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Developing a Practical Approach to 'Light IWRM' in the Middle East

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ABSTRACT: This paper outlines the development of an approach (and a set of tools) for 'light' integrated water resources management (IWRM): that is, IWRM that is opportunistic, adaptive and incremental in nature and clearly focused on sustainable service delivery. The approach was developed as part of the EC funded EMPOWERS project in three middle-eastern countries: Egypt, Jordan and Palestine. Developed specifically for use at the intermediate and local levels (that is, sub-national and sub-basin) it is based on a facilitated process of stakeholder dialogue for concerted action supported by a strategic planning framework. The paper describes and discusses the justification for the approach, and sets out its main elements as well as experiences gained during its application.

The main lesson of the EMPOWERS project is the seemingly simple – in fact, rather complex and time-consuming – work on facilitating dialogue, taking a structured approach to examining problems, collecting and sharing context-specific information, and helping to formulate a shared vision and strategies to achieve it all of which contribute to improved decision making. However, a major limitation to effective action is lack of appropriately decentralised finance, with local authorities reliant on financing from the national level that is often earmarked and over which they had very little control.

KEYWORDS: Light IWRM, local water governance, adaptive management, stakeholder dialogue and concerted action, RIDA, scenario building, MENA

INTRODUCTION

Water managers, water users, and water service providers around the world face multiple challenges in providing 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): essentially a loose and fairly general set of principles aimed at more holistic and sustainable development and management of water resources. Based on these principles, something resembling a standard package of water reforms to national water policy and law has been developed, led by the World Bank, EC and others. This package typically includes (but is not limited to): the development of national water policies; the establishment of apex agencies for water management; and the creation of basin agencies typically with some element of stakeholder participation. As Warner et al. (2008) argue, the basin (or catchment or watershed) holds pride of place in this package, presented as a sort of 'natural unit' that somehow supersedes the political units of

states, governorates or districts; or the service delivery units of domestic water supply and irrigation systems defined by the pumps, pipes and canals. This vision of IWRM is far from uncontested and it has been critiqued (for different reasons) over time by a number of academics and practitioners, including Biswas (2004), Wester and Warner (2002) and Pahl-Wostl (2007).

While sympathising with many of the academic critiques of this standard package, our starting point, as practitioners and action researchers from a largely technical (hard-science and engineering) background, was to seek how to implement IWRM in practice. This paper is about the development of an approach and toolbox to help us in advancing our vision of better water service delivery that incorporates IWRM principles (the order is important, our starting point is the delivery of water to people). Between 2003 and 2007, through the EMPOWERS¹ project we carried out a programme of action research aimed at creating (or consolidating) these approaches and tools. These have subsequently been developed into a methodology and toolbox for planning and decision making about water services (i.e. water governance), that are currently available in French, English and Arabic editions (Moriarty et al., 2007a, 2000b).

The paper is divided into four main sections including this introduction. The next section, background, gives a brief overview of water governance in the MENA region and EMPOWERS focus countries, followed by an introduction to the key concepts that underpinned the project; this is followed by an overview of the EMPOWERS approach itself, presenting brief sketches of the principal pillars of the approach as well as discussing how they were applied in practice; finally we discuss the main lessons learned in the process of carrying out the work.

BACKGROUND

Guiding concepts for local water management

In a previous work we developed the concept of *light IWRM* (Moriarty et al., 2004) as a counterpoint to the typical package of institutional, legislative and informational interventions recommended by organisations such as the World Bank (Shah and van Koppen, 2006); typically pulled together under the banner of national water sector reform, which we have referred to as full IWRM. We understand light IWRM to be a more incremental and opportunistic application of the core principles of IWRM at the level of water users and water service providers. Light IWRM is intended as an approach that is less formulaic and is predicated on improved communication, information-sharing, and negotiation between different water users. In contrast to the normal top-down IWRM package, light IWRM aims to be pragmatic, problem-focused and adaptive. The intended outcome of applying light IWRM is a system of managing water services and resources developed over many years in response to real demand and, as a result, better adapted or tailored to the political economy of a given area. We have also argued that light IWRM has fewer problems with buy-in because even quite limited initial successes can quickly convince sceptics that IWRM is an approach that they should take seriously.

Light IWRM is focused on delivering water-based services to people. In line with IWRM philosophy it aims to do this in a sustainable way that acknowledges the finite (albeit renewable) nature of water resources, and the complex linkages between water and the rest of the ecosystem. Taking this starting point leads inevitably to a polycentric approach which sees interlinked and overlapping system boundaries: human (politico-institutional); service delivery (pipes and canals); and hydro(geo)logical.

¹ EMPOWERS is short for Euro-Mediterranean Participatory Water Resource Scenarios, the name of a proposal to the European Commission's MEDA Water project. However, the long form was seldom used and the project, programme and approach are simply referred to as EMPOWERS.

Water management and water services in Jordan, Palestine and Egypt

The EMPOWERS project worked in Egypt, Jordan and Palestine, three countries that provide a good cross section of both water resource and governance systems found in the Middle-East and North-Africa (MENA). Institutional assessments carried out by the project identified the following broad characteristics of water governance in the region:

- Fragmented decision making. Responsibility for water-related decision making is spread across different line departments.
- Lack of reliable information. Although large amounts of water-related information exist, the quality is variable and/or the information is out of date.
- Poor access to information. As information is collected and stored by many different organisations, accessibility to information when and where it is needed is poor. In particular, stakeholders at the town or village rarely have access to, or copies of, water-related information that is specific to their village or town.
- Focus on technological and supply-based solutions. There is a tendency for technological solutions to be used whenever there are water supply problems regardless of their causes.
- Limited stakeholder participation or representation. Most water-related decision making takes place without stakeholder participation or meaningful consultative processes.
- Lack of accountability and transparency. Water-related decision making is inherently political and, as a consequence, these processes can be, and often are, subverted as a result of political involvement.
- Lack of clarity regarding the accountability of service providers to users, and of transparency in how and why decisions are made, lends itself to abuse of the management process (EMPOWERS, 2007).

