FINAL BASELINE REPORT

Baseline Assessment for the USAID Expanding Water and Sanitation Project

Prepared for

Research Triangle Institute (RTI)

By

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June 2022

List of Acronyms and Abbreviations

CSO	-	Central Statistics Office
ERs	-	Enumeration Areas
FPIC	-	Free, Prior, and Informed Consent
GPS	-	Global Positioning System
GRZ	-	Government of the Republic of Zambia
HH	-	Households
IDIs	-	In-depth Interviews
KIs	-	Key Informants
KII	-	Key Informant Interview
KPIs	-	Key Performance Indicators
MDGs	-	Millennium Development Goals
M&E	-	Monitoring and Evaluation
NRWSSP	-	National Rural Water Supply and Sanitation Program
ODK	-	Open Data Kit
RAs	-	Research Assistants
RTI	-	Research Triangle Institute
SPSS	-	Statistical Package for Social Scientists
USAID	-	United States Agency for International Development
WHO	-	World Health Organization
WASH	-	Water, Sanitation and Hygiene

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Acknowledgement

We would like to thank staff from the following institutions; the United States Agency for International Development (USAID) Zambia for Financial and Technical Support to the USAID Expanding Water and Sanitation Project, Ministry of Water and Sanitation, Ministry of Health, Ministry of Education, Ministry of Local Government and Rural Development, Water Commercial Utility Companies in Northern, Muchinga, Southern and Western Provinces, the National Water & Sanitation Council (NWASCO), the Water Resources Management Authority (WARMA) and the Zambia Environmental Management Agency (ZEMA) for providing valuable information for the WASH Baseline Assessment. Special gratitude is also extended to the local authorities in the 12 districts, members of the District Water and Sanitation committees, community leaders and the household respondents in the selected districts. Lastly, we extend our sincere gratitude to the technical staff at USAID for their guidance and support during the WASH Baseline Assessment.

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Executive Summary

Introduction: The WASH Baseline Assessment was commissioned by Research Triangle Institute and conducted by IMPACT Research Zambia Ltd. The assessment was designed to form an important part of the M&E processes of the project as well as to inform its interventions. Therefore, the findings of the WASH Baseline Assessment are expected to contribute to project design, implementation, monitoring, learning and evaluation.

Methodology: To conduct the WASH Baseline Assessment, a cross-sectional study design with mixed-methods data collection approaches (quantitative and qualitative) was used. The assessment was conducted in 4 provinces, namely; Northern, Muchinga, Southern and Western. The districts covered in the study include; Lunte and Mungwi in Northern Province, Nakonde, Chinsali and Mpika in Muchinga province, Kalomo and Kazungula in Southern province as well as Nalolo, Sesheke, Kaoma, Kalabo and Mongu in Western province.

Data were collected from the following targeted population groups; heads of households or their spouses, representatives from; Ministry of Water Development, Sanitation and Environmental Protection, Water Resources Management Authority (WARMA), Zambia Environmental Management Agency (ZEMA), National Water and Sanitation Council (NWASCO) and District Water Affairs Department. Other target populations included representatives from; day schools, health facilities, local authorities, and water utility companies, among others.

The assessment collected the following types of data: proportion of households with access to basic drinking water services, proportion of households with access to safely managed drinking water services, proportion of institutional settings with access to basic water services, and proportion of households receiving improved service quality from existing basic drinking or safely managed water services. Other types of data collected include: proportion of households verified as Open Defecation Free, proportion of households with access to a basic sanitation service, and proportion of facilities with access to basic sanitation services. Quantitative data collected through household and institutional questionnaires using Kobo Collect were analyzed using STATA while qualitative data from key informant interviews were analyzed using Atlas.ti, a qualitative data analysis software.

Key Results

Access to Water Services by Households

Overall, results of the baseline assessment indicate that 13% (n=4,448) of households in the study have *no access* to water services. On the contrary, the results further indicate that, overall, only 4% of households in the study have access to *safely managed* water services. In addition, the results show that, overall, 40% of households in the study have access to *unimproved* water services while 32% have access to *basic* water services. Disaggregated by district, results of the baseline assessment show that Nalolo (52%), Mpika (47%) and Kazungula (43%) districts reported the highest proportion of households with access to *basic drinking*

water services. On the contrary, the findings of the baseline assessment indicate that Lunte (9%), Mungwi (14%) and Chinsali (21%) districts reported the least proportion of households with access to *basic drinking water services*.

Further, findings of the baseline assessment indicate that Sesheke (12%), Kaoma (7%) and Kalomo (6%) districts reported the highest proportion of households with access to *safely managed* drinking water services. In contrast, results further show that Mungwi (0.8%), Kalabo (2%) and Nakonde, Mpika, Kazungula as well as Mongu (3% each) districts reported the least proportion of households with access to *safely managed* drinking water services.

