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3 Water Governance: Context is Crucial



Water Governance: Context is Crucial



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We face daunting water management challenges as demand for water hits the limits of supply and competition increases between agriculture, industry, urban needs and the environment.

Climate change is an additional factor impacting water availability.

To be effective, water governance needs to directly identify and respond to local problems and needs. Such governance needs to take into account the local institutions, knowledge, socioeconomic, political and environmental conditions in the setting of targets and indicators.

Water governance needs to evolve over time, involve people and be cross-sectoral in its approach. Off-the-shelf solutions—whether technical, institutional or all encompassing, such as Integrated Water Resource Management (IWRM)—need to be critically evaluated according to the specific context.

To be effective, water governance needs to directly identify and respond to local problems and needs.

The proposed SDG on water recognizes the need for improved governance of water resources through a target on integrated water resource management and improved water management across national boundaries. We assume here that good governance of natural resources, including environmental sustainability (not explicitly mentioned in the SDGs), is accepted to be a cornerstone of sustainable development, with integrated water resources management providing a more tangible target.

WATER GOVERNANCE AND INTEGRATED WATER RESOURCES MANAGEMENT

According to the Global Water Partnership, water governance refers to “the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society.” Water governance is also concerned with rule-making and enforcement, the political economy and cross-sectoral linkages. It is not something that the state decrees; rather, it is an ongoing process shaped by the inner workings of society.

Internationally, great store has been placed on implementing IWRM as a means to improve water governance, and it is now a proposed SDG target. IWRM’s philosophy is about society-wide participation in managing water as a scarce resource, along with other natural resources, to equitably improve livelihoods and protect ecosystems.

Integrated Water Resource Management

Principles: Integration, decentralization, participation, economic and financial stability, basin as unit for decision making

Practices as packaged: Overall water policy and law, water rights, water licensing, permits and pricing, water allocation, participation in decision making, restructuring territorial into basin organizations

The IWRM principles provide a good overall framework for managing water resources. However, in applying these principles it is crucial to be flexible and to consider the local context. For example, reaching consensus from differing views can help solve local problems where local people are engaged in managing their scarce resources, but sometimes participation in decision making is not necessary for achieving viable solutions, as shown in China.

CASE STUDY: Top-down Approach in China Improves Rice and Water Productivity

In China’s Hubei Province, a top-down approach has been remarkably successful in improving water management by rice farmers. Faced with the growing demand for water caused by rapid urbanization, officials simply allocated more water to cities, forcing farmers to respond by building their own ponds to capture runoff and reducing the overall amount of water they used for irrigation. Rice productivity increased and water productivity skyrocketed. This hierarchical approach is incompatible with IWRM’s principle of inclusive decision making.

Implementation of IWRM as a prescription for poor water governance and management has been largely donor-driven, with limited adjustment to on-ground realities. The implementation of IWRM needs to be country-specific and pragmatic.

CONSIDER THE COUNTRY’S LEVEL OF ECONOMIC DEVELOPMENT

Understanding the physical, social and political context is critical. For example, the level of economic modernization of a society is a critical consideration (see Table 1). Rich countries have highly formal water industries that function within a robust and relatively well-resourced regulatory framework, while poor countries have highly informal water economies that are hard to regulate and govern.

Most water users in a highly formal water economy are secondary users, connected with the water governance regime through organized service-providing primary users amenable to regulation. Those in a predominantly informal water economy are mostly primary users, drawing water directly from nature to meet their personal and productive water requirements. Implementing formal approaches to water management through laws and higher level institutions will not work without a basic level of infrastructure and service provision being in place.

The intent of externally driven IWRM discourses is often to transform, all at once, a predominantly informal water economy into a predominantly formal one as a route to improving water governance. But evidence across the world suggests that there is no shortcut for a poor society to morph its informal water economy into a formal one; this process is organically tied to wider processes of economic growth. When countries try to force the pace of formalization, interventions fail. Interventions are more likely to work if they aim to improve the working of an informal water economy.



TABLE 1. Evolution from informal to formal water economics

	STAGE 1 – Fully informal	STAGE 2 – Largely informal	STAGE 3 – Rapidly formalizing	STAGE 4 – Fully formal water industry
Example	Congo, Afghanistan, Lao PDR	Gujarat, Bangladesh	Turkey, Mexico, South Africa	Sweden, Canada, Australia
Dominant mode of water service provision	Self-provision	Public and self-provision	Public provision with self-supply declining	Modern water industry with zero self-supply
Rural population as a % of total	80–90	50–80	20–50	5–10
Agricultural water use as a % of total managed water	>90	80–90	70–90	60–70
% of total water use self-supplied	>90	70–90	20–70	0–20
Water management capacities	+	++	+++	+++++
Utilities’ cost to serve water	+	++	++++	+++++
Institutional arrangements in water sector	Informal self-help and mutual help; community institutions dominate	Informal exchange institutes dominate; water markets coexist with community institutions	Organized service providers crowd out mutual help and community institutions	Modern water industry; community institutions and self-help declined
Priorities of water governance	Infrastructure creation and operation in welfare mode	Improve service management without cost recovery	Improve infrastructure and service management with cost recovery	Integrated management of water service, infrastructure and resource with full cost recovery

Source: Shah 2014

UNDERSTAND FACTORS THAT HELP OR HINDER

Specifics of each country determine what is possible to do and what is not. For example, the approach to groundwater governance in any society is contingent on a variety of internal and external factors that policy makers and implementers cannot ignore. Strong local authority structures enable China, for example, to experiment with pilot administrative procedures in a way that Pakistan, which has no such village governance structures, would find hard to emulate.

