



Rossella Alba

# Featuring Urban Water Supply Governance: an overview

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# Abstract

This paper provides an overview of five major shifts in urban water supply governance in relation to changing paradigms in the water sector as a whole and in water-related research: i) the municipal hydraulic paradigm in the Global North; ii) its travel to cities in the Global South; iii) the shift from government to governance; iv) the (private) utility model and v) its contestation. The articulation of each shift in the Ghanaian context is described from the creation of the first water supply system during colonial time to the recent contestation against private corporate sector participation. Current challenges are outlined together with new pathways for researching urban water governance. The paper is based on a literature review conducted in 2015 and serves as a background study for further research within the WaterPower project.

# Featuring Urban Water Supply Governance: an overview

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## 1 Introduction

Governance has gained much attention to describe the progressive transformation of the water sector in particular and the provision of services in general. Often referred to as the shift ‘from government to governance’, this transformation involves the change of roles and the shift of functions and responsibilities from nation-states to “supranational entities, localities, and non-state actors” (Myers, 2011, p. 106) including citizens, civil society and the private sector (Bakker, Kooy, Shofiani, & Martijn, 2008; Harris & Roa-García, 2013; Pahl-Wostl & Knieper, 2014). Thus, the notion of governance has emerged “as reaction to a previous narrow focus on government as the prime actor in shaping society” and it implies “the recognition that many more actors and structures are at play, and [that] they interact in myriad ways” (Olsson & Head, 2015, pp. n/a).

In the context of water, governance broadly refers to “the range of political, organizational, and administrative processes through which stakeholders (including citizens and interest groups) articulate their interests, exercise their legal rights, take decisions, meet their obligations, and mediate their differences” (Bakker et al., 2008, p. 1894). In other words, governance refers to the different actors, networks and institutional arrangements at multiple scales through which socio-environmental goals are defined (Lautze, Silva, Giordano, & Sanford, 2011). Governance differs from management, whereas the former refers to the processes of setting goals, the latter focusing on the implementation of such goals (ibid.).

This working paper provides an overview of the transformation of urban water supply governance by reviewing the institutional arrangements and shifting responsibilities between different actors in relation to water supply. Five major shifts in urban water supply governance are described: i) the municipal hydraulic paradigm in the Global North; ii) its travel to cities in the Global South; iii) the shift from government to governance; iv) the (private) utility model and v) its contestation. The review relates the evolution of urban water governance to the changing definition of water-related challenges, conceptualizations of nature-society relations and their articulation in academia, policy and practices.

The articulation of different governance arrangements is related to the case of water supply in urban Accra, Ghana. Within the paper, the colonial and post-colonial history of the water supply network, the intervention of international actors and the articulation of dominant global paradigms are described. Although Ghana reached the water MDG – halving the number of people without access to water – only a limited number of the residents of the Ghanaian capital city enjoy reliable water supply from the water utility, Ghana Water Company Limited - GWCL (Adank et al., 2011; Peloso & Morinville, 2014; Stoler, 2012).

The working paper draws from a literature review conducted in 2015 in the context of the WaterPower research project. It serves as a background paper

for further research relating to urban water governance in Accra and its metropolitan area. The first section provides a definition of water governance and outlines the recent debate on the subject. Subsequently, the second section illustrates the major shifts in urban water governance together with their articulation in the case of Accra. The concluding part briefly summarizes the current status and outlines a way forward.

## 2 Defining water governance

As Bridge and Perreault (2009, p. 491) note “environmental governance is a concept more popular than precise”. Indeed, governance has been used with multiple meanings and purposes - e.g. as way to describe a process, as an instrument to achieve an objective or as a toolkit - becoming what Chatterjee calls a new “buzzword in policy studies” (Chatterjee, 2004; Jessop, 1998). Due to its malleability and vagueness the use of governance has often obscured a broad range of interests, socio-economic and political processes (Perreault, 2014). For instance, Watson (2009) notes how governance has been interpreted and practiced in different ways, from a more administrative/managerial interpretation to approaches that emphasize the democratic practices, civil and human rights (Castro, 2007). This is not new in the development and water policy domain. For instance, Mehta et al. (2014) discuss how Integrated Water Resource Management (IWRM) has become a dominant paradigm in the water sector and has been deployed with various political purposes with often unclear and uneven implications in Southern Africa.

Several authors have been engaged with defining what (water) governance is about and in analysing the implications that it has on policies and practices. Among others, two major strands of literature and approaches can be identified within the (water) governance debate. The first interprets governance as ‘good’ or ‘bad’ outcomes of decision-making processes centred on predefined conditions (Rogers & Hall, 2003). The second focuses on governance as a process, rather than an outcome, and insist on critically analysing how decision-making works, which decisions are made, how and by whom.

