a finite, vulnerable resource essential to sustain life.

Water has two special qualities that make it quite different from other finite or renewable natural resources (oil, forests etc.): first, as a prerequisite for all life and most economic development, and second, as a finite but renewable natural resource whose availability is driven by powerful and variable natural phenomena. While the overall amount of fresh water in the world is to all intents and purposes fixed, it is infinitely and naturally renewable, although its availability in space and time is highly variable. For example, water used in growing food is not put beyond further use, as happens when oil is consumed. Instead, the state of the water changes, from liquid to vapour, and it re-enters the hydrological cycle and becomes available again for other uses and users through naturally occurring processes. Nevertheless, within a single hydrographic unit (basin, aquifer) and a given time-frame, water is finite, and one person's consumption or pollution impacts on another person's use.

The Dublin principles

1. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.
2. Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels.
3. Women play a central part in the provision, management and safeguarding of water.
4. Water has an economic value in all its competing uses and should be recognised as an economic good.

WMO, 1992

IWRM provides a useful set of concepts for thinking about governance issues as they relate to water. Taken as a philosophy of water management, it also provides a commonly and widely agreed set of fundamental principles. Principle one implies a need for greater integration between water users and others who impact on water availability, and in its most radical form suggests entirely new water governance structures based at the basin (or aquifer) level. Principle two reflects a strong belief in decentralisation and participation and enshrines the idea that decisions should be made at the lowest appropriate level. Principle three can be seen as an endorsement of an equity and rights based approach to water governance. Principle four has been the most contested, in that it has been seen by some as giving a green light to market-led approaches to governance. It brings to the surface the conflict between different views of what constitutes 'good' water governance, with neo-liberals emphasising the 'economic' aspects of water (tradable water rights, private sector involvement etc.) and social-democrats the 'social' aspects (the right to water, the need to protect the resource base etc.). What is common ground is that, as a scarce and vital resource, water has a value that is both social and economic, and that the protection, conservation, collection and delivery of water has a cost that must be acknowledged and met.

While IWRM can provide a framework for thinking about water governance, there is a danger that it can also obscure what can be done at local and intermediate level. Discussions about IWRM tend to be dominated by technical issues, and the IWRM approach is often presented as hierarchical and technocratic. Merrey *et al.* (2005) point out that IWRM discourse is often focused on overall water resource availability rather than human (and environmental) development and wellbeing. There is a danger that water becomes an issue per se – rather than important because of what it means to people and to the environment.

Some authors (e.g. Biswas, 2004) have suggested that the IWRM concept is politically naive because there are major disconnections between the IWRM concept and existing systems of water governance. The Global Water Partnership toolbox on IWRM (GWP Toolbox, 2003) points out that when social actors try to put IWRM into practice, "they are faced with the apparently insurmountable difficulty of bringing together a very intricate socioeconomic reality, the legacy of the past and its ingrained practices and beliefs, and the apparently non-reconcilable conflicting demands". Yet the real challenges in implementing IWRM, do not reduce its significance as

a concept, nor should they be used as an excuse to regress towards out-dated technocratic systems of governance. IWRM continues to motivate individuals and agencies and has, like the elusive search for sustainability, had inspirational value as a goal or direction for improvement in water governance.

Drivers of improved water governance

“Equitable distribution of supplies under changing conditions is often more of a challenge than absolute limitations on the available resources” (Moench *et al.*, 2003).

Management incurs costs, and is only legitimate and sustainable where those costs are justified by benefits that outweigh them, either in terms of positive benefits, or negative impacts avoided. The analysis in Table 1 was developed primarily for river basins, but is relevant to all sources of renewable freshwater. It is particularly useful in understanding the different stages of development of water systems and the drivers for increased investment in management and governance.

Table 1. The road to water stress – development, utilisation and reallocation

| | Stage 1: Development | Stage 2: Utilisation | Stage 3: Reallocation |
|---|--|--|---|
| Approximate fraction of flow already allocated | Low (0 – 40%) | Medium (40 – 70%) | High (70 – 100%) |
| Dominant activity | Construction (of water supply and storage infrastructure). | Managing supply. | Managing demand. |
| Value of water | Low | Increasing | High |
| Groundwater | Development | Conjunctive use | Regulation |
| Pollution | Limited pollution. Pollutants are diluted. | Increasing pollution. Increasing regulations. | Emphasis on control (polluter pays) and clean-up. |
| Conflicts | Few | Within sub-sector | Cross sectoral |
| Typical institutional tasks | Planning & implementing construction. | Operation and maintenance. Expansion and rehabilitation. | Inter-sectoral planning. Often large complex infrastructural projects. |
| Effect on poverty | Focus on improvements in access to safe water supply, and (to a lesser extent) irrigation water. Some employment opportunities related to providing services and use of water. | Similar to ‘development’ but with added attention to economic value of water. Increased employment opportunities in O&M, rehabilitation etc. | High risk of deterioration in safe water supply, irrigation access and employment opportunities |

Adapted from Molden *et al.*, 2005

Many existing management and governance structures for water have their roots in what Molden refers to as the 'development' phase. In other words, they come from a time when water resources were relatively plentiful, when one water user did not impact directly on another, and when priorities lay in quickly expanding access to water supply services. This is followed by a utilisation phase when water has been developed and is in use. This phase is often linked to sharply increased per-capita consumption, as improved supply meets growing demand. However, where demand continues to rise and water is scarce, this is followed by a reallocation phase when there is so little spare resource easily available that providing more water for one user requires reallocation from those being used by another. In many parts of the world, the transition from 'development' to 'reallocation' phases has been quick, and institutions have not had time to adapt. Most existing institutions involved in managing water resources were created during the 'utilisation' phase and are related to the management and use of water within water distribution schemes (irrigation schemes, domestic water supply and sewerage networks, etc.), rather than between schemes as is required in a reallocation paradigm.

