Reflections on the Feasibility of Addressing Water Crises in Urban Zimbabwe through Community-Based Management

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Abstract **- In some Zimbabwe's urban areas, water shortages and its quality has become a perennial predicament that has claimed human life and inhibited economic development. A study by Nhapi (2009) revealed that the current problems have been caused by rapid population growth after independence in 1980, inadequate rehabilitation and maintenance of water and wastewater treatment plants, expensive technologies and a poor institutional framework.In this respect, the problem is two-fold that is, inadequate water quantity and poor water quality. In Harare, for instance, water quantity problems have been attributed to the inadequate pumping capacity at Morton Jaffrey Works and Prince Edward Water Treatment Works as observed by (Manzungu and Mabiza, 2004). The quality of drinking water on the other hand has been seriously affected as a result of deteriorating water quality in Lake Chivero. Erratic water supplies and poor sanitation mostly affect the poor as they do not have alternative means. Those who can afford can drill household boreholes or may resort to buying or transport it from other places. The majority however, are forced to dig shallow wells within their yards as was the practice in rural areas. This resulted in unprecedented cholera outbreak in 2008-9, 2017 and 2018, which claimed more than 4,400 lives according to Zimbabwe Government (2017).From UNICEF experience and studies, some community organizations in rural and urban areas have been successful in generating financial resources needed for the extension of services and in acting as providers of services through the operations and management of local utilities popularly known as Community Based Management (CBM). As a result Zimbabwe introduced the CBM concept in rural areas which became a successful initiative (UNICEF, 2003).The concept of community based approach is not new or unique to the water and sanitation sector. The approach has and is being implemented in forestry management, fisheries, game parks, HIV and AIDS programmes among others (OECD, 2015).Community Based approaches to services is supported by several international declarations. The Institute of Water and Sanitation Development (IWSD) (2015) argued that in Zimbabwe, like in many other African states, CBM has been accepted among policy makers, development practitioners, NGOs and developing country governments as the route to sustainable WASH interventions, but with an initial focus on water points only. IWSD gave evidence of steps towards the implementation of CBM in Zimbabwe which started in the early 1990s with a pilot project in Chivi district. By 1997, CBM had been extended to five other rural districts, namely, Makoni, Mutoko, Matobo, Kwekwe and Beitbridge. Experiences in these districts revealed that it was necessary to document some principles upon which CBM could be based and this was successfully done in 1997. CBM is also apparently a viable alternative in Zimbabwe's urban centres, although it has not been fully implemented. This paper critically reflects on the feasibility of CBM water management in urban Zimbabwe.**

Key words: **community based management, water, water quality, social capital, Zimbabwe.**

I. INTRODUCTION

In line with the United Nations' sustainable development goal number 6 of ensuring the availability and sustainable management of water and sanitation for all, many countries on the globe are seized with devising strategies to ensure clean and safe water supply and sanitation for all their citizens in both rural and urban areas. According to UNESCO (2019) safe drinking water and sanitation are recognized as basic human rights, since they are indispensable to the sustenance of healthy livelihoods and are fundamental in maintaining the dignity of all human beings. UN DESA (2015) submits that ensuring the sustainable provision of equitable access to sufficient good quality water for people, productivity and the environment is a necessary condition for ending poverty and hunger, and achieving all the other ambitious goals proposed by the United Nations post-2015 sustainable development agenda. Noting that water permeates all aspects of life, UN DESA (2015) pertinently points out that it is not only people who require a basic supply of reasonably good quality water in order to survive, but water is essential for the survival and productivity of all life and all ecosystems. Water is crucial, not only for basic drinking, cooking, hygiene and ecosystem functioning, but for producing food, energy, and indeed all products needed for survival. In recognition of the critical importance of water, Zimbabwe, a developing country located in Southern Africa, is grappling to ensure a safe and clean water supply for its citizens against the backdrop of limited fiscal space and poor economic performance. In such a scenario, community-based management of water is viable option.

