

A REVIEW OF GOVERNANCE CHALLENGES AND STRATEGIES: TOWARDS A SUSTAINABLE WATER SUPPLY IN INFORMAL SETTLEMENTS OF DEVELOPING COUNTRIES

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ABSTRACT

Informal settlements in most developing countries of the world form a bulk of the urban population, these settlements are however experiencing inadequate water supply, and tend to have the worst water access scenarios. The aim of this paper is to unveil the governance challenges associated with unsustainable water supply in informal settlements, as well as the strategies that would serve as a panacea to sustainable water supply. This paper is a review paper, hence secondary data was used for data collection. Using keywords related to the research topic, relevant journal articles from databases indexed in Google Scholar, Scopus, and Web of Science among others were downloaded and reviewed. Some of the prominent governance challenges associated with inadequate water supply are; incoherent and unclear policy statements, legal issues, duplication of functions, and lack of stakeholder's participation in the decision-making process. These points were supported with examples from various developing countries such as; Bangladesh, Melanesia, Kampala, Nigeria, Mongolia and Ghana. Major governance strategies such as; inclusive governance and institutional reforms are paramount in addressing these governance challenges. This paper therefore recommends that a wide range of key stakeholders should participate in the design and development of water policy at all levels.

Keywords: *Governance challenges, Informal settlements, Institutions, Strategies, Water governance*

1. INTRODUCTION

Statistics and reports have revealed that over 60 percent constituting more than half of the world's population lives in urban areas (UN-Habitat, 2016). It is also important to know that this tremendous increase in urban population and number of cities have given rise to the emergence of slums or informal settlements. Currently, statistics revealed that one quarter of the urban population, that is to say at least one eighth of the global population lives in slums, a total of about a billion people live in slum conditions (Kuffer et al., 2016; UN-Habitat, 2016). It is also assumed that the number of slum inhabitants is still going to increase in the next few decades, especially in the world's two poorest regions of South Asia and sub-Saharan Africa (UN-Habitat, 2016). These settlements tend to have the worst water access scenarios (Adams and

Halvorsen, 2014). Continued water supply scarcity has been widely attributed to poor water governance (Global Water Partnership 2002; Mugumya, 2013). In a statement of the UN World Water Development Report, “water crisis is essentially a crisis of governance (Montoya, 2018). Governance describes the processes of governing that involve a wide range of institutions (Pierre, 2000).

Institutions are vital to water governance; this is because governance itself is focused on institutions and their efficacy (Kjær, 2004). The word ‘Institution’ is defined as the channel through which information flows from one section to another, either from the top-bottom or bottom- top. Within the jurisdiction of governance, institutions are invariably described to mean a set of norms, values and beliefs that are formed to ensure that targets are achieved (Wapwera et al., 2015). Governance covers the manner in which allocative regulatory politics are exercised in the management of resources (natural, economic, social) and it broadly embraces formal (Codified and legally adopted) and informal institutions (Traditionally, locally and non-codified) by which authority is exercised (Rogers and Hall, 2003). Formal institution is defined as socially shared rules, usually written and are created, communicated and enforced outside officially sanctioned channels (Helmke and Levitsky, 2004). They may refer to social norms or rules of good practice in a practitioner’s community (Pahl-Wostl et al., 2007), formal institution therefore includes; laws, official policies, organizational structure (Huitema et al., 2009) while the informal institutions can be defined as socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels (Helmke and Levitsky, 2004). Institutions could also be considered as sites where trust is nurtured (Goldin, 2010), they are places where negotiations take place and they create a dynamic space due to the action of individuals who influence and change these sites (Powell and Dimaggio, 1991). But this system of change can only thrive when there is an equalisation of power and all members are able to influence and shape the outcome hence, institutions will not change if the voice of the dissent (different opinions) is amputated (Goldin, 2010).

Sustainable development with regards to water supply must therefore be a transformative development which requires structuring of governance systems and an incorporation of transition of management to deal with water issues in informal settlements (Rotmans et al., 2001; Kemp et al., 2005; Martens and Rotmans, 2005). The task of creating effective water governance as interpreted on ground water governance requires consideration of the full set of the organization's structure, rules and processes that influence and control human actions (Helmke & Levitsky, 2004; Lebel et al., 2006; Lemos and Agrawal, 2006; Kiparsky et al., 2017). Addressing challenges effectively requires frequent interaction among institutions (Ostrom and Ostrom, 1977; Dietz et al., 2003). The aim of this paper is to establish the importance of water governance as a means of enhancing sustainable water supply in informal settlements through reviewing the concept of water governance, highlighting the possible governance challenges associated with water supply in informal settlements and the governance strategies that will help in achieving the desired goal of sustainability.