This is an entirely rational and understandable pattern of development. Management in the sense implied by IWRM, of increased analysis and coordination across users and uses, comes with major cost implications and is only justified when the natural ability of the system to handle different uses is surpassed. Turton and Ohlsson (1999) argue that water scarcity per se is not as fundamental as whether a society has the adaptive capacity to cope with the challenges that water scarcity poses. What is clear in many countries is that systems of water governance have been slow to recognise and adapt to challenges related to arriving at the 'reallocation' phase of water development. Indeed, many water professionals continue to try to find solutions within the boundaries of their own sectors rather than in a broader understanding of the water resource system. Nevertheless, it is also clear that as the point approaches at which rising demand can no longer be met simply by creating more supply capacity (a point referred to as river basin 'closure'), the political importance of effective water management and governance increases.

Within the broad phases identified by Molden, a number of drivers to improved water governance are of particular importance, and these are briefly mentioned below.

Increasing demand leading to water scarcity: The single most important set of drivers of water scarcity and the need for improved governance lie in the nexus of rapid population growth, economic development and societal change, which together put increasing pressure on water and other natural resources. While the world's population trebled in the 20th century, water consumption increased sixfold (UNFPA 2001). In many countries or regions, demand is outstripping supply to the extent that renewable freshwater resources are fully allocated and there is acute water scarcity. This is particularly true in the Middle East and North Africa region (MENA), whose countries have the lowest per-capita access to renewable freshwater resources in the world, and where current use is often unsustainable being reliant on 'fossil water' from non-replenishable aquifers.

Increasing pollution: When water is scarce and demand greatly exceeds supply, other issues such as pollution become increasingly important. For example, by the time it reaches the irrigated land of the delta, the water of the Nile has been used several times over and concentrations of agricultural pollutants are high. In governance terms, pollution can be seen as an issue arising from increased demand. The 'need' to pollute needs to be weighed and negotiated against competing consumptive needs and environmental requirements.

Increasing interconnectedness and complexity of water systems: As water resources become more intensively developed, and as the interconnections between different water uses, users and systems become ever more complex, so the challenges of effective governance become greater. The high level of uncertainty and variability found in the occurrence of and demand for water, linked to the very complex societal and political structures that have grown up around water, lead to complex systems with unpredictable and emergent properties¹ (Pahl-Wostl *et al.*, 2005). This complexity is an important driver of the need for more dialogue and negotiation between water users as the very complexity of the system makes top-down command and control models ever less effective. One additional complexity concerns ownership. Ownership of, or the right to use, a water resource or water supply infrastructure implies the right to exercise some power and control (UNDP, 2007). The various roles and responsibilities, such as those encapsulated in legislation on water rights and ownership, 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 often require clarification as patterns of supply and demand change.

Increasing uncertainty linked to climate change: Climate change will impact on water resources primarily through more frequent extreme events (e.g. floods and droughts) and temporal and spatial shifts in rainfall patterns. The overall effect will be to exacerbate risk and vulnerability, threatening the livelihoods, health and security of millions of people. Climate modelling exercises point to a complex range of possible outcomes but, beyond the complexity, there are two recurrent themes. The first is that, in general, dry areas will get drier and wet areas wetter, with important consequences for patterns of average water resource availability. The second is that there will be an increase in the unpredictability of water resource availability, linked to increased rainfall variability and more frequent and extreme weather events (UNDP, 2006). In terms of water governance, the challenge of climate change lies primarily in taking increased uncertainty into account when planning for water services and water resources management.

The need for equity in access to water services and resources: The link between reducing poverty and access to (safe) water in a social, economic and institutional context is a little recognised, but increasingly important, driver of improved water governance since water is a critical factor in economic growth and social well-being. For people who are able to pay

¹ Emergent properties are a product of the interaction of different components of a complex system. They cannot be predicted from the behaviour of individual elements, but can be observed when those elements combine.

or belong to elite social groups, water is never scarce, even in situations where freshwater resources are extremely limited. However, and often as a direct consequence of the ability of the rich to buy their way out of scarcity, the poorer and more marginalised elements of society disproportionately lack access. In other words, lack of access to suitable and sustainable water services is at the same time a cause, a result and an indicator of poverty. As access to water becomes increasingly discussed within a human rights framework, the need to ensure equitable access by all sectors of the community to water, and to decision-making processes about water, is an important driver for changes in water governance.

Key trends in water governance

Partly in response to these drivers, a number of important trends can be identified in water governance, especially decentralisation, participation and transparency.

Decentralisation and participation: The GWP, in a 2003 publication on water governance (Rogers and Hall, 2003), identified a trend towards distributed water governance, with functions and decisions shared across a broad range of devolved structures. There is a growing perception that the governance of water resources and water services (and of many other things) functions more effectively within an open social structure which enables broader participation by civil society, private enterprises and the media, networking to support and influence government. The GWP identified this trend against a background of a progression from command and control or hierarchical centralised state-managed systems, through what was often an overly simplistic reliance on market-led water governance models to more decentralised and participatory water governance systems. In these systems, formal authority is supported and supplemented by an increasing reliance on informal authority, for example, through genuine public-private coordination and cooperation. This can avoid governments becoming enmeshed in contradictory roles, for example as both provider and regulator of services. An important challenge for the water sector is to ensure that decentralisation leads to a genuine improvement in local water governance, rather than to a system of deconcentrated ministerial budgets that remain locked into separate sectors (and sub-sectors). An equally important challenge lies in ensuring that participation is genuinely representative, that key groups are not excluded and that the participatory process is actually allowed to impact on decisions.

