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LOCAL ACTION WITH INTERNATIONAL COOPERATION TO IMPROVE AND SUSTAIN WATER, SANITATION AND HYGIENE SERVICES

Adjusting Institutional Arrangements: towards Improved Governance of Self-Supply Water Systems in Uyo, Nigeria.

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Improved access to water supply in sub-Saharan Africa is increasing. However, the driver for this increase is not water supplied by water utility companies but alternative sources of supply. As the trend continues, there is need to move beyond clamour for access to address water governance in order to contribute to sustainable supply of water to water users. To scrutinise the water governance concerns, a case study of institutional arrangements in water supply in Uyo, Nigeria was assessed using interviews, documentary reviews and observations. The key findings are discussed in relation to eight institutional arrangements for water supply and are related to effect on improved water governance. This paper concludes with potential implications for self supply water systems in Uyo, all the major cities in Nigeria and in most cities in sub-Saharan Africa, and recommends areas where further research could focus.

Introduction

Water supply systems (source, treatment, storage and distribution) come under pressure from urbanisation and population growth among others. Urban population in developing countries could be up to 4 billion by 2030 constituting about 80% of urban population (Okpala et al., 2007). Just six countries, India, China, Pakistan, Nigeria, Bangladesh and Indonesia could be responsible for half of the increase expected in world population by 2050 (Soderbaum and Tortajada, 2011). In Nigeria, the Multi-Indicator Country Survey reported that only 5.9% of households had water piped into dwelling or plot (NBS-MICS, 2013). This represents only 10 million served with pipe water out of about 180 million people. However, 69% of the population have access to 'improved' water service (FMWR, 2016), an indication that the water from alternative sources surpass the pipes connected to households by water utilities in Nigeria. In view of this, governance of the alternative sources of supply is equally necessary.

The definition of water governance proffered by the Global Water Partnership, and adopted by other authors refers to “the range of political, social, economic, and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society” (Rogers and Hall, 2003, pp.7). The definition acknowledges differences in societies, and outcomes for water resources as well as water services (Frank and Cleaver, 2007). However, the definition is mostly descriptive, and lacks diagnostic value (Araral and Wang, 2013). More limiting is that Rogers and Hall’s definition assumed that 90% of domestic water services were provided by public or private utilities, which is quite the opposite in urban areas of sub-Saharan Africa.

The need to detail the implication of water governance for the different systems for alternative service options such as Self-Supply Water System (SSWS) is therefore pertinent. Self supply refers to user investment in advances in water treatment, supply construction and upgrading to household or community water supply (Sutton, 2009). This study is aligned with the definition of SSWS, but goes beyond previous research which appears to be focused on access to water, to address water governance of SSWS. As observed, and in previous studies in Kenya and Ethiopia (Ayalew et al., 2014) most urban areas in sub-Saharan Africa are serviced by alternatives to utility, and in Nigeria, SSWS comprises water sourced using boreholes or submersible pumps to serve residential and institutional buildings. To investigate the implication of water governance of SSWS this exploratory study focuses on the case for improved governance of SSWS in Uyo, Nigeria.

Methodology

Uyo, a city which serves as the capital of Akwa Ibom State, Federal Republic of Nigeria was selected as case study location for the study. Similar to other state capitals in Nigeria, water sector governance in this state is structured based on Federal Government guidelines on the water sector, while specific arrangements on water supply systems are responsibilities of State Governments, and are unique to each state. The case study methodology involved key informant interviews, review of records and working drafts, and observation.

Interviews were conducted with key stakeholders in the water sector in Uyo, Akwa Ibom State, Nigeria. Respondents included:a Director at Ministry of Environment, two heads of units at Akwa Ibom State Water Company hereafter referred to as AKWC, an Assistant Director at Akwa Ibom State Rural Water Sanitation Agency hereafter referred to as AKRUWATSAN, and the Chairman, Borehole Drillers Association of Nigeria, Uyo Chapter hereafter referred to as BODAN. The interviews were recorded, transcribed and sorted to text in MS-Word package. Additionally, observations and documentary evidence from records available in some of the agencies was also reviewed.