This paper, thus, looks at water management in urban Zimbabwe, examining the key policy problems and highlighting the most prominent policy solutions or tools to address the key problems. The paper gives evidence of

success of suggested solutions as well as providing an area for further research. In Zimbabwe the National Constitution under section 77(a) provides for the human right to water. Besides the National Constitution, there are other laws and policies on water governance ,e.g. Zimbabwe National Water Authority Act (Chapter 20:25; the Water Act (Chapter 20:24); the Environmental Management Act Chapter 20:27; the 2013 Water Policy as well as Statutory Instruments like the 1913 Water Regulations By-law SI 164 of 1913.

In Harare, the capital city of Zimbabwe, the water problem has become a perennial predicament that has claimed human life and inhibited economic development. Studies by UNDP (2007) revealed that the use and abuse of increasingly precious water resources has intensified dramatically over the past decades reaching a point where water shortages, water quality degradation and aquatic ecosystem destruction are seriously affecting prospects for economic and social development, political stability and ecosystem integrity. Given the importance of water to poverty alleviation, human and ecosystem health, the management of water resources should be given urgent attention by both responsible authorities, policy-makers and the central government to ensure access to safe and clean water to all in terms of the country's supreme law, the constitution.

Definition of Terms

Water management relates to a 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 (Rodgers and Hall 2003). OECD (2015) defines water management as a set of systems that control decision-making with regard to water resource development and management. Hence, water governance is much more about the way in which decisions are made (i.e how, by whom and under what conditions decisions are made) than the decisions themselves (Moench et al 2003).

Water governance covers the manner in which allocative and regulatory politics are exercised in the management of water and other natural resources and broadly embraces the formal and informal institutions by which authority is exercised. Rodgers and Hall, (2007) observed that water governance has emerged as one of the most critical areas in the context of sustainable water resources development and services, necessary to respond to global water shortages- a crisis which is not about having too little water to satisfy our needs, but rather a crisis of managing water and making it accessible to all.

Theoretical Underpinnings

To understand complex facets of social interactions in successful community based managed project, Mayer's (1995) and Cleaver's (1996) theories could be useful as highlighted below.

Civil Society and Social Capital Theory

Civil society and social capital theories by Mayer (1995) emphasize the relational aspects of community life. These theories hold that participation in informal and formal organisations builds trust in individuals and institutions and forms habits of interaction. Community based management or non-profit organisations facilitate trust and interaction by defining mutual obligations and member rights, by creating sets of specialised roles internal to the organisations, by establishing internal authority and accountability systems, by promoting norms and behavioural patterns regarded as useful to the group and inhibiting those regarded as detrimental. Organisations incorporate important accumulations of human experience and knowledge, which is social capital (Cernea 1994). As Claridge (2004) appositely notes, the social capital theory provides another lens for the analysis and improvement of participation methodologies. He posits that the social capital theory encompasses the idea that social relationships are productive in nature and are therefore characterised as capital. The social capital theory is associated with thinkers such as Tocqueville, Mill, Toennies, Durkheim, Weber, Locke, Rousseau and Simmel and was popularised by Robert Putnam, a political scientist through the study of civic engagement in Italy (Claridge, 2004). Social capital is considered as important to the efficient functioning of modern economies, and stable liberal democracy and as vital base for cooperation across sector and power differences and is considered as an important variable in community governance and problem solving(Claridge, 2004).

Gardner (1991) notes that as community leaders search for new ways to strengthen and enrich community life, they increasingly turn their attention to the concepts of civic participation and social cohesion. Edwards (2000) also noted that in the last decade, civil society and social capital have been accepted as key components of the development equation. Edwards observed that part of the desirability of a community lies in its social fabric and the connections among its people and institutions. He notes that these qualities are the basis for civil societies and healthy communities. Putnam (1993) revealed in a study of regional governments in Italy, that the stronger a community's social capital and tradition of civic engagement are, the greater is its potential to thrive and grow.