Access to Basic Sanitation by Households

Overall, findings of the baseline assessment indicate that 27% (n=4,448) of households in the study practice *open defecation* while 52% have access to unimproved sanitation services. In addition, overall, 11% and 9% of households in the assessment have *limited* and *basic* access to sanitation services respectively. With regards to the proportion of households practicing *open defecation*, results indicate that, Nalolo (68%), Kalabo (59%) and Kazungula (48%), reported the highest proportion of households practicing *open defecation*. In contrast, baseline assessment findings indicate that, Mpika (4%), Chinsali (6%) and Nakonde (7%) reported the least proportion of households practicing open defecation.

In terms of access to *unimproved* sanitation services, findings of the baseline assessment suggest that, Chinsali (83%), Mpika (68%) and Mungwi (64%), reported the highest proportion of households with access to *unimproved* sanitation services. On the other hand, Kazungula (29%) and Nalolo (30%) reported the least proportion of households with access to *unimproved* sanitation services. In addition, baseline assessment results indicate that Nakonde (32%) and Mpika (26%) reported the highest proportion of households with *limited* access to sanitation services while Kaoma and Chinsali (3% each), reported the least proportion of households with *limited* access to sanitation services.

Access to Water – Institutional Settings

Furthermore, the findings of the baseline assessment, indicate that, overall, 67% (n=51) of health facilities in the assessment have access to *basic* water services while 20% have access to *limited* sanitation services. In contrast, findings indicate that only 14% of health facilities in the assessment have no access (*no service*) to water services. Disaggregated by districts, results shows that all (100%) health facilities in Nalolo, Kalabo, Mongu and Mungwi districts have access to *basic* water services. On the contrary, the results indicate that 20% of health facilities in Lunte districts have access to *basic* water services. In addition, the findings indicate that 60% (Lunte), 50% (Nakonde), 40% (Chinsali and Sesheke) and 33% (Kazungula) of health facilities have access to *limited* water service.

In terms of access to *basic* water services in schools, results of the WASH Baseline Assessment, indicate that, overall, 69% (n=99) of schools in the assessment have access to *basic* water services while 19% have access to *limited* water services. On the contrary, results from the assessment show that 12% of schools in the study have no access to water services (*no service*). Disaggregated by district, findings indicate that, Mongu (100%) and Nalolo (91%)

reported the highest proportion of schools with access to *basic water services*. Moreover, findings also indicate that 60% or more of schools in Nakonde, Chinsali, Mpika, Mungwi, Kazungula, Kalomo and Kalabo have access to *basic* water services. Furthermore, results of the baseline assessment indicate that 50% (Sesheke) and 43% (Lunte) of schools reported having *limited* access to water services compared to 7% and 9% in Chinsali and Nalolo districts, respectively.

Access to Basic Sanitation Services in Institutional Settings

Overall, baseline assessment results indicate that, the majority (88%) of health facilities in the study have *limited* access to sanitation services. Further, overall, only 12% (n=51) of health facilities in the study have no access (*no service*) to sanitation services. Disaggregated by districts, results shows that all (100%) health facilities in Nalolo, Kalabo, Mongu and Mungwi districts have access to *basic* water services. On the contrary, the results indicate that 20% of health facilities in Lunte districts have access to *basic* water services. In addition, the findings indicate that 60% (Lunte), 50% (Nakonde), 40% (Chinsali and Sesheke) and 33% (Kazungula) of health facilities have access to *limited* water service. Baseline assessment findings further show that 50% (Kaoma), 36% (Kalomo), 33% (Mpika) and 20% (Lunte) of health facilities reported having *no access* to water services.

In terms of access to *basic* sanitation services in schools, results of the WASH Baseline Assessment indicate that, none of the toilet facilities in all the schools across all 12 districts in the assessment meet the *basic* sanitation service level. Overall, baseline assessment results indicate that 97% (n=99) of schools in the assessment have access to *limited* sanitation services. In contrast, findings indicate that only 3% of schools in the assessment have no access (*no service*) to sanitation services. Disaggregated by district, results of the baseline assessment indicate that, all (100%) schools in Nakonde, Chinsali, Mpika, Mungwi, Lunte, Mongu, Kalabo, Kaoma and Nalolo have *limited* access to sanitation services. In contrast, findings indicate that 92% (Kazungula and Kalomo), and 88% (Sesheke) of schools have *limited* access to sanitation services.

WASH Governance, Financing and Coordination

The main policy guiding the provision of water and sanitation is the National Water Supply and Sanitation Policy (NWSSP), developed in 2020 by the Ministry of Water Development and Sanitation (MWDS) and other stakeholders. The policy aims to set coherent policy measures to guide the development and implementation of national strategies and programmes to achieve improved water supply and sanitation. It also provides an institutional and legal framework, for sector coordination and management, infrastructure development as well as financing and investment, inter alia.

