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Progress towards sustainable urban water management in Ghana

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Abstract

Purpose

In recent decades, governments in developing countries have experienced relentless pressure from key supranational finance providers (particularly the World Bank) to focus on the achievement of financial efficiency. This pressure persists despite evidence that basic institutions necessary for sustainable infrastructure and competitive commercial arrangements are often not present. This paper examines the steering of urban water management in Ghana as it progressed through a first failed public-private partnership in this sector (from 2005 to 2011), and beyond to 2017. Throughout this 12-year period, we consider progress, and barriers to the achievement of steering for sustainable development.

Methodology

Publicly available documentation is examined through the lens of steering for sustainable development (Voß *et al.*, 2007), to consider the challenges of urban water management between 2005 and 2017.

Findings

Progress towards a more sustainable approach to urban water management was achieved through greater democratic governance, public accountability, and public engagement. This acted as a counter foil to power, and effected improvements of knowledge, and clarity of related goals. Effective sustainable management continued to be challenged however, by on-going World Bank pressure to focus on financial efficiency.

Practical implications

The provision of a sustainable water supply continues to be a significant challenge for many developing countries including Ghana. This study provides insights into how progress beyond crippling financial dependency might begin to be achieved.

Social Implications

Safe and sustainable water supply is critical for both the health, and economic progress of citizens in developing countries such as Ghana. This study provides insight into the value of drawing from a broad range of stakeholders in seeking viable pathways towards those goals.

Value

While water management challenges for developing countries have been significantly researched, particularly in the context of private financing arrangements, little empirical insight is provided into how governments can move forward with sustainable progress beyond the failure of such arrangements. Water management in Ghana beyond 2011 provides that unique context.

Key words: water management, steering, sustainable development

Article classification: Case Study

Introduction

The 2015 UN '2030 Agenda for Sustainable Development Goals' provides a vision of a world where safe drinking water, sanitation, and affordable, sustainable energy become basic human rights for everyone. However, these ideals remain elusive for many developing countries. In 2015, water scarcity affected 40% of the global population, 2.4 billion people did not have access to basic sanitation, and an average of approximately 1,000 children died every day from preventable water and sanitation-related diarrhoeal diseases (UN, 2015). Sub-Saharan Africa accounts for approximately half of the global population that does not have access to safe water. Correspondingly, approximately half of the world's water related child deaths also occur in that region (UNICEF, 2015).

A key challenge for governments in all developing countries, as they seek to provide basic utilities such as water, is how to finance the investments required. Generally, they are required to interact and work within the dominating control and power of supranational funding providers such as the World Bank (Pessoa, 2008). During the 1990s and early 2000s, debts to the World Bank steadily increased for many developing countries, as they sought to address acute infrastructure deficiencies. This dependency often leads to pressures to concentrate on financial efficiency rather than societal needs for the provision of sustainable utility supply. In Ghana for example, despite significant increases in funding for water related developments in recent years (JDC, 2016), 40% of urban populations still did not have access to safe drinking water by 2016 (MFEP, 2017).

While a range of studies have explored issues of urban water management, many focus on the context of private financing. The peculiar challenges for effective water management within developing countries remains poorly understood (Anand, 2017; Schmidt, 2017). In Ghana for example, a range of studies have explored urban water management during the period of a first public-private partnership (PPP) contract within that sector (2005 to 2011) (Forrer *et al.*, 2010; Amenga-Etego and Grusky, 2005). Zaato (2015) examined the circumstances of that contract's termination, noting the private partners failed to meet almost every target. Several studies focus on factors contributing to the termination of that contract (Atarah, 2015; Hirvi and Whitfield, 2015; Rahaman *et al.*, 2007; 2013; Suleiman and Khakee, 2017; and Zaato, 2015). However, the literature stops at this point, providing no empirical insight into how urban water management in Ghana was able to recover and progress beyond that failure. Here we respond, by exploring the progress of urban water management in Ghana beyond 2011. In so doing, we address a gap of interest to many other less developed economies, as they also struggle to progress beyond similar failed PPP arrangements within their water sectors.

We draw on Voß *et al.*, 's (2007) unique concepts of steering for sustainable development, to first re-examine urban water management in Ghana up to the termination of that failed PPP (2011), and then to consider progress beyond to 2017. Voß *et al.*, (2007) suggest that three key factors challenge sustainable development; governments are commonly ambivalent about goals, knowledge of sustainability is often uncertain, and the power reflected in related responses is often widely distributed. These concepts have particular utility in the context of water management within developing countries, where so many continue to struggle with the goal of achieving safe potable water for all. Water management challenges are further complicated for all nations today, with concerns of global climate change, and more recent ambitions to achieve Sustainable Development Goals (SDGs), including clean water and sanitation¹. Voß *et al.*, 's (2007) steering for sustainable development framework enables effective navigation of these complexities.

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Insights from this study suggest that both the government's water goals, and related knowledge in Ghana improved towards 2017. However, power remained dispersed, both vertically and horizontally, with concentration among a growing range of large supranational steering entities. Urban water management in Ghana from 2011 to 2017 continued to be hampered by a myopic focus on financial efficiency. Our findings suggest that there is a critical need for both the Government of Ghana and supranational organisations like the World Bank to re-focus energy on engaging with effective transparency and network governance. Our argument is that progress can be achieved by directing more attention to public concerns for the provision of sustainable and safe water supply.

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The remainder of the paper is structured as follows. The next section develops a theoretical framework focused on steering for sustainable development. That is followed by a discussion of the research approach which focuses on documentary analysis. A literature review is then developed, focused on existing insights into urban water management in Ghana to 2011. Sections follow which then present new insights into urban water management in Ghana from 2011 to 2017. A final section presents further discussion and conclusions.

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Steering for sustainable development

This study draws on the theoretical framing of steering for sustainable development (Voß *et al.*, 2007), to help make sense of the materials examined. Through its systematic unpacking of the complexity of 'sustainability', concepts from this framework avail meaningful insight into why governments fail to provide safe and universal water supplies. Voß *et al.*, (2007) start by arguing that sustainable development (of which water management is an element) entails an "interaction between society, technology and nature", an "integration or balancing of potentially conflicting values" ... and "the interplay of diverse factors ... [that are] not under the power of any one single actor" (Voß *et al.*, 2007, p. 194). Those diverse factors include politics, law, science and lifestyles. In effect, sustainable development depends of effective governance.

Voß *et al.*, (2007) emphasise the complexities for governments seeking to steer resource consumption for sustainable development. Steering is defined as a "purposive attempt to bring a system from one state to another by exerting influence on its dynamics of development" (Voß *et al.*, 2007, p. 195). In this understanding, attention is directed to the relationship between intentions and outcomes. This conception enables broad consideration of the role and impact of all participants within a given context. Consideration needs to be directed therefore, to the roles played by national governments, organisations, civil society, differing sectors of the public, and in the case of developing countries, supranational bodies such as the World Bank. Arguments developed by Voß *et al.*, (2007), are useful as they provide insight into three key problems associated with sustainable development, and suggest five approaches that governments may take, as they attempt to manage related challenges.