According to the first approach, governance is seen as a tool to achieve a predefined outcome of the decision-making process centred on predefined principles (Lautze et al., 2011). These include normative principles such as inclusiveness, accountability, participation, transparency, predictability and responsiveness (Batterbury & Fernando, 2006; Rogers & Hall, 2003). As Franks and Cleaver (2007, p. 292) highlight, there is a general desirability of ‘good governance’ as it is related with the perception that it will lead to ‘good outcomes’. Major donor agencies and development banks have funded projects and programs aiming at improving (water) governance (Lautze et al., 2011) to the point that from the end of the 1990s, “‘good governance’ has become the mantra for development in the South” (Watson, 2009, p. 158). Prescriptions of ‘good governance’ are fused with development discourses viz. good governance contributes to poverty alleviation and enhancing development. In the case of water provision, the “ability of states to deliver safe water to

their citizens is often the hallmark of good governance and contributes to their status in achieving development goals, whereby safe-water provision and safe-water consumption harbinger further development achievements in future“ (Sultana, 2013, p. 339).

Within the second approach, governance is analysed by looking at the politics, power relations and multiple actors more or less involved in decision-making at multiple spatial/geographical scales (Lindell, 2008). As noted by Castro (2007) in water policy literature there is a tendency to present a depoliticized understanding of governance as a technical instrument within neutral management processes. The author calls for an understanding of governance as “a political process involving the exercise of political power by political actors who seek to define the ends and values that must inform social development” (Castro, 2007, p. 106). While still recognizing the relevance of governance as a framework for investigating the complex and multi-scalar domain of water, several authors call for a careful and critical use of the concept (Bakker et al., 2008; Castro, 2007; Lu, Ocampo-Raeder, & Crow, 2014). Swyngedouw (2005) discusses several challenges in relation to governance processes beyond-the-state including entitlement and status (who is entitled to participate and how), legitimacy and scale of governance. The latter refers to the shift in social, political and economic power relations resulting from upscaling or downscaling decision-making. From this perspective, the shift from government to governance is not a neutral movement, but is understood as shifts in power relations between actors at multiple inter-linked territorial scales (Swyngedouw, 2004a). This approach implies the recognition that water accessibility, distribution and management are shaped by relations of power between multiple actors and groups (Loftus, 2009). Thus, governance involves questions about how water is provided, by whom, for who, where it flows (and where it does not) and, more importantly, who gains and who pays (Batchelor, 2007; Bridge & Perreault, 2009; Lu et al., 2014, p. 129; Monstadt, 2009; Perreault, 2014)

The following sections describe urban water supply governance by focusing on the changing relationship between new and existing actors, the emergence of novel institutional arrangements and their implications for the management of water within the urban sphere.

### **3 Changing urban water governance**

The shifts in urban water governance are discussed below in relation to shifting paradigms in the water sector as a whole and in water-related research. While the former refers to changing relations between actors, the introduction of new institutional and decision-making arrangements; paradigms include dominant ideas, concepts and models on how water is perceived, used and managed. They shape the ways in which policies, management practices and infrastructure conceptualize, problematize and materialize the relationship between water, the environment and society.



The term 'paradigm' was first introduced by Thomas Kuhn in relation to scientific revolution and it is now widely used to describe and analyse the assumptions behind concepts, ideas and scientific studies. Following Pahl-Wostl et al. (2011), paradigm is here defined as a set of assumptions, ways in which problems are formulated, described, explained and interpreted in order to achieve a set of goals. A paradigm "is shared by an epistemic community of actors involved in the generation and use of relevant knowledge" and "is manifested in the artefacts such as technical infrastructure, planning approaches, regulations, engineering practices, models etc." (ibid. page 840).

For instance, different understandings of the relation between society and nature are embedded in the conceptualizations of the flow of water either as a hydrological cycle, a hydrosocial cycle or as a hydro-cosmological one. While the hydrological cycle understands water flows as a purely natural process "that occurs independently of human involvement" (Linton & Budds, 2013, p. 171), the hydrosocial conceptualization looks at water flows as shaped at the same time by natural and social processes (ibid.) and the third conceptualization includes the cultural and metaphysics dimensions related to water flows (Boelens, 2014).

Concepts, ideas and ways of looking at water are not neutral, but socially constructed and embedded in a web of interests, ideologies and power relations. As Molle (2008, p. 132) notes for concepts, they "shape the ways things are framed; options are favoured, disregarded or ignored; and particular social groups are empowered or side-lined". For instance, narrow and absolute framings of water scarcity underpin debates over resource conflicts and competitions and often led to blueprint solutions based on the introduction of private property rights and economic valuation while side-lining local culturally based arrangements for resource distributions and other policies (Mehta, 2000; 2007). Indeed, the way water is conceptualized and understood also influences the forms of governance that we establish and the ones we struggle against (Perreault, 2014).

