

Sustainability and Equity Review of CARE Zambia's Peri-urban Water & Sanitation Model

An analysis of how well the Water Trusts have managed to continue their mission of providing quality water and sanitation services, accessible to the most poor and vulnerable households in these peri-urban settlements since CARE ceased to support them.

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Acronyms

CBO	Community Based Organisation
CBE	Community Based Enterprise
CP	Cooperating Partner
CSO	Civil Society Organisation
CU	Commercial Utility
FDG	Focus Group Discussion
GRZ	Government of the Republic of Zambia
JICA	Japanese International Cooperating Agency
LA	Local Authority
LCC	Lusaka City Council
LWSC	Lusaka Water and Sewerage Company
MCDMCH	Ministry of Community Development Mother and Child Health
MCA	Millennium Challenge Account
MCC	Millennium Challenge Corporation
MDG	Millennium Development Goal
MP	Member of Parliament
O&M	Operations and maintenance
NWASCO	National Water Supply and Sanitation Council
UWSS	Urban Water Supply and Sanitation
WSS	Water Supply and Sanitation
WSUP	Water and Sanitation for the Urban Poor
WT	Water Trust

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Section I – Background and objectives of the review

1.0 Background to the review

As a capital city Lusaka is also the most urbanized city in Zambia with a population of 1.7 million in 2010 (CSO, 2011) with at least 35 peri-urban settlements accounting for the majority of the population living in the city. Water Supply and Sanitation services in these settlements was very poor, inadequate, unreliable, with at least 56% and 90% of the peri-urban populations not having access to safe Water Supply and satisfactory Sanitation facilities respectively. In order to address this situation, the Government of the Republic of Zambia embarked upon a sector wide restructuring exercise in 1993 which provided an enabling policy environment for International NGOs to develop and implement innovative management models that would embrace the interests of communities and Government.

CARE was invited by the Government of the Republic of Zambia (GRZ) in 1992 to mitigate against the negative impact of drought and Structural Adjustment Programme of the early 1990s. The first project was the Project Urban Self-Help (PUSH) phase I, a food-for-work project. CARE took interest in addressing the water situation because the communities identified water as their priority need. It was not until 1997 under PUSH II the first water project became operational. In March 1998 CARE, with funding from the Department for International Development (DFID), started the Program of Support for Poverty Elimination and Community Transformation (PROSPECT). In terms of the water projects, only one scheme was implemented under PUSH II whereas 11 water schemes were implemented under PROSPECT.

Through these projects, CARE Zambia helped set up Water Trusts (WTs), as community-owned and managed water and sanitation service providers in marginal peri-urban settlements of Lusaka. Water Trusts were set up in Kanyama, Chaisa, Chibolya, Chazanga, Chipata and Garden peri-urban settlements, while five other water schemes were constructed across five settlements in Lusaka (Mtendere, Kabanana, Mandevu /Marapodi, Jack, Chunga) and Malota in Livingstone and handed over to Lusaka Water and Sewerage Company (LWSC) for establishment of an alternative governance structure. CARE has also collaborated with other donors and actors [Water and Sanitation for the Urban Poor (WSUP) and Japanese International Cooperating Agency (JICA)] to support the setting up of Water Trusts in other settlements in Lusaka. In addition, CARE has helped strengthen LWSC's capacity to establish a Water Trust in Mtendere East.

The Water Trusts, set up between 2001 and 2005, have proven to be largely functional to date. They are recognized by Government, albeit informally, as alternative (to LWSC or to water sourced from shallow wells etc) providers of water and sanitation services in informal settlements. There are 12 water trusts in Lusaka supplying water to the unplanned settlements. These water trusts play an important role. The daily production of 5,390 m³ by the water trusts can be compared with the production of 28,600 m³ and the billed volume of 13,400 m³ by LWSC for the peri-urban areas. There are also independent water and sanitation providers covering about 1.4 % of the urban population. These schemes are also regulated by NWASCO¹.

The established Water Trusts operate under Lusaka Water and Sewerage Company water and sanitation license through a Delegated Management Contract arrangement. Water Trusts' key collaborating partners include Lusaka City Council (LCC), the local authority, Lusaka Water and Sewerage Company (LWSC) the mandated water and sanitation service provider, Ministry of Community Development,

¹ MLGH, National Urban Water Supply and Sanitation Programme, 2011-2013, 2010

Mother & Child Health (MCDMCH), the line ministry on issues of equity and vulnerability, plus the Ward Based Development Committees who provide community leadership.

Besides water infrastructure, CARE, through various urban projects, supported the construction of household level sanitation facilities (ecological sanitation toilets) and water borne public toilets in Chaisa, Kanyama and Chipata settlements. Over the years, the Water Trusts have been given additional responsibility of managing water borne fee-paying public toilets and there is potential for the WTs to take on additional urban sanitation services, such as solid waste management.

With significant donor funding and Government investment in improving urban and peri-urban water and sanitation infrastructure and services in Lusaka over the next few years (in particular, the US-funded \$354.8m Millennium Challenge Corporation Compact for the Lusaka Water Supply, Sanitation and Drainage (LWSSD) project), CARE and LWSC have conducted an analysis of how well the Water Trusts have managed since CARE ceased to support them, in continuing their mission of providing quality water and sanitation services, accessible to the most poor and vulnerable households in these peri-urban settlements.

1.1 Review objectives

1. To what degree have the Water Trusts continued to provide, and expand, coverage of water and sanitation services, beyond their initial levels of coverage when CARE stopped direct support?
2. To what degree are the Water Trusts financially sustainable? Are revenues covering operating costs as well as infrastructure replacement costs?
3. What are the average economic benefits for women and men working for the Water Trusts (in particular the vendors)?
4. To what degree have the Water Trusts ensured the inclusion of the most vulnerable households, including female and child headed households, in management and in service provision?
5. To what degree have the Water Trusts managed to remain as independent, service-oriented institutions, relatively free from political interference? How have the Water Trusts negotiated with local political stakeholders or other power holders (externally, and within their own Board, and between the Board, management and vendors), to be able to remain focused on their mission of providing equitable and quality services?
6. What is the scope for the expansion of the Water Trust model into new geographical areas (as the MCA project and others are implemented) or into new areas of service provision (e.g. solid waste)?
7. The degree to which Water Trusts have benefited from their relationship with LWSC, LCC, and MCDMCH in the following areas: attending meetings, O&M, enforcement of the terms and conditions set out in the Trust Deed; Management Contract; HR and Administration manuals respectively.

1.2 Review approach and methodology

To undertake this review, the following approach and methodology was used:

Data collection tool development: A data collection framework was developed and finalized with comments from the CARE UK office. This framework is what has been used to collect data from the different stakeholders interviewed. The methodology used was mainly qualitative focussing on field interviews as listed below.

Field visits to settlements: field visits were made to the following settlements (chosen in consultation with LWSC): Chipata (which had received support from CARE), Kalikiliki (which had not received support from Care but from JICA) and Chibolya (which had also received support from CARE). The following local structures were met: The management team of the Water Trusts; The Water Vendors, The Sanitary Workers; Ward Development Committee members and other key informants identified by the community or the management of the water trusts. In addition focus group discussions were also held

with groups of community members (users) including women, youth, the elderly and people living with disabilities.

Observations within the settlement: In addition to the interviews in the settlements, visits were also made to some of the water points in some of the settlements where further discussions were held with community members as well as observations made with regard to the design and location of the water points vis-à-vis equity/accessibility considerations.

Interviews with key informants at the national level: Following the field visits to the settlement, additional interviews were undertaken with a number of institutions at the national level including the Lusaka City Council, Lusaka Water and Sewerage Company, the Ministry of Local Government and Housing, the millennium Challenge Account among others (*see full list of those interviewed in appendix II*)

1.3 Structure of the report

The report is divided into four sections as follows:

Section I: Provides a background to the review covering the overall purpose as well as the approach and methodology.

Section II: Gives an introduction to the WT model, outlining the basic structure and overall purpose.

Section III: Details the findings of the review covering the elements of review as outlined in the terms of reference.

Section IV: Focuses on reviewing the scope of replicating the model to other areas both in terms of coverage and scope of services offered

Section V: Draws from the discussions in the previous sections and lays out some conclusions and recommendations on the WT model as it has expanded its services and the implications for replication. The section specifically recommends critical elements for consideration in any strategy for expansion that wishes to use the WT model. These identified elements are based on the discussions and recommendations made from the different people interviewed during the review process.



Section II – Introduction to the Water Trust Model in Zambia

2.0 Water and sanitation in Zambia

Domestic water and sanitation are thought to be among the most important services that should be provided for people who live in urban areas. This sub-sector includes drinking water supply, systems for dealing with waste water and sewerage and domestic faecal disposal systems and practices. The 2010 National Urban Water Supply and Sanitation Programme (2011-2030) also includes solid waste and storm water (drainage) management. The effective provision of these services has primary health benefits and prevents the spread of diseases. It is commonly agreed that effective water and sanitation relies on strong state led and citizen led institutions and good governance, particularly so that all people, even the poorest, receive water effectively and can use it to serve their needs.

With regard to service delivery, there are two main actors: the Ministry of Energy and Water Development, responsible for water resource management and development, and the Ministry of Local Government and Housing, charged with the delivery of water and sanitation services through local authorities. The National Water Supply and Sanitation Council monitors and enforces standards for all water and sanitation schemes. Within the Ministry of Local Government and Housing, the Department of Housing and Infrastructure Development oversees policy guidance and mobilization of resources for efficient service delivery by public providers.

Within the Zambia National Decentralization Policy, water and sanitation along with solid waste management, drainage improvements and environmental services are devolved to Local Authorities including city councils. Provision of water and sanitation services in both rural and urban areas is the responsibility of the Municipal Authorities. Lusaka City Council (LCC) is the governing local authority for the city of Lusaka. The Local Authority derives its authority from several Zambian laws, but most immediately, Section 61 of the Local Government Act, which lists 63 functions of local authorities. Their responsibilities include, but are not limited to:

- The provision and maintenance of supplies of clean water and the establishment of water works and water mains;
- Prohibit and control the use of land and erection of buildings in the interest of public health, safely and orderly development of the Council area; and
- Approval to formalize unplanned settlements

As water supply and sewerage services previously offered by Lusaka City Council (LCC) began to deteriorate, a study instituted in late 1980's with support from GIZ (then GTZ) recommended devolution of water and sewerage services from LCC to a commercial utility. This saw the establishment of a quasi-government institution, Lusaka Water and Sewerage Company (LWSC) in 1988 under the Company's Act. Staff and some assets belonging to Water and Sewerage department of LCC were transferred to LWSC. The Company started operating in 1990 and assets were fully transferred in 2003 through Statutory Instrument 26 of 2003.

Countrywide, urban water and sanitation service provision has therefore been fully delegated from local authorities to commercial utilities with the aim of increasing efficiency and sustainability in operations. Lusaka Water and Sewerage Company is the sole commercial utility providing water and sanitation services to Lusaka residents in both urban and peri-urban areas. The utility is regulated by the National Water Supply and Sanitation Council (NWASCO) in terms of performance and tariffs among others.

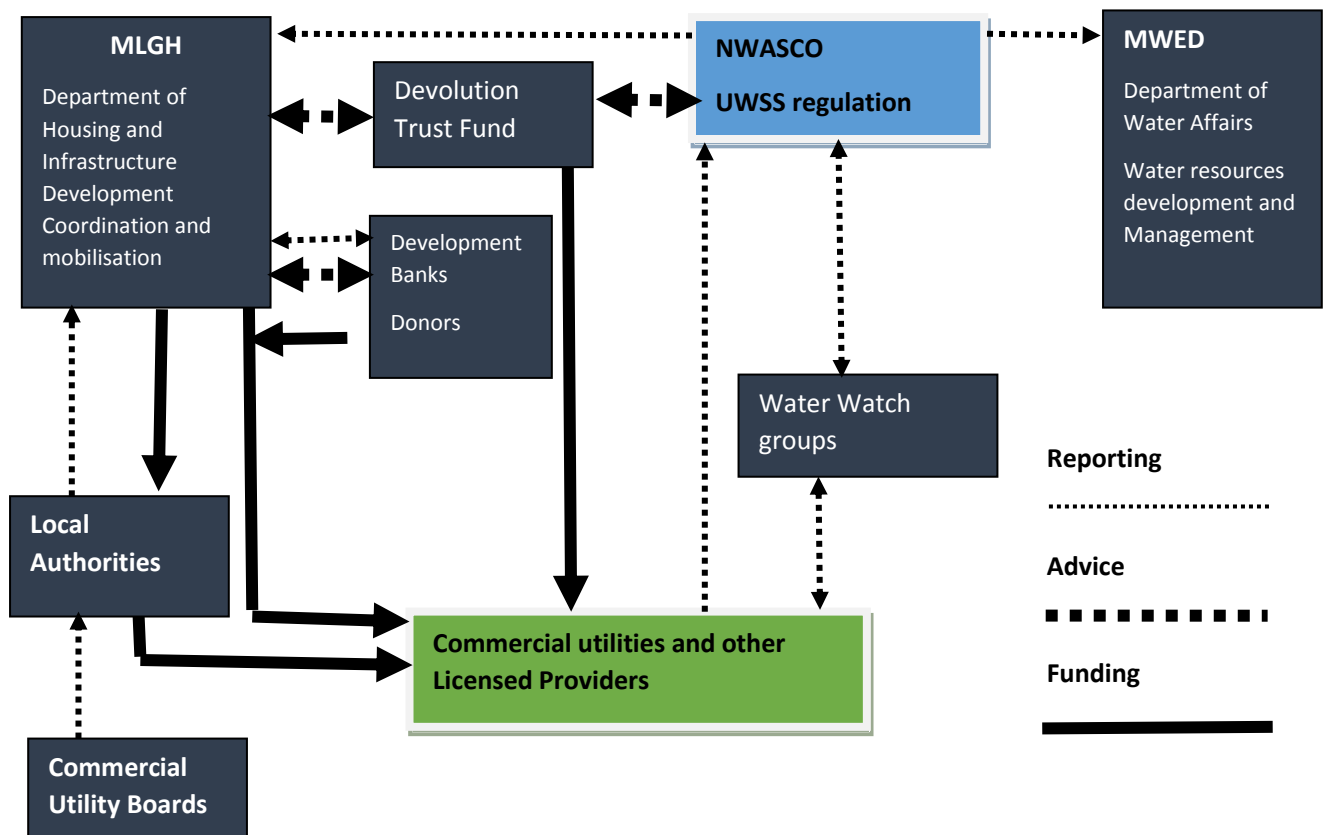
NWASCO was established by the Water Supply and Sanitation Act of 1997 of the Laws of Zambia, and serves to regulate the provision of water supply and sanitation services in the country. NWASCO ensures

that water and sewerage companies provide consumers with good quality service at a fair value for money while operating sustainably and efficiently. Its core functions are to regulate the provision of water supply and sanitation services for efficiency and sustainability and include : licencing providers; Advise the Government on water supply and sanitation matters; Establish and enforce sector standards and guidelines; Advise providers on procedures for handling complaints from consumers; and Disseminate information to consumers on water supply and sanitation issues

According to the Millennium Development Goal (MDG) Progress Report of 2013, Zambia has made good progress in providing clean drinking water to its population. The proportion of the population without access to an improved water source decreased from 51.0% in 1990 to 36.9% in 2010. However, with alarming lack of adequate sanitation in both urban and rural areas, the country faces a tremendous challenge in meeting the MDG sanitation target by 2015. The proportion of the population without access to improved sanitation facilities worsened from 26.0% in 1991 to 67.3% in 2010. The post-2015 consultations concluded on the urgency of the Government, local leaders and communities stepping up and demanding investments on improved basic decent sanitation and clean water for all as a means of reversing the current trend.