This then was the context in which over 4 years and in three governorates (one in each country) the EMPOWERS project worked to develop an approach that would represent a real step forward in water governance and the provision of water services, especially to the poor. The action research was based on a pragmatic approach and a willingness to look outside the sector, together with a belief that adaptive forms of management are the most promising way forward in working with largely intractable problems. In developing the approach we assumed that, especially in areas of increasing water scarcity, improved water governance will be based on a process of negotiation at different institutional levels and across different sectors between water resource managers, water service providers and water users. The approach was developed with a special focus on the sub-national and sub-basin level: that is, it worked at the level primarily of water service users, and water service providers.

Given the overall objectives, it was logical for the EMPOWERS project to adopt a process of active experimentation and adaptation of new approaches by those who are intended to make use of them. We applied the concepts of action research not only at the level of users, but also at the higher institutional level of service providers (engineers and managers), identifying and involving different groups of actors at different levels and facilitating a greatly increased communication between them. Within the project we called this group of different actors at different levels a knowledge community; in later writing, we have also referred to this group as a learning alliance (see for example Moriarty et al., 2007c).

Over a period of 4 years we worked with the knowledge communities in the three countries. The focus of the work was at the levels of governorates, and below these districts, towns and villages. We drew on, and experimented with, a wide range of existing and purpose-built tools to develop an approach that worked in the context of the different countries. These tools came from business, project

planning, rural development and water resource management sectors. As they were developed and experimented with, we built them into a coherent package (or toolbox) and a methodology for their application, which we have subsequently called the EMPOWERS approach (Moriarty et al., 2007a). The EMPOWERS toolbox contains over 30 different tools, as listed in box 1. A guiding principle in developing the approach was to draw, wherever possible, on existing tools and methodologies that would be familiar to users. We sought in this way to develop an approach that would be robust, flexible, easy to use, and easy to adapt.

Box 1. Tools included in the EMPOWERS toolbox

- Tools for strategy development:** visioning; scenario building; strategy development; planning
- Tools for participatory learning and action:** problem tree analysis; semi-structured discussion; SWOT analysis; prioritisation and ranking; accountability and rights analysis
- Tools for assessing:** resources, infrastructure, demand and access (RIDA) analysis; qualitative information system (QIS); quality assurance and control; water balance estimation; time series analysis; modelling; information management; cost-benefit analysis
- Tools for working with stakeholders:** stakeholder identification; actor and task analysis; identifying key stakeholders; institutional analysis; visual models of leadership and coordination; involving the poor and marginalised; capacity development; awareness-raising; facilitation; conflict management
- Tools for monitoring:** monitoring and evaluation; benchmarking; process documentation

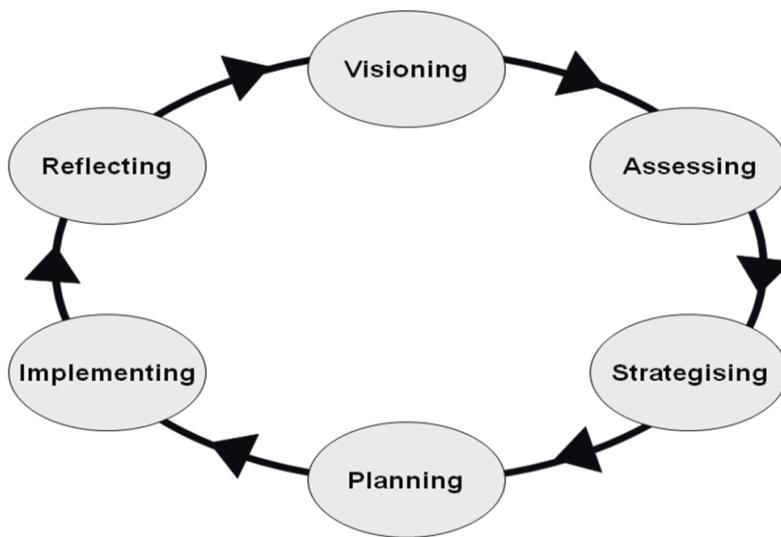
As a project, in part funded by the European Commission (EC), the EMPOWERS project had a log frame and was expected to monitor project progress and outputs against this. And the results of a final evaluation were broadly satisfactory. However, the project also implemented an internal process of more qualitative and descriptive monitoring based on the collection and frequent sharing of stories. This approach, which we called process documentation, was explicitly intended to support the work of the knowledge communities, by 'holding up a mirror' to members. These stories also complement and supplement the formal communication of reports and data by presenting the human stories that lie behind them. Some of the stories were collected into a book (Abd-Elseoud et al., 2007).

THE EMPOWERS APPROACH TO LOCAL WATER GOVERNANCE

Conceptually, the EMPOWERS approach rests on two pillars. The first of these is Stakeholder Dialogue and Concerted Action (SDCA), that is, a process in which stakeholders at all levels engage in facilitated dialogue to take agreed action. The second pillar is a framework, in the form of a programme cycle (figure 1), to guide and structure the process of stakeholder dialogue along a number of steps.