The remaining sections of the paper provide an overview of five major shifts in urban water supply governance. As the table below demonstrates (Tab.1), each shift corresponds to a set of actors, views on water, key ideas influencing the policy context and different financial arrangements. The transformation of urban water governance in Accra is used as an illustrative example.



**Table 1: Main features of urban water governance shifts (own elaboration)**

<b>Water Governance</b>	<b>Actors</b>	<b>Views on water</b>	<b>Key ideas (policy content)</b>	<b>Financing</b>	<b>The case of Ghana</b>
Municipal hydraulic model	State (Municipal government)	Emphasis on technology; Hydraulic engineering	Expansion of hydraulic infrastructure	General taxation, Municipal bonds	Construction of Akosombo Dam
Piped water paradigm in the Global South	State (Colonial administration first, post-colonial centralized government after)	Hydraulic engineering and epidemiology	Expansion of hydraulic infrastructure	Colonial and post-colonial government, donors and development banks	Construction and expansion of piped water network in Accra Hydraulic bureaucracies
The shift from government to governance	State – Private Sector – Civil Society	Focus on demand management, governance and participation	IWRM	State and Private capital, Cost-recovery, Donors and development banks in the Global South	Establishment of the Water Resource Commission, National Water Policy and National Strategy for Community Participation in Management of Urban Wash Services
The (private) water utility model	State – Private Sector	Economic value of water	Multiple forms of privatization of urban water supply systems	Private capital, Cost-recovery, Donors and development banks	Private management contract for water supply; Separation of responsibilities for urban and rural/small-town water supply; Establishment of PURC, CWSA
Contested privatization and the right to water	State – Private Sector – Civil Society	Human right to water	Alternatives to private participation (i.e. Public-public partnerships)	Cost-recovery	GWCL fully public Emergence of decentralized systems and increase relevance of informal providers

### 3.1 Municipal hydraulic model

Up to the second half of the nineteenth century, most of the urban water supply systems in the Global North involved a mix between government-managed and privately managed water infrastructure. The latter involving small private companies supplying water only to limited parts of the city. As Swyngedouw notes, “water provision was socially and spatially highly stratified and water businesses were aimed at generating profits for the investors” (Swyngedouw, 2004).

Starting from the late 1980s, a new paradigm emerged in urban water provision: the so-called *municipal hydraulic paradigm* (Bakker, 2010). Prompted by the experiences of rapidly growing industrial cities in the Global North including London, Paris and Berlin, this paradigm involves the shift towards centralized urban water supply financed, constructed and managed by local municipal governments. The trend towards municipalisation involved bringing existing private operators under public control, the construction of centralized public water supply infrastructure and the decreasing reliance of private wells, water vendors and other sources of water supply (Gandy, 2006).

Several socio-economic, environmental, technical and health concerns triggered the emergence of the municipal hydraulic paradigm. First, it was “prompted by concerns over deteriorating environmental conditions and calls for a sanitized city” (Swyngedouw, 2004b). Indeed, the outbreak of epidemics (notably cholera and typhoid) and later the evidence of linkages between contaminated water and ill health have contributed to put pressure on city governments to improve water quality and ensure reliable supply (Pahl-Wostl & Knieper, 2014). Among others, John Snow’s study on the cholera outbreak in 1854 London and its relation with contaminated water provided by a standpipe fostered the concerns for improving potable water supply.

Second, the municipal hydraulic paradigm was based on the recognition of the political and economic advantages of government provision of public services. Governments would guarantee commitment to public well-being in the context of democratic accountability on the one hand, and ensure the availability of fiscal resources and expertise on the other (Bakker 2010, pag. 32). Profitability was not a concern; infrastructure projects were financed with subsidies from general taxation and new methods of financing public works such as municipal bonds (Gandy, 2006).

The municipal hydraulic paradigm with its large scale technological networks and new modes of municipal administration did not only transform the way water supply was organized, but also urban life as a whole (Gandy, 2006). First, it is connected to the emergence of a certain idea of the city that features the urban space as ordered and unitary where flow of resources is mediated by large-scale networked infrastructure, so-called ‘modern infrastructural ideal’ (Graham & Simon, 2001). In the case of water, this ideal envisions a networked city with one centralized water network rationally planned

providing standardized and universal access to potable water to its residents (Graham & Simon, 2001; Kooy, 2014).