Transparency and corruption: Corruption, which is strongly linked to lack of participation and transparency, remains one of the least addressed challenges in relation to water governance and water service delivery (UNDP, 2007). For years, governments, bilateral and multilateral organisations tacitly accepted corruption in the way water was governed. Corruption was seen as 'grease for the wheels' of development efforts. However, anti-corruption measures are now perceived as central to equitable and sustainable development. Corruption is seen as a symptom of governance deficiencies in both the private and public spheres. However, in many countries, enforcement of legislation is still weak and judicial systems are inadequate. These weaknesses, combined with low wages, huge income disparities (within and between

countries) and shortcomings in accountability and transparency, fuel corruption, as personal gain overtakes concern for the well-being of others.

Overcoming corruption is clearly an important aspect of governance. Until recently, a lack of information and political will has made it difficult to openly discuss the problem, which is rife throughout the world in both the public and private sectors, at all levels (from international to local). The law is a heavy and expensive instrument, a measure of last resort. Decentralised and participatory governance brings more open competition, more accountable public administrations and more transparent processes and may help to address corruption. Many measures can reduce temptation and opportunity for corrupt practices without recourse to law, including reform of public administration, liberalisation, reduced bureaucracy and fair pay for workers. Oversight by users, regulators and watchdogs, such as specialist NGOs and CSOs, a strong independent media and self governance through e.g. corporate social responsibility and codes of conduct, can produce social sanctions to deter all but the most unscrupulous (Moench *et al.*, 2003; Shordt *et al.*, 2006).

2. How to achieve and maintain good water governance

“The pragmatic, empirical method of trying an approach and then modifying it as problems become apparent, has a great deal to offer” Rogers (2002)

Good water governance cannot be achieved hastily by using blueprints from outside a given county or region (Merrey *et al.*, 2005; Rogers and Hall, 2003). Systems of water governance invariably reflect and are governed by the wider political realities at national, provincial and local levels (Rogers and Hall, 2003; Green, 2007). Good governance therefore needs to be developed to suit local conditions, and incremental improvements and flexibility are crucial. New reforms do not have to be immediately implemented in a comprehensive or fully integrated way; it is essential that they are workable. Doing a few things well to demonstrate that new approaches work, is both pragmatic and likely to generate public and political support.

Rogers and Hall (2003) argue that there is no single model of effective water governance, particularly if effective governance systems are to fit the social, economic and cultural particularities of each country. Nevertheless, some basic principles or attributes are considered essential for effective water governance (Box 1). The EMPOWERS approach is designed to work to these principles, which are also reflected in the Amman principles for local water governance (see Chapter 4, The way forward).

Box 1. Principles of effective water governance

Approaches

Open and transparent: Water institutions should work in an open and transparent manner, using language understandable to the general public. Water policy decisions should be transparent, particularly regarding financial transactions.

Inclusive and communicative: Wide participation should be ensured throughout the water project management cycle, from visioning to implementation and evaluation. Key stakeholders should maintain a dialogue both horizontally (at the same level of governance) and vertically, between levels.

Coherent and integrative: Coherence requires political leadership and a strong responsibility taken by institutions at different levels. Water institutions should consider all potential water users and potential externalities when planning and implementing projects and programmes.

Equitable and ethical: Equity between and among various stakeholders and user groups should be carefully monitored throughout the policy development and implementation process. Particular attention should be given to the rights and specific needs of women and of poor and marginalised social groups. Penalties for corrupt behaviour or sharp practices should be applied equitably. Water governance systems must be based on the ethical principles of the society in which it functions and on the rule of law.

Performance and operation

Accountable: The rules of the game, as well as legislative roles and executive processes should be clear. Each water-related institution must explain and take responsibility for its actions. Penalties for violating the rules and arbitration-enforcing mechanisms should exist to ensure that satisfactory solutions to water issues can be reached.

Efficient: Concepts of political, social, and environmental efficiency related to water resources must be balanced against simple economic efficiency. Governmental systems should not impede needed actions.

Responsive and sustainable: Demand for water, evaluation of future impact and past experience should be the basis for water policy. Policies should be implemented and decisions made at the most appropriate level. Water policies should be incentive-based, to ensure clear social or economic gain if the policy is followed. Long-term sustainability of water resources should be the guiding principle.

Adapted from Rogers and Hall, 2003

Decentralisation and other aspects of integrated water resources management are considered as important components of sector reform programmes. These programmes often involve institutional change, particularly at intermediate level, which includes modifications to the forms and functions of existing institutions, creation of new institutions and modifications to the ways in which institutions interact. Discussions around water management at decentralised institutional and/or river basin scale have tended to concentrate on three generic institutional models (Shah *et al.*, 2005), namely:

- The hydrological model in which a river basin organisation, cutting across administration boundaries, takes overall charge of water resources management,

- The administrative model in which water management is the responsibility of organisations whose areas of interest are unrelated to hydrological boundaries,
- Coordinating or facilitating mechanisms superimposed on existing administrative organisations with the aim of integrating and aligning planning and management objectives and activities.