The figure below provides an overview of the organisation of the water supply and sanitation sector. It is clear that the sector has many players with distinct, although at times overlapping, roles. As a result the WSS sector appears “complex”. Organisations in the WSS sector can be grouped into three categories: (i) water service providers; (ii) policy, regulatory and coordination institutions; and, (iii) institutions with an indirect role (mainly sector ministries)²

Organisation of the urban water supply of sanitation sector



Source: MLGH, National Urban Water Supply and Sanitation Programme, 2011-2013, 2010

² MLGH, National Urban Water Supply and Sanitation Programme, 2011-2013, 2010

2.1 History of the Water Trust Model in Zambia³

For urban areas of Lusaka City Council (LCC), Lusaka Water and Sewerage Company (LWSC) is mandated to provide the services. Lusaka Water and Sewerage Company, a public liability company wholly owned by Lusaka City Council, is legally responsible for provision of water and sanitation services to all urban and peri urban residents of Lusaka City. To enable it reach more people, delegated management has been used to provide services to the peri-urban areas of Lusaka. This has taken the form of Water Trusts (WTs) which are provided with a licence by LWSC for provision of water services in peri-urban areas. As such the WT's can be understood to be entities subcontracted by LWSC and overseen by them as they provide services on its behalf. The WT's each sign a service management contract with the LWSC that specifies what the roles and responsibilities are of both parties.

In a review process, specific weaknesses were identified with the service management contracts that were signed between LWSC and the different WT's, these included issues around the board member meetings, issues of board allowances, capacity building of board members, strengthening of internal financial controls, setting of performance indicators, auditing of the WT's and remittance of some money to LWSC for any services that it renders to the WT's. With assistance from WSUP, the service management contract has been revised but at the time of the review had not been signed by the LWSC and the WT's.

The Water Trust Model is an innovation of CARE Zambia developed and implemented in collaboration with Lusaka City Council and Lusaka Water and Sewerage Company who were the Trust Settlers as defined in the Trust Deed. The WT is a two-tier community management structure registered with the Ministry of Lands under the Perpetual Succession Act of the Laws of Zambia. In relation to the progressive realisation of rights, the concept of progressive realisation demands that states take deliberate, concrete and targeted steps towards fully realising covenant rights as expeditiously and effectively as possible and using the maximum available resources. The obligation to focus on the most marginalised and vulnerable is crucial for progressive realisation to bring about progress where it is most needed. By allowing the implementation of this particular model, the Government of Zambia has allowed for more people to be reached water services than would have otherwise been done through the LWSC alone.

2.2 The overall purpose of the Water Trusts

The priority of the Water Trust is to, on behalf of LWSC as described above, provide water and sanitation services to community members, through public standpipes (kiosks) and individual household connections and on the sanitation side, the provision of fee paying toilets. At the system level, and where necessary, LWSC is contracted to provide further technical assistance.

2.3 The overall management structure of the Water Trusts

The Water Trust is comprised of a two-tier management structure with the Board of Trustees as the apex body and the management team as the supporting structure. The main role of the Board is to supervise and guide the management team, who in turn are mandated to manage the scheme on a daily basis and are required to submit regular reports to the Board. The entire staff under the management team are recruited locally through a transparent and competitive process. The structure allows for the recruitment of a Manager, Revenue Officer, Plant Operator, Administration Assistant, Handyman, Cashiers, Plumbers, Meter Readers and Guards. Once the staff take up their appointments, they are provided with relevant skills, through various capacity-building activities such as intensive courses and on-the-job training.

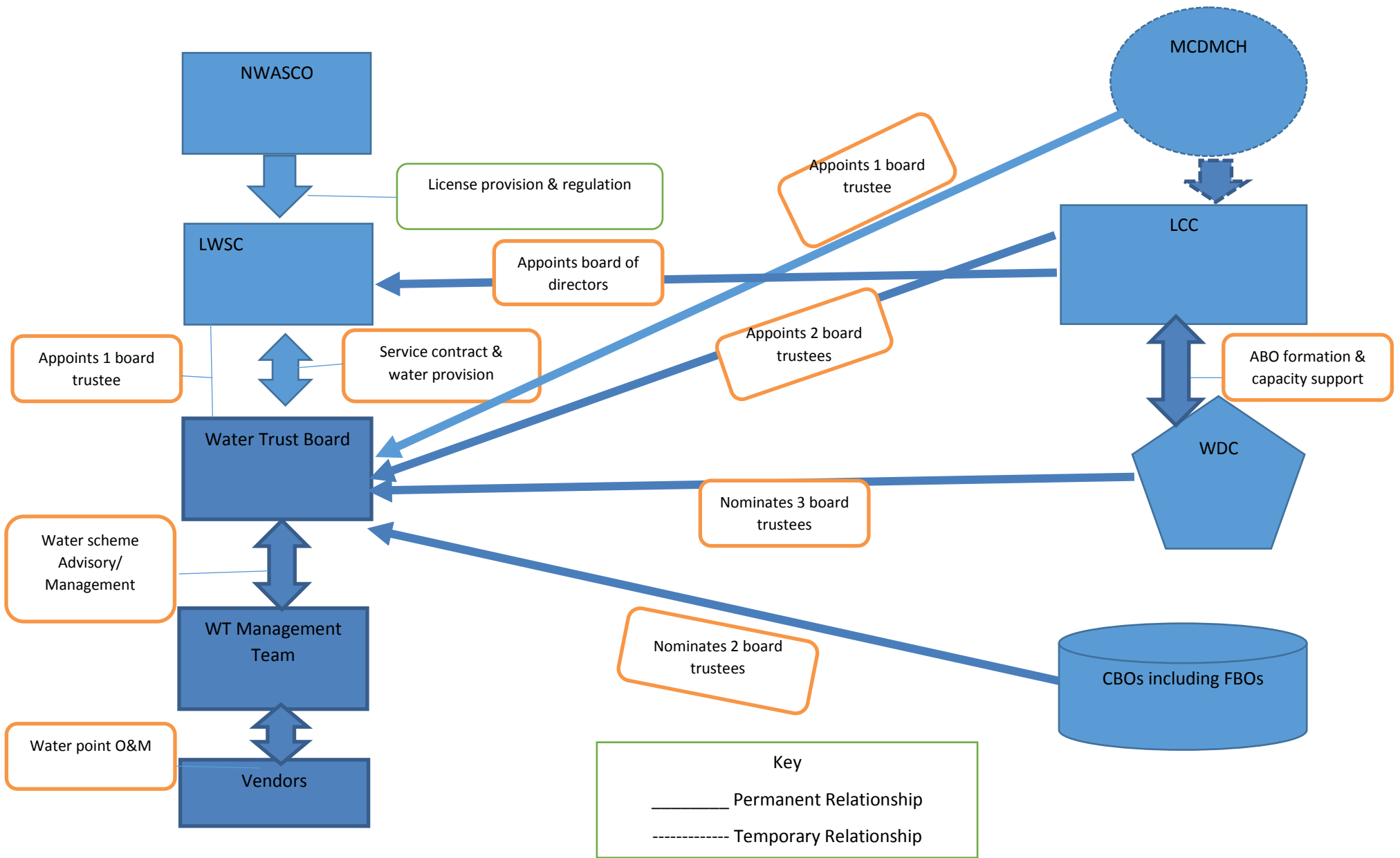
The model also allows for recruitment of water vendors and sanitary workers (where fee paying toilets exist) locally to sell water and operate public toilets, respectively, on a commission basis. These are recruited from among members of the community and the selection criterion is based on numerical and

³Mwanamwambwa and Nkoloma (2005): Maximizing the benefits from water and environmental sanitation; from practice to policy: CARE– Zambia's 'Water Trust Model'. Paper presented at 31st WEDC International Conference, Kampala, Uganda, 2005

reading skills. The vendors sign a water point operations and management (O&M) contract with management and receive a commission for selling water on behalf of the Water Trust. Vendors ensure that any faults are reported and attended to as soon as they are detected.

Any funds generated by the WTs are left with them to enable them improve and expand the services. All WTs have opened investment accounts into which all profits are kept for future investment. In the initial service contract, the WTs were not obliged to remit any funds to any institutions including LWSC. This has been revised in the new and yet to be signed contract between the WTs and the LWSC

See the diagram below for the full institutional structure.



WATER TRUST MODEL- INSTITUTIONAL ARRANGEMENT

2.4 The board composition

The Board members are nominated by the key institutions (indicated below) and officially appointed by Lusaka City Council (LCC) Town Clerk. The Board consists of nine members called Trustees, four of whom are professionals with skills critical to the needs of the scheme. For example head of the Peri-Urban Section of Council is among the professions while LWSC has the head of the Peri-Urban Department and Accountant as a Trustees. At inception of the model, CARE Zambia's PROSPECT Programme Manager was a member of the Board but was later replaced by an officer from the Ministry of Community Development Mother and Child Health (MCDMCH) given the Ministry's interest in the poor and most vulnerable in society. These four representatives of LCC, LWSC & MCDMCH sit on all the Water Trust Boards. From inception of model, the other five board members came from each respective settlement and from this number, three were elected community leaders drawn from the then Residents Development Committee (RDC), which was responsible for overseeing all the development activities in the settlement whereas the other two are non-elected individuals selected from among the active CBO operating in the settlement (mostly 1 from business community and the other from faith based organisation). In 2011, when there was a change of government, the mandate for WDCs members ended. It was learnt during the review that LCC was supposed to facilitate fresh elections for new office bearers but this has not taken place to date. As a result some former RDCs members have been allowed to continue serving by the area councillors so as not to create a vacuum while others were asked to step aside and replaced by other 'appointed' WDC members.

The current board⁴ composition is summarised as follows:

- i. 1 representatives from LWSC;
- ii. 2 representative from LCC
- iii. 1 representative from the Ministry of Community Development, Mother and Child Health who is supposed to provide guidance on issues of inclusion and access regarding the poorest and most vulnerable in society (women, children, aged, HIV positive patients/chronically ill and physically challenged);
- iv. 3 representatives from the Ward Development Committee (WDC). Once LWCS takes more control of the management of the WTs, it is expected that the board structure and composition will change. The boards are answerable to the Commercial Utility, LWSC whose board is in turn answerable to the LCC
- v. 1 representative from the a Faith Based Organisation (FBO), and
- vi. 1 representative from the Business Community (BC)

The right to water and sanitation confirms that access to minimum essential supplies of safe water and basic sanitation is a legal entitlement, rather than a charity or only a moral priority. The right to water provides a basis for individuals and groups to hold governments and other actors to account. Full recognition of access to water and sanitation as a right gives a real mandate to government officials to promote access to water and sanitation for all. Communities and other organisations can use the right to lobby the responsible agencies for improvements and call on them to fulfil their obligations. By virtue of the way in which the boards are structured, i.e. including the Government and community stakeholders as well as other stakeholders, the Board itself can serve as a platform through which the different stakeholders can be held accountable for fulfilment of very specific obligations. It can also be a platform through which management can lobby for specific issues regarding the supply of water and sanitation services in their areas.

⁴ (i) Amendments to the board composition were proposed in 2012 to have LWSC have 2 representatives and LCC to have 1 representative but it has not been effected. (ii) From the 5 board members representing WDC, FBO & BC, 1 is elected as **Chair** of the Board.

3.0 Water Trusts and the provision and coverage of water and sanitation services

3.1 Construction of water and sanitation facilities

In Chipata settlement, the water and sanitation facilities were funded by CARE Zambia (which had been supported by DFID). The infrastructure construction started in 1996 and ended in 1997. CARE external support ended in 2004 for water supply and in 2010 for sanitation promotion.

At the end of the project, the following had been done and handed over:

- One borehole,
- Three ground water reserve tanks (588m³ total holding capacity),
- One overhead tank,
- 31 communal water kiosks,
- 35 individual connections and distribution network were handed over to the WT. Data on water production capacity at time of handover in 1997 was not available; old data retrieved was for 2004 and the water production capacity at that time was 22,368m³ (22.368 million litres) of water per month or 745,600 litres per day.
- One fee paying ablution block was also handed over by CARE in 1997 to the WDC to manage; two additional fee paying ablution blocks were constructed by CARE and handed over to the WT in 2010. The three ablutions are strategically situated in the main market, at the football grounds and at the far end of the settlement.

In Chibolya settlement, the water and sanitation facilities were also funded by CARE Zambia under the DFID supported intervention. Whereas the water infrastructure construction started in 2001 and ended in 2004, the sanitation infrastructure was done in 2009. For water services, CARE support ended in 2004 and for sanitation in 2010. At the end of the intervention, the following was handed over:

- One borehole,
- One overhead tank,
- Five communal water kiosks
- The distribution network was handed over to the water trust.
- One fee paying ablution block was handed over in 2010.

In Kalikiliki settlement (not supported by CARE), the water and sanitation facilities were funded by the Japanese International Cooperation Agency (JICA) and LCC. The support started in 2004 and ended in 2005.

- One borehole
- The water distribution system ,
- 25 communal kiosks and distribution network were handed over to the water trust in October 2005, the construction work having started in 2004. There were no individual connections at time of handover. Before this water system was constructed, the community relied on three communal boreholes installed with hand pumps.