2. MATERIAL AND METHODS

This research is a review paper, secondary data was used for the collection of data. Using keywords related to the research topic, more than thirty articles were downloaded from peer-reviewed water governance journals indexed in databases such as Scopus, ResearchGate, and Google Scholar among others. Unveiling the governance challenges and strategies that will

ensure sustainable water supply in informal settlements of developing countries is of utmost importance. This is because developing countries in comparison to developed countries are defined by lower levels of industrialization, lower per capita income, and a lower Human Development Index (HDI) (World Bank, 2021). In addition, high poverty rates, inadequate infrastructure, inadequate healthcare, and limited access to high-quality education are just a few of the social and economic problems that these countries commonly face (Todaro and Smith, 2020). However, their youthful populations, abundant natural resources, and expanding markets also offer them tremendous growth potential (UNDP, 2022). Developing nations can be found in Africa, Asia, and Latin America, among other continents.

3. CONCEPT OF WATER GOVERNANCE

Water governance refers to the range of political, social, economic and administrative systems that are put in place to develop and manage water resources as well as the delivery of water services at different levels of society (Global Water Partnership 2002). Water governance is also defined as the range of political, organizational and administrative processes through which stakeholders including (citizens and interest groups) articulate their interest, exercise their legal rights, take decisions, meet their obligation and mediate their differences (Nunan & Satterthwaite, 2001; Rogers and Hall, 2003; UNDP, 2007). The concept of water governance is based on the interaction process between contributing stakeholders to define clear sustainable water policy goals and targets at all levels of government, ensuring stakeholders inclusiveness through democratic legitimacy and fairness for the society at large (OECD, 2012). Also, given the complexities of water use within society; developing, allocating and managing it equitably and efficiently as well as ensuring environmental sustainability requires that the disparate (different in kind) voices are heard and respected in decisions over common waters and use of scarce financial and human resources (Rogers and Hall, 2003). Natural resource use is said to often involve political decisions; therefore a governance system that includes participation, collaboration and deliberation tends to be more effective in achieving support for and compliance with management strategies (Armitage et al., 2008; Akhmouch and Clavreul, 2016). It is in this light that the phrase ‘Stakeholders Engagement’ was adopted to defined water governance as ‘the political, institutional, and administrative rules, practices and processes (formal and informal) through which decisions are taken and implemented, stakeholders can articulate their interest and have their concern considered and then decision makers are held accountable in the management of water resources and delivery of water services (OECD, 2015). Additionally, water governance is concerned with; i) those political, social and economic organizations and institutions (and their relationships) which are important to water development and management. ii) the internal structures, functions and balances of water sector (internal governance) as well as the framing of social agreement on property rights and the structure to administer and enforce them as a law. iii) the ability to design public policies and institutional frameworks that are socially accepted and to mobilize social resources in support of them (Rogers and Hall, 2003).

3.2 GOVERNANCE CHALLENGES

3.2.1 Incoherent and Unclear Policy Statement

There is an assertion that developing countries have every tendency of assigning policy development consultants not having a good understanding of grassroots levels and problems (Akhmat and Khan, 2011). Such consultants tend to adopt developed world ideologies to

formulate policies in developing countries, confirmed to be in conflict with the institutional capacities of such countries. Therefore, the majority of policies in developing countries are merely blueprints that frequently fail to address practical development issues confronted by citizens (Muzondi, 2014). They are incoherent policies with little action, lack of proper policy coordination mechanism, lack of continuity, unrealistic assumption of situations and poor implementation, largely due to lack of political commitment and corruption (Akpobio, 2012). Some of the common barriers associated with the supply of good water services in developing countries are unclear roles and responsibilities and other related factors (Baietti et al., 2006; Kayaga et al., 2018).