According to the findings of the WASH Baseline Assessment, the two major sources of funding for WASH in the districts in the study are public resources and development or donor funds. Regarding stakeholder engagement and coordination, results from all key informants

from councils (districts) indicated that the local authorities are responsible for stakeholder engagement and coordination.

Conclusion

The results of the WASH Baseline assessment suggest that the USAID Expanding Water and Sanitation Project is aligned to the National Water Supply and Sanitation Policy II (NWSSP II) and the Sustainable Development Goals (SGD) targets 6.1 and 6.2. To achieve its objectives, the USAID Expanding Water and Sanitation Project must work with other key stakeholders in the target districts. These stakeholders include but not limited to; Ministry of Water Development and Sanitation (MWDS), NWASCO, WARMA, ZEMA, water utility companies as well as local authorities. However, findings of the WASH Baseline Assessment indicate that these institutions are faced with various challenges, ranging from, high labour turnover and limited funding to lack of capacity to fully undertake their mandates. To ensure project success, these challenges need to be addressed.

In addition, findings of the WASH Baseline Assessment indicates that none of the schools and health facilities in the study have access to *basic* sanitation services. Further, results of baseline assessment suggest low access to *safely managed* and *basic* water and sanitation services among households in all the districts. According to the findings, access to *safely managed* water services ranges from 0% to 12% while access to *basic* water services ranges from 9% to 52% across all districts in the study. Further, access to *safely managed* sanitation services among households ranges from 0% to 5% while access to *basic* sanitation services ranges from 0% to 20% across all the 12 districts. Therefore, viewed within this context, the USAID Expanding Water and Sanitation Project is relevant and, can positively contribute towards the achievement of the benchmarks set under the NRWSSP II as well as the SDGs when and if successfully implemented.

Recommendations

1. The USAID Expanding Water and Sanitation Project should consider supporting the provision of WASH services in rural areas and rural grow centres both at regulatory and implementation levels by;
    a. Supporting the finalization and development of regulatory tools (standards and limits for faecal sludge by ZEMA) and finalization of the Urban Onsite Sanitation and Faecal Sludge Management Framework for Provision and Regulation in Zambia by NWASCO,
    b. Supporting the development of a comprehensive data management system to establish status of services delivery in rural areas and to inform interventions in water and sanitation.
    c. Supporting the review of staffing plan in CU's so as to improve their capacity to implement their WASH mandate in rural areas,
    d. Conduct hygiene education, CLTS and sanitation marketing to raise awareness and ensure appropriate latrines are constructed in the districts in rural areas.

CHAPTER ONE: BACKGROUND

1.1 Introduction

This report has been prepared in accordance with the *Terms of Reference* of the Baseline Assessment for the USAID Expanding Water and Sanitation Project. The report contains the background information, baseline assessment methodology, findings, conclusions and recommendations. The WASH Baseline Assessment was commissioned by Research Triangle Institute (RTI) and conducted by IMPACT Research Ltd.

1.2 Project Context

In 2006, the Government of the Republic of Zambia (GRZ) developed the National Rural Water Supply and Sanitation Programme I (NRWSSP I) to increase and improve access to water supply and sanitation in rural areas of Zambia. The NRWSSP I was aligned to target 7C of the Millennium Development Goals (MGDs). Target 7C of the MGDs sought *"to halve the proportion of the universal population without sustainable access to clean and safe drinking water and basic sanitation by 2015".*

The NRWSSP I ended with gains in coverage for water supply and sanitation in rural areas. However, disparities still existed between urban and rural areas, with low coverage in rural areas as per the 2018 Zambia Demographic Health Survey (ZDHS). According to the ZDHS 2018, 92% of urban population had access to safe water while 41% had access to sanitation, compared to 58% and 28% of rural population with access to safe water and sanitation respectively.

Moreover, an End of Term Evaluation (ETE) of the NRWSSP I revealed that the programme did not achieve the first part of its overall objective, *"to increase and improve access to water supply and sanitation,* and *to achieve the MDGs target for water supply and sanitation*". This, notwithstanding, the programme was able to achieve some major successes and provided lessons that could enable its successor programme, NRWSSP II, to achieve the second part of its overall objective: *"to meet the national vision for universal coverage by 2030*".

Therefore, the NRWSSP II builds on the lessons learnt during the NRWSSP I, as well as the achievements attained. It consists of a coherent set of investment, institutional and support activities aimed at providing sustainable water supply and sanitation services to the rural

population in Zambia. In addition, the NRWSSP II is aligned to the National Vision 2030 as well as the SDGs.

Furthermore, the Government of the Republic of Zambia developed the National Urban Water Supply and Sanitation Programme (NUWSSP 2011-2030) to address the increase in demand for adequate access to water supply and sanitation services in urban and peri-urban areas. The NUWSSP seeks to, inter alia, "*provide secure access to safe potable water sources and improved sanitation facilities to 100% of the population in both urban and peri-urban areas".* In this regard, the USAID Expanding Water and Sanitation Project is designed to positively contribute to achieving the benchmarks set under the NRWSSP II and the SDGs.