The interview questions covered nine sections that cover a broad range of institutional arrangements of water governance (Rouse, 2007), including: background information, government organization, government capacity, separation of powers, regulation, monitoring and enforcement, transparent operations, public participation, and empowered management. The analysis involved noting responses that corresponded with the range of institutional arrangements of water governance .

Water Supply in Uyo, Nigeria

Uyo is located in the tropical climate (wet and dry seasons) at $5^{0}2^{1}$N $7^{0}55^{1}$E coordinates, with a mean rainfall of 2650mm, average temperature between 26-28^{0}C, occupies an area of 115km^{2}, population of about 600,000, and population density of 1,400/km^{2} (NPC and ICF International 2014; AKSG, 2016). Also, Uyo is located within catchment of Ikpa River, Cross River, Imo River, and Qua Iboe River and their tributaries emptying to the Atlantic Ocean, and groundwater is said to be major source of water for residents (Essien and Bassey, 2012). In terms of water supply from utility, there are conflicting figures on actual number of households connected to the utility supply system, with estimates of about 10,000 connections. AKWC has within the constraints to its operation, erected stand-post and water kiosk in certain clusters in Uyo. However, the rate of piped connections to households has in effect encouraged dominance of SSWS, especially self-supply from individual households using submersible pumps, and also boosted illegal water abstractions in the area. There is need to address the governance of water supply in the area with attention to implications for sustainable supply for residents.

Key Findings

This section reports on responses from respondents during the interview sessions and from documentary evidence on the water supply sector in Uyo, Akwa Ibom State, Nigeria.

Government organization

In Akwa Ibom State, Nigeria, the AKWC is the State Agency responsible for Water Supply in urban areas. Similarly, the AKRUWATSAN is responsible for water supply and sanitation services in rural areas of the State. AKWC has been undergoing reforms at the moment, and there is no water policy. The state water policy is currently under draft, and is facilitated by some stakeholders such as policy makers at Government agencies, managers at water agencies, and Non-Governmental Organizations. The stakeholders understand that the draft needs to be approved by the executive council and passed into law by the State Legislature before it becomes operational.

Despite the absence of a policy framework, the Government organization for water in Uyo has undergone different changes with each political dispensation at the state level of government. Two sets of agencies coordinate water supply in the area; AKWC is responsible for urban and semi-urban areas and is currently supervised by Bureau of Political, Legislative, and Water Resources; while AKRUWATSAN which is responsible for rural water supply, also serve as State Agency that liases with International Donor Agencies and NGOs on water sector related issues, and is currently supervised by Bureau of Rural Development and Cooperative. An example of such change is the transfer of supervisory role over water supply in Uyo, from State Ministry of Special Duties to Bureau of political legislative and water resource during the course of data collection for this study. However, respondents all indicated the necessity of a Government structure where every water related issue would be organized under one administrative set up.

Government capacity

Aside from the two main agencies responsible for water supply in Akwa Ibom State, there is an acknowledgement of need for partnership with other stakeholders in water supply outside government agencies. The absence of guiding policy and law is a limitation on the capacity of Government agencies to adequately articulate their roles, perform their responsibilities, and to dispatch their objectives. The Government agencies have structured organograms depicting responsibilities, but deploying adequate staffing is a challenge. The current capacity across policy making and implementation of such policies which is mostly set up for utility supply may not be adequate capacity for governance of self-supply systems. Additional capacity required to develop the draft water policy was provided by donor agencies and international NGOs collaborating with the State Government.

