1 Research Paper

REGULATING LUSAKA'S URBAN SANITATION SECTOR

THE IMPORTANCE OF PROMOTING INTEGRITY AND REDUCING CORRUPTION

June 2021

WIN Water Integrity Network
Fighting corruption in water worldwide

AGUA CONSULT

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#1

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June 2021

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CONTENTS

ACRONYMS

BRRA	Business Regulatory Review Agency
CBO	Community Based Organisation
CSO	Civil Society Organisation
FSM	Faecal Sludge Management
GRZ	Government of the Republic of Zambia
JIT	Joint Implementation Team
KfW	German Development Bank
LCC	Lusaka City Council
LSP	Lusaka Sanitation Programme
LWSC	Lusaka Water Supply and Sanitation Company
MPE	Manual Pit Emptier
MWDSEP	Ministry of Water Development, Sanitation and Environmental Protection
NWASCO	National Water Supply and Sanitation Council
OAG	Office of the Auditor General
OCDS	Open Contracting Data Standard
SLA	Service Level Agreement
SLG	Service Level Guarantee
2018 UOS-FSM Regulation Framework	2018 Urban Onsite Sanitation and Faecal Sludge Management: Framework for Provision and Regulation in Zambia
VTO	Vacuum Tanker Operator
WASH	Water, Sanitation and Hygiene
WIN	Water Integrity Network
WSS	Water Supply and Sanitation
WWG	Water Watch Group
WWTP	Wastewater Treatment Plant
ZEMA	Zambia Environmental Management Agency
ZPPA	Zambia Public Procurement Authority

1 INTRODUCTION

1.1 Overview and Purpose

This report focuses on the steps taken to strengthen Zambia's regulatory framework for its urban sanitation sub-sector and details the types of corruption and wider integrity failures that remain pervasive in the sub-sector in Lusaka, Zambia. Zambia is a landlocked Southern African country with a population of 17.86 million. It transitioned to lower-middle-income status in 2011; however, per capita GDP remains low at USD 1,600.00, and 58% of Zambians earn less than the international poverty line of USD 1.90 per day (World Bank, 2019). Lusaka is Zambia's capital and the centre of government. It has a population of 2.3 million, 70% of which live in densely populated informal neighbourhoods termed peri-urban areas. These are home to the city's poorer inhabitants and characterised by a lack of "the infrastructure vital to sustainable development, such as passable roads, in-home water points or centralised/small-bore sewer networks" (WSUP, 2018).

2.6% Forecast annual GDP growth over next 3 years	**$194** millions of annual economic losses due to poor sanitation	**21** Number of years with a cholera outbreak since 1990
7th Easiest country to do business in Africa (2019)	**146th** On the Human Development Index (2020)	**23%** Urban population living in poverty
83% Unsafely managed excreta	**4.8%** Lusaka's population growth rate	**$1,600** GDP per capita (2020)

Across Zambia, incidences and perceptions of corruption are rising. In 2018, 66% of Zambians felt corruption was increasing, and 18% of Zambians that had contact with at least one public service (police, health care, schools, ID documents and utilities) had paid a bribe compared to 17% to in 2015 (Transparency International & Afro Barometer, 2019). Nevertheless, this remains lower than the average of 25% of people across Africa that had contact with at least one public service and paid a bribe (Transparency International & Afro Barometer, 2019) and 25% globally (Transparency International, 2017a).

With 15% of households accessing sewered sanitation and 85% accessing onsite sanitation (septic tanks and pit latrines of varying quality), sanitation services in Lusaka are better than many comparable sub-Saharan African cities. However, there has been a stagnation in sanitation service levels over the last 15 years. The failure to increase the provision of sanitation services at an acceptable rate is not solely a technical problem. Like the global water and sanitation crisis generally, it is primarily a governance problem – a critical component of which is the need for stronger regulatory tools and environments and the pervasiveness of corruption and other integrity failures.

This case-study report provides a broad mapping of the different types of corruption and other integrity issues in Lusaka's urban sanitation sub-sector. It highlights critical areas (i.e., public procurement and the mismanagement of per diems) where certain types of integrity failures and, in some cases, corruption are reportedly prevalent. This report also outlines the preventive and corrective measures used by key stakeholders to regulate the urban sanitation sub-sector and increase the levels of accountability, transparency and participation.

The primary reason Lusaka was selected as the case-study for this report was the comparatively advanced state of Lusaka's regulatory framework and environment, and the fact that, since 2018, measures have been taken to begin regulating onsite sanitation services. By highlighting the steps taken in Lusaka over the last 20 years to improve the regulation of urban sanitation services – and the areas where further improvements are needed – this report hopes to inform further improvements in Zambia as well as measures being taken in other developing country contexts to strengthen urban sanitation regulation.

1.2 Methodology

Most of the required information for this case-study report was collected through primary and secondary research from April to July 2020, with minor updates made in February 2021 before publication. The main secondary resources consulted included government policy and strategy documents, regulator and Office of the Auditor General (OAG) reports, and sub-sector reviews and evaluations.

For the primary research, remote key informant interviews were held to investigate instances of integrity failures and corruption and validate this study's findings concerning the functioning of the urban sanitation regulatory environment, the impact of the preventive and corrective measures being applied and recommendations. These stakeholders included many governmental organisations as well as a series non-state actors. For confidentiality reasons, neither of these sets of organisations are named. However, they include national and sub-national governmental actors as well as international organisations, international non-governmental organisations (NGOs), local NGOs, civil society organisations and private sector actors.

Although the integrity failures and instances of corruption presented in this report are based on primary and secondary research and were generally corroborated by multiple reliable stakeholders, anonymous sources are used throughout.

Annex One details the core set of questions asked to each of the stakeholders consulted, while Annex Two provides definitions of key terms used throughout this report.

1.3 Report Structure

This case-study report is divided into five further sections:

Section Two outlines the sanitation context in Lusaka. It provides a brief overview of the institutional arrangements for urban sanitation, before detailing coverage rates and the different service providers operating across the sanitation service chain for onsite and offsite sanitation.

Section Three details Lusaka's urban sanitation regulatory framework. It provides a short overview of the regulatory roles and responsibilities of key governmental actors before analysing the regulatory tools at their disposal and the status of the regulatory environment.

Section Four highlights the instances of corruption and wider integrity issues uncovered by this study's primary and secondary research. This information is presented as per the Water Integrity Network's (WIN's) three classifications of corruption and integrity issues: corruption in public financial management[1], corruption at the citizen-institution interface[2], and wider integrity failures[3].

Section Five provides a conclusion on the situation in Lusaka.

Section Six offers recommendations to strengthen the regulatory environment for urban sanitation and reduce opportunities for corruption and other integrity failures.

Photo by Georges Mikhael, 2014

[1] Covers the inappropriate capture of public resources by public or private actors.
[2] Covers the bribery of public officials by private citizens.
[3] Covers the allocation of resources to win votes or satisfy certain powerful or influential groups, to achieve a public relations goal, or to whitewash corporate social responsibility investments

2 SANITATION CONTEXT

2.1 Institutional Arrangements

Zambia has traditionally prioritised water supply over sanitation in its policies, regulatory frameworks and institutional arrangements (WHO, 2019). However, since 2015, Zambia has consolidated "its legislative and policy frameworks to focus explicitly on sanitation, taking into consideration the entire sanitation chain" (WHO, 2019, p. 4). In 2016, the establishment of the Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP) as the lead sector organisation responsible for sector oversight and policy development, with sanitation as one of its core mandates, demonstrated this renewed focus. Zambia has a decentralised system, and local authorities have wide-ranging responsibilities for sanitation.[4]

The Water Supply and Sanitation (WSS) Act No. 28 of 1997 is the primary legislation governing urban sanitation. It paved the way for local authorities to establish commercial utilities to provide water and sanitation services on their behalf. In Lusaka, Lusaka City Council (LCC) is the local authority and Lusaka Water Supply and Sanitation Company (LWSC) the commercial utility. LWSC is responsible for the provision of sanitation services across the sanitation service chain; however, it only directly manages a small percentage of sanitation services – the 15% of households with sewer connections and Lusaka's wastewater treatment plants (WWTPs). Most households use onsite sanitation services, and this arrangement leaves a substantial role for the private sector.[5]

The WSS Act No. 28 of 1997 established the National Water Supply and Sanitation Council (NWASCO) as the lead agency for regulating WSS, with the remit to do all things "necessary to regulate the provision of water supply and sanitation services" (GRZ, 1997, p. 7). The Zambia Environmental Management Agency (ZEMA) was established in 1990 and is responsible for regulating effluent discharge for environmental protection. Section Three outlines NWASCO and ZEMA's responsibilities and their regulatory tools.

Several other governmental actors have responsibilities pertaining to urban sanitation. These included several ministries[6] as well as other regulatory actors: The Water Resources Management Agency (WARMA), the Zambia Bureau of Standards (ZABS), the Business Regulatory Review Agency (BRRA) and the Zambia Public Procurement Authority (ZPPA). Additionally, international organisations such as the World Bank, the African Development Bank (AfDB) and the German Development Bank (KfW) play a substantial role in urban sanitation. In particular, the World Bank, AfDB, KfW and the European Union are funding

[4] These include establishing and maintaining sanitary and ablution facilities as well as services for the removal, destruction or re-use of refuse and effluent (and compelling the use of those services); establishing and maintaining drains and sewers; and taking and requiring the taking of measures for conserving and preventing the pollution of water supplies (GRZ, 2019).
[5] For example, private vacuum tanker operators provide all faecal sludge management services in Lusaka.
[6] These include the Ministry of Local Government, the Ministry of National Development Planning, Ministry of Finance, the Ministry of Health, the Ministry of Gender, the Ministry of General Education, the Ministry of Community Development and Social Services, the Ministry of Chiefs and Traditional Affairs, Ministry of Land and Natural Resources, Ministry of Housing and Infrastructure Development, Ministry of Commerce Trade and Industry (MCTI).

the USD 355 million Lusaka Sanitation Programme (LSP), which runs from 2016-2022 and is upgrading and expanding sewerage networks, developing onsite sanitation infrastructure and service provision in peri-urban areas, and capacitating LWSC.

2.2 Coverage Rates and the Sanitation Service Chain

Sanitation coverage rates in Lusaka are better than in many comparable sub-Saharan African cities.[7] However, service levels have stagnated over the last 15 years, with LWSC unable to keep up with rapid urbanisation. The percentage of households accessing sewered services declined from 2006 to 2020 (22% to 15%). Conversely, driven by economic development and an increasingly affluent middle-class, the percentage of households using pour-flush latrines and septic tanks increased. There is a substantial disparity in access between Lusaka's peri-urban areas and the wealthier central business districts: the proportion of the population in peri-urban areas utilising pit latrines is 95% (WSUP, 2018).[8]

There are several service delivery models for the sanitation service chain in Lusaka following the containment stage (emptying, transport, treatment, safe re-use/disposal) largely distinguished by the method of emptying. Offsite sewered sanitation is directly managed by LWSC, which connects households to the sewerage system, and transports sewerage to one of Lusaka's seven WWTPs.[9] LWSC only very recently started directly emptying onsite sanitation services connected to a septic tank. This market is dominated by Lusaka's formalised vacuum tanker operators (VTOs), with (in)formal manual pit emptiers (MPEs) playing only a minor role, mostly in peri-urban areas. Manchinchi WWTP is the sole treatment plant designated for licensed VTOs to dispose of their septage. As Figure 1 illustrates, only 10% of faecal sludge emptied from septic tanks is estimated to be treated. Some formalisation of emptying services (both septic tanks and pit latrines) is provided by the recently created Zambia Emptiers Association, which has a constitution to regulate its 55 members (mostly based in Lusaka) and procedures for disciplinary action.

Of households, businesses and institutions in Lusaka, 59% use informal MPEs to empty their pit latrines (Mikhael, 2017). The main manual emptying method is 'drain and bury', where the MPEs dig a new pit next to the pit latrine and, under cover of darkness, make a hole through the connecting wall, to then drain the contents of the latrine into the new pit and cover it. Informal MPEs generally operate without personal protective equipment, and this is hazardous work for themselves and the wider population – the 'drain and bury' emptying method is associated with Lusaka's near-annual cholera outbreaks (Mikhael & Clouet, 2012). There have been some recent moves to formalise MPEs.

LWSC launched formal faecal sludge management (FSM) services in Lusaka's two peri-urban areas. Under this model, community-based organisations (CBOs) enter a delegated management contract with LWSC to deliver pit-emptying services. Each CBO operates in a five-person team of pre-existing MPEs. The waste from the pit latrines is placed into

[7] For example, in Ghana's urban areas, only 20% of urban residents have individual improved facilities, and 7% of the population practice open defecation (WSUP, 2017).
[8] These pit latrines are generally badly built, difficult to empty, unlined, poorly managed, and, consequently, pose a significant risk to human health and for groundwater contamination.
[9] None of the WWTPs under LWSCs purview meet discharge standards. This is mainly due to the need for rehabilitation of the existing dilapidated facilities (or decommissioning them and constructing new ones), some of which will be undertaken under the LSP. Due to the current non-compliance, LWSC must pay fines to ZEMA on an annual basis (World Bank, 2015). The size of the WWTPs also causes some instances of failing to meet effluent standards.

60-litre barrels using modified garden tools and transported via pushcarts to a small faecal sludge treatment plant where it is treated onsite or collected by a VTO. This model has increased the professionalisation and accountability of pit emptying services and is currently being scaled up across Lusaka.

2.3 Impact of the Sanitation Situation

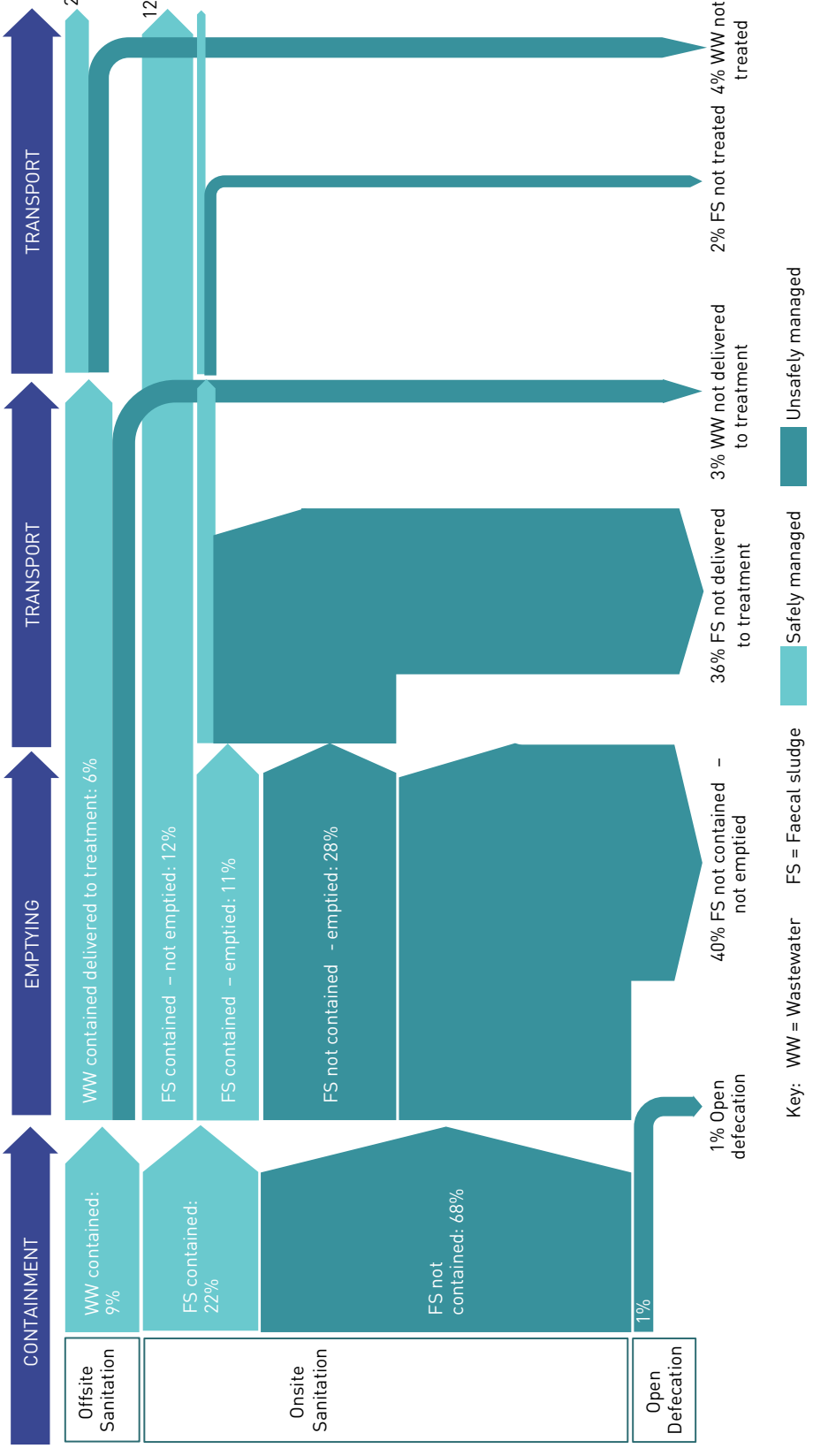
Figure 1is a Shit Flow Diagram for Lusaka, which highlights the extent of the challenges facing Lusaka's urban sanitation sub-sector, with 83% of excreta being unsafely managed. It is based on a one-time snapshot survey rather than systematically collected data on the emptying, transport and treatment of excreta, which is not collected.[10]

