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Managing water supply systems using free-market economy approaches: A detailed review of the implications for developing countries



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ABSTRACT

Decision makers in developing countries are often confronted by difficult choices regarding the selection and deployment of appropriate water supply governance regimes that sufficiently take into account national socio-economic and political realities. Indeed, scholars and practitioners alike continue to grapple with the need to create the optimum water supply and allocation decision-making space applicable to specific developing countries. In this paper, we review documented case studies from various parts of the world to explore the utility of free-market economics approaches in water supply governance. This is one of the major paradigms that have emerged in the face of enduring questions regarding how best to govern water supply systems in developing countries. In the paper, we postulate that increasing pressure on available natural resources may have already rendered obsolete some of the water supply governance regimes that have served human societies very well for many decades. Our main findings show that national and municipal water supply governance paradigms tend to change in tandem with emerging national development frameworks and priorities. While many developing countries have adopted water management and governance policy prescriptions from the international arena, national and local socio-economic and political realities ultimately determine what works and what does not work on the ground. We thus, conclude that the choice of what constitutes an appropriate water supply governance regime in context is never simple. Indeed, the majority of case studies reviewed in the paper tend to rely on a mix of market economics and developmental statism to make their water governance regimes more realistic and workable on the ground.

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1. Introduction

Cycles of changing and dominant development paradigms in the past six decades have seen alternating policies emphasize the state, user groups, or markets as essential for addressing water supply governance challenges. Any of these options has worked in some places but failed in others, especially when policies attempted to replicate them in too many countries and diverse situations (see Meinzen-Dick, 2007). But since the early 1990s, integrated water resources management (IWRM) has emerged as the dominant framework for guiding decision-making and planning in the water sectors of developing countries. With the observed and anticipated

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worsening of water scarcity due to climate change and various anthropogenic factors that increase water demand, the push for IWRM has never been greater.

It is within this context that discourses on the importance of the 'political paradigm' for water supply governance in developing countries are usually framed. In these discourses, scholars and practitioners alike often grapple with the need to create the optimum water supply and allocation decision-making space and framework applicable to a developing country. The enduring question is no longer about whether or not water should be managed purely as a social or economic good, but rather how best a nation-state and its service delivery agencies can manage fresh water supply systems taking into account the state's developmental role while at the same time addressing the free-market economy imperatives evident in and promoted by proponents of IWRM approaches.

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It is now common cause that traditional approaches for meeting increasing demand for water relied almost exclusively on centralized infrastructure and decision-making characterized by big dams and reservoirs, pipelines and treatment plants, water departments and agencies (see Gleick, 2002; Chikozho, 2008; GWP, 2012). These approaches, dominated by a supply-orientation and reliance on technical solutions to water problems, have since been discarded in favour of a governance regime that embraces user involvement in decision-making and more efficient resource management. In effect, IWRM explicitly challenges traditional water development and governance systems. It starts with the recognition that top-down, supply-led, technically based and sectoral approaches to water governance and management impose unsustainably high economic, social and ecological costs on human societies. The water governance paradigm that has now emerged is underpinned by neo-liberal approaches that emphasize, inter-alia, a 'rolling back of the state from the frontiers of development planning' and treating water as an 'economic good'. It is a way of thinking that emphasizes decentralized management structures, use of efficient technologies, and deployment of water pricing structures that act as both incentives and dis-incentives for 'irresponsible' water use.

In this paper, we focus on the free-market economy approach as one of the major paradigms that have emerged in the face of enduring questions regarding how best to govern water supply systems. We present the main discourses that reveal the implications of deploying this approach in a developing country context. We acknowledge that increasing demand and scarcity of fresh water has serious implications for water resource allocation and protection. We argue that in the face of new pressures on the natural resource, water supply systems, models and governance regimes that have served human societies for a long time may now fail to cope. Therefore, the paper brings attention and sharper focus on the need to deploy alternative tools and approaches to water supply governance and management in order to protect and sustainably allocate this resource. The paper is intended to inform practitioners, policy-makers and theorists who grapple continuously with the challenge of crafting effective water governance systems in a rapidly altering environment in developing countries.