In respect to unclear mandates, you will discover that the government institution's, department or agency responsibilities and tasks for the management and maintenance of water infrastructure are not designated clearly on legal ground, hence not certain about what to do (Kang, 2019). The unclearness attested by Government officials on urban poor policy come from, and has resulted in the reason why slum settlements in cities are frequently absent from official policy documents or government analysis (Rashid and Hossain, 2005). Loftus (2009) acknowledges that the global 'injustice of water poverty' is as a result of failed water-distribution policies. In the light of these issues, it is certain that many attempts made by third world countries to solve informal settlements housing problems in form of policies, strategies and programs have failed to produce the desired outcome (Nassar and Elsayed, 2017), in comparison to surrounding and core-urban areas, have historically received little attention in terms of water policy or development (Biswas, 2006). For example, water policy in principle requires that all consumers regardless of their location will be provided with access to water and that service providers have the obligation to collaborate with communities to design and provide suitable service, but this is not implemented in most cases (Kariuki et al., 2003).

In Bangladesh, studies revealed that absence of a suitable countrywide policy aimed at the poorest people in cities was mentioned, and identified as a major constraint to working in urban slum settlements by non-governmental organisations (NGOs), donor agencies, and even some government officials (Rashid, 2009). In Melanesia, water and other services are not extended or partly provided in informal settlements because government utilities have no clear duty to serve informal settlements, this is same in other four countries where there was no obligation or budget for the government utility or government body to provide services to informal settlements (Schrecongost and Wong, 2015). As a result, there is a chasm between policy and implementation, this is because there is information overload, pre-set plans and dominant knowledge regimes, with exclusive dominance and hence restarting reform and replicating a top-down government style, establishing closed networks and inclusion and exclusion historical patterns (Goldin, 2010). Additionally, it is suggested that the absence of urban poor policy is the belief that slum areas are a transient passing phenomenon, this way of thinking has resulted in the denial of programmes aimed specifically at the urban poor (Rashid, 2009).

3.2.2 Legal Issues and Duplication of Functions

At the global level, the water crisis suffers from the lack of a codified right to water (Huang, supra note 39, at 354 cited in Montoya, 2018). By its nature, international law and human rights law is limited in its capacity of formal enforcement (Montoya, 2018), this is because the emerging human right to safe drinking water is mainly notional and is equally responsible for

the problems of enforcement and implementation for the billions without access to clean water (Beail-Farkas in Montoya, 2018). Water rights are therefore not secured, the differences between formal legislation and informal customary water rights and unequal distribution of water right are not stated, these issues tend to cause frequent sources of conflict” (WGF, 2015). Muzondi (2014) equally observed that the precondition for water supply set forth by legislation is unmet in informal settlements (security of tenure), for this reason water supply in informal settlements is not reliable in terms of quantity, quality and available.

There is also a lack of enforcement of regulation. For example, selling of water from a private domestic connection is prohibited but could not be enforced and there seems to be no case of a water vendor or an owner of a private connection being prosecuted for engaging in the sale of water (WaterAid, 2003). Many city governments engage in minimal monitoring of water service delivery at the community or household level (Subbaraman et al., 2015), operation monitoring and maintenance strategies are sorely lacking and this is responsible for poor allocation of resources and the failure of the government to solve problems on a permanent basis (Martinez-santos, 2017).

In Mongolia, while several river basin councils were created, their scope of action has been seriously restricted by legal power, financial resources and political mandate (Karthe et al., 2015), this problem to a large extent is caused by insufficient clarity of legal frameworks concerning the mandate and capacities of the different institutions in the whole environmental sector (Tortel et al., 2008), limited political weight of the environmental sector was another major problem (Karthe et al., 2015). Also, despite advancement in the legal framework for environmental and water governance, the mandates of some institutions are still overlapping and the processes for decision-making are not always clear in the present laws and no mechanisms for conflict resolution at the different levels are so far provided (Karthe et al., 2015).

In the same vein a study conducted by Jideonwo (2014), revealed that in Lagos Nigeria, water infrastructures fall short of meeting the needs of the people because of poor planning and management and there is also an overlap and duplication of duties among water agencies because the water sector does not utilize the integrated planning approach, as such each of these agencies work independently which sometimes result to conflicting policies and strategies. In a study in Kampala, responses given by institution officials interviewed regarding current efforts, challenges and recommendations to service improvement to the urban poor, suggest that these authorities continue to work sectoral to a large extent, meaning that integrated planning at community level is very difficult (Nakawunde et al., 2010). Similarly, in implementing institutional changes to address policy and other related governance problems in Mongolia, some major obstacle to effective governance encountered are issues related to; deficiencies in horizontal interplay, i.e. lack of coordination and cooperation between institutions of the different sectors and the vertical interplay, i.e. cooperation between institutions of the different political levels (communities, provinces, national level) (Horlemann and Dombrowsky, 2010).