Civil society, as Minkoff (1997) observes, is multidimensional in form and multipurpose in function. Non-profit organisations, just like community based managed projects, play a critical role in civil society by building and maintaining important social relationships (Boris 1999). They provide a means by which people can interact and work toward common goals. The social capital that is created can come through a variety of channels. For instance, it can come through volunteers working alongside each other, staff interacting with clients, or board members promoting the organisation's activities in a community. Such experiences, as argued by Mayer (1995), build ties between people and

enhance social capital. In addition to individual connections, Mayer observed that, community based managed projects offer a means for creating community infrastructure. Non-profit organisations, (CBM) projects, often work together on common concerns, sharing ideas, responsibilities, and resources. They collaborate with government agencies and business to further community interests. The social networks formed through these interactions contribute to a community's general quality of life and help reinforce it (Campbell, 1996).

The Urban Institute (2001) observed that, although much of the literature on civil society and social capital tends to emphasize local level community building, Minkoff (1997) warns that national social movement organisations should not be overlooked as a means of producing social capital. She submits that national organisations play a critical role in a changing environment through their extensive use of networks and affiliations. Such networks provide infrastructure for collective action and act as proponents of group claims that help shape public debate and discourse (Minkoff, 1997).

The mechanisms by which civil society and social capital form and expand have changed overtime. Hall's (1995) work discusses the origins of the concept of civil society and provides a historical context for its formation. It was observed that the advancement of literacy and mass print media, in particular, enhanced the ability of people to organize and form social groups. Civil society's role was enormously amplified by changes in means of communication. This infrastructure enables the imaging of new communities (Hall 1995).The Urban Institute noted that in today's world characterised by rapidly changing technology, new communication tools such as the fax, e-mail, the internet and teleconferencing are transforming the ways in which the formation and production of civil society and social capital occur. In Harare, the predominance of modern communication technologies, especially, the increased use of social media technologies, can be leveraged on to promote community based management of water resources.

Organisational and Management Theory

Another relevant theory to this paper is organisational and management theory. The literature on organisational and management theory, according to Mayer (1995), emphasizes the operational decisions and trade-offs that groups face when developing their financial and political capacity. Mayer observed that decisions concerning the use of staff, choice of products and services, fundraising and marketing strategies, and even the selection of a board of directors can considerably impact the success or failure of an organisation. Decision making involves foregoing one option in favour of another. In short, organisational management decisions produce trade-offs that may be either beneficial or detrimental to the short-term or long-term viability of the organisation.

All types of organisations face pressures from other groups when attempting to meet their goals. The Urban Institute (2001) noted that, institutions such as government and for profit firms may either cooperate or conflict with each other in their efforts to promote community decision-making- each with a specific view of what constitutes economic and social balance. The theory posits that community based managed projects play a vital role in affecting local decision making, particularly by representing less popular and competing viewpoints in the political process. However, to be effective players, non-profit organisations must develop and sustain political and financial capacity.

Literature on organisational decision-making suggests that the unique nature of non-profit organisations propels them to act similarly to their for-profits counterparts, but in a manner that heightens their mission of promoting the public good. One theory is that non-profit organisations are important to communities because they address the flaws of competitive markets. For example, Weisbrod (1988) observes that that non-profit organisations can overcome government failure. Government tends to respond to majority concerns and, as a result, some minority concerns are not addressed through public action. Non-profit organisations often provide public goods where government fails to respond to the preferences of small groups of citizens.

Another theory is that the formation of non-profit organisations is encouraged by the availability of tax benefits for charitable organisations. Such benefits usually include exemptions from property and sales taxes and, in some cases, tax deductible charitable donations (Brody and Cordes, 1999). In addition to the legal status, non-profits have unique characteristics that cause them to evaluate and act upon problems differently than do for-profit firms. Smith and Lipsky (1993) argue that non-profit human service providers are tangible significant manifestations of community. They further posit that voluntary action, in which people provide time and financial resource, produce positive societal outcomes. As Smith and Lipsky note, such voluntary organisations may be particularly strong because they are autonomous and not subject to market vagaries or changing government priorities. They also enjoy a special sort of legitimacy because their existence derives from free association rather than the law or profit motive and because they are thought to arise from the sort of passionate convictions that tend to be respected in politics disproportionately to the number of people who hold the benefits (Smith and Lipsky, 1993). Because of their attachment and reflection of the community, non-profits are more likely than for-profit providers to put charitable and community preferences before profitability. A strong mission orientation is a distinguishing characteristic of the non-profit sector and a motivating force for many non-profit organisations. As such, community based management is ideal for resource like water which is a public good.

