


# RURAL WATER SUPPLY AND SANITATION

Framework for  
Provision and  
Regulation in Zambia







**Rural Water Supply  
and Sanitation:  
Framework for Provision  
and Regulation in Zambia**

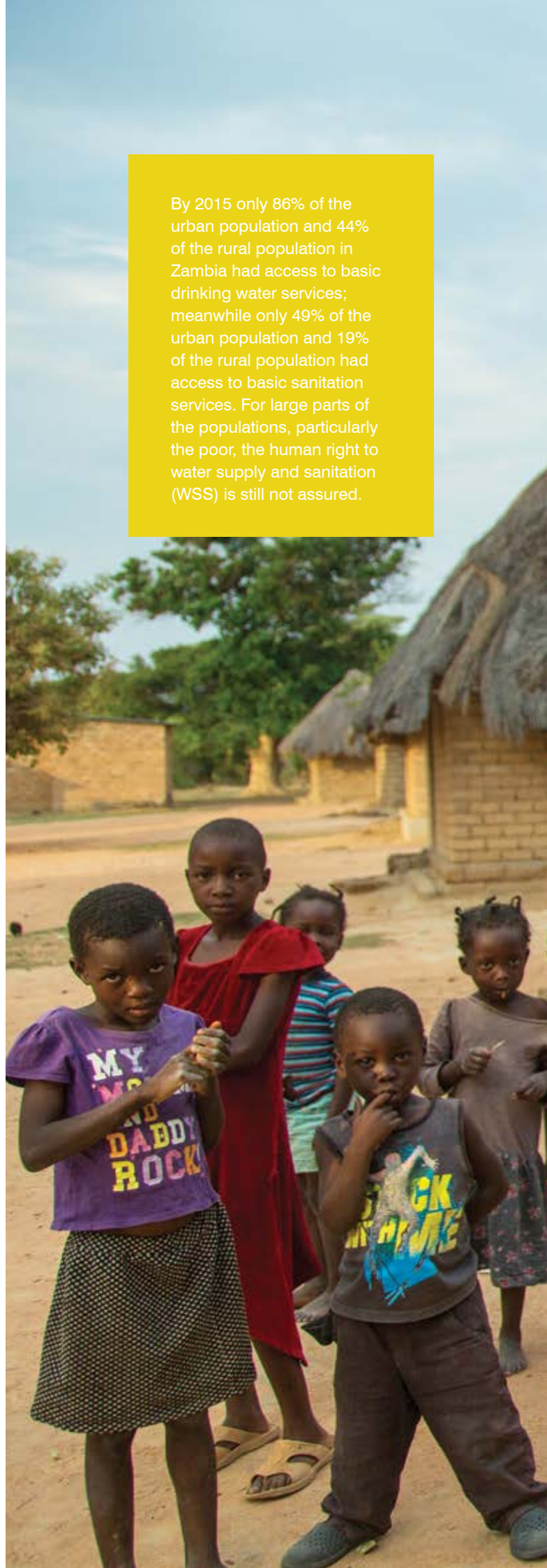
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By 2015 only 86% of the urban population and 44% of the rural population in Zambia had access to basic drinking water services; meanwhile only 49% of the urban population and 19% of the rural population had access to basic sanitation services. For large parts of the populations, particularly the poor, the human right to water supply and sanitation (WSS) is still not assured.











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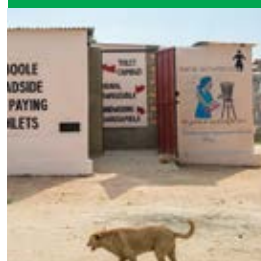
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## Abbreviations and Acronyms

CBO	Community-based organisation	NGO	Non-governmental organisation
CBU	Copperbelt University	NRWSSP	National Rural Water Supply and Sanitation Programme
CLTS	Community-led total sanitation	NWASCO	National Water and Sanitation Council
CU	Commercial utility	NIS	NWASCO Information System
DHID	Department for Housing and Infrastructure Development	NUSS	National Urban and Peri-Urban Sanitation Strategy
DHIS2	District Health Information System 2	O&M	Operation and maintenance
DPI	Department for Planning and Information	P-DHID	Provincial Department of Housing and Infrastructure Development
D-WASHE	District Water Sanitation Hygiene and Education Committee	RWSS	Rural water supply and sanitation
ECZ	Environmental Council of Zambia	RWSSU	Rural Water Supply and Sanitation Unit
FSM	Faecal sludge management	SDG	Sustainable Development Goal
GDC	German Development Cooperation	SI	Statutory Instrument
GIS	Geographical Information System	SOMAP	Sustainable Operations and Maintenance Project
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH	UNZA	University of Zambia
GRZ	Government of the Republic of Zambia	UWSS	Urban water supply and sanitation
KfW	Kreditanstalt für Wiederaufbau	V-WASHE	Village Water, Sanitation, Hygiene and Education Committee
LA	Local authority	WASAZA	Water and Sanitation Association of Zambia
LCC	Lusaka City Council	WASH-MIS	Water, Sanitation and Hygiene Management Information System
M&E	Monitoring and evaluation	WARMA	Water Resources Management Authority
MCA	Millennium Challenge Account	WSUP	Water and sanitation for the urban poor
MER	Monitoring, evaluation and reporting	WSS	Water supply and sanitation
MIS	Management Information System	ZABS	Zambia Bureau of Standards
MLG	Ministry of Local Government	ZAWAFE	Zambia Water Forum and Exhibition
MLGH	Ministry of Local Government and Housing	ZEMA	Zambia Environmental Management Authority
MoF	Ministry of Finance	ZMW	Zambian Kwacha
MoH	Ministry of Health		
MWDSEP	Ministry of Water Development, Sanitation and Environmental Protection		
NCC	National Council for Construction		

### List of Commercial Utilities (CUs)

ChWSC	Chambeshi Water and Sewerage Company
EWSC	Eastern Water and Sewerage Company
KWSC	Kafubu Water and Sewerage Company
LgWSC	Lukanga Water & Sewerage Company
LPWSC	Luapula Water and Sewerage Company
LWSC	Lusaka Water & Sewerage Company
MWSC	Mulonga Water and Sewerage Company
NWSC	Nkana Water & Sewerage Company
NWWSC	North Western Water and Sewerage Company
SWSC	Southern Water and Sewerage Company



## Foreword



As provided for under the Water Supply and Sanitation Act, No. 28 of 1997 (as amended by Act No. 10 of 2005), NWASCO has the mandate to:

- advise Government on water supply and sanitation matters,
- advise local authorities on commercially viable institutional arrangements for the provision of water supply and sanitation services,
- ensure that utilities and other service providers are licensed in order for them to undertake water supply and sanitation services,
- develop guidelines for the provision of water supply and sanitation services and for ensuring effective technical and financial management of the entities,
- establish and enforce standards for water supply and sanitation services.

The regulatory purview indicated above therefore calls for NWASCO to undertake continuous regulatory enhancement to respond to the changing environment.

Developing a framework for regulation of Rural Water Supply and Sanitation Services (RWSS) is one of the strategic considerations that NWASCO has embarked on with a view to ensuring sustainable provision of safe drinking water and sanitation in rural areas, including the promotion of safe hygiene practices, to protect the public and the environment.

This clearly aligns with NWASCO's vision which promotes 'Safe, affordable and sustainable water supply and sanitation services for all' and the Vision 2030 in which, among others, a firm commitment has been made by the Government to ensure universal coverage of water supply and sanitation, thereby improving the living conditions of its citizens through continuous improvement of WSS service delivery.

NWASCO has also taken cognisance of the concerns raised by various stakeholders with regard to inadequate regulatory framework for onsite sanitation and hence commenced the process of developing the necessary framework for regulating this important aspect. During the launch of the 2016 Urban and Peri-Urban Water Supply and Sanitation Sector Report on 12 April 2017, the Ministers in charge of Water Development, Sanitation and Environmental Protection (MWDESP) and Local Government (MLG) gave directives to ensure regulation of urban onsite sanitation, rural water supply and sanitation and solid waste management.

For ease of assessing progress, clear objectives have been set in the institution's 2016–2020 Strategic Plan. From the progress made to date, there is a clear demonstration and unwavering desire on the part of both the Council and Management to ensure that the two aspects highlighted are brought to fruition so as to augment the efforts that Government is making towards meeting the Vision 2030 goals.

It is worth emphasising that a true realisation of this framework calls for concerted efforts and collaboration between NWASCO and other stakeholders. In this regard, NWASCO has taken proactive measures to ensure that all critical stakeholders are consulted or rather taken on board in this process.

NWASCO carried out an assessment of the existing situation of water supply and sanitation service provision in rural areas with the aim to extend regulation to these areas. The assessment covered the status of reporting, and the actors in the rural WSS sub-sectors and their roles, plus gaps and challenges. The framework is a result of this assessment for which recommendations were developed. These recommendations were presented to all stakeholders in various forums for input and validation. Furthermore, the developed framework is aligned to the key activities of the National Urban and Peri-Urban Sanitation and Open Defecation Strategies.

The focus going forward is the implementation of recommendations contained in the framework for provision and regulation of rural water supply and sanitation services through cooperation and collaboration with all key stakeholders in the WSS sub-sector, especially the commercial utilities and local authorities.

We urge our readers to use the contents of this document to positively contribute to the sustainable provision of safe drinking water and sanitation, including hygiene promotion, to ensure improved living conditions for the populations living in rural areas.



*Kelvin Chitumbo*  
**Director-NWASCO**







## Acknowledgements

In developing the framework for provision and regulation of Rural Water Supply and Sanitation Services (RWSS), the National Water and Sanitation Council of Zambia (NWASCO) was mandated to facilitate and coordinate the consultative process under the Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP).

Being a process that required input from stakeholders, NWASCO wish to render its sincere gratitude to the Technical Committee comprising representatives from the Ministry of Water Development, Sanitation and Environmental Protection – Department of Water Supply and Sanitation (WSS), NWASCO, the Water Resources Management Authority (WARMA), the Zambia Environmental Management Agency (ZEMA), Lusaka City Council (LCC), Lusaka Water Sewerage Company (LWSC), UNICEF, GFA Consulting Group, and Water and Sanitation for the Urban Poor (WSUP) for the hard work and dedication that was invested in the development of this framework.

NWASCO also acknowledges the contributions received from various local and international stakeholders, Government Ministries, Provincial and Local Authorities, Commercial Utilities, Training Institutions, NGOs, Water and Sanitation Hygiene (WASH) Forum members, the Private Sector and members of the user communities. The contributions received have made and validated the process as an all-inclusive activity.

Particular thanks are also given to the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) who, in collaboration with the Government of the Republic of Zambia through the Ministry of Water Development, Sanitation and Environmental Protection, co-financed and supported the development of this framework.

Last but not least, sincere thanks go to all the other participants not specifically mentioned here, for the invaluable contributions that they made to this process.





The 2030 Agenda for Sustainable Development recognises the importance of safe drinking water, effective sanitation and good hygiene (WASH) as a driver of progress on many of the Sustainable Development Goals including health, nutrition, education and gender equality.







## 1. Introduction

### 1.1 The global situation<sup>1</sup>

No child should die or get sick as a result of drinking contaminated water, being exposed to other people's excreta, or having no place to wash their hands. No child should have to stay away from school for lack of a clean toilet and privacy. No mother or newborn should contract an infection from an unsanitary delivery room when they are most vulnerable. No one should suffer the indignity of having to defecate in the open.

But unfortunately, far too many children, women and men around the world experience some or all of these risks to their health and well-being and, thus, to their futures. That

is why the 2030 Agenda for Sustainable Development recognises safe drinking water, effective sanitation and good hygiene (WASH) both as an end in itself and as a driver of progress on many of the SDGs, including health, nutrition, education and gender equality. To meet these targets, we need a better understanding of the progress we have made and a strategic approach to meet the challenges that lie ahead in our shared effort to reach every community, every family, and every child.

According to the Joint Monitoring Programme for Water Supply and Sanitation report of 2017, the data highlights how far we have come since 2000. Open defecation rates have fallen and billions have gained access to basic water and sanitation services — both achievements translating into more

<sup>1</sup> Source: *Progress on Drinking Water, Sanitation and Hygiene, 2017 Update and SDG Baseline* by WHO and UNICEF.



children growing up free from disease and thus, better lives and brighter futures. Despite these successes, progress has been uneven in both areas, with wide disparities among and within countries. The report establishes the first ever national, regional and global baseline estimates for the new SDG indicators of “safely managed” drinking water and sanitation services — meaning drinking water at home that is free from contamination and available when needed, and toilets from which excreta are treated and disposed of safely. Additionally, the report provides global data on the percentage of people who have access to soap and water for handwashing.

Yet the data we have now are more than enough to show the tasks at hand: to eliminate open defecation for the nearly 900 million people who continue to lack even the most rudimentary sanitation; to bring basic water, sanitation and hygiene within the reach of the most disadvantaged; and to support progress for those who already have basic services, but still don’t have truly safe drinking water or adequate sanitation.

## 1.2 The national situation

Zambia is no exception to the need to accelerate the provision of adequate and safe water supply and sanitation. The country’s Vision 2030 states that universal coverage of both water supply and sanitation services should be achieved.

Despite Zambia’s low population density combined with relatively large water resources, the water sector still lags behind in national development goals and was not able to meet the Millennium Development Goals (MDGs). According to the JMP 2017 report, by 2015 only 86% of the urban population and 44% of the rural population in Zambia had access to basic drinking water services; meanwhile only 49% of the urban population and 19% of the rural population had access

to basic sanitation services. Thus, the human right to water supply and sanitation (WSS) is still not assured for large parts of the populations, particularly the poor. Continued efforts to improve the water sector are therefore required.