1.3 The USAID Expanding Water and Sanitation Project

The objective of the USAID Expanding Water and Sanitation Project is to professionalize WASH services, promote accountability for reliable and high-quality WASH services, and to enhance the enabling environment for private sector engagement in service delivery in Zambia. To achieve this, the project uses USAID's Local Solutions Framework to strengthen social accountability within complex and dynamic local systems. This approach entails a flexible and responsive strategy to link supply-side governance – understood as the GRZ's ability to come through on its promises for providing WASH services to its citizens – with demand-side governance, defined as robust civil society engagement that keeps governments and private service providers accountable.

The project is expected to be implemented in four (4) provinces, namely; Muchinga, Northern, Southern and Western – targeting to provide water and sanitation interventions in 12 districts. With regards to water, the following districts will be the areas of focus: Lunte and Mungwi districts in Northern Province; Kalomo and Kazungula in Southern Province; and Nakonde in Muchinga Province. For sanitation, the focus districts will be; Nalolo, Kalabo, Sesheke, Mongu, and Kaoma districts in Western Province as well as Chinsali and Mpika in Muchinga Province.

1.4 WASH Baseline Assessment

Within the framework of the USAID Expanding Water and Sanitation Project, RTI commissioned a WASH Baseline Assessment for purposes of forming an important part of the monitoring and evaluation (M&E) processes of the project as well as to inform its

interventions. Through the WASH Baseline Assessment, RTI and its partners hope to understand the project context: WASH status (or level of service) which would inform interventions as well as to be able to measure performance of the project – through the key performance indicators (KPIs). In this regard, the findings of the WASH Baseline Assessment are expected to contribute to project design, implementation, monitoring, learning and evaluation. Against this background, IMPACT Research Zambia Ltd., was engaged by RTI to conduct a comprehensive WASH Baseline Assessment in the 12 districts which included, a complete mapping of;

i. Location (GPS) and state of existing WASH facilities,
ii. Functionality of WASH facilities,
iii. Information on who manages facilities,
iv. Demographic data, including, inter alia, number of women and youth users, and
v. Population served via services to clinics and schools.

The WASH Baseline Assessment was conducted in a manner that allowed for project results to be evaluated (through percentage measurement) over the life of the project and, in accordance with the key performance indicators drawn from the USAID Water and Development Indicator Handbook.

1.4.1 Expected Deliverables

In undertaking the WASH Baseline Assessment, the following were the expected deliverables:

1. Weekly progress reports using an agreed upon template;
2. Draft baseline report describing the survey methods and tools used, reports analyzed, a map with location of facilities, and data disaggregation tables;
3. Final baseline report describing the survey methods and tools used, reports analyzed, a map with location of facilities, and data disaggregation tables; and
4. Presentation on the baseline survey results.

CHAPTER TWO: BASELINE ASSESSMENT METHODOLOGY

2.1 Introduction

This chapter outlines the research methodology employed to conduct the WASH Baseline Assessment. The chapter includes sections such as; study design, sampling procedure, data collection methods, data management and quality control, data analysis, ethical considerations and COVID-19 prevention strategies, among others.

2.2 Study Design

To conduct the WASH Baseline Assessment, a cross-sectional study design with mixed-methods data collection approaches (quantitative and qualitative) was used. This design allowed for the collection of adequate data representing the views of the population of interest. Further, the design ensured that adequate information on key performance indicators was collected. It is therefore believed that this design would allow for the periodic measurement (i.e. baseline, mid-term and end-line evaluation) of key performance indicators over the life of the project.

2.3 Study Area

The WASH Baseline Assessment was conducted in 4 provinces, namely; Northern, Muchinga, Southern and Western. The districts covered include; Lunte and Mungwi in Northern Province, Nakonde, Chinsali and Mpika in Muchinga province, Kalomo and Kazungula in Southern province as well as Nalolo, Sesheke, Kaoma, Kalabo and Mongu in Western province.

2.4 Study Population

The WASH Baseline Assessment targeted the following population groups; heads of households or their spouses, representatives from; Ministry of Water Development and Sanitation, Water Resources Management Authority (WARMA), Zambia Environmental Management Agency (ZEMA), National Water and Sanitation Council (NWASCO) and District Water Resources Development (formerly, District Water Affairs Department). Other target populations included representatives from; day schools, health facilities, local authorities, and water utility companies, among others.

2.5 Sampling Procedure

2.5.1 Baseline Coverage

The sampling procedure for the WASH Baseline Assessment was designed to obtain representative estimates in the twelve districts for the two key areas of focus (water and sanitation) and indicators of interest as per the *Request for Proposal* document.