Each model has its advantages and disadvantages. The hydrological model deals well with upstream-downstream issues that administrative models typically ignore. However, hydrological organisations typically focus on water and overlook land management issues (Shah *et al.*, 2005), and they require important investments of time and effort, with limited demonstrable success to date. River basin commissions, as a hybrid between the hydrological model and the administrative model, might combine the advantages of both, but often command little authority and are, therefore, confined to lowest common-denominator solutions (Shah *et al.*, 2005). Coordinating mechanisms have the advantages that they do not require major institutional change and, in theory at least, they do not duplicate functions already carried out by existing institutions. However, if the coordinating mechanisms, such as the multi-stakeholder platforms that are described below (see Changing roles for stakeholders), are working well and threaten existing power relations, they may be undermined by strong stakeholders. In addition, coordinating mechanisms such as multi-stakeholder platforms often have problems implementing decisions because they have to rely on existing institutions with the capacity to do the work. In some cases, the existing institutions may give a low priority to activities they did not originate and for which they feel limited ownership.

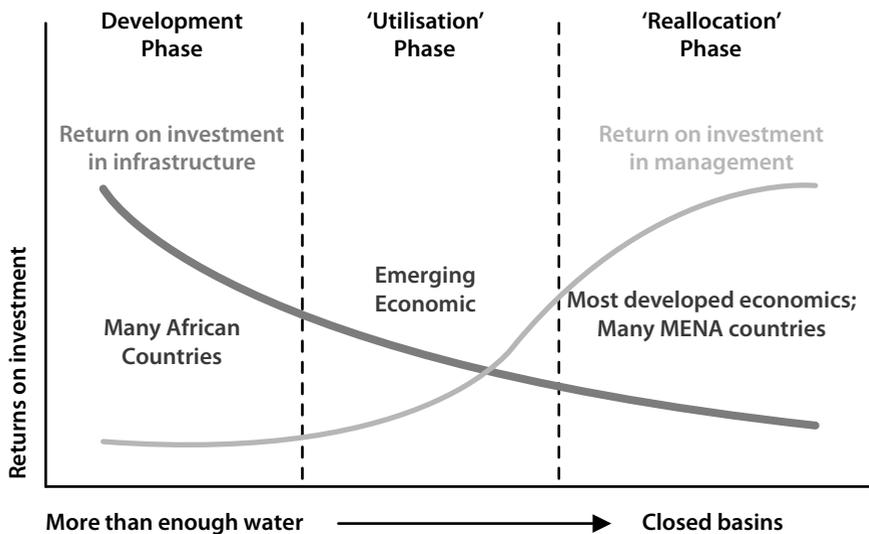
The EMPOWERS approach focuses primarily on the creation of coordinating mechanisms and a structured planning process to underpin these mechanisms. This is primarily about supporting, working with and improving the relations between existing organisations in an approach that Moriarty *et al.* (2004) have referred to as 'light IWRM', in contrast to 'full IWRM' in which policy and legislation are used to create a range of new hydrologically based institutional structures. This approach of improving the coordination of existing agencies, while at the same time trying to improve vertical dialogue between agencies and users, has much to offer. It is pragmatic and can be put into practice without waiting for a full range of enabling legislation. That said, the risks of being undermined and of difficulty in implementing decisions, as identified above, need to be carefully weighed and considered.

Regardless of the model, new institutional arrangements often have a problem of democratic legitimacy. Members of boards and committees are often appointed rather than elected and, as a result, some stakeholder groups are not represented. Situations can easily arise in which an elected government institution asserts its authority over a multi-stakeholder platform because the platform is not recognising the rights and demands of all stakeholder groups. Some have argued that, at least in areas in which water is of political importance, local government should be the lead decision-making organisation rather than that role being exclusively played by a multi-stakeholder platform (Wester *et al.*, 2003).

Links between water governance and financing

Improved governance should in theory lead to reduced transaction costs and improved value for money from investments in water management and water service delivery. An important lesson learnt in recent decades is that countries cannot 'construct' themselves out of water problems and that capital-intensive infrastructural development should go hand-in-hand with improvements in how water and, more specifically financing, is governed (UNDP, 2007; Moore and Unsworth, 2006). The greater the level of allocation of available water resources, the greater the (theoretical) returns on investments in improved water management, as illustrated below. The figure below shows returns on investment for both 'infrastructure development' and 'management' type activities during the three phases of water development. It shows that large investment in infrastructure (x axis) results in poor returns on investment (y axis) in the utilisation and reallocation phases, but that investments in management yield increasingly better returns as water resources come under pressure.

Figure 1: Returns on investment in infrastructure and management in different phases of development



Source: Adapted from WB China National Strategy 2002

Clearly, the water sector in many countries is under-financed. Despite the controversy and attention related to the private sector, private companies and entrepreneurs are only modestly involved in water-related services. Governments play an important role in providing incentives for private sector investment. However, this needs to be coupled with clear regulatory and institutional frameworks that define the roles and responsibilities of all parties. It is also vital that governments ensure that poor people are served and can afford water-related services, while still achieving cost recovery overall.

The ideal for truly independent local water governance is local access to independent sources of financing that are responsive to decentralised planning and decision making. There is little point in developing an integrated local water development plan if budgets remain located within line ministries with sign-off and priority setting in the national capital or at the whim of donors. Access by decentralised local platforms to non-governmental financing is also essential to long-term success and ownership. Only when local actors can raise their own finance can they be said to be truly in charge of their decisions.