Second, the advancements in public health influenced also private domestic life (Gandy, 2014): in-house water connections and toilet facilities became distinct elements of modernity. Thus, the new paradigm also contributed to the creation of the idea of modern citizens “capturing residents to a life aesthetic defined by the state so that they can be citizens” (Simone 2004a, p. 7).

The emergence of the municipal hydraulic paradigm intertwined with the view of water as a resource to be exploited in light of growing demand engendered by modernization (Bakker, 2010; Pahl-Wostl & Knieper, 2014), the so-called hydraulic mission (Molle, Mollinga, & Wester, 2009). Both in the Global North and in the South, the focus lay with supply-side solutions, namely the expansion of infrastructure, to meet increased water demands driven by projections of populations growth, as well as increases in agricultural and industrial production (Gleick, 2000).

Water management equated with hydraulic engineering: The focus was on understanding the hydrologic cycle and how to modify it with the objective of fostering economic growth (Linton & Budds, 2013). Large-scale hydraulic projects such as the construction of dams, reservoirs and urban water supply systems were highly promoted. For instance, the construction of the Akosombo and Kpong dams in the Ghanaian stretch of the Volta River correspond to this period.

The construction and management of water systems necessitated the expansion of state bureaucracies and creation of new institutions, including government departments and ministries in charge of coordinating the hydraulic infrastructure, what Molle et al. (2009) define as hydrocracies. A hierarchical top-down command and control approach was promoted with a great role for the central government in the development of water resources (Linton & Budds, 2013; Pahl-Wostl & Knieper, 2014). Subsequently, many countries introduced the first water legislation and policies to regulate the management of water.

### **3.2 The piped water paradigm in the Global South**

Based on the municipal hydraulic paradigm by then established in the Global North, the planning of the first urban water supply systems in the Global South is rooted in the colonial histories of the cities (Dill & Crow, 2014). Starting from the end of the nineteenth century, water supply infrastructure was planned, funded and constructed by colonial governments (Kooy & Bakker, 2008). Thus, urban water supply was organized as a large-scale networked system centrally planned, managed and financed.

As in European cities, the construction of water supply infrastructure in colonial urban centres was triggered by the outbreaks of epidemics and the poor environmental conditions. For instance, In the Gold Coast Colony (now Ghana), the outbreak of a bubonic plague and the publication of a report

written by a British doctor on the alarming sanitary situation “served as a trigger for the first colonial interventions and efforts to develop a public water supply in Accra” (Bohman, 2010, p. 68). Following the construction of the Weija waterworks, the first public pipe borne water supply system opened in 1914 and subsequently expanded with the building of the Kpong treatment plant in the 1950s. Both were managed by the colonial government within the Hydraulic branch of the Public Works Department (Fuest & Haffner, 2007).

The concerns of colonial governments focused first on the health of European officials living in the colonies and mixed with their attempts of recreating a ‘modern European lifestyle’ within the settlers’ neighbourhoods. Thus, the construction of the first waterworks concentrated on the areas where richer strata of urban population resided and lived mostly corresponding to the colonial settlers and local elites (Swyngedouw, 2004b).

Although a similar processes occurred in European cities, with the richest strata receiving water first followed by the rest, within colonial cities the interaction of European technologies and colonial economies led to reinforcing the segregation of residential patterns (Headrick, 1990). In the case of the African continent “both the French and the British eventually used the language of health concerns to engineer racial and ethnic divides in the city” (Simone, 2004, p. 160). Bohman (2010, p. 80) for the case of Accra observes that during “the colonial era, a pattern of inequality in water consumption was established. Access to and consumption of water visibly materialised social segregation and reflected colonial power structures”. Indeed, in recognition of a limited availability of treated water, more water within the city of Accra was allocated and supplied to colonial areas, whereas the general public was urged to save water (Hirvi, 2012). Where the networked supply was not reliable or absent, urban dwellers are dependent on a variety of mechanisms to access and distribute water including wells, rainwater harvesting, surface water, door-to-door water vendors and kiosks (Stoler, Weeks, & Fink, 2012).

In the post-colonial era, investments in water supply infrastructure intertwine with modernization and nation-building processes. National governments were responsible for improving water supply coverage and developing water infrastructure as a whole (including the construction of dams, irrigation systems, etc.) as part of processes that would transform newly independent countries into modern nations. This was the case of the Gold Coast colony that in 1957 became independent as Ghana where “getting piped water into the cities was framed as part of a modernisation project and a further step away from colonial oppression” (Bohman, 2010, p. 94). Secondly, improving supply was considered an important factor for the development of the country and its economy - improved water supply corresponded to improved health conditions that in turn would lead to higher productivity.