Problems associated with steering for sustainable development

This subsection examines the problems and challenges that Voß *et al.*, (2007) identify, as governments seek to achieve sustainable development. Problems associated with steering, particularly in the context of sustainable development, can be related to the *goals* or the direction of steering, *knowledge* of systems (which impacts on the ability to assess the effects of action), and *power*.

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3 Firstly, rational thinking would suggest that effective steering requires the establishment of
4 clear goals. However, particularly with respect to sustainable development, goals are often
5 ambivalent, mixed or even contradictory (Voß *et al.*, 2007). Ambivalence occurs because
6 sustainability involves trade-offs between a range of objectives, and there is often no common
7 measure for comparing goals. While different stakeholders may argue for the legitimacy of a
8 diversity of goals, they will seldom be simultaneously achievable. As an example, the need for
9 sustainable energy may be accepted as a legitimate societal goal. But, there may be conflict
10 between politicians, agencies and interest groups about whether this goal requires a focus on
11 nuclear energy or renewable sources. Voß *et al.*, (2007) also suggest that even where a
12 consensus on goals is achieved, there may be secondary problems such as consensus on the
13 right targets or measures. To achieve consensus or a compromised solution, goals often need
14 to be described in vague terms.
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18 The second sustainability steering problem Voß *et al.*, (2007) identify is knowledge.
19 Sustainable development is complex and depends on interactions between science, technology,
20 ecology, environment, and human behaviour. There may be little certainty about how different
21 factors interact in any given situation. Yet to manage sustainable development effectively, a
22 knowledge of complex dynamics and how they interlink is critical. “A special aspect of
23 sustainable development problems is that they often comprise interactions between very
24 different elements from the domains of society, technology and nature” (Voß *et al.*, 2007, p.
25 197). All of these knowledge challenges are clearly apparent in the case of water. While water
26 is important for all sectors of society, its supply depends on the vagaries of climate and
27 geography. Water has significant health impacts, and potential for pollution from other human
28 endeavours. Furthermore, related infrastructure has challenging long-term maintenance needs.
29 In addition, whatever the response, related policies and practices will likely impact on a range
30 of other emergent and uncertain dynamics; for example, climate change.
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34 Finally, the power issue is one that recognises some reconfiguring, reorganising or
35 establishment of power may be necessary to effectively address sustainability. Sustainability
36 challenges may entail significant horizontal distribution of power, with input from actors from
37 many different industries, professions, organisations, and associations. This may have to
38 coordinate with significant vertical power distribution, from a range of different domestic and
39 supranational entities including funding bodies. This is particularly the case in the steering of
40 water management in developing countries, which continue to be beholden to the requirements
41 of key external financiers such as the World Bank. Fukofuka and Jacobs (2018) observe in the
42 case of Tongan development projects however, that while the World Bank tends to dominate
43 at the time contracts are signed, that relationship becomes more complex as those projects
44 progress, with national and even village level actors able to forge an influence.
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48 A range of studies provide broad insight into the challenges that the Government of Ghana may
49 have experienced in recent decades with respect to goals, knowledge and power, as it seeks to
50 steer urban water management for sustainability. While not directly utilising Voss *et al.*,
51 (2007), the three key challenges of steering for sustainable development, are generally accepted
52 and evidenced. Anand (2017) and Brugnach and Ingram (2012), argue that a key challenge in
53 the achievement of ‘sustainable’ water management, is the need to resolve the ambiguity that
54 results from the many valid perspectives brought by the multitude of actor groups that are
55 necessarily involved. Anand (2017) argues that progress towards a vision of public water might
56 be achieved where an openness to that multitude of perspectives can be maintained.
57 Abderrahman (2000) emphasises regulatory problems and legal and institutional arrangements
58 as barriers to effective urban water management. A consensus in these arguments is that what
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3 is important now, is to reject “unequal practices that favour one cultural understanding of water
4 over others” (Schmidt, 2017, p 229). Bayliss (2014, p. 305) suggests that governments that
5 have been maligned in the past, should therefore be re-empowered; “rather than promoting
6 greater privatization, the social interest will be better served by strengthening state capacity”.
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9 Schmidt (2017) explains how global water management philosophies have shifted in recent
10 decades, from a focus on scarcity in the 1980s, to a more recent focus on the importance of
11 security. ‘Scarcity’ emphasised human rights and the needs of the public for safe supply and
12 sanitation, including and therefore demanding, a state-focused approach. ‘Security’ on the
13 other hand, focused on claims of government mismanagement, and economic inefficiency.
14 Globalised free-market rationality was championed as the solution. Several studies argue that
15 the World Bank and other powerful financial institutions were instrumental in engineering this
16 shift to ‘security’. Strategies that the Bank drew on in this endeavour included, consistently
17 attributing blame for past water infrastructure failings to local governments (Bakker, 2013;
18 Goldman, 2007), and imposing complex and irreconcilable funding conditions which segment
19 societies, (Bakker, 2013; Goldman, 2007), effectively excluding many (poorer) citizens from
20 both service, and effective public engagement (Bakker, 2013). In addition, the World Bank’s
21 championing of powerful ‘self-referential’ transnational networks, contributes to the
22 increasingly blinkered focus on strict financial conditionalities, to the detriment of visions for
23 ‘public’ water (Bayliss, 2014; Goldman, 2007).
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27 As a consequence of the shift to ‘security’, understandings of water management have
28 transformed in recent decades from ‘public service’, to ‘commodity’ (Bayliss, 2014). This
29 epistemological shift “has the subtle effect of replacing what might be public sector goals such
30 as access, social justice, and equity, with financial ones, such as efficiency and profitability”
31 (Bayliss, 2014, p. 295). Considered through the lens of steering for sustainable development
32 (Voß *et al.*, 2007), we may observe that powerful supranational steering organisations have
33 been successful in recent decades, in cementing their position as *the* authority on water
34 management knowledge, with the specific aim of reshaping related goals to support agendas of
35 importance to them. In this study we will draw on the insights highlighted here, as we seek to
36 make sense of how the Government of Ghana was able to progress with a water management
37 agenda despite and beyond, the failure of a first PPP arrangement in that sector.
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41 *Five approaches to steering for sustainable development*