- The sanitation facilities which comprised 15 shared pit latrines were also handed over in 2005. One latrine was serving three households. The pit latrines were not handed over to the water trust but instead handed over to Mtendere Health Neighbourhood Committee to run them as a loan revolving fund. Management in place at the time of the review were not aware of the reasons why this was done 10 years ago. No loan recoveries have been made since then and the community have not made any requests for more toilets.

All infrastructure handed over has been effectively maintained by the WTs with assistance from LWSC. In Chibolya it was noted that there is a strong sense of ownership of the WTs by the community as evidenced by the active role played by the community in reporting and curbing cases of vandalism and illegal connections. Further, in Chipata settlement, community members interviewed indicated that they view the infrastructure as theirs, having actively participated in its construction (digging water line trenches). **During the focus group discussions held with the community members in all the three settlements, the community members, both the men and women clearly noted that the infrastructure in the community belonged to them as a community and said they, through the WTs were responsible for its management and maintenance.**

3.2 Other external support received by the Water trusts

For Chipata WT, there has been no other external support for infrastructure development since the CARE support ended. In Kalikiliki settlement, the only support received was from Water and Sanitation for the Urban Poor (WSUP⁵) who put up a water supply interconnection line between Kalikiliki and Mtendere East on a 50-50% operation cost sharing basis. For the WT in Chibolya, Children International provided financial support towards the establishment of five kiosks between 2010 and 2013. All other expansion projects described in section 4.0 were funded from the WTs own income.

3.3 Percentage of population currently being served⁶

The table below provides data on the population at the time that the settlements were being supported and the current population. In all three cases the population has grown.

	Water Trust	Population at time of interventions	Current population (2014)
1	Chipata	56,250 (1996)	123,000 people
2	Chibolya	28,450 (2004)	43,000 – 35,000 in service area
3	Kalikiliki	9,250 (2004)	14,000

As can be seen in the table above, the WTs Water contribute to the implementation of the human right to safe drinking water and sanitation every day; it is their daily job to provide water and they do so. As instruments of public policies, they have improved the quantity, the quality, the availability, the acceptability and the equity of water supply on behalf and as instructed by the LCC. Their mission, as instruments of public water policies, is to make the Right to Water a reality for people, a mission they are trying to fulfil on a daily basis.

⁵ WSUP was established in 2005 and has quickly become recognised as a leading actor in the urban WASH sector. It is a not-for-profit company, consisting of members from the private sector, NGOs and academia; it was established specifically to address the urban water and sanitation challenge. Based on the belief that the urban challenges demand a multi-sector response, WSUP harnesses the skills and expertise of the private sector and NGOs through a mechanism which overcomes the natural disincentives for the different sectors to work together. By harnessing the expertise and sector leading knowledge of the private sector, NGOs and research institutions, WSUP works as a professional partner to service providers in the delivery of water and sanitation programmes. WSUP works in partnership with the Water and Sanitation Programme (WSP) and International Resource Centre (IRC) for Community Water Supply as two leading documentation and advocacy organisations to disseminate evidence of models that successfully increase access for low income consumers, targeting governments and service providers worldwide.

⁶ Population figures are based on WDC/WT estimates. 2010 official Central Statistical Office figures are less than WDC estimates.

3.4 Water Trusts efforts to meet water standards

All three water trusts indicated they are aware of the national water and sanitation standards and the service level guarantees⁷. On service level indicators, all WT were able to state at least five out of eight key service level guarantees (SLGs) set by the license holder, LWSC. The key SLGs are coverage, water quality, service hours, billing, client contact, service interruption, water pressure and unjustified disconnection. Their progress on meeting the SLGs and other indicators are described in the table below: are as follows:

National standard/LWSC Service level guarantees/Indicators	Findings from the three WTs
<p>Accessibility</p> <p>The MLGH national standard is within 500m radius.</p>	<ol style="list-style-type: none"> 63 kiosks in Chipata, 27 kiosks in Kalikiliki 37 kiosks in Chibolya <p>All these are within 500m radius from households which is within the national standard.</p>
<p>Reliability</p> <p>The MLGH standard is functionality all year round.</p>	<ol style="list-style-type: none"> Chipata WT had a major breakdown (damaged motor) last year (2013) due to a power surge during an electricity supply outage. It cost the WT K15,000 to buy a new motor but it was repaired the same day. Kalikiliki had a breakdown in 2013 when the on-line chlorinator got blocked and service was interrupted for three 3 days. During this time, residents accessed water from neighbouring settlements and from shallow wells around the settlement. Chibolya WT system operated uninterrupted last year. The water system last malfunctioned in 2011 when the pump broke down but was repaired within 2 days. <p>Overall, all the WT confirmed that for minor problems affecting service provision, it takes them only a few hours to restore service with a maximum service interruption of 24 hours.</p>
<p>Coverage</p> <p>The MLGH standard is 75%; LWSC SL Indicator is 80% of service area population accessing water</p>	<ol style="list-style-type: none"> In 2013, Chipata WT scheme produced 489,373m³ of water of which 11% was unaccounted for water (due to spillage, leakages), leaving with 435,542m³ supplied to the users. This translates into 1,209,839ltrs per day, equal to supplying 80,656 people, 66% of 123,000 people in the settlement accessing water at 15ltrs/capita/day⁸. This is below the service level standard but above the national average. Kalikiliki WT scheme produced 94,530m³ of water in 2013 of which 19% was unaccounted for water, leaving 76,599m³ supplied to the users; translating into 212,775ltrs per day, equal to supplying 14,185 people, 101% of 14,000 people in the settlement accessing water at 15ltrs/capita/day. This is above standards. Chibolya WT scheme produced 194,193m³ of water in 2013 of which 22% is unaccounted for water, leaving with 151,471m³ supplied to the users. This translates into average of 420,752ltrs per day, equal to supplying 28,050 people accessing safe water at 15ltrs/capita/day. This represents 80% of 35,000 people in the service area which is

⁷ LWSC Level Guarantees for Lusaka City (2012-2015)

⁸ The WHO SPHERE standard, as per humanitarian charter, sets minimum water requirements at 15liters per capita per day

	<p>the LWSC service level standard.</p> <p>Note: The rates for unaccounted for water (UfW), though high, are actually lower than all CU's who's UfW for 2013 ranged between 28 and 64%⁹. WTs cited leakages and spillages at kiosks.</p>
<p>Water quality</p> <p>The service level relates to frequency of doing the tests and percentage of sample within allowable standards. The key tests are bacteriological and residue (chlorine). The standards are unobjectionable taste/colour/odour; 0 faecal coliform in any 100ml sample, 10 total coliform in any 100ml sample; Chemicals contaminants within ZBS/WHO guidelines</p>	<p>Currently, all water trusts are only able to independently test for chlorine residue. They said physical, bacteriological and other chemical tests are done by LWSC two times in a year (especially in the rainy season) and when there is a water related disease outbreak. In terms of frequency of testing chlorine residue, all water trusts conduct tests at least twice in a day. LWSC corroborated this and confirmed undertaking periodic testing of the water being provided.</p>
<p>Service hours</p> <p>The service level for individual connections is 17 service hours and 12 service hours for kiosks.</p>	<ol style="list-style-type: none"> 1. In Kalikiliki, the service hours for individual connections are 19 hours from 05:00 to 22:00 (this is above service level); for kiosks the service hours are 10 rationed from 06:00 to 12:00 and from 14:00 to 18:00. This is slightly below service level. 2. In Chipata, the service hours for individual connections are 24 hours- this is above service level; for kiosks the service hours are 5 hours rationed in the morning and afternoon- this below service level. 3. In Chibolya, the service hours for individual connections are 24 hours- this is above service level of 19hrs; for kiosks the service hours are 10 hours rationed in the morning and afternoon, this is slightly below the recommended service level of 12. <p>All WTs indicated that there is an improvement in the frequency of rationing water at Kiosks, from once per day at handover, to 2 times in a day (morning and afternoon).</p>
<p>Unjustified disconnections</p> <p>The service level is: only less than 0.2% of connections should have unjustified disconnections in a year</p>	<p>All WTs said they never had an unjustified disconnection to any individual connected customer in the past 1 year. This was further corroborated by the community members during the FDGs</p>
<p>Frequency of Billing</p> <p>The service level is once per month</p>	<p>All WTs are billing individual customers once in a month. They are within the service level.</p>
<p>Client contact</p> <p>The service level for response time to written complaints is five working days; and for new connections it is 10 working days</p>	<p>All water trusts said that they respond to complaints within 1 to 5 days. However response time for new connections takes longer than the service level. In all three settlements, community members verified that this was in effect the case.</p>
<p>Service interruptions</p>	<p>All water trusts said that unannounced service interruptions are able to be resolved within 3 hours. This is within service level</p>

⁹ NWASCO, Urban and Peri Urban Water Supply and Sanitation Sector Report, 2013

The minimum service level is 20hrs for up to 15% of the individual connected customers	and was confirmed as true by the community members and the vendors interviewed.
Water pressure in the network The service level is: less than 7ltrs/1minute for less than 5% of individual connections	In Kalikiliki, the average flow rate was 20ltrs/45 seconds (or 27ltrs/1minute). In Chipata WT, the average flow rate was 20ltrs/55 seconds (or 22ltrs/1minute). In Chibolya WT, the average flow rate was 20ltrs/66 seconds (or 18ltrs/1minute). The flow rates are all above the minimum allowed service level of 7ltrs/1minute.

Water and sanitation services are part of the infrastructure needed for human development and well-being. Adequate and clean water for consumption is critical in ensuring healthy lives, while appropriate sanitation prevents diseases and assures dignity to individuals. The review noted that WTs have made strides in continuing to provide water services to the consumers thereby contributing to expanding coverage specifically in the informal settlements.

3.5 Water Trusts and sanitation interventions

Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces. Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities. The word 'sanitation' also refers to the maintenance of hygienic conditions, through services such as garbage collection and wastewater disposal. At a national level, NWASCO in the 2012/2013 Urban and Peri-urban Water Supply and Sanitation Report notes that the investments within the WSS sector have been skewed towards improving and increasing access to water supply as compared to sanitation resulting in the majority of Zambians lacking this basic service. As a result, sanitation coverage for urban and rural areas is 57% and 43% respectively.

Sanitation coverage refers to the proportion of population with access to improved or adequate sanitation facilities at domestic level. While various descriptions for adequate sanitation exist, NWASCO only considers centralised systems and septic tanks as acceptable for urban and peri urban areas. Most latrines particularly those found in peri-urban and low cost areas, where over 60% of the urban population reside are unimproved and therefore not included in the computation of coverage. However, rural sanitation coverage includes pit latrines.¹⁰ Despite not including them in their computation, the report does point out that the most common types of sanitary facilities in the unplanned settlements are pit latrines, bush facility and flying toilets (using plastic bags) in that order, due to lack of space. The main problems associated with these sanitary facilities are smells and frequent collapsing and filling up of pit latrines. Contamination of ground water is prevalent in these areas because of the poorly constructed latrines

With regard to sanitation and specifically focusing on accessibility, the national standard is that a latrine be within the yard or at minimum a shared toilet between a few households. Under Chipata WT, there are three fee paying public ablution blocks and 50 ECOSAN Household latrines for 20,500 households; in Kalikiliki, the project (under JICA) put up 15 shared pit latrines for 2,333 households. These numbers are below the national standards of coverage and accessibility.

As far back a November 2002, the UN Committee on Economic, Social and Cultural Rights adopted its general comment No. 15 on the right to water stating that: “The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.” Universal access to sanitation is, “not only fundamental for human dignity and privacy, but is one of the principal mechanisms for protecting the quality” of water resources. Furthermore, in April 2011,

¹⁰ NWASCO, Urban and Peri-urban Water Supply and Sanitation Sector Report 2012/2013, 2013

the Human Rights Council adopted, through Resolution 16/2, access to safe drinking water and sanitation as a human right: a right to life and to human dignity. The realisation of the right to life and human dignity will not be fully achieved particularly because despite the dire sanitation situation in all the three settlements and the concerns raised by community members on the same, of the three WTs only Chipata WT that have expanded the sanitation infrastructure initially handed over to them. Further, even as discussions on water provision continue, there is no evidence that tangible discussions have taken place in the community and with district authorities on how the situation could be improved. Instead, the focus has been and remains on water supply an issue recognised by Government and other stakeholders as something needing to be changed.

The National Health Strategic Plan recognizes poor environmental sanitation as a major source of public health problems and epidemics in Zambia, and argues that the effects have been felt in the high incidence of both water and food-borne diseases, especially malaria and diarrhoea. The neglect of sanitation in areas with high population densities erodes some of the benefits of increasing access to safe water. For example, “contrary to what would be expected, diarrhoea is more prevalent among children whose households have an improved drinking water source”.¹¹ The optimum benefit from water and sanitation interventions can only be achieved if communities and individuals are made aware of the links between hygiene practices, poor sanitation, polluted water sources and disease. This level of awareness raising has to be consistent and continuous.

3.6 Challenges faced in trying to provide water and sanitation services

All three WTs visited are struggling to provide sanitation within their areas of operation. The actual challenges cited include the following:

1. In the case of Chipata settlement, the 50 ECOSAN toilets that were constructed by CARE Zambia are not being used because according to the community (that also said they had not been consulted on the design), the design is inappropriate in that wooden access doors were used to cover the chambers. These have since dissipated leaving the waste to spew out into the open. In addition, within the community, there is no space for households to have gardens where they can use the toilet products. As a result, people do not have anywhere to take the dry waste once it was collected. It was explained that right at the start of the project, no plans had been made on taking the waste out of the community.
2. Changing people’s mind-sets with regard to sanitation appears to be the biggest challenge being faced by all the WTs in that the community members have not appreciated the toilets and are not using them at all preferring instead to use the ECOSAN toilets that were constructed at their homes as storerooms or as shops.
3. The individual willingness to pay for sanitation is typically considered to be lower than for water, as is the awareness among users for the benefits associated with sanitation services. The Chipata WT specifically noted that because of the low usage of the toilets by the community, the infrastructure is not making the WT any money.
4. There is inadequate space to expand the sanitation services. Plans to expand would have to include compensation being given to the community members as they would include breaking down people’s homes.
5. In addition and as reported in NWASCO (2013), there is also weak enforcement of the law by Local authorities regarding construction of sanitary facilities particularly in peri urban areas where there is no security of tenure. This was confirmed by the WTs and in particular by Chipata WT which described how some community members are building toilets and designing waste collection pipes to lead into communal open drainage systems. This is something that is going unabated.