Mayer(1995) describes community-based management as an approach that entails three theories: responsibility, authority and control.

Responsibility theory

The community takes on the ownership of and associated obligations of the system and they have the responsibility to plan and implement their plans. Communities have had tendencies to associate water facilities with the service provider, be it the national government, local authority or non-governmental organisations. As such, they see themselves as users only who are entitled to a service at any given time. With CBM however, roles are reversed to that of facilitator (service provider) and owner (community) as the IWSD (2005) asserts.

Authority theory

According to the authority theory the community has the legitimate right to make decisions regarding system on behalf of the users. The right extends to the choice of technology as well as to how and when they want a certain service. Communities are in a position to demonstrate a desire for and commitment to aservice and can make commitments over the lifetime of the service to receive it and to sustain it (Deverill et al, 2002).

Control theory

According to the control theory, the community is able to carry out and determine the outcomes of its decisions. All decisions and actions pertaining to the facility are determined by the user community and not from the outside. This means that the community is prepared to face the consequences of its actions, be they positive or negative. This theory is useful in that it enables the community to set targets which they can achieve and which benefit them, using resources available to them.

CBM implies the ability by the community to mobilise resources and to use them productively, sustainably and equitably in addressing the needs of that community (Thorpe, 2002). The term CBM becomes appropriate when the management processes are broadly distributed within the community. The term is not appropriate when resources on which the wellbeing of the community depends are being managed for the community by persons outside its boundaries or is managed by a small elite group. A real community-based management arrangement should strengthen and broaden the local base of effective resource control (Breslin, 2002).

II. KEY WATER MANAGEMENT PROBLEMS IN URBAN ZIMBABWE

As Sultana (2008) observes, community and participation have become popular in development discourse and practice in relation to water resources management, as the greater involvement of people in decision-making, implementation and evaluation of water management practices is expected to increase efficiency and equity in water management. In the same vein, Carr, Bloschl, and Loucks (2012) note that participation in water resource management has increasingly gained momentum over the last decades, with great emphasis on the role of stakeholder and public involvement as well as the role of community involvement in decision making. Cognisant of this trend, the government of Zimbabwe has to certain extent adopted community based water management systems in its urban centres, since it is facing serious water supply challenges. Studies by Nhapi (2009) revealed that the current problems have been caused by rapid population growth after independence in 1980, inadequate rehabilitation and maintenance of water and wastewater treatment plants, expensive technologies and a poor institutional framework. According to Nhapi, (2009) this means that for Harare, for instance, the problem is two-fold that is, inadequate water quantity and poor water quality. Water quantity problems in Harare have been attributed to the inadequate pumping capacity at Morton Jaffrey Works and Prince Edward Water Treatment Works as observed by (Manzungu and Mabiza, 2004). Nhapi et al. (2012) postulated that in order to avert the current water scarcity in the city, another water treatment plant should be developed to meet growing demand.

The quality of drinking water on the other hand has been seriously affected as a result of deteriorating water quality in Lake Chivero (Nhapi et al, 2012). Pollution reduces the uses water can be put to and in the case of Harare, it increases the cost of purification for domestic use thereby reducing quality standards in form of disorders in colour, smell and taste. Although the cholera pandemic was contained in 2009, water problems still persist as evidenced by the outbreak of typhoid and other isolated cholera cases (Manzungu, 2012, MoH, 2018).

Harare water challenges are further exacerbated by the high rate of urban growth and unplanned settlements the city is experiencing with most of that growth affecting the already overwhelmed high density suburbs and peri-urban areas where there is limited or no access to basic environmental services (MDG Progress Report, 2011). Most of the infrastructure was meant to support only a limited number of residents and the planners did not anticipate the current rate of rural to urban migration.