In the work that the EMPOWERS project undertook in the three Middle-East countries, stakeholders at different levels worked through the different stages of the planning cycle to come to strategic plans for water service delivery and water resource management for their area: be that a village, town, district or governorate. The outputs were strategic plans that set out the broad lines for water service improvement, as well as detailed plans for specific pilot activities that were felt to be of particularly high value. Planning cycles was used as the main guiding framework because this is an approach familiar to many engineers and planners, and because a cycle is a proven framework that supports an adaptive or 'learning by doing' approach. The European Commission also used the approach in its 'blue book' (EC, 1998) – an early and innovative set of guidelines for IWRM that took a recognisably 'light' approach.

Figure 1. The EMPOWERS cycle.



Stakeholder dialogue and concerted action

At the heart of the EMPOWERS approach is the creation of facilitated (ad-hoc) platforms for negotiation and coordination, working with, and improving the relations between, existing organisations. It is important to underline that, in general, the EMPOWERS project did not try to create new institutions or structures. Rather it focused on the links and communication between existing ones: both horizontally, between actors at the same institutional level and vertically, particularly between users and service providers. These platforms and links were instrumental in forming the new or enhanced relationships between sector actors that allowed the implementation of light IWRM through a process of active exploration of new solutions to existing problems. Actors from different water sub-sectors – particularly agricultural and domestic – knew each other but had hardly worked together in the past. Nor had they been systematically involved in discussions with water users; indeed there was initially a great deal of scepticism on the part of many of the sector professionals as to the usefulness of engaging in such discussions.

As an approach, SDCA draws heavily on experiences in rural development and agricultural knowledge systems. An important source of tools to support the SDCA approach in the EMPOWERS project was the well-known RAAKS toolbox of Salomon and Engel (1997). These tools were used to support stakeholders in different steps of the planning cycle to map out and understand the different relationships underpinning water governance, relating to the different aspects of water use that were of relevance to them. Different tools from RAAKS and other sources were used to support different stages of the strategising process. Of particular importance to the process of stakeholder dialogue were those who supported the structured identification of stakeholders and the web of relationships that exist between them. Coupled with RIDA analysis (see next section) mapping stakeholders was a very important element in terms of raising awareness of lines of accountability and information-sharing.

The EMPOWERS management cycle

The second pillar of the approach is a six-step programme cycle which structures and guides the process of SDCA (figure 1). Although the use of management cycles in water management is not new, this approach differs from most in several respects, including:

- The fundamental importance of stakeholder involvement during all phases, addressed through the use of SDCA.

- Explicit acknowledgement, through the use of narrative scenarios, of the uncertainty that exists in nearly all aspects of water service delivery and water resource management, especially future demand and water resource availability.
- Acknowledgement of the multi-level and polycentric nature of water service and water resource management through the use of RIDA analysis.

The six steps of the cycle can be divided into three principal phases. A strategising phase including the steps of 'visioning', 'assessing' and 'strategising'; an implementation phase consisting of 'planning' and 'implementing'; and a 'reflecting phase' which although shown as an independent step in the cycle is, in fact, intended to pervade all steps and which is intended to support an adaptive and learning-based approach. Closing the loop with 'reflecting' underpins the key idea of the cycle – that the vision and strategies developed should be regularly updated in the light of experience. Typical activities, inputs and outputs of each step in the cycle are illustrated in the flow diagram below (figure 2).

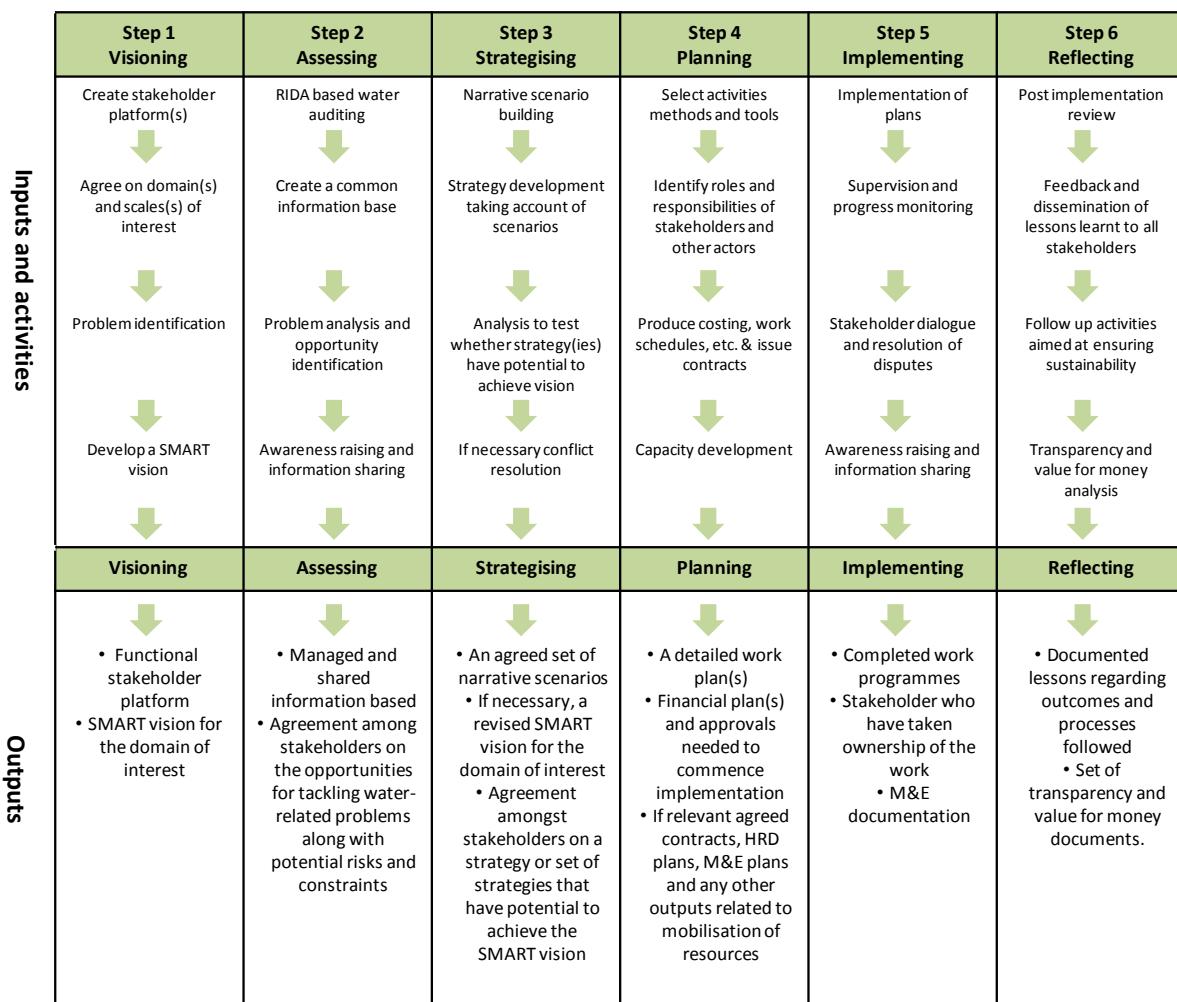
The strategising phase was the one which was most practised and therefore the most fully developed by the EMPOWERS project, and where we believe the approach was most different and challenging to the stakeholders we worked with. It lies at the heart of the light IWRM approach, in that it is in the process of developing a commonly shared water development and management strategy that the problem-focused discussions, decisions and compromises between multiple stakeholders take place. It is therefore the phase that is most focused on in this paper. It is also the most innovative in terms of the tools and approaches used within it, largely because strategic planning is not typically the arena of mid-level managers and engineers, especially in centralised institutional structures, who are typically simply expected to implement plans made and decided elsewhere. Indeed, arguably, it is the lack of approaches, methods, tools and the skills to use them in local and intermediate level decision making that poses the greatest challenge to implementing IWRM in practice. Creating and applying both the approach and skills for improved and more integrated water development and management within existing institutional structures is the essence of light IWRM.