¹¹ UNDP, Human Development Report 2011

3.7 Adequacy of water and sanitation infrastructure in the settlements

On adequacy of infrastructures, in the Chipata WT, at 20ltrs per capita per day, the number of people accessing water in the service area is 49%, and the LWSC service level indicator is 80%. The water infrastructure is therefore, not adequate. For sanitation, with only three public ablution blocks and 50 household ecological sanitation toilets catering for a population of 123,000 (20,500 households) the sanitation infrastructure is not adequate. In Chibolya WT scheme, at 20ltrs per capita per day, the number of people accessing water in the service area is 21,038, this represents 60% access rate. The water infrastructure is, therefore, not adequate. In Kalikiliki WT scheme, at 20ltrs per capita per day, the water access rate is 76% and is just slightly below the required service level. For sanitation infrastructure, at the minimum of 1 shared latrine per 3 households, the access rate is 2% (270 people served against 14,000 people in service area) against the national target of 60%. The sanitation infrastructure is therefore inadequate.

4.0 Water Trusts and expansion interventions

As can be seen below, Chipata WT has undertaken the most infrastructure expansions since external infrastructure support ended; and works were done without any additional support from other stakeholders including Government.

For Chipata WT expansions since first construction in 1997 include:

1. Four additional boreholes have been drilled increasing the number from one to five;
2. 32 additional kiosks have been constructed increasing the number from 31 to 63; and 524 additional individual connections increasing the number from 35 to 559
3. One additional ground tank (100m³ capacity) was erected increasing the number from three to four;
4. Two overhead tanks (20m³ total capacity) and tank stands were erected increasing number from one to three;
5. One electricity transformer (3-phase) was procured and enabled the scheme to have independent power line;
6. Two generator sets (3-phase) as back up during power outages or low voltage, previously had none;
7. One on-line chlorinator to replace the manual dosing of chlorine;
8. Two motor vehicles (but one was later sold), previously had none; and
9. They have also bought land for K70,000 as site for new boreholes and erected wall fence around it.
10. Expansion of the distribution network from Chipata settlement to Kabanana West and to unserved areas within the settlement.

The sanitation infrastructure was also slightly expanded in that the WT constructed:

1. One water tank and stand, and sewer system for each of the two new fee paying ablution blocks supported by CARE Zambia under PPRUSS Project.
2. They also constructed one office ablution block including and water tank and stand. The office previously had pit latrines.



Picture: New water storage tanks bought by the Chipata WT

For the Kalikiliki WT, the water infrastructure has been expanded since hand over in 2005 as follows:

1. The WT bought a piece of land for a new borehole site at K20,000;
2. One additional borehole was drilled by WSUP but unfortunately it was found to be dry and the full cost was borne by WSUP;
3. Two additional communal kiosks were constructed, bringing the total number from 25 (2005) to 27 (2014);
4. 187 new individual water connections were made. There were none at handover.
5. There has also been expansion of the distribution network to unserved areas within the settlement

The sanitation infrastructure in Kalikiliki has not been expanded since the 15 shared pit latrines were handed over to the NHC in 2005.

For the Chibolya WT, the water infrastructure has been expanded since hand over in 2004.

1. The WT drilled one additional borehole to bring total to two;
2. Nine communal kiosks at initial (five by CARE and four by Children International) have increased to 38 kiosks;
3. The 375 new individual connections been put up when there were none at handover.

The sanitation infrastructure has never been expanded since the one fee paying ablution block was handed over to the WT in 2010.

The review noted that while the three WTs had been active in doing water infrastructure expansions, the series of investments (expansions) made were short term aiming at addressing the current needs as opposed to looking at the future growth of the settlement and develop a settlement wide water and sanitation improvement plan.

4.1 Factors that have influenced the decision to expand service provision

In all the three WT visited, the decisions to expand have been made based on the need to serve as many people as they can and on the need to increase the revenue being collected by the WTs so as to improve the services and coverage. There was no reported influence from other stakeholders such as the Ministries or the board. In effect, with regard to the board, all the WTs admitted that they have written proposals on expansion plans and the boards have been obliged to comment and advise as is their role. The management of all the three WTs interviewed were cognisant of the fact that everyone has a right to health and that the provision of clean safe water is a means of ensuring that this right is upheld.

In the case of Chipata WT, it was explained that their expansion into another settlement (Kabanana East) was also based on a request from the area Member of Parliament and requests from the people living in the settlement then not covered by the WT. The management feel that the final decision after consultation with the community of Chipata was based on the need to reach even more people so as to allow the WT to grow. Community members interviewed confirmed seeing the expansion as a positive intervention that was going to enable the WT to gain more income.

In the case of Chibolya WT, the interventions under CARE had been focussed around a particular geographical area and the expansion done was based on the need to provide water services to children identified as vulnerable by an international organisation called Children International. They funded the expansion initiative.

In Kalikiliki, the areas for expansion was selected considering the location of the existing kiosks and growth pattern for the settlement. The expansions have been made mainly in the number of individual connections and these have been based on need and requests from the community itself. A note was made that only in Kalikiliki was there reported threat of political influence from a civic leader who after the elections took place in 2011 and a new political party came into power had gone to the WT and demanded to receive financial information among other things. The management of the WT took time to

explain who they are and what they were trying to achieve and the civic leader having understood what was explained has never been back to the WT with any other demands.

4.2 Challenges faced in trying to expand water and sanitation services

Without exception, all three WTs indicated that they would like to expand their services even further but are experiencing the following limitations:

1. In the case of Kalikiliki, there is just no additional space within the settlement for them to expand.
2. Although they would all like to pilot other income generating activities to support the water and sanitation provision service, they are limited by the licence that they hold with LWSC. The Licence permits the WT only to supply water and sewerage services.
3. People that have drilled boreholes within the settlement or have individual connections are taking customers away from the WTs thus impacting on their income levels which will inevitably impact on their capacity to expand. Those on individual connections receive longer service hours than those getting water from the stand pipes but these are then illegally selling water to the people in the settlement while they continue to make their monthly payments to the WTs.
4. In Chibolya, the volatility of some parts of the settlement have tended to discourage stakeholders interested in supporting expansion interventions from coming to the settlement.

The challenges being faced by the WTs are well known by Government officials and by NWASCO and LWSC. This is by virtue of the fact that these are the issues discussed during board meetings where Government is present as well as at different other fora. The responses from Government have taken different forms, in the case of Kalikiliki, expansion to Mtendere East has been necessitated by the need to help the WT source additional water. In all the three settlements, LCC has helped the WTs try and source land for their expansion work. The challenges continue to be deliberated as Government obligation to meet water demands is still a priority.

5.0 Human resource complement and capacity development interventions

5.1 Water Trusts staff complement

Kalikiliki WT has a total of 37 staff; ten of who are fulltime with 1 year and 2 years renewable contracts. 27 are part time staff with 3 months short renewable contracts. Of the 37 staff, 11 are male and 26 are female. The ten fulltime staff make up the management team and the gender breakdown is 1 female (the scheme manager) and 9 male. All the 28 part time staff are water vendors of which 3 are male and 25 are female. In addition, Kalikiliki WT also has two volunteers trained by JICA as health workers who support water vendors doing hygiene awareness at kiosks and go around the settlement inspecting the water stands. The volunteers are normally paid in kind and the payment includes a bag of mealie meal, 750 ml of cooking oil, one packet of washing paste and two bars of bathing soap.

In Chipata WT, the total number of people engaged by the WT is 96; fulltime staff are 24 and part time staff are 72. Of the total, 58 are female and 38 are male. 63 are water vendors, 9 are sanitary workers and 24 are management team. Of the 63 water vendors, 11 are male and 52 are female; for 9 sanitary workers, 3 are female and 6 are male and for 24 management team, 3 are female and 21 are male. Of the 11 skilled staff, nine are male and two are female. Of the 72 unskilled staff 21 are male and 53 are female. In the case of Chipata WT, the WDC is involved in the recruitment of the staff from actual shortlisting to interviewing and final selection of applicants.

In Chibolya WT, the total staffing is 57; fulltime staff are 16 and part time staff are 41 (water vendors). Of the total, 31 are female and 26 are male. Of the 41 water vendors, 13 are male and 28 are female. Of the

16 fulltime staff (who make up the management team), 3 are female and 13 are male. For 8 skilled staff, 5 are male and 3 are female. For 49 unskilled staff 21 are male and 28 are female.

The staff composition of the management team include the Scheme Manager, Plant superintendent and/or plant Operator, Plumbers, Meter Readers, Revenue Officers, Cashiers, Administration Assistant, Handyman, and Security Guards. The review observed that the existing staff composition has managed to run the schemes without major challenges.

5.2 Capacity development interventions for full and part time staff

All WTs got together and initiated a Managers' Forum in 2003. This forum meets annually to share water scheme progress, challenges, innovations and ideas as well as plan out staff capacity development interventions.

In Chipata and Chibolya WTs, three training workshops were provided in water scheme management and leadership skills; and in urban slum upgrading training. The initial 2 trainings were provided by CARE/LCC and the third training was provided Zambia College for Building/LCC.

In Kalikiliki, the hygiene promotion and water meter reading trainings were provided to water vendors at handover. The training was facilitated by LCC. For new vendors, only the induction in water meter reading is facilitated upon engagement by the WT. For management staff, a training in water trust management system was facilitated by JICA/LCC at hand over.

The water vendors during the focus group discussions indicated the need for specific training in hygiene promotion, leadership skills, customer relations, basic plumbing and how to calculate cubic meters of water. This is training that can be arranged by the WTs with support from any stakeholder including INGOs, LCC and others.

As a way of motivating their vendors, Chipata WT has developed a reward system for the top 10 vendors that over time have cashed in well. This is implemented every three months when items such as pressing irons and other small kitchen utensils are given as gifts to the deserving individuals.

The review observed that initial training in water scheme management system for all staff was part of the model and any new staff joining the water trust were trained with funding from internal resources. Since external support was stopped, training for new staff, especially vendors, has not been done consistently. Some training, such as that by vendors is undertaken by the management of the WTs but any additional capacity development interventions are planned for by the management and implemented with LWSC.

6.0 Water Trusts financial sustainability

Desirable financial sustainability is attained when a service provider generates the cash flow necessary to produce a given output (quantity and quality) at a minimum private cost (i.e. we define financial sustainability conditional on internal efficiency). For purposes of this review, two issues are looked at. These are: (i) the WT having cash to maintain the technical workability of the system (ii) the WTs having gained or sustained independence from external financing sources by, for example, building up equity capital. For the WTs, in order to achieve financial sustainability the cash flow should be generated through the selling of water.

6.1 Revenue and expenditure patterns in the WTs

The financial sustainability mechanism of the water trust model was developed that the revenue should¹²: i) cover the costs incurred in running the scheme, and ii) set aside funds to cover future costs. In

¹² Mbuzi, O. (2002). Water Trust Management Systems. A manual developed for CARE International Zambia, PROSPECT Project.

the last five years (2009-2013), the total revenues and expenditure for all three WTs are provided in the table below. It can be seen from the table that all three WTs have expenditures below their incomes with the Chipata WT having the largest income when compared to the other two WTs. This pattern shows potential to invest even further or at least to cover part of capital or replacements costs. A critical concern expressed by stakeholders at the national level is that the expenditure figure are in fact not a true reflection of what the WTs are spending because they have not been paying for the services that are rendered to them by LWSC and are therefore considered to be subsidized by LWSC.

All three WTs have fixed deposit accounts with the banks where they have kept their reserves. In Kalikiliki, the WT has plans to construct fee paying toilets to increase revenue. Chipata and Chibolya WTs have plans to drill more boreholes and expand their network in order to increase its customer base. The break down per year is indicated below:

Table I: 2009 – 2013 income and expenditure figures for the three water trusts

Year	Kalikiliki WT		Chipata WT		Chibolya WT	
	Income (ZMW)	Expenditure (ZMW)	Income (ZMW)	Expenditure (ZMW)	Income (ZMW)	Expenditure (ZMW)
2009	281,166.05	250,171.84	1,365,468.81	1,320,813.41	370,053	321,056
2010	324,960.05	302,403.48	1,422,696.18	1,386,460.01	385,540	412,090
2011	314,640.20	289,725.79	1,619,833.90	1,768,423.67	467,411	447,574
2012	374,920.21	346,777.63	1,853,381.36	1,905,549.51	664,027	611,188
2013	695,392.90	627,476.38	3,203,840.93	482,898.98	1,171,859	1,031,772
Total	1,991,079.41	1,816,555.12	9,465,221.18	8,864,145.58	3,058,890	2,823,680

(To convert to USD – Exchange rate of ZMW 6.23 as of 20th August 2014)

Chipata WT say they are able to meet all of their O&M costs; all of system expansion costs and part of replacement costs. In Kalikiliki, the WT said that they are able to meet all of the O&M costs; but are only able to meet part of system expansion costs and replacement costs.

All WTs hold two bank accounts; an operation account and an investment account and all WT funds are kept in the said bank accounts. The accounts have two signing arrangements: Panel A and panel B. The respective WT management teams and Ward Development Committees (WDC) make up panel A, while LWSC and LCC make up panel B. The boards are responsible for approving all expenditures above a certain ceiling. In Kalikiliki, the scheme manager is only allowed to approve payments of ZMW 15,000 and below. Chibolya WT manager has an approval ceiling of ZMW 5,000 approximately 803 US dollars at an exchange rate of 6.23 as of August 20th 2014).

6.2 Tariff structure being maintained by the water Trusts and user engagement

NWASCO, the regulator, approves all tariff adjustments and has the responsibility of ensuring that only justified costs are passed on to the customer (The set tariff should initially cover the justified O&M costs and eventually other costs such as finance costs, depreciation, provision for employees' benefits as well as capital investments)¹³. On tariff structure, all WTs have followed the structure as passed on by LWSC i.e. differentiating according to whether water is drawn from a public standpipe (fixed price per 20litre), or from a private house connection (rising block tariff). This is intended to ensure the minimum quantity of water is affordable particularly to low income consumers.¹⁴

¹³ For more details see the NWASCO's guidelines to tariff setting at:

http://www.nwasco.org.zm/jdownloads/Water%20Tariffs/Tariff%20Guideline/tariff_setting_guideline.pdf

¹⁴ NWASCO (2014). Urban and Peri Urban Water Supply and Sanitation Sector Report, 2013

In the case of the water kiosks tariffs being used by the WTs, it was observed that these are higher than what has been approved by NWASCO. Whereas the WT charges 20ng/20 litre container, LWSC approved charge is set at 10ng/20 litre container. This means that households in peri-urban areas pay substantially more per cubic meter than households with house connections.¹⁵ LWSC are able to offer a lower tariff because they have the added advantage of being able to cross subsidise their supply of the service using the rising block system. Within this system, the overall principle is that the lower the amount of water a household uses, the lower the tariff they are required to pay. On the one hand, this is raised as a fundamental in that having the community members being serviced by the WTs pay more than what the middle income households are paying is against the pro-poor approach espoused by Government as a whole. On the other hand, some of the other stakeholders interviewed saw the willingness of the community members to pay for a service as a positive thing and a sign that the water is affordable.