42 This subsection examines the five approaches that Voß *et al.*, (2007) suggest governments can
43 draw on, as they attempt to manage the challenges of steering for sustainable development. The
44 first approach is regulation and the crafting of rules. Regulation can take either a command or
45 control approach, or an approach that aims at incentivising participants. Voß *et al.*, (2007)
46 suggest however, that regulation is not effective in addressing any of the specific problems
47 associated with ambivalent goals, knowledge or power issues. Rather, regulation is a
48 mechanism that assumes outcomes are controllable.
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51 A second steering strategy entails establishment of shared visions to guide action. Shared
52 visions are helpful in addressing ambivalence of goals. The belief is that a guiding vision can
53 enable other steering problems to be overcome. In some respects, this concept is akin to the
54 ideas of Broadbent and Laughlin (2013), where societal steering media, such as government
55 departments, attempt to steer through shared societal lifeworld values. Societal goals are
56 theorised to derive from background lifeworld values, which are socially agreed through
57 communicative action (i.e. debates). Institutions and organisations including government,
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3 professional and financial institutions, become the steering *media* developed to facilitate these
4 societal goals through laws and funding mechanisms.
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7 Third, steering can be achieved through learning, which might occur either through the
8 acquisition of incremental knowledge as participants are encouraged to share knowledge, or as
9 adaptive management. Learning strategies might be particularly useful in addressing complex
10 and uncertain elements of sustainable development.
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13 Fourth, Voß *et al.*, (2007) suggest network governance. Approaches to network governance
14 acknowledge that “there may be insurmountable differences in values, world views and
15 interests, but that it is still necessary and possible to achieve agreement” (Voß *et al.*, 2007, p.
16 203). Agreement might be achieved through either debating or bargaining. Van de Meene *et*
17 *al.*, (2011) drew on Voß *et al.*, (2007), to argue that network governance was particularly
18 important in the context of water, as related solutions need to be viewed holistically.
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21 Finally, Voß *et al.*, (2007)’s fifth approach is reflexive governance. Like network governance,
22 reflexive governance also seeks to address the possibility that steering might become
23 dominated by powerful actor groups (Voß and Bornemann, 2011). Reflexive governance
24 differs however, as it requires acknowledgement that actors are interdependent, uncertain, and
25 embedded within context. The emphasis of reflexivity is therefore on mutual probing and
26 adaptation. Reflexive governance necessarily calls for democratically legitimate societal
27 learning processes (Voß *et al.*, 2009; Voß and Bornemann, 2011).
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30 In conclusion, Voß *et al.*, (2007, p. 208) suggest that a complexity of actors and goals can be
31 “an asset to deal with sustainability problems because they can increase the variety of potential
32 solutions”. Through combinations of these five solutions, a harnessing of the knowledge and
33 perspectives of various actors, along with various elements of a system’s dynamics, becomes
34 critical. An overview of the steering for sustainable development arguments presented in this
35 section is represented visually in Figure 1.
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42 **Methodology and method**

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45 Our study employs “middle-range thinking” (Agyemang and Broadbent, 2015; Broadbent and
46 Laughlin, 2013; Laughlin, 1995; 2004), drawing on a skeletal framing of appropriate
47 theoretical concepts, which is then embellished though the ‘flesh’ of empirical findings. The
48 steering for sustainable development framework developed by Voß *et al.*, (2007), avails the
49 appropriate skeletal framing here, because it provides practical and workable (Llewelyn, 2003)
50 concepts, which enable the complex urban water challenges experienced in Ghana in recent
51 decades, to be broken down and analysed into key constituent elements. Our period of interest
52 commences in 2005 (when a first PPP began in that sector). We continue through the
53 subsequent fall-out following the termination of that PPP (2011), to 2017. Beyond 2011, some
54 retraction and reflection on the limitations of PPPs became apparent. 2017 was then chosen as
55 an appropriate place to end our exploration (for now), because at that time, a surprising return
56 to eulogising the importance of PPPs re-emerged, as a significant number of new PPP water
57 projects were suddenly announced.
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We divide the empirics of this paper into two sections. The section that follows, considers the steering of water management from 2005, to the point at which that first PPP failed and was terminated (2011). As we have noted, a number of prior studies have explored the circumstances and failings of that arrangement. The ensuing section of our paper is therefore fundamentally a literature review. Nonetheless, that review contributes to our conclusions, by reinterpreting available insights through the lens of Voß *et al.*, (2007).

A further empirical section follows, which continues by exploring the steering of urban water management in Ghana from 2011 to 2017. The data utilised in that second phase of our study, is drawn from available web-based documentation and commentary. A documentary approach was pursued for its potential to provide insight into the ambivalence of expressed goals, the willingness of key agencies and actors to express related knowledge, and the impacts of power in the management of urban water (Voß *et al.*, 2007). The websites of all key steering agents are explored including a range of government departments and agencies, Aqua Vitens Rand Limited (the former private partners to the first water contract in this sector), and the World Bank. Relevant downloadable documents, as well as information provided within those websites are reviewed. While all of the sources drawn on here are fully referenced in the bibliography, we also provide a summary of the data drawn on in Appendix A.

To achieve thorough coverage, we started at the Government of Ghana's homepage (<http://ghana.gov.gh/>), to obtain an overview of all departments and agencies having water related responsibilities. The websites of relevant departments and agencies were then thoroughly explored and examined by the lead author for water related content. This was then reviewed by the co-author. Within the websites of other entities including Aqua Vitens Rand Limited, and the World Bank, searching focused on the words 'water' and 'Ghana'. This review was undertaken at two points in time; October 2015, and again at October 2017. October 2015 was initially chosen as a point sufficiently beyond 2011 when the first PPP water contract in Ghana was cancelled. Public transparency was however, found to be limited at that point. A two-year period was therefore allowed to transpire before a further identical documentary review was undertaken in October 2017. Lodhia (2018) suggests that snapshot exploration of web-based disclosures can avail valuable insight into organisational change and communication.

Jeacle (2008, p. 1303) suggests value in researching web-based discourse, for its potential to provide "a general review ... to somehow capture the flavour or essence of how these organisations attempt to construct" a desired message. Websites provide a 'virtual stage' where organisations test legitimacy (Mescher *et al.*, 2010). Gallhoffer et al (2006, p. 682) suggest that the web enhances the public sphere and democratic functioning, and provides potential for counter-accounts. Our approach therefore facilitates a reasonable insight into urban management challenges in Ghana. Text might suggest efforts to draw connections where there are none, or to silence inconvenient truths (Gabriel, 2004). Simplistic grand narratives may provide clues into how organisations seek to marginalise some, and benefit a powerful few (Boje, 1995). These arguments lead us to question whether related goals for water management were certain or ambivalent, how the depth of underlying knowledge was evolving, and how relationships of power were developing. Our assessments are however, necessarily subjective. This is therefore, a limitation of the study. Nonetheless, both authors contributed to reviewing all documents.

Other limitations of our methodological approach need to be acknowledged. An exploration of discourse provided through websites is only able to reveal the carefully tailored messages that

related agents are willing to provide. Critically, our insights will depend on the willingness of those agents to be transparent about water management goals, knowledge and power. We have addressed these concerns by ensuring that both authors contributed to the process of searching for and analysing relevant documents. In so doing, efforts were made to contrast and compare key arguments, to achieve a “plausible” and “trustworthy” analysis (Ahrens and Chapman, 2006, p. 834).

Urban water management in Ghana to 2011

Several studies provide insight into urban water management in Ghana up to 2011 when a first PPP in this sector was terminated. This section overviews that literature, adding new insights by explaining how failings to 2011 reflected all three of the steering for sustainable development problems identified by Voß *et al.*, (2007).

The Ghana Water and Sewerage Corporation (GWSC) was established in 1965 with responsibility for managing national water supply, sanitation, and setting water tariffs. In 1999 GWSC was dissected into two entities; Ghana Water Company Limited (GWCL) to manage approximately 70 urban water supply systems, and Community Water and Sanitation Agency to co-ordinate rural water and sanitation. GWCL continued to 2017, to be responsible for urban water supply. In 2005, the Ministry of Water Resources, Works and Housing (MWRWH) was established with authority over these two agencies, to assume responsibility for “the formulation, implementation and co-ordination of policies and programmes for the systematic development of the country’s infrastructure requirements”².