Yet, in many cases, processes of socio-spatial differentiation initiated during colonial time were reinforced during the post-colonial period with the difference that local elites now occupied the well-watered areas in the city which

were hitherto inhabited by colonial settlers (Gandy, 2004; Mc Farlane & Rutherford, 2008). As Bakker and Kooy (2008) illustrate with the example of Jakarta, the expansion of coverage focused on upper class residential neighbourhoods regarded as the 'modern' areas of the city neglecting 'non-modern' poorer ones.

During the colonial and post-colonial times, rather than a homogeneous network, the translation of the municipal hydraulic paradigm in the cities of the Global South led to an uneven coverage fostering urban fragmentation. To describe this process, Bakker (2003) introduces the metaphor of the 'archipelago' constituted by spatially separated islands of networked supply within a multiplicity of delivery mechanism in-between.

### **3.3 The shift from 'government to governance'**

As illustrated above, within the municipal water paradigm in the North and in (post)colonial cities in Sub-Saharan Africa, supplying water to the urban population was considered a government task. Therefore, water-related infrastructure was to be planned, constructed and financed by central governments through general taxation and embedded in political processes of state building and modernisation (Molle et al., 2009).

The situation changed starting from the late 1970s when progressively new hybrid forms of water governance emerged involving multiple actors and decision-making arenas at local, national, regional and global level. At the same time, new concepts, ideas and principles emerged such as demand management, market-based mechanisms, decentralization, and stakeholder participation. The "dominant mode of water governance shifted from bureaucratic hierarchies to markets and subsequently to networks and community involvement" (Pahl-Wostl & Knieper, 2014). Forms of participatory governance were established such as river basin organizations, water users' associations in the water resource domain (Rap, 2006) and local water boards in the urban water supply (Morinville & Harris, 2014).

These transformations of water governance were triggered by the increasing economic, social and environmental costs of large water projects – with particular reference to the construction of large dams and increased wetland pollution – that became a source of criticisms towards the municipal hydraulic paradigm and the hydraulic mission (Gleick 2000). Additionally, the limits of technical engineering solutions in dealing with environmental problems as well as the growing competition between agriculture, industry and urban uses prompted a change in the conceptualization of water. Increasingly, water management focused not only on the hydrological dimension but on the wider relationship between water, society and ecological processes (Linton & Budds, 2013).

This led to the emergence of a more 'holistic' view of water resources where integration between different uses and users' needs was seen as the way forward to achieve efficient and equitable allocation of water resources with-

out compromising the sustainability of the environment (GWP 2000). Integrated Water Resource Management (IWRM) emerged as a dominant paradigm in water resource management (Mehta et al., 2014; Merrey, Drechsel, de Vries, F. W. T. Penning, & Sally, 2005; Molle, 2008; van Koppen, 2003). According to Linton and Budds the "popularity of IWRM attests to a broad historical shift in the way water is understood" from separated to integrated with the social and environmental domains (Linton & Budds, 2013, p. 172).

The so-called "Dublin Principles" represent a turning point in water governance. Endorsed during the International Conference on Water and the Environment (ICWE) held in Dublin in 1992 the four principles set as recommendations for action and became part of a new agenda including participatory approaches, river basin management, the recognition of water as an economic good and the finite character and vulnerability of fresh water (ICWE 1992). Within this context, institutional reforms were associated with the need for 'good water governance' practices to achieve sustainable development in general, and sustainable use of water resources in particular.

The government in Ghana approved a new water law in 1996 introducing the commitment to IWRM principles and the establishment of the Water Resource Commission (WRC) in charge of overseeing and coordinating the management of water resources at national level (Act. 522). Subsequently, a process of formulation of a national water policy was initiated. It led to the approval of the policy in 2007, followed by the publication of the National Integrated Water Resource Management Plan (IWRM) in 2012 and the National Strategy for Community Participation in Management of Urban Wash Services published by the Ministry of Water Resources, Works and Housing (MWRWH) in 2012 (Frick & Bruns, 2013).

### **3.4 The water utility model**

Within the water supply sector, the failure of governments to extend water supply especially to the low-income areas in the Global South became soon evident. Starting from the 1980s, the urban water supply systems faced multiple pressures: On the one hand, rapid urbanization and aging of existing infrastructure called for more investments; on the other hand, budgetary constraints and limited public financing overwhelmed municipal governments and limited their abilities to sustain existing systems and improving coverage.

In light of governments' challenges and their 'failure' to improve urban water coverage, the private sector emerged as a new key actor in the water sector with the private utility becoming the new paradigm in water supply (Bakker 2010). While publicly run water providers were considered prone to corruption and 'political interference', the private sector was assumed to be more efficient. Thus, market-based and managerial approaches were seen as a way to overcome the perceived lack of efficiency and effectiveness of governmental command and control policies. These responses mixed with a wider

neoliberal shift towards increasing competitiveness and privatization as ways to deal with the economic crisis (Castree, 2008; Swyngedouw, 2004b).