Lusaka's sanitation situation has a substantial economic and health impact. The World Bank estimates that poor sanitation costs Zambia USD 194 million each year. This is equivalent to 1.3% of GDP and USD 16.40 per person and equates to USD 42 million in Lusaka (WSP, 2012). The public health impacts are also severe. Due to the high percentage of unsafely managed excreta, pathogens and nitrates contaminate groundwater, which causes a high rate of diarrheal disease. Approximately 8,700 Zambians, including 6,600 children under five, die each year from diarrhoea – nearly 90% of which are directly attributed to poor water, sanitation and hygiene (WASH) (WSP, 2012) – and Lusaka Province has a stunting rate of 36% for children under five years (USAID, 2018). Cholera outbreaks continue to occur frequently, with 21 of the years between 1990 and 2018 containing an outbreak (WSUP, 2018). There is a lack of sex-aggregated data on sanitation services; however, the economic and health impacts of poor sanitation fall hardest on women and children, for example, increasing the incidence of gender-based violence (MGCD, 2014).

Photo by Georges Mikhael, 2014

[10] LWSC does not collect information on several key indicators, including the exact source of waste making it to the WWTPs (most is believed to be from septic tanks and potentially pour-flush pit latrines, and rarely from dry pit latrines); how much of the waste emptied by VTOs makes it to Manchinchi WWTP; and how much waste is being emptied by the informal MPEs that service pit latrines (Mikhael, 2017).

FIGURE 1 Shit Flow Diagram for Lusaka



3 URBAN SANITATION REGULATION

This section details the institutional arrangements for urban sanitation regulation in Lusaka, before outlining the regulatory tools at the main regulatory actors' disposal. It ends with an overview of Lusaka's regulatory environment for urban sanitation, which focuses on autonomy, capacity, coordination, accountability over regulators, participation and transparency, and the link between the regulators and the state.

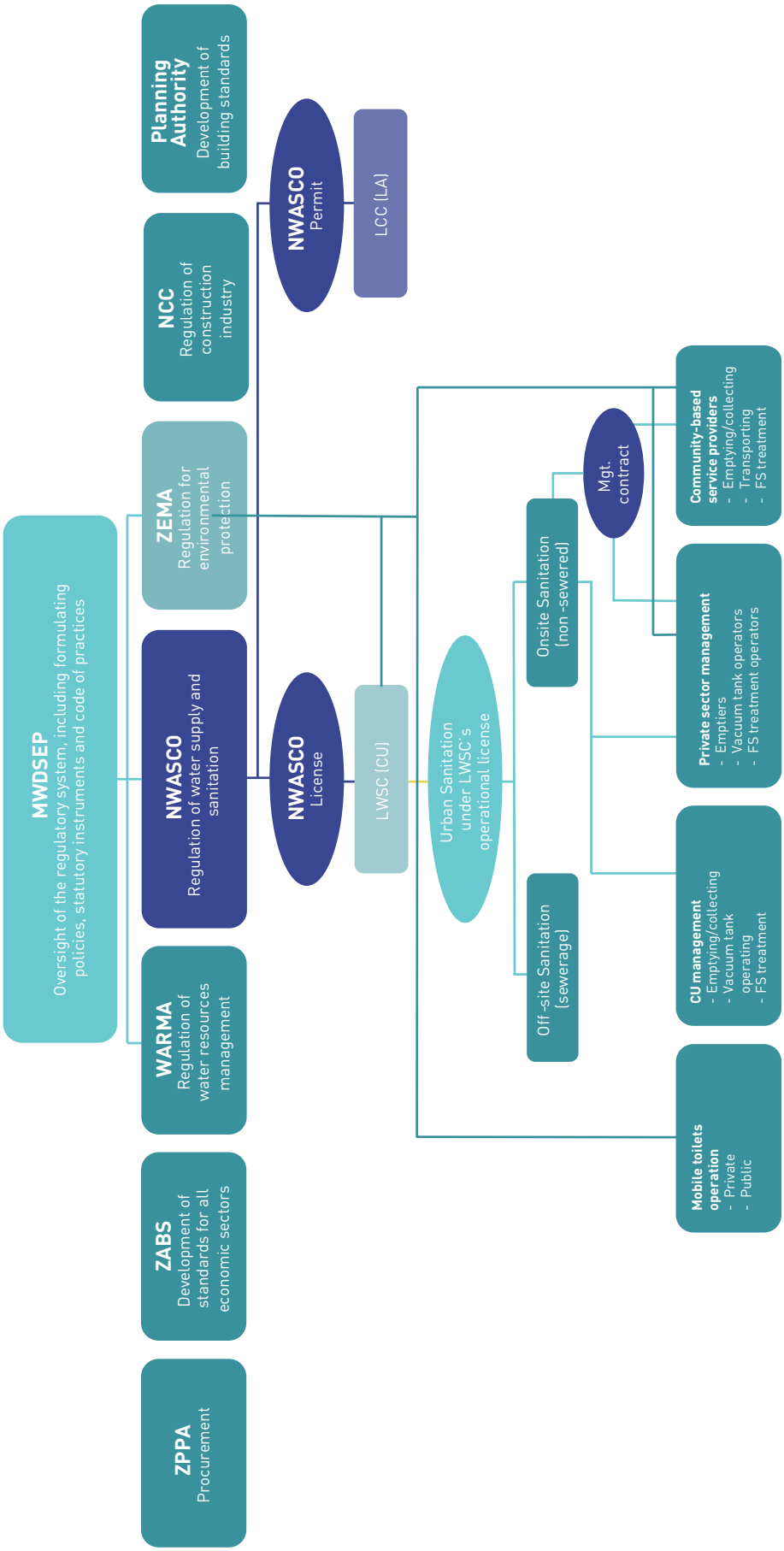
3.1 Institutional Arrangements for Regulation

Figure 2 is an overview of the institutional arrangements for urban sanitation regulation in Lusaka. It details the lines of oversight of the primary actors in Lusaka's institutional framework for regulating urban sanitation and distinguishes between offsite and onsite sanitation services. Annex Three provides an overview of the different laws governing the regulation of sanitation services.

As the lead actor for water supply and sanitation (WSS), the Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP) holds several important responsibilities pertaining to the regulation of the urban sanitation sub-sector. Paramount among these is formulating appropriate policies and strategy documents, laws, regulations, and statutory instruments. The National Water Supply and Sanitation Council (NWASCO) is the lead regulator for the provision of WSS services across Zambia for efficiency and sustainability. It has a substantial mandate, which spans developing WSS guidelines and service standards as per the WSS Act No. 28 of 1997 and ensuring compliance with these. Until 2018, NWASCO overwhelmingly focused on offsite sanitation, and substantial gaps existed regarding its actions regulating onsite sanitation across the sanitation service chain (NWASCO, 2018). This began to change with the formulation and publication of the 2018 *Urban Onsite Sanitation and Faecal Sludge Management: Framework for Provision and Regulation in Zambia* (UOS-FSM Regulation Framework). While NWASCO's overall mandate remains the same, this framework details how NWASCO's functions are being expanded to cover the onsite sanitation facilities used by around 85% of Lusaka's population.

Following the 2018 UOS-FSM Regulation Framework's publication, NWASCO amended the licences of commercial utilities to cover the entirety of the districts they operate across (including urban areas, peri-urban areas and rural areas), rather than previously just urban and peri-urban areas. Under this new approach, commercial utilities are responsible for managing the entire sanitation service chain in their jurisdiction, including private operators (i.e., MPEs and VTOs). Any service providers (i.e., formalised manual pit emptiers, vacuum tanker operators) are to operate under a commercial utility licence and are required to have a management contract with the commercial utility stipulating adherence to the requirements of the regulator. NWASCO is to be notified

FIGURE 2 Institutional Arrangements for Regulating Urban Sanitation in Lusaka. Adapted from: (NWASCO, 2018)



of the engagement once the operator has met requirements stipulated by NWASCO. Accordingly, under this new approach to urban onsite sanitation regulation, every actor operating across the sanitation service chain is under NWASCO's regulatory purview. This new system is still being operationalised, with joint implementation teams (JIT) consisting of key stakeholders (i.e., local authorities, commercial utilities, provisional officers of MWDSEP, the Ministry of Local Government, the Ministry of General Education, the Ministry of Health) being established in several provinces to spearhead the new regulatory framework's implementation. The most progress has been made implementing the regulatory framework in Lusaka Province (as is highlighted throughout Sub-Section 3.2.1.). However, key activities remain outstanding, and the provision of onsite sanitation services shall not be meaningfully regulated until the full implementation of the 2018 UOS-FSM Regulation Framework.

The other main regulator with responsibilities pertaining to urban sanitation is the Zambia Environmental Management Agency (ZEMA), which has a broad mandate to do all such things as are necessary to protect the environment and control pollution (GRZ, 2011). This mandate cuts across the sanitation service chain. It includes licensing for the environmental protection of transportation vehicles as well as formulating standards for emptying and service quality; licensing for environmental protection in the treatment of faecal sludge as well as setting standards for the treatment of faecal sludge; licensing for environmental protection for the use of end products from faecal sludge; and setting limits to be met by industries discharging waste to protect the environment from gaseous, liquid and solid waste protection. Until 2018, ZEMA's actions in urban sanitation had not sufficiently focused on onsite sanitation, although they played more of a role in this area than NWASCO (i.e., through licensing VTOs). The 2018 UOS-FSM Regulation Framework rectified this by setting out several further areas where ZEMA is supposed to play an important regulatory role for onsite sanitation. Broadly, these responsibilities include, working with commercial utilities and local authorities to monitor and inspect the quality of onsite sanitation facilities and the avoidance of groundwater pollution,[11] registering and inspecting septic tank systems or domestic wastewater systems, and working with key stakeholders to develop urban onsite sanitation standards and a code of practice.

Local authorities' (in Lusaka, LCC's) regulatory responsibilities primarily concern enforcing Zambia's Public Health Act – as well as the Town and Country Planning Act – to ensure each property has a safe toilet, enforcing building standards for onsite sanitation facilities (i.e., siting and design), and formulating local by-laws for minimum standards. These functions are particularly important in Lusaka's peri-urban areas because of the dependency on onsite sanitation facilities.

While commercial utilities do not have regulatory functions per se, they also have critical responsibilities concerning increasing the levels of accountability in the provision of urban onsite sanitation services as they have overall responsibility for monitoring, coordinating and managing the entire sanitation service chain. Their monitoring responsibilities include monitoring onsite sanitation facilities for functionality and service quality at the containment and emptying stages, monitoring the operations of VTOs at the transportation

[11] LCC monitors and inspects from the perspective of compliance to planning and development, ZEMA from the point of pollution, and LWSC from the perspective of ensuring the sanitation service chain's continued functioning.

and disposal stages, and monitoring the operations of treatment facilities at the treatment and disposal/reuse stages.

Several other pertinent governmental actors have relevant regulatory responsibilities. The Zambia Bureau of Standards (ZABS) works with NWASCO and ZEMA to develop sector standards (i.e., for the design and construction of sanitation facilities and tolerance limits discharged effluent) and codes of practices and building codes for urban sanitation. The Water Resources Management Agency (WARMA) is responsible for regulating water resources management, which includes collaborating with NWASCO to produce water source protection guidelines and monitoring onsite sanitation facilities to avoid groundwater pollution as well as collaborating with local authorities in approving onsite sanitation facilities. The National Council for Construction (NCC) regulates the construction industry, while the Planning Authority – in collaboration with NWASCO, local authorities and commercial utilities – establishes building standards and codes for onsite sanitation. The Zambia Public Procurement Authority (ZPPA) is an independent regulatory body responsible for ensuring integrity in public procurement processes and eliminating opportunities for corruption in this area. Finally, the Office of the Auditor General (OAG) is the Supreme Audit institute in Zambia mandated to audit all government institutions, parastatal organisations, statutory boards, donor funded agencies and any other institute in which public resources have been invested.[12]

Individuals, civil society organisations (CSOs), international organisations and international and local NGOs also play a pertinent role in the regulatory framework. This is both through internal procedures that help eliminate opportunities for corruption in their programmes (i.e., the World Bank, AfDB and KfW's procurement policies for the LSP) and increasing forms of vertical accountability.

3.2 Regulatory Tools

Actors in Lusaka's urban sanitation sub-sector have wide-ranging preventative and corrective regulatory tools at their disposal. These reduce the opportunities for – and raise the costs of – corruption and other integrity failures by increasing the levels of accountability, participation and transparency while also helping to ensure appropriate anti-corruption measures can be applied when necessary. These tools can be classified into five groups:

1. Standards, guidelines, service level guarantees (SLGs) and service level agreements (SLAs).
2. Monitoring and performance reporting.
3. Citizen involvement.
4. Corrective measures.
5. Measures focused on procurement processes.

[12] The Office is a public institution whose role is to scrutinise the public sector to see to it that there has not been any wastage of taxpayers' money and that government deliver services in an equitable, efficient and effective manner for the benefit of all the citizenry. The OAG is responsible of carrying out a number of audits among them financial audits of the government's financial statements (public accounts), perform special examinations and annual financial audits of public Corporations, special reports and performance audits.

These regulatory tools have evolved considerably over the last 20 years. While capacity constraints impede the implementation of some of these tools, they largely represent a well-developed set of measures for offsite sanitation.

This is not the case for onsite sanitation. The 2018 UOS-FSM Regulation Framework details wide-ranging regulatory tools for onsite sanitation. Indeed, this is an impressive strategy document and, if properly implemented, would provide the necessary conditions to effectively regulate – and increase the provision of – onsite sanitation and FSM services and reduce the opportunities for corruption and other integrity issues in this area. Key stakeholders have made steady progress with the implementation of many of the more preparatory measures despite COVID-19. Nevertheless, as of February 2021, the implementation of most these activities are behind the original schedule (NWASCO, 2018a), albeit with a series of key capacity building and on-the-ground implementation activities now planned for 2021 and 2022 that will be critical to achieving tangible impacts on the regulation of onsite sanitation services.