Changing roles for stakeholders

“Water governance is as much about the art of social change as it is about the science of hydrology.” (Currie-Alder *et al.*, 2006)

Stakeholder dialogue and multi-stakeholder platforms

The involvement of water stakeholders is central to improved water management and governance: water users, providers of water services, managers of water resources and so on. Forums where these stakeholders can meet and take part in constructive dialogue, sometimes called multi-stakeholder platforms, have therefore come to the fore as a logical companion to IWRM (Warner *et al.*, 2006).

But what actually makes a multi-stakeholder platform? A widely accepted definition defines a platform as a “decision-making body (voluntary or statutory) comprising different stakeholders who perceive the same resource management problem, realise their interdependence for solving it, and come together to agree on action strategies for solving the problem” (Steins and Edwards, 1998). When people come together in platforms, they have multi-stakeholder dialogues. A multi-stakeholder dialogue is not just a conversation, but an interactive approach to getting things done - “a contrived situation in which a set of more or less interdependent stakeholders in a resource are identified and invited to meet and interact in a forum for conflict resolution, negotiation, social learning and collective action” (Warner *et al.*, 2006).

The precise role of multi-stakeholder dialogue varies but it usually involves some combination of social learning, conflict resolution and collective decision making. Clearly, multi-stakeholder platforms are not suited to all types of problems and all kinds of policy contexts. While explicitly starting from diversity, multi-stakeholder platforms tend to ‘homogenise’ the problem, looking

for consensual solutions by providing a space conducive to mutual understanding. Where conflicts are totally antagonistic, there is little hope for such a collaborative process. Similarly, in a situation where diversity and debate are frowned upon, multi-stakeholder platforms are unlikely to work. Legal, political or bureaucratic concerns can also limit the space for utilising the result from negotiation and, where applicable, lessons learnt. Multi-stakeholder platforms, then, are a recommended practice where the field is not dominated by a single actor and there is a basic willingness (eagerness) to communicate. Finally, the majority of platforms do not come together spontaneously. There may be a charismatic leader with good political access setting things in motion, but more usually there is an external facilitator (or facilitating organisation) to convene and motivate the platform (Warner *et al.*, 2006; Moriarty *et al.*, 2007; Laban 2007).

The EMPOWERS approach is not about joint discussion for its own sake, but is also about joint action, and this combination is summed up as Stakeholder Dialogue and Concerted Action (SDCA). In this approach, multi-stakeholder dialogue is seen as a promising way forward for action to improve local water governance, particularly where wider legislative and policy instruments related to 'full IWRM' may be lacking.

Changing roles of experts and non-experts in water governance

Traditionally, water governance and integrated water resources management have been seen as a job for expert professionals, often with an engineering background. Such experts have seen their role as determining what the public and the environment need, determining the best means to satisfy those needs and implementing that optimum solution. Where final decisions are taken that depart from expert advice, and particularly if politicians or other representatives of water users are involved, experts talk of results being 'contaminated by politics', and see these decisions as inherently bad and irrational.

Recognition that water governance is per se political, as water users and other stakeholders, including environmental interests, seek to negotiate and balance competing interests in what may or may not be a zero-sum game, leads us to re-evaluate the roles of both experts and non-experts. So too does a recognition that the aim of managing water is to ensure not the sustainability of the water itself, but the sustainability of its benefits to people and the environment.

In essence, a governance model based on stakeholder engagement implies a change in role for water experts from leaders to supporters, helping other stakeholders to discover what are the implications of different possible options and, where necessary, aiding them to invent new ones (Green, 2007).

Dealing with gender and poverty

One weakness of current writing on governance, particularly water governance, is its tendency to be gender blind (Clever, 2007). Effective, efficient and equitable water resources management

is only achieved when both women and men are involved in integrated water resources management (UNDP 2006 and 2007). Assessing the implications for women and men of any planned action in all activities, including legislation, policies and programmes, is a crucial step towards achieving improved water governance. Without specific attention to gender issues, initiatives and projects can reinforce inequalities between women and men and even increase imbalances

Making water governance pro-poor and gendered

Conventional wisdom is that the challenge of addressing gender, and achieving pro-poor water governance can be met by initiatives such as:

- Ensuring that the needs of the poor and, particularly poor women and children, are considered when strengthening water policies and laws,
- Ensuring that the poor have access to information and play an active role in decision making, particularly when it affects them,
- Introducing pro-poor safeguards into IWRM-related work such as river basin planning and management, water rights and entitlements, and allocations,
- Mainstreaming gender and development issues in all water sector activities.

However, there is a lack of evidence that these actions automatically deliver more gendered and pro-poor services. Cleaver *et al.* (2006) state that the consensus on the desirability of good governance implies that there is also a consensus that it will lead to 'good outcomes'. Despite much case study documentation of good practice, this consensus masks a lack of enquiry and understanding as to how governance works out in practice and how outcomes are achieved. Indeed, there is an increasing body of evidence (e.g. Cleaver *et al.*, 2006) that decentralised decision making can have a negative impact on the poor as benefits resulting from projects or programmes are captured by elites.

The EMPOWERS guidelines are designed to support a governance process in which the needs of the poor and marginalised, women and men, are explicitly addressed. Nonetheless, no amount of tools for participatory processes can guarantee beneficial outcomes. It is important to realise that mainstreaming gender and making water governance pro-poor are political decisions that need time and resources dedicated to them, as well as dedicated champions who are closely involved in the process.