Into the “early 1980s, the operational efficiency of GWSC had declined to very low levels, mainly as a result of deteriorating pipe connections and pumping systems”³. Multiple institutional and operational challenges including significant non-revenue water⁴, poor debt collection, failure to bill or incorrect billing, poor maintenance, drought, and population growth, contributed to the difficulty of managing urban water supply (Wolf *et al.*, 2007). Nepotism in the appointment of board members, corruption, and theft by bill collectors, added to this environment of poor control and accountability (Fuest and Haffner, 2007). Proposals to increase tariffs remained publicly unpalatable. As a consequence, as reported by the Jubilee Debt Campaign (JDC), deficits persisted and national debts escalated (JDC, 2016). Into the 1990s, the World Bank wielded its power to increasingly represent the complex water management challenges identified here as simplistic stories of inefficiency. Privatisation was the solution which the World Bank increasingly encouraged governments to pursue (Yeboah, 2006; Zaato, 2015).

After years of procrastination, and with no ex-ante consultation (Forrer *et al.*, 2010), a ‘soft’ privatisation solution involving a five-year contract to manage the urban water sector was pushed through in 2005, between GWCL and Aqua Vitens Rand Limited (AVRL) (Amenga-Etego and Grusky, 2005). Yeboah (2006, p. 52) notes that “the reward for Ghana, following the conditionalities imposed by International Financial Institutions (IFIs) has been the availability of loans to help reschedule debts and to pay for the same infrastructure”. Outcomes through the five years following the signing of that contract were poor; non-revenue water did not decrease, and the supposed expertise of the private consortium was difficult to identify. “After pressure from workers and civil society organisations, complaining of the poor performance of AVRL”, the contract was “acrimoniously” (Atarah 2015, p. 14) terminated in July 2011. Since 2011, the government has reassumed management of GWCL.

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3 Viewed through the lens of (Voß *et al.*, 2007), all three key steering for sustainable
4 development problems are suggested here. The failing of this privatisation with AVRIL was
5 accompanied by an increased ambivalence of goals, uncertainty of knowledge, and distribution
6 of power. The World Bank's imposition of "almost uniform [financial accounting]
7 conditionalities" (Rahaman *et al.*, 2007, p. 650), focused on profitability and efficiency
8 (Bayliss, 2014), succeeded in marginalising poorer segments within society (Bakker, 2013),
9 and so was inconsistent with core social goals for public access. Ideally, effective societal
10 steering will include a strong focus on citizen participation and debate (Bovens, 2005; Haque
11 and Mudacumura, 2007), to draw out a clear understanding of societal lifeworld values. While
12 Ghanaian society was quite vociferous in its protests against PPPs both up to, during, and
13 beyond the AVRIL contract, their voices were largely "ignored and subsumed by those of the
14 state and its decision makers" (Yeboah, 2006, p. 52). As a consequence, a range of societal
15 concerns for water were not effectively built into the AVRIL contract, including water access
16 for all, and improved life expectancy.
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21 The weak due diligence (Itika, 2011), poor planning, and poor contract negotiation (Zaato,
22 2015) apparent in this AVRIL case, confirms that knowledge within the Government of Ghana
23 had also become more uncertain through this privatisation experience. In addition, we can
24 observe that power also became both more concentrated, and more distributed (Forrer *et al.*,
25 2010; Voß *et al.*, 2007). In embracing privatisation, the government had now bowed to the
26 demands of their most powerful creditor, the World Bank. However, presenting some contrast
27 to Bakker (2013), the World Bank's success in achieving its aims in this case was limited. In
28 Ghana, the government also felt compelled to respond to increasing demands from community
29 groups. The outcome was a contract that only outsourced the management of water, but not
30 control of related infrastructure (Amenga-Etego and Grusky, 2005). Here we add to
31 observations of undemocratic contract negotiation (Wolf *et al.*, 2007; Zaato, 2015), by
32 observing that efforts to placate the demands of these two distinct stakeholder groups
33 (financiers and community), effected a contract that was flawed in almost every respect,
34 preventing any of the interested stakeholder groups from achieving effective steering at this
35 time.
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39 **Urban water management in Ghana - 2011 to 2017**

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41 This section progresses from the review presented in the preceding section, by exploring urban
42 water management in Ghana from 2011 to 2017. In so doing, three subsections are separately
43 developed which ask; how the goals of water management were articulated; what was the
44 certainty of knowledge; and how was power distributed. The final discussion and conclusions
45 section then questions how each of these factors impacted on the steering of urban water
46 management towards sustainable solutions.
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49 *How were goals articulated?*