3.2.1 Guidelines, Service Level Guarantees and Agreements and Standards

By specifying how stakeholders should behave and providing clear reference points to judge their actions, several guidelines and standards for urban sanitation help reduce opportunities for corruption and other integrity failures. NWASCO issues guidelines on tariff setting, corporate governance, business and financial planning, annual reporting, accounting, non-revenue water, prepaid metering, ring-fencing of funds, and risk management. It also formulates a service level guarantee (SLG) with LWSC every three years detailing precise indicators that LWSC is judged against for 11 minimum service levels.[13] The SLG guides LWSC's performance as, by agreeing to the SLG, LWSC effectively guarantees its "customers a certain and defined level of service for a specified price, thus ensuring value for money" (NWASCO, 2019).[14] The SLG also provides a vital reference point against which NWASCO monitors LWSC's performance (see Sub-Section 3.2.2.).[15] Other pertinent guidelines include ZABS's effluent standards and water quality monitoring standards detailing acceptable drinking water parameters.

Together these guidelines, SLGs and standards represent a comprehensive set of guidelines. Nevertheless, until recently, these were overwhelmingly related to offsite sanitation and there was comparatively limited guidance on onsite sanitation and informal service providers. In 2021, steps have been taken to address this, with minimum service levels approved by NWASCO and due to be implemented. The 2018 UOS-FSM Regulation Framework details several further action points in this area:

- NWASCO amending the existing service contracts with commercial utilities to include onsite sanitation and faecal sludge management (complete).

[13] These 11 minimum service levels are: coverage of the service area, drinking water quality, service hours, billings for services, clients contacts, interruption of water supply and sewer blockages, pressure in the network and minimum flow rate at the point of supply, unjustified disconnections, sewer flooding, quality of discharged sewerage, and support to public institutions to curb wastage and settle bills promptly.
[14] LWSC's SLG for 2015-2018 can be accessed here: http://www.lwsc.com.zm/wp-content/uploads/2015/06/Service-Level-lusaka.pdf
[15] Should LWSC not meet its minimum service levels, it must propose three-year progressive movements towards meeting the minimum service levels and set targets in an SLA signed between LWSC and NWASCO.

- NWASCO developing new sanitation service provision guidelines covering containment, emptying, transportation, storage, treatment facilities and disposal/re-use mechanisms (in progress – ESAWAS prepared guidelines and NWASCO is adopting them). These are the City-Wide Inclusive Sanitation (CWIS) Planning Guidelines.
- NWASCO and ZABS developing standards for onsite sanitation facilities (drafts finalised and planned to be taken to wider stakeholder consultations, yet to be finalised).
- NWASCO updating a range of guidelines[16] to include onsite sanitation (complete, training / consultation with commercial utilities planned).
- ZEMA developing new standards for faecal sludge treatment, disposal or re-use (incomplete).
- MWDSEP developing new statutory instruments on regulations governing the operations and maintenance (O&M) of onsite sanitation facilities and waste management (draft complete based on LCC by-laws, yet to be finalised).
- MWDSEP developing new guidelines for the protection of urban sanitation plans (complete).

If properly introduced, these guidelines standards and statutory instruments would provide a comprehensive foundation for regulating onsite sanitation. These documents' development was targeted as one of the more straightforward or 'low-hanging fruit' components of the 2018 UOS-FSM Regulation Framework that NWASCO could implement before moving to more challenging activities. While delays have occurred and this activity is behind schedule, good progress has now been made with most of the activities and they are largely awaiting finalisation and implementation.

3.2.2 Monitoring and Performance Reporting

Corruption and other integrity issues are concealed acts, and "it is often not possible to monitor, and consequently control, corruption through an evidence-based approach" (WIN, 2017). Nevertheless, monitoring and performance reporting are key regulatory tools in gauging the effectiveness of measures designed to reduce corruption and other integrity issues while also reducing opportunities for corruption through increased accountability and transparency. LWSC's performance and activities are primarily monitored by NWASCO. For this purpose, LWSC must submit comprehensive reports. NWASCO's monitoring covers an impressive range of indicators in detail, including LWSC's performance against the 11 minimum service levels of its SLG. NWASCO's monitoring also includes several indicators that are critical in measuring the progress made towards combating corruption and integrity failures:

- Non-revenue water (NRW).
- Metering ratio.
- Progress extending services.
- Average response time to customer complaints.
- Percentage of complaints resolved.
- O&M cost efficiency.
- O&M cost coverage.

[16] These include annual reporting guidelines, tariff adjustment guidelines, accounting guidelines, water quality monitoring guidelines, business planning guidelines, financial projections guidelines and investment planning guidelines.

However, several pertinent indicators are currently not monitored or reported that would play an important role in revealing the extent of corruption at the citizen-institution interface. These include:

- Percentage of the population that have paid a bribe to obtain water and sanitation services.
- Number or percentage of illegal connections.
- Number or percentage of meter manipulations.

The data LWSC submits is validated through inspections (in 2019, a NWASCO inspector visited LWSC for one in-depth inspection). NWASCO's inspectors have advanced powers,[17] and the inspections are an intense process, which also involve viewing externally audited accounts. The technical director of one utility noted, "They not only verify the numbers, they also get into details about sampling: the way the method was conducted [and] if we are following the checklist" (Peletz, et al., 2018). NWASCO employs 23 part-time inspectors (PTIs) nationally to monitor service provision in the communities they reside in, attend to issues promptly and provide rapid feedback to NWASCO. If NWASCO's monitoring revealed that LWSC's performance dipped beyond acceptable limits (i.e., failure to adhere to its SLG), NWASCO could place LWSC under special regulatory supervision.[18]

Several other governmental actors also play a vital role in monitoring sanitation service provision in Lusaka. Once they receive a licence for operating a WWTP, commercial utilities are required to submit returns bi-annually to ZEMA, which detail physical, chemical, and bacteriological parameters, which ZEMA then checks against set limits.[19] ZEMA also monitors VTOs by licensing them with conditions, although these are generally seen as the most compliant actors in the sector by ZEMA. While ZEMA is supposed to monitor informal MPEs, this is an area where it struggles[20] – it often does not know where informal MPEs exist, let alone regulate them. LWSC also conducts a range of monitoring activities directly. This includes the monitoring of VTOs and MPEs at Manchinchi WWTP (where they discharge faecal sludge)[21] as well as treated waste, overall effluent discharge and the discharge from companies into the sewerage system. Finally, LCC is responsible for and monitors solid waste management, and it is in the process of operationalising a fleet management system to monitor the movements and activities of solid waste management vehicles.[22]

The primary reporting is NWASCO's annual sector report, which details service providers' (LWSC, other commercial utilities and private service providers) performance against wide-ranging indicators. The information is presented in a manner that enables comparison of commercial utilities' performance against sector standards and benchmarks, against each other and their performance in the preceding five years. These reports form an essential

[17] Inspectors have the power to: inspect the premises and records of a utility or service provider; order any person in charge to produce for inspection or for purposes of obtaining any relevant copies or extracts as well as any books, documents or records; ensure adequate arrangements for water and sanitation; and issue a fine to any person that obstructs their work (GRZ, 1997).

[18] Special regulatory supervision would involve NWASCO attending board meetings and closely monitoring all aspects of LWSC's operations with LWSC having to submit monthly reports detailing progress made.

[19] ZEMA does not have its own laboratory, and samples are sent to UNZA or Alfred Knight for testing chemical bacteriological parameters.

[20] This is reportedly due to the large number of these operators, the fact that they operate on a small scale, because it is many of these people's second or third job and therefore work sporadically, and because they do not want to be registered.

[21] This is not based on a particularly sophisticated monitoring system and relies on LWSC measuring the size of all the VTOs' trucks that dispose faecal sludge and entering into an agreement that the truck will always be full when it is emptied.

[22] This is currently at the procurement stage and shall be implemented in 2021.

component of NWASCO's Regulation by Incentives programme, with the annual reports detailing the winners of the programme's range of awards,[23] and explicitly flagging areas of good performance.

As noted above, there are some gaps in NWASCO's monitoring and reporting of LWSC's performance and activities that would help determine the extent and impact of corruption at the citizen-institution interface in Lusaka. However, overall, there is a comprehensive monitoring and reporting process for urban offsite sanitation, with only comparatively minor improvements needed. This plays a key role in holding LWSC accountable and is an impressive and important development that should be heralded. Conversely, neither NWASCO, ZEMA, or LWSC effectively monitor or report on onsite sanitation. NWASCO's annual sector reports do very briefly touch on onsite sanitation;[24] however, this is not to anywhere near the same level as offsite sanitation due to the lack of comparative data on onsite sanitation between services areas, over time, and against key indicators. The 2018 UOS-FSM Regulation Framework details several important action points for this area. If implemented, these would help ensure the required monitoring and reporting occurred. However, many of these actions are yet to be implemented:

- NWASCO updating its annual sector reporting to include onsite sanitation (complete).
- LCC developing an inspection plan for onsite sanitation (incomplete – not yet started).
- LCC, LWSC, the Ministry of Health and ZEMA developing innovative inspection mechanisms to handle the large number of onsite sanitation facilities (incomplete) and LCC and LWSC conducting ongoing inspections and inspections during the construction of onsite facilities (incomplete – not yet started comprehensively).[25]
- ZEMA, local authorities and commercial utilities developing regulations for the registration and inspection of septic tanks, which includes development of a database (incomplete – not yet started).
- Mapping of sanitation facilities in all urban areas, including development of appropriate tools for data collection and a GIS-based information system to be housed at NWASCO (incomplete – started in 2021).

3.2.3 Citizen Involvement

In 2002, NWASCO established Lusaka Water Watch Group (WWG), which comprises voluntary community members, to increase consumer representation and protection by proactively engaging them in the regulatory process. Lusaka WWG acts as "the eyes of the regulator and the voice of the voiceless" (NWASCO, 2008), and plays a vital role in reducing opportunities for corruption and other integrity issues by increasing accountability and participation. Lusaka WWG performs a range of activities, including holding public

[23] These include the CEO's Award, awards for a range of specific indicators (NRW, water quality, metering ratio, water service coverage, sanitation service coverage by network, hours of supply, staff efficiency, collection efficiency, and O&M cost coverage by collection) and broader cross-cutting awards (most improved, best in peri-urban areas and best submitted data).

[24] The only data concerning onsite sanitation in NWASCO's 2018 annual report was the population served by septic tanks and different variations of latrines.

[25] However, NWASCO has developed a framework for data and information management. NWASCO has done pilots in three districts (Kabwe, Mansa and Mufulira) by collecting data on sanitation. The framework has been shared with Zambia Statistics Agency in readiness for 2020 National Census. The collection tool will be disseminated to all commercial utilities to use in their data collection exercise.

meetings with consumers, reviewing and validating complaints, sensitisation[26] and submitting periodic reports to NWASCO.

Lusaka WWG holds several functions that span the entire water and sanitation sector.[27] Of particular importance in increasing the level of accountability in Lusaka's urban sanitation sub-sector is its role in consumer complaints.[28] If a consumer does not feel that LWSC has satisfactorily resolved a complaint, they can raise the issue with Lusaka WWG, which will again raise the issue with LWSC. If the issue remains unsatisfactorily resolved, Lusaka WWG presents the complaint to NWASCO, which can, in turn, publicise the issue or penalise LWSC. To ensure Lusaka WWG can effectively perform these functions, NWASCO provides Lusaka WWG with an annual budget of ZMK 24,000 (equivalent to USD 1,321.00) to cover operational costs and prescribes that LWSC tasks a senior employee to act as a contact person that deals with issues brought forward by Lusaka WWG.[29] Since its establishment, Lusaka WWG has had several noteworthy achievements:

- Facilitating the setting-up of an LWSC office in Chunga after there were instances of vandalism and non-payment of bills in the area.
- Contributing to the change in LWSC's attitude to consumers.
- Contributing to citizens' behaviour change (increased willingness to pay and fewer incidences of vandalism).
- Participating in local and international forums.

3.2.4 Corrective Measures

This sub-section has focused on preventative regulatory tools, which, instead of penalising instances of corruption or other integrity failures, reduce the opportunities for corruption and other integrity issues by increasing transparency, accountability and participation. In addition to such measures, NWASCO, ZEMA and LCC also all have corrective measures. The most powerful corrective measure available to NWASCO is the removal of a service provider's licence. This can be done for several reasons including giving false information as well as failing to comply with an enforcement notice, provisions of the WSS Act No. 28 of 1997 or the SLG (NWASCO, 2019). There is a clear process for NWASCO to follow if it is to go down this route[30], although it has not yet been carried out. However, NWASCO has worked with MWDSEP to replace top management of commercial utilities.

[26] This is vital, because – as is evidenced throughout Sub-Section 4.2. on corruption at the citizen-institution interface – vulnerable citizens that generally have less knowledge around how commercial utilities should be delivering and expanding water supply and sanitation services are the most targeted groups.
[27] These include representing consumers' interests in the WSS sector; following up on unresolved customer complaints with service providers; improving communication between consumers and providers as well as arbitrating conflicts between consumers and service providers; sensitising consumers on their rights and obligations and educating them on NWASCO; collecting information on service providers' performance; and informing NWASCO on the effectiveness of the regulations and proposing adjustments.
[28] NWASCO has also established an online complaint platform that covers all urban areas in Zambia and can be used by the public to directly report issues with service delivery to NWASCO via phone, an online submission form, Facebook or Twitter. ZEMA and LCC have also established mechanisms to enable community members to report complaints or concerns directly. Additionally, in 2017/18, my Watsan Quick Fix was launched as an online platform that integrates different actors' complaints systems and ensures that complaints that are not resolved go directly to NWASCO.
[29] At Lusaka WWG's inception, LWSC reportedly viewed it with apprehension – "instead of viewing them as partners and arbitrators with consumers, WWGs were perceived as opponents and watchdogs whose aim was to frustrate the efforts of the providers" (NWASCO, 2008). This perception has changed, with Lusaka WWG now being viewed as a vital actor in helping LWSC understand consumer needs.
[30] When NWASCO decides to suspend a licence, a service provider is given 30 days to outline why the licence should not be removed. If this is not done and the time elapses without the service provider correcting the situation or providing acceptable reasons, NWASCO requests that the Minister of Local Government and Housing appoints a statutory manager to manage the utility until service delivery is stabilised and/or improved (NWASCO, 2019).

NWASCO currently has no administrative penalties (i.e., fines) – it is reliant on criminal convictions, an approach it is reluctant to use. While NWASCO cannot currently issue fines, it has powerful economic levers that it can pull to influence the behaviour of commercial utilities. Notably, as NWASCO must approve tariff increases, it can easily penalise utilities by not allowing them a new tariff. For example, after NWASCO's creation, LWSC reportedly felt it was too powerful to be regulated and did not follow NWASCO's directive. However, this changed when LWSC required tariff adjustments and NWASCO used this leverage as an opportunity to begin regulating LWSC.

Statutory Instrument no. 112 of the 2013 Environmental Management Act stipulates penalties and other punitive measures ZEMA can apply to stakeholders that breach Zambia's environmental regulations. Similarly to NWASCO, ZEMA can suspend or cancel a licence for a range of reasons, including if a service provider contravenes the terms and conditions of their licence or the 2011 Environmental Management Act.[31] Additionally, ZEMA's inspectors can issue an order of "cessation of an operation or activity, which they deem to be causing adverse effects to the environment or which poses or is likely to pose adverse effects to human health, animal or plant life" (GRZ, 2013). ZEMA can also issue a wide range of orders to compel an actor to take a particular action,[32] as well as fines for breaching certain provisions (i.e., discharging effluent into the environment). However, ZEMA has not gone down the route of fining or litigating a commercial utility for a sanitation-related offence in recent years. ZEMA does, however, have a built-in structure to its licensing fees that penalises LWSC (and other commercial utilities) for failing to ensure their WWTPs meet effluent standards. There are four brackets of fees, and all LWSC's WWTPs are in the most expensive bracket (ZMW 176,610.00 for seven WWPTS – equivalent to USD 9,671.78).[33] This acts as a penalisation or corrective measure of sorts. However, unsurprisingly considering the modest monetary amount involved, it has not proven sufficient to force LWSC to improve the current situation.