Erratic water supplies and poor sanitation mostly affect the poor as they do not have alternative means. Those who can afford can drill household boreholes or may resort to buying or transport it from other places. The majority however, are forced to dig shallow wells within their yards as was the practice in rural areas. This however, resulted in an unprecedented cholera outbreak in 2008-9, 2017 and 2018 which claimed more than 4,400 lives according to Manzungu (2012) and MoH (2018). According to UNDP (2009) the outbreak affected all ten provinces both urban and rural areas and was largely attributed to water shortages and malfunctioning sanitation systems. Burst sewer pipes underneath and above the ground started to mix with fresh water bodies which according to UNICEF (2009) is what triggered the cholera outbreak in Chitungwiza town near Harare and Budiriro, a Harare high density suburb which later became the epicenter of the pandemic.

A study by MOH (2013) revealed that the Budiriro community in Harare, like other residents, experienced

frequent water shortages for over 12 years due to water supply systems failure, leading to the use of alternative sources of water like deep and shallow wells at residential stands and along water streams in and around Budiriro, posing another health hazard to the community. The consequences of not having adequate water and sanitation services tend to be too costly at individual, community, government and national level and thus the search for sustainable ways to provide such services for urban population remains high.

As an interim measure and as part of efforts to mitigate against water borne and poor sanitation and hygiene related diseases, boreholes fitted with a hand pumps, a facility originally meant only for rural areas, were drilled in urban areas. All high density suburbs including Budiriro, which had high cholera incidence rate were provided with communal boreholes for safe access to clean water. UNICEF together with GAA and OXFAM for example drilled 200 boreholes in several cities and small towns that were affected by cholera in the 16 districts (UNICEF, 2010). Other organizations such as Mercy Corps and Practical Action were involved in the provision of sanitation facilities and solid waste management in and around urban areas to create a defecation free environment and reduce disease incidences (MoH, 2010). The efforts ranged from rehabilitating the old ones to construction of new communal latrines. Due to limited financial provisions, all the facilities provided were for communal use.

Despite the interventions, the water and sanitation situation has not improved as there was still erratic supply and malfunctioning sewer pipes. According to Manzungu (2012), isolated cholera outbreaks have been recorded in and around Harare, including Budiriro and some small towns since 2009. Early in 2012, and 2015 Budiriro and other high density suburbs experienced yet another disease outbreak in the form of Typhoid, which was attributed to an erratic water supply in high density areas, which compromised good hygiene practices (The Herald, 6 February, 2012 and 17 October 2015). The boreholes in question were constructed during an emergency period where the objective was to 'save lives' but three years after the cholera outbreak, the boreholes are still being used as the only next safe alternative.

In Budiriro, 28 boreholes were drilled but only 14 were functional as there was no service and repairs being done to those that were not functioning. There is extensive evidence according to (UNICEF 2010) that newly delivered WASH services often perform effectively for a period, and then either fall into disrepair or otherwise fail to provide continuing benefits to their users. What makes the Budiriro situation even more frightening is that even though the interventions were in reaction to the cholera outbreak of 2008, the water and sanitation service delivery situation in the suburb has not improved since then (Manzungu, 2015). City of Harare continues to run on limited resources and the government itself has not recovered from the economic depression that started at the beginning of the last decade. There is no doubt that the supposedly stop-gap is still very much needed now and maybe for a long time to come.

Despite these interventions, there was overwhelming evidence that the condition of donated boreholes in Budiriro high density suburb, indicated a high level of poor management in handling WASH facilities, and vandalism of borehole iron bars. About ½ of these boreholes were broken down and have not been repaired despite acute shortage of safe drinking water in Budiriro (Nhapi, 2009). The ownership of the boreholes is with the City of Harare who have failed to repair some broken down boreholes in the area thereby exposing the community to diseases arising out of frequent shortages of safe and clean water due to frequent water supply systems failure in Harare (Nhapi 2009). These problems, as by Manzungu, (2012) points out, often result from poor management of the council, which leads to erratic and dirty water supply. OECD (2015) asserts that lack of an integrated framework for water facilities management and protection at national and local levels, as well as low level of public awareness are also contributing factors.