## 1.3 The reform

The water sector has been undergoing reforms since the early 1990s with the aim of improving access to WSS services and improving water resources management (WRM) through the National Water Policy of 1994. The WSS Act No. 28 of 1997 was passed as the enabling act for that policy. The 2010 National Water Policy focusing on WRM and the corresponding enabling act (the WRM Act No. 21 of 2011) have been established. The process of establishing the WSS policy and enabling act is underway.

The Water Policy of 1994 established the seven sector principles:

- **Principle 1:** Separation of water resources functions from water supply and sanitation
- **Principle 2:** Separation of the regulatory functions from executive functions within the water supply and sanitation sector
- **Principle 3:** Devolution of authority to local authorities and the private sector
- **Principle 4:** Achievement of full cost recovery for water supply and sanitation services through user charges in the long run
- **Principle 5:** Human resource development leading to more effective institutions
- **Principle 6:** Technology appropriate to local conditions
- **Principle 7:** Increased GRZ spending priority and budget spending to the sector



The first four are the major principles of the 1994 Policy and have largely been achieved, according to the review process conducted during the preparation of the 2010 Water Policy. Principles 5 and 6 are targeted in the Rural Water Supply (RWS) Programme covering both WRM and WSS.

Under the RWS programme for WSS, the guiding framework for urban water supply and sanitation (UWSS) is the National UWSS Programme (NUWSSP) 2011–2030 and for rural water supply and sanitation (RWSS), it is the National RWSS Programme (NRWSSP) 2006–2015. The new NRWSSP 2016–2030 is in development. Under these national guiding frameworks, three strategies for UWSS have been developed — the National Water Supply and Sanitation Capacity Development Strategy, the National Urban and Peri-Urban

Sanitation Strategy and the Open Defecation Free (ODF) Zambia Strategy.

#### 1.4 The rationale

The provision of water supply and sanitation services to the rural areas of Zambia has remained a responsibility of local authorities (LAs) after successful commercialisation of the provision of urban WSS services, under the guidance of the NRWSSP (2006–2015). NRWSSP II is currently being developed. Several approaches and standards such as the Sustainable Operations and Maintenance Project (SOMAP) for water point O&M and Community-Led Total Sanitation (CLTS) for onsite sanitation provision, as well as the Water, Sanitation and Hygiene Management Information System (WASH-MIS) for water point onsite facility monitoring using the







District Health Information System 2 (DHIS2) platform, have been established under MWDSEP.

The sustainability of these measures and ensuring adherence to standards in WSS is still needed through regulation. Based on the current situation, regulation will include:

- Water quality monitoring — condition of water supply is not assured
- Monitoring and reporting — reporting on coverage not consistent compared to urban WSS
- Operation and maintenance — availability of WSS facilities not assured
- Adherence to standards — no enforcement of standards
- Sustainability — long-term sustainability of WSS interventions may be at risk

### 1.5 The objective

The objective of this publication is to assist in the creation of a regulatory framework for rural water supply and sanitation service provision that supports sustainability of services in rural areas. The regulation of service provision for rural WSS will ensure that an adequate and affordable water supply of good quality, as well as safe sanitation, is accessible to the population of Zambia.

### 1.6 Basis for formulation of regulation framework

The main basis for formulation of the regulation for rural water supply and sanitation are:

- The Vision 2030
- The Water Policy 2010
- The Water Supply and Sanitation Policy Draft 2016
- The Water Supply and Sanitation Act No. 28 of 1997
- The National Development Plan (7th to be released)

- The National Rural Water Supply and Sanitation Programme (2005 to 2016)
- The National Water Supply and Sanitation Capacity Development Strategy (2015 to 2020)
- The National Urban and Peri-Urban Sanitation Strategy (2015 to 2030)
- The ODF Zambia Strategy (2016 to 2020)
- The NWASCO Strategic Plan (2016 to 2020)

### 1.7 Process of formulation of the framework

The formulation involved a detailed assessment of the current situation and development trends regarding rural water supply and sanitation in Zambia via:

- Review of reports in the water sector compiled in recent years
- Study and review of policies, laws, national programmes and strategies
- Considerations of the NWASCO strategic plan
- Consideration of various CU strategic plans
- Consideration of LA plans and operations
- Consultations with NWASCO and MWDSEP
- Consultation and obtaining stakeholder input into the framework through the NWASCO Technical Committee comprising representatives from MWDSEP, WARMA, ZEMA, LCC, WSUP, GIZ, NWASCO, GFA Consulting Group, etc. meeting regularly
- Holding a wider stakeholder workshop, from 28 February to 1 March 2017, to consult on the framework. The stakeholders included MWDSEP, MLG, MoH, MWDSEP, MOGE/UNICEF, MCA-Zambia, USAID Zambia, NWASCO, WARMA, ZEMA, UNZA, CBU, WASAZA, LAs (LCC, Chipata City Council), CUs (ChWSC, EWSC, KWSC, LgWSC,

LWSC, MWSC, NWSC, NWWSC, SWSC), NGOs (WSUP, WaterAid, CARE International, Toilet Yanga, etc.), private sector (Geochi Services Ltd, NECOS, etc.), COWI and other stakeholders.<sup>2</sup>

- Further consultation during the Local Government Association (LGA) Annual Conference in Livingstone, 24 to 28 April 2017, for all LAs in Zambia
- Presentation to the ZAWAFE Conference on 12 June 2017

### 1.8 Government commitment and support

The Government of the Republic of Zambia is committed to improving the living conditions of its citizens through continuous improvement of WSS service delivery as contained in the Vision 2030 for universal coverage of water supply and sanitation. During the launch of the 2016 Urban and Peri-Urban Water Supply and Sanitation Sector Report on 12 April 2017, directives to improve WSS service delivery were given by the ministers of Water Development, Sanitation and Environmental Protection (MWDESP) and Local Government (MLG).

“As you are aware, provision of sanitation services and regulation of onsite sanitation continue to lag behind, particularly in rural and peri-urban areas. I am therefore directing NWASCO to ensure that regulation for onsite sanitation and rural water supply is enforced”


*MWDESP, Hon. Lloyd Kaziya (MP)*

“You may be aware that the solid waste management function still remains the mandate of the MLG. However, my ministry will still depend on ZEMA and NWASCO to regulate the sector. I therefore call upon NWASCO to develop strategies for regulating the business side of solid waste management”

*MLG, Hon. Vincent Mwale (MP)*

<sup>2</sup> For abbreviations and acronyms used here, please refer to the list at the front of this book



A large, leafy tree dominates the center of the image, its branches spreading wide. Underneath the tree, a group of people, including men, women, and children, are gathered. Some are sitting on the ground, while others stand. There are various items on the ground, including baskets and containers, suggesting a market or a community gathering. In the background, there are more trees and a clear blue sky with some clouds. The overall scene is rural and peaceful.

While the policies, laws, national plans, programmes and strategies are essentially in place, there is a gap in water supply and sanitation coverage because rural WSS is currently not regulated by NWASCO.





## 2. Situation Analysis

### 2.1 Regulations governing rural water supply and sanitation provision

The regulations governing provision of rural water supply and sanitation services are:

- The Environmental Management Act No. 12 of 2011: *For protection of the environment.*
- The Statutory Instrument No. 112 of 2013, of EM Act No. 12 of 2011, The Environmental Management (Licensing) Regulations of 2013: *Sets limits and standards for environmental protection.*
- The Public Health Act Chapter 295, Volume 17 of the Laws of Zambia: *Mandates local authorities to enforce public health protection.*
- The Water Supply and Sanitation Act No. 28 of 1997: *Mandates NWASCO to regulate water supply and sanitation provision in urban, peri-urban and rural areas.*
- The Statutory Instrument No. 63 of 2000, The Water Supply and Sanitation (Licensing of Utilities and Service Providers) Regulations, 2000: *Details procedures for licensing of service providers.*
- The Urban and Regional Planning Act of 2015 (repealed the Town and Country Planning Act of 1962 and the Housing Act 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.*
- Local Government Chapter 281, Volume 16 of the Laws of Zambia: *Mandates local*



*authorities for provision of water supply and sanitation services in the respective districts.*

- Statutory Instrument No. 100 of 2011: *Provides for local authorities to undertake activities related to solid waste management.*

## 2.2 Policy developments in the water sector

The 2016 Draft Water, Sanitation and Solid Waste Management Policy defines sanitation as:

- safe collection
- transportation
- treatment and disposal or reuse of human excreta, domestic liquid waste, industrial effluents and municipal solid waste

One measure is to develop strategies, standards and guidelines for:

- service delivery of WSS services
- regulation of WSS services

Targeting (including non-piped WSS):

- urban and peri-urban WSS service provision
- rural WSS service provision
- schools and other public institutions and places (urban, peri-urban and rural areas)

## 2.3 NWASCO's mandate

Excerpts from Section 4 WSS Act No. 28 of 1997, the mandate for NWASCO to regulate water supply and sanitation services are:

**Section 4 (d)** – Develop sector guidelines for:

- the provision of water supply and sanitation services
- the establishment of water supply and sanitation utilities
- the technical and financial management of utilities

- the setting of tariffs for the provision of water supply and sanitation services

**Section 4 (e)** – Establish and enforce standards for:

- water supply or sanitation services
- the management of utilities and other service providers
- the design, construction, operation and maintenance of water supply and sanitation facilities

NWASCO initiates the process for development of standards as per the water supply and sanitation sub-sector requirements with the Zambia Bureau of Standards (ZABS) and/or the Zambia Environmental Management Authority (ZEMA), and

- ZABS develops design and construction standards related to WSS facilities such as water consumption design figures, etc.
- ZEMA develops environment protection standards related to WSS facilities such as limits for effluent and faecal sludge.

## 2.4 NWASCO initiatives in regulation of WSS services

NWASCO's vision is 'Safe, affordable and sustainable water supply and sanitation services for all'. As a regulator, to achieve the vision entails ensuring that licensed service providers deliver good quality water supply and sanitation services at affordable cost to their customers while operating efficiently and sustainably. This cannot be fully achieved without the regulator itself undertaking continuous regulatory enhancement that will respond to the changing environment. NWASCO's fourth strategic plan for the period 2016 to 2020 is thus anchored in this commitment. Through a consultative process, various concerns from stakeholders were also considered. Paramount among the concerns raised was the call for regulation of onsite sanitation and rural water supply and





sanitation. NWASCO has placed emphasis on these areas while being mindful of the need for a stepwise approach, matching the capacity of the sector institutions involved. Improving regulation of onsite sanitation and rural water supply and sanitation will be the next milestone for the sector, raising the need for enhanced coordination and collaboration among various players. NWASCO's core responsibilities are to:

1. license water supply and sanitation providers,
2. establish and enforce sector standards and guidelines,
3. advise providers on procedures for handling complaints from consumers,
4. disseminate information to consumers and the public on water supply and sanitation issues, and
5. advise the government on water supply and sanitation matters.

In its strategic plan, NWASCO has outlined clear objectives and activities to enhance the regulatory framework by developing new regulatory tools, improving regulation of sanitation service provision, enhancing stakeholder engagement for enforcement and ensuring efficiency and financial viability of commercial utilities that are clearly linked to onsite sanitation and rural water supply and sanitation.

Specifically, the NWASCO 2016–2020 Strategic Objective 1 states: To Undertake Continuous Regulatory Enhancement:

- Goal 1: Develop New Regulatory Tools, Priority Area 1.4 – Develop and implement a regulation strategy for Rural Water Supply and Sanitation (RWSS)
- Goal 2: Improve Regulation of Sanitation/Wastewater



The NWASCO strategic plan activities are presented in Table 1 below.

**Table 1: NWASCO strategic plan activities**

No.	Activity	Timeframe	Budget in ZMW
1	Undertake study of new areas for development of regulations, standards, guidelines	2017 – 2019	140,000
2	Develop identified regulations, standards and/or guidelines	2018 – 2020	130,000
3	Develop regulations / standards for “other service providers”	2017 – 2018	100,000
4	Implement limited regulation for “other service providers”	2019 – 2020	100,000
5	Develop RWSS regulation strategy	2016	300,000
6	Implement RWSS regulation strategy	2017 – 2020	400,000
7	Develop / incorporate new indicators for reporting	2016 – 2020	n/a
8	Undertake study to explore various forms of sanitation regulation	2016	120,000
9	Establish baseline for the status of sanitation service delivery	2016 - 2018	1,050,000
10	Develop guideline for separation of costs related to sewerage and water services	2017	200,000
11	Develop pricing strategy for sanitation	2018 – 2020	80,000
12	Increase the number of CUs with sanitation surcharge	2016 – 2020	n/a
13	Hold meetings with other local regulators	2016 – 2020	75,000
14	Engage stakeholders in town planning to ensure WSS service delivery is a prerequisite to area development	2016 – 2020	100,000
15	Develop systems to ensure progressive cost coverage towards set targets for financial viability	2017 – 2020	n/a
16	Ensure an increase in the number of household sewerage connections	2016 – 2019	n/a
17	Facilitate strategic partnerships between “other service providers” and CUs to increase the number of people accessing water supply and sanitation services	2016 – 2020	n/a
18	Establish capacity requirements for NWASCO to regulate rural and onsite sanitation	2017	200,000
19	Identify regulatory areas for training e.g. sanitation, rural	2017 - 2020	275,000
20	Increase revenue sources through licensing (for other service providers serving populations less than CUs but more than 500) and rural regulation	2018 – 2020	n/a



To support NWASCO in taking consecutive steps, a gap analysis was carried out to provide an overview on existing and possibly missing regulatory tools to be reviewed or developed to extend regulation to rural water supply and sanitation service provision. Annex 2 provides an overview of the main findings and recommendations, allowing NWASCO to decide on its priorities and the way forward.