The three steps that make up the strategising phase of the EMPOWERS approach lead to the development of locally owned and agreed medium to long-term strategies for water service delivery and water resource management. These documents contain SMART visions,² scenarios and strategies for water that are developed with stakeholders based on problem analysis. Although figures 1 and 2 show this process diagrammatically as a series of clearly delimited steps, in practice the activities of this stage have blurred boundaries and require iteration: initial ideas captured as visions and then tested first by the collection and sharing of new information and later by scenarios-building and a search for promising strategies. Initial visions, scenarios and strategies were often quite simplistic and tend towards solutions that only scratch the surface of the problems being addressed: "more pipes are required"; or "dumping solid waste in canals should be banned".

In practice, the strategising phase was carried out over a time period that stretched from a few weeks (for small villages) to several months for larger towns and at governorate level. In this period, the facilitation team worked both with, and away from, stakeholders, sometimes in large workshop settings and sometimes in small groups. Figure 2 shows the typical flow of activities and outputs of the different steps of the strategising (and subsequent) phase. Throughout, the emphasis was on trying to introduce (often quite complicated) information in a way that made possible meaningful discussion between stakeholders of very different backgrounds and experience.

² SMART is an acronym for Specific, Measurable, Achievable, Realistic and Time-bound. A SMART Vision is therefore a vision that contains sufficient detail to allow its achievement (or not) to be measured.

Figure 2. A typical flow chart for the main activities in the EMPOWERS approach.



An innovative aspect of the overall methodology was the use of a modified form of the Shell method of narrative scenario-building (van der Heijden, 2006)³ as a participatory activity in which expert and non-expert stakeholders take part. We adopted scenario-building as a way to get stakeholders to engage with the inherent uncertainty of making long-term decisions against a background of variability, complexity and an essentially unpredictable future. Figure 3 shows conceptually how scenario-building is used between initial vision development and subsequent strategy formulation. Scenario-building helps test vision and strategies and is used more than once in the cycle. In the visioning step, scenarios help towards an outline strategy. In the strategising step, when the strategy is becoming clearer and more concrete, scenarios are refined or reworked to take account of new information, opportunities, threats or uncertainties. This iterative process of revisiting, improving and adjusting the vision, scenarios and strategy is essential to the EMPOWERS light IWRM approach in that it keeps the process embedded in reality and it allows planning to adjust to new information.

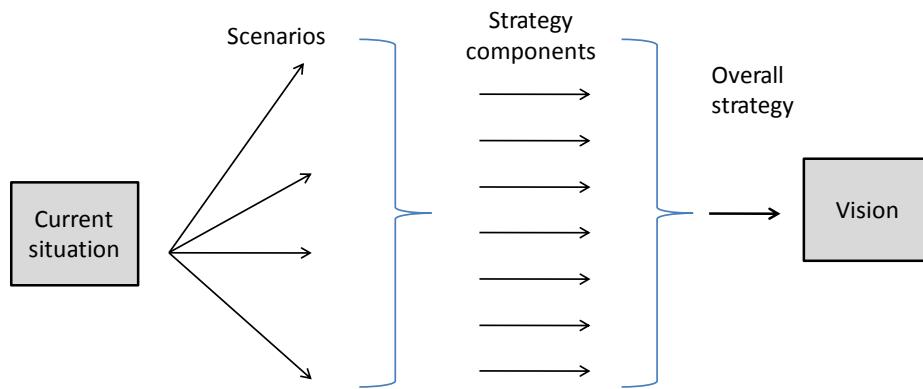
³ The oil company Royal Dutch Shell pioneered the use of scenario building as a strategic business tool in the 1970s. In essence, scenario-building attempts to sketch out (in the form of coherent stories) the range of possible different future operating environments in which an organisation may find itself. The focus of the Shell approach is on imagining the exogenous environment – that is, those aspects of the operating environment that are beyond an actor's own ability to affect. In the case of water managers this will range from future rainfall patterns through economic and political developments to patterns of demand.