2.5.2 Sampling Methods

Due to the desire to obtain representative estimates (results) of the populations of interest as well as the need to ensure that data was collected from all key project stakeholders, two methods of sampling were employed: probability and non-probability sampling techniques. Probability sampling methods were used to select the Standard Enumeration Areas (SEAs) and the actual households interviewed – based on the 2010 Census of Population and Housing sampling frame. In this regard, probability sampling gave all household target populations in each of the 12 districts an equal and non-zero chance of being included in the study. On the other hand, non-probability sampling technique (purposive) was used to select key informants who provided detailed insights and explanations on the two focus areas (water and sanitation) and indicators of interest.

2.5.3 Sample Size Estimation for the Two Focus Areas

Access to Water

In order to estimate the appropriate district level sample size for households with access to water, the following formula for calculating the sample size was used:

$$n = DEFF * (z^2 *(p) (1-p))/d^2$$

Where:

DEFF = Design effect (1.4)

Z value = 1.645 for p = 0.1 or 90% confidence intervals

P = Estimated prevalence of households with access to basic drinking water ZDHS 2018 (0.64)

$$q = 1-p$$
$$= 1 – 0.64$$
$$= 0.36.$$

Therefore, the sample size required was calculated as follow:

$$n = DEFF * (z^2 *(p) (1-p))/d^2$$

$$n = 1.4*(((1.645^2) *(0.64) *(0.36))/ (0.05^2))$$

$$n = 349$$

Access to Sanitation

In order to estimate the appropriate district level sample size for households with access to sanitation services, the following formula for calculating the sample size was used:

$$n = DEFF * (z^2 *(p) (1-p))/d^2$$

Where:

DEFF = Design effect (1.4)

Z value = 1.645 for p = 0.1 or 90% confidence intervals

P = Estimated prevalence of households with access to sanitation services ZDHS 2018 (0.33)

$$q = 1-p$$
$$= 1 – 0.33$$
$$= 0.67.$$

Thus, the required sample size for estimating access to sanitation services was calculated as follow:

$$n = DEFF * (z^2 *(p) (1-p))/d^2$$

$$n = 1.4*(((1.645^2) *(0.33) *(0.67))/ (0.05^2))$$

$$n = 335$$

Therefore, the calculated sample sizes for the WASH Baseline Assessment were 349 households (access to water) and 335 households (access to sanitation services) per district. However, since oversampling helps in ensuring that estimates are closer to the true population parameters, district samples sizes were increased to a minimum of 350 households.

2.5.4 Probability Sampling

2.5.4.1 Sample Selection and Allocation
Enumeration Areas, Households and Respondent

A two-stage stratified cluster sample design was adopted for the WASH Baseline Assessment. In the first stage, 10 Standard Enumeration Areas (SEAs) were selected for each of the twelve (12) target districts, considering probability proportional to estimated size (PPES), among peri-urban and rural SEAs. In the second stage, a minimum of 35 households were selected using a circular systematic random sampling in each of the selected ten (10) SEAs. This selection process resulted in approximately 350 households per district and, overall, 4,200

households (HHs) in all the 12 districts. This method assumes households are arranged in a circular manner (something of a construct) which allows selection from overlapping intervals. With this sampling procedure, it was possible to continue selecting replacement households in the event that some households originally selected did not have eligible respondents. Where eligible respondents were available, only household heads, their spouses or a knowledgeable adult person responded to the questionnaire.

2.5.5 Non-Probability Sampling

To select respondents for the key informant interviews (KIIs), purposive sampling technique was employed. In this regard, a total of 31 KIIs were conducted in all 12 districts, refer to table 2.1 for details.

Table 2. 1: Number of KIIs and IDIs per district

Province	District	Number of KIIs
Northern	Lunte	3
	Mungwi	3
Muchinga	Nakonde	3
	Chinsali	4
	Mpika	3
Southern	Kalomo	3
	Kazungula	3
Western	Nalolo	1
	Kalabo	2
	Sesheke	1
	Mongu	3
	Kaoma	2
Total		**31**

2.6 Data Collection Methods and Sources

As indicated earlier, the WASH Baseline Assessment employed mixed-method data collection approaches to collect both secondary and primary data from different sources.

2.6.1 Secondary data Sources

Relevant literature including, among others; relevant project documents, relevant reports from CUs and NWASCO, policy documents from relevant government ministries, departments and agencies, international related documents such as SDGs and JMP and relevant empirical studies were reviewed.

2.6.2 Primary data Sources

Primary data were collected from key project stakeholders using the following methods:

a. **Household Survey:** Using a semi-structured questionnaire, quantitative data were collected from selected households, health facilities and day schools in the 12 districts.
b. **Key Informant Interviews:** Using interview guides, qualitative data were collected from key stakeholders such as; representatives from; Ministry of Water Development, Sanitation and Environmental Protection, WARMA, ZEMA, NWASCO, water utility companies, local authorities and District WASH Committees.
c. **Observations:** using a pre-determined check list, the observation method was used to collect data on the location and state of existing WASH facilities as well as their functionality in the districts of interest.