## 2.5 Current scenario and challenges

### Current scenario

- Rural Unit monitors rural WSS (functional and non-functional points) using WASH-MIS on the DHIS2 platform
- An M&E system is being developed to cover water supply and sanitation, including harmonisation of indicators

### Current challenges

- Upscaling of DHIS2 to cover all districts
- At sub-district level, LAs rely on other institutions and volunteers for coordination of interventions, data collection, maintenance and monitoring
- Community contributions for O&M within the community threshold
- Inadequate water quality monitoring
- Inadequate enforcement of water and sanitation standards
- Sustainability challenges
- Uncoordinated interventions
- Behavioural and/or change processes influence the sustainability of interventions
- Climate change and poor agricultural practices

## 2.6 Existing setup for provision of RWSS

Figure 1 shows the existing setup for provision of rural water supply and sanitation.

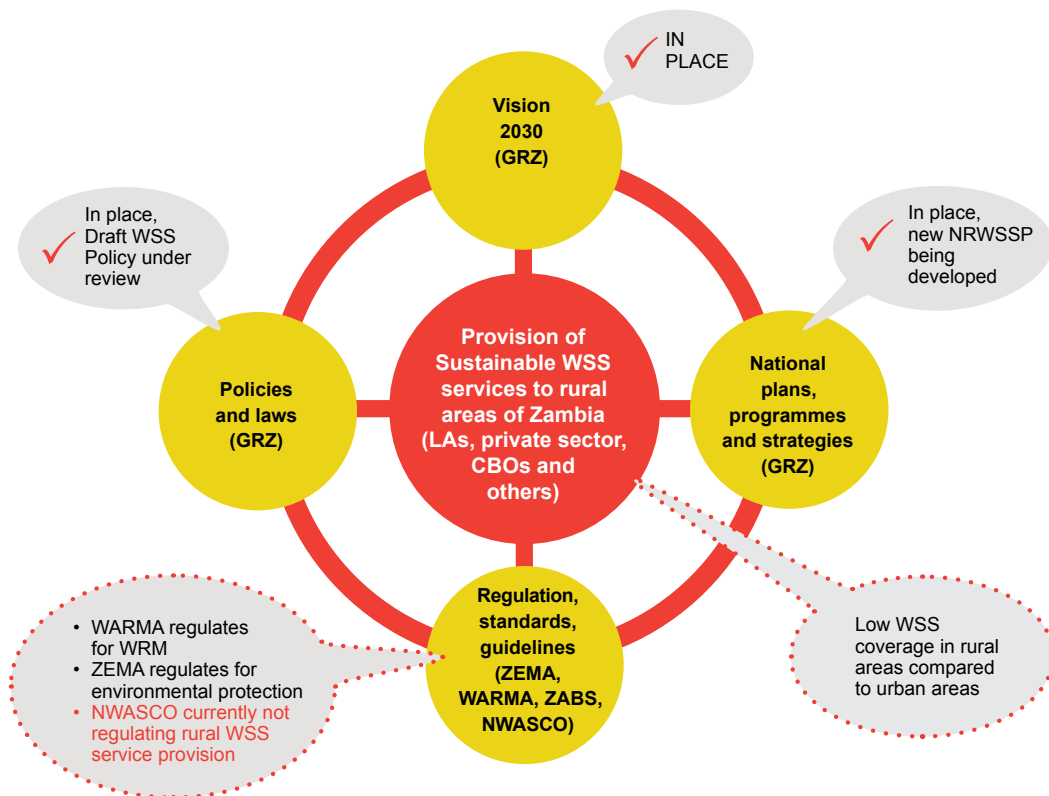


Figure 1: Existing setup for the provision of rural water supply and sanitation services

The vision, the policies and laws, the national plans, programmes and strategies are essentially in place. However, there is a gap, as currently rural water supply and sanitation are not regulated by NWASCO.

### 2.7 Existing setup for monitoring of RWSS

Figure 2 shows the existing setup for provision of rural water supply and sanitation services. Local authorities' provision of services is categorised as follows:

#### Water supply

- Piped water schemes with community/private management
- Water points managed using SOMAP

#### Sanitation

- Offsite sanitation which can be managed by a community/private with proper arrangements

- Onsite sanitation as per ODF strategy using CLTS approach

MWDSEP has in place a Water, Sanitation and Health Management Information System (WASH-MIS) for monitoring of rural WSS points using the District Health Information System 2 (DHIS2) platform. The DHIS2 has been developed for onsite sanitation in a total of 58 districts, of which 53 are supported by UNICEF, four by SNV and one by Plan International. Through the basket fund for rural areas under the support of KfW in five provinces comprising Central, Northwestern, Lusaka, Southern and Eastern, data collection using AKRO Flow is being done, which is then to be integrated into the DHIS2 system. The WASH-MIS system is being developed and is to be upscaled to cover the whole country.

There is no regulation to enforce standards in rural water supply and sanitation and, as can be seen from Figure 2, NWASCO does not have access to information systems.

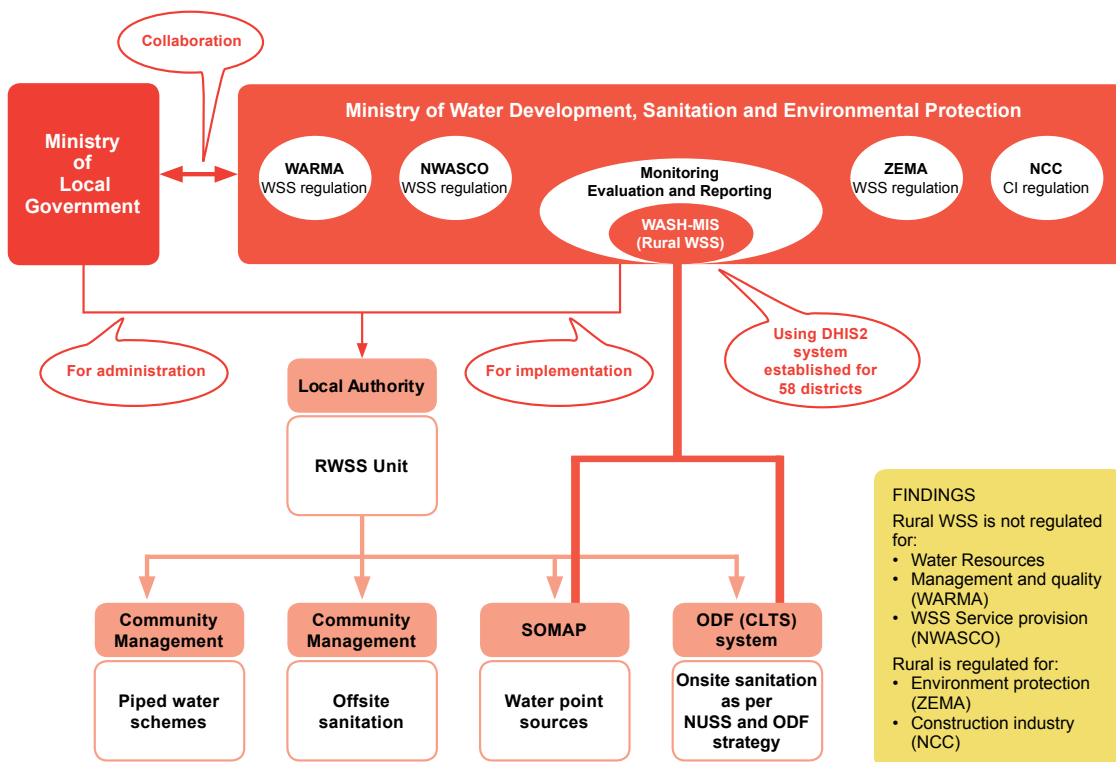


Figure 2: Existing organisational setup for provision of rural WSS services





## 3. Approach for Provision and Regulation

### 3.1 Preferred future with sustainable WSS provision to rural areas

- Increased coverage for quality rural WSS – in line with Vision 2030
- Reliable data on status of services
- Promotion of piped systems based on population clusters
- Improved integrity of water quality

- Sustainable, coordinated and efficient service delivery
- Compliance to standards

### 3.2 Preferred setup for sustainable rural WSS

The preferred setup for provision of WSS services is shown in Figure 3.

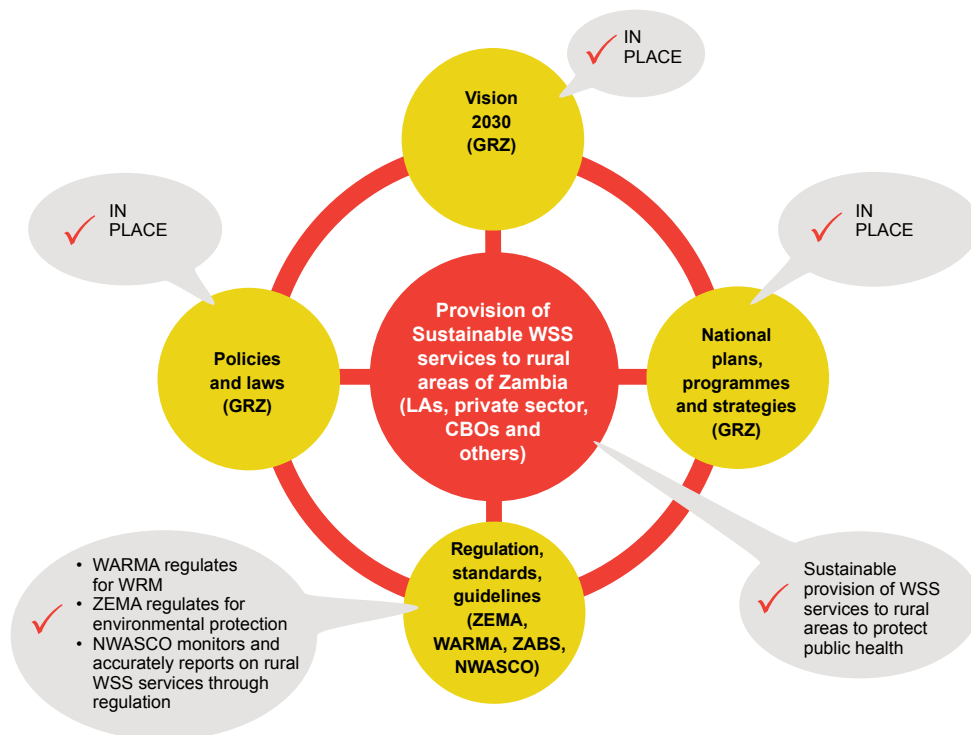


Figure 3: Preferred setup of provision of rural water supply and sanitation services

### 3.3 Categorisation of areas and new service provision and licensing arrangements

#### 3.3.1 Categorisation of service areas

The current trend is that more piped water supply schemes are being planned and constructed as growth centres emerge. Figure 4 shows the categorisation of areas.

Figure 4 shows that:

- A district contains urban, peri-urban and rural areas.
- Urban areas are the developed part of a district; the district administration is located within.
- Peri-urban areas are unplanned settlements within urban areas and these are densely populated with lower service levels than urban areas.

- Growth centres are developing zones within the rural areas of a particular district, which may eventually turn into a separate district. These are characterised by a relatively concentrated population and piped water supply provision is targeted.
- Within rural areas, there are sparsely located institutions such as schools, clinics, etc.

#### 3.3.2 New service provision and licensing arrangements

The operating service licence from NWASCO shall be issued to a commercial utility (CU) to cover the entire district. Other WSS service providers shall be issued with NWASCO permits. Table 2 shows the new service provision and licensing arrangements.

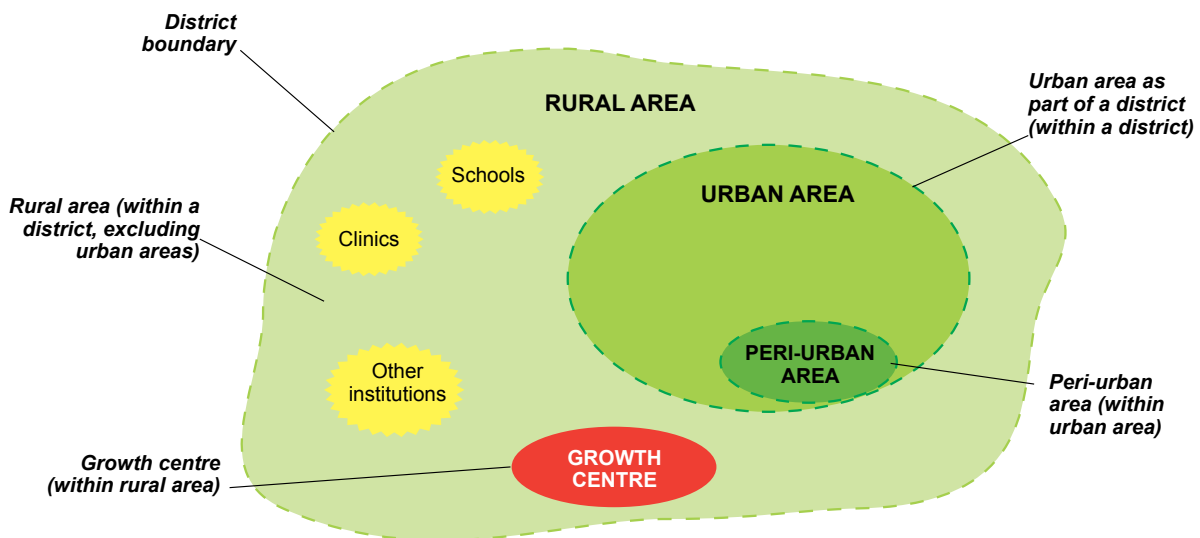


Figure 4: Categorisation of areas



**Table 2: The new service provision and licensing arrangements for water supply and sanitation**

Area	Water supply technology mainly used	Sanitation technology used	Service provision responsibility	Licensing arrangements for service provision
<b>Urban</b>	Conventional water supply systems with individual connections, standpipes and kiosks, etc.	Conventional sewer systems or FSM with onsite san. (septic tanks, pit latrines, etc.)	CU	Overall NWASCO licence for the whole district. SLA/SLG* cover all urban areas
<b>Peri-urban</b>	Piped water supply schemes with mainly standpipes, kiosks and few individual connections	FSM with onsite sanitation, mainly pit latrines, septic tanks, DEWATS*	CU	Overall NWASCO licence for the whole district. SLA/SLG cover all peri-urban areas
			Delegated management to community or private sector, e.g. water trusts	Through CU licence using a management contract that includes SLA/SLG for peri-urban areas as licensed to a CU
<b>Rural growth centres</b>	Targeted for piped water supply schemes with mainly standpipes, kiosks and few individual connections. Moves from water point supply	FSM with onsite sanitation, mainly pit latrines, septic tanks, DEWATS	CU	Overall NWASCO licence for the whole district. SLA/SLG cover growth centres taken up by CUs
			Local Authority (LA) Not yet taken up by CUs	NWASCO permit with specific conditions for piped schemes <ul style="list-style-type: none"> <li>• MoU between LA and CU</li> <li>• MoU between CU and community</li> <li>• MoU between LA and community</li> </ul>
<b>Rural institutions (public or private e.g. schools, clinics)</b>	Piped water supply schemes with mainly standpipes. May have kiosks and few individual connections	FSM with onsite sanitation, mainly pit latrines, septic tanks, DEWATS	Respective institution (school, clinic/ health centre, depot)	NWASCO permit with specific conditions for specific type of institution
<b>Rural settlements (sparsely populated)</b>	Water point supply consisting mainly of boreholes and protected shallow wells fitted with hand pumps	Mainly pit latrines, with some septic tanks	Local Authority (LA)	NWASCO permit with specific conditions for point sources. Strategies and guidelines, e.g. NUSS, ODF Strategy,* SOMAP*