III. POLICY SOLUTIONS TO ADDRESS THE PROBLEMS

From UNICEF (2010) experience and studies, some community organizations in rural and urban areas have been successful in generating financial resources needed for the extension of services and in acting as providers of services through the operations and management of local utilities popularly known as Community Based Management (CBM).As a result Zimbabwe introduced the CBM concept in rural areas which became a successful initiative (UNICEF, 2003).

Community based management (CBM), as argued by Pandey and Okazali (2005), ensures that communities are responsible, and have authority and control over development of their water and sanitation facilities. Pandey and Okazali observed that, in areas where government and local authorities have been unable to manage water and sanitation facilities, community management has proved to be good and sustainable alternative. It is argued that, it aims at empowering people and equipping them to own and manage their own system sustainably.

Despite frequent outbreaks of diseases and donated boreholes, the community had not been accorded the opportunity to take ownership of the boreholes and no repairs had been done by the City of Harare to ensure uninterrupted clean water supply against the background of frequent water shortages and lack of council capacity. Hence the introduction of CBM would help to solve this problem.

Therefore this paper provides evidence surrounding the use of community based management of WASH facilities given the failure of City of Harare to maintain the hard-to find facility donated to save life in the community.

IV. STATE OF EVIDENCE SURROUNDING THE IMPACT OF KEY SOLUTIONS

Community Based Approach

The concept of community based approach is not new or unique to the water and sanitation sector. The approach has and is being implemented in forestry management, fisheries, game parks, and HIV and AIDS programmes, among others OECD (2015). The rationale is that what the communities themselves manage on their own, in their own way, using their own resources stand a greater chance of sustainability than an externally imposed approach. Community based approaches to services are supported by several international declarations. The United Nations Decade Era (UN, Decade dossier, 1981) which recommended a shift towards sound financial practices, improved role and participation of communities and women, institutional reforms and environmental protection. The Dublin principles (Dublin Conference report, 1992) further stated that water development and management should be based on a participatory approach involving users, planners and policy makers at all levels and that water should be managed by the users and those close to it. Agenda 21(Rio Earth Summit Report) further elaborated on the Dublin principles by advocating the involvement of local communities, especially, women in water resources management and promotion of community management, cost effective programmes and operations and maintenance. The Vision 2000 statement recommended the decentralized implementation of the water and sanitation programme with the Rural District Councils (RDCs) and the community of users assuming greater responsibility in the management of their water supplies.

The concept of CBM shares ideological roots with the *comunidad de base* of the 1970s Liberation Theology Movement in Latin America according to Breslin (2002). The key words are a bottom up approach whereby theory is evolved by the praxis of the community, which is the base. According to de Gabriele (2002), CBM also has emerged out of the shift to participatory development since the late 1970s. The strength of this ideology is that it goes to the base. That is, the theory should be formed from observable practice.

Community Based Management (CBM) is just a simple but attractive concept (Cernea, 1994) and is about communities being involved and active in managing their own development. According to The Urban Institute (2001), CBM is a people centred approach and is based on the fact that sustainable development and poverty elimination requires respect for human freedom and choice as well as understanding of the environment around them. This concept entails communities making decisions about their future and strengthening local ownership of local problems and solutions as well as designing actions to deal with identified challenges (Mayer 1995). This does not imply that communities must take responsibility for everything but rather promotes an integrated approach to problem solving between different stakeholders. It puts communities in charge of their own development in a flexible partnership with supporting agencies including the local authority and the resources each can provide are used in the most effective way that develops a dependable and sustainable water and sanitation supply system. Such partnership allows sharing of responsibilities and the division of responsibilities may vary significantly, but should be agreed upon in advance. When everyone knows what is expected of them, then communities can hold their local and national government accountable to agreed actions or claim their community right to services.