The higher tariff being charged by the WTs is as a result of their need to ensure they can sustainably manage the provision of services. In their view, the tariffs as set by NWASCO are not realistic and would not enable them meet their O&M costs. All national level stakeholders interviewed including LCC, MLGH and NWASCO are well aware of the situation but in the case of NWASCO, they cannot enforce the tariff set for LWSC because the company has not signed the new service agreement with the WTs.

For the Chipata WT, tariff setting is done with the community's participation. Interviews with the community representatives confirmed that they are consulted and that they are satisfied with the consultative process and the tariff that has been agreed upon. The consultations are done through the WDC structure which organises consultative meetings at the Zone level. When NWASCO requested that the water tariff be reduced, the WT did meet with the area Councillor and the area Member of Parliament to seek their intervention on the matter. The Councillor in particular has been involved in the community meetings to explain the need for increments when they are proposed.

In Kalikiliki, tariff setting is also done with the community's involvement but with use being made of the church and other community leaders. Community members interviewed could only remember having had one meeting with the WT where tariff increments were discussed. With only one consultative meeting having been held, the community feel the WT is not engaging them enough. For individual connections, there are two flat rates, the LWSC which has flat rate of ZMW 70/month and the WT rate of ZMW 80/month. It was noted that between 2005 and 2010, LWSC water distribution line was servicing 120 households but due to low pressure problems, a lot of those households opted to be serviced by the WT. As at the time of the review, only 22 households were being serviced through the LWSC water distribution line, the rest, despite having to pay a higher flat rate had moved to the WT operated Salama water line. The WT is now servicing a total of 161 households with piped water.

In Chibolya, the community members interviewed noted that whereas before 2011, stakeholder meetings used to be held where issues related to water and sanitation used to be discussed, following the 2011 general elections and the ushering in of a new WDC, these meetings are not held anymore. They further noted that they have not been consulted about the increase in tariffs and most of them learnt about the increments by reading posters put out at the water stands.

For the community members interviewed, in all the three communities visited, their views are that water is in fact affordable and they were more than willing to have an additional amount added to what is currently being charged so that the WTs can also offer garbage collection services.

6.3 Cost of operation and maintenance (O&M)

O&M costs cover minor repairs, rehabilitations (major repairs) and some replacements costs. In the last 5 years (2009- 2013), O&M costs were as follows: Chipata WT spent K851,600, Chibolya spent K227,003

¹⁵ Ministry of Local Government and Housing, National Urban Water Supply and Sanitation Programme 2011 – 2030, February 2011

and in 2012 and 2013, Kalikiliki WT spent K97,233.77. The WT makes bulk purchases of materials for repairs, mostly once per quarter and as result were not able to remember the number of such minor repairs undertaken in the past year. All WTs indicated that their expenditure on O&M has been adequate in keeping the infrastructure to provide the level of service. Below are the cost of O&M per WT in the last five years.

Table II: 2009-2013 O&M Costs for the three WTs (ZMW)

Year	KALIKILIKI WT Income (ZMW)	O&M costs (ZMW)	%age of O&M over income	CHIPATA WT Income	O&M costs	%age O&M over income	CHIBOLYA WT Income (ZMW)	O&M costs (ZMW)	%age O&M over income
2009	281,166.05	19,270.11	6.9	1,365,468.81	175,348.97	12.9	370,053	42,609.00	11.5
2010	324,960.05	16,716.90	5.1	1,422,696.18	188,504.10	13.3	385,540	33,592.00	8.7
2011	314,640.20	16,155.05	5.1	1,619,833.90	171,408.92	10.6	467,411	29,853.00	6.4
2012	374,920.21	33,167.73	8.9	1,853,381.36	153,950.43	8.3	664,027	42,488.00	6.4
2013	695,392.90	64,066.04	9.2	3,203,840.93	162,387.84	5.1	1,171,859	78,461.00	6.7
Total	1,991,079.41	149,375.83	7.5	9,465,221.18	851,600.26	9.0	3,058,890	227,003.00	7.4

Water vendors in Kalikiliki and Chibolya observed that taps are the one component of the system that wear out quickly. Households in Kalikiliki narrated how there is a lot of water wastage at the stands because of high pressure and that the wastewater is not being controlled and tends to be left to flow onto the road. They further explained that where a soak pit had been constructed, it is often left open posing a danger to children



Water spillage at a Kiosk in Kalikiliki settlement.

6.4 Availability of financial systems and auditing within the Water Trusts

The WT model stipulates some minimum basic financial systems to ensure prudent financial management and sustainability. In all WTs, the following financial systems are in place:

1. Adheres to financial reporting (monthly to local board members, i.e. WDC and CBO representatives) and quarterly to the full board
2. Follow guidelines on authorisation (payment upon approvals) and division of responsibilities
3. Uses a computer software, Twenshi Billing System, to for billing water consumption by individual metered customers
4. Avail their financial reports to LWSC who are supposed to conduct financial spot checks as well as annual internal audits. In Kalikiliki, the last internal audit by LWSC was done in 2011 and 2010 for Chipata WT. They, however, said that no management reports were availed to the WT management. All three WTs have not been audited in the last three years but LWSC confirmed that they do undertake spot checks as the need arises. In Kalikiliki, the last audit by LCC was done in 2008. No community score cards on the WTs or any other citizen social audit mechanisms have been applied in any of the settlements.

An observation by stakeholders at the national level is that the internal financial controls at the WTs are not strong enough to stop embezzlement by managers, something that has been experienced in Chibolya. This is acerbated by the fact that LWSC has not had adequate mandate to ensure accountability of the management to the company, a weakness identified and dealt with in the new service contracts to

be signed between the WTs and the LWSC. The external audits are supposed to be undertaken by the Office of the Auditor General but none of the WTs have been externally audited in the last five years.

6.5 Corruption within the Water Trusts

The Anti-Corruption Act No.3 of 2012 of the laws of Zambia defines corruption as soliciting, accepting, obtaining, giving, promising or offering of a gratification by way of a bribe or other personal temptations or inducement, or the misuse or abuse of a public office for advantage or benefit for oneself or another person. Corruption can be said to occur when people violate their duties for personal or political gain, either at their own instigation (e.g. embezzlement) or in response to improper inducements (e.g. bribes). In many ways, corruption is the antithesis of good governance.¹⁶ When corruption reduces the number of kiosks or water stands that can be erected or prevents the piped-water network from expanding, it is the poorest sections of society that are likely to suffer most.

In Chibolya, WT management reported that a case of embezzlement did stall the rate at which the WT could have expanded their service provision. This was exacerbated by the fact that the then board had not had the necessary capacity to stop the embezzlements and in addition the previous management had also not been remitting staff pensions to the National Pension Scheme Authority (NAPSA). A total penalty of ZMW 137,000 (ZMK137 million then, before kwacha rebasing) was paid to NAPSA by the WT and at the time of review had all been settled. The payment was done over time as agreed between NAPSA and the WT.

6.6 Financial sustainability challenges

All WTs cited that their service management contract with LWSC stops them from undertaking other income generating ventures other than water and sanitation service provision. This, they said, is a challenge to being financially sustainable. Other challenges cited were:

1. Inability of some board members to make decisions that add value to the whole debate around financial sustainability.
2. The service area has inadequate space for scheme expansion – e.g. for Kalikiliki.
3. For Kalikiliki WT that have entered into an agreement with Mtendere WT, the 50%-50% cost share of O&M costs for Salama boreholes weighs heavily on the Kalikiliki water scheme.
4. Kalikiliki and Chibolya Water vendors cited that taps on the kiosks discharges a lot of water thus affecting the amount of water remitted daily. In Chibolya, there is high non-revenue water due to spillage at kiosks and unaccounted for water which stood at 35% in 2013.
5. In Kalikiliki, the water tables go down during the year, which means water has to be rationed and this has affected the WT capacity to increase their income
6. There is an increase in the number of households with private boreholes that are also selling water. The WTs confirmed that although the practise is illegal, the WTs cannot stop them because their scheme does not meet the demand and they do not have the legal powers to stop this practice.
7. The WTs have been shifted from paying a fixed electricity charge to having pre-paid meters. They are now faced with huge electricity bill and Chibolya has had to prepare a supplementary budget as a result of this.
8. The materials being sourced on the market are substandard and break easily (with rarely any alternatives) which means the WTs are having to replace the same parts very often. In addition, the prices for such materials are consistently fluctuating making it very difficult to plan ahead.
9. In the case of Chibolya, there is increased vandalism in some parts of the settlement which raises the cost of maintenance. Vandalism particularly occurs when there has been no water provided in the said areas during the day due to for example power outages. When the service is resumed during the night, the community members are reported to break the taps and get water free of charge.

¹⁶ Gordon Mcgranahan and David Satterthwaite; Governance and Getting the Private Sector to Provide Better Water and Sanitation Services to the Urban Poor 2006

6.7 Community perception of financial management by the Water Trusts

In all three settlements, the households and the WDCs felt that the WT management teams were managing finances well. In Kalikiliki, they cited that the senior staff in the last management team only lasted two years and the board terminated their employment. The current management has been in office for the past six years without any petitions or allegation of serious financial impropriety except for one case of false accounting by a cashier. Similar sentiments were expressed by Chipata WDC and households of management's better use of finances. The management team, constituted in 2003, have not been accused of serious financial impropriety. Chibolya management has been in office for three years and the community expressed confidence in their capacities to ensure sound financial accounting. The review observed a common understanding by the community on the operating rules or mandate of the water trust such that cases of interference or undue influence were minimal. While there is 'confusion' on the mandate of current WDC members, officials have not taken advantage of the situation to exert significant undue influence on the management of the water schemes.

7.0 Economic benefits for women and men working for the Water Trusts

7.1 Levels of income and avoided costs for full and part-time staff in the water trusts

In Kalikiliki, for the management team (full time staff) the level of income per month (gross salary) ranges between K1,661 (lowest paid) to K4,674 (highest paid). In Chipata WT, for management team (full time staff) the level of income per month (gross salary) ranges between K1,193 (lowest paid) to K4,487 (highest paid). In Chibolya, the salaries ranged between K1,500 and K4,400.

For water vendors (part time staff), the level of income, paid out as commission of total monthly remittance in 2013, ranged between K523 to K638 per month for Kalikiliki WT, for Chipata WT vendors it ranged between K542 and K1,536 and for Chibolya it ranged between K300 and K900. The commission is calculated at around 30% of total monthly water sales for each vendor. The lowest commission for Chipata and Kalikiliki is just above the threshold of government set minimum wage of K520/month for short term part time employees. The WTs all said that equal pay is offered for the same job whether undertaken by a man or a woman.

With regard to avoided costs, full time staff in management teams in all WTs indicated that they do enjoy avoided costs which include funeral grants (i.e. a sum based on position, free firewood and free water) loans, and subsidised water connection fees (at 20% in Kalikiliki WT, 50% in Chipata WT). Chipata WT also subsidises its staff connected to the scheme water line with water bills at 50%; it also cost-shares staff training costs at 50%.

7.2 The economic and productive use of income by WT full and part-time staff

In all three WTs, it was reported that most staff use their income to engage in small businesses such as trading stands (locally known as 'Tuntemba'), market stalls, starting group loan systems and expanding houses for rent. All, but one female staff in Kalikiliki WT, indicated they had control over the income they earn from the water trusts. Specifically for the vendors, benefits and difficulties of working with the WT include:

Settlement	Benefits to working with the WT	Challenges being faced
Chipata settlement	<ol style="list-style-type: none"> Starting up businesses such as small grocery stores, a hairdressers, selling of computers, running a pay phone. WT provides funeral assistance in the form of food and a vehicle. Assistance with hospital bills for the vendor and their immediate family; The opportunity to further ones 	<ol style="list-style-type: none"> Leakages at the stands mean one loses income. Electricity load shedding also means they get less at the end of the month During the rainy season people opt to use rain water trapped in drums. During the cold season, people tend to use less water. Trash collection around the settlement is

Settlement	Benefits to working with the WT	Challenges being faced
	education using monthly salary.	not being done and it is affecting their capacity to ensure hygiene around the water stands. 6. The water stands do not have shelters so the vendors get wet during the rainy season despite their raincoats
Kalikiliki settlement	<ol style="list-style-type: none"> Starting up a business ordering fish; Started a group loans scheme (ichilimba) WT provides a funeral grant covering the immediate family and children below 21 Loans can be given to staff depending on the revenues collected. Medicals are covered but have to be from Government hospital. Provided an opportunity to help in the building of a one room for rent. 	<ol style="list-style-type: none"> There are a number of drunk people in the community that become difficult when collecting water and refuse to pay for it. There is too much pressure on some taps and the wastage is high. There has been no substantial training done since JICA left. The manager has run some training on hygiene.
Chibolya settlement	<ol style="list-style-type: none"> Starting up a business such as a pub as well as ordering soft drinks for resale. Have started a group loans system (Ichilimba) The vendors are able to pay school fees from the salaries they get. 	<ol style="list-style-type: none"> Individual connections have increased and vendors are not making as much money as before. People can afford to pay for individual connections and make the necessary payments to the WT directly. The advantage is the increased service hours they get as opposed to having to get rationed water from the stand pipes. Those that have individual connections are also selling water and so reducing the WT customer base. There is low pressure in the area and some taps run dry which means the vendor operating there does not make any money. In some areas of Chibolya (Gaza) vendors face security problems given the violence in the areas. This is an area known for drug peddling and also known as an area where criminals hang out. The water stands have no shelter and the vendors get soaked during the rainy season.

One female vendor from Kalikiliki WT, was reported to be in an abusive marriage in that her husband takes the money away from her when she is paid. If she does not get paid, he chases her away from home.

8.0 Water Trusts and the inclusion of the most vulnerable households in management and in service provision

8.1 WT's levels of awareness about inclusion and exclusion

All WTs indicated that they have never done an enquiry to establish community members that are excluded from accessing water and sanitation services and the reasons for any such exclusions. They explained that such a process would ordinarily be undertaken by the WDCs as this is the committee responsible for community mobilisation and coordination. Needless to say, the WTs are supporting some

vulnerable households that cannot adequately meet the costs of water services. The equity and inclusion information is part of the information included in the WTs performance reporting indicators in their quarterly reports but takes the form of having the WTs report on amounts of water that they have given out free and not necessarily on giving details on just who has received the water.