\* SLA = Service Level Agreement, SLG = Service Level Guarantee, DEWAT = Decentralised Wastewater Treatment System, ODF = open defecation free, SOMAP = Sustainable Operations and Maintenance Project



### 3.3.3 Regulation arrangements for rural water supply and sanitation

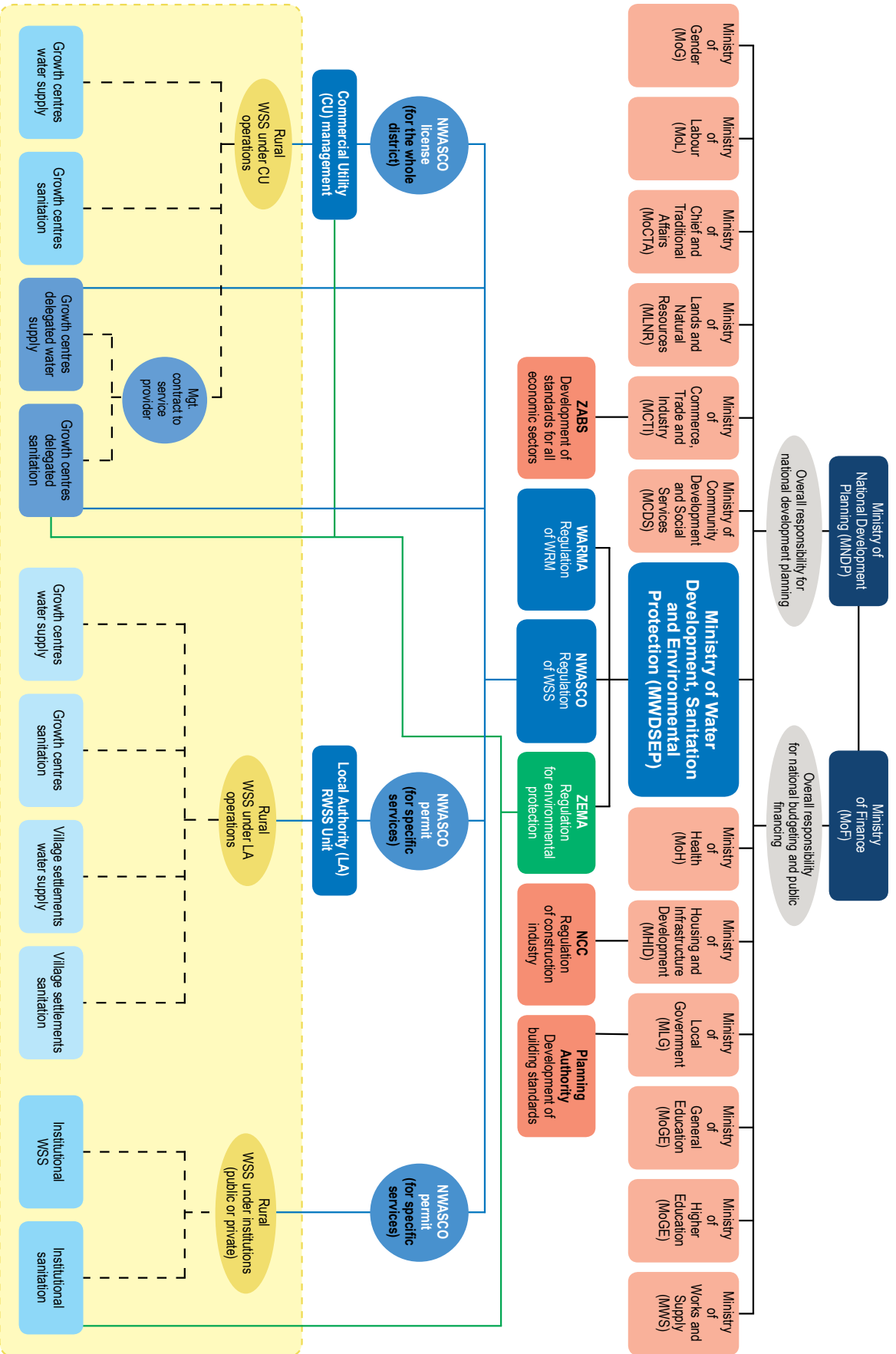
The proposed regulations are explained in Table 3 below and in Figure 5.

**Table 3: Regulation arrangements**

Category	Regulation arrangements	Comment
<b>Piped water schemes</b>	Piped water schemes should progressively be taken over by CU as practised by NWASCO when new districts are formed. (Mwandi, Shang’ombo were put under CU licences.) Management may continue under LAs if putting them under CUs would compromise CU performance. A piped scheme assessed to be able to meet its O&M cost may be put under a CU. A regulation to trigger this arrangement should be provided for by the regulator.	Appropriate regulatory tools such as guidelines would need to be developed  <i>Details of recommendations are in Annex 1</i>
<b>Water point schemes</b>	The guiding principles are availability/access to water, water quality and affordability. The regulator shall achieve regulation by publishing performance of LAs in managing water point sources in their annual reports, covering: <ul style="list-style-type: none"> <li>• access to water supply (coverage and distance)</li> <li>• quality of water supplied</li> <li>• affordability</li> </ul> This shall include monitoring of implementation of SOMAP	In order to publish performance of rural water supply points, NWASCO shall need a properly managed and functioning information system, similar to the NWASCO Information System (NIS)  Monitoring adherence to standards  <i>Details of recommendations are in Annex 1</i>
<b>Onsite sanitation</b>	Monitor implementation of the NUSS and ODF Zambia strategy. CLTS approach is used.	Monitor LAs in applying standards and guidelines. These could be through the WASH-MIS system and management checklist  <i>Details of recommendations are in Annex 1</i>
<b>Offsite sanitation</b>	These shall be treated in a similar manner to growth centres (earlier in table 2). For specific situations such as privately operated schemes, specific licensing shall be done, as in private water schemes already reported by NWASCO.	Appropriate regulatory tools such as guidelines would need to be developed



Figure 5: Recommended organisational arrangements for regulation of rural water supply and sanitation services





### 3.3.4 The recommended organisational arrangements for regulation of rural WSS

The recommended organisational arrangements for regulation of rural WSS service provision are depicted in figure 5. Detailed information can be found in Annex 1 (organisation arrangements) and Annex 2 (regulation flow chart).

The Rural WSS schemes taken over by CUs would continue to be regulated using existing regulatory tools for service provision (i.e. Mwandia, Shang'ombo and others which were put under CU licenses in Southern and Western provinces). When growth centres within CU-licensed areas are managed by the private sector or by delegated management arrangements, the operator shall have a NWASCO permit and a management contract signed between a responsible CU and the operator, meeting performance and service level guarantees as set by the regulator.

Instances where piped water/offsite sanitation schemes are still under LAs, there shall be an MoU between the CU and that particular

LA, and between the CU and the community/private operator, as planned in Luapula Province. This to ensure the community scheme has support from a CU for major maintenance works. NWASCO shall regulate LAs for these piped water schemes not yet taken over by CUs using specific regulations developed to ensure sustainable delivery of adequate affordable safe water supply and sanitation services.

For RWSS points, NWASCO shall also regulate LAs using specific regulation instruments to ensure the provision of adequate affordable safe water supply and sanitation services. For sub-district level activities, including key community activities for operation and maintenance of WSS facilities, there shall be measures and tools to ensure that the LAs are supporting their sustainability.

The details for the regulation of these above scenarios are illustrated in the next chapter.





## 4. Framework for Rural Water Supply and Sanitation Provision and Regulation

### 4.1 The provision and regulatory framework for RWSS

The regulatory framework for rural water supply and sanitation is depicted in Table 4 below. Details on the recommended actions can be found in Annex 3.

**Table 4: Framework for provision and regulation of rural water supply and sanitation services**

No.	Responsible institution	Element of regulation	Purpose	Agreed action required
<b>Provision (institutional arrangements)</b>				
1	<b>Water sector institutions</b>	Institutional arrangements	To clearly show roles and responsibilities and ensure effective coordination according to mandates	Amendments to institutional arrangements: <ol style="list-style-type: none"> <li>1. CUs shall have overall responsibility for WSS service provision in the entire district and shall be specifically responsible for WSS service provision to cover               <ul style="list-style-type: none"> <li>• urban areas</li> <li>• peri-urban areas</li> <li>• growth centres with piped systems taken up</li> </ul> </li> <li>2. LAs shall have specific responsibility for WSS services in rural settlements for WSS points. LAs shall also continue to be responsible for piped systems not yet taken up by CUs and be supported by CUs through MoUs. Rural WSS piped schemes may be provided through community-based organisations (CBOs)</li> </ol>



No.	Responsible institution	Element of regulation	Purpose	Agreed action required
				<p>3. Most rural CBOs are not registered and these need to be formalised. Water trusts can be considered as a form of a CBO</p> <p>4. Independent providers or private operators may also provide WSS in urban and rural areas. These will have to obtain a NWASCO permit</p> <p>5. Institutions, public or private, within their premises shall obtain NWASCO permits to operate WSS facilities</p>
<b>Licenses and permits</b>				
1	<b>NWASCO</b>	Service Provision License	Stipulates conditions under which the service provider will operate, as well as the delineation of the operating area	Amend licence given to CUs to cover the whole district, and LAs and other service providers should be given permits within the licence area
2		Service Provision Permit	Stipulates conditions under which the other service providers (other than the one holding a license) will operate	A NWASCO permit allows a legal entity to provide WSS
3	<b>ZEMA</b>	Permit to discharge effluent into sewerage system	Controls owners or operators of a trade or industrial undertaking wishing to discharge effluent from their plant into an existing sewerage system	None
4	<b>LA</b>	Permit to discharge effluent into sewerage system	Controls owners or operators of a trade or industrial undertaking wishing to discharge effluent from their plant into an existing sewerage system	Amendment to the LGA Act and Trade Effluent Regulations to enable NWASCO to enforce regulations whilst CUs monitor. Enforcement is to be done in collaboration with LAs
<b>Regulations</b>				
1	<b>ZEMA, LAs, CUs</b>	Registration and inspection regulations for septic tanks <i>(New)</i>	In general, all onsite septic tank systems or domestic wastewater treatment systems (DWWTS) will have to be registered	Development to cover all the country, including rural areas
2	<b>MWDSEP</b>	SI: Regulations governing O&M of onsite sanitation facilities <i>(New)</i>	Establishes regulations for O&M of onsite sanitation facilities and/or domestic wastewater treatment systems and/or onsite sanitation facilities Defines desludging /emptying requirements Defines registration and monitoring requirements	Development to cover all the country, including rural areas
3		SI: Waste Management (Use of sewage and FS in agriculture) Regulations <i>(New)</i>	Defines standards for the use or disposal of sewage and faecal sludge Establishes the general requirements, pollutant limits, operational standards, and management practices, as well as frequency of monitoring, recordkeeping, and reporting requirements	Development to cover all the country, including rural areas



No.	Responsible institution	Element of regulation	Purpose	Agreed action required
<b>By-laws</b>				
	MLG/ LAs	By-laws	In Zambia local laws established by local authorities to be applied within their jurisdiction are referred to as by-laws because their scope is regulated by central government; by-laws facilitate implementation of service delivery activities	Develop new by-laws for enforcement to cover all districts, including growth centres such as for onsite sanitation
<b>Monitoring and performance reporting</b>				
1	NWASCO	Annual Sector Report	In line with its mandate to inform the public on WSS issues, NWASCO publishes an annual sector report on the performance and status of the sector	Update annual sector reporting to include rural WSS
<b>Service level agreements and guarantees</b>				
2	NWASCO	Programme to reach the required minimum service level standards	The licensed service provider undertakes to achieve defined levels of service to its customers in a specified timeframe as agreed with NWASCO	Revise programme to reach the required minimum service level standards for rural WSS
3		Service Level Agreement	The regulator and the provider will agree on a stepwise progress towards the required minimum service level by signing every three years (adjusted) service level agreements based on a relevant programme  CUs should propose service level agreements that include clear proposals on how they intend to manage piped water schemes. Care should be taken to ensure that when the CU takes up water schemes its performance is not negatively affected, leading to deteriorated service provision in their operational areas	<ul style="list-style-type: none"> <li>Amend service level agreement with CUs for piped schemes taken up by CUs</li> <li>Amend service level agreement with LAs for <ul style="list-style-type: none"> <li>pipeds schemes under LAs</li> <li>point sources managed by LAs</li> </ul> </li> </ul>
4		Service Level Guarantee <i>(Service Charter)</i>	Every licensed service provider must prepare and submit a service level guarantee defining in a detailed way the service level they intend to offer their customers for a period of 3 years (with reference to piped water schemes)	Amend service level guarantee (service charter)  This should include both the water supply and sanitation
<b>Standards</b>				
1	ZEMA	ZS 323: 2007 Effluent Discharged into Inland Surface Waters General Limits	Lays down the tolerance limits for effluents discharged into inland surface waters	Amendment to include discharge into soils, in urban, peri-urban and rural areas. This is urgently required to facilitate setting standards for DEWATS and septic tanks.
2		Standards for treatment, discharge and reuse of faecal sludge <i>(New)</i>	ZEMA has the mandate to develop standards and guidelines relating to the protection of air, water, land and other natural resources and the prevention and control of pollution, the discharge of waste and the control of toxic substances	Develop new standards for sludge categorised for disposal, agricultural, energy, recovery etc.