CBM, unlike simple participation, firmly places control over the development and upkeep of the water system on the community itself (IWSD, 2005). But before that happens, communities have to be equipped and empowered to take on its changed role (from passive recipient to active manager) and at the same time the role of local authority, Government and Non-Governmental Agencies changes to development facilitator.

The Impact CBM in Zimbabwe

The Institute of Water and Sanitation Development (IWSD) (2015) argued that in Zimbabwe, like in many other African states, CBM has been accepted among policy makers, development practitioners, NGOs and developing country governments as the route to sustainable WASH interventions but with an initial focus on water points only. IWSD gave evidence of steps towards the implementation of CBM in Zimbabwe which started in the early 1990s with a pilot project in Chivi district. By 1997, CBM had been extended to five other rural districts namely Mutoko, Makoni, Matobo, Kwekwe and Beitbridge. Experiences in these districts revealed that it was necessary to document some principles upon which CBM will be based and this was successfully done in 1997. In 1997, the National Action Committee (NAC) adopted CBM as a national strategy that could be used to enhance the sustainability of water and sanitation facilities. This was followed by a directive by the NAC to districts to include CBM in all new WASH proposals submitted for funding. To streamline the implementation of CBM, formulation of guidelines started in 1999 and was finalized in 2000. Since these early pilots and the subsequent scaling up of CBM, the WASH sector has evolved and CBM itself has grown to look at sanitation, solid waste management and hygiene using in some instances health clubs, volunteers and community based organizations. However, besides the NAC guidelines for CBM of water supply facilities in rural areas, there has not been any agreed, standardised guidelines specifically for urban WASH. Individual fragmented efforts have been put on urban water, solid waste and latrines but still the formula for making it work is not known. For instance, Practical Action, a non-Governmental organisation has tried to apply the CBM concept in areas of Mbare and Hatcliffe in Harare as well as in Kadoma focusing on boreholes and solid waste management (Practical Action, 2011). Mercy Corps, an American Based Humanitarian organization implemented

CBM of public latrines in Sakubva High density suburb in Mutare (IWSD, 2009). The challenge, however, is the lack of a standardized formula of applying CBM in urban areas which makes it difficult to measure the success of these separate initiatives. The second challenge is lack of written down guidelines which can be used except for the NAC rural focused CBM guidelines developed in 2002 as mentioned before.

V. CONCLUSION

Against the backdrop of a plethora of challenges facing the urban water management sector in Zimbabwe, community based management is a possible option, although it has its own attendant challenges, such as delays in decision-making, reduction of government culpability and vulnerability to manipulation by powerful interest groups. Community based management is increasingly being recognised and encouraged for the effective management of a public resource like water, since it engenders, within communities, a sense of ownership and responsibility requisite for the effective and efficient management of the resource. The greater involvement of ordinary people in decision-making, implementation that CBM fosters is also expected to increase equity in water management. For community based water management to be effectively implemented in the urban sector in Zimbabwe, there is, however, need for robust public policy frameworks and implementation mechanisms. Coping with current and future water challenges requires robust public policies, targeting measurable objectives in pre-determined time schedules at the appropriate scale, relying on a clear assignment of duties across responsible authorities and subject to regular monitoring and evaluation.

REFERENCES

[1]. Boris E.T. (1999) *Next Step for Building Capacity in Non-profit Organisations, the Urban Institute*

[2]. Brody E. and Cordes JJ. (1999) *Tax Treatment of Non-profits: A Two Edged Sword? In Government and Non-profits: Conflicts or Collaboration.*

[3]. Campbell S. (1996) *Green Cities, growing cities; Just cities? Readings in Planning Theory, 2nd Ed.* Oxford: London.

[4]. Carr, G., G. Blo¨schl, and D. P. Loucks (2012), Evaluating participation in water resource management: A review, *Water Resour. Res., 48, W11401, doi:10.1029/2011WR011662.*

[5]. Cernea M. (1994) *The Sociologist Approach to Sustainable Development, Making Development Sustainable: From Concepts to Action.*

[6]. Claridge, T. (2004) *Designing Social Capital Sensitive Participation MethodologiesSocial* Dunedin: Capital Research.