8.2 Criteria for identification of vulnerable households

WSS are clearly relevant for achieving equity. Lacking access to adequate WSS for personal and domestic use constitutes an absolute deprivation with respect to essential human needs (drinking, cooking, personal hygiene). At the same time, lacking access to these services is one important factor causing deprivations in other dimensions of well-being. It increases the risk of falling ill with the further consequences of decreasing productivity and economic possibilities of the household¹⁷.

According to the WT management and the WDC in Chipata, all WTs said that they do not have a documented (written) set of criteria of identifying vulnerable households. But the trusts and WDCs have, informally agreed, that elderly persons (above 60 years of age) who have no dependable family members to support them and other 'vulnerable' people should be entitled to 40ltrs of free water per day. Vendors interviewed also confirmed providing water to the elderly as specified.

In the case of Chipata WT which has 15 people registered as vulnerable, the WT works closely with the WDC to ensure that these people are reached. It is the WDC that interviews the people identified as vulnerable by the different Zone leaders and recommends to the WT just who should be provided with free water. In addition, when a household can provide a medical report justifying the need for individual household connection, this is also considered.

In Kalikiliki, the WT currently has 20 people registered as vulnerable that get free water. The WT initially used to work with the WDC but since they became less active it now works closely with the church and other community leaders in the identification of the vulnerable. The vulnerable include the aged, those that are very poor and those that are chronically ill. The WTs keeps identification documents of those identified as vulnerable and also keeps hospital documentation of those identified as chronically ill. For this WT, the focus is mainly on the aged.

Chibolya has 37 people on its list of vulnerable people. These are given cards which they present at a water kiosk to be allowed to draw their free water.

In all three settlements, FGDs with the community members and the vendors brought out the fact that they feel there are more people in the settlements that should be benefitting from the scheme but are not. The vendors specifically explained that in some cases they personally cover the costs of water for individual vulnerable people that have not been reached by the scheme.

8.3 Equity and inclusion mechanisms/actions

Within the WTs the inclusion mechanisms that are in place are mainly for the provision of water and not sanitation services. They include: i) free water (40ltrs/day) to elderly people ii) free water (2x210 litres per day for 3 days) to a household with a funeral, and iii) kiosks are located closer to households. In Kalikiliki, they also explained that during construction of kiosks, the facilities are set slightly above ground level to enable easy access by people with disabilities. However, a check on some kiosks reviewed that most have had their soil base eroded and are left suspended above natural ground level.

With regard to flexible payments (e.g. in-kind payments and tariff structure), Kalikiliki WT said that no equity mechanisms/considerations are in place. While Chipata WT, have an in-kind payment consideration where vulnerable households who are unable to pay the tariff are allowed to clean at the kiosk as payment for water.

¹⁷ Matthias Krause, The political economy of water and sanitation in developing countries: Cross-country evidence and a case study on Colombia,

8.4 Inclusive representation in staff - gender considerations

Without exception, all three WTs have a larger percentage of women working as part time staff than men and all have a larger percentage of women that are unskilled. One of the reasons given for why there are more female vendors employed is that the women tend to be more honest and declare all the money they make at the tap stands. The table below depicts the number of men and women employed as full time and part time members of staff as well as presents the number of skilled and unskilled staff that each of the three WTs is working with.

Table III: Gender disaggregated number of skilled and unskilled staff per WT

Water Trust	Full time			Part time			Skilled			Unskilled		
	Total	M	F	Total	M	F	Total	M	F	Total	M	F
Kalikiliki	9	8	1	28	3	25	4	3	1	33	8	25
Chipata	24	21	3	72	14	58	16	13	3	50	25	55
Chibolya	16	13	3	41	13	28	8	5	3	49	21	28

On the division of responsibilities for operation and maintenance between men/women and abled/differently abled persons, all WT management representatives said there are none as all staff are assigned according to their job responsibilities.

Women's higher representation among part time and unskilled staff is a typical presentation of vertical segregation – the tendency of men and women to be employed in different positions within the same occupation or occupational group. It can be attributed to several issues which include the education levels of the women being lower than that of the men which impacts on their chances of getting skilled jobs. A balance of women and men at all levels in the workplace creates more opportunities to discuss and address the different impacts of the work that the WTs do on men and women as well as the implications of development, policies and programming on both sexes. For the WTs, this would mean them having to deliberately restructure their recruitment process to allow more women to be employed and to consider opening the recruitment process to allow qualified women from other areas to apply for jobs within the settlement when they cannot identify qualified women in the area.

8.5 Inclusive representation of staff - the elderly, the youth and those living with disabilities

With regard to respect for diversity as evidenced by the employment of youth, the elderly and those living with disabilities, the three WTs have been employing people as indicated below:

Water Trust	Total number of staff	No. of elderly employed above 60 years	No. of youth employed below 35 years ¹⁸	No. of people living with a disability employed
Kalikiliki	37	3	19	3
Chipata	96 staff	6	55	1
Chibolya	57	0	48	3

It was only Chibolya WT that admitted to having had a deliberate policy to employ people living with disabilities. None of the staff at the Chibolya WT are above 60 years of age. The reason given for this by management was that there is need to have personnel able to multitask and employing people above 60 would limit the WTs capacity to ensure staff are multitasking.

What was observed is that there does not appear to be any written down policy around ensuring diversity and encouraging inclusiveness within the WTs establishment. Instead, there appears to be an emphasis on simply ensuring there is representation in as far as numbers are concerned without any follow-up action to ensure quality participation through the decision making process by those that are

¹⁸ As defined in the National Youth policy of 2006, Ministry of Sport, Youth & Child Development, Page 2.

representing the different groups of people, i.e. the elderly, the youth and those living with disabilities. The process of institutionalising inclusion has not happened in any of the WTs

8.6 Physical accessibility of water and sanitation infrastructure by vulnerable people

The human right to water entitles everyone to sufficient, safe acceptable, physically accessible and affordable water for personal and domestic uses. In as far as physical accessibility is concerned, specific groups of people are considered vulnerable to being denied access should the infrastructure not be designed well. This includes the aged and the physically disabled in cases where they have to go over steps to gain access to the service. This review has adopted the social model of disability in which disability is considered the responsibility of the whole of society. In this model people with impairments, such as physical impairments that limit their activity, are disabled because of the social and economic environment in which they live, which does not allow them to engage in society in the same ways as other people.

Other vulnerable groups include women that prefer to head load their containers of water and cannot do so easily when there is no pedestal to help them do it or that have to walk longer distances just to access the service or be able to get a little privacy in cases of sanitation services.

Vulnerable individuals face additional barriers to water and sanitation access. These barriers can negatively affect their self-esteem, dignity and self-respect and cause them to be less likely to know or assert their rights. The assumed benefits of addressing all barriers are greater autonomy, productive and civic engagement for vulnerable people as well as reduction in time, energy and resources for carers.

8.6.1 Distances between water points

On the infrastructure accessibility (location, accessible features) to people with vulnerability (persons living with disabilities, children, elderly, chronically ill, and women), it was observed that in Kalikiliki, location of kiosks are within 150m from households; while in Chipata and Chibolya, kiosks are with 300m from households. The national standard as determined in the legislation is within 500m radius. Another point to consider is the experience of having to deal with difficult paths to water points. In Kalikiliki a woman was observed having to draw water from a water point further away from her home because she cannot get her wheel burrow to the closest water point because the path she would have to use is too eroded and will not allow her wheel burrow over. All the paths in the settlements are gravel and there is a high possibility that in some areas, some paths are impassable once the rains have started.

8.6.2 Design of the infrastructure

Most kiosks had platforms slightly above ground level, a few had their platforms suspended due to erosion making access challenging. Household ECOSAN latrines in Chipata by design had quite steep steps which would make them inaccessible to the elderly and those living with disabilities. In addition, the toilets are too small for a wheelchair user to enter and turn inside.

8.7 Observed challenges being faced by WTs in trying to be inclusive

For the case of individual connections, the WTs currently, do not have mechanisms of supporting vulnerable households meet this cost. I.e. there are no tariffs options for the poorest and people who cannot pay and the payment system required that customers pay all the money owed in one instalment. From the point of view of the community the water supply connection fee which ranges between K500 to K900 is too expensive a cost for vulnerable households to meet.

Secondly, it was noted that the WTs do not have any baseline data disaggregated by sex, age and disability to help them make informed decisions. This is worsened by the fact that none of the WTs have undertaken any survey to collect the views of women, children, older people, disabled people and their households, and any groups living in the area whose needs are likely to be neglected.

Thirdly, unless they start to reinvest and remodel the old infrastructure and make an effort to deal with things such as soil erosion or the need to widen the doorways to the toilets, those living with disabilities and the aged will continue to have reduced physical access to the water and sanitation services.

Fourthly, none of the three WTs interviewed indicated any plans to ensure that all community mobilisation uses participatory approaches that enable different groups of people in the community to participate in the planning and implementation of WSS. In particular a gender considerations did not feature all in the discussions held with the WTs in as far as ensuring accessibility to all was concerned.

9.0 Governance of the Water Trusts

Bearing in mind that governance factors are important in constraining or enabling effective service delivery, this section of the report discusses the degree to which the Water Trusts have managed to remain independent, service and not profit oriented institutions, relatively free from political interference; and also looks at how the Water Trusts have negotiated with local political stakeholders or other power holders (externally, and within their own Board, and between the Board, management and vendors), to be able to remain focused on their mission of providing equitable and quality services.

Statements such as that made by the Global Water Partnership, ‘the world water crisis is mainly a crisis of governance’ (GWP 2000), reflect a recognition that while issues of technical and financial support for service delivery are unquestionably important, the global crisis in access to water supply and sanitation services is predominantly rooted in aspects of poverty, power and inequality; and not in physical availability. Strategies to address disappointing performance in the sector must therefore seek to understand and where possible to address these underlying political factors¹⁹.

In this review the term water governance “...refers to the range of political, organizational and administrative processes through which communities articulate their interests, their input is absorbed, decisions are made and implemented, and decision makers are held accountable in the development and management of water resources and delivery of water services.”²⁰ Crucial elements of WS governance are the articulation of the actors responsible for policy making, regulation and service delivery and the institutional boundaries between them as well as the institutions for user participation.

9.1 The key stakeholders at the national and the community level

Institutions are crucial elements of governance since they shape the behaviour of the actors responsible for policy making and public decision taking. Stakeholders identified as being critical in the management and governance of the WTs include the following:

At the national level: At this level, the most important stakeholders are the Ministry of Local Government and Housing/Lusaka City Council; the Lusaka Water and Sewerage Company; the Ministry of Community Development Mother and Child Health.

The Ministry of Local government and Housing (MLGH) has the overall mandate to coordinate urban water supply and sanitation (UWSS) to all users through Local Authorities (LAs) It also remains with the role of providing policy direction and legal instruments as well as undertaking resource mobilisation for the sector. MLGH is the principal channel through which the Government disburses funds supporting rehabilitation and development of UWSS. These funds do not go to the WTs and LWSC confirmed that they have only received funds provided for very specific projects in some settlements. LAs have

¹⁹ Overseas Development Institute, Daniel Harris, Michelle Kooy and Lindsey Jones, Analysing the governance and political economy of water and sanitation service delivery, August 2011

²⁰ Bakker, K. (2003) Good Governance in Restructuring Water Supply: a Handbook. Federation of Canadian Municipalities, Ottawa

established Commercial Utilities (CUs) to manage the UWSS systems in the cities and towns while solid waste management and drainage remain the direct responsibility of the LAs.

For the other stakeholders such as MCDMCH, their main role with regard to the overall management and governance of the WTs has been with their participation on the WT boards where they have specific officers representing the institutions on the boards of the WTs.

Specifically with regard to LWSC, beyond the company being the licence holder and sitting on the board, the company has been providing the following services directly to the WTs:

1. Overall monitoring of the quality of water done throughout the year. Although they do not give the WTs immediate results, they do notify the WTs when they have identified a problem.
2. Technical assistance in the form of actual expertise to resolve O&M technical problems encountered by the WTs as well as assistance in actual installation of new equipment.
3. Providing support to the WTs when there is an outbreak of any water related disease (e.g. giving out chlorine at the household level) because ultimately it is the LWSC that remains answerable to the LCC.
4. Providing support in the design of appropriate infrastructure for establishment in the settlements. For example, under the Devolution Trust Fund interventions, the open and closed kiosks have included a pedestal to aid with women opting to head load their water containers.
5. LWSC has also been providing orientation for the board members on their roles and responsibilities and has in the past also held other training courses for the management of the WTs.

The WTs have benefited from these services free of charge because the initial service contracts did not provide for remittance of any funds to LWSC to cover the costs of providing these services. This is an issue of concern raised by institutions at the national level who point out that this is not sustainable way of managing the WTs given that LWSC is no longer able to offer these services free given their human resource and financial constraints. A note was made that the new service contracts once signed will oblige the WTs to pay for some services.

With the LCC, the WTs have benefited from the engagement in the following ways:

1. Running the elections of the then RDCs and providing these with capacity building to help them run effectively and efficiently. It is expected that this is the same role that will be played with regard to the WDCs
2. The WTs are mainly housed in the community based LCC offices which also house the WDC and other LCC offices. They do not pay any rent.
3. LCC has also helped in the development of specific documents to help the WTs run. These include the Water Trust Deeds, and the service management contract between the WTs and LWSC.
4. LCC has also been involved in assisting the WTs identify and actually procure land within the settlements of operation.
5. In areas where it is the WDC tasked with resolving conflicts, where they have failed, LCC is approached and asked to help resolve the conflict.
6. Garbage collection is being done under the auspices of the LCC which has engaged some private enterprises to collect garbage and remit some income to the LCC. Although not working well, the WTs are benefiting from this intervention.

At the community level: Several stakeholders exist in the different settlement but the key stakeholders identified in relation to water provision and in the functioning of the Water Trusts include the Ward Development Committees, the church and the private sector and the Neighbourhood Health Committees (NHC).

It was observed that the links between the WTs and the NHCs is very weak despite the NCH potential to be a vehicle through which sensitisations on water related matters can be done. With regard to the private sector, the role played appears to be relegated to sitting on the board and participating in the provision of garbage collection in all three settlements. The church's role too has been to sit on the board but in the case of Kalikiliki WT, in the absence of an active WDC, they have also made use of the church to reach the community and reach out to those identified as vulnerable.