No.	Responsible institution	Element of regulation	Purpose	Agreed action required
3	MLG/ Department of Physical Planning	Standards for onsite sanitation facilities  (New)	Defines design criteria and specifications for household sanitation facilities	MLG to work with NWASCO for regulations  LCC reported to have initiated development of by-laws for onsite sanitation
			Provides technical drawings, specifications and BoQs for household sanitation facilities	
			Establishes building codes	
<b>Code of practice</b>				
1	NWASCO/ ZEMA/ ZABS/ MWDSEP	Code of Practice: Onsite Sanitation Systems  (New)	This code of practice could provide guidance on the design, operation and maintenance of onsite sanitation/ wastewater treatment systems for single houses	Develop code of practice for onsite sanitation that covers the whole country, including growth centres
<b>Building codes</b>				
1	MLG/ Department of Physical Planning	Building codes	A building code (or building regulations) specifies the standards for constructed objects such as buildings and non-building structures. The main purpose of building codes is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures	Revision, to cover all the country, including growth centres
<b>WSS guidelines</b>				
1	NWASCO	Data Management Guideline  (New)	Guides service providers on data management in terms of generation and record keeping	Develop new guideline for data management
2		Minimum Service Level Guidelines	Minimum service level stipulates an acceptable minimum level of service that providers must achieve within a defined timeframe	Update minimum service level guidelines to include rural WSS
3		Annual Reporting Guidelines	Ensures that licensed water and sanitation service providers submit a standardised annual report to NWASCO (financial and technical report) allowing NWASCO to prepare its annual sector report to fulfil their reporting obligations	Update annual reporting guidelines to include rural WSS
4		Accounting Guidelines	Assists licensed water and sanitation service providers to periodically deliver reliable and relevant accounting information	Review accounting guidelines for piped water schemes and review and adopt SOMAP approaches
5		Water Quality and Effluent Monitoring Guidelines	Ensure through regular monitoring that the quality standards set by the ZABS are being complied with and that the customers can have confidence that the water they consume is potable and that the wastewater and the faecal sludge they produce is treated and disposed of safely	Develop new water quality monitoring guidelines for rural WSS

No.	Responsible institution	Element of regulation	Purpose	Agreed action required
			Ensure that all licensed water and sanitation service providers follow a systematic way of water quality, effluent and sludge disposal/reuse monitoring so as to have uniformity of the process (ZEMA standards)	
			Ensure that providers conduct risk assessments at all stages of water quality monitoring through water safety planning. Collaborate with MoH, WARMA and ZEMA. To cover issues of climate change and poor agricultural practices.	
6		Investment Planning Guideline	Specifies the basic elements of investment planning	Update investment planning guidelines to consider rural areas
7	<b>MWDSEP</b>	ODF Guidelines	To guide implementation of community approaches. For example, CLTS covering: <ul style="list-style-type: none"> <li>• community-based sanitation and hygiene promotion</li> <li>• engagement of traditional leaders</li> <li>• sanitation marketing</li> <li>• sanitation in schools and institutions</li> <li>• handwashing behaviour change</li> <li>• legal enforcement</li> <li>• publicity</li> <li>• monitoring evaluation and tools</li> </ul>	Review ODF guidelines if they meet current demands. Monitoring of ODF implementation, through developed monitoring, evaluation and reporting systems for rural water supply and sanitation
8	<b>MWDSEP</b>	Operation and maintenance standards and guidelines	Aimed at establishing a sustainable O&M system at district level to enable communities to utilise their water points fitted with hand pumps better and for longer periods. These water facilities should be managed using the community-based management (CBM) approach to O&M. For example, for SOMAP, principles include: <ul style="list-style-type: none"> <li>• cost sharing by communities</li> <li>• sustainable supply chain for spares</li> <li>• O&amp;M mechanisms, incorporating stakeholder participation and gender balance</li> <li>• choice of appropriate technology</li> <li>• capacity building</li> </ul>	Review SOMAP Monitoring of implementation, e.g. of SOMAP, is needed
9	<b>MWDSEP</b>	National guidelines for preparation of district sanitation plans, including rural areas	Planning forms an integral part of the service delivery cycle in which the projected outcome/objectives determine the prioritisation of improvements and the design of projects to meet the identified needs	Develop new national guidelines for the preparation of district sanitation plans, including rural areas
<b>Inspection plan</b>				
1	<b>ZEMA, Local Authorities, CUs</b>	Inspection plan (New)	According to the Public Health Act 1995, local authorities are responsible for the inspection of sanitation facilities	Development to cover all districts, including growth centres





## 4.2 The roles and responsibilities

The key actors in rural water supply and sanitation and their roles and responsibilities are shown in Table 5 below.

**Table 5: Key actors in rural water supply and sanitation and their roles and responsibilities**

Stakeholder		Water supply provision ( <i>piped water and water point systems</i> )	Sanitation provision ( <i>offsite sanitation and onsite sanitation</i> )
Type	Group		
GRZ	MWDSEP	<ul style="list-style-type: none"> <li>• Policy and laws</li> <li>• National programmes, strategies and guidelines</li> </ul>	
Standards authority	ZABS ( <i>sets design and construction standards for all sectors</i> )	Sets design and construction standards for water supply infrastructure	Sets design and construction standards for sanitation infrastructure
Regulating agents	WARMA ( <i>regulation of water resources management</i> )	<ul style="list-style-type: none"> <li>• Issues water permits for abstraction of surface and ground water</li> <li>• Monitors quality of surface and ground water resources</li> <li>• Monitors quality of water when a borehole is drilled</li> <li>• Sets standards for borehole construction</li> </ul>	Not applicable
	NWASCO ( <i>service provision regulation, including price regulation for consumer protection</i> )	<i>Issue licences:</i> NWASCO licence to be issued to CU to cover entire district. All other service providers to be issued with NWASCO permits	
		<i>Set standards and develop guidelines</i> <ul style="list-style-type: none"> <li>• Water supply provision (based on ZABS)</li> <li>• Guidelines to ensure sustainability</li> <li>• Price regulation, incl. consumer protection</li> </ul> <i>(Guidelines for water point sources already exist, such as SOMAP)</i>	<i>Set standards and develop guidelines</i> <ul style="list-style-type: none"> <li>• For O&amp;M to meet ZEMA standards and protection of public health</li> <li>• To ensure sustainability (<i>based on ODF strategy</i>)</li> </ul> <i>(Onsite sanitation involving facilities such as septic tanks shall be as in urban areas)</i>
		<i>Monitoring and reporting:</i> Monitor performance of LAs and report on coverage	
	ZEMA ( <i>environmental protection regulation</i> )	Not applicable	Licensing for environment protection for disposal of wastewater/FS treatment products. Similar to urban areas
	NCC ( <i>construction industry regulation</i> )	Promoting, developing, training and fostering quality and sustainable infrastructure	

Implementing agents	Local authority ( <i>also service provider for rural areas</i> )	Responsible for <ul style="list-style-type: none"> <li>• piped water schemes in growth centres not yet taken up by CUs (<i>with MoU between LC, CU and others</i>)</li> <li>• water point sources in rural settlements</li> </ul>	Enforce standards for onsite facilities/ buildings ( <i>each property to have a toilet</i> )
Service providers	CU	Responsible for <ul style="list-style-type: none"> <li>• piped schemes taken up in growth centres</li> <li>• supporting LAs through MoUs for piped water schemes not yet taken over</li> </ul>	Responsible for sanitation taken up in growth centres. When not ready to take over, CU supports LAs through MoUs
	Private operators	<ul style="list-style-type: none"> <li>• Operating piped water schemes</li> <li>• Suppliers of pump spares</li> </ul>	O&M wastewater and /or FS treatment facilities (where engaged)
	CBOs	O&M of water schemes through community management arrangements	<ul style="list-style-type: none"> <li>• O&amp;M of sanitation facilities through community management arrangements</li> <li>• Monitoring of ODF strategy implementation at sub-district level</li> </ul>
Customers / users	Non-domestic, community (investors)	<ul style="list-style-type: none"> <li>• Responsible for water supply accessories such as taps, kiosks and tap stands</li> <li>• Responsible for taking care of water points and contribution to O&amp;M</li> </ul>	Toilet construction and maintenance

### 4.3 Implementation strategy/plan

The recommended approach is to implement regulation in stages in order to facilitate an orderly, manageable change which builds on processes in place. The implementation of regulation would begin with monitoring and accurate reporting for the rural WSS sub-sector (as is done for urban). Monitoring shall include rural WSS coverage which would then provide a complete reporting on WSS for the country. In addition to a report, the regulator shall also monitor enforcement of standards and implementation of national programmes such as the NUSS and ODF strategy in rural areas, including growth centres.

#### Stage One:

##### Institutional/legal framework

The institutional and legal framework is an important part of creating an enabling environment for sustainable sanitation service provision. NWASCO, together with other stakeholders, shall have to review the existing laws such as the Local Government Act (presently under review) to ensure issues of enforcement are addressed and that the regulator is specifically included in administering its regulatory and enforcement mandates. Further, the drafting of the Water Supply and Sanitation Act to support implementation of the updated new Water



Supply and Sanitation Policy provides an opportunity to further strengthen the role of the regulator.

**Stage Two:  
Establishing a database of rural WSS  
for regulation**

In order to ensure adequate monitoring and performance reporting for the rural WSS sub-sector as is done for urban WSS, NWASCO needs to establish a database/information system (NIS is for urban) that is sustainably managed.

Under the Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP) a monitoring system for rural water supply and sanitation, called the WASH-MIS, is under development, using the DHIS2 platform. The system has been established for 58 districts under the support of UNICEF (53 districts), SNV (four districts) and Plan International (one district). The other districts report through the paper trail. The WASH-MIS system needs to be strengthened and upscaled to cover all districts. The NWASCO NIS being enhanced shall be linked to the WASH-MIS.

**Stage Two:  
Development of regulatory tools**

Regulatory tools need to be developed:

- Working together with actors such as the ZABS, ZEMA, LAs and CUs, regulatory tools for rural water supply and sanitation need to be developed/ reviewed. The immediate need is for standards and guidelines covering the development and sustainable O&M of piped water schemes in growth centres. Experiences of the Devolution Trust Fund (DTF) in supporting CUs, and the CUs experiences in establishing community management systems for the provision of WSS in peri-urban areas, can be adapted to rural settings taking account

of the socio-economic situation, including affordability.

- Guidelines shall provide CUs and LAs with targets and set standards to be met. This entails developing and issuing new rural piped water supply guidelines, which shall define minimum standards for sanitation facilities including operation and maintenance, opening hours, tariffs, planning and management, and monitoring and reporting obligations, etc.

**Stage Three:  
Licensing and associated service level  
agreements and guaranties**

Based on established monitoring and reporting systems, standards and guidelines, NWASCO shall:

- Amend licences for CUs to cover the entire district and take up the provision of piped water supply services in growth centres as and when the CU is ready. Taking up of piped schemes shall be based on criteria and the capacity of a particular CU, to avoid negatively affecting the performance of the CU and at the same time ensure sustainable WSS service provision.
- Issue permits to LAs for water point supply in rural areas, including piped water supply not yet taken up by a CU. (In this instance, there shall be interim arrangements where MoUs between the CU and LA, and between the CU and the community, are entered into to ensure sustained water supply provision.) The permit shall include monitoring of LAs in the implementation of the National Urban and Peri-urban Sanitation Strategy (2015–2030) and the Open Defecation Free (ODF) Zambia Strategy (2016–2020).

The CUs and LAs will develop their respective WSS plans in alignment with the new and updated NWASCO guidelines. Service level agreements and guarantees and licenses will need to reflect these changes.



Where outsourcing of services is done by a CU or LA (such as private operators), a management contract will need to be signed in accordance with newly developed rural WSS provision guidelines. This contract shall reflect the regulator conditions given to the CUs or LAs to adhere to set standards. It is anticipated that CUs shall develop urban, peri-urban and growth centre WSS plans as part of investment planning which shall then be linked to strategic plans and budgets approved by their respective boards. In a similar manner, the LAs shall also develop WSS plans covering water point supply, anticipated growth centres (the process of establishing and handing over WSS services in growth centres to CUs and collaborating with CUs) and district sanitation plans for rural areas.

All these measures shall be stipulated in licensing to ensure CUs and LAs develop these plans and that the WSS agenda for rural areas, including growth centres, becomes a priority through regulation.

#### 4.4 Monitoring of rural water supply and sanitation

A monitoring system for rural water supply and sanitation is under development, called the WASH-MIS (using the DHIS2 system). The system has so far been established for 58 districts with the support of UNICEF, SNV and Plan International, while other districts continue to report through the paper trail. In addition, an M&E framework is being developed at the ministry with support from the World Bank. Once the monitoring framework is developed, it can be used by NWASCO to monitor the performance of LAs in the provision of safe water and sanitation services.