The complexity of the scenarios developed in the EMPOWERS project varied between the local (village) and intermediate (governorate) level. But it is important to underline that they were not the sort of highly complex model-based scenarios used in, for example, international climate talks. The strength of the scenario-building approach was that it encouraged stakeholders to focus on factors that were external to their immediate problem space (that is, that were beyond their control) yet which critically affected decisions they needed to make: factors ranging from water resource and climate variability, through demographic growth and changing patterns in demand to the behaviour of the economy and availability of financing. Among the (typically) three or four scenarios developed, stakeholders were encouraged to think about a 'worst case' scenario – as a way of trying to get to grips with the sort of 'black swan'⁴ (unlikely but high-impact) event that can completely disrupt a strategy.

An interesting observation was that water resource availability per se seldom figured in the less certain aspects of the scenarios developed: scarcity of water was taken as being a given. Rather, scenarios tended to focus on institutional and financial issues, ranging from the political control by Israel of licences for water development in Palestine, to the availability of project financing, to aspects such as responsiveness of government and capacity of technical actors. Although only indicative, this observation tended to confirm our underlying assumption that many of the most difficult problems encountered in water service delivery and management are not actually about water at all, but rather about the political, financial and institutional issues that surround it.

Despite some scepticism about whether scenario-building was really an appropriate tool to use with non-specialist decision-makers, we found that well-facilitated scenario-building provided an ideal arena for expert and non-expert stakeholders to interact as they explored assumptions about how the future might unfold and hence about how to develop a sound strategy for their own future water use.

Figure 3. Schematic showing scenario-building as an integral part of a planning process.

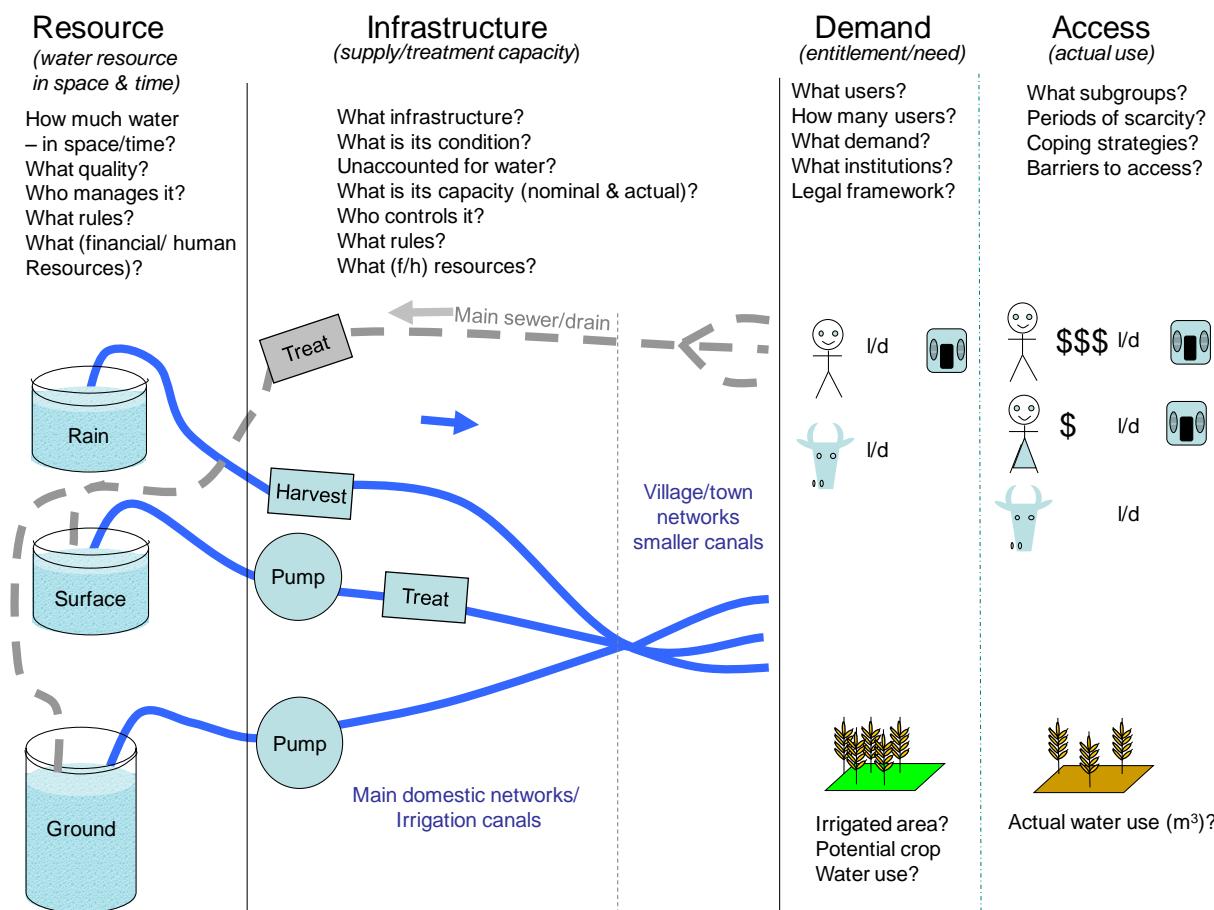


Another innovative element of the approach was the use of an analytical approach called RIDA to help guide problem-focused discussions aided by identification of required information. RIDA as illustrated in figure 4, represents a simple statement of the obvious: that water services rely on bringing water resources to users (to meet their demand) by means of water supply infrastructure: and that each of these elements operates at (or across) different scalar and institutional boundaries, involving different people. The information is collected as part of the RIDA analysis data about water resources and water supply systems and also institutional information regarding different water stakeholders: service providers, users and their needs. The introduction of the RIDA framework was based on our experience of the need to work across institutional and scalar boundaries in a problem-focused manner and is