2.6.3 Types of Data collected

The WASH Baseline Assessment collected different types of data on water supply, sanitation and hygiene to allow for the measurement of key performance indicators. The following types of data were collected:

a. Water supply;
   - Proportion of households with access to basic drinking water services,
   - Proportion of households with access to safely managed drinking water services,
   - Proportion of institutional settings (schools and health facilities) with access to basic water services, and
   - Proportion of households receiving improved service quality from existing basic drinking or safely managed water services.

b. Access to Sanitation.
   - Proportion of households verified as Open Defecation Free,
   - Proportion of households with access to a basic sanitation service, and
   - Proportion of basic sanitation facilities provided in institutional setting.

2.7 Data Management and Quality Control

For purposes of ensuring enhanced data management and quality, quantitative data for the WASH Baseline Assessment were collected using a Mobile Data Collection application – KoBo Collect. The App helped to ensure that data were collected in real time. It further helped to minimize mistakes such as; keeping out of range responses from being entered, skipping questions and recording of incorrect responses, consequently, leading to improved data quality. The completed questionnaires in KoBo Collect were verified by the field

supervisors for consistency and completeness before uploading the data into the server at the end of each day of data collection. Further, KoBo Collect was used to collect geo-coordinates for all water and sanitation facilities, health, schools and households. In addition, all researchers underwent an intensive 3-day training to enable them collect both quantitative and qualitative data.

2.8 Data Analyses

The quantitative data collected through household and institutional questionnaires using Kobo Collect were exported to SPSS version 26.0 software for purposes of cleaning and, thereafter, to STATA for analyses. Data analyses were conducted in line with the key indicators and objectives of the WASH Baseline Assessment. The analyses processes resulted in the production of descriptive statistics such as frequencies and cross-tabulations

On the other hand, qualitative data collected through KIIs were transcribed and then uploaded onto Atlas.ti, a qualitative data analysis software. The data was then analyzed hierarchically according to themes in either two or three-level hierarchies. That is, sub-themes followed the most prominent themes. Coding in Atlas.ti was also done in the same way. Once coded, nodes were used to identify patterns and common themes across sources and differences in responses between and across groups based on the indicators and objectives of the WASH Baseline Assessment.

2.9 Recruitment and Training of Research Assistants

An experienced team of researchers were recruited to collect relevant data from selected respondents in the 12 districts. The minimum qualification of the researchers was a university degree. In addition, a 3-day training workshop for all persons involved in the WASH Baseline Assessment was conducted. All sessions of the training workshop were done using power point presentations. The objectives of the training were to:

1. Explain the context and rationale for the WASH Baseline Assessment;
2. Explain the sources of data for the WASH Baseline Assessment;
3. Explain the sampling methodology for the WASH Baseline Assessment;
4. Explain the data collection tools used in the WASH Baseline Assessment;
5. Explain the ethics and rules of conduct for WASH Baseline Assessment; and
6. Explain the duties and responsibilities of supervisors and research assistants in the processes of the study; during and after the data collection process.

2.10 Pre-Testing

Before the commencement of data collection, a pilot study was conducted. The purpose of the pilot study was to test both the tools as well as the methodology and, other aspects of data collection. In addition, the pilot study was conducted to ensure familiarity with the study tools, following the training. Other reasons for pre-testing included but not limited to assessing: duration of interviews, length of data collection tools, appropriateness of questions developed, appropriateness of data collection tools for the tasks, and the ability of research assistants to undertake the data collection tasks etc. Based on the observations made during the pilot study, adjustments to the tools, where necessary, were made.

2.11 Study limitations and Mitigation Measures

Limitation	Mitigation Measure
a. The sampling frame for the WASH Baseline Assessment was drawn from the 2010 Census of Population and Housing and, since then, some district and ward boundaries have changed. Therefore, following the creation of new districts in some provinces, some of the randomly selected wards and SEAs (originally in the districts of interest), were moved to the newly created districts. In addition, some randomly selected wards and SEAs were inaccessible due to floods and/or poor road infrastructure. As a result, such wards and SEAs needed to be replaced. However, to avoid selecting wards and SEAs that were either inaccessible or in other districts, replacement wards and SEAs were purposively selected. Therefore, in such cases, it was not possible to randomly select wards and SEAs.	a. To mitigate, more wards and SEAs than was required were purposively selected. From the purposively selected wards and SEAs, random selection was used to select replacement wards and SEAs.

2.12 Ethical Considerations

In undertaking the WASH Baseline Assessment, due considerations were made to ensure that all appropriate research and ethics protocols concerning interactions with human subjects were strictly followed. These included but not limited to; obtaining ethical approval for the study, respecting selected respondents' decision to refuse to take part in the assessment, free, prior, and informed consent (FPIC), confidentiality of information provided, respect for local customs, values, beliefs, norms, religion, as well as taking into account the gender and age of the respondents, among other considerations. In addition, considerable care was taken to

ensure that the WASH Baseline Assessment was conducted in line with the UN Universal Declaration of Human Rights, rights of people with disability and other relevant human rights conventions.