Separation of powers

On separation of powers across policy, regulation and service delivery, agencies responsible for water supply at the federal level only issue policy guidelines that the state water agencies are required to follow suit. For instance, the monitoring and evaluation unit at AKWC was created in response to requirement at federal level for existence of such units in state water agencies. Regulation and service delivery are mandates of state governments. In relation to water governance in self-supply water systems, there appeared to be ambiguity among the agencies on who is responsible for what. The regulatory ambiguity appears to be a result of non-assignment of such responsibilities officially to any agency. On service delivery, at water agency or utility level, there is a clear reporting line that employees are expected to follow, and the organogram of the agencies indicate the reporting lines. Whereas the newly created Bureau of Political, Legislative Affairs and Water Resources will be responsible for policy making, the regulator is not clearly defined, and service delivery in Uyo, despite being the role of AKWC, also involves AK-RUWATSAN when it relates to drilling boreholes.

Regulation

There is no established water policy and law in the state, and as such no clearly defined regulation. The target is for legislative process to produce State Water Law in 2017. However, with respect to self-supply water systems, some guidelines exist on location and distance of boreholes from septic tanks, waste disposal system or dump sites. Also, there is a general guide range for borehole depth (60-150m) following the African Development Bank (ADB) assisted water scheme. Other regulations covering the social and economic regulations such as licencing of boreholes, payment for drilling permits and sanctions for illegal abstraction are not being considered even in the draft water policy.

Non-Governmental Organizations such as BODAN use the Code of Practice for water well construction by Standards Organization of Nigeria to regulate activities of its members. This Code of Practice is not formally enforced in Akwa Ibom as there is no policy guideline, nor is any Government ministry directly saddled with its enforcement.

Monitoring and Enforcement

Currently, residents and water users and contractors are expected to obtain abstraction licence from AKWC before drilling boreholes. Water users are advised to consider about 20m-50m distance between borehole and septic tanks, and depth range between 18-76m for developing their self-supply water system. The depth range suggested for SSWS is different from the 60-150m range used in large water schemes such as the ADB assisted scheme. The lower range also highlights the different geographical landscape of Akwa Ibom State as areas close to the river routes and Atlantic Ocean will likely have low depth range to the water table. However, monitoring and enforcing standards is limited as there is no law to prosecute defaulters. The establishments responsible for enforcing regulation across the water supply system from source to usage are domiciled under different Government Ministries and are limited to what monitoring and enforcement can be done due to absence of a policy or law backing such moves. Whereas AKWC expects to issue abstraction licence to developers of SSWS, it only monitors its installations: against damage by construction companies, for leakages, for planning of maintenance activities, and does not monitor SSWS. While a unit in Ministry of Health is responsible for monitoring water quality, a unit in Ministry of Environment has similar duties though tied to sewage water pollution. Also, while AK-RUWATSAN is responsible for water supply in rural areas, its oversight over borehole drilling attempts to check activities of BODAN members in Uyo which is an urban area.

The risk arising from absence of Water Governance framework though state water policy covering self-supply water systems in Uyo is conspicuous in many ways. First, there is proliferation of quacks without requisite training among contractors drilling boreholes for residents and water users. Second, stakeholders have resorted to self-regulation. For instance, Borehole Drillers Association is currently using Code of Practise from Nigerian Industrial standards as guide for the operation of their members. BODAN also has its

own inspection unit to monitor its members and sanction those not complying with the Code of Practice. Third, there is no monitoring of boreholes used as SSWS at the moment in Uyo.

Transparent operations

AKWC has an estimated 25,000 household connections but only about 30% of these receive a reliable service, for about 3-4 hours/day. While records indicate 25,000 connections, respondents suggested actual could be as low as 10,000 connections The low connection and service is caused mostly by; damage to water pipes by; road construction companies, obsolete infrastructure and lack of data on consumers and revenue. The connections not served and other water users not even connected are assumed to be using SSWS. Operations at the water system- sourcing, treatment, and usage at SSWS scenarios seems not transparent. Owners of such systems do not obtain licences, the quality of water consumed is not verified, and there is no instrument to manage demand on water resources and disposal. An apparent contribution to lack of transparency at SSWS might be that in both water agencies, aside from internal reports and memos among staff, there is no publication to guide water users on environmental protection and sustainable use of water.