Currently, LCC cannot apply punitive measures to citizens, service providers (VTOs and MPEs) and businesses, and, as such, lacks the necessary corrective tools to enforce certain behaviours. However, the necessary tools are contained in the draft onsite sanitation service provision by-laws developed by LCC and currently waiting to be approved by the Minister of Local Government. These by-laws will give LCC the legal basis required to enforce aspects of urban sanitation, giving LCC powers to fine and prosecute individuals and companies for breaching the public health act and components of the by-laws.[34] Substantial challenges can, however, be forecast in their implementation: LCC only has 12 inspectors to cover all of Lusaka, and there is a lack of community sensitisation on proper sanitation and hygiene practices. LCC plans to begin utilising community inspectors to mitigate some of these difficulties.

[31] Other reasons include that the holder of the licence obtained the licence by fraud or deliberate or negligent submission of false information or statement; that the holder contravened any relevant written law; that the holder failed to maintain any required records for the purposes of the Act; or the holder failed to submit annuals returns (GRZ, 2013).

[32] These include a site and environmental restoration order, a prevention order, a protection order, a compliance order if a condition of a licence has been breached, and a cost order requiring the actor to reimburse ZEMA (GIZ, 2018).

[33] This compares to the cheapest bracket of just ZMW 6,510.00 per WWTP (equivalent to USD 356.51).

[34] These by-laws aim to protect the environment and public health; support the human right for sustainable sanitation (and water) services); and promote the processing and reuse of human waste as resources. The by-laws will govern the selection and O&M of different sanitation systems in different parts of a local area; define the types of sanitation facilities applicable in Lusaka, aim to ensure no user of onsite sanitation services or their neighbours cause or suffer any nuisance or other condition liable to be injurious or dangerous to health; provide technical and operational details of each system and it technologies that have been adopted by LCC and LWSC; and ensure adherence to design details, standard drawings and building regulations and codes.

LWSC also has its own internal corrective and punitive measures for sanctioning individuals caught engaging in corrupt behaviour. Towards this end, LWSC has an audit and inspections unit that conducts investigations into alleged instances of corruption – this work has led to the firing of approximately 11 staff members in the last five years.

3.2.5 Procurement

Zambia's OAG, ZPPA and NWASCO collectively scrutinise public procurement, with a dual focus on whether commercial utilities have the requisite procurement systems, frameworks and procedures in place as well as the extent to which these are followed.

Very broadly, ZPPA predominantly focuses on setting the necessary framework and procedures for public procurement and monitors procurement activities in public entities to ensure these procedures are adhered with. ZPPA conducts what it terms end-to-end monitoring of procurement processes and deploys various methods to monitor procurements: physical visits (predominantly conducted when high-risk and high-spend tenders are being conducted), remote reviews and requiring the submission of reports. The Public Procurement Act No. 12 of 2008 empowers ZPPA to utilise a range of corrective or punitive measures where actors have sought to undermine procurement processes. This includes suspending or permanently debarring any bidder or supplier from participating in public procurement and cancelling tendering processes and forcing the procuring agent to restart the tendering process (GoZ, 2008).[35]

ZPPA has an e-procurement system, which is used for other sectors. While this is yet to be used in Zambia's water supply and sanitation sectors, there are plans to begin rolling it out.[36] This e-procurement system was developed with support and guidance from the Open Contracting Partnership. The e-procurement system provides several important benefits, and operationalisation of this system for the water supply and sanitation sectors (especially ensuring its effective use by commercial utilities) should be expedited (see Sub-Section 6.1. for recommendations). Key features include the ease of access it creates for actors to see key documents and announcements across the procurement process (i.e., tenders, bids, bid evaluations, awards, contracts, amendments, status of payments), ability to easily follow auditable trails, an integrated complaints system and the reduction of physical contact between procuring entities and suppliers. In theory, all of this should improve planning and efficiency, competition, accountability, integrity, innovation, and oversight (Open Contracting Partnership, 2020).

OAG is Zambia's supreme audit institute and mandated to audit all government institutions, parastatal organisations, statutory boards, donor-funded agencies and any other institute in which public resources have been invested. The OAG is an audit institution that promotes transparency, accountability and prudent management of public resources. The OAG publishes reports, highlighting weaknesses in areas such as internal controls, leadership, financial management and governance in the institutions audited.[37]

[35] The 2008 Public Procurement Act is currently being reviewed.
[36] Some challenges are forecast in the roll-out of this system to remote areas. These include connectivity challenges as well as a lack of resources in some of the procuring entities in remotes areas (i.e., lack of laptops or computers).
[37] The OAG recently audited 9 of Zambia's 11 commercial utilities and produced a Special Report of the Auditor General on the accounts of commercial utilities for the financial year ended 31st December 2018. The report highlighted matters concerning the management and financial performance of selected commercial utilities, which included failure to prepare and have accounts audited, implement approved governance structures, implement National Policies and Board-approved plans, failure in internal control systems and failure to meet key performance indicators as provided by NWASCO.

While ZPPA and OAG scrutinise procurement activities after they occur, NWASCO brings out issues as they happen as well as from the past, checking that commercial utilities adhere to ZPPA procurement guidelines and that issues raised by OAG are addressed. For commercial utilities, NWASCO incorporates monitoring of procurement into its detailed yearly inspections of all commercial utilities and conducts spot checks when necessary (i.e., if a commercial utility were to have a particularly large number of procurements in a given period or it had received reports of suspect behaviour). Commercial utilities are required to submit financial and management reports quarterly.

International organisations and international NGOs operating in Lusaka – that channel most funds for constructing new sanitation infrastructure[38] – also play an important role in overseeing and ensuring the proper functioning of procurement processes during their programmes. For the largest programmes, this includes a range of activities including an initial assessment of implementing partners' procurement capacity (i.e., capacity to carry out duties, provide and perform internal controls, size of procurements done in the past) to determine what can be feasibly procured by actors such as LWSC or MWDSEP and where, for example, an international organisation needs to lead. Where an actor such as LWSC or MWDSEP takes the lead and is responsible for procurement of comparatively smaller programme activities, international organisations retain oversight through mechanisms such as post-review processes where they can use auditing and accounting systems to identify any issues in procurement and safeguard funds. To procure larger contracts that are potentially higher risk, clearance is obtained before action to ensure the procurement process is not tailored to a particular bidder, and organisations must receive a 'no objection' from the international organisation before moving forward. International NGOs also have their own procurement processes to ensure due diligence and limit opportunities for corruption and other integrity failures. For example, repeated problems with the leaking of engineers' estimates during the procurement process (see Sub-Section 4.1.1.) led one international NGO to set up an independent evaluation committee as well as measures to limit the number of persons with access to engineer's estimates.

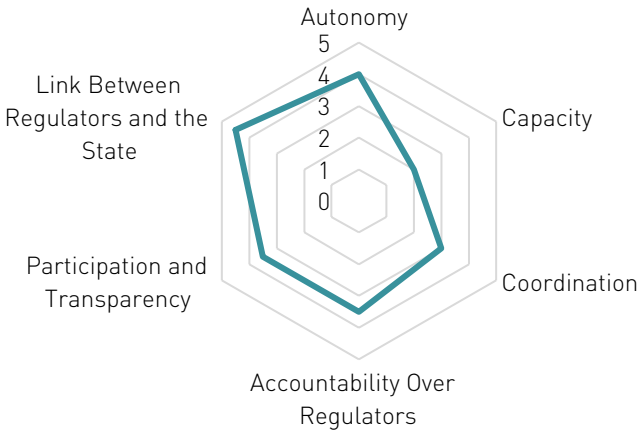
3.3 Regulatory Environment

OECD and WIN have detailed key features of an effective regulatory environment for WSS. This sub-section borrows from this work and uses a series of indicators outlined in these publications to judge Lusaka's regulatory environment for urban sanitation. This focuses on six areas: autonomy (political and legal, financial, and managerial), capacity, coordination, regulators' accountability, participation and transparency, and the link between the regulator and the State. As the lead regulator for the WSS sector, NWASCO is the primary focus; however, where relevant, the conditions of the other main regulatory actors are noted.

Figure 3 presents an overview of the consultants' ranking of Lusaka's regulatory environment for urban sanitation against a series of indicators for each of these six areas. It highlights the overall robustness of the urban sanitation regulatory environment, except for capacity, which is generally insufficient to ensure the 2018 UOS-FSM Regulation Framework's proper implementation.

[38] While the Government of Zambia spent an average of USD 10 million since 2013 on WASH, it is estimated to have received between USD 80-85 million annually in official development assistance towards the sector is the same period (International Growth Centre, 2018).

FIGURE 3 Ranking of Lusaka's Regulatory Environment for Urban Sanitation



3.3.1 Autonomy

Autonomy refers to regulators' level of independence (their ability to behave as they desire without being dependent on other actors) and is critical in ensuring that their actions cannot be compromised. It is particularly pertinent to avoid regulators being captured by the regulated and their work being skewed or undermined by such capture (WIN, 2020). There are three main dimensions to autonomy: political and legal, financial, and managerial.

Regarding political and legal autonomy, NWASCO was established as an independent body with both binding powers and an advisory role to perform its mandate. This enables NWASCO to act autonomously and take its own decisions, without fear of the political ramifications – for example, in reprimanding LWSC (see Sub-Section 4.3.1.). Measures are also in place to protect against interference in NWASCO's activities. Of note, when a governmental actor (i.e., MWDSEP) wishes to inform NWASCO's functioning, they must issue directives that are documented and published.[39]

Concerning financial autonomy, NWASCO is mainly financed through a 2% levy on services providers' revenues and fees from licences issued. The remainder of NWASCO's operating costs are mostly covered via government funds. International donors provide financial support for specific activities. Overall, NWASCO is largely financed in a sustainable manner, enabling it to act without fear of its actions' financial ramifications. However, significantly, NWASCO currently lacks the financial resources to effectively perform the myriad of activities required to effectively lead the expansion of regulation to cover onsite sanitation (see Sub-Section 3.3.2.).

Regarding managerial autonomy, the WSS Act No. 28 of 1997 sets out NWASCO's governance structure and the process for filling key positions. Of note, NWASCO's Board appoints its Director and Technical Advisory Committee, while MWDSEP appoints NWASCO's Board, which, in turn, appoints 'top management' positions that then recruit other staff with the

[39] For example, MWDSEP's directive for NWASCO to extend regulation to urban onsite sanitation and rural WSS services.

Board's approval. There are human resources procedures for recruiting NWASCO staff. All positions are publicly advertised and a salary structure is followed. NWASCO also has internal and external communications protocols.[40] These management arrangements have generally worked smoothly and contributed to NWASCO having a well-qualified staff who displayed strong leadership in the sector; however, from June 2019 to May 2020, NWASCO was functioning without a complete Board.

3.3.2 Capacity

Capacity refers to the human, material and financial resources at the regulators' disposal to perform their key functions and apply their regulatory tools. For the period 2016-2020, NWASCO required an annual budget of around ZMW 2.5 million (equivalent to roughly USD 135,000.00). NWASCO employs 20 full-time staff (12 of which are professional staff with various specialisations supporting regulation) as well as 35 part-time inspectors across Zambia (NWASCO, 2016) to monitor service provision in the communities they reside in, attend to issues promptly and provide rapid feedback to NWASCO. As highlighted by the comparatively well-developed status and application of NWASCO's regulatory tools for offsite sanitation (see Sub-Section 3.2.), NWASCO has sufficient financial, human and material capacity to perform its regulatory functions for offsite sanitation effectively. However, the 2018 UOS-FSM Regulation Framework substantially expands NWASCO's financial, human and material capacity requirements by tasking NWASCO with leading the process and implementing several new key activities (e.g., guideline and standard development, licensing, monitoring and performance reporting).

NWASCO is in the process of recruiting two additional permanent staff based at their head office to be responsible for extending the regulatory framework to cover urban onsite sanitation and FSM as well as rural WSS. However, during consultations, NWASCO highlighted a large human capacity shortfall, and noted the need to increase its number of part-time inspectors from 35 to 115. With NWASCO's extended mandate covering urban onsite sanitation and rural WSS services, there is a need for NWASCO to ensure an effective presence in each district by having at least one part-time inspector per district.

The other governmental actors consulted also reported capacity constraints, with LCC, for example, having just 12 inspectors to cover its enforcement activities across all of Lusaka. ZEMA and ZPPA also face capacity constraints. ZEMA has only 23 inspectors to cover Lusaka, Central, Northern, Muchinga and Western Provinces as well as Chikankata and Mazabuk Districts, while only 70% of ZPPA's specified posts are filled.

3.3.3 Coordination

Coordination between regulatory actors is vital to maximise their effectiveness and ensure they work in harmony and reinforce each other's actions. This is particularly important in comparatively resource-poor settings such as Zambia, where regulators regulate the same organisations but for different purposes, as they have information that can help each other perform their respective mandates cost-efficiently. The main regulatory actors in Lusaka's urban sanitation sub-sector are established under specific acts of

[40] For example, all communication to and from the outside should be through NWASCO's Director.

parliament specifying their mandates, thereby ensuring that there is not competition over – or duplication of – roles and responsibilities.

At the national level, as is encouraged by the Urban and Regional Planning Act No. 3 of 2015, the National Development Plan (2017 to 2021) and the Integrated Development Planning process, the main regulatory actors work collaboratively and not in their respective silos. This is evidenced by the process of developing the 2018 UOS-FSM Regulation Framework, which saw NWASCO, ZEMA, WARMA and ZABS – as well as a range of other stakeholders (MWDSEP, LCC, LWSC, WSUP, SNV, GIZ and UNICEF, amongst others) – work together. Effective collaboration at the national levels among the main regulatory actors (with oversight from the Business Regulatory Review Agency (BRRA) is also demonstrated as part of the implementation of the 2018 UOS-FSM Regulation Framework in developing the statutory instrument for onsite sanitation as well as the development of some standards and a code of practice.

At the operational level, NWASCO highlighted good coordination with the other regulators. It noted how it uses inspections of LWSC to investigate areas under its mandate and collect information for other regulators. This could include, for example, looking into procurement issues for ZPPA by following the chain of quotations and billing, or environmental issues for ZEMA. Similarly, LWSC highlighted effective coordination with NWASCO and ZEMA, citing how they help enforce VTOs' use of ZEMA's licences by not allowing them to dispose of waste at Manchinchi WWTP without a licence. ZEMA also noted good coordination with NWASCO and WARMA and highlighted the benefits of having officers from each other's organisations on the boards.

There are, nevertheless, several areas where coordination between the main regulatory actors could be strengthened. Of note, there are no mutual agreements between NWASCO and ZEMA detailing areas of cooperation where their mandates overlap, or each regulator could operate more efficiently by capitalising on potential synergies in their activities. Additionally, while the main regulatory actors can access each other's electronic information systems, this is governed by each entities' procedures and confidentiality requirements, creating barriers to timely access.

3.3.4 Regulators' Accountability

While a regulators' autonomy is vital for any effective regulatory environment, autonomy does not mean complete independence. As NWASCO and ZEMA play a key role in policy implementation, it is imperative that there is (1) legislative and political scrutiny over their actions (WIN, 2020) and that (2) regulated entities and (3) citizens can hold regulators accountable in a fair and reasonable manner.

1. NWASCO, ZEMA and WARMA are all statutory bodies under their respective ministries. As such they are required to periodically report to their respective ministries.[41] They are also supervised by their Boards (that have ministry representation), and each regulatory institution reports to its respective Board quarterly and as needed. For some national regulatory entities, increased politicisation of Boards was cited; however,

[41] For example, NWASCO, ZEMA and WARMA all contribute to the annual water sector report according to their mandates as statutory agencies of MWDSEP.

this was not noted as problematic for NWASCO or ZEMA. Moreover, by reviewing the regulatory system and ensuring regulatory actors and other public bodies' regulatory powers are kept in check, BRRA is an important bridge between policymakers and regulators.