A human rights based approach to water and sanitation promotes participation in and information about people's access to decision-making forums that affect their access to water, sanitation and hygiene services. It furthermore ensures that water and sanitation service provision is based on the principles of non-discrimination and equality. For the WT model being discussed, the opportunity to engage the community is through the provision of seats on the board by the community based organisations and faith based organisations and more so through the representation of the WDC.

The Ward Development Committees

In 2011, with the coming in of the new Government, the Residents Development Committees that had initially been the community development structures were abolished and replaced with Ward Development Committees as prescribed in the revised Decentralisation Policy (2013). This policy includes specific policy measures to ensure that sub-district structures are established for the effective and efficient delivery of services. The functions to be performed at this level will include the promotion of community participation in decision making, development planning and implementation. At this sub-district level, the Local Councils will establish Ward Development Committees (WDC) which are a coordinating body comprising of community representatives elected from the communities at zone level. Currently, all the Local Councils have been mandated to form these WDCs and district planners have been trained and provided with guidelines on their establishment. The guidelines do provide space for women's participation on the said structure.

After the abolition of the Residents Development Committees efforts were made to establish interim Ward Development Committees in the different settlements even as the local authority started to arrange for actual formation of Zones and eventual election of representatives to sit on the various community structures. Whether through the RDCs or the WDCs, having the community organised provided an opportunity for the community members to be in a stronger position to negotiate with both government and water and sanitation provider.

Unfortunately, the actual selection of who was to sit on the interim committees was done by area councillors in the settlements. What this has resulted in is that even though in some settlements such as in Chibolya, some of the members of the RDC were taken on as members of the new WDC, the new committees are seen as being political with a preference being made that the WDCs are not a part of the WT Boards. This is a decision made based on the need to avoid the politicisation of water provision in the settlements. The idea implementation of what is really a good governance structure that allows for the active participation of the community was watered down by the perceived negative impact of the politicians on the running of the community structure.

In the case of WDCs in the settlements, Kalikiliki does not have a WDC and although it falls under Mtendere Ward where there is a WDC operating, Kalikiliki does not have a representative sitting on the committee there. In the absence of a WDC in Kalikiliki, the community members and vendors identified the gap that this has left in as far as linking them to the development processes taking place within the community and how this has worsened the leadership crisis also experienced by having area councillors and MPs that are not engaging with the communities at all.

The table below shows that the WDCs have also made attempts to ensure equal representation of men and women on the committee. Unfortunately, beyond the numbers, it was difficult to ascertain the level of participation of the women on these committees let alone the impact they have had in ensuring women’s concerns are taken into consideration in the management of the WDCs

Table IV: Gender representation on the WDCs

Ward Development Committee	No. of people on the WDC			Comment
	Total	Male	Female	
Chipata settlement	10	5	5	Executive meets every week and have bi-annual meetings. Monthly reports sent to the Council. They receive 5% of surplus from the WT every quarter.
Chibolya settlement	8	4	4	Meets quarterly. They receive 5% surplus from WT, paid quarterly. However, the WTs is owing for the last two quarters.

9.2 Gender representation on the governance structures of the Water trusts

From the table below it can be seen that all the three WTs have tried to ensure equal representation of both the men and the women on the board.

Table V: Gender representation on the WT boards

Water Trust	No. of people on the Board			Includes WDC	Comment
	Total	Male	Female		
Kalikiliki	6	3	3	No	Meet quarterly, community representation is from the church and a local CBE
Chipata	9	4	5	Yes (3)	Meet quarterly as planned
Chibolya	7	4	4	No	Meet quarterly as planned

9.3 Relationship between the board and the management of the WTs?

According to all three WTs, the relationship between the board and the management is very positive. The board members all understand their roles and do provide performance monitoring and oversight. Where the WDCs (devoid of politics and representing the views and needs of the community) are part of the board, it was noted that there is increased local ownership even at community level as through them there is downward accountability and spaces and channels for citizens to influence the provision of services. This has had a positive impact on service delivery particularly in Chipata settlement. The conclusion of the review is that community representation on the boards is important in ensuring there is a feedback mechanism to the community but also that the views and needs of the communities are clearly made known to the WTs.

The review noted that where the WDC is a part of the board of the WT, the role that they play is greater than in settlements where they are not on the board. For example, in Chipata settlement, the WDC are not only involved in tariff setting, but also in the recruitment of staff as well as in conflict resolution between the WT and the community. But even where the WDCs are not a part of the WT board, the WTs have continued to involve the WDCs in the implementation of activities, e.g. in the case of Chibolya, the WDCs are used by the WTs to initiate discussions in the community around tariff increments and other critical decisions where they need community to voice their opinions.

10.0 Scope for the expansion of the Water Trust model into new geographical areas or into new areas of service provision

10.1 Expansion into new geographical areas

Without exception, all the stakeholders interviewed as part of this review (including Government officials, other NGOs and the community members during the FDGs) agree that the WT model is a good model that should be strengthened in order for them to become more commercially viable. According to the MLGH representative interviewed, the National Urban Water Supply and Sanitation Programme recognises that the CUs cannot be the sole players in the supply of water and sanitation services and therefore leaves open the possibility for increased participation of the private sector including the WTs. Community members in particular are cognisant of the capacities of the LWSC to provide the settlements with WSS and believe the WTs are a good model. In the views of the community members, the added benefit is the fact that the WTs have been employing people from the same settlements.

To actualise this position, the Government of the Republic of Zambia in partnership with the United States of America, acting through the Millennium Challenge Account Zambia (MCA-Zambia)²¹ and the U.S. Government's Millennium Challenge Corporation (MCC), announced a water, sanitation, and drainage grant program that will open later in 2014. The U.S.-funded Millennium Challenge Compact Innovation Grant Program will solicit proposals from the private sector and support the best approaches to improve service delivery for clean water, sanitation, and drainage. The total amount committed under the program is US\$10 million. The projects funded under the Innovation Grant Program will complement the Compact's US\$355 million Lusaka Water Supply, Sanitation and Drainage Project investment that commenced implementation of activities in November 2013. MCA specifically emphasised that they are open to the use of WTs as the model for implementation as long as there is evidence of efficiency and capacity to successfully implement what was being proposed. Also, LWSC indicated that there are plans to use the money received from the MCA programme to improve water and sanitation services in WT managed areas in Ngombe, Chazanga, Chipata and Kamanga settlements.

The main concern raised with the WT as a model is that in its current form, the WTs appear to be more aligned to the LCC than they are to LWSC and by virtue of the type of service management contracts signed, LWSC does not have adequate control over the WTs management. What is therefore proposed (by the different stakeholders at the national level) is that LWSC (because it is the licence holder with the overall responsibility on water provision) takes greater control over the management of these WTs to strengthen their financial controls and ensure better transparency and accountability. In the absence of a more stringent monitoring role being played by LWSC, the WTs are viewed as unsustainable should the

²¹ MCA-Zambia has been established under the laws of Zambia as a company limited by guarantee, designated by the Government of the Republic of Zambia (GRZ) as the Accountable Entity to implement the Lusaka Water Supply, Sanitation and Drainage Project. This has been funded by the United States of America, acting through the Millennium Challenge Corporation (MCC). The Compact agreement between MCC and GRZ was signed on May 10, 2012. The project being implemented in the City of Lusaka under the Compact is the **Lusaka Water Supply, Sanitation and Drainage (LWSSD)** project. The LWSSD project aims to increase access to clean and safe drinking water supply and adequate sanitation in up to 25 peri-urban areas of Lusaka, thereby reducing water-borne diseases such as cholera. This project will make drainage and sewerage improvements, tackle solid waste management, bury shallow wells and conduct health education and hygiene promotion. For more data see <http://www.mcaz.gov.zm/>

city be hit by a serious water borne disease outbreak or should the WSS systems start to crumble and the WTs fail to meet the costs of repairs.

10.2 Expansion into new areas of service delivery

Without exception, all the three WTs indicated a desire to expand into other urban service delivery areas and noted that their only constraint is the licence as signed between themselves and LWSC. For the WTs, new areas of service delivery include and as already noted:

1. **Garbage collection** – where they hope to take over the role currently played by the community business enterprises (these are privately run businesses owned by individuals) which in all three settlements are not doing a good job. In the interviews with the community and the vendors, all present expressed a general dissatisfaction with the solid waste management situation in the settlements. Further people felt garbage collection services will be cheaper if it is done by the WTs and were willing to have the cost of the WT doing this included in the water tariff.
2. **Scaling up of sanitation services** – even though the challenges as described earlier are identified as real constraints that make sanitation provision an unattractive income generating initiative, the WTs are still keeping this as a possible area of operation.

The view of other stakeholders particularly at the national level (this included LCC, LWSC, NWASCO and MLGH) is that allowing the WTs to move from their core business of providing water and sanitation services to providing additional urban services, such as solid waste, may see them completely divert from their core mandate with the potential risk of the quality of WSS services deteriorating.

Section V – Review conclusions and recommendations

11.0 Conclusions and recommendations

11.1 Conclusions

With the foregoing views on the potential of scaling up the WT model to other areas it is the reviewer's view that the idea of replicating the model is a good thing especially if the current gaps (board composition, weak financial systems) identified within the model can be strengthened during the replication process. **WTs have proven that they can operate efficiently and provide water services in the poorest peri-urban areas of the country with additional benefits including job creation for the unemployed urban poor, building life-long skills for local people, strengthening local structures and cohesion, improved revenue and revenue collection efficiency, and providing urban services at scale with minimal costs.**

Overall the WTs, whether funded by CARE or JICA have managed to remain autonomous with little influence from the political actors, policy makers and other institutions with power. With regard to curbing political influence, this has been essentially possible because all stakeholders involved at community and national level agree that by allowing political influence the WTs will run the risk of politicizing water and sanitation service provision which may lead to some sections of the community not receiving the service. The WTs themselves are cognisant of this fact and by not sanctioning the inclusion of WDCs (which by virtue of the fact that the membership was appointed by politicians and not elected are considered politicised) in the boards of the WTs, all other stakeholders have also recognised this risk.

The fact that all the three WTs reviewed have in fact expanded, the two initially supported by CARE having expanded using their own resources for the most part is an indication that the WT model does work and can be sustainable. Within the scope of the study, the review notes that the WT model has demonstrated the opportunities that lie in delegating the management of small water schemes in peri urban areas.

The following factors were identified as having contributed to the good performance of the WTs. It was noted that in comparison to the other WTs, Chipata WT is specifically doing well and the main reasons are as follows:

1. **The water potential in the area.** In the case of Chipata settlement, the area has good water yields and so pressure issues are easily resolved. This is unlike Kalikiliki where the water tables are recorded to go down this forcing the WT to ration water and impacting on their capacity to collect income.
2. **The management of the WT and the WDC work very well together;** the WDC has the direct link to the community and the WT management is making good use of them and the WDC is functional, meeting regularly and keeps consistent communication with the community. In Chipata settlement, the WDC is well known by the community and the vendors. In Kalikiliki settlement, none of the vendors knew who the WDC members were and in Chibolya, the community members noted that there appears to be a weak link between the WT and the WDC and because the WDC do not sit on the board, the WT is not accountable to the community and is making decisions on its own. In addition, because the WDC is currently interim, there is no commitment from its members and thus no leadership on developmental issues in the community.
3. **The management and the board have a good relationship and the board is known by the community and the vendors.** In the case of Chipata and Chibolya settlements, the board members were known by all the vendors. In the case of Kalikiliki settlement, only two out of the 11 vendors said they knew who the board members are.
4. **The management of the WT sets out a vision and targets to be met:** In the case of Chipata, the WT management consistently shared with the staff both full time and the vendors the WT vision and targets ensuring complete understanding and buy into the vision and set targets. This is the case for Chipata WT but is not the case for Chibolya and Kalikiliki.
5. **The management responds quickly to any issues raised by the community and the vendors and the Scheme manager maintains an open door policy and is said to be a people's person:** Although the response time was not an issue in all three WTs, Chipata WT stood out as being the most responsive to complaints and system failures no matter how small.
6. **The WDC is not seen as having been negatively influenced by the politicians and the area MP and Councilors are known by the community and are working well with the WT:** In Chipata settlement, both the area councilor and MP are well known by the WT, the WDC and the vendors. In Kalikiliki and Chibolya, both the MP and the area councilors though known to the community and the vendors were said to be very unaware of the issues faced by the community with regard to water and sanitation. Meetings between them and the community were not being held and in the case of Chibolya, the MP's and councilor's visits to the settlement are irregular.
7. **Management is seen by the community as being transparent and accountable to them:** In the case of Chipata WT, the management quickly shares information with the community through a given structure (WDC) and consistently keep them informed about any plans the WT has. This was observed as a critical weakness at the Kalikiliki WT where communication between the management and the community as well as the vendors is said to be very weak.
8. **The vendors believe in the management and overall leadership of the WT:** Within the Chipata settlement, the vendors believe they are looked after well, and because of this remain motivated and work hard. In Kalikiliki and Chibolya, the vendors did believe in the management and overall leadership but there were noted elements in the relationships that still need to be resolved. E.g. in Chibolya the need for more management/vendor meetings.
9. **Maintaining public confidence:** The Water Trusts has built public confidence with the users. In Chipata where the access rate is the lowest (at 49%), the support from users was immerse even

with such low level of service. In Chibolya and Kalikiliki, the community also spoke highly of the WTs.

10. **A supportive environment:** One that clearly stipulates the roles and responsibilities of all players is key to making community management models work. In this case, the Government and all other stakeholders have recognized the role being played by the WTs and continue to support them by, e.g. having representatives sit on the WT board as well as implementing projects through them. In addition the fact that they continue to get external support in the form of expertise in major repairs, water testing, training and monitoring from LWSC and LCC reinforces this point.

Elements noted as challenges to financial sustainability still need to be resolved before the WTs can be passed as being financially sustainable. The move towards getting such social enterprises financially sustainable would ideally consider allowing them to venture into offering other services either themselves or having them run other income generating initiatives through subsidiary companies.

The extent to which the WTs are serving the poor cannot be questioned, they are all expanding their services and are only constrained by issues of space. Despite this, there has to be acknowledgement that the very poor tend to be those identified as vulnerable, i.e. the women, the chronically ill, the aged and those living with disability. The issues raised with regard to inclusiveness, specifically in relation to the capacities of the WTs to reach those identified as vulnerable then raises questions around the extent to which the WTs are in fact reaching the very poor. In addition, the issue of the irregular tariff being administered that has been noted to be working against Governments pro-poor approach also raises the need to ensure there are efforts made to get this debated even more and the issue regularised.

Quotes

We are happy with the WT because they employ people from the community and are committed to providing us with a service.