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51 Over the period 2011 to 2017, a range of, in some cases conflicting goals for water management
52 were articulated. However, towards 2017 some progress was apparent in both the development
53 of specific targets, and in an articulation of how those apparently conflicting goals reconciled.
54 In short, the review undertaken here suggests that towards 2017, learnings from past
55 management failings in the urban water sector in Ghana were beginning to lead to less
56 ambivalent goals. Here it is argued that until 2011, the steering of water was dominated by the
57 World Bank. Until 2011, the Government of Ghana remained unable or unwilling to give
58 significant attention to community concerns regarding water. However, water related goals
59 began to be clarified towards 2017, as the government demonstrated an increasing ability to
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3 reject the World Bank's myopic financial understanding of water management (Schmidt,
4 2017), and find some space to also engage with community.
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7 Throughout the period of this study, the World Bank continued to emphasise goals of cost
8 efficiency, profitability, privatisation, and full cost recovery (Amenga-Etego and Grusky,
9 2005). Any reference from financiers to societal goals of safe drinking water and poverty
10 reduction, remained secondary. This prioritisation of efficiency is evident in the government's
11 2007 National Water Policy. Water goals there included; "(i) to promote private sector
12 participation in investment and management of water supply as a means of mobilizing
13 investment and improving overall efficient and effective operation [and] (ii) to encourage
14 community ownership and local private sector participation" (GoG, 2007, p. 32). Significant
15 evidence from other African water privatisations emerging at this time suggested however, that
16 while profitability and efficiency are important, those goals should be secondary, to a primary
17 focus on safe potable water for all. Itika (2011) argues that the myopic focus on efficiency
18 rarely achieves its aims; the need to maximise profits for the lowest cost, commonly results in
19 a significant compromise of quality, safety and equity. Towards 2017, water goals as expressed
20 by the World Bank became even more ambivalent. Elliott (2016, p. 3), argued that into the
21 mid-2010s, the so-called 'Washington Consensus' focus of austerity, privatisation and
22 financial liberalisation continued to dominate. The author concluded that "there's nothing
23 wrong with the rhetoric, but it's the performance that counts".
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27 Rahaman *et al.*, (2013) add that in forming water goals, it is important to establish clear, open
28 and active dialogue with the public. Forrer *et al.*, (2010) argue that a careful combination of
29 both ex-ante and ex-post accountability is important. However, following termination of the
30 AVRIL contract in Ghana, the Jubilee Debt Campaign continued to observe that both the
31 Government of Ghana and the World Bank, provided "little [public] transparency", "preventing
32 civil society, media and politicians from holding the government and the World Bank to
33 account" (JDC, 2016 p. 5). This has not been for want of effort from vocal groups in Ghana.
34 Rahaman *et al.*, (2013) note the community in Ghana is increasingly sophisticated in
35 demanding protection of basic human rights. This is evident in recent commentary from the
36 community group ISODEC, who argued that in narrowly focusing on financial concerns in the
37 steering of urban water management in Ghana, donors have come to dominate, which "could
38 prove detrimental to the sector in view of the fact that the current global difficulties could lead
39 to a drastic reduction of donor support in this sector" (ISODEC, 2013, p. 2).
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44 Despite these challenges, some improved public accountability and reworking of water
45 management goals became evident towards 2017. The Government of Ghana's 2014 'Water
46 Sector Strategic Development Plan (2012-2025)' stated that "the vision of the water sector is
47 'sustainable water and basic sanitation for all by 2025'" which means ensuring that "all people
48 living in Ghana have access to adequate, safe, affordable and reliable water services, practice
49 safe sanitation and hygiene and that water resources are sustainably managed" (MWRWH,
50 2014, p. 16). GWCL stated that to achieve this goal, investment in the region of \$100 million
51 per annum, or \$2 billion in total would be required⁵. Another shift into 2017, was belated
52 commentary on the failings of the AVRIL PPP contract. The Ghana Water Company (GWCL)
53 had now compiled a brief but insightful 'History of Water Supply in Ghana'⁶. Recent
54 privatisation experiences were directly addressed. The document strongly and bluntly
55 explained, "at the end of the [AVRIL] management contract period on 5th June 2011, all the
56 performance indicators showed that private involvement in the operations of GWCL had failed
57 to bring about the expected positive improvement". Almost repeating verbatim the critique of
58 Zaato (2015), the document acknowledged that performance in "almost all the systems" was
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3 “poor”, including reduction in non-revenue water, treatment plant operations, and debt
4 collection.
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7 Into 2017, the Ministry of Sanitation and Water Resources, through the Ministry of Finance
8 and Economic Planning, also clarified a more community-oriented understanding of water
9 goals. Its ‘2017 Budget Estimates’⁷ document disclosed significant detail of budgets, actuals
10 costs, and related strategies, and explained that the goal for water was, “to contribute to
11 improvement of living standards of Ghanaians through increased access to and use of safe
12 water, sanitation and hygiene practices and sustainable management of water resources”
13 (MFEP 2017 p 5). The document went on to explain ‘key achievements’ for 2016 (largely low-
14 cost including public awareness campaigns), and that total water capex was GH¢ 161 million
15 in 2017 (approximately \$US36 million as per the GWCL website), of which GH¢152 million
16 was provided by donors.
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20 Summarising through our lens of steering for sustainable development, the Government of
21 Ghana appeared increasingly able towards 2017, to publicly reflect on learnings from past
22 failings in the water sector. This public engagement was achieved despite the World Bank’s
23 best efforts to keep the government focused on financial efficiency. Here we contrast to Bakker
24 (2013), Goldman (2007), by observing that in this case, despite significant ‘noise’ from the
25 World Bank about the importance of financial efficiency, the government was increasingly
26 able to find space to engage less powerful others. Through that engagement, learnings about
27 effective water solutions, and some untangling of ambiguous and conflicting social, economic
28 and technological goals for water, was able to progress (Voß *et al.*, 2007). Here it is argued
29 that modest developments in public engagement, contributed to improved water knowledge,
30 which in turn enabled development of less ambivalent goals. Further explanation of how
31 community engagement was critical to that progress, is presented in the following subsection.
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34 *What was the certainty of knowledge?*