The focus of water reforms shifted from “technical solutions to solutions of a ‘managerial’ and institutional nature” (Schwartz, 2008). Both in the Global North and in the South, the managerial turn in the water supply sector involved the introduction of institutional arrangements and management practices generally associated with the private sector in public water utilities, referred to as New Public Management (Schwartz, 2008).

Reforms in both, the North and in the South, established various forms of privatization, commercialization and corporatization of water supply. As Bakker notes, “the specific nature of these reforms varies across countries and regions. But the general trend (...) is clear: at the beginning of the 1980s, government management of water supply was an exception rather than the rule” (Bakker 2010, p. 38). Indeed, the emergence of the ‘utility model’ led to a sharp acceleration of privatization and creation of public-private partnership in drinking water supply in 1990 with a peak in 1997 (Budds & McGranahan, 2003). Donor agencies and financial institutions including the World Bank and the International Monetary Fund supported these reforms, making private sector involvement “a central concern of development policy during the 1990s” (Budds & McGranahan, 2003, pag.92). Indeed, reforms of the water sector often became a necessary condition in order to access loans and debt relief notably Structural Adjustment Programs (SAPs).

The case of water supply in Ghana discussed in the following is characteristic for what has happened in other countries in the Global South: The 1970s and 1980s saw a rapid decline in investments in the Ghanaian water sector, loss of skilled manpower from the Ghana Water and Sewage Corporation resulted in “unprecedented decline in operational efficiency and leaving one-third of the system inoperable” (Fuest & Haffner, 2007) and withdrawal of government subsidies to the company (Whitfield, 2006).<sup>1</sup> The challenges in the water sector echoed the economic difficulties of the country during the 1970s-80s that brought about the first Structural Adjustment programme, the 1983 Economic Recovery Programme (ERP). Currency devaluation as part of the SAPs further contributes to deteriorate the situation in the water sector (Whitfield 2006). Eventually, urban water systems were further under pressure due to the rapid urbanization and, consequently, growing water demand. In the 1980s, urban water demand first exceeded supply giving rise to rationing practices in Accra (Stoler, Fink et al., 2012).

During the 1990s, the Ghanaian water sector underwent a period of structural changes aiming at improving water supply both in urban and rural areas. Budgetary pressure together with international trends shaped the transformation of the national water sector (Yeboah 2006:53). Indeed, a set of

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<sup>1</sup> government was subsidizing about half of GWSC’s expenditure on operations and had placed a ceiling on tariffs to be collected from citizens



legal, commercial and regulatory interventions created conditions to facilitate a favourable environment for stronger private sector participation. The “underlying philosophy was that strengthening domestic legal and regulatory structures will provide the mechanism to ensure that privatisation meets social equity goals” (Agyenim & Gupta, 2012, p. 53). Urban water supply was separated from rural water supply and sanitation: the first under the responsibility of GWCL and the second delegated to District Assemblies (1993) with the support of the Community Water and Sanitation Agency (CWSA) established in 1998.

In a parallel process, a new framework for the management of urban water supply was introduced (Fig.1). In 1994, an action plan was formulated and agreed upon between the Government of Ghana and the World Bank (Water Sector Rehabilitation Project, WSRP, 1995–97) followed by the Water and Sanitation Sector Programme Support I and II. The plans led to the transformation of the GWSC to a state-owned limited liability company (1993, Act 461) and to a five year (2005-2011) management contract between GWCL and Aqua Vitens Rand Limited (AVRL) – a Dutch South African consortium (Yeboah, 2006). The contract involved the management of water in Accra, but also in other urban centres in Ghana. In 1997 a new independent regulatory institution, the Public Utilities Regulatory Commission (PURC, 1997) was created in charge of sector regulation, tariff settings, promoting fair competition and working towards full cost recovery (Agyenim & Gupta, 2012).

The transformation of the water sector went hand in hand with the government’s decentralization policy (the Local Government Act was approved in 1993) and the neoliberalization of Ghanaian economy. As in many other countries, access to loans and credits under the SAP came with conditions imposed by the Bretton Woods institutions, the so-called policy-based lending approach. In Ghana, the reform of the water sector was one of the conditions. Several financial institutions (World Bank and IMF) and donor agencies (CIDA, DANIDA, DFID, GTZ) conditioned grants on progress with privatization and cost recovery (Whitfield, 2006). Furthermore, the national government favoured policies towards private sector participation during the terms of both Rawlings (1979-2000) and Kufuor (2001-2004). However, the establishment of a public-private partnership for urban water supply revealed to be a long and contested process: It took 10 years, different governments and changes in the type of contractual and financial arrangements (Whitfield, 2006). As the next section will further demonstrate, contestation against the privatization processes emerged both at local and at international level.