3. Lessons learnt in water governance

This section provides a short summary of major lessons learnt in the field of water governance, both globally over the last decade and within EMPOWERS and other projects in which the authors have been involved.

1. There are no blueprints for improved water governance – locally valid approaches have to be developed

Governance is by its nature different in every country and society. Finding water governance systems that work requires an open-minded search by stakeholders within that country; indeed the EMPOWERS approach is the outcome of such a search (Moriarty *et al.*, 2007). Generic lessons can be learnt and general principles articulated. However, the nuts-and-bolts of governance systems will always remain locally defined and locally interpreted.

2. Proper financing is essential

Governance requires financing, and improved governance requires investment. The cost-benefits of this investment are believed to be positive – but money needs to be spent to develop and maintain improved governance systems. Capacity development, improved communication and improved information management are particularly costly. Initial calculations suggest that the EMPOWERS approach can be implemented at a cost of around US\$ 2-5 per person per year within a given area². Whether this is an acceptable amount depends on the local context and other expenditure within the sector.

3. Time is required to develop capacity on the job through guided learning

Just as improved local water governance can only be developed through a local search for models that work, so too must capacity development that impacts on the knowledge, attitudes and practices of individuals and institutions take place through a process of guided learning over time. Schools and universities have a role to play in training the next generation of water managers, but the only way to change the behaviour of the current generation is by engaging with them in their places of work. As such, capacity development is as much about attitudinal change as it is about 'teaching' new or improved skills.

4. Mechanisms are required to promote stakeholder dialogue at all levels and between levels

Facilitation may be necessary to resolve conflicts and to ensure that stakeholder groups who are marginalised and/or poorly organised are able to participate or be properly represented. Attention should be given to involving women and poorer social groups and in the democratic legitimacy of decision-making systems.

² This was the calculation from the EMPOWERS Project itself in MENA.

5. Legal standing for those representing water users is important

Of all the challenges to participation, the legal standing of the 'community' – or of groups within the community is often the most problematic. Improved water governance requires meaningful participation, which in turn requires effective representation – particularly of the poorest and most marginalised. One form of such representation, widely accepted as legitimate and effective, is through democratically accountable and legally valid representatives, as members of elected water user associations at community level, or as local (or national) government politicians.

6. Integration and participation must be problem and location specific – it is not possible to involve all stakeholders all the time

Not everyone can participate all the time in everything. Stakeholders need to be identified in a pragmatic manner to address the problem or aspect of water management under review. Stakeholder forums need not be monolithic and different stakeholders can and should engage at different levels. For example, all stakeholders may be involved in high level information sharing, but only those directly affected involved in detailed planning.

7. Adaptive management and scenario-based approaches to planning can help to deal with problems of uncertainty and variability

The high level of complexity in the natural, physical and political systems surrounding water mean that it is impossible to address the problems of water management from a traditional optimisation paradigm. Rather, an adaptive management approach is preferred, one that seeks to make the best decision based on the available information, monitoring what then happens and adapting decisions accordingly. This approach represents an iterative cycle rather than a straight path through a linear process.

8. Systems of water governance should take explicit account of the long-term sustainability of water resources and of maintaining an appropriate balance between supply and demand

Planning should aim at a level of water resource development that protects the integrity of water ecosystems and gives special protection to rare and valuable ecosystems. Particular attention should be given to mitigating the risks posed by climate and/or land use change and other processes that can impact on the hydrology of a basin (including processes that can impact on water quality).

9. Monitoring systems should be set up so that the resulting information is readily accessible to all stakeholders

Effective water governance is almost impossible in the absence of good quality information about water supply and demand and the status of aquatic ecosystems. Equally, stakeholder involvement in governance will only be informed (and hence effective) when information is shared in a way that is appropriate to the educational levels and needs of stakeholders from different backgrounds. Mediating water information to support governance processes is one

of the key roles for 'water experts'. However, information management is one of the most significant costs related to improved water governance, and hence needs to be managed carefully. As with other aspects of improved governance, information needs should be carefully assessed within the framework of dealing with real problems. What information is (or is not) collected in any particular place will be context specific and should therefore always be clearly linked to actual decisions and problems within a paradigm of 'optimal ignorance' and 'appropriate imprecision'.³

Several of these lessons are summarised in the 'Principles for Local Water Governance' adopted at the regional Forum for Local Water Governance in Amman, Jordan on 7 June 2007. The EMPOWERS guidelines are designed to support the process of putting the principles, shown below, into practice.

Box 2: Seven Principles for Local Water Governance

- 1) Local water governance should be based upon the integrated participation of all stakeholders and end-users at all levels
- 2) Local water governance requires that special efforts are made to include vulnerable groups
- 3) Locally appropriate solutions and tools should be developed through the use of participatory research and action
- 4) Capacities of stakeholders should be developed at different levels to enable them to participate in water resource planning and management
- 5) Water information should be considered a public good; and access to information be enabled for all citizens
- 6) Awareness must be developed for informed participation in water governance
- 7) The efforts of all actors (government, partners in development, civil society) should be harmonised and contribute to achieving agreed and locally owned visions and strategies

(EMPOWERS, 2007)

³ "Optimal ignorance means knowing the difference between what is worth knowing and what is not, enabling the collection of information that is required for the research projects. This avoids collection of too much irrelevant data. Appropriate imprecision. In conventional surveys, many of the data collected have an unnecessary degree of precision. It is often more useful to obtain causes of problems, trends and directions of change, rather than accurate information on the absolute numbers affected by the problem." (Scrimshaw & Gleason, 1991)

4. The way forward

A widely-held opinion is that water governance is just politics. There is a lot of truth to this view, but good local water governance is also intimately linked to practical matters such as whether or not households or communities are able to access safe water supplies, sufficient water is available for productive uses and aquatic ecosystems and rare habitats are conserved. The aim of the EMPOWERS approach is to provide a framework, methods and tools that will enable local water governance to be improved so that these practical objectives can be achieved.