2. Concerning regulated entities, for most of NWASCO and ZEMA's punitive or corrective measures, regulated entities have a 30-day period where they can appeal the decision or highlight that they are no longer breaching the provision in question. For example, if NWASCO were to suspend LWSC's licence, LWSC would have 30 days to outline to NWASCO (with this information being passed onto to the MWDSEP why the licence should not be suspended before LWSC went into statutory management. Similarly, were ZEMA to fine LWSC for not preventing illegal faecal sludge discharge by VTOs, LWSC would have the right to appeal and even negotiate different payment modalities to not adversely harm its operations.
3. Regarding the public's oversight over regulators' activities, NWASCO and ZEMA's key operational policies, strategic plans, guidelines, standards and the SLGs and SLAs agreed with commercial utilities are all publicly available and can be accessed free of charge by the public via their websites. All major decisions taken by NWASCO and ZEMA are also published on their websites. Members of the public can also lodge complaints directly with all key governmental actors in Lusaka's urban sanitation sub-sector: NWASCO, ZEMA, BRRA, LWSC, LCC and even MWDSEP.[42]

3.3.5 Participation and Transparency

Participation implies that all stakeholders, including marginalised and resource-poor groups, are meaningfully involved in decision-making, while transparency refers to the level of openness and public access to information. Participation and transparency both play a key role in reducing opportunities for corruption and other integrity failures. Concerning participation, government guidelines specify the process for policy formulation, which require extensive stakeholder consultations as well as representation from across Zambia. NWASCO abides by these guidelines. It has formal procedures for decision-making and formulating regulatory policies, guidelines and standards that include cycles of consultations with key stakeholders (i.e., local authorities, commercial utilities, NGOs, bilateral and multilateral organisations, CSOs and citizens). NWASCO has also established and supported the capacitation of Lusaka Water Watch Group, which enables active citizen participation in the regulatory process (see Sub-Section 3.2.3.). Citizens and CSOs also participate in budget-making processes, and the press documents the award of significant government projects and the status of their implementation. However, there is room for improvement in this area, most notably, concerning the currently limited role of CSOs or citizens in monitoring procurement processes and project implementation.

Regarding transparency, Zambia's 2002 Freedom of Information Bill specifies that "every person shall have the right of access to information which is under the control of a public authority" and that "every public authority shall make available to the general public or, on request, to any person information which is under its control" (GRZ, 2002). This Bill also established the Public Information Commission, with overall responsibility for

[42] Most complaints are lodged directly with LWSC, which received 45,091 complaints in 2018 and resolved 39,967 (89%) (NWASCO, 2018).

ensuring that these provisions are effectively carried out. Service providers' budgets and plans are published; however, contracting documents are not. There is also further room for improvement regarding transparency in the regulatory environment. NWASCO's annual reports include statistics that indirectly indicate the impact of corruption and the effectiveness of measures being taken to eliminate it: NRW,[43] metering ratio,[44] progress extending services,[45] response time to customer complaints, percentage of claims resolved.[46] However, the investigation, monitoring and reporting on issues pertaining to corruption are relatively sporadic and often dependent on external actors (i.e., a current Transparency International study and a 2011 UNDP report). This needs to be conducted systematically, with key indicators reported on periodically in NWASCO's annual report (see the recommendation directly relating to this important point in sub-section 6.5.).

3.3.6 Regulator and the State

Regulatory actors should also perform an essential advisory role on policy formulation through monitoring policy implementation and identifying opportunities for reform (WIN, 2020; OECD, 2014). NWASCO and ZEMA both list advising government among their core functions, and as key stakeholders in Zambia's WASH sector contribute to the development of government plans, policies and strategy documents. Moreover, as Sub-Section 3.2.2. details, NWASCO also plays a vital role in the urban sanitation sub-sector through consolidating data in its annual sector reports. While these primarily report service providers' performance and activities, they also play an essential role in providing an overview of sector performance and identifying priority areas moving forward.[47]

NWASCO also plays an important role in ensuring that government targets for sanitation are adequately reflected in public spending and agreements with service providers. Of note, as a condition of licensing, commercial utility boards (including LWSC's) must have a strategic plan and budget, and commercial utilities are required to have yearly financial audits, the results of which are shared with NWASCO. NWASCO also directly reviews the financial sustainability of service providers' activities through specific indicators in its annual reports such as metering ratio, NRW, planned maintenance, collection efficiency, staff efficiency, O&M and full cost coverage by collection. Corporate governance and management indicators are also monitored and reported on.

[43] In 2019, there was a significant deterioration in the rate of NRW for LWSC, with NRW rising from 39% in 2018 to 45% in 2019. This is the highest NRW rate of 11 Zambia's commercial utilities and also very high by typical standards for utilities in developing country contexts.
[44] In 2019, LWSC's metering ratio increased modestly from 66% in 2018 to 70%. This is below the average of 81% for Zambia's 11 commercial utilities.
[45] In 2019, LWSC made moderate progress extending offsite sanitation services, with the number of sewer connections rising from 32,396 to 36,117.
[46] In 2019, LWSC responded to 93% of customer complaints – this is higher than the average among Zambia's 11 commercial utilities of 90%.
[47] For example, NWASCO's 2018 Annual Report contained sections on service provision in low-income areas and integrating onsite sanitation in regulation.

4 CORRUPTION AND INTEGRITY ISSUES

This section presents a broad mapping of the different instances of corruption and other integrity failures in Lusaka's urban sanitation sub-sector according to WIN's three classifications of corruption and integrity issues: corruption in public financial management, corruption at the citizen-institution interface and wider integrity failures. Ultimately, this highlights that while significant steps have been taken to reduce the opportunities for corruption and other integrity failures, substantial further measures are needed to combat the various types of corruption and other integrity issues that persist, especially corruption in procurement. Unless otherwise noted, all the examples in this section come from Lusaka's urban sanitation sub-sector, not elsewhere in Zambia.

4.1 Corruption in Public Financial Management

Corruption in public financial management covers the inappropriate capture of public resources by public or private actors. Common examples include corruption throughout public and private procurement processes, smaller-scale accounting fraud such as fraudulent expense claims or abusive demands for per diems, nepotism in contract award or employment, and businesses paying bribes to gain some benefit. Overall, this is WIN's classification of corruption and other integrity failures where the most concerning instances are occurring.

4.1.1 Procurement

Across all the consultations, corruption in procurement processes was the most frequently cited instance of corruption. It was noted by all the different types of stakeholders consulted. Corruption in procurement is prevalent throughout the urban sanitation sub-sector at a variety of levels. These range from manipulating comparatively small programme activities or projects that local NGOs and private sector actors are bidding for up to much larger – and more concerning – instances of corruption in the procurement processes of several large externally funded WASH programmes. Examples include bribery, collusion and undue interference, nepotism, or failure to comply with procurement processes for other personal benefit.

The most high-profile instances of alleged corruption in procurement concern the procurement processes for large WASH programmes managed by governmental actors that are funded by international organisations where powerful governmental actors appear to have consistently influenced – or sought to influence – the selection of contractors with insufficient capacity and experience. For all the instances cited here, there is no concrete evidence of corruption; however, much of the behaviour is highly suspicious, and corruption can be inferred.

A recent report published by OAG details several specific areas where LWSC's procurement of goods for sanitation service provision has not followed procurement protocols. While evidence of corruption is not provided for the cases presented by OAG, it can be inferred. During consultations, respondents stated that cases such as the one presented below occur because pressure is placed on LWSC by senior political figures. On the 29th of May 2017, LWSC engaged a national contractor to supply a vacuum tanker at a cost of ZMW 2,091,051 (equivalent to USD 115,251.92) with a delivery period of 8 to 12 weeks. The tanker was delivered on the 28th of February 2018, and the supplier had subsequently been paid the whole contract sum. The contract included several clauses concerning the condition and payment for the vacuum tanker.[48] However, contrary to these clauses, the supplier delivered a vacuum tanker that had been used and had a mileage of 20,000 kilometres. LWSC paid the supplier in full on the 7th of March 2018 despite the vacuum tanker not meeting the specifications in the contract (OAG, 2019, pp. 51-52). This incident had a clear, direct impact on sanitation service provision because, as of 31st December 2019, 22 months after delivery, the vacuum tanker had never been used and was parked at LWSC premises as management had rejected the vacuum tanker. The same OAG report specifies similar issues concerning urban water.[49,50] These sorts of issues in the procurement of large WASH programmes are not limited to the urban sanitation sub-sector and appear to be prevalent across Zambia's WASH sector.[51,52,53]

"The rate of development and growth is hampered by corruption and integrity issues – we can achieve a lot as a country, but only if our focus is on putting human resources in the right places and ensuring they work effectively"

[48] One clause stated that the supplier warrants that all the goods are new, unused, and of the most recent or current models and that they incorporate all recent improvements in design and materials. Another clause stipulated that the method and conditions of payment to the supplier: (i) 10% advance payment within 30 days of signing the contract; (ii) 80% of the contract price on receipt of the goods and submission of the document; and (iii) 10% of the contract price paid within 30 days of the acceptance certificate. Another clause detailed that performance security shall be required at 10% of the contract sum (OAG, 2019).

[49] On the 1st of December 2015, LWSC signed a contract with Infotron Zambia Limited to supply 9,000 prepaid meters at a contract sum of ZMW 13,479,767 (equivalent to USD 743,487.31) and the contract sum had been paid in full. According to one of the contract's clauses, the battery, which was to be embedded in the prepaid meter, was supposed to have a lifespan of at least five years. However, it was observed that as of 31st December 2019, out of the 9,000 meters installed, batteries for 8,836 meters valued at ZMW 13,234,136 (equivalent to USD 729,939.34) were found to be faulty before the expiry of the 5-year life span. Consequently, the meters were uninstalled, resulting in substantial wasteful expenditure (OAG, 2019).

[50] On the 4th of November 2013, LWSC engaged Pyramids Works Ltd to supply and deliver 52,000 concrete blocks at a contract sum of ZMW 259,480.00 (equivalent to USD 14,306.83), which was to be paid upon delivery of the blocks. The blocks were for the construction of a wall fence at Mass Media water pump station. Contrary to the terms of payment, LWSSC made full payment of ZMW 259,480.00 (equivalent to USD 14,306.83) on 5th February 2014 to the supplier upon the partial delivery of 16,750 blocks costing ZMW 83,583.00 (equivalent to USD 4,608.48). As of 31st December 2019, the supplier had delivered 38,176 blocks costing ZMW 190,498.00 (equivalent to $10,503.40) leaving a balance of 13,824 blocks costing ZMW 68,982.00 (equivalent to USD 3,859.27) undelivered (OAG, 2019).

[51] On a large rural WASH programmes funded by international organisations, there have reportedly been substantial challenges due to governance aspects in a Ministry, which had selected contractors for water programmes without the required capacity. Notably, an international organisation asserted that on one programme, they reviewed the experience of the contractors selected by a Ministry and asked for a copy of certificates for the completion of similar works and found that the contractor selected had no capacity or experience.

[52] According to the Zambia Anti-Corruption Commission, a substantial percentage of the boreholes on a previous (over 10 years ago) national rural and urban water supply programme were installed on government officials' private plots (UNDP, 2011, p. 89).

[53] Another high-profile case that occurred over 10 years ago involved irregularities in the awarding of contracts in a multi-million government tender to drill boreholes to supply water at two public universities (UNDP, 2011, p. 89).

Another concerning aspect of the procurement process that has directly impacted many of the stakeholders consulted is the leaking of engineers estimates. In one instance, an international organisation alleged that a contact of senior members of a Ministry that met the required technical specifications provided a bid for a project that was extremely close to the engineer's estimate. Several other contractors, however, came in with lower bids and had the necessary capacity and experience for the project. Significantly, when discussions were held with members of the Ministry on who should receive the contract, they reportedly passionately argued that their contact should receive the contract and warned that the other bids were not reliable because of their low price. Ultimately, the project did not go to the contact of the members of the Ministry after a reference was made to the rules stipulated in the tender document, that if multiple firms had the requisite experience and capacity the contract would be awarded to the firm with the best offer (a quality cost-based selection).

An international NGO that acknowledged that it had previously faced substantial issues with engineers' estimates being released to contractors – and had implemented several safety mechanisms to prevent this happening again – reported a similar issue occurring recently. In this instance, the international NGO recently put out a tender for 50 (proxy figure) public sanitation facilities and had to disqualify multiple contractors whose quotes were very close to the engineer's estimate – one was within ZMW 0.1 (equivalent to less than USD 0.01). Another representative of this international NGO asserted that "contractors expect that tendering organisations are interested in bribes; when contractors drop off their tenders, there is often an implicit or explicit encouragement to influence the process through bribery".

Box 1: The Impact of Corruption in Procurement

As an act that generally occurs behind the scenes, the impact of corruption and other integrity failures are often difficult to gauge. However, regarding corruption in procurement in Lusaka's urban sanitation sector, the impact is clear, albeit sometimes unquantifiable. The delay of programme activities because of corruption in procurement was cited as an issue by one of the international NGOs consulted. While not concerning urban sanitation in Lusaka, alleged substantial issues in the tendering of a large international organisation funded rural WASH programme were cited as being responsible for a considerable reduction in the programme's scope, with the number of sanitation facilities and water points being constructed both being reduced by around 20%.

4.1.2 Per Diems and Smaller Scale Accounting Fraud

Per diems are allowances or payments that are supposed to be used to cover the personal expenses of attending an event and have become widely used to reduce accounting complexities. Per diems are set at different rates by the organisations sponsoring individual's attendance at events, rather than by the individual's own organisation. There have been some attempts to harmonise per diems in Zambia; however, substantial disparities remain between the per diems that organisations in the WASH sector are willing to pay. The manipulation of per diems and other instances of smaller-scale accounting fraud represent another particularly concerning area of corruption in public

financial management because of their high prevalence. This behaviour was reported as highly problematic by most of the stakeholders consulted and has reached a point where it has become institutionalised and widely accepted across the WASH sector. The examples presented below cover urban water supply and sanitation. The most extreme example highlighted during the consultations concerns a Ministry official allegedly misappropriating money from a basket fund and attempting to hide this before it was later revealed during an audit (News Diggers!, 2018).

While not as extreme, the manipulation of per diems by governmental and non-governmental personnel appears to be very common and collectively has a substantial impact. The pervasiveness of this issue was highlighted by the vast majority of non-state (international organisations, international NGOs, local NGOs) organisations consultations, and some of the governmental organisations consulted even acknowledged that this was highly problematic within their institution. One large international NGO asserted that at a five-day workshop, in 2019, many attendees demanded to be paid for all five days of the workshop despite only showing up for one day. At the same workshop, individuals would also simply arrive, sign in the register and disappear after claiming the transport re-fund and payment. When challenged on their behaviour, these individuals reportedly defended themselves by asserting that this was a common practice in Government and some large international organisations. An estimated 20% of the workshop's attendees (individuals from government departments and international and local NGOs) engaged in such behaviour. The general tendency of governmental organisations to charge for workshops and evaluations that do not take place was also reported.

Abuse of per diems is also found in the double claiming of per diems and transport allowances, with individuals claiming per diems and transport allowances from Ministries and the international organisation or NGO in question. Similarly, many individuals receive per diems when they have not attended events and are not even on the participant's list, and participant lists are reportedly falsified by friends or members of the same organisation to enable per diems to be claimed. Moreover, some organisations are legally constrained in the per diems and travel allowances that they can pay, and some individuals will refuse to participate at certain workshops where the per diem and travel allowance is lower than what is paid by other (often larger) organisations. Finally, individuals also purposefully attend workshops just outside of Lusaka to claim the additional per diem and travel allowances permitted for this.