3.2.3 Lack of Participation of Stakeholders

The WGF (2015) highlighted the importance of equity in addressing the world’s water security challenges, emphasizing the need for making distinction between equal and equitable opportunity. Access to water services in informal settlements particularly has been a serious problem because there has been little involvement of major stakeholders in the decision-making process that is why intervention is difficult and not sustainable (Grafakos et al., 2010; Montgomery and Elimelech, 2007; Murphy et al., 2009). Key actors are therefore often excluded

from the decision making-process of identifying their needs, contributing their ideas, knowledge, skills and finances in water problems and also in designing programs, policies and its implementation and management (Goldin, 2010), since decisions in terms of water issues are taken without the voice of the ordinary water users and other key players in its provision then, the outcome of such decisions may not bring reform or improve access to water (Goldin, 2010). Stakeholder's involvement is important because decisions that take advantage and improve on the weaknesses, the ability of individuals, groups, or sectors to incorporate their knowledge and promote their views are likely to be sustainable (Camkin and Neto, 2015). In a study in Ghana it was observed that policy-makers have dealt only with a few large public enterprises that have been handling urban water supply, this is because they think it is easier to deal with few large enterprises than with heterogeneous group of small scale providers (Ainuson, 2010), the negative perception of small scale water providers by the government for many years have caused animosity between them and the water utility staff, and has discouraged meaningful dialogue between them and hence hindered initiatives to improve water provision and continues to be a constraint to improving services (McGranahan et al., 2006). In Dhaka, ineffective connectivity is also identified as a gap in the governance approach by parties involved in the DWPF themselves (Wuijts et al., 2018).

3.3 SUGGESTED STRATEGIES

3.3.1 Inclusive Governance

Development that includes marginalized people, sectors, and countries in social, political, economic processes for increased human well-being, social environmental sustainability, and empowerment is referred to as inclusive development (Gupta et al., 2015). The Sustainable Development Goal (SDG's), two of the 17 goals, is connected to the issues of inclusive governance. In addition, Goal 6 is not only concerned with ensuring access and availability of water and sanitation, but also sustainable management by supporting and strengthening the participation of various stakeholders including local communities (Rausch et al., 2018). According to Freeman (1984) a stakeholder is "any group or individual who can influence or is influenced by the achievement of the organization's objectives". Reed et al. (2009) proposed a more narrow and practical definition of a stakeholder as those individuals or groups without whom the organization would not be able to exist. Since inclusive development is concerned with equity and inclusion through prioritization of sustainable environmental growth, then the inclusive development concept can be applied to urban water service, because it provides the opportunity to balance ecological sustainability and equity of water access (Kooy et al., 2018).

The involvement of stakeholders improves decision acceptance, and this improves implementation and compliance of decisions, issues and matters in existence (Macnaghten and Jacobs, 1997; Schenk et al., 2007). Involvement of the broad spectrum of players in water decisions is based on the idea of increasing risk and related cost awareness; it helps in enhancing the social and political acceptability of relevant decisions, and hence reduces the potentials for conflict over water (Akhmouch and Clavreul, 2016). Non-state actors' participation in local decision-making has the potential to expand existing non-sustainable actor networks in environmental issues, and then participatory decision-making results in higher environmental standards (Dryzek 1997; Smith., 2003). Therefore, in the formulation and development of water policy by the government, a whole range of key stakeholders' participation should be encouraged. Government utilities are thus encouraged to collaborate with current stakeholders working in these settlements. For example, local governments, non-governmental organizations

(NGOs), community-based organizations (CBOs), and the informal sector (Nakawunde et al., 2010).

3.3.2 Stakeholders Involvement and Institutional Settings

Institutional settings refer to the establishment and organizations that are used to enforce or promote a public purpose. In terms of water governance, such a setting is a combination or should be composed of; water users, providers, policymakers and government authorities who interact through a dynamic set of social and material relations to access, provide, and control water supply (Ahlers et al., 2014). In some literature's settings are also referred to as arrangements. According to Kiparsky et al. (2017) in their study on local water governance, they opined that institutional arrangement or design are local entities which refers to existing governmental bodies such as; water districts, country government, land use agencies and others that have potential role in groundwater governance. Institutional settings can contribute to effective, efficient and inclusive water governance (Akhmouch and Clavreul, 2016). This view is strongly supported by Rogers & Hall (2003), that one key element in governance is to create a framework (institutional and administrative) within which people with different interests can peacefully discuss and agree to cooperate and coordinate their actions. A framework describes the linkage that supports two or more sub-systems ensuring the easy flow of information from one system to another (Wapwera et al., 2015). In line with this, space arrangement for participation should be conceived (formed or designed) of as situated position, place base, established (Cornwall, 2002). Invited spaces however refer to the opportunities for public participation granted by authorities whereas uninvited (or popular) spaces represent modes of participation that are entirely citizen- led (Cornwall, 2002).