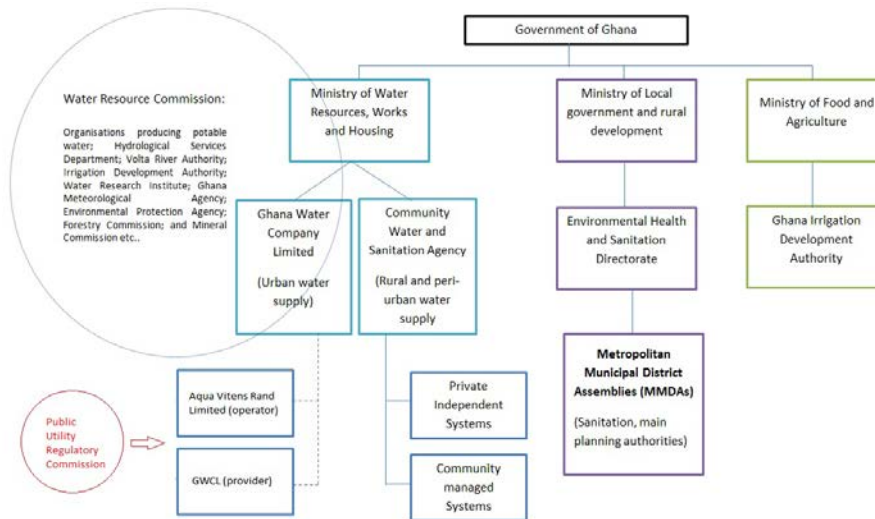


Figure 1: Ghanaian water sector framework until 2005 (own elaboration).

### 3.5 Contested privatization and the right to water

Starting from the mid-2000s, private corporate participation in urban water supply started losing its attraction (Budds & McGranahan, 2003). As further explained below, the reasons for this change in trajectory reside in the realization of the limits of privatization by governments and private companies on the one hand and the increasing resistance that privatization experienced both at local and global levels on the other. Yet, it should be noted that rather than the end of private participation, the mode of involvement of private actors in urban water supply has transformed (Bakker, 2010): Private corporations are now focusing on most profitable countries, cities and neighborhoods. Meanwhile, small private providers operating at the side of urban water utilities are increasingly involved in urban water provision in poorly served areas (Ahlers, Cleaver, Rusca, & Schwartz, 2014).

First, private sector participation did not bring the expected improvements in access and network coverage particularly in low-income areas in cities of the Global South (Budds & McGranahan, 2003; Loftus & McDonald, 2001; McDonald & Ruiters, 2005). Poor performance of private operators, disputes over operational costs and price increases, as well as difficulties in monitoring private companies represent only some of the issues. Several factors prevented urban dwellers particularly the poor to choose networked water sources (Bakker et al., 2008). These include high connection fees and transaction costs, housing and residence status (land tenure issues), security of supply and perceptions related to water quality (ibid). Meanwhile, private operators realized that investments in the water sector (particularly in the Global South) were not as profitable as expected underestimating the risks related to these investments. Companies recognized that water supply is characterized by high capital investment requirements with rather low rates of return (Bakker, 2013).

Forms of contestation emerged all over the world with campaigns against privatization of urban water supply systems taking place both at local and at global levels (Hall, Lobina, & La Motte, 2005). These triggered a wider critical debate on processes of resource commodification, water justice and democratization of governance, and the right to water (Sultana & Loftus, 2013). Beside opposing privatization, movements also promoted alternatives, building on the notion of commons (as opposed to commodities) and new ways of organizing urban water supply such as public-public partnerships (Bakker, 2007).

The experience of Ghana is often cited as an example of strong opposition to private sector participation (McDonald & Ruiters, 2005). In fact, while the terms of the private sector participation were being discussed at governmental level, a National Coalition Against Privatization (NCAP) emerged with the involvement of NGOs and other organizations. Mass mobilization and awareness campaigns organized by the NCAP contributed to stall the privatization of water (Yeboah, 2006). The protests against private sector participation led to the 'Accra Declaration for the Right to Water' issued in 2001. Eventually, the contract between the private company (AVRL) and the public partner (GWCL) lasted 5 years and was eventually discontinued due to poor performance in relation to the set targets (Hirvi & Whitfield, 2015; Shang-Quartey, 2013).