35 While the failure of the first PPP contract within the urban water sector in Ghana in 2011 was
36 disappointing, the experience contributed to a more nuanced understanding of how financial
37 control might best be achieved. Shortly after the 2011 termination, the Ministry of Finance and
38 Economic Planning released the ‘National Policy on Public Private Partnerships (PPP)’ which
39 argued reflectively that privatisation had no more than “the potential to offer enhanced value
40 for money ... for the benefit of the people” (MFEP, 2011, p. 1). That document also
41 acknowledged that risk allocation, the ability of end users to pay, accountability and
42 competition, were also important factors to be achieved in any PPP arrangement. A more recent
43 2014 ‘Water Sector Strategic Development Plan (2012-2025)’ softened the tone on
44 privatisation even further, presenting it as simply one of several possible financing solutions.
45 “The water sector will require increased financial investment from government and other non-
46 traditional sources ... to ensure sustainable financing of the sector as traditional aid ... begins
47 to decline” (MWRWH, 2014, p. 26).
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51 A former partner to AVRL, Vitens Evides, disclosed a candid reflection on its relationship with
52 the Government of Ghana, in its 2011 Annual Report; “obviously, we went through our ups
53 and downs with our partner and got to know each other better as we went along. ... We’ve
54 remained on good terms with GWCL and are currently working together on the basis of a three-
55 year contract” (VEI, 2014, p. 11). While providing no detail of what they were ‘working’ on,
56 this comment confirms that an economic relationship was on-going. No detail of this
57 relationship was disclosed on any Government of Ghana website. The only information
58 available on what Vitens Evides and GWCL were apparently now working on, came from a
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3 Vitens Evides factsheet, suggesting smaller technical projects including, “improve competency
4 and knowledge of officials, operators and laboratory officials” and “investing in equipment and
5 improved availability of materials” (VEI, 2011, p. 1). These comments add to suggestions that
6 the government was seeking broad engagement in its efforts to address past failings and
7 develop knowledge.
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10 Other perspectives on the financing of water were also expressed at this time through
11 community groups. ISODEC (2013) argued for example, that Ghana was rich in resources, and
12 so the financing of water infrastructure ought to focus on better tax collection, particularly from
13 large multinationals. In a similar reflection, Amanthis (2012) argued that privatisation is
14 unnecessary; “Ghanaians can finance their water sector themselves. Since 2010 the country has
15 produced oil. It’s one of the world’s leading gold and cocoa producers. Taxation needs to be
16 properly regulated”. Consistent with Anand (2017), these comments suggest that the citizens
17 of Ghana preferred their infrastructure to be publicly financed. For its part, the Government of
18 Ghana appeared increasingly able to respond to developing public perspectives. A novel citizen
19 survey was undertaken in 2010 for example, which sought to tap into community wisdom
20 regarding water management and supply. In the forward to its final report from that survey, the
21 Metropolitan Chief Executive of the Accra Metropolitan Assembly noted; “to deliver the
22 needed service improvements, the Accra Metropolitan Assembly will need to work in
23 partnership with its constituents, the residents of Accra. This means communicating more
24 frequently with residents, and actively listening to residents” (WB, 2010, p. 1). The survey
25 specifically explained that “all residents of the Accra Metropolitan Area aged 18 years and
26 older” were targeted, covering “residents in each of the 11 city sub-metros” (WB, 2010, p.
27 135). Key conclusions included acknowledgement of community dissatisfaction with basic
28 infrastructure, and suggestions that residents were willing to pay, or pay more, for potable
29 water.
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34 By contrast, the World Bank provided limited commentary on water financing at this time.
35 Nonetheless, some rethinking of its position on PPPs was suggested. In a 2008 BBC report, the
36 World Bank Director for Ghana, Ishac Diwan, now argued for a softened “middle-ground
37 solution” to privatisation (Hooker, 2008). Mr Diwan is reported to have said; “it’s not about
38 ideology. It’s pragmatic”. However, most other commentary from the World Bank at this time
39 suggested the ‘Washington Consensus’ continued to dominate. In a 2011 document, the World
40 Bank argued that “anticipated spending will not be enough to achieve sector targets, and that
41 increased and more innovative financing, sector planning, better targeting, greater efficiency,
42 and cost recovery approaches will be needed” (AMCOW, 2011, p. 2). Full cost financing was
43 a key proposal. Some refusal to acknowledge mounting evidence of difficulties with PPPs was
44 also apparent, in suggestions that water management in Ghana was largely a story of progress
45 in recent decades. In a later 2013 report, some progress from these arguments was suggested,
46 with acknowledgement that there had been some challenging PPPs in the past. However,
47 supporting Bakker (2013) and Goldman (2007), the document concluded that this was largely
48 attributable to poor governmental planning and management. “If clear arrangements for
49 undertaking PPPs are not established with caution, they are likely to constitute a burden on the
50 government and to erode efficiency benefits” (WB, 2013, p. 1).
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55 By 2015, the World Bank’s Annual Report continued to endorse PPPs, making no suggestion
56 of recent challenges. It explained that a key current goal was to “improve global knowledge
57 about PPPs” and so explained that the Bank “helped to launch the PPP Knowledge Lab, a
58 website containing quantitative and qualitative information about PPPs and private
59 infrastructure” (WBG, 2015a, p. 19). Another World Bank Report at this time reiterated that
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3 Ghana still had significant infrastructure financing problems, insisted that PPPs do pay off, and
4 concluded therefore that further decentralisation and a renewed focus on privatisation were all
5 critical (WBG, 2015b). Alternatively, in a document written for the World Bank, Thierry
6 (2015, p. 16) argued bluntly that PPPs in most African contexts over the past 2 decades had
7 been “mostly disappointing”. “In sectors such as electricity and drinking water, the institutional
8 and rate reforms needed to make these projects viable for private operators proved impossible”.
9 Nevertheless, the World Bank’s objectives as stated in August 2015 continue to be, to “improve
10 the legislative, institutional, financial, fiduciary and technical framework to generate a pipeline
11 of bankable PPP projects” (Aijaz, 2015, p. 1). In short, the World Bank’s ideologies did not
12 significantly adapt to emerging evidence that for now, privatisation was simply unworkable in
13 Ghana’s water sector. Supporting Bakker (2013) and Goldman (2007), a key argument
14 developed was that governments were at fault, and better training was needed.
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18 Confirming the World Bank’s unchanged position, 10 major new PPP projects for Ghana were
19 announced by the Bank in 2014, including the ‘Asutsuare Water Project’ which the Ministry
20 of Finance was apparently seeking to ‘fast-track’ (PB, 2014). Suggesting a reluctance to
21 announce what they knew would be publicly unpalatable, the Government of Ghana did not
22 also comment at that time on these developments. The only hint from the government of these
23 developments, came indirectly in reporting on the progress of their ‘PPP bill’, which explained
24 that the bill “seeks to promote a combination of policy and legal reforms, financing
25 mechanisms, incentives and institutional support to boost private sector participation” (GoG,
26 2016). Goldman (2007) also observes that privatisation policies have become important pre-
27 conditionalities in recent decades for heavily indebted countries to receive further loans.
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31 Suggesting a growing confidence in knowledge about water deficiencies, costs, and solutions,
32 a final documentary search in October 2017 revealed a surprising increase in water-related
33 disclosures from the government. The GWCL website provided insight into two urban-focused
34 projects located north of Accra in October 2017; the Kpong Intake Rehabilitation Project and
35 Kpong Water Supply Expansion Project. Purpose, impact, and cost were all explained. New
36 funding bodies including the China Exim Bank were disclosed⁸. News Ghana (an online
37 independent Ghanaian news site) elaborated, explaining that Accra had a daily deficiency of
38 approximately 100 million gallons per day, and that this new infrastructure might ultimately
39 contribute 40 million gallons per day to resolving that deficiency (NG, 2013). A ‘meet the
40 press’ statement of 16 December 2014, from the Minister for Water Resources, Works and
41 Housing also provided a brief overview of this ‘flagship’ project, explaining that it had already
42 added over 65 million gallons of water per day to Accra supply (Collins Dauda 2014). In short,
43 it would seem that an impressive reduction to supply shortfalls was being achieved at this time.
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47 However, while the extent of water infrastructure developments commenced since 2011
48 seemed impressive, a key deficiency was that little was explained in any of these disclosures
49 about how related projects were to be financed. In 2017, the GWCL website simply explained
50 that current ‘development projects’ necessitated loans from external agencies amounting to
51 \$US35 million per annum⁹. ‘News Ghana’ confirmed that while the government was now more
52 transparent about costs, details, and timing, limited transparency about financing persisted.
53 News Ghana suggested that this was intentional, allowing fraudulent diversion of funding for
54 other purposes; “such deception and open fraud between the Ghana Government with the
55 collaboration of the Western financiers, has been responsible for Ghana’s backward situation.
56 ... It is also one reason why Western nations cannot criticize as Africa turns to China” for
57 financing (NG, 2013).
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3 In summary, the empirics presented here suggest that knowledge regarding water management,
4 administration, finance, and engineering, all became more certain, for all key stakeholders
5 (government, World Bank, and the public) in the period 2011 to 2017. Strategic improvements
6 to public transparency were also evident. Perhaps cognisant of past failings, the government
7 was now listening to and communicating with an increasingly powerful public. Progress in
8 community engagement was evident in the development of clearer community-centric goals
9 (for example, 100% water coverage by 2025). However, insight on financing, including the
10 government's on-going relationship with past private partners, remained opaque. Goldman
11 (2007) observes that public mass mobilisations and protests in other developing countries, has
12 driven some dismantling of compromised water financing arrangements. Our case adds by
13 observing that in a context of on-going public concern about water privatisation, governments
14 will avoid commenting on the specifics of new deals. This 'backward situation' in Ghana (NG,
15 2013), regarding concealment of national debt and PPP information, reflects on-going public
16 concern regarding the unpalatability of private financing.
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20 *How was power distributed?*