4.1.3 Bribery of Public Officials by the Private Sector

Solid evidence was not found of the bribery of public officials by the private sector in the procurement process. However, given the suspicious issues alleged and reported in this area (see Sub-Section 4.1.1.), it can be inferred. Evidence of the bribery of public officials by the private sector was provided in other areas. LCC alleged that 37 officers provided licences to private sector actors without following procedures (see Sub-Section 4.3.2.) (LCC, 2019). Additionally, a stakeholder from LCC highlighted an instance where private solid waste management enterprises had been suspected of bribing officials at a weighbridge. It was claimed that the private operators falsified their books; for example, instead of listing that they had collected 2,000 kg of solid waste, they would only declare 1,200 kg. This was enabled by a faulty weighbridge at the solid waste facility. Solid waste

management enterprises could then connive with the officers at the plant who reportedly received a bribe or took a cut of the savings. The officers in question were eventually caught, charged and reported to the Local Government Commission. However, they were ultimately reprieved because of the lack of concrete evidence (due to faulty weighbridge) and eventually only transferred and put under observation. Overall, this instance resulted in a considerable loss of revenue for LCC.

"Most of what we are suffering from links to integrity – a lack of integrity robs us of resources"

Another issue in this area – that OAG recently detailed the extent of – is commercial customers being billed as domestic customers by LWSC for water supply and sanitation services. OAG's review of LWSC's billing information from January 2017 to December 2018 found that 34 commercial enterprises were billed under domestic tariffs. As there is a substantial disparity in the tariffs applied to domestic and commercial customers this resulted in these enterprises being billed a total of ZMW 395,839.00 (equivalent to USD 21,823.13) rather than ZMW 709,782.00 (equivalent to USD 39,140.19) – a shortfall of ZMW 313,843.00 (equivalent to USD 17,308.58) (OAG, 2019, p. 49). While evidence of the bribery of public officials by the private sector was not established by OAG for this form of corruption in public financial management, it can be inferred. Similarly, to the cumulative impact of LWSC's high NRW rate (see Box Two), this form of corruption undermines LWSC's ability to function effectively and, in turn, impacts poor, vulnerable and underserved households most severely.

In many cities, bribery of public officials by private actors occurs at WWTPs. However, despite a faulty weighbridge and a monitoring system that has several important weaknesses,[54] LWSC reported that they had not experienced any instances of private actors bribing public officials.

4.1.4 Nepotism or Bribery in the Award of Employment

A final area of corruption in public financial management is nepotism or bribery in the award of employment. At the national level, one governmental actor asserted that nepotism in the award of employment was very common in their organisation, even stating that new positions have not been publicly advertised for the last five years despite people being employed as normal. Similarly, there is alleged employment based on political affiliation at several organisations, including within commercial utilities, commercial utility boards and within local authorities. A governmental actor acknowledged that it was a significant issue in their organisation, stating nepotism "in recruitment is very high – appointment is not based on merit and [often] no adverts are made".

The bloating of administrative structures was also cited as a key indicator of nepotism in the award of employment at commercial utilities. It highlights how jobs are reportedly

[54] These weaknesses include remaining open at night with a skeleton staff when there are, therefore, less safeguards and less of a chance of being caught paying/accepting a bribe, manipulation of subsidies by MPEs, and the use of paper-based reporting systems.

being created for family members or friends. Indeed, one governmental stakeholder interviewed for this study asserted that in some cases staff structures are 40-50% larger than required. Issues of nepotism also appear to be common at the lower levels. Issues pertaining to 'ghost employees' (fake or real people that are on the payroll without conducting any actual work) were not found.

4.2 Corruption at the Citizen-Institution Interface

Corruption at the citizen-institution interface centrally covers the bribery of public officials by private citizens. It can be instigated by both public officials and private citizens and comes in a range of different forms that include collusion where the citizen is essentially happy to pay the bribe as well as extreme cases of extortion where, for example, a public official denies a basic right or fabricates a reason to impose a penalty. The consulted stakeholders generally believed bribery at the citizen-institution interface to be fairly common in Lusaka's urban sanitation sub-sector, and several examples are detailed below. The consulted stakeholders did not cite the more extreme forms of corruption at the citizen-institution interface (i.e., extreme cases of extortion or sextortion, where sexual favours are extorted in exchange for service).

"Corruption has a huge impact on sanitation service delivery. For the low-income households, the impact is gravest – it not only compromises the quality for service but also access and affordability"

The extent of corruption at the citizen-institution could not be quantified,[55] and stakeholders reported that it was less prevalent for urban sanitation than it is for urban water. Three core reasons were found for this:

- Physical challenges in providing illegal sanitation services (i.e. a sewer connection) as compared to the comparatively straightforward process of creating an illegal water connection or meter bypass.
- The low level of sewerage coverage in Lusaka (especially in peri-urban areas) means there are fewer opportunities in this area.
- Efforts to investigate and fight corruption at the citizen-institution interface are more geared to identifying and preventing issues in relation to water rather than sanitation.

Altogether, while it could not be quantified, corruption at the citizen-institution interface does not appear to be as common as is typical in developing country contexts, especially at LWSC, which appears to be doing a comparatively good job in this area. This highlights the positive impact of the measures that NWASCO and LWSC have implemented in this area. For example, for NWASCO, the implementation of multiple avenues of customer complaints, clear guidance and standards as well as the monitoring and reporting of several pertinent indicators: NRW, metering ratio, progress extending services, average

[55] This study could not quantify the frequency of corruption at the citizen-institution interface. However, In 2018, 18% of Zambians that had contact with at least one public service (police, health care, schools, ID documents and utilities) had paid a bribe (Transparency International & Afro Barometer, 2019). This is up marginally from 17% in 2015, but lower than the average of 25% for Africa and globally.

response time to customer complaints and the percentage of complaints resolved, and O&M cost efficiency and cost coverage. For LWSC, these measures include, developing and institutionalising policies and procedures such as standard operating procedures, commercial procedures, human resources management and development procedures, disciplinary procedures under human resources management, connection procedures and reporting, and billing and metering procedures.

Very few of the instances of corruption at the citizen-institution interface detailed below concern urban onsite sanitation. This is not because there is effective regulation of onsite sanitation to limit the opportunities for corruption at the citizen-institution interface. Instead, this is because there is such limited capacity at LCC to enforce standards for onsite sanitation or public health that citizens typically get away with breaching these without having to pay a bribe.

4.2.1 Bribery to Reduce Regular Fees

A variety of different forms of bribery were cited throughout the consultations to reduce regular fees for services. In the first instance, the most common form of corruption in this area is the tampering of water meters, which is closely connected to bribery to reduce regular fees for urban offsite sanitation services as the tariffs for sewerage services are calculated based on the amount of water consumed. Despite LWSC's installation of new water meters for most water connections, many older meters remain, and lower-level staff in LWSC, customer service assistants or former LWSC staff find these comparatively easy to tamper with or even create a meter bypass that can be used to circumvent both old and new meters.

Meter bypasses are reportedly particularly prevalent in comparatively wealthy areas where more water is consumed per capita. In these cases, huge amounts of water are typically consumed, with the water meters reading low figures and the customers accordingly being billed low amounts. For example, LWSC has found instances where water meters have been bypassed to fill swimming pools, where large companies have used substantial amounts of water for water-intensive industries, and where households have used water to fill ground tanks and then claim that they have a borehole. Meter bypassing is done in collaboration between the customer and a skilled plumber and is difficult for LWSC to uncover unless someone informs on the act. LWSC noted that meter bypassing was a major contributory factor to LWSC's high NRW rate, which significantly impacts water supply and sanitation service provision in Lusaka, especially the underserved in poorer communities (see Box 2).

4.2.2 Bribery to Obtain a Service

One LWSC staff member noted that "[illegal connections to the sewer network] are common, especially in the peri-urban areas and the new settlements where connections are made illegally with help from community members with technical knowledge on how to connect into the sewer network". More specifically, it was reported that community members have been connecting illegally to the sewerage system in Mtendere peri-urban area, for example. This has supposedly been done by former LWSC employees – who sometimes pretend to work for LWSC – who go into communities and offer to provide sewer connections for

around ZMW 1,000.00 (equivalent to USD 55.00). In some cases, these individuals go as far as facilitating the opening of an account for the individual with LWSC.

Another way in which this occurs is by demanding that community members pay for the cost of parts in addition to the normal fee charged by LWSC. For example, an LWSC employee cited a case where a woman reported paying ZMW 1,500.00 (proxy figure – equivalent to USD82.50) for a water connection but only being receipted for ZMW 500.00 (proxy figure – equivalent to USD 27.50) and then having to pay an additional ZMW 750.00 (proxy figure – equivalent to USD 41.25) on top of this for materials making ZMW 2,250.00 (proxy figure – equivalent to USD 120.00) in total. The overall excess of what the water connection should have cost (around ZMW 500.00) was pocketed by the LWSC staff member, with them taking the necessary materials free of charge from the LWSC's stores.

Due to insufficient sensitisation on the proper procedures for getting a connection and the targeting of more vulnerable groups (see Box Two), community members are reportedly often not even aware that they have an illegal connection. Studies, conducted as part of the five-year USD 332 million Millennium Challenge Corporation Zambia Compact that ran from 2013-2018, also indicated the issue of bribery for an illegal connection, but in this case for urban water.[56] Linked to this, LWSC noted that bribery to avoid a water disconnection was the most commonplace form of corruption at the citizen-institution interface in the Lusaka's WASH sector. Instances of illegal reconnections once a disconnection has been facilitated also reportedly occur frequently.

"If you willingly participate in any action that diverts access to the basic human right to sanitation, disproportionately affects the very people in need or inflates the price of services, you are stunting the development of our people"

During consultations with LCC, several cases were flagged pertaining to bribery to obtain a service. These largely concerned the issuance of licences, health and business permits in 2019 for organisations. Thirty-seven members of staff were alleged to have been involved in malpractices. These allegations covered a variety of cases – several of which directly relate to urban sanitation provision – and typically involved accepting or soliciting bribes of between ZMW 400.00 (equivalent to USD 22.30) and ZMW 6,500.00 (equivalent to USD 362.50). These forms of bribery to obtain a service occurred in several different manners, with some instances where middlepersons were used to transfer funds via Airtel Money, individual employees demanding a bribe or where a senior employee may collude or pressurise lower-level staff to issue licences on their behalf. Minutes from LCC meetings highlight that where evidence was provided, LCC recommended to the Local Government Service that the individuals involved be dismissed (LCC, 2019).

[56] A component of the Millennium Challenge Corporation Zambia Compact sought to reduce LWSC's level of NRW and part of this focused on reducing commercial losses by making the volumetric billing of customers' water usage more accurate, as well as the intensive clean up and updating of LWSC's customer database. Significantly, "information received from contractor progress reports at compact closure demonstrate that approximately 16,500 previously unrecorded customers were added to the utility database and properly registered as billable accounts. ... These customers had previously been accessing water services for free" (Millennium Change Coorporation, 2020). While this is an impressive programme output, it highlights the extent of the challenge of bribery between citizens and public officials in this area. A significant proportion of these 16,500 previously unrecorded customers would have all presumably required assistance from an LWSC staff member in creating these illegal connections.

Additionally, in 2018, the former Director of City Planning was reported by the Police to the Anti-Corruption Commission for abuse of powers by irregularly granting the extension of sanitary facilities of a religious site to encroach onto the road.[57] In this case, LCC was unable to provide concrete evidence of corruption (i.e., the acceptance or demand of bribes for these highly suspicious acts); however, based on a series of charges,[58] LCC councillors recommended to the Local Government Service that this official be dismissed (LCC, 2019).

4.2.3 Bribery to Accelerate Administrative Procedures

Bribery also appears to be common as a means for citizens to speed up administrative procedures, especially in peri-urban areas. The representative of one international NGO highlighted how bribery to accelerate administrative procedures may occur. The following anecdote was provided: "If you speak to someone at a commercial utility for a connection and ask them to go search for a record, they will say, 'I am busy now, if you leave something for lunch I'll search for you' ". Concerning LCC, bribery at the citizen-institution interface used to reportedly be common in the City Planning Department, with citizens submitting plans for approval and then needing to pay a bribe if they wanted to have them processed quickly.

> **"The impact of corruption is on the most vulnerable – these people are being targeted because of a lack of knowledge and options"**

As has been the case with all forms of corruption at the citizen-institution interface, the victims of instances such as this are reportedly generally those with low literacy levels who do not feel very comfortable visiting LWSC offices, are not privy to procedures that govern the obtaining of services from LWSC and often find it more difficult to challenge or report instances of corruption compared to people in more affluent areas. Another specific example highlighted by LWSC is a practice whereby LWSC staff would go around communities selling application forms for water and sanitation connections. These are supposed to be free; however, they would be sold for around ZMW 150.00 (equivalent to USD 8.30). Again, it is typically the poorer areas of Lusaka's peri-urban areas where community members often have less understanding of proper practices for receiving services from LWSC that are targeted.

4.3 Wider Integrity Failures

The final classification considers wider integrity failures. This covers the allocation of resources to win votes or satisfy certain powerful or influential groups (i.e. undue political interference) and achieve a public relations goal (i.e. to demonstrate large numbers of beneficiaries cheaply rather than achieving real benefit), as well as the whitewashing of corporate social responsibility investments. Except for LWSC's mishandling of the sanitation surcharge, there was a lack of detailed information on wider integrity failures despite concerns in this area expressed by many consulted stakeholders.

[57] This was one of several acts alleged against this individual, with others pertaining to performing official LCC duties while being suspended and falsifying LCC minutes.
[58] These charges were: (i) abuse of office; (ii) impersonation and dishonest conduct; (iii) falsifying documents; and (iv) failure to comply with established procedure and sheer failure to meet job requirements.

Box 2: The Impact of Corruption at the Citizen-Institution Interface

The clearest impact of corruption at the citizen-institution interface in Lusaka's urban sanitation sub-sector is LWSC's NRW rate of 45%, which is very high for global standards of cities in developing countries and well-above the recommended benchmark of 20-25%. Behaviours such as the tampering of water meters, illegal connections and reconnections, and meter bypasses are having a substantial cumulative impact. This undermines LWSC's ability to function effectively and has a critical bearing on service delivery across Lusaka. "It accounts for considerable water wastage, affects the technical stability of the water supply, deteriorates the quality of water and water services, increases the operating costs and reduces revenues that should sustain and expand access to water [and sanitation services]" (Al-Washali, Sharma, Al-Nozaily, Haidera, & Kennedy, 2019). These impacts are almost always felt most acutely by marginalised and vulnerable groups.

Zambia's Auditor General estimated that from 2016-2018 the substantial levels of NRW caused loses of a staggering ZMW 597,694,171 (equivalent to USD 32,996,490.56). This issue is closely linked to the urban sanitation sub-sector as the tariffs for sewerage services are calculated based on the amount of water consumed. LWSC's reduced revenue is also closely connected to its decision to mishandle the sanitation surcharge as this was used to cover LWSC's O&M costs rather than expand sanitation coverage in underserved areas (see Sub-Section 4.3.1.).

Across the three broad modalities of corruption at the citizen-institution interface cited in this sub-section, vulnerable groups are consistently being targeted. Several disturbing issues in this area were detailed during consultations with LWSC. In a particularly alarming instance, a blind lady was looking after 15 orphans, and one of these reached out to an LWSC member of staff for a connection. However, the LWSC staff member took ZMW 950.00 (equivalent to USD 52.15), did not provide a receipt and then provided an illegal connection that LWSC uncovered. Further to this, most of the acts of corruption at the citizen-institution interface are targeted against people in the poorer areas of peri-urban areas where people are more likely to have limited literacy skills, not be sensitised to proper practices for getting a connection from LWSC and may be less willing to confront corrupt individuals. Women are also more often targeted, and this is generally done when their husbands are out.

4.3.1 Mishandling of the Sanitation Surcharge

In 2007, NWASCO sought to create a mechanism for commercial utilities to begin extending sanitation services to underserved peri-urban areas, and LWSC's management team suggested a sanitation surcharge on water bills – NWASCO strongly supported this. The sanitation surcharge is a levy of up to 5% on all a commercial utility customers' monthly water bills; however, currently, all NWASCO-approved sanitation surcharges are charged at 2.5%. Commercial utilities apply for the right to utilise the sanitation surcharge on a case-by-case basis, which is generally approved if they have achieved at least 100% O&M coverage as there are fears that if the commercial utility is not covering their O&M costs through other revenue, they will begin using the surcharge for this. To date, 6 of Zambia's 11 commercial utilities are applying the surcharge as part of their tariff structure.