[7]. Edwards K. (2000). *The Structure of Local Environmentalism*.

[8]. Edwards B. and Foley MW. (1998) *Civil Society and Social Capital Be.yond Putnam: American Behavioural Scientist.*

[9]. Gardner J. (1991).*The Changing Nature of Leadership*.

[10]. Goal Zimbabwe, (2009). *Assessment of Harare Town Water and Sewage Systems.*

[11]. Hall JA. (1995*) In Search of Civil Society. In Civil Society Theory, History, Comparison.* Cambridge, Mass Harvard University Press.

[12]. International Institute of Rural Reconstruction (IIRR) (1998). *Participatory Methods in Community Based Coastal Resource Managemnt. 3 Volumes, Silang, Cavite, Phillipines.*

[13]. Instituted of Water and Sanitation (2015) *Health and Epidemiology Module.* Harare: Institute of Water and Sanitation.

[14]. Manzungu, E. &Mabiza, H. (2004). *Water for all: Improving water resource governance in Southern Africa*, Gatekeeper Series No.113

[15]. Mayer S.E. (1994) *Building Community Capacity: The Potential of community foundations: Minneapolis: Rainbow Research.*

[16]. Minkoff D.C. (1997) *Producing Social Capital: National Social Movement and Civil Society; American Behavioural Scientist.*

[17]. Zimbabwe Government. (2009).*Survey on cholera outbreak in Harare*. Harare: Ministry of Health and Child Care

[18]. Moench, M. (2003). *The fluid mosaic; Water governance in the context of variability, uncertainity and change*. Nepal Water Conservation Foundation.

[19]. Nhapi, I. (2009). The Water Situation in Harare Zimbabwe: A policy and Management problem. *Journal of water policy volume 11 pp 221-235*

[20]. OECD, (2003). *Peer Review: A tool for cooperation and change, Development Cooperation Report.*

[21]. OECD. (2015).*Stakeholder Engagement for Inclusive Water Governance; OECD Studies on Water*, OECD Publishing

[22]. Pandey B. and Okazali K. (2008) *Community Based Disaster Management: Empowering Communities to Cope With Disaster Risks.* United Nations Centre for Regional Development, Japan.

[23]. Putnam R. (2000) Bowling Alone. America's declining social capacity, Journal of Democracy.

[24]. Rogers,P. &Hall,A.W. (2003). *Effective Water Governance. TWC Background Paper No. 7* Global Water Partnership, Technical Committee Stockholm, Sweeden.

[25]. Sultana, F. (2009) Community and participation in water resources management: gendering and naturing development debates from Bangladesh. *Transactions of the Institute of British Geographers.*

[26]. UN DESA (2015) *The Critical Role of Water in Achieving the Sustainable Development Goals: Synthesis of Knowledge and Recommendations for Effective Framing, Monitoring, and Capacity Development* Paper prepared for the United Nations, Department of Economic and Social Affairs.

[27]. UNDP, (2007). *Water Governance Facility*, http://www.watergovernance.org/

[28]. UNESCO (2019) *The United Nations World Water Development Report 2019: Leaving no one behind.*

[29]. UNICEF, (2003), *Community Centred Capacity Development: A step-by step guide on training facilitators*, UNICEF, Harare.

[30]. UNICEF, (2007), *Programme Policy and Procedure Manual: programme Operations (Revised)*, Harare.

[31]. UWEP (2012) *Working Document: Community Based Solid Waste Management and Waste Supply Projects: Problems and Solutions.*

[32]. Weisbrod B.A. (1988) *The Non-profit Economy*. Cambridge, Mass .Harvard University Press.

[33]. WHO/UNICEF, (2010), J*oint Monitoring Report*.

[34]. WWAP (UNESCO World Water Assessment Programme). (2019). *The United Nations World Water Development Report 2019: Leaving No One Behin*d. Paris.