⁴ For an entertaining and enlightening introduction to complexity and the importance of 'black swans' generally, see Taleb, 2007.

crucial to the light IWRM approach in that it helps clarify, to all involved, the linkages between different aspects of water service delivery and management.

Figure 4. The RIDA framework.



Important outputs of the assessing phase using RIDA include a shared information base upon which stakeholders can draw in developing visions, scenarios and strategies; and identification of stakeholders who need to be involved in ad-hoc platforms as part of SDCA.

The shared information base can be as simple as some key facts and figures on a few sheets of paper: or as complex as a GIS-based management information system. The point is that stakeholders should understand and agree (or agree to disagree) on the information contained, even if this means working with ranges of values rather than with precise values. In particular, experts should be clear on the data, and should be able to articulate what it means to non-professional stakeholders.

In practice, working through the steps of a RIDA analysis and posing the questions shown in figure 4 proved to be an effective tool for improving all stakeholders' understanding of the challenges facing them. The framework also helped in stakeholder identification as it was worked though from users to providers and management institutions. Often, quite simple and relatively accessible information could trigger deep discussions: for example, comparing an engineer's estimate of water production from a treatment plant (infrastructure) with water users' actual experience of quantity of water received (access) could lead to a complex discussion of the challenges of network design, leakage control and unaccounted for water.

Indeed, it was through this discussion and bringing together of different water users in a shared analysis, facilitated by the EMPOWERS project team as part of the SDCA, that most progress was made in breaking down institutional barriers, developing the trust and improving working relations necessary for improved decision making.

AFTER STRATEGY DEVELOPMENT

This paper has focused on the first, strategic, phase of the EMPOWERS cycle as we feel that, at the intermediate and local levels that we worked, this was the most truly innovative part of our work. However, while the development of locally developed and owned strategic plans (at village and governorate levels) was an important output, it was an essential part of the EMPOWERS project that these strategic plans were then used in an implementing phase to identify real actions that were then carried out. The project had a small budget for carrying out activities identified by stakeholders, based on prioritised lists created as part of the strategising process (see box 2). Actions carried out ranged from physical works such as the construction of water-harvesting cisterns or the purchase of tankers for emptying septic tanks through the creation of new village-level organisations. At the governorate level, initiatives tended to focus on strengthening capacity to manage and use water-related information. Our experience was that the promise of something 'concrete' at the end of the planning process helped greatly in terms of focusing minds and encouraging active participation – especially in the early days of strategic planning. In addition to the activities financed and supported by the EMPOWERS project itself, the water-development strategy documents were also used to seek support from other donors and collaborators.

DISCUSSION

EMPOWERS did not carry out a formal impact- or, indeed, outcome-level assessment. However, it was subjected to a well-resourced external evaluation at the end of the programme.⁵ The assessment found that after 4 years, the main outcomes of the project were stronger (and in some cases new) relationships between the different water stakeholders in the countries and governorates where we worked: vertically between water users in villages and towns and representatives of government ministries; and horizontally between different water-user groups and different line ministries. The strongest outcomes were observed at the village and town levels, where the evaluators found real improvement in the ability of citizens to analyse and plan for their water use. At the governorate level, outcomes were strongest, and also felt to be most sustainable, in Jordan, and weakest in Egypt, where the governorate is an order of magnitude larger than in Jordan or Palestine. It is too early, and the scale of implementation of the approach too small, to state whether, at a larger scale, access to water, and the management of water resource improved substantially.⁶ However, we do believe that from the interactions with stakeholders on the ground and in governorate offices, and also at the international level, through a series of regional conferences and training events, the approaches developed and systematised by the EMPOWERS project resonate with the needs of water professionals and water users in the region and beyond.

⁵ This was made available on the project website at www.project.empowers.info/page/3402.

⁶ The main source of funding for the EMPOWERS programme was the EC's MEDA Water Fund. This programme had an ambitious range of goals that mirrored those of EMPOWERS, in essence to change how water was managed in the region. However, a shift in policy meant that the programme itself was wound up after 5 years, leaving EMPOWERS and other programmes with no obvious sources of funding to take what they had developed to a new scale. To us it seems an important lesson that change of the sort sought by the EC cannot be achieved on the basis of 4- or 5-year projects and needs a longer (probably closer to 10-year) and more clearly focused programmatic intervention.

Box 2. Main tools used in the EMPOWERS approach.

Where the EMPOWERS project worked and what it did

The EMPOWERS project worked in one governorate in each of Egypt, Palestine and Jordan. In each country the project initially developed the methodology in a first round of villages and small towns, and subsequently replicated it in a second round. The initial activity was the development of strategic plans for water development and management, which took place at both the level of the village/town and independently at the level of the governorate. This was followed by the identification and implementation of (typically small) 'pilot' projects: high priority activities identified by stakeholders. In line with the local, incremental and service focussed approach of the project, pilot activities typically revolved around better using existing resources and extending services, rather than major increases in water resource availability.