Photo by Georges Mikhael, 2014

By 2018, Commercial utilities collected over ZMW 60 million (equivalent to approximately USD 6.5 million when accounting for inflation) through the sanitation surcharge, with LWSC having collected ZMW 24.3 million (equivalent to approximately USD 2.6 million) since 2007 (NWASCO, 2018). NWASCO stipulates that this money is to be stored in a ring-fenced account to ensure it is utilised for approved sanitation extension projects rather than covering O&M costs or providing additional water services to a wealthier area. At the beginning of the year, each commercial utility submits a proposal for sanitation infrastructure investments or projects, including a Bill of Quantities. NWASCO judges these proposals to check for adherence to its guidelines. Once approved, the money in the ring-fenced accounts can only be released for these pre-agreed projects, with NWASCO undertaking quarterly financial audits to ensure compliance.

In 2009, just two years after LWSC first started collecting the sanitation surcharge, NWASCO suspended LWSC's collection of the levy. A variety of different reasons are reported for this, including disagreement between LWSC and NWASCO about how the sanitation surcharge was being spent (some of the funds were spent on a water project in a middle-income area) and NWASCO's concern that the money was being spent too slowly (WSUP, 2012). Some years later, following review by NWASCO, LWSC was granted permission to begin applying the sanitation surcharge again. In 2016, NWASCO again suspended LWSC's ability to apply the surcharge. Instead of placing the not insubstantial money collected from the surcharge into the correct ring-fenced account, LWSC used the money to cover short-term obligations as its revenue had been insufficient to meet ongoing O&M costs. NWASCO issued a directive to LWSC stating that the money needs to be transferred into the ring-fenced account. However, LWSC did not do this, and NWASCO suspended LWSC's application of the sanitation surcharge. In the four years since then, the issue has remained unresolved, with LWSC not transferring the money back.

This issue of integrity in financial management has had a substantial impact on the provision of sanitation services in Lusaka's poorer, less developed peri-urban areas. Critically, as LWSC forecasts that it would have collected ZMW 7,827,710.83 (equivalent to USD 430,949.18) in 2018 from the sanitation surcharge had it been allowed to apply it. It can be estimated that for the four years from the beginning of 2016 to the end of 2019 an additional ZMW 31,310,843.32 (equivalent to USD 1,723,796.89) would have been available for financing sanitation programmes in low-income areas. Moving forward, NWASCO has asserted that LWSC will be granted permission to apply the sanitation surcharge again once it has completed the three projects that it originally received approval from NWASCO for back in 2016. LWSC is currently going through a process of advocating to be allowed to reapply the surcharge and has applied to be able to use the sanitation surcharge to create a revolving fund for household sanitation.

4.3.2 Political Influence

The wider integrity failure that was most frequently cited by the consulted stakeholders concerns undue political influence in resource allocation. This is a substantial challenge globally, and it is not surprising that this is reportedly an issue here. The examples generally concerned the selection of target intervention areas and beneficiaries and were reported to escalate in the build-up to elections. Issues of undue political influence in decision-making, as well as the allocation of resources and services, also appear to be common in the wider WASH sector. One international organisation's representative asserted that the distribution of districts to receive software support was heavily politicised, with selection based on special interests. Similarly, another international organisation reported that it was pushed to fund projects in certain regions of Zambia considered strongholds of the current government.

5 CONCLUSION

Larger, quantitative studies on the extent of certain instances of corruption in Zambia highlight that they are less prevalent than globally and across Africa. For example, in 2018, 18% of Zambians that had contact with at least one public service (police, health care, schools, ID documents, and utilities) had paid a bribe compared to 25% across Africa and globally (Transparency International & Afro Barometer, 2019). Indeed, the specific instances of corruption in Lusaka's urban sanitation sub-sector that were detailed throughout Section Four are probably more ubiquitous in most other countries. This highlights the critical importance of investing more resources in combating corruption, and Zambia showcases many measures that should be adopted in other developing country contexts that have generally not gone as far in addressing this vital area.

This case-study report has provided an overview and assessment of the status of the regulation of Lusaka's urban sanitation sub-sector and documented a broad mapping of the different types of corruption and other integrity failures that are prevalent. Section Three highlighted that Zambia has well-established institutional arrangements for regulating the urban sanitation sub-sector, which have evolved and been refined over the last 20 years. While improvements are needed concerning the financial resources and number of staff available to regulators, there is a robust and an altogether impressive regulatory environment for urban sanitation. This is especially true regarding regulators' autonomy as well as the levels of accountability, transparency and participation, which are key pillars of integrity. Concerning offsite sanitation, NWASCO and ZEMA have wide-ranging regulatory tools that they generally apply effectively, especially in NWASCO's oversight of LWSC.

Conversely, for onsite sanitation, substantial progress is required. The 2018 UOS-FSM Regulation Framework is a vital development that sets out new regulatory roles for onsite sanitation and provides an impressive strategy for regulating this area. However, unsurprisingly given the financial and human resources required, there have been delays in implementing most of the key activities contained in this strategy document. Consequently, NWASCO, ZEMA, LCC and LWSC, amongst others, are not yet sufficiently performing their regulatory responsibilities for onsite sanitation. This represents a critical challenge, especially because around 85% of Lusaka's population use these services.

A further key gap for both urban onsite and offsite sanitation concerns procurement. While ZPPA continuously updates public procurement procedures and provides oversight (alongside NWASCO and OAG), given the prevalence of corruption in procurement, these evidently require further improvements. Greater oversight is also required.

Based on consultations with a wide range of governmental and non-state (international and local NGOs, civil society, private sector) organisations, Section Four presented a broad mapping of the instances of corruption and other integrity failures in Lusaka's urban sanitation sub-sector. This was done according to WIN's three classifications: corruption

in public financial management, corruption at the citizen-institution interface and wider integrity failures. This highlighted that despite the attempts to improve the regulation of the urban sanitation sub-sector, concerning instances of corruption and other integrity failures are relatively common.

Corruption in procurement is particularly concerning, with several instances where powerful actors were accused of engaging in corrupt acts by multiple reliable stakeholders. Most troubling are the issues highlighted in the procurement of large international organisation programmes as these concerned sizeable contracts and have a clear and substantial negative impact on services (see Box 1). Other especially troubling issues identified by this study include nepotism in the award of contracts and employment as well as the seemingly institutionalised abuse of per diems. Most of the worrisome and seemingly prevalent instances of corruption and other integrity failures identified are allegedly being conducted by powerful actors, which raises an important question about the extent to which governmental regulatory bodies can realistically effectively regulate these actors. Conversely, corruption and integrity failures are somewhat limited compared to what could be expected in a developing country context, and this indicates the positive impact of NWASCO's oversight and the application of its regulatory tools.

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6 RECOMMENDATIONS

This section details recommendations for further improvements to the regulation of urban sanitation services in Lusaka (and across Zambia), with the ultimate aims of reducing the opportunities for corruption and other integrity failures and improving services.

6.1 Ensuring Effective Implementation of the E-Procurement System

Corruption in procurement processes was the primary and most concerning form of corruption and other integrity failures identified. Zambia's E-Procurement System (also termed the e-GP system) is considered an effective tool for instituting procurement reforms and establishing a transparent and open procurement environment. In addition, ZPPA's inclusion of the Open Contracting Data Standard (OCDS) to its e-GP system is in line with international best practice. There are plans for this to be rolled out for the water supply and sanitation sector; however, the e-GP system's implementation for this sector (especially for commercial utilities) needs to be expedited. If effectively implemented, the e-GP system will increase transparency by ensuring key details throughout the procurement process (i.e., tenders, bids, bid evaluations, awards, contracts, amendments, status of payments) are published and easy to access. Among a wealth of further benefits (i.e., improved planning and efficiency, increased competition, more innovation and enhance oversight), the use of e-procurement systems has been shown to improve government's own behaviour (Open Contracting Partnership, 2017) and deters malfeasance behaviour from businesses (World Bank, 2017). Further, a study to pick lessons learnt from the implementation of the e-GP system in various institutions should be conducted and built upon when implementing the system in the water and sanitation sectors.[59]

6.2 Improving Management of Per Diems

The Government already issues circulars (instructions) indicating acceptable per diems and governs the administration of per diems that public and semi-public institutions receive. These have been disseminated and clearly outline what constitute reasonable per diems. Nevertheless, as the issues highlighted in Sub-Section 4.1.2. shows, further measures are necessary. At the sector level, all actors need to familiarise themselves with these government procedures and processes during the planning stages. The sector should also, at a minimum, outline common issues in the management of per diems and include standardised per diem rates that have been agreed with Government. Additionally, all governmental stakeholders should contextualise, adopt and enforce the template code of ethics that exists, while international development organisations must not adopt practices that make them complicit in the mismanagement of per diems as a 'quick fix' to accelerate project implementation. At the national level, OAG needs to be involved in reviewing the administration of per diems.

[59] This is a key area where developmental partners could provide assistance.

6.3 Accelerating the 2018 UOS-FSM Regulation Framework's Implementation

The 2018 UOS-FSM Regulation Framework details a series of measures to be implemented by key stakeholders in Zambia's urban sanitation sub-sector. This is an impressive strategy document and, if properly implemented, would provide the necessary conditions to effectively regulate – and increase the provision of – onsite sanitation and FSM services and reduce the opportunities for corruption and other integrity issues in this area. While key stakeholders have made steady progress with the implementation of these measures despite COVID-19, as of February 2021, many activities still need to be implemented. This is interlinked with the need to strengthen regulatory actors' capacity (see Sub-Section 6.4.). However, as much as possible, steps should be taken to begin or accelerate the implementation of the following outstanding areas of the 2018 UOS-FSM Regulation Framework in particular:

Standards and guidelines. Several standards and guidelines have been developed or expanded to cover onsite sanitation in recent years. However, many standards and guidelines still should be developed or finalised:

- NWASCO developing new sanitation service provision guidelines covering containment, emptying, transportation, storage, treatment facilities and disposal/re-use mechanisms (in progress – ESAWAS prepared guidelines and NWASCO is adopting them).
- NWASCO and ZABS developing standards for onsite sanitation facilities (drafted finalised, yet to be finalised).
- ZEMA developing new standards for faecal sludge treatment, disposal or re-use (incomplete).

Inspections, monitoring and reporting. Similarly, some improvements have been made in inspections, monitoring and reporting. However, again, many areas require greater attention:

- LCC developing an inspection plan for onsite sanitation (incomplete – not yet started).
- LCC, LWSC, the Ministry of Health and ZEMA developing innovative inspection mechanisms to handle the large number of onsite sanitation facilities (incomplete) and LCC and LWSC conducting ongoing inspections and inspections during the construction of onsite facilities (incomplete – not yet started comprehensively).
- ZEMA, local authorities and commercial utilities developing regulations for the registration and inspection of septic tanks, which includes development of a database (incomplete – not yet started).
- Mapping of sanitation facilities in all urban areas, including development of appropriate tools for data collection and a GIS-based information system to be housed at NWASCO (incomplete – started in 2021).

By-laws for onsite sanitation and FSM. LCC has developed by-laws that cover important aspects of enforcing onsite sanitation regulations, guidelines and standards by investing LCC with the power to fine and prosecute individuals and companies. These by-laws are, however, currently waiting for approval from the Minister of Local Government, and there are some concerns that there will be further delays in their approval.

Incentive mechanisms to finance investments in sanitation. The transition commercial utilities are required to make in ensuring the provision of onsite sanitation services is a challenging and costly one. NWASCO and MWDSEP were supposed to develop financial incentives to assist and push commercial utilities to invest in onsite sanitation. One means of doing this could be through certain aspects of the sanitation surcharge, such as increasing it from 2.5% to 5% of customers' monthly water bills under certain conditions (see Sub-Section 6.6.).

6.4 Strengthening the Regulatory Environment with Capacity Building and Improved Coordination

Zambia has well-developed institutional arrangements for urban sanitation, and, for the most part, there is a robust regulatory environment. Nevertheless, several aspects of the regulatory environment require improving. In the first instance, capacity building is required of several regulatory actors (NWASCO and LCC, among others) to enable the proper enforcement of regulatory provisions, especially concerning those that are being (or have been) developed for onsite sanitation in recent years. Of note, NWASCO currently only has 35 part-time inspectors operating across all of Zambia. Funds should be mobilised to increase this to 115 (at least one part-time inspector per district) so that they can play a substantive role in the regulation of onsite sanitation services. The capacity constraints at LCC are even larger, with just 12 full-time inspectors across the whole city. Some support was already provided in this area as part of the LSP to LCC's Environmental Health Technologists and Public Health Inspectors with training on best practices for inspection, enforcement and reporting. However, further assistance is needed, and the Ministry of Local Government should consider further assistance in this area. This is also an area where development programmes could make a significant impact.

Several other improvements also should be implemented to strengthen the regulatory environment further. Regarding coordination, measures should be taken to streamline regulators' ability to access electronic information held by the other regulators by reducing the current barriers that exist. Additionally, coordination should also be improved through NWASCO, ZEMA and WARMA using mutual recognition agreements[60] to ensure further cost savings and efficiencies in their work.

Finally, improvements should also be made to the regulatory environment regarding transparency and participation. Level of participation could be increased through strengthening citizens and CSOs' capabilities and capacity to play a more pro-active role in monitoring budgets and projects' procurements and implementation. This could be done by supporting media members to attend specialised training sessions on budget tracking and procurement and by expanding the remits and resources available to WWGs. The level of transparency should be heightened by ensuring studies into corruption and other integrity failures are conducted periodically (see recommendation below) and disseminated in a variety of appropriate mediums. For example, reports being made publicly available online, summaries being detailed in the press, and appropriate findings being displayed at water and sanitation kiosks.

[60] Mutual recognition agreements are agreements between two or more entities to recognise the result of one another's conformity assessments (i.e., NWASCO yearly inspections of commercial utilities).

6.5 Collecting and Reporting Data on Corruption at the Citizen-Institution Interface

NWASCO requires LWSC to submit data on a wide range of indicators, which NWASCO's comprehensive annual sector reports document. These indicators cover areas that can help to gauge the level and impact of corruption and other integrity failures: NRW, metering ratio, progress extending services, average response time to customer complaints, percentage of complaints resolved, O&M cost efficiency and cost coverage. However, currently, NWASCO does not monitor or report on several pertinent indicators that would help to reveal the extent of corruption at the citizen-institution interface:

- Percentage of the population that have paid a bribe to obtain water and sanitation services.
- Number or percentage of illegal connections.
- Number or percentage of meter manipulations.

Collecting data on these indicators would play a pertinent role in reducing corruption at the citizen-institution interface by enabling NWASCO to monitor progress in this area over time, gauge what measures are (and are not) working and hold commercial utilities accountable for their performance in this area.

Linked to this, periodic studies into the prevalence of WIN's three categories of corruption and other integrity failures in Zambia's WASH sector should be arranged, bringing together key stakeholders (Ministries, regulators, OAG, service providers (commercial utilities and the private sector, local authorities, international organisations, other international development organisations, international NGOs, local NGOs and CSOs). This would help identify issues that the regulators may have missed, while also enabling a more qualitative assessment of the progress being made by the sector as a whole to reduce corruption and other integrity failures. OAG's special report on financial management within commercial utilities is an important development in this area, which needs to be built on (OAG, 2019).