2. Methodology

This paper is the outcome of an applied qualitative research project that relied mainly on a review of the current state-of-the-art literature to create a relatively solid narrative focusing on the dynamics of water supply governance in developing countries. In the paper, we make reference to a number of case studies that help us in deepening the articulation of water supply governance trends. While a wide search and review of published material that addresses water supply governance in developing countries was the main focus, other global level studies that present theories associated with the concept were also consulted to strengthen the theoretical base of the paper. Most of the literature used was obtained from general databases such as the ISI Web of Knowledge, Scopus, JSTOR and EBSCO that tend to contain peer-reviewed journal articles. We also made extensive use of the google scholar search engine to access relevant published and grey literature.

Due to limitations of time, we purposively selected case studies and reviewed articles that addressed the thematic areas we believed would sufficiently reflect the various dimensions of water supply governance in the global South. These thematic areas are: efficiency; cost-recovery; free-market economy approach; developmental state approach; user-pays principle; ability to pay; and equitable access to water. From this search, we managed to get about 80 articles that had direct relevance to the themes of interest. We reviewed these articles and extracted evidence and contextual

information which addressed the key research questions guiding the study. Thus, we concentrated on extracting and synthesizing information and data that directly addressed the key themes as well as the implications of deploying free-market economy approaches in the water supply sector. The use of data and narratives from various published sources enabled us to generate a reasonable evidence-base from which to develop the paper and inform public policy and practice.

3. Managing water in a free-market economy: a brief historical trajectory

The vulnerability and finite nature of water in the face of a rapidly growing demand for the resource was first highlighted during the United Nations (UN) Conference on Water, 1977 at Mar del Plata. Since then, debates on water governance in developing countries have mainly revolved around the need to discard the long-held belief that water is a social good to be provided by the state either free of charge or at very low cost. To proponents of this approach, developing and delivering new water supply systems and suppressing water prices appeared much more politically expedient than charging citizens higher water prices and efficiently managing existing supply systems. This approach was buttressed by the widely-held belief that water was always going to be in abundance (Molle, 2009). Inefficiencies in water use were either not detected at all or simply ignored. Thus, the failure to recognize the economic value of water led to wasteful and environmentally damaging uses of the resource (Kevinsen et al., 2014). As Smith and Wang (2008) point out, solely searching for water supply-side remedies may mask over-consumptive or unsustainable behaviours that are acknowledged during the critical self-examination that inevitably occurs when a water conservation approach is adopted.

The Dublin principles of 1992 heralded a significant shift in perceptions about how water should be governed and managed, giving rise to the acceptance of the integrated approach embodied in IWRM. Guided by the Dublin principles, governments, water management agencies, international organisations, civil society agencies, and others have engaged in a long-term change process to improve management of water resources (see FAO, 1995; GWP, 2003; Chikozho, 2010). A product of the International Conference on Sustainable Development in Rio 1992, Agenda 21, Principle No. 4, declared that "Water has an economic value in all its competing uses and should be recognized as an economic good" (United Nations, 1992). In 1993, the World Bank issued a comprehensive policy paper that basically re-iterated that water should be viewed as a limited resource to be managed in an integrated manner to meet national objectives - economic, social, security, and environmental rather than as an input into specific sectors (World Bank, 1993). Attention significantly shifted from technical solutions to solutions of a managerial and institutional nature in the early 1990s (Schwartz, 2008).

In effect, IWRM has been promoted in many developing countries by various international players such as the Global Water Partnership (GWP), the World Water Council, the World Bank and the UN, as well as national governments, as a key means of improving access to safe water supply and sanitation and, more generally, alleviating poverty and improving peoples' lives. In the process, 'water as an economic good' has taken root (Mukhtarov, 2006; Mollinga, 2008; Beveridge and Monsees, 2012). Most of the key international water policy players have either directly supported or advocated institutional reforms in developing countries whose backbone is the IWRM framework. In countries that have adopted the 'water-as-an-economic-good' principle, the reforms that ensue have tended to drastically alter the relationships

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