The emergence of invited spaces cannot be easily separated from a human rights-based perspective, which is based on the notion of inclusive democracy and is aware (cognizant) of the claims that representation alone is inadequate for increasing the quality of policymaking (Gaventa, 2002). This therefore suggest that appropriate authorities should constantly create avenues and opportunities for interaction at specific locations between various stakeholders during the decision-making process. Instruments for physical interactive places of deliberations among stakeholders that have been tried and tested includes; meetings, workshops and expert panels town hall meetings, which have been used to elicit informed opinion and to probe for shared public interest in conjunction with major policy reforms (Akhmouch and Clavreul, 2016). Such governance processes can also take place in virtual spaces where stakeholders agree to participate in a two-way communication to know and understand the problems and to incorporate their own vision or ideas (Nabatchi, 2012). They are information and communication technologies (ICT) platforms whose functions have taken new and varied dimensions and vectors such as; social media, chat room, online forum, websites (Akhmouch and Clavreul, 2016; Pintér et al., 2012; Isenmann et al., 2007), these virtual spaces are also potential good channels for social interaction and can increase the availability and accessibility of sustainable information (Pintér et al., 2012; Isenmann et al., 2007). Such are however meant to support or complement and not to replace the institutionalized mechanism of representative democracy of face-to-face deliberation processes, designed and facilitated by all actors or stakeholders involved (Von Korff et al., 2010; Bryson et al., 2012; Schulz and Newig, 2015).

3.3.3 Institutional Reforms

Institutions are vital to water governance; this is because governance itself is focused on institutions and their efficacy (Kjær, 2004). The World Bank, through its leading publication report, argued that water providers on a small scale ought to be recognized to help increase access for deprived communities through changes in the law, contracts, regulations, and policies that allow for more flexibility and variety (World Bank, 2008). Institutional reform therefore needs to develop suitable operational and maintenance strategies, and it requires robust arrangements made by institutions. One aspect of the tools developed and adopted by Meji'a et al. (2012) is the enabling environment. This includes: policy tools in form of laws, rules and regulations designed to achieve overall development goal, and the legislative framework tools that address issues such as water rights, allocation of responsibilities and accountability across water users and the government and externalities. There is however no single water efficiency governance model, but for water governance system to be effective, it must be tailored to each country's unique social, economic, and cultural characteristics (Rogers and Hall, 2003) they also suggest certain fundamental principles that institutions should consider in order to ensure effective water governance are; Open and transparent, communicative and inclusive, integrative and coherent, ethical and equitable, accountable, efficient, responsive and sustainable.

4. CONCLUSION

In order to proffer solutions to the increasing lack of adequate water supply in informal settlements of developing countries, this paper established the foundation by defining the term "Water Governance". Also, the possible governance challenges that are most paramount in negating water supply in informal settlements were reviewed, with good examples from some developing countries across the world. Having established these governance challenges, this paper further reviewed some strategies that would help ameliorate this problem. The application of these strategies mentioned suggest areas where further studies could be carried out, to improve the effectiveness of water supply in informal settlements. In the light of this, further studies will require that a framework should be developed, to provide a guide on the processes and mechanism of stakeholder's involvement in the water governance process.

5. RECOMMENDATIONS

This paper therefore recommends that in the formulation and development of water policy by the government, a wide range of key stakeholders' participation should be encouraged. This will be achieved through collaboration of government utilities(authorities) with stakeholders working in these settlements, creating avenues and opportunities for interaction at specific locations between various stakeholders during the decision-making process, organizing physical interactive places of deliberations such as meetings, workshops and expect panels town hall meetings. Lastly, policy tools in form of laws, rules and regulations should be designed to address issues such as water rights, allocation of responsibilities and accountability across water users, in order achieve the overall development goal.

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