21 In this case, the World Bank continued to dominate key financial decisions up to 2017. The
22 surprising revelation from the World Bank in 2014 of an urgency to push ahead with 10 new
23 PPP projects, exemplifies the significant financial pressures exerted on the Government of
24 Ghana. It is necessary to turn to the non-government Jubilee Debt Campaign (JDC), to learn
25 how this impacted on debt. JDC (2016) reveals a significant increase to 2016, driving the need
26 for further World Bank loans, just to service existing debts. However as we have argued, while
27 this power imbalance made it virtually impossible to resist falling deeper into debt, the
28 government also found some space at this time, to reflect on past PPP failings, and to engage
29 with an increasingly vocal and powerful public. Through that engagement, the government was
30 able to improve management skills and public transparency and develop water-related goals.
31 Those goals now clearly articulated societal concerns for safe drinking water, and poverty
32 reduction.
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36 GWCL's 'History of Water Supply in Ghana'¹⁰ provides insight into who were perhaps the
37 least powerful stakeholders in this story; water sector employees. That document explained
38 that all key staff contracts were amended in April 2015, subjecting them to performance
39 improvement KPIs. The document concluded; "although the overall objective of the reform is
40 to bring improvement in the urban water sector, the specific objective is to turn GWCL into a
41 profitable utility company in the shortest time possible. The central focus on profitability here,
42 indicates that the World Bank's influence continued to reign supreme. Interestingly, this
43 'performance improvement programme' also implied that cost inefficiencies were the key
44 factor contributing to poor profitability, and that staff were therefore, largely to blame. The
45 reality however, is that revenue continued to be the greater profitability challenge in this sector.
46 Without specifying how, the document finished by suggesting that recent efforts to improve
47 staff performance had been "highly successful". In short, any blame for past poor performance
48 within GWCL was attributed to the failings of past privatisation partners, and to staff; no
49 responsibility was directly accepted by the government, or the World Bank.
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53 Adding to earlier evidence of developing community influence, the (then) President of Ghana
54 also produced a document in December 2015 entitled 'Accounting to the People'¹¹.
55 Interestingly, the 'accounting' in this document focused only on several recent successful
56 infrastructure developments, with little insight into financial impacts, or on what might *not*
57 be getting done. A key message suggested, was that the government was now in control of an
58 effective program of nation building. With respect to water, the document explained 'over
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3 US\$1 billion worth of investment has been made in the last five years ... which have taken
4 both urban and rural water coverage to 76%' (GoG, 2015, p 58). This seemed to be inconsistent
5 however, with a Ministry of Finance document released in 2017, which stated that as of 2016
6 only 60% of urban populations had access to safe drinking water (MFEP, 2017). To add to this
7 confusion, a 'meet the press' statement from the MWRWH of 9 August 2016, explained that
8 with recent investments, 78% of Accra's water needs were now met (Agyemang-Mensah
9 2016). Later, a subsequent undated meet-the-press statement indicated that 89% access was
10 now being achieved (Kofi Adda, 2017). Despite these apparent inconsistencies, it is impressive
11 that the government had apparently been able to turn water around so dramatically, since the
12 first failed PPP experiment with AVRIL in 2011.
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16 A range of other disclosures of interest were also provided on the GWCL website at October
17 2017, adding to suggestions of a government which was now more empowered. A 'completed
18 projects' page argued that 'major expansion and rehabilitation works' had been undertaken in
19 recent years, and that the government was 'aggressively looking for funding' to support these
20 projects. A 'meet the press' statement of 16 December 2014, from the MWRWH provided
21 insight into how supranational power in the water sector was becoming more dispersed towards
22 the end of this study. That statement named key current funding providers, including the World
23 Bank, along with a range of private development banks including the US Exim Bank, as well
24 as several Chinese development banks. Comments from the Chinese government at this time,
25 seem to frame related projects as a response to their so-called, 'silk road' initiative, which
26 aimed to open trading with a range of emerging nations. The online 'China Daily' reported that
27 "China emerged as the largest provider of finance for infrastructure in Africa in the years
28 between 2009 and 2012" (CD, 2017b). Much of the rhetoric arguing for the importance of this
29 Chinese investment was economic. For example, in another 2017 China Daily report, Africa's
30 significant 'infrastructure gap' was explained as problematic because it was "holding back per
31 capita economic growth ... and lessening companies' productivity" (CD, 2017b). In this report,
32 water was linked closely to the importance of irrigation for agriculture, and transport projects
33 were celebrated for their ability to "transform the way Africans travel and do business".
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38 In summary, powerful supranational steering organisations continued to dominate urban water
39 management in Ghana to 2017. However, that supranational power was now more dispersed,
40 with both new financiers, and increasing influence from government and the people.
41 Improvements in knowledge drove improvements to control and accountability. That improved
42 knowledge was reflected in a stronger articulation of community-related goals, focused on
43 poverty reduction and safe water supply. Nonetheless, with an expanding influence of
44 supranational financiers, myopic and unrealistic goals focused on financial efficiency and
45 privatised funding, continued to reign supreme. Table 1 provides a summary of the conclusions
46 drawn from the empirics in this paper. In so doing, Table 1 describes water management in
47 Ghana from 2005 to 2017 through the lens of steering for sustainable development.
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55 Further discussion and conclusions