6.6 Professionalising Service Providers

Globally, one of the primary constraining factors to effective urban onsite sanitation regulation is that these facilities are typically serviced by informal service providers such as MPEs, especially for pit latrines. This creates substantial regulatory challenges because of the numbers of these service providers and because informal service providers are generally less able and willing to comply with regulations or subject themselves to regulatory processes. Lusaka also suffers from this difficulty, with 59% of households, businesses and institutions using informal MPEs to empty their pit latrines (Mikhael, 2017). Some initiatives have been implemented recently to increase the formalisation of onsite sanitation service providers across the sanitation service chain. Of note, the Zambia Emptiers Association has a constitution to regulate its 55 members (mostly based in Lusaka), procedures for disciplinary action and monitored by NWASCO and ZEMA. Moreover, there have been moves to formalise MPEs into CBOs with delegated management contracts with LWSC to deliver pit emptying services in two peri-urban areas. This model is currently being scaled up (see Sub-Section 2.2.).

Efforts must be taken to expand and intensify these initiatives to formalise and regulate onsite sanitation services and support the new roles that are expected to be performed by NWASCO, ZEMA, LWSC, and LCC. The sanitation surcharge could play a catalytic role here. Currently, the sanitation surcharge represents just a 2.5% levy on seven commercial utilities' customers monthly water bills and – while it can now be used as a revolving fund for onsite sanitation – remains predominantly used for comparatively expensive (per beneficiary) investments in extending offsite (sewerage) services (see Sub-Section 4.1.2). NWASCO should consider enabling commercial utilities to charge the sanitation surcharge at 5% and direct that commercial utilities use a given (significant) percentage of it for helping to formalise onsite sanitation services across the sanitation service chain in their jurisdictions. This would create a substantial, sustainable financing mechanism for improving onsite sanitation services (LWSC forecasts that if charging at 5%, it would collect ZMW 22,293,264.11 (equivalent to USD 1,228,580.74) per year), making it easier to regulate these services. In Lusaka, this would be particularly impactful considering that the LSP is coming to an end in 2022.

6.7 Improving Governance

Most of the issues highlighted in this case-study report ultimately stem from issues of poor governance and leadership by key individuals in Zambia's WASH sector. In recent years, NWASCO has developed corporate governance as well as anti-corruption and integrity guidelines for the water supply and sanitation sector. These cover a range of important areas including principles of effective water supply and sanitation service governance, expected standards and conduct, steps that need to be taken to achieve proper corporate governance, and corporate governance principles that must be adhered to in terms of transparency, accountability and respect of the rights of stakeholders. NWASCO works with MWDSEP in improving corporate governance in the WASH sector: NWASCO and MWDSEP have, for example, recently conducted and planned corporate governance training as mandated. Moreover, NWASCO and MWDSEP also recently developed detailed tools and training for corporate governance, which cover the performance of commercial utilities' boards and senior management, amongst other topics.

NWASCO, in collaboration with MWDSEP, should support Commercial utilities to fully implement the corporate governance guidelines, including promotion of integrity. The implementation of these guidelines could include identification and agreement on key performance indicators for this purpose. These indicators would, in turn, be monitored and included in NWASCO's annual reports. A core component in ensuring the effectiveness of this involves conducting (preferably joint) scheduled corporate governance training sessions for commercial utility boards and senior management, covering promotion of integrity, identification and agreement on key performance indicators for corporate governance, anti-corruption and integrity promotion, and integrating selected key performance indicators into NWASCO reporting. These corporate governance, anti-corruption and integrity promotion activities or measures, could also be picked by OAG when conducting performance audits of commercial utilities. Further key components of promoting corporate governance are ensuring that commercial utilities' boards are appointed in accordance with NWASCO's corporate governance guidelines and the articles of Association of the company and supported by both the Ministry of Water and the Ministry of Local Government.

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ANNEX 1: CORE QUESTIONS

The core set of questions that were asked to the stakeholders consulted for this assignment are presented below. These were supplemented for some stakeholders with additional questions according to their organisation's mandate.

Corruption in public financial management:

- Have you experienced or are you aware of any instances of accounting fraud and diversion of major public funds by governmental actors in Lusaka's urban sanitation sector?
- Have you experienced or are you aware of any instances of smaller scale accounting fraud such as fraudulent expense claims or abusive demands for per diems?
- Have you experienced or are you aware of any instances of nepotism in the award of contracts?
- Have you experienced or are you aware of any instances of nepotism in the award of employment?
- Have you experienced or are you aware of any instances of public officials paying a bribe to obtain a job or promotion?
- Have you experienced or are you aware of any instances of public officials giving or soliciting sexual favours to obtain a job or promotion?
- Have you experienced or are you aware of any instances of businesses paying bribes to gain some benefit?
- Have you experienced or are you aware of any instances of a business paying a bribe to speed up administrative procedures, or using a family/friend connection to speed up administrative procedures?
- Have you experienced or are you aware of any instances of false or inflated invoicing?
- Have you experienced or are you aware of any instances of corruption in procurement? This could include (i) collusion or bid-rigging in the procurement process; (ii) lobbying, bribing or pressuring decision-makers to amend the terms of the contract, change infrastructure locations or enable the use of sub-standard materials and equipment to cut costs and maximise profitability; and (iii) collusion or bribing decision-makers during the quality control/assessment of infrastructural works.
- Have you experienced or are you aware of any instances of funds for water and sanitation being utilised for purposes not as intended/planned/agreed?

Corruption at the citizen-institution interface:

- Have you experienced or are you aware of citizens paying a bribe to obtain a subsidy or a non-subsidised but desirable benefit?
- Have you experienced or are you aware of citizens paying a bribe to reduce regular fees for water and sanitation services?

- Have you experienced or are you aware of citizens giving or soliciting sexual favours to secure water and sanitation services?
- Have you experienced or are you aware of citizens constructing water and sanitation facilities not following standards? Was this linked to a form of corruption or other integrity failure?
- Have you experienced or are you aware of citizens paying a bribe to speed up administrative procedures, or using a family/friend connection to speed up administrative procedures?
- Have you experienced or are you aware of instances of citizens paying a bribe to avoid a penalty?
- Do you know of any instances of extortion where, for example, a public official is denying a clear basic right, or fabricates a reason to impose a penalty or an unusually high fees for water and sanitation services?

Wider integrity failures:

- Have you experienced or are you aware of any instances of the allocation of financial or other resources that is not fair and equitable, but is instead designed to win votes and/or to satisfy favoured groups?
- Have you experienced or are you aware of any instances of the allocation of financial or other resources that is not fair and equitable and cost-effective, but is instead designed to achieve a 'public relations' goal?
- Have you experienced or are you aware of any instances of whitewashing of corporate social responsibility investments?
- Have you experienced or are you aware of any instances of sub-standard materials in project delivery? Has this been knowingly overlooked by the relevant body?

ANNEX 2: DEFINITIONS

Term	Definition
Accountability	Refers to elected officials and other actors in the WASH system being held accountable for their actions and answering to those they serve. Accountability describes a relationship in which A is accountable to B if A is obliged to explain and justify his or her action to B or if A may suffer sanctions if his or her conduct, or explanation for it, is found wanting by B. Horizontal and vertical forms of accountability are distinguished (see below). Together with transparency and participation, accountability is one of the WIN's three pillars of water and sanitation integrity.
Autonomy	Refers to the level of independence of a regulator – its ability to behave as they desire without being dependent on the support of another actor. Autonomy has political, financial, legal and management dimensions.
Corrective measure	Regarding accountability, a corrective measure refers to an action that addresses individual or collective grievances and sanctions the wrongdoings by the individuals and institutions responsible. This can involve, for example, restitution or compensation, legally binding promises of corrective action, or possibly even criminal sanctions.
Corruption	Refers to dishonest or fraudulent conduct by those in power. WIN distinguishes three categories of corruption and integrity failures: corruption in public financial management; corruption at the citizen-institution interface; and wider integrity failures (see below).
Corruption at the citizen-institution interface	This category of corruption and integrity failures centrally covers bribery of public officials by private citizens to obtain a benefit or avoid a penalty. Examples include: • Bribery to obtain a subsidy or a non-subsidised but desirable benefit (e.g., a sewer connection); and • Bribery to avoid a penalty (e.g., landlord pay a bribe to a public official to avoid a fine for failing to provide adequate toilets for tenants). These situations may range from collusion (the citizen is essentially happy to pay the bribe) to extreme extortion (the public official denies a clear basic right or fabricates a reason to impose a penalty).
Corruption in public financial management	This category of corruption and integrity failures covers the inappropriate capture of public resources by public or private actors. Examples include: • Accounting fraud and diversion of major public funds. • Smaller-scale accounting fraud such as fraudulent expenses claims, abusive demands for per diems. • Procurement corruption. • Nepotism in contract award or employment. • Businesses paying bribes to gain some benefit (e.g., subsidy, avoidance of pollution fines). • False or inflated invoicing.
Horizontal accountability	Horizontal accountability exists when one state actor has the authority to demand explanations or impose penalties on another state actor. Horizontal oversight systems are based within the legal and justice system and include mechanisms of internal oversight and checks and balances within an institution as well as oversight and checks and balances of public institutions.
Institutional arrangements for regulation	Refers to how organisations in charge of regulation sit within the institutional landscape relevant to the wider WASH sector as well as their status and founding legislation.

Term	Definition
Integrity	ntegrity is the consistent alignment of and adherence to shared ethical values, principles and norms for upholding and prioritising the public interest over private interests. In the water and sanitation sectors, integrity is the honest and ethical use of vested powers and resources for the provision of sustainable and equitable water and sanitation services. Integrity is implicit in human rights obligations, explicit in the administrative justice laws of many countries, and operationalised in the governance principles of transparency, accountability, participation and anti-corruption.
Preventive measure	Regarding accountability, a preventive measure refers to an action that helps to determine which aspects of policy or service delivery are working (so they can be built on) and which aspects need to be adjusted. Preventive measures include actions such as initiatives to promote public participation, increase awareness, improve access to information and transparency in public decision-making.
Participation	Implies that all stakeholders, including marginalised and resource-poor groups, are meaningfully involved in deciding on decisions relating to water and sanitation. Together with accountability and transparency, participation is one of WIN's three pillars of water and sanitation integrity.
Regulation	Refers to the sustained and focused control exercised by a public agency over activities that are valued by a community.
Regulatory environment	Refers to the status of the wider enabling environment within which the institutional arrangements for regulation and the regulatory tools available to regulators exist. It covers a range of factors, including autonomy (political, financial, legal, management), capacity, coordination, the level of accountability of regulation, the levels of participation and transparency and the link between regulators and the state.
Regulatory functions	Specific roles performed by regulators considering accepted good practice in these governance areas as well as per their mandates.
Transparency	Refers to the level of openness and public access to information. Together with accountability and participation, transparency is one of WIN's three pillars of water and sanitation integrity.
Vertical accountability	Vertical accountability exists when non-state actors such as the media, NGOs or individuals place pressure on state actors for improved services. Vertical channels of accountability are those that link citizens directly to government and comprise of direct and indirect forms of accountability. Elections are the most commonplace form of direct vertical accountability, while indirect forms include civic engagement, lobbying and mass mobilisation.
Water and sanitation integrity risks	Refers to particular risk areas, which can provide opportunities for poor governance as well as corruption. These risks can be related to specific functions performed by institutions.
Wider integrity risks	WIN's other two classifications of corruption and integrity failures (corruption in public financial management and corruption at the citizen-institution interface) focus on corruption, essentially unethical decision-making for personal financial gain. This category considers wider types of integrity failure, such as: • Allocation of financial or other resources that is not fair and equitable but is instead designed to win votes and/or to satisfy favoured groups (e.g., very wealthy elites, middle-class citizens, the military, public employees, favoured ethnicities). • Allocation of financial or other resources that is not fair and equitable and cost-effective, but is instead designed to achieve a "public relations" goal (e.g., government or NGO investment designed to demonstrate large "numbers of beneficiaries" cheaply rather than achieve real benefit); and • Whitewashing corporate social responsibility investments (e.g., a brewery which loudly invests a small amount of money in improving slum water supply but is meanwhile over-extracting local water resource).

ANNEX 3: LAWS, POLICIES AND REGULATIONS GOVERNING SANITATION PROVISION

Regulation	Topic
The Water Supply and Sanitation Act No. 28 of 1997	Facilitated the establishment of NWASCO and mandates it to regulate WSS provision in urban, peri-urban and rural areas. Also provides for commercialisation of water supply and sanitation service provision by local authorities.
The Statutory Instrument No. 63 of 2000, The Water Supply and Sanitation (Licensing of Utilities and Service Providers) Regulations, 2000	Under WSS Act No 28 of 1997, states procedures for licensing of service providers.
The Public Health Act Chapter 295, Vol. 17 of the Laws of Zambia, 2006	Under the Ministry of Health, mandates local authorities to enforce public health protection.
The Water Policy 2010	The overarching policy framework for the water and sanitation sector in Zambia. Provides policy guidance on improving the management of water resources, institutional coordination and defined roles and responsibilities.
The Water Resources Management Act No 21 of 2011	Facilitated the establishment of WARMA and defined its functions and powers; provides for management, development, conservation, protection and preservation of water resources and their ecosystems; provides for the equitable, sustainable utilisation of the water resources.
The Environmental Management Act No 12 of 2011	Covers a wide range of topics concerning environmental management. These include: • Renaming the Environmental Council of Zambia as ZEMA • Integrated environmental management and protection and conservation of the environment and the sustainable management and use of natural resources • State of the Environment Report, environmental management strategies and other plans • Strategic environmental assessments of proposed policies, plans and programmes • Prevention and control of pollution and environmental degradation • Public participation in environmental decision making and access to environmental information • Established the Environment Fund • Environmental audit and monitoring
Statutory Instrument No. 100 of 2011	Provides for local authorities to undertake activities related to solid waste management.

Regulation	Topic
The Environmental Management (Licensing Regulations 2013), SI No 112 of 2013	Regulations to operationalize the Environmental Management Act of 2011, and provide specifics
The Urban and Regional Planning Act of 2015 (repealed the Town and Country Planning Act of 1962 and the Housing Act of 1975)	Details the integrated planning of districts and regions and mandates local authorities to enforce building standards as set out by the planning departments of the Ministry of Local Government.
The Local Government Act No. 2 of 2019	To provide for an integrated local government system; give effect to the decentralisation of functions, responsibilities and services at all levels of local government; ensure democratic participation in, and control of, decision making by the people at the local level; revise the functions of local authorities, etc.
The Water Supply and Sanitation Policy Draft 2016	Though still in draft form, to further policy guidance in the WSS sub-sector.
The Urban and Regional Planning Act No. 3 of 2015	Repealed the Town and Country Planning Act of 1962 and the Housing Act 1975. Guides the town planning of local authorities.
National WSS Capacity Development Strategy (2015 to 2020)	Operationalises capacity development components of key sub-sector National Programmes (NUWSSP and NRWSSP).
National Urban and Peri-Urban Sanitation Strategy (2015 to 2030)	Covers pertinent topics including sanitation regulation, sanitation planning and service provision.
The National Development Programmes	The Seventh National Development Plan is an integrated (multi-sectoral) development approach under the theme "Accelerating development efforts towards the Vision 2030 without leaving anyone behind". The integrated approach recognises the multi-faceted and interlinked nature of sustainable development that calls for interventions to be tackled simultaneously through a coordinated approach to implementing development programmes.
The National Urban WSS Programme (2015 to 2030)	Provides Government guidance on long term planning and implementation of WSS sector activities, in alignment to National Development Programmes.
Regulatory Framework for Urban OSS Provision	To assist in creation of a regulatory framework for onsite sanitation and FSM that supports proper functioning of an integrated faecal sludge management system covering the whole sanitation chain. Regulation of service provision for onsite sanitation and FSM is aimed at ensuring that faecal matter generated on onsite facilities is effectively contained, collected, transported, treated and disposed/reused in a safe manner to protect public health and the environment.
The Vision 2030	Expresses the aspirations of the Zambian people to be accomplished by the year 2030. Articulates the appropriate national and sector goals to meet people's aspirations, based on policy oriented research on key national strategic issues and on a process of discussion and dialogue with the private sector, civil society and the general citizenry on the long-term goals and future of Zambia.


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Integrity
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Fighting corruption in water worldwide