The EMPOWERS approach to water governance was rooted in the reality of the MENA region, namely overriding water scarcity, the fact that much water is groundwater, and the reality that many basins are international and fiercely contested. The starting point in MENA was to work with existing institutional stakeholders, within existing boundaries and domains of responsibility, and to take a 'light IWRM' approach of seeking to improve what is currently being done with minimal new legislation or policy. The emphasis was on improving communication and dialogue between stakeholders rather than fundamentally challenging or seeking to change the current structures for water management.

The EMPOWERS approach is also based on using existing tools, wherever possible, rather than on developing new ones. As such, it builds on the experience of participatory approaches and water resources management of its own partners, and from a wider base of experience of global development.

The most important outcomes of the EMPOWERS Project in MENA were:

- stronger (and in some cases new) relationships between different water stakeholders: vertically between water users in villages and towns and representatives of government ministries; and horizontally between different water-user groups and different line ministries; and
- improved knowledge, attitudes and practices of those directly involved in the work.

Another important output was to develop and codify the approach to locally owned water development plans, set out in The Empowers Approach to Water Governance: Guidelines, Methods and Tools. These help to fill the gap resulting from a general lack of practical tools for implementing water governance, particularly at local and intermediate level. As explained in that companion volume, the EMPOWERS approach is delivered through a strategic and participatory management cycle that takes its users from a first vision through a process of assessing information, devising a strategy, developing detailed plans, implementing those plans and reflecting on the outcome, with a view to making further improvements. It is an iterative process, in which stakeholders develop scenarios of possible futures and adjust their strategies, and sometimes even their vision, accordingly.

Those of us who were involved in the development and use of this management cycle and the EMPOWERS approach are convinced that the guidelines, methods and tools can lead to major improvements in local water governance. However, we are also convinced that the approach and guidelines can be improved through practical experience and research to further refine concepts of water governance. Also, as already emphasised, local water governance has to be made specific to local (and national) contexts.

The approach is therefore offered as a resource and starting point for people interested in improving water governance processes. It is hoped that many projects will use the EMPOWERS guidelines, methods and tools as a resource within their own processes, that they will find them useful, and that they will adapt and modify them as they see fit. *The EMPOWERS Approach to Water Governance: Guidelines, Methods and Tools* is available in both printed and electronic formats (from www.empowers.info) for easy adaptation. It is also hoped that those using and adapting the approach will share their experiences, whether positive or negative, with others, and hence contribute to the global sum of knowledge on water governance. To this end, a message board has been set up at www.empowers.info.

References

Web sources cited here were checked in August 2007

- Biswas, A., K. 2004. Integrated Water Resources Management: A Re-assessment. *Water International* 29(3), September 2004: Pages 398-399
- Cleaver, F. 2007. Water governance and poverty: a framework for analysis. (In Press).
- Cleaver, F., Franks, T., Boesten, J. and Kiire, A. 2006. Water governance and poverty: What works for the poor? DFID Research Report, University of Bradford.
- Currie-Alder, B, Thompson, L, Bustamante, R. 2006. Insights on Water Governance: Research in the Middle East/North Africa and Latin America. Presented at "Survival of the Commons: Mounting Challenges and New Realities," the Eleventh Conference of the International Association for the Study of Common Property, Bali, Indonesia, June 19-23, 2006. Available at: <http://dlc.dlib.indiana.edu/archive/00001870>
- EC Guidelines for water resources development co-operation. 1998. Towards sustainable water resources management. A Strategic Approach. Published DG Development and DG External Relations and North-South Co-operation.
- EMPOWERS – Seven Principles for Local Water Governance. Available at: <http://www.empowers.info/page/3188>
- Engel, Paul G.T. and Salomon, M.L. 1997. RAAKS resource box, Networking for innovation, A participatory actor-oriented methodology. Royal Tropical Institute, KIT Press, Amsterdam. Available at: <http://www.kit.nl/smartsite.shtml?ch=FAB&id=4616&Part=Resources>
- Green, C. 2007. Mapping the field: The landscapes of Governance. EU-funded SWITCH Project.
- GWP Toolbox 2003. Toolbox available at: http://www.gwpforum.org/servlet/PSP?chStartupName=_water . Quote is from the foreword to the 2003 iteration (IWRM toolbox Version 2). Available at: www.gwpforum.org/gwp/library/ToolBox%20Version%202%20.pdf.
- GWP. 2000. Integrated Water Resources Management. TAC Background Papers No.4, Global Water Partnership, Technical Advisory Committee, Stockholm, Sweden. Available at: <http://www.gwpforum.org/servlet/PSP?iNodeID=215&itemId=24>
- Laban *et al.*, 2007. Integrated Water Resources Management. TAC Background Papers No.4, Global Water Partnership, Technical Advisory Committee, Stockholm, Sweden. Available at: <http://www.gwpforum.org/servlet/PSP?iNodeID=215&itemId=24>
- Merrey D. J., Drechsel P., Penning de Vries F.W.T., Sally H. 2005. Integrating livelihoods into integrated water resources management: taking the integration paradigm to its logical next step for developing countries. Available at: www.sarpon.org.za/documents/d0000575/P530_IWMI.pdf
- Moench, M., Dixit, A., Janakarajan, S., Rathore, M., Mudrakartha, S. 2003. The fluid mosaic, water governance in the context of variability, uncertainty and change. Available at: http://web.idrc.ca/uploads/user-S/10492953541Fluid_Mosaic21.pdf
- Molden, D., Sakdithel, R., Samad, M. and Burton, M. 2005. Phases of river basin development: the need for adaptive institutions. In Svendsen, M. (Ed): Irrigation and River Basin Management: Options for governance and institutions. IWMI/CABI publication
- Moore, M. and Unsworth, S. 2006. Britain's New White Paper: Making Governance Work for the Poor. *Development Policy Review*, 2006, 24 (6): 707-715.
- Moriarty, P.; Butterworth, J.; Batchelor, C. 2004. Integrated Water Resources Management and the domestic water and sanitation sub-sector, IRC Thematic Overview Paper, IRC International Water and Sanitation Centre, Delft, The Netherlands. Available at: <http://www.irc.nl/page/10431>