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57 This final section considers how these developments and changing water goals, knowledge,
58 and power, impacted on the achievement of 'sustainable' solutions. In so doing, empirical and
59 theoretical contributions are formed. As we have argued, our case confirms observations from
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3 Bakker (2013), Goldman (2007) and others, that in recent decades, the World Bank continues
4 to champion myopic arguments focused on government failure, and the importance of financial
5 efficiency and free market rationality. What is unique in our case however, is evidence of a
6 government that was able to work past that dominating 'noise', and find some space to respond
7 broadly, with an increasingly vocal and influential community, regarding concerns for a
8 universally available, safe, urban water supply. Empirically, that engagement demonstrates a
9 government that was now willing to acknowledge some learnings from past challenges. A key
10 learning articulated was that more communication with all stakeholders was needed. Through
11 those engagement efforts, a renewed focus on water goals was able to develop, which now
12 emphasised concern for poverty, equity, and public transparency. Some effort to articulate how
13 social and financial targets for water should reconcile was also evident. The evolving argument
14 was that the goal now should be 100% water coverage by 2025, which would require
15 investment in the region of \$US100 million per annum (or \$US2 billion in total). However,
16 while a broad public was engaged, the issues discussed were limited. Little public
17 communication was offered regarding the cost of new infrastructure projects, the impact on
18 national debt, or most controversially, the extent of private financing. With national debt
19 soaring to record new levels by the mid-2010s¹², transparency about full financial implications
20 was left intentionally opaque.
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25 Power continued to remain significantly disbursed both horizontally and vertically, which
26 continued to frustrate effective knowledge development. Horizontally many government
27 agencies, technology providers, and consumer associations had a role to play. Vertically,
28 several governance levels were involved, including the World Bank, and more recently, China.
29 The significant on-going power of key supranational funding bodies was particularly
30 challenging, given the persistent fixation on a mantra of financial efficiency. Here, frameworks
31 were set at higher levels, but enforcement was expected locally. We argue therefore that in
32 addition to engaging with broad cultural understandings of water (Schmidt, 2017),
33 governments must counter Washington Consensus financial efficiency arguments, with a clear
34 focus on core mission. In the case of water in Ghana, that mission remained, 'sustainable water
35 and basic sanitation for all by 2025' (MWRWH, 2014, p. 16). Solutions to address the appalling
36 water-related health challenges experienced in the past in Ghana (UNICEF, 2015), must be
37 prioritised over financial efficiency and profitability. For their part, both traditional and
38 emerging supranational steering media (the World Bank and China) must also learn to
39 effectively engage with these key lifeworld challenges.
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44 In summary, towards 2017, goals for water management in Ghana became increasingly less
45 ambivalent, knowledge became increasingly more certain, but power remained disbursed
46 across (an expanding) supranational sector. Finally, we can therefore consider how these
47 changes were achieved, by relating our case to the five approaches to addressing challenges in
48 steering for sustainable development, as suggested by Voß *et al.*, (2007); regulation, shared
49 visions, learnings, network governance, and reflective governance. First, some regulatory
50 development was evident in this case, including the passing of a 'PPP bill'. Voß *et al.*, (2007)
51 argue however, that regulation can only work within the current state of a system, and cannot
52 affect improvement to flawed goals, knowledge uncertainty, or power imbalances. Indeed, the
53 PPP bill merely smoothed the way to continue with one of the bigger challenges for water
54 management in Ghana; the on-going dominance of World Bank, and its myopic focus on PPPs.
55 Second, the Government of Ghana was able to achieve some progress towards a shared vision
56 for water, through better public engagement. That better public engagement was evident in
57 efforts to both better communicate with, and listen to, a broad conception of the public,
58 including the government's unique citizen's survey on water in 2010. Third, learning was
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3 evident in this case, focused on both technical and management skills. However, an inability
4 to learn from past PPP failures, particularly amongst the most powerful players in this case (the
5 World Bank), was critical to explaining the on-going uncertainty of workable financial
6 solutions, and ambivalence of finance-related goals.
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9 Finally, some tentative suggestions emerged in this study that the Government of Ghana may
10 be progressing towards greater control of urban water management, through a developing focus
11 on network and reflexive governance (Voß *et al.*, 2007). Improved governance was evident in
12 developing efforts to provide public accountability, to publicly debate solutions, and to listen
13 to public needs. If the government can continue to develop these debating and bargaining
14 practices, more effective solutions to the bigger challenges in this sustainability puzzle (the
15 financing questions), might also be uncovered. A key problem stems from the fact that the
16 people of Ghana remain poor, and simply have not been able to afford full cost for services like
17 water. It is argued here that market governance is being forced upon non-“market oriented
18 people” (van de Meene *et al.*, 2011, p 1120). Our case reveals that network governance is
19 therefore critical to achieving effective societal steering, for which effective public
20 accountability is central, including open communication, sharing of information, and
21 identification of risks (van de Meene *et al.*, 2011).
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25 Theoretically we contribute to Voß *et al.*, 's (2007) framework, by arguing that more democratic
26 governance and public accountability can act as a counter foil to power imbalances. While Voß
27 *et al.*, (2007) suggested that shared visions for sustainable solutions through better public
28 engagement are important, we contribute by showing how that public engagement might be
29 achieved, and what its impact might be. Here we show that “the ability [for all citizens] to be
30 recognized by city agencies through legitimate water services” (Anand, 2017, p. 8) is critical.
31 Our case demonstrates that governments can move towards more knowledge and clearer goals
32 through public engagement initiatives that both listen to, and communicate with, a broad cross-
33 section of the public. Through that engagement, where few urban dwellers in Ghana had been
34 ‘full water citizens’ in the past, spatial fragmentations of the supplied from the non-supplied
35 were now diminishing (Bakker, 2013).
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39 While sustainability and infrastructure challenges are highly contextual, governments in other
40 developing countries might reflect on the lessons from this study. This study suggests that
41 governments should not fear accountability and engagement with their people. In fact, in
42 confronting infrastructure challenges, improvement to egregious community relationships,
43 should be a key priority. By working together, governments and the public might begin to
44 effectively confront the dominating influence of the greater adversary; the supranational
45 funding providers. Here we argue that a recognition of the interlocking activities of market
46 regulation, administrative reform, social mobilization, educational reform and “the shaping of
47 social attitudes”, is critical (Voß *et al.*, 2007, p 208; van de Meene *et al.*, 2011). UNESCO
48 puts it this way, “sustainable development cannot be achieved by technological solutions,
49 political regulation or financial instruments alone. We need to change the way we think and
50 act” (UNESCO, 2018).
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54 The documentary approach taken in this study, avails a limited insight into the initiatives,
55 challenges and perspectives of the stakeholders explored (the Government of Ghana, the
56 public, the World Bank etc). Furthermore, a big unknown at the end of this study, is how the
57 recent emergence of major new supranational players, particularly China, will impact into the
58 longer term. Further studies could seek more direct engagement with such stakeholder groups,
59 to better understand how progress is achieved with goals, knowledge and distribution of power,
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3 in steering towards the UN's identified 'sustainable development goals' (UN, 2015). We argue
4 once again however, that a solution in the best interests of the people of Ghana might best be
5 achieved, if the government can work effectively and transparently with its people. The World
6 Bank and now China, will continue to be key supranational steering organisations impacting
7 on developing countries like Ghana. If as supranational steering media, their aim is to lead
8 national resource management processes to success, they need to acknowledge and accept the
9 social complexities of resource delivery in different life-worlds (Hirvi and Whitfield, 2015).
10 Solutions are not simple, but the nation's core mission for sustainable development, basic
11 human rights, accountability, and poverty alleviation must remain paramount. A focus on that
12 complex and challenging mission might best be maintained, where governments remain open
13 to coordinating and working with the perspectives of all key stakeholders.
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Appendix A

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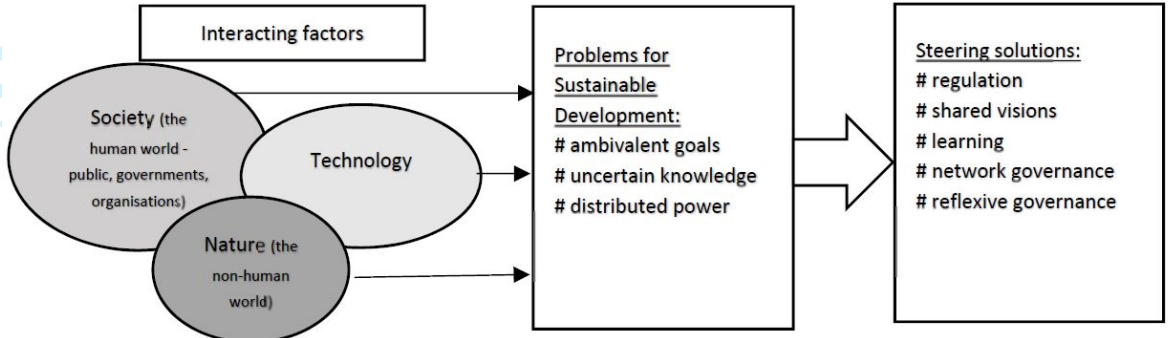


Figure 1: Visual representation of the Voß *et al.*, (2007) 'Steering for Sustainable Development' framework

Table 1. Describing urban water management in Ghana - 2005 to 2017

	To 2005	To 2011	To 2017
Goals	Ambivalent	More ambivalent	Less ambivalent. More community oriented
Knowledge	Uncertain	More uncertain	Improving
Power	Distributed	More dominated by supranational powers	More dispersed but still dominated by supranational powers
Source of evidence	Re-examination of existing studies through the lens of steering for sustainability		Examination of new data – publicly available web-based documentation