2.13 COVID-19 Prevention Measures

The following measures, among others, were undertaken by the researchers to reduce the risk of contraction and spread of the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), the virus responsible for COVID-19:

- Maintaining social distance with interviewees as recommended by WHO;
- Interviewers wore masks during the data collection process and when interacting with fellow researchers.
- Disinfection of the interior of vehicles used to transport researchers during the data collection exercise.
- Maintaining social distance in the mode of transport used by the research team;
- Dissemination of COVID-19 awareness-raising messages; and
- Avoiding handshakes with interviewees and among the research team members.

CHAPTER THREE: WASH BASELINE ASSESSMENT FINDINGS

3.1 Introduction

This chapter presents results of the WASH Baseline Assessment in relation to; households' socio-economic and demographic characteristics, households' access to water services and sanitation facilities, access to basic water services and basic sanitation facilities in institutional settings (schools and health facilities). The chapter further presents baseline assessment results in relation to WASH governance, coordination and financing as well as cross cutting issues.

3.2 WASH at Household Level

The WASH Baseline Assessment was designed to collect information on; household demographic characteristics, the proportion of households with access to; basic drinking water services, safely managed drinking water services, and the proportion of households receiving improved service either from existing basic drinking or safely managed water services. This section presents the WASH Baseline Assessment results in this respect.

3.2.1 Household Characteristics

The WASH Baseline Assessment collected data on household demographic characteristics in relation to sex, age and marital status of respondents, employment status of heads of household and whether or not a particular household had a person(s) with disability. Results, shown in table 3.1 indicate that the majority (more than 50%) of respondents across all 12 districts were female. Findings further show that the majority (more than 25%) of respondents in Nakonde, Chinsali, Mpika, Lunte, Mungwi, Kazungula, Sesheke and Kaoma were between 25-34 years old. In contrast, the findings also indicate that the majority of respondents in Kalomo (28%), Mongu (26%) and Kalabo (27%) were between 35-44 years old. In addition, results show that only Nalolo (24%) had more respondents aged 65 and above.

In terms of marital status of the respondents, findings indicate that 46% to 75% of respondents across all 12 districts were *married* at the time of the assessment. Moreover, according to the findings, 8% to 33% of respondents were *single* while 5% to 17% were *widowed*. About 0.5% to 5% of respondents across all 12 districts were *separated* at the time of the baseline assessment.

Table 3. 1: Percentage distribution of respondents' and household's demographic and social economic characteristics by district