Public participation

Public participation is viewed under: policy, water delivery, environmental sustainability and water user interests in institutional arrangements for water services. Pertaining to policy, respondents were unanimous that public presentations were held in preparing the draft water policy/law. In terms of water delivery, water users are encouraged through media advertisements to individually test the quality of their water at the laboratory in AKWC. On environmental sustainability, despite lack of transparency in operations of SSWS, there has been no assessment of impact of dominance of SSWS on the environment. Rather, the respondents identified the water consumed in the area was becoming acidic between pH of 4-6, but the geographic location of the area as a coastal state was giving the wrong sense of water security and safety.

On water user interest in institutional arrangements for water services, AKWC reckoned that the stakeholders do not have interest in the development of AKWC. Arising from dominance of SSWS in the area, it was observed that public participation to utility supply from AKWC is limited at the moment. For instance, at Area offices, which happen to be the closest administrative setting to water users, there is an Area manager, Station officer, Plumbers, and Account assistance whose function is limited to water supplied by that Area office, they have no responsibility to water users using SSWS. Also, no effort has been made on integrating consumers through water consumer association in Uyo.

Lastly, participation by other interest groups such as BODAN in water supply appears to be forced on due to non-equipping of public water agencies. However, there appears to be no formal partnership arrangement in place beyond the annual UN-led World Water Week celebration. The UN World Water Day celebration seems to be the most visible means of public participation to create awareness on water related issues in Uyo.

Empowered management

It was observed that the frequent changes in administrative set up of AKWC have impacted on its delivery of water services over the years. The perception of respondents from AKWC indicated an inadequate number of technical and administrative workers required for the monitoring of either utility water supply or SSWS in Uyo. In terms of capacity development, the perception was that in-house training rarely occurs or occurs once in a while. Thus far, as a compliment to capacity development, Niger Delta Support Programme (NDSP) initiated by an international NGO, is undertaking training in almost all units of the state water company. Perhaps a major limitation to an empowered management of water supply in Uyo is that there is no law empowering the State Water Agencies to regulate or enforce guidelines in the area.

Conclusion and Recommendation:

The non-optimal performance of AKWC in water supply to residents in Uyo has been the reason for dominance of SSWS in Uyo, and has continued to boost illegal water abstractions in the area. Managers at AKWC have identified that optimal service from AKWC could be dependent on continuous electricity supply, but observation and documentary review suggest the limitations to optimal service delivery is also affected by other factors such as inability to meet design and operation capacity, inadequate maintenance on equipment, damage to pipe connections by road construction companies, inadequate funding, and inadequate change management strategy to match dominance of SSWS and rising governance challenges.

A major challenge to water governance in Uyo as drawn from the findings appears to be absence of water policy in the area. This has adversely affected institutional arrangements that would have supported improved water governance in the area. For instance, the stakeholders acknowledge the need for sanctions

on illegal water abstraction but the institutional arrangement to implement the sanctions is not in place. However, the draft water policy seems biased in favour of the utility supply option to accessing water, whereas evidence of major access to water supply in the Uyo points to SSWS. A recommendation would be drafting a water policy that would integrate the eight themes of institutional arrangements discussed in this study with relevant concepts such as self-governance to support improved water governance at SSWS scenarios.

In view of dominance of SSWS as means of accessing water by residents in: Uyo, all the major cities in Nigeria and in most cities in sub-Saharan African countries, there are still many unanswered questions about water governance. In view of implications for the environment and sustainable supply of water for domestic uses, further work is required to improve water governance across SSWS beyond the current clamour for increasing access to water supply.

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Note/s

Additional case study proposal can be discussed with the author.

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