The following key aspects shall need addressing:

- Data management and generation from LAs: The data entering the system need to be quality assured by ensuring that designed procedures and processes are adhered to





- The management information systems should be properly managed and maintained to ensure sustainability
- LAs and CUs as service providers should report to NWASCO as per established reporting guidelines. CUs would report on growth centres and piped water supply schemes that fall under their mandate. LAs would report on water points, growth centres not yet taken up by CUs, and rural sanitation.

WSS coverage monitoring in line with the national Vision 2030 and SDGs (JMP Monitoring), shall be based on water supply and sanitation ladders as depicted in figures

6 and 7 below. This linked monitoring shall facilitate progress made towards attaining the national WSS agenda as per Vision 2030 and also make it easier to meet international reporting protocols and development agendas.

The SDG targets aim for universal access to drinking water, sanitation and hygiene and call for enhanced monitoring to ensure that no one is left behind. JMP acknowledges the limitations of indicators based on source type and introduces a more ambitious indicator for SDG monitoring that takes account of accessibility, availability and quality of drinking water.

### The new JMP ladder for household drinking water services

Service level	Definition
<b>Safely managed</b>	Drinking water from an improved water source which is located on premises, available when needed and free of faecal and priority contamination
<b>Basic</b>	Drinking water from an improved source provided collection time is not more than 30 minutes for a roundtrip including queuing
<b>Limited</b>	Drinking water from an improved source where collection time exceeds over 30 minutes for a roundtrip to collect water, including queuing
<b>Unimproved</b>	Drinking water from an unprotected dug well or unprotected spring
<b>No service</b>	Drinking water collected directly from a river, dam, lake, pond, stream, canal or irrigation channel

### Drinking water in schools

<b>Advanced service</b>	To be defined at national level (e.g. water is available when needed, accessible to all, free from contamination, etc)
<b>Basic service</b>	Water from an improved source is available at the school
<b>Limited service</b>	There is an improved source but water is not available at the time of survey
<b>No service</b>	No water source or an unimproved source

### Water supply in health care facilities

<b>Advanced service</b>	To be defined at national level (e.g. water is available when needed, accessible to all, free from contamination, etc)
<b>Basic service</b>	Water from an improved source is available on premises
<b>Limited service</b>	There is an improved source, but it is not on premises or water is not available
<b>No service</b>	No water source or an unimproved source

**Figure 6: Drinking water supply ladder (Source: JMP 2015)**

As shown in Figure 6, *safely managed drinking water services*<sup>1</sup> represents a higher level of service and a new rung at the top of the drinking water ladder used by the JMP for global monitoring. *Universal access* means everyone. ‘Universal’ also implies expanding monitoring efforts beyond the household, to include institutions and other settings. The JMP has identified global indicators that will be used to monitor access to water in schools and health care settings as a first priority. Monitoring progress towards safely managed drinking water may be challenging, but estimates are expected to improve over time as more and better data become available.

#### 4.4.1 Strengthening of NWASCO

Rural water supply and sanitation regulation is an additional responsibility and a new area for the regulator. Therefore, capacity building measures need to be undertaken for institutional strengthening based on assessed needs, which could include formal and informal training, study tours and twinning with other regulators in and outside the region to keep learning and exchanging ideas. Partnerships and twinning arrangements are critical in ensuring that NWASCO keeps improving in its mandate of regulation.

<sup>1</sup> Source: Safely managed drinking water – thematic report on drinking water, WHO/UNICEF 2017

<p><b>Open defecation:</b> When human faeces are disposed of in fields, forest, bushes, open bodies of water, beaches or other open spaces or disposed of with solid waste</p>	<p><b>Unimproved Sanitation</b></p>
<p><b>Unimproved sanitation facilities:</b> Where hygienic separation of human excreta from human contact is not ensured. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines</p>	
<p><b>Shared sanitation facilities:</b> Sanitation facilities of an otherwise acceptable type shared between two or more households. Only facilities that are not shared or not public are considered improved</p>	
<p><b>Improved sanitation facilities:</b> Likely to ensure hygienic separation of human excreta from human contact. They include the following facilities:</p> <ul style="list-style-type: none"> <li>• Flush/pour flush to:                             <ul style="list-style-type: none"> <li>○ piped sewer system</li> <li>○ septic tank</li> <li>○ pit latrine</li> </ul> </li> <li>• Ventilated improved pit (VIP) latrine</li> <li>• Pit latrine with slab</li> <li>• Composting toilet</li> </ul>	<p><b>Improved Sanitation</b></p>

**Figure 7: Sanitation ladder (Source: JMP 2015)**



#### 4.5 Addressing hygiene

The full benefits of improvements in access to sanitation and drinking water cannot be realised without good hygiene. Of the range of hygiene behaviours considered important for health, handwashing with soap is a top priority in all settings. Menstrual hygiene management should also be a priority for improving the health, welfare and dignity of women and girls.

In 2008 and 2009, the JMP supported a review by the monitoring group of the Public-Private Partnership on Handwashing, MICS, DHS and

USAID. It was agreed that the most practical approach leading to reliable measurement of handwashing in national household surveys was observation of the place where people wash their hands and noting the presence of water and soap (or local alternative) at that location. This provides a measure of whether households have the necessary tools for handwashing and is a proxy for their behaviour. Observation by survey enumerators represents a more reliable, valid and efficient indicator for measuring handwashing behaviour than asking individuals to report their own behaviour.





## 5. The Budget

**Table 6: Estimated budget for implementing the framework activities**

Item no.	Activity	Provisional estimated budget (ZMW)	Comment
1	Institutional/legal framework	200,000	Working with relevant institutions
2	Regulation guidelines for rural water supply and sanitation (including meetings and workshops)	500,000	Priority guidelines: <ul style="list-style-type: none"> <li>• Minimum service level guidelines               <ul style="list-style-type: none"> <li>- Develop minimum service levels guideline for rural piped water supply schemes</li> <li>- Adopt SOMAP guidelines for rural water point supply</li> <li>- Adopt ODF Zambia Strategy service levels (sanitation ladder) for rural onsite sanitation</li> </ul> </li> <li>• Water quality monitoring for rural water supply</li> <li>• Annual reporting guidelines for rural WSS, including data management.</li> <li>• Accounting guidelines</li> <li>• Other guidelines as determined by NWASCO</li> </ul>
3	Coordinate review of rural WSS standards with sector-responsible agencies	300,000	<ul style="list-style-type: none"> <li>• Physical Planning Department of MLG is responsible for building and onsite facilities standards/codes related to housing development</li> <li>• ZEMA is responsible for effluent and FS standards development</li> <li>• ZABS is responsible for design and construction of water supply and sanitation systems</li> <li>• Standards of WSS technology</li> </ul>
4	Stakeholder engagement and regulation process facilitation	500,000	Consultations and stakeholder participation meetings
5	Training of LAs and other actors in rural regulation	500,000	LAs and other actors in RWSS understand provision of WSS services and standards and adhere to regulatory requirements
6	Strengthening of NWASCO	350,000	NWASCO reviews its organisation to meet water sector needs for regulation of RWSS services
<b>Total</b>		<b>2,350,000</b>	



With the framework agreed upon, it is expected that the stakeholders, from government ministries to institutions and cooperating partners, will participate in the implementation.







## 6. Next Steps, Timeframe and Deliverables

The Framework for Provision and Regulation of Rural Water Supply and Sanitation, after being subjected to wide stakeholder consultations in the water sector through meetings, workshops, conferences and reviews, has been agreed upon and the next step is implementation. The stakeholders, which include the relevant ministries, ZEMA, ZABs, JICA, UNICEF, AfDB, World Bank, MCA,

WSUP, LAs, CUs, SNV, Plan and cooperating partners, etc., are all expected to participate.

The implementation starts with updating/developing licensing arrangements, which includes the review of existing licences held by all WSS service providers, including SLAs and SLGs. This is followed by updating and/or developing the standards and guidelines.

**Table 7: Timeframes and deliverables**

Steps	Deliverable	Proposed timeframe
1	Agreed regulatory framework	Feb/March 2017
2	Institutional and legal framework agreement	TBA
3	Development of regulatory tools	September 2017
4	Guidelines and standards on rural water supply and sanitation service provision	August 2017
5	Amend licences and associated service level agreements and guarantees	End of 2017
6	Definitions of national sanitation standards/code of practice (growth centres included in the national sanitation standards)	End of 2017
7	Enhance NIS and link it with WASH-MIS under MWDSEP; strengthening the WASH-MIS under MWDSEP	2017/2018
8	Strengthening of NWASCO	2017



## ANNEXES

### ANNEX 1:

Organisational arrangements for provision and regulation of rural water supply and sanitation

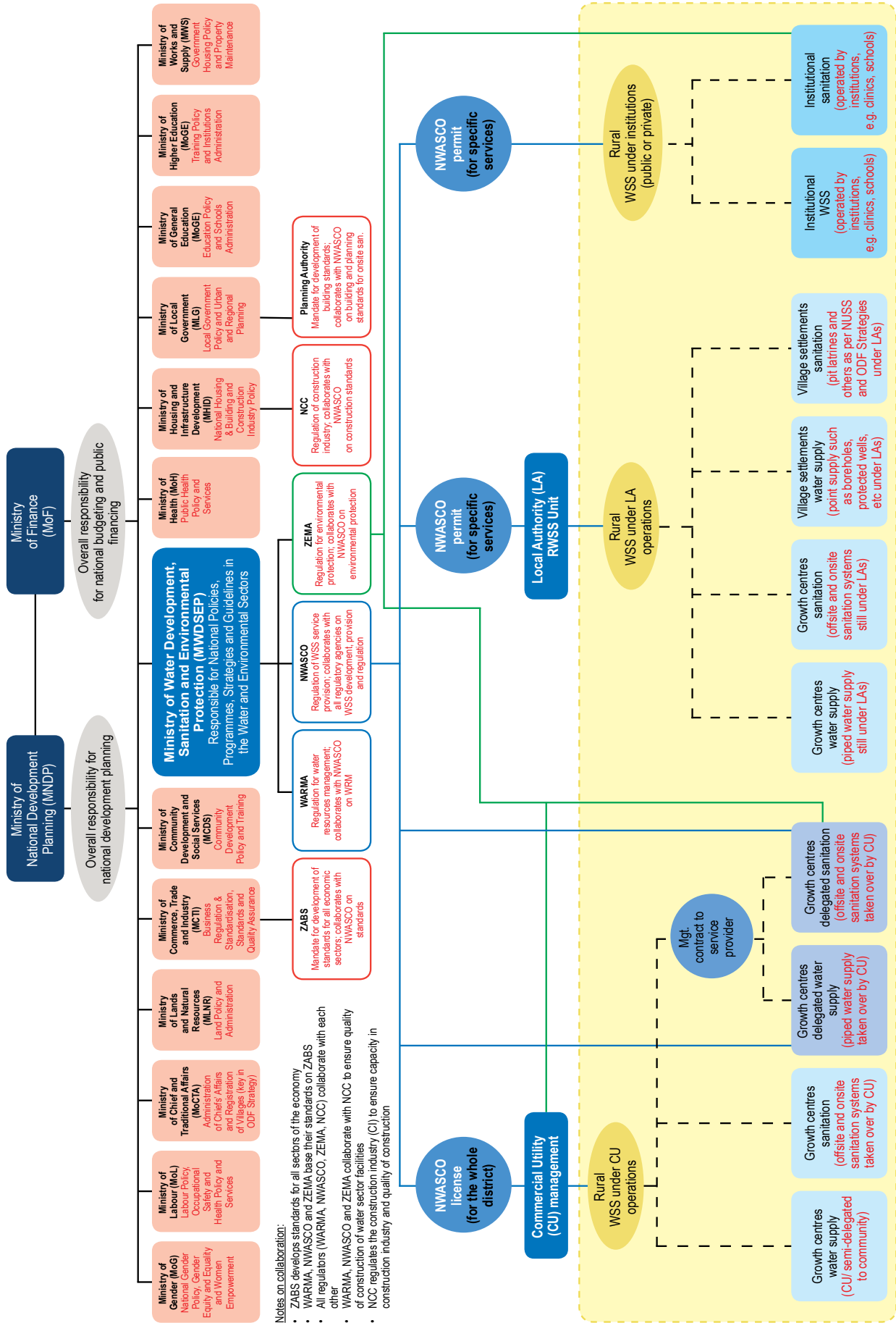
### ANNEX 2:

Regulation flowchart for rural water supply and sanitation

### ANNEX 3:

Regulatory framework for rural water supply and sanitation services

# Annex 1: Organisational arrangements for provision and regulation of rural water supply and sanitation





## Annex 2: Regulation flowchart for rural water supply and sanitation

Management requirements		Sanitation Service Chain		
Aspect	Responsibility	Rural water supply	Rural sanitation	
Political will and government support	Water sector policies and laws	<ul style="list-style-type: none"> <li>The Vision 2030</li> <li>The Water Policy 2010</li> <li>The Water Supply and Sanitation Policy Draft 2016</li> <li>The Water Supply and Sanitation Act of 1997</li> <li>The National Development Programmes (7th to be released)</li> <li>The National Urban Water Supply and Sanitation Programme (2015–2030)</li> </ul>	<ul style="list-style-type: none"> <li>The National Water Supply and Sanitation Capacity Development Strategy</li> <li>The National Urban and Peri-Urban Sanitation Strategy</li> <li>The Open Defecation Free (ODF) Strategy</li> </ul>	Stage 1
	Water sector programmes			
	Water sector strategies			
	MER			
Licensing	Service provision licence	MWDSEP/ NWASCO	WASH-MIS fully functional in all districts and supports reporting	Stage 2
	Emission and waste management licences	NWASCO	Stipulates conditions under which the service provider will operate, as well as delineation of the service area	
	Business licences	ZEMA	<ol style="list-style-type: none"> <li>Control emission or discharge of pollutants or contaminants</li> <li>Control (a) recovery or recycling of waste, (b) collection &amp; disposal of waste from industrial, commercial, domestic or community activities, (c) transportation of waste, (d) ownership, construction or operation of a waste disposal/storage site, and (e) transit, trade in or export of waste</li> </ol>	
	Standards and code of practice	Local authority	Businesses operating in Zambia are typically required to obtain one or more licences and permits, depending on the activities of their enterprise	
	Building codes	NWASCO, ZABS, ZEMA	National standards for sanitation facilities established, led by NWASCO. Design and construction by ZABs, limits for environmental protection by ZEMA	
	Statutory requirements	Planning Authority of government	Planning Authority establishes building standards in collaboration with NWASCO	
Regulations	Environmental protection regulations	ZRA, PACRA, NAPSA, LCC, etc	Effluent standards in place. Need to establish FS standards	Stage 3
	WSS service provision regulations	ZEMA	Monitors performance, adherence to design and construction standards in rural WSS, standards for service provision or operation of the facilities, and reporting	
	Enforcement of Public Health Act, overall management of rural WSS	NWASCO	Implementation of the NRWSSP	
	Responsible for water supply and sanitation schemes in growth centres	Local authorities	CUs take over water supply and sanitation schemes in growth centres as and when necessary, per the Regulator	
Operations	Construction and rehabilitation of water points	Commercial utilities (CUs)	Water points are constructed/ rehabilitated according to national standards	Stage 3
	O & M of water points	LAs, private sector, NGOs, CBOs	Sanitation facilities are constructed/ rehabilitated according to national standards	
	Open Defecation Free sanitation provision	LAs, private sector, NGOs, CBOs	Standard approach for operation and maintenance (SOMAP) implemented	
		LAs, private sector, NGOs, CBOs	ODF strategy implemented and community approaches (CLTS) sustainability ensured	

What is MER?