In Jordan the project worked in Balqa governorate situated on the edge of the rift valley near to Amman. In all, the project worked with seven communities on the floor of the valley. Water related problems addressed spanned both domestic and irrigation, and were predominantly linked to a perception of overall insufficiency of water availability, although access to sanitation facilities and management of septage was also important for some communities. Pilot activities included strengthening village level organisations in water management in all communities; construction of household water storage; rehabilitation of springs and irrigation networks; and, construction of cesspits. At the governorate level, the project supported in the development of a water focussed management information system.

In Palestine the project worked in the northern governorate of Jenin. In all, five rural communities and the governorate capital town, Qabatya, were involved. As in Jordan the main water problems addressed were shortages of water for irrigation and domestic use with the difference that there was no canal based irrigation – all water coming from boreholes. Pilot interventions in Palestine included: the installation of households water meters in Qabatya city to help manage demand; the development of new boreholes to increase irrigation; rainwater harvesting and the construction of storage tanks for both rainwater and tankered supplies; and the construction of sanitation facilities in schools.

In Egypt, the project worked in Beni Suef governorate, a poor rural governorate upstream of Cairo. Because of the very large size of Egyptian governorates as compared to those in Jordan and Palestine, the project focussed piloting in one district, Ehnasia. Ehnasia city and five villages were sites for pilot implementation. As in Jordan and Palestine, the pilots covered irrigation, domestic water supply and sanitation. Pilot activities included: strengthening local institutions in water management; covering tertiary canals in urban areas; extending the domestic water supply to poor households; provision of sanitation facilities and solid waste management (solid waste becomes a severe problem when it clogs canals).

Our experiences of creating a genuine dialogue between different stakeholders were largely positive: getting people to meet each other – engineers and planners from different departments meeting each other and water users, and water users meeting other users constituted an eye-opener while, on a fundamental level, empowering all involved. This is not to say that change in attitudes and behaviour, especially for more senior staff of stakeholder institutions, was easy or happened overnight. Indeed, for many, it took from a year to 18 months to bring the majority of sector stakeholders on board, although once convinced, many became champions of the approach. This change was brought about by intensive interaction by a well-motivated and technically competent facilitation team.

The EMPOWERS project was arguably unusual in focusing so clearly on the intermediate-level stakeholders: primarily government technocrats from different water-related line agencies. In our experience, this is a group, at best, expected to do its duty without comment or complaint, or at worst

ignored or bypassed by development projects (particularly those of NGOs). Often seen as 'part of the problem' the temptation is to create parallel structures to interact directly with the grassroots. And indeed this large group of typically poorly managed and poorly motivated people is part of (perhaps a large part of) the problem. Stuck between national-level corridors of power, and local-level people who (understandably) are often mistrustful of them, their typical role is to carry out instructions passed down the chain of command from the capital city, or to pass (often questionable) statistics back up. Yet in the end these people, the engineers, planners and administrators at the sharp end of service delivery are unavoidable if IWRM is to ever be more than pious hot air.

Our experience was that these people, as well as many water users, had the knowledge and ability to identify creative and appropriate solutions to water-related problems, once given the space to do so. Perhaps as a reaction to years of being told what to do but not why, many of our stakeholders found working through the steps of preparing a collaborative strategic vision empowering. What is more, the use of narrative scenarios was very useful in pushing past the stage of a wish-list generation to actually engaging with the real (and daunting) limitations with which most water managers in the region are faced, to come to strategies that were often refreshingly modest and realistic.

The quality of the output developed, i.e. the strategic water development plan (many of these plans can be accessed at www.empowers.info) was not always world class – but it was normally better than what had gone before. Indeed, none of the areas we worked in had ever had an integrated strategic development and management plan for water. At most, some governorate-level engineers and planners were aware of national master plans for specific sectors. We found that the exercise of scenario-building helped stakeholders to focus outside of their immediate area of technical interest. And using the RIDA helped better structure the analysis and move outside of narrow sub-sector boundaries.

The activities that resulted from the EMPOWERS process (see box 2) were typical of light IWRM in that they were 'small' and incremental. There were no plans for mega water diversions or radical demand curtailment. At the village or town level, typical actions included an irrigation project extended a few hundred metres to bring domestic water to a village or the purchase of a tanker to empty cesspits. At the governorate level, actions included the development of new water information management systems. Both village and governorate levels saw the establishment of new or strengthened networks and platforms for communication. Whether at the level of technocrats based in governorate offices, or water users in villages and towns, water problems were experienced almost entirely as supply side and service related. Where issues of resource constraint were identified, these were often seen more in terms of lack of political or physical access rather than absolute resource scarcity. So, for example in both Jordan and Egypt the resource to which planners and service providers had access at the governorate level was controlled primarily by the irrigation system (in Beni Suef the governorate's allocation of Nile water, in Balqa from the King Abdullah canal). In Palestine, the main constraint was seen as being Israeli control over licensing. Because of this service-based entry point to considering water management, the focus for most of the EMPOWERS pilots was on either extending services (through, for example, connecting poor households to the water mains, or improving sewage connections) or on better management of the existing quanta of allocated water. Exceptions to this were the drilling of additional boreholes and construction of water harvesting structures in Jenin. The dialogue based approach of bringing together different sub-sector actors was particularly effective in the identification of potential for improving the allocation and use of existing water resources, be it through grey-water re-use; the extension of irrigation canals to bring domestic water to a village; or the realisation that where piped supplies are intermittent, it is household storage capacity that is the critical factor for improved reliability of service.

Two common threads emerge from the stories collected as part of the EMPOWERS process documentation (Abd-Elseoud et al., 2007): that engineers and other service providers when given time, space and facilitation, began to talk to, and appreciate the opinions of, water users, and vice versa leading to greater trust, understanding and decision-making ability; and that people who had felt

essentially powerless, began to feel empowered. Once this happened, many water problems that had been seen as being intractable were in fact rather easy to solve.