Moriarty, P., Laban, P., Batchelor, C., Shraideh, F., Fahmy, H., Rifai, S. 2007. Learning alliances for local water resource management in Egypt, Jordan and Palestine: Lessons from the EMPOWERS project, in Smits, S., Moriarty, P., Sijbesma, C., (Eds). 2007. Learning Alliances - Scaling up innovations in water, sanitation and hygiene, Technical Paper Series 47, IRC International Water and Sanitation Centre, Delft, the Netherlands

Pahl-Wostl C., Moltgen J., Sendzimir J., Kabat P. 2005. New methods for adaptive water management under uncertainty – The NeWater project.
Available at: http://www.newater.info/downloadattachment/1133/74/ewra_newater.pdf

Rogers P. 2002. Water governance in Latin America and the Caribbean. IADB.
Available at: <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=355237>

Rogers, P. and Hall, A.W. 2003. Effective water governance. GWP Technical Advisory Committee, Background Paper no. 7. Global Water Partnership. Available at: <http://www.gwpforum.org/gwp/library/TEC%207.pdf>

Scrimshaw, N. S., and Gleason, G.R., (Eds). 1991. Rapid Assessment Procedures – Qualitative Methodologies for Planning and Evaluation of Health Related Programmes.
Available at: <http://www.unu.edu/unupress/food2/UIN08E/uin08e00.htm#Contents>

Shah, T., Makin, I. and Sakthivadivel, R. 2005. Limits to leapfrogging: Issues in transporting successful river basin management in the developing world. In Svendsen, M. (Ed.): "Irrigation and river basin management: Options for governance and institutions". CABI Publishing.

Shardt K., Stravato I., Dietvorst C. 2006. About Corruption and Transparency in the Water and Sanitation Sector. IRC International Water and Sanitation Centre Thematic Overview Paper 16.
Available at: <http://www.irc.nl/page/31982>

Steins, N, A. & Edwards, V.M. 1998. Platforms for Collective Action in Multiple-Use CPRs, Paper Presented at "Crossing Boundaries", the seventh annual conference of the International Association for the Study of Common Property, Vancouver, British Columbia, Canada, June 10-14, 1998.
Available at: <http://www.indiana.edu/~iascp/abstracts/612.html>

Turton, A. and Ohlsson, L. 1999. Water scarcity and social stability: Towards a deeper understanding of the key concepts needed to manage water scarcity in developing countries. SOAS Water Issues Study Group, Occasional Paper 17. University of London, London.
Available at: <http://www.soas.ac.uk/waterissuesfiles/occasionalpapers/OCC17.PDF>

UNDP. 1997. Governance for sustainable human development. New York: United Nations Development Programme.
Available at: <http://mirror.undp.org/magnet/policy/default.htm>

UNDP. 2006. United Nations Human Development Report. Beyond Scarcity: Power, Poverty and the Global Water Crisis. United Nations Development Programme, New York.
Available at: <http://hdr.undp.org/hdr2006>

UNDP. 2007. Effective Water Governance: The Key to Sustainable Water Management and Poverty Eradication. United Nations Development Programme. Available at: http://www.undp.org/water/about_us.html

UNFPA. 2001. The State of World Population 2001, Chapter 2. Water and Population.
Available at: <http://www.unfpa.org/swp/2001/english/ch02.html>.

Warner, J., Smits, S., Winnubst, M., Butterworth J. 2006. Local governance in Integrated Water Resources Management in the Netherlands. LoGO Water working paper. Available at: http://www.iclei-europe.org/fileadmin/user_upload/logowater/resources/Local_governance_in_IWRM_in_the_Netherlands.pdf

Wester, P., Merrey, D.J., de Lange, M. 2003. Boundaries of Consent: Stakeholder Representation in River Basin Management in Mexico and South Africa. World Development Volume 31, Issue 5, May 2003, Pages 797-812

WMO. 1992. The Dublin Statement and report of International Conference on Water and the Environment (ICWE): Development issues for the 21st century, 26-31 January 1992, Geneva, Switzerland, World Meteorological Organization, Hydrology and Water Resources Department.
Available at: <http://www.wmo.ch/web/homs/documents/hwrpdocs.html>

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