### Annex 3: Regulatory framework for rural water supply and sanitation services

Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
Licensing	NWASCO	Licence	<p>Stipulates conditions under which the service provider will operate, as well as delineation of the operating area.</p> <p>According to the Water Supply and Sanitation Act 1997 “a utility or a service provider shall not operate except (...) under the authority of a licence (...)”</p> <p>The regulations on licensing are covered by the Statutory Instrument No. 63 of 2000, The Water Supply and Sanitation (Licensing of Utilities and Service Providers) Regulations, 2000. Thereby a sanitation service provider shall apply to NWASCO for a licence to provide WSS services. To apply for a licence, the service provider needs to provide a business plan, a company registration certificate, financial information, and an investment plan. The licenced service provider must keep and maintain records of its activities for the purpose of regulation in accordance with the information management systems of NWASCO. Data and information must be submitted according to the quality standards set by NWASCO (guidelines).</p>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>The Statutory Instrument No. 63 of 2000 does not include rural water supply and sanitation.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>There is need to amend the Statutory Instrument No. 63 to include piped water supply in growth centres of rural areas so that CUs can take them up as need arises.</li> <li>Specific licences need to be considered for local authorities in the management of water points according to set standards and procedures and processes.</li> </ol>
Monitoring and performance reporting	NWASCO	Annual Sector Report	<p>In line with its mandate to inform the public on WSS issues, NWASCO publishes an annual sector report on the performance and status of the sector. The sector report highlights the performance of providers against set sector benchmarks derived from the minimum service levels guidelines as well as compares the performance of licenced service providers against each other.</p>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>There is no annual reporting on rural WSS.</li> </ol> <p><b>Recommendation</b></p> <p><b>Piped water schemes</b></p> <ol style="list-style-type: none"> <li>For urban areas, NWASCO already has a relationship with CUs to regulate provision of water supply and sewerage services. For piped water supply schemes, management may continue to be under local authorities (LAs) if putting them under CUs would compromise CU performance. A piped scheme assessed to be able to meet its operation and maintenance cost may be put under a CU. A regulation to trigger this arrangement should be provided for by the regulator. These schemes under CU management are considered covered under the current NWASCO regulatory regime.</li> </ol> <p>Regulation of piped schemes shall be done through:</p> <ol style="list-style-type: none"> <li>establishing minimum service level standards that include aspects such as hours of supply, quality of water supply, etc. LAs shall sign service level agreements/MoU with communities based on these standards.</li> <li>setting standards for reporting, covering report formats, content and frequency of reporting to NWASCO.</li> <li>publishing performance reports on water schemes in the NWASCO annual sector report. The performance of LAs shall be benchmarked and for this purpose performance indicators are proposed.</li> </ol>

Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
Monitoring and performance reporting	NWASCO	Annual Sector Report		<p><b>Water point schemes</b></p> <ol style="list-style-type: none"> <li>1. The regulator shall achieve regulation by publishing LA performance in managing water point sources in the annual reports, covering:               <ol style="list-style-type: none"> <li>a. access to water supply</li> <li>b. quality of water supplied</li> <li>c. affordability</li> </ol> </li> <li>2. In order to publish performance of rural water supply points, NWASCO shall need a properly managed and functioning information system, similar to the NWASCO Information System (NIS) for urban areas. There are three possibilities to achieve this:               <ol style="list-style-type: none"> <li>a. NWASCO establishes its own information system for rural WSS. This has the advantage of NWASCO managing the system to which LAs report, and builds on NWASCO experience in managing information systems. However, this may be a replication of what is being developed under MWDSEP.</li> <li>b. The NWASCO system is linked to the information system being developed under MWDSEP and accesses data with reporting from LAs. The advantage of this arrangement is using the existing systems being developed. The disadvantage is the need to analyse huge amounts of data from numerous LAs.</li> <li>c. The NWASCO system is linked to the information system being developed under MWDSEP and accesses data, with any report data requirements incorporated into the systems being developed. This has the advantage of using existing systems without having to develop new ones.</li> </ol> <p>The third option is recommended.</p> </li> <li>3. Recommended guidelines for this purpose are the Reporting Guidelines which should contain:               <ol style="list-style-type: none"> <li>a. Template for reporting/content and frequency of reporting, including performance indicators</li> <li>b. Data management to ensure quality data enters the information system and is reported</li> </ol> </li> </ol>
WSS Guidelines	NWASCO	Minimum Service Level Guidelines	Minimum Service Level stipulates an acceptable minimum level of service providers must achieve within a defined timeframe	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>1. None existent for rural WSS, except for water supply under SOMAP and onsite sanitation under the ODF Zambia Strategy.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>1. Develop minimum service levels guideline for rural piped water supply schemes</li> <li>2. Adopt SOMAP guidelines for rural water point supply</li> <li>3. Adopt ODF Zambia Strategy service levels (sanitation ladder) for rural onsite sanitation</li> </ol>



Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
WSS Guidelines	NWASCO	Water Quality Monitoring Guidelines	<ul style="list-style-type: none"> <li>Ensures through regular monitoring that the quality standards set by the Zambia Bureau of Standards (ZABS) are being complied with and that customers can have confidence that the water they consume is potable and that the wastewater and the faecal sludge they produce is treated and disposed of safely</li> <li>Ensures that all licensed water and sanitation service providers follow a systematic way of water quality, effluent and sludge disposal/reuse monitoring so as to have uniformity of the process</li> <li>Ensures that providers conduct risk assessments at all stages of water quality monitoring through water safety planning</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>Water quality standards adequately cover drinking water quality and sampling. However, there are no specific standards for faecal sludge disposal. General limits for disposal are set by ZABS.</li> <li>Rural water supply programme activities have not been addressing water quality during usage of facilities, except at the construction stage.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>Need to integrate water quality monitoring in both piped water and water point schemes. The service providers, whether LAs, CUs or private, should provide annual reports of their water quality monitoring activities according to set service levels for rural water supply and sanitation.</li> <li>A guideline for water quality monitoring for rural WSS should be developed. This may need to be extended to allow for monitoring of quality standards set (or to be set) by ZABS and/or ZEMA with regard to effluent disposal and disposal/ reuse of faecal sludge and sludge from faecal sludge/wastewater treatment plants where they exist.</li> </ol>
Annual Reporting Guidelines	NWASCO	Annual Reporting Guidelines	<ul style="list-style-type: none"> <li>Ensures that the licensed water and sanitation service providers submit a standardised annual report to NWASCO (financial and technical report) allowing NWASCO to prepare its annual sector report</li> <li>Ensures that the licensed water and sanitation service providers fulfill their reporting obligations towards their shareholders</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>There is no annual reporting on rural WSS.</li> </ol> <p><b>Recommendation</b></p> <p><b>Piped water schemes</b></p> <ol style="list-style-type: none"> <li>For urban areas, NWASCO already has a relationship with CUs to regulate provision of water supply and sewerage services. For piped water supply schemes, management may continue to be under local authorities (LAs) if putting them under CUs would compromise CU performance. A piped scheme assessed to be able to meet its operation and maintenance cost may be put under a CU. A regulation to trigger this arrangement should be provided for by the Regulator. These schemes under CU management are considered covered under current NWASCO regulatory regime.</li> </ol> <p>Regulation of piped schemes shall be done through:</p> <ol style="list-style-type: none"> <li>Establishing service level standards for piped schemes that include aspects such as hours of supply, quality of water supply, etc.; the minimum service levels. LAs shall sign service level agreements/MoUs with communities based on these standards.</li> </ol>

Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
				<p>b. Reporting, containing reporting formats/content, frequency of reporting to NWASCO.</p> <p>c. NWASCO shall publish performance reporting of water schemes in the NWASCO Annual Sector Report. The performance of LAs shall be benchmarked and for this purpose performance indicators are proposed.</p> <p><b>Water point schemes</b></p> <p>2. The Regulator shall achieve regulation by publishing performance of LAs in managing water point sources in the annual reports, covering:</p> <ol style="list-style-type: none"> <li>Access to water supply</li> <li>Quality of water supplied</li> <li>Affordability</li> </ol> <p>3. In order to publish performance of rural water supply points, NWASCO shall need a properly managed and functioning information system, similar to NWASCO Information System (NIS). There are three possibilities to achieve this:</p> <ol style="list-style-type: none"> <li>NWASCO establishes its own Information System for Rural WSS. This has the advantage of NWASCO managing the system to which LAs report through; this builds on NWASCO experience in managing information systems. The disadvantage is that it may a replication of what is being developed under MWDSEP.</li> <li>NWASCO system is linked to information system being developed under MWDSEP and access data, with reporting from LAs. The advantage of this arrangement is using the existing information systems being developed. The disadvantage is the need to analyse huge amounts of data from numerous LAs.</li> <li>NWASCO system is linked to the information system being developed under MWDSEP and access data, with any report data requirements incorporated into the systems being developed. This has the advantage of using existing systems without having to develop new ones.</li> </ol> <p>The third option is recommended.</p> <p>4. Recommended guidelines for this purpose are the Reporting Guidelines which should contain:</p> <ol style="list-style-type: none"> <li>Template for reporting/content and frequency of reporting, including performance indicators</li> <li>Data management to ensure quality data enters the information system and is reported.</li> </ol> <p><i>Refer to the elaborations under Annual Sector Report.</i></p>

Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
WSS Guidelines	NWASCO	<b>Accounting Guidelines</b>	<ul style="list-style-type: none"> <li>Assists licenced water and sanitation service providers to periodically deliver reliable and relevant accounting information</li> <li>Recommends disclosure of accounting bases used in arriving at the amount attributable to major items</li> <li>Defines the content of the fields in the NWASCO Information System (NIS)</li> <li>Enables licenced water and sanitation service providers to submit financial statements complying to the requirements laid out in the Annual Reporting Guidelines</li> <li>Harmonises the maintenance and reporting of accounting information among the providers</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>None existent.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>Sustainability of piped water and water point schemes also depends on paying for services at community level, taking account of affordability. All collections/payments and operations should be properly recorded in a transparent and accountable manner. Therefore, a new accounting guideline must be developed to ensure accountability and transparency, considering current practices.</li> <li>Adopt SOMAP guidelines for water point user contributions.</li> </ol>
	NWASCO	<b>Investment Planning Guideline</b>	<ul style="list-style-type: none"> <li>Specifies the basic elements of investment planning</li> <li>Harmonises the presentation of investment planning documents and specifies the contents of them</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>None existent.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>Investment planning is needed; particularly the CUs should consider growth centres and their implications for current and future water supply and sanitation requirements. LAs need to have plans to extend coverage of services in rural areas as guided by the NRWSSP.</li> </ol>
	MWDSEP	<b>ODF Guidelines</b>	<ul style="list-style-type: none"> <li>Community-based sanitation and hygiene promotion</li> <li>Engagement of traditional leaders</li> <li>Sanitation marketing</li> <li>Sanitation in schools and institutions</li> <li>Handwashing behaviour change</li> <li>Legal enforcement</li> <li>Publicity</li> <li>Monitoring evaluation and tools</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>Through the national coaching system established with support from UNICEF, the ODF Zambia Strategy is implemented in districts using these guidelines.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>At this initial stage, monitoring of the implementation of the ODF strategy is needed. LAs should be reporting on this through appropriately designed reporting formats.</li> </ol>
		<b>Operation and Maintenance standards and guidelines</b>	<p>Aimed at establishing a sustainable O&amp;M system at district level to enable communities to utilise their water points fitted with hand pumps better and for longer periods. These water facilities should be managed using the community-based management (CBM) approach to O&amp;M. For example, the SOMAP principles include:</p> <ul style="list-style-type: none"> <li>Cost sharing by communities</li> <li>Sustainable supply chain for spares</li> <li>O&amp;M mechanisms, incorporating stakeholder participation and gender balance</li> <li>Choice of appropriate technology</li> <li>Capacity building</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>SOMAP guidelines are being updated with support from JICA. These SOMAP guidelines shall form standard procedures and guidelines for operation and maintenance of water points.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>At this initial stage, monitoring of the implementation of SOMAP is needed. LAs should be reporting on this through appropriately designed reporting formats.</li> </ol>



Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
Service Level Agreement and Guarantee	NWASCO	Programme to reach the required minimum service levels	<p><b>Required Minimum Service Level:</b> Service providers have to reach this within a specified time, as defined by the regulator and measured by service level indicators (SLIs). To this, the regulator issues guidelines. The service level will be regularly adjusted according to the development of the sector. Therefore, the provider will need time to comply with new requirements.</p> <p><b>Programme to reach the required minimum service levels:</b> The provider has to describe how they intend to reach the required minimum service level, including the measures and the timeframe. This programme has to be proposed with the first service level agreement and the service level guarantee. A maximum timeframe for each indicator is included in the guidelines.</p>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>1. None existent.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>1. Minimum service levels need to be developed for rural WSS, including respective indicators and benchmarks.</li> </ol>
Service Level Agreement	NWASCO	Service Level Agreement	<p>The regulator and the provider will agree on a stepwise progress towards the required minimum service level by signing (adjusted) service level agreements every 3 years based on a relevant programme.</p> <p>All licensed service providers have to prepare and submit a proposal for service level improvements for the subsequent 3-year period. The service level agreement will be signed between the service provider and NWASCO, outlining in detail the intended improvement to the service level that should be achieved in the time.</p>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>1. Generally, the CUs provide a proposal for the overall supply area, derived from the proposals made for each town/city in their supply area (as defined in the licence). However, even if the districts are in the service licence, some newly created piped schemes have not been taken up by CUs, e.g. Luapula for water schemes in Millenge.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>1. The CUs should propose service level agreements that include clear proposals on how they intend to manage piped water schemes. Care should be taken to ensure that when the CU takes up a scheme its performance is not negatively affected, resulting in deteriorated service provision in their operational areas.</li> <li>2. Further, a threshold number of connections that can enable viable operations needs to be established. Currently, NWASCO considers 50 households or 500 people supplied as a minimum.</li> <li>3. The CUs need to make a new proposal before the end of the current agreement but not later than the last day covered by the agreement. To ensure that CUs start taking up piped water schemes, a list of identified piped schemes in their area needs to be included in their next service level agreement with NWASCO. Most of the SLAs expire on March 31, 2018. The one of LPWSC expires on December 31, 2017.</li> </ol> <p>It is considered important to amend the licence or the SLA allowing them to cover the same area.</p>

Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
	NWASCO	Service Level Guarantee	<p>Every licensed service provider must prepare and submit a service level guarantee defining in a detailed way the service level offered to customers for a period of 3 years. The service level guarantee will contain all the information set out in the minimum service level guidelines published by NWASCO and will duly take into consideration the minimum standards of service as defined. After approval from NWASCO, the service level guarantee must be published and presented to the public as deemed necessary. Adjustments to the service level guarantee can only be made after approval by NWASCO.</p> <p>The provider shall at all times guarantee a specific service level to the customer with increasing progress towards the minimum service level standard required by the regulator.</p>	<ul style="list-style-type: none"> <li>• Service Level Agreement</li> </ul>
By-laws	Ministry of Local Government/ councils	By-law	<p>In Zambia, local laws established by local authorities to be applied within their jurisdiction are referred to as by-laws because their scope is regulated by the central government.</p> <p>The Local Government Act empowers local authorities to formulate by-laws that facilitate implementation of service delivery activities. Nothing contained in this act shall be construed as empowering a council to make any by-law which is in conflict with or derogates from the provisions of any other written law; and to the extent that any by-law conflicts with or derogates from the provisions of any other written law, it shall be void. For example, a by-law may be issued by a local authority to establish a waste management unit and compel all citizens in its jurisdiction to comply with it.</p> <p>For at least 30 days before application is made to the minister for confirmation of a by-law, a copy of the by-law shall be deposited at the offices of the council and shall, at all reasonable times, be open to the inspection of any interested person.</p> <p>No by-law made by a council under this act shall have the force of law until it has been confirmed by the minister.</p>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>1. According to the information obtained, there are currently no existing by-laws considered relevant for sanitation service provision. This is necessary for rural settings where onsite facilities are constructed, such as growth centres.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>1. Specific by-laws for enforcement of building regulations and other identified measures may be issued by the councils. A guideline in the form of a template can assist to ensure that by-laws are made for specific local conditions. Where consideration is at national level, the minister may issue a statutory instrument that can be used by all LAs.</li> </ol> <p>Councils can issue by-laws on sanitation, e.g. to regulate sewage disposal or to provide provision of services to premises, meaning that whoever wants to construct a building must ensure that provision is made for treatment and disposal of domestic sewage.</p> <ol style="list-style-type: none"> <li>2. It needs to be discussed with the MLG and the local authorities to which extent by-laws are the appropriate regulatory tools to enhance the regulatory framework.</li> </ol>
Standards	ZABS	ZS 923: 2007 Effluent Discharged into Inland Surface Waters General Limits	<ul style="list-style-type: none"> <li>• Lays down the tolerance limits for effluents discharged into inland surface waters</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>1. ZEMA currently regulates the effluent discharge to water but does not provide standards for effluent which is percolated into the soil (e.g. effluent from septic tanks or from faecal sludge treatment plants, like the one operated by the Kanyama Water Trust). Information suggests that ZEMA applies the same regulations as for the discharge into water bodies.</li> </ol>

Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
				<p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>From a technical point of view, it is highly recommendable to establish separate regulations for septic tank effluent to avoid soil or media clogging to a degree where infiltration is reduced dramatically and anaerobic, saturated conditions develop. There is a significant difference between discharging into a water body or into the soil.</li> <li>In addition, there is a need to develop a standard for sewage and faecal sludge to be used in agriculture and for other reuse purposes.</li> </ol> <p><i>Refer to standards for treatment, discharge and reuse of faecal sludge and effluents from faecal sludge treatment plants as outlined below.</i></p>
	ZEMA	<p><b>Standards for treatment, discharge and reuse of faecal sludge and effluents from faecal sludge treatment plants</b></p>	<p>ZEMA has the mandate to develop standards and guidelines relating to the protection of air, water, land and other natural resources and the prevention and control of pollution, the discharge of waste and the control of toxic substances.</p> <p>The guiding regulation is laid out in the Statutory Instrument No.112 of 2013 The Environmental Management (Licensing) Regulations. The Third Schedule provides for the Limits for Effluent and Wastewater.</p>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>ZEMA currently regulates the effluent discharge to water but does not provide standards for effluent which is percolated into the soil (e.g. effluent from septic tanks or from faecal sludge treatment plants). Information suggests that ZEMA applies the same regulations as for the discharge into water bodies. In rural growth centres, septic tanks and other containment structures may be built, e.g. Solwezi Baseline Survey shows septic tanks in rural areas.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>There is a need to develop, in liaison with ZEMA and ZABS, standards and guidelines relating to the treatment and disposal or reuse of treated faecal sludge or effluents from faecal sludge treatment plants and/or onsite sanitation facilities (e.g. septic tanks). This mainly relates to the reuse of sludge in agriculture and the discharge of effluents into the soil rather than water bodies (existent).</li> </ol> <p><i>For information, refer to WHO Guidelines 20016 or EU Guidelines USEPA guidelines for biosolids.</i></p>
Code of Practice	ZEMA	<p><b>Code of Practice: On-site Sanitation Systems for Single Houses</b></p>	<p>This code of practice provides guidance on the design, operation and maintenance of on-site sanitation/wastewater treatment systems for single houses (e.g. less than or equal to 10). It will assist authorities, developers, system manufacturers, system designers, installers and operators to deal with various systems.</p> <p>This code of practice may set out the following:</p> <ul style="list-style-type: none"> <li>An assessment methodology for the determination of site suitability for an onsite sanitation system and identification of the minimum environmental protection requirements</li> </ul>	<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>According to the information obtained, no code of practice currently exists. This is particularly important for growth centres.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>It is strongly recommended to develop an overall framework of best practice in relation to the development of onsite sanitation systems/wastewater treatment and disposal systems for unsewered areas, for the protection of the environment and specifically water quality.</li> </ol>



Regulatory tools	Institution	Type of tool	Objective and relevance	Findings and recommendations
			<ul style="list-style-type: none"> <li>• A methodology for the selection of a suitable onsite sanitation system for sites in unsewered areas</li> <li>• Information on the design and installation of conventional septic tank systems and other suitable onsite sanitation facilities</li> <li>• Maintenance requirements for the above on-site sanitation systems</li> </ul>	<p>2. Beside septic tanks (an underground tank where the solids sink to the bottom and the liquid flows out and soaks into the ground) and cesspools (also called cesspit – a sealed tank that collects the sewage), it needs to be decided if other onsite sanitation facilities should be included, due to the fact that not all households have a domestic water connection (at their premises) and particularly poor households may not be able to afford them.</p>
Building Code	MLG / Department of Physical Planning	Building codes	<p>A building code (or building regulations) is a set of rules that specifies the standards for constructed objects such as buildings and non-building structures. The main purpose of building codes is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures. The building code becomes law of a particular jurisdiction when formally enacted by the appropriate governmental authority.</p> <p>Building codes are generally intended to be applied by architects, engineers, constructors and regulators but are also used for various purposes by safety inspectors, real estate developers, subcontractors, manufacturers of building products and materials, insurance companies, facility managers, tenants, and others.</p> <p>For residential properties, building codes usually include specifications on how toilets need to be designed.</p>	<p><b>Finding</b></p> <p>1. The Ministry of Local Government under the Department of Physical Planning has established national building codes that due to their age need to be revised.</p> <p><b>Recommendation</b></p> <p>1. The revision of building codes will be strongly linked to the development of standards for sanitation facilities as mentioned above.</p>
Permit	ZEMA	Permit to discharge effluent into sewerage system	<ul style="list-style-type: none"> <li>• Controls owners or operators of a trade or industrial undertaking wishing to discharge effluent from their plant into an existing sewerage system</li> </ul> <p>Written permission from the local authority operating or supervising the sewerage system must be obtained. A local authority may impose conditions under which effluent may be accepted or prescribe methods for pre-treating the effluent prior to accepting the effluent into the sewerage system (by-law).</p>	<p><b>Finding</b></p> <p>1. Existent</p>
Inspection Plan	ZEMA, Local Authorities, CUs	<b>Inspection Plan</b>	<p>According to the Public Health Act 1995, local authorities are responsible for the inspection of sanitation facilities</p>	<p><b>Finding</b></p> <p>1. No inspection plan exists.</p> <p>2. Inspection of sanitation facilities needs to be carried out regularly or at least after construction and based on demand if any nuisance or public health risks occur.</p> <p>3. Although the establishment of a suitable sanitation facility and its preconditions are mandatory to obtain a building permit, hardly any inspections are carried out nor do LAs enforce the existing building standards.</p>

<p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>1. A regime for inspecting at least septic tanks should be established. Initial ideas suggest that either ZEMA or local authorities should be responsible for the development of respective inspection plans. The aim of the plan is to protect human health and water from the risks posed by domestic wastewater treatment systems/onsite sanitation facilities.</li> <li>2. The plan should be delivered by the LA or delegated to the CUs and the number of inspections for each area should be allocated on a risk basis. 'Risk-based' means putting resources where the danger to human health and the environment is greatest. The plan would focus particularly on areas where the potential risk to public health and pollution of valuable water resources is higher.</li> <li>3. An inspection under the National Inspection Plan checks that a septic tank or onsite sanitation facility is fit for purpose and that it does not pose a risk to human health or the environment. If a system fails an inspection, then an advisory notice should be issued. This would specify what is wrong and what measures need to be taken to fix the problem.</li> </ol> <p>If the task is delegated to the CUs, capacities need to be developed.</p>	
<p><b>Finding</b></p> <ol style="list-style-type: none"> <li>1. None existent.</li> </ol> <p><b>Recommendation</b></p> <ol style="list-style-type: none"> <li>1. Current legislation suggests that ZEMA could be responsible to establish the registration process, because of the environmental risks of pollution involved, as well as to maintain the database and the inspection records.</li> <li>2. ZEMA could develop a national inspection plan in close cooperation with the local authorities and the CUs, using a risk-based approach to prioritise areas of higher risk to human health and water quality.</li> <li>3. ZEMA would have a supervisory role in relation to each local authority's performance of its functions under the public health regulations. It would also be responsible for the establishment and maintenance of a register of inspectors which is made available to the local authorities.</li> </ol>	<p><b>Regulations</b></p> <p>ZEMA, local authorities, CUs</p> <p><b>Registration and inspection regulations of septic tanks</b></p> <p>In general, all onsite septic tank systems or domestic wastewater treatment systems (DWWTS) will have to be registered. All new developments where a DWWTS is constructed or installed shall ensure that the system is registered within a defined number of days of connection of the premises to the DWWTS.</p>

<p>MWDSEP</p>	<p><b>Statutory Instrument: Regulations governing the operation and maintenance of onsite sanitation facilities</b></p> <ul style="list-style-type: none"> <li>Establishes regulations for the operation and maintenance of onsite sanitation facilities and/or domestic wastewater treatment systems and/or onsite sanitation facilities</li> <li>Defines desludging/emptying requirements</li> <li>Defines registration and monitoring requirements</li> </ul>	<p><b>Finding</b></p> <p>1. None existent.</p> <p><b>Recommendation</b></p> <p>1. To be discussed and developed if considered appropriate.</p>
<p>MWDSEP</p>	<p><b>Statutory Instrument: Waste Management (Use of Sewage and Faecal Sludge in Agriculture) Regulations</b></p> <ul style="list-style-type: none"> <li>Defines standards for the use or disposal of sewage and faecal sludge</li> <li>Establishes the general requirements, pollutant limits, operational standards and management practices, as well as the frequency of monitoring, recordkeeping, and reporting requirements</li> </ul>	<p><b>Finding</b></p> <p>1. None existent.</p> <p><b>Recommendation</b></p> <p>1. To be discussed and developed if considered appropriate.</p>



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