Today, GWCL (Ghana Water Company Limited) is a fully public water utility responsible for urban water supply in Accra and other major urban areas in Ghana. The change in ownership of GWCL did not influence the overall institutional organization of water supply in the country: District Assemblies with the support of CWSA remain responsible for water supply in rural areas, small-towns and in peri-urban areas where the GWCL is not present; PURC remain as the key regulatory agency in the sector. Even though the expansion of large-scale physical water supply infrastructure has been a central concern for the Government of Ghana supported by international donors, only a limited number of the urban residents has direct access to GWCL services (Adank et al., 2011, p. vi; Van Rooijen, Spalthoff, & Raschid-Sally L., 2008).<sup>2</sup> Where GWCL's supply is absent or inadequate, private independent systems (i.e. community-managed water supply systems) or intermediate services such as vendors and retailers emerged. Although acknowledged by many policy documents, these informal practices seem to find only limited space in existing water governance processes (Peloso & Morinville, 2014).

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<sup>2</sup> Contrasting numbers and percentages: 51% according to Adank et al., 45% according to Van Rooijen et al., Pelos and Morinville (2014) say GWCL meets about 60% of the demand of urban and peri-urban residents, the World Bank (2013) says 84% of GAMA population have access to piped water— the core message is that GWCL reach only a rather limited part of the population in GAMA.

## 4 Conclusion

Despite the growing attention that the improvement of water supply has gained since the 1970s, a large fraction of urban and rural dwellers continues to lack access to safe, reliable and affordable water, particularly in Sub-Saharan Africa (Castro, 2007).<sup>3</sup> The 2015 Progress Updates and MDG Assessment report illustrates that whereas the Millennium Development Goal for drinking water was met worldwide, the target was not reached in Sub-Saharan Africa at regional level-although with some exceptions at country level like in the case of Ghana (UNDP, 2015; UNICEF/WHO, 2015).

Within urban areas, access to improved sources of water has overall improved in the decade from 1990 to 2015 (UNICEF/WHO, 2015). Yet, a “geography of exclusion” (Bakker et al., 2008) persists in many urban areas in the Global South where some parts of the city are excluded from piped water coverage. A recent report by the World Bank reviewing the status of water supply in Sub-Saharan African cities calls attention to the unequal expansion of piped water, where the richest part of the urban population have the highest level of access to piped water “reflecting the limited coverage of water utilities” in informal settlements (Jacobsen, Webster, & Vairavamorthy, 2013, p. 10). For instance, it is striking that in the case of Accra, this figure falls to 16 percent in low income neighbourhoods while about 80 percent of richest neighbourhoods have connections to the public supply (Dominguez Torres, 2013). In the Ghanaian capital as well as in other cities in the Global South, “a thriving “informal” water market” is present. It involves mobile water vendors who purchase water from publicly owned infrastructures and resell it (often at higher price) to households, kiosks and neighbours (Luengo et al. 2010).

On-going trends such as planetary urbanization, persistent high levels of inequalities and poverty, and the informalization of the economy particularly in cities of the Global South poses increasing challenges to the situation described above. In particular, the rapid expansion of build-up areas, the growth of urban populations and the consequent rise in demand put pressure on the existing water supply infrastructure, on the management of water supply and the overall sector. In the case of Accra, the history briefly outlined above, together with the rapid population growth are often cited as key drivers behind the lack of water access within the ‘water crisis’ narrative (BBC NEWS, 2014; Van Rooijen, Daniel J., Biggs, Smout, & Drechsel, 2010; World Bank, 2013).

Therefore, inequalities still characterize urban water supply, not only in terms of physical access to water but also in terms of wider governance processes. As Bakker et al. (2008) point out, after government and market fail-

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<sup>3</sup> For instance, the International Drinking Water Supply and Sanitation decade 1980-1990, followed by the definition of the Millennium Development Goals and the 2005–2015 the International Decade for Action ‘Water for Life’.

ures, also institutional dimensions of water management and decision-making failed to effectively take into account the needs of poor households. This brings into question the existing institutional settings and decision-making processes concerning urban water supply and call for a reassessment of current approaches.

New pathways for the study of urban water governance could start by examining the interconnection between informal practices in water provision and state driven initiatives as multiple but interdependent sites of urban water governance (Lindell, 2008). Additionally, conceptualizing urban water supply with the wider hydro-social cycle opens up opportunities to analyse the social, cultural, economic and political processes surrounding access and control of water (Linton & Budds, 2013). Eventually, a situated approach to urban water governance that takes into consideration local realities and global processes (i.e. urbanization, global capital flows, changing lifestyles) could contribute to foster a more equitable and just urban water governance that can better serve current and future challenges (Lawhon, Ernstson, & Silver, 2014; Lu et al., 2014; Pieterse, 2010).

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