The experience of the EMPOWERS project is that seemingly simple – in fact, rather complex and time consuming – work on facilitating dialogue (getting people talking to each other), taking a structured approach to examining problems, collecting and sharing context-specific information, and helping to formulate a vision as a way of 'seeing the bigger picture' can all contribute to improved decision making by such people.

Of course, they can only do so where an arena exists for meaningful involvement in decision making. And that arena can only be created by policy and legislation. In the EMPOWERS project, we were fortunate that the general wave of democratic change patchily evident in the region is starting to create this space, albeit patchily and imperfectly. Even at the level of national ministries we found time and again that there was a willingness to listen to messages about local empowerment and autonomy – even if there was very little idea as to how to bring this about. At the same time, there are limits, particularly related to flows and decision making around public finance. In the areas where we worked, one of the main limitations to action was lack of access to finance, with decentralised authorities absolutely reliant on financial flows from the national level that were often earmarked and over which they had very little control. This is a general comment often found in discussions on decentralisation, where fiscal decentralisation often seems to lag far behind the decentralisation of functions and people.

While advocating strongly for a polycentric approach to water governance based on principles of subsidiarity, we of course realise that some problems remain outside the ambit of the local level. The quanta of Nile water allocated to Beni Suef governorate in Egypt was not going to be changed by the EMPOWERS project; neither was the flow in the King Abdullah canal allocated to Balqa'a in Jordan. In Palestine, the prohibition on new well development awaits a final resolution of the Palestine/Israel conflict. An approach such as that implemented by the EMPOWERS project therefore needs not only the space and finances to operate at the intermediate and local level but also the ability to communicate with national and even international (trans-boundary river basin) levels where appropriate. The principle of subsidiarity is easy to articulate, much more difficult to agree and implement the details, yet we believe that it is the only conceivable way forward to implement water governance reforms that are at the same time sufficiently flexible to take account of local specificity while taking account of the need for large-scale application. The challenge for improved water governance continues to be not so much the formulation of sweeping national policies, but the working out in detail of who has responsibility for what at which institutional level.

Successful implementation of the EMPOWERS approach requires intensive facilitation. Developing the skills of a facilitation team is among the most difficult part of the process, yet is critical to scaling it up. It is also the main expense of the approach. In the EMPOWERS project, the facilitation teams in each country consisted of four to five professionals from a range of technical and non-technical backgrounds. Working through the approach from first contact with stakeholders to the development of strategic action plans was very roughly estimated to cost about €2 per person in the user community (Laban and Abd-Alhadi, 2007), and took from several weeks to almost a year depending on scale and institutional level (village to governorate). Put another way, we estimated that the EMPOWERS approach at the intermediate and local level could be fully and sustainably mainstreamed for approximately €2 per person per year.

The EMPOWERS approach was, and is, not a panacea. While two euros per person per year is not expensive in the larger scheme of things, the approach would be too expensive to implement in full in countries poorer than the middle-income ones where it was developed. And this cost is likely to rise if the process of facilitated dialogue were to be properly extended to national and supra-national levels. That said, we see little other option. If we accept that centralised management of something as complex as water is in practice bound to fail, it comes down to conceptually simple cost-benefit analyses: do the benefits of mitigating the water crisis in a given locality outweigh the costs of implementing expensive and intensive dialogue-based approaches such as the one we have developed?

We are not naive in our exposition of light IWRM as practised and formalised by the EMPOWERS project. The field of application was too narrow and too localised to come to categorical conclusions about its efficacy. However, we believe that at the level of proof of concept the experiences of the EMPOWERS project were largely positive and encouraging. Water is, and cannot be, managed only at the level of the basin. It is, and must be, better managed also at the level of the governorate, village or town; the piped distribution network or irrigation scheme. Ignoring these levels and ignoring the need to co-opt the people who work and live there into water management will lead at best to only partial solutions and, at worst, to no real improvement at all.

CONCLUSIONS AND NEXT STEPS

To sum up, the EMPOWERS approach has built on earlier work on light IWRM to develop a robust and tested, at the level of proof of concept, methodology and set of tools for local water governance that are applicable in most parts of the world. We are, at the same time, aware that the approach is (relatively) expensive, and no more a silver bullet than any other.

The EMPOWERS approach to light IWRM, taken as a whole, is both new and original but built on components adapted from proven methodologies in the fields of project management, business and rural development. It provides the practical framework to apply an adaptive approach to local water governance.

The experiences of the EMPOWERS project demonstrated that given the right support in the form of qualified process facilitators and a set of relatively simple tools, it is possible to lead to qualitatively improved decision making processes around water services and water resource management.

That said, for the approach to be scaled up and to have real impact on either people or water systems it would need to be much more thoroughly mainstreamed into the 'business as usual' of national water sectors. Two elements are of particular importance for this. The first is that real decentralised decision making can only happen with decentralised financing. If towns, villages or governorates come up with strategic plans but without any way of financing these, action will always be limited to tinkering at the edges of existing activities (arguably what happened in the EMPOWERS project). This challenge is of course not limited to the water sector but is a constant of the decentralisation and subsidiarity debate. The second is that local water governance needs to be nested within higher-level water governance structures to give real effect to the principle of subsidiarity and to allow for scale-related and cross-boundary (physical and societal) issues to be dealt with. We believe that light IWRM has much to offer in a decentralised setting even without higher-level mechanisms; however it has a better chance of being successful and receiving necessary financial and other support if it is part of a multi-level process involving stakeholder dialogue between and within different institutional levels.

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