Female community member in Chipata settlement

The participation of the WDC in the model is a good thing because through them, the ordinary person in the community is represented.

WDC chairperson Chipata

The WTs have been involving us in the tariff structure meetings and we feel involved. They are really working.

Community member in Chibolya – Chairperson of the crime committee

11.2 Recommendations

The review recommends the continued use of the WTs as a model for the provision of WSS in peri-urban areas. In order to ensure that the model as it is being replicated is strengthened, it is recommended that:

At the community level:

1. There should be adequate community involvement to ensure that the community own the processes and the investments being made. This should start by having the community members participate in the building of the infrastructure.
2. There is need to set up and agreeing on some accountability mechanisms that should allow users and providers to consult and share information thus strengthening the public confidence in the management team. Publicity around investments would generate interest to users who ultimately would want to offer support through regular paying of user fees, consensus on tariff adjustment, curbing vandalism, among others.
3. Sensitisations and awareness raising around water and sanitation issues should be continuous and targeted. In the new areas, emphasis should be on awareness around sanitation as an issue that has been neglected for a long time.

4. To promote inclusiveness and ensure all community members are being served, the WTs need to develop systems of identifying those that are considered vulnerable starting with the development of an identification criteria. If this cannot be done with the WDCs, other community based structures such as the churches should help do this.
5. Consideration should be made to have a community structure comprising all stakeholders in the community that will represent the community even on the board. As much as possible, these structures should not be politicised in any way. The WDC can be such a structure but only if the issues of it being politicised are dealt with.

With regard to the WT boards

1. In the selection of the boards, there is need to ensure the board composition does not include any politicians and is based on voluntarism.
2. In addition, there should also be gender considerations in the selection process.
3. Board members should not only be oriented on water and sanitation issues but also on issues of ensuring the WTs remain open to diversity and are inclusive both in management and in service provision.

In relation to Water Trust management

1. Absence of external support for infrastructure improvement requires attention. There is need to strengthen the WTs capacity to mobilise external resources including grants. Grants would enable the WTs to channel funds to expansion works while using own income for O&M costs and building up reserves for future replacements costs. LWSC has to focus on building the WTs capacities and helping them source for funds be they Government or donor based.
2. Sanitation promotion remains a challenge for the WTs. Whether this problem is due to cost implications or design of the model, it is an area for further investigation. It was noted that sanitation promotion and accompanying hygiene awareness was not being paid much attention compared to water supply. As such, there is need to deliberately start to have the WTs focus on sanitation by helping them include it more in the planning sessions. This is important specifically because of the implications poor sanitation has with regard to water contamination in the said areas.
3. As the WTs are started in the different settlements or as they are growing, there is need to also start negotiations for land on title for the WTs. This is land that can then be used for expansion purposes. All plans for scaling up of services should therefore include land acquisition.
4. The WT need to be supported to shift from doing series of expansion projects to developing a settlement wide water and sanitation improvement plan that take into account the growth pattern and base its expansion on that plan.
5. Considering the need to strengthen accountability and transparency in the management of the WTs, it is recommended that LWSC does take on a more stringent monitoring role that will allow it to not only set performance benchmarks and strengthen the internal financial systems of the WTs but also provide vertical accountability as a system through which the WTs can formally report back to the stakeholders i.e. LCC and LWSC. With regard to accountability to the community, through the WDCs, accountability to the community can be better enhanced through the use of scorecards at the community level.
6. To help the WTs become even more financially viable, it is also recommended that the WTs be allowed to venture into other income generating initiatives including bottling of water and garbage collection as a start. With this added experience, WTs should ideally then be allowed to form autonomous subsidiary companies that can run other income generating initiatives proceeds from which can be ploughed back into the WT. In relation to the tariff system, there is

need for this discussion to be brought up again at the policy level and for the WTs to be allowed to implement a tariff structure that will enable them remain sustainable.

7. Recruitment of staff should be opened to include recruitment of people outside the settlement as this will increase the possibility of getting even highly qualified people that may not be available within the settlement, especially women.
8. Water Trusts should utilise knowledge sharing forums like the 'Managers Forum' to share best practices, in an environment with less strict compliant systems. Water Trusts with active and motivated scheme managers have been able to come up with simple innovations, e.g. of reducing water spillage in Chibolya by use of short hose pipe to direct water to the container spout; increasing commission for water vendors by adopting daily rotation system and supporting financially constrained households by adopting in kind payments in Chipata.
9. The WTs need to explore the role that can be played by the NHCs so that they can take advantage of their community outreach structures as well as their expertise at reaching out to the community with messages around hygiene.

The vendors

1. The vendors should continue to work on commission to ensure they work hard and there is no pilferage.
2. Where the WT is increasing the individual connections, the vendors should be trained to undertake other tasks and maintained so as not to lose the investment made by the WT in the individuals. Tasks such as undertaking minor repairs or monitoring the water system in the community can be undertaken by the vendors.
3. Capacity development in the form of training for the vendors should be done on a continuous basis and should form part of the WTs annual plans.

The other stakeholders

1. There is need for the MLGH through the LAs to resolve the issue of the election of the WDCs and so allow for the committee members to be truly elected by the community members.
2. The MCDMCH needs to play a greater role in providing technical expertise to the WTs particularly in advice on inclusiveness and ensuring gender sensitivity in the provision of water and sanitation services.

References

Bakker, K. (2003) Good Governance in Restructuring Water Supply: a Handbook. Federation of Canadian Municipalities, Ottawa

CARE International Zambia, Report of the Compliance and Financial Assessment for CARE Partners under COMEQS Project - Kanyama Water Trust, Chaisa Water Trust, Chipata Water Trust and People's Process on Housing & Poverty in Zambia, April 2014

CARE International Zambia, Water Trust Management System December 2002

Esther Duflo, Sebastian Galiani, Mushfiq Mobarak, Improving Access to Urban Services for the Poor: Open Issues and a Framework for a Future Research Agenda October 2012

Gordon Mcgranahan and David Satterthwaite; Governance and Getting the Private Sector to Provide Better Water and Sanitation Services to the Urban Poor 2006.

Harry Jones, Ben Clench and Dan Harris, The governance of urban service delivery in developing countries March 2014.

Lusaka Water and Sewerage Company (LWSC), Service Level Guarantees for Lusaka City (2012-2015)

Lusaka Water and Sewerage Company (LWSC), Service Management Contract- LWSC/Chaisa Water Trust, 2007

Matthias Krause, The political economy of water and sanitation in developing countries: Cross-country evidence and a case study on Colombia

Mbuzi, O. (2002). Water Trust Management Systems. A manual developed for CARE International Zambia, PROSPECT Project.

MLGH, National Urban Water Supply and Sanitation Programme, 2011-2013, 2010

MSYCD, National Youth policy, 2006

Mwanamwambwa and Nkoloma (2005): Maximizing the benefits from water and environmental sanitation; from practice to policy: CARE– Zambia's 'Water Trust Model'. Paper presented at 31st WEDC International Conference, Kampala, Uganda, 2005

NWASCO, Urban and Peri-urban Water Supply and Sanitation Sector Report 2012/2013, 2013

Overseas Development Institute, Daniel Harris, Michelle Kooy and Lindsey Jones, Analysing the governance and political economy of water and sanitation service delivery, August 2011.

S. Kayaga and C. Kadimba-Mwanamwambwa, Bridging Zambia's water service gap: NGO/community partnerships, September 2006.

Appendix 1: List of people met

Institution	Name contact person	Designation	Contact details
MLGH	Oswell Katoka,	Assistant Director, Dept. of Infrastructure and Housing, MLGH	0977 334422
Lusaka City Council	Mr Mulimba Yesini	Assistant Director- Housing and Social Services	0979 894086
NWASCO	Ms. Josephine Goma	Commercial dept.	0211-226941-2/ 0977790138
Water and sanitation for the urban poor (WSUP)	Mr. Rueben Sipuma	Country programme manager	0977 306387/ 01-250434
PPHPZ	Mr Ncube Nelson	Executive Director	0967 112200
Millennium Challenge Account (MCA)	Mr Mbulwe Mwiimba	Director Grants	0966 862948/ 01-256004
WASAZA	Mr. Moffat Tembo,	Engineer	0977986831
WaterAid	Mr. Numwa Numwa	Technical support manager	0977 546926
NGO WASH Forum	Ms. Miriam Mukamba	Secretariat	0966958976
Lusaka Water and Sewerage Company	Ms Yvonne Siyeni	Manager Peri Urban Department	0955 642165
	Ms. Tamara Ngoma	Senior Engineer Peri Urban Department	0977971413
Settlement 1: Kalikiliki, Mtendere east			
WT Manager	Philimon Sukutwe	Acting Scheme Manager	0976 393516
Water vendors	Mr. Mpundu, Mr Shachizanda, Ms Chimungula, Ms Tembo, Ms Lungu, Ms Mukumba, Ms Kawatu, Ms Simuchi, Mr Moono, Ms Namumba, Ms Zimba	Water vendors	-
Community members	10 community members were met, four males and six females	Community members	-
Settlement 2: Chipata Compound			
WT Manager + other Management Team representatives	Mr Chinkuli Mr. Mwelwa Ms Joyce Mwanza Mr Sibanda	Scheme Manager Head Technical Department Secretary Head of Finance	0977 377669
Water vendors 10 water vendors Five males and five females	Ms. Chirwa, Ms Mfula, Ms Phiri, Ms Mulenga, Ms Nkunde, Mr Chipanama, Mr Chimfwembe, Mr Banda, Mr Lusambo, Mr Kodowe	Water vendors	-
Community Members	10 community members were met, five males and five females	Community members	-
Ward Development Committee	Mr Gondwe Mr Daka Mr Chinunka Mrs Phiri Ms Tembo	WDC Chairperson Executive Committee members Treasurer Vice Secretary Member	0977 530784/ 0954 709909
Settlement 3: Chibolya Compound			

WT Manager + other Management Team representatives	Mr. Chishimba, Mr Gondwe Mr. Hajonkoma Ms Masumba Mr Sakanya	Scheme Manager Plant Operator Plumber Cashier Revenue officer	0977 489016
Water vendors 11 water vendors were met, six males and five females	Mr Mbulo, Mr Kalaba, Mr Hamoonga, Ms Musonda, Mr Kabimba, Ms Mwemba, Ms Mole, Mr Hanjonko, Mr Masumba, Ms Mwenda, Ms Makukula	Scheme Manager	
Community members	Eight community members were met, six males and two females	Scheme Manager	
Ward Development Committee	Mr Phiri Mr Funganisha Mr Mumbi Ms Nambeye Ms Bulaya Mr Mubita	Former RDC Chairperson Treasurer Member Vice treasurer Vice Chairperson Member	-

Appendix II: Terms of reference

Through various projects over the last 10-15 years, CARE Zambia helped set up Water Trusts, as community-owned and managed water and sanitation service providers in marginal peri-urban settlements of Lusaka. Water Trusts were set up in Kanyama, Chaisa, Chibolya, Chazanga, Chipata and Garden peri-urban settlements, while five other water schemes were constructed across 5 settlements in Lusaka and Malota in Livingstone (Mtendere, Kabanana, Mandevu /Marapodi, Jack, Chunga) and handed over to Lusaka Water and Sewerage Company (LWSC) for establishment of an alternative governance structure. CARE has also collaborated with other donors and actors (WSUP and JICA) to support the setting up of Water Trusts in other settlements in Lusaka. In addition, CARE has helped strengthen LWSC's capacity to establish a Water Trust in Mtendere East.

The Water Trusts, set up between 2001 and 2004, have proven to be largely functional to date. They are recognized, albeit informally, by Government and Lusaka Water and Sewerage Company, whose license the Trusts use through a Management Contract arrangement. Key collaborating partners: Lusaka City Council, LWSC, Ministry of Community Development, Mother & Child Health plus the community leadership across all settlements. Over the years, the Water Trusts have been given additional responsibility of managing water borne fee-paying facilities. Besides water infrastructure, CARE through various urban projects, has supported the construction of ecological sanitation facilities (dry sanitation, in Chaisa, Kanyama and Chipata) at household level through engagement of local artisans, and there is potential for Water Trusts being able to take on additional urban sanitation services, such as solid waste management.

With significant donor funding and Government investment in improving urban and peri-urban water and sanitation infrastructure and services in Lusaka over the next few years (in particular, the US-funded \$354.8m Millennium Challenge Corporation Compact for the Lusaka Water Supply, Sanitation and Drainage (LWSSD) project), CARE and LWSC wish to analyse how well the Water Trusts have managed, since CARE ceased to support them, to continue their mission of providing quality water and sanitation services, accessible to the most poor and vulnerable households in these peri-urban settlements.

In particular, we wish to understand:

1. To what degree have the Water Trusts continued to provide, and expand, coverage of water and sanitation services, beyond their initial levels of coverage when CARE stopped direct support?
2. To what degree are the Water Trusts financially sustainable? Are revenues covering operating costs as well as infrastructure replacement costs?
3. What are the average economic benefits for women and men working for the Water Trusts (in particular the vendors)?
4. To what degree have the Water Trusts ensured the inclusion of the most vulnerable households, including female and child headed households, in management and in service provision?
5. To what degree have the Water Trusts managed to remain as independent, service-oriented institutions, relatively free from political interference? How have the Water Trusts negotiated with local political stakeholders or other power holders (externally, and within their own Board, and between the Board, management and vendors), to be able to remain focused on their mission of providing equitable and quality services?
6. What is the scope for the expansion of the Water Trust model into new geographical areas (as the MCA project and others are implemented) or into new areas of service provision (e.g. solid waste)?
7. The degree to which Water Trusts have benefited from their relationship with LWSC, LCC, and MCDMCH in the following areas: attending meetings, O&M, enforcement of the terms and

conditions set out in the Trust Deed; Management Contract; HR and Administration manuals respectively.

Methodology:

The study will be carried out by a consultant team to be selected by a Steering Committee, including CARE Zambia, LWSC, LCC and WSUP. The aspects of governance and functionality will follow the CARE USA Water Team's Governance for Sustainability Snapshot tool (<http://www.surveymonkey.com/s/governance2013snapshot>), based on interviews with Water Trust staff, in a sample of WT areas, as well as mixed interest groups, including community members and committee leaders. This will be supplemented by quantitative data from WT and LWSC records, as well as Political Economy Analysis, using in-depth key informant interviews with relevant stakeholders.

The proposed detailed methodology from the consultant team, as well as a draft report, will be reviewed by the Steering Committee prior to approval, and the final report will be disseminated in a stakeholders meeting.