Table 2 offers a list of factors that influence the way different countries respond to groundwater overexploitation. Countries where public systems actively manage the groundwater economy by proactively intervening through demand- as well as supply-side initiatives tend to have most or all of the enabling factors present.

Where many or all of the hindering factors dominate, groundwater governance tends to be absent, primitive, perverse or dependent on indirect instruments, which achieve a socially desired outcome without forcing individuals to change their behaviors. These contextual realities help explain why different countries choose different policy instruments to govern their groundwater economies.

TABLE 2. Factors influencing groundwater governance regimes

	HINDERING FACTORS	HELPING FACTORS
National and local authority structures	Weak	Strong (China, Vietnam)
Organization of the groundwater economy	Numerous small users	Few large users
Proportion of the population dependent on farming	High	Very small
Groundwater's significance to national food and livelihoods security	High	Low (USA, Mexico, Spain)
Capacity, reach, and effectiveness of water bureaucracy	Low (South Asia)	High (China, Mexico)
Perverse incentives in groundwater irrigation (energy and tube well subsidies)	Present (India, Iran, Syria, Mexico)	Absent (China, Pakistan, USA, Australia)
Productivity of groundwater irrigation	Low (South Asia)	High (China, Mexico, USA [California], Spain)

Source: Shah 2014

There is no shortcut for a poor society to morph its informal water economy into a formal one.

LOOKING OUTSIDE THE WATER SECTOR

Water issues can be caused by perverse policies in other sectors, such as energy subsidies. To succeed, a water governance regime needs to take a cross-sectoral integral approach to managing water resources. It is often assumed that water problems can be resolved by integrating policies and institutions within the water sector alone, ignoring, for example, the integration of water and land rights or associated energy issues (see section 2).

It is important to focus on the actual water problems within a country and the national priorities. Emphasizing the development of IWRM plans has sometimes imposed governance reform at the cost of investigating real water needs. For example, efforts to implement IWRM in sub-Saharan Africa have failed to recognize that most of African agriculture is based on informal water rights. This will likely reduce the responsiveness of African farmers to improved water use measures rather than improve the situation. Finding pragmatic solutions to water management problems is more important than following specific principles.

Even within one country, there will be different needs in different regions. For example, India is the biggest user of groundwater in the world, but groundwater management varies across the country. Some drier areas urgently need to regulate groundwater use to make it more sustainable (see section 2, Gujarat case study, p. 11); other wetter areas could help poor farmers boost incomes through improved groundwater access.



EXPLORING COUNTRY-SPECIFIC TARGETS AND INDICATORS

Meaningful indicators, country-level targets and preferably also country-specific indicators next to global indicators will be important to stimulate and measure progress (see section 4). The choice of indicators will be crucial to avoiding rigid implementation. The danger with indicators is that boxes can be ticked off (e.g., displacement plans for dam development in place, national IWRM plans in place) without the situation improving. It will be important to find pragmatic ways to assess if progress is being made, that plans relevant to the local context are being implemented and the interventions are being sustained.

Given that water governance is tied to the overall socioeconomic evolution of a country, prescribing a single set of water governance targets for SDGs will not work. A more meaningful approach will prescribe different targets for countries at different stages of economic development, as outlined in Table 3. Even within a single country the context, as indicated by the four stages, varies from one setting to another.

TABLE 3. Recommended SDG targets for countries at different stages of economic development

SDG targets	STAGE 1 – Fully informal	STAGE 2 – Largely informal	STAGE 3 – Rapidly formalizing	STAGE 4 – Fully formal water industry
TARGET 1 Investment	Invest in local infrastructure to improve water access	Invest in meso-level infrastructure for sustainable development of water resources	Invest in improving water productivity and waste recycling	Invest in 100% coverage in high water quality water service provision
TARGET 2 Institutional	Make informal water institutions equitable	Integrate informal water institutions with formal ones in private or public sector	Create meso-level participatory water institutions	Create a full-fledged water industry with proactive regulator
TARGET 3 Policy and legal regime	Establish basic water information system	Establish water policy and legal regime	Establish basin-level water allocation mechanism	Full-fledged basin management authorities
TARGET 4 Financial sustainability	Establish the principle of water as a social and economic good	Provide a subsidy on operational and maintenance costs to 50%	Apply a 75% service fee for recovery of operational and maintenance costs of water infrastructure	Apply 100% water service as well as resource fee for management, operations and maintenance costs

Source: Shah 2014