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Sex of respondents																										
Male	30.0	113	31.7	120	30.8	111	41.8	151	35.7	128	44.1	154	36.8	127	30.0	108	39.4	177	34.5	133	49.3	175	36.9	136	36.7	1632
Female	70.0	264	68.3	258	69.2	249	58.2	210	64.3	231	55.9	195	63.2	218	70.0	252	60.6	272	65.5	253	50.7	180	63.1	233	63.3	2816
Age group of respondent																										
18 -24	17.5	66	20.9	79	18.6	67	19.4	70	17.5	63	17.2	60	13.9	48	8.9	32	10.7	48	13.0	50	13.8	49	8.9	33	15.0	665.0
25 - 34	30.0	113	27.8	105	31.4	113	24.9	90	28.1	101	22.1	77	25.8	89	22.8	82	17.8	80	28.5	110	25.4	90	16.5	61	25.0	1,111.0
35 - 44	17.8	67	20.6	78	23.6	85	23.8	86	17.3	62	27.5	96	25.2	87	25.6	92	26.5	119	25.9	100	23.7	84	19.8	73	23.1	1,029.0
45 - 54	19.4	73	15.3	58	13.9	50	14.4	52	16.4	59	18.1	63	17.4	60	16.4	59	18.7	84	12.7	49	19.4	69	18.2	67	16.7	743.0
55 - 64	8.2	31	8.5	32	7.5	27	10.2	37	8.9	32	10.6	37	7.0	24	12.8	46	12.9	58	10.9	42	8.5	30	13.0	48	10.0	444.0
65+	7.2	27	6.9	26	5.0	18	6.9	25	11.1	40	4.6	16	10.7	37	13.6	49	13.1	59	9.1	35	9.3	33	23.6	87	10.2	452.0
Age not stated	0.0	0	0.0	0	0.0	0	0.3	1	0.6	2	0.0	0	0.0	0	0.0	0	0.2	1	0.0	0	0.0	0	0.0	0	0.1	4.0
Marital status of respondents																										
Single	12.7	48	14.3	54	18.3	66	16.1	58	7.5	27	17.5	61	14.5	50	25.3	91	32.5	146	23.6	91	25.1	89	30.9	114	20.1	895
Married	71.6	270	74.9	283	67.2	242	67.6	244	73.0	262	70.8	247	73.9	255	55.3	199	47.2	212	64.2	248	66.8	237	46.3	171	64.5	2870
Divorced	3.7	14	2.1	8	3.3	12	2.2	8	4.2	15	3.4	12	3.2	11	6.7	24	6.5	29	6.2	24	2.0	7	5.1	19	4.1	183
Separated	0.5	2	1.1	4	4.7	17	3.9	14	4.2	15	1.7	6	0.3	1	1.1	4	4.5	20	0.8	3	0.6	2	0.5	2	2.0	90
Widowed	11.4	43	7.7	29	6.4	23	10.2	37	11.1	40	6.6	23	8.1	28	11.7	42	9.4	42	5.2	20	5.6	20	17.1	63	9.2	410
Employment status of household head																										
Unemployed	52.3	197	45.2	171	38.1	137	21.9	79	20.9	75	21.2	74	54.5	188	58.6	211	81.5	366	53.4	206	77.5	275	95.1	351	52.4	2331
Formal employment	10.9	41	13.2	50	21.1	76	10.0	36	4.2	15	16.6	58	13.0	45	8.1	29	0.9	4	7.8	30	8.2	29	0.3	1	9.3	414
Informal/Self employment	36.9	139	41.5	157	40.8	147	68.1	246	74.9	269	62.2	217	32.5	112	33.3	120	17.6	79	38.9	150	14.4	51	4.6	17	38.3	1704
Households with persons with disabilities																										
Yes	13.3	50	15.3	58	12.2	44	18.0	65	20.9	75	7.2	25	12.5	43	17.5	63	18.7	84	19.4	75	9.6	34	20.6	76	15.6	694
No	86.7	327	84.7	320	87.8	316	82.0	296	79.1	284	92.8	324	87.5	302	82.5	297	81.3	365	80.6	311	90.4	321	79.4	293	84.4	3754
Total		**377**		**378**		**360**		**361**		**359**		**349**		**345**		**360**		**449**		**386**		**355**		**369**		**4448**
Type of disability by household members																										
Blind	1.0	22	1.0	21	0.6	12	0.9	18	0.9	17	0.3	7	0.4	8	0.9	23	0.7	21	1.0	24	0.3	7	0.5	12	1.0	274
Lame	1.3	28	1.4	30	1.4	28	2.0	40	3.0	58	0.4	10	1.3	28	1.5	38	1.9	57	2.0	47	1.0	23	1.9	46	1.6	439
Deaf	0.3	7	0.6	13	0.3	6	0.8	16	1.1	21	0.3	7	0.3	6	0.7	18	0.6	18	0.8	19	0.3	7	0.9	22	0.6	164
Total		**2186**		**2141**		**2025**		**2000**		**1919**		**2405**		**2122**		**2540**		**3008**		**2356**		**2283**		**2430**		**27415**

Regarding the employment status of head of households, baseline assessment results suggest that, the majority (more than 45%) of household heads in Nakonde, Chinsali, Kazungula, Mongu, Kalabo, Sesheke, Kaoma and Nalolo were *unemployed* at the time of the assessment. Further, the findings indicate that Kaoma (78%), Kalabo (82%) and Nalolo (95%) recorded the highest level of unemployment among household heads. On the contrary, the majority of household heads in Mpika (41%), Kalomo (62%), Lunte (68%) and Mungwi (75%) were in *informal employment* at the time of the assessment. In addition, results of the baseline assessment indicate that, with the exception of Kalabo (1%) and Nalolo (0.3%), more than 4% of household heads in the other districts were in *formal employment* (refer to table 3.1 for details).

Furthermore, household respondents were asked if there was a member of their households with disability. According to the findings, Mungwi and Nalolo (21%), Kalabo and Sesheke (19%) as well as Lunte and Mongu (18%) reported the highest proportion of households with persons with disabilities. On the contrary, WASH Baseline Assessment results indicate that Kalomo (7%), Kaoma (10%) and Mpika (12%) reported the least proportion of households with persons with disabilities. Further, results indicate that, among the households with persons with disabilities, in all 12 districts, the most common type of disability was *lame* (0.4% or more). Furthermore, in terms of type of disability (for households with persons with disability), Mungwi (3%), reported the highest proportion of individuals categorised as *lame*. On the other hand, Kalomo (0.4%), reported the least proportion of individuals categorised as *lame* (refer to table 3.1).

With regards to the sex and age of household members, baseline assessment results suggest that there are no major variations across districts. However, findings indicate that 10% or more of household members in Kazungula, Mongu, Kalabo, Sesheke and Nalolo were aged 65 years and above. Suggesting that the aforementioned districts have more household members aged 65 years and above in comparison with the rest of the districts in the study (see table 3.2 for details).

Table 3. 2: Percentage of households' population by age, sex and district

Variable	< 5 Years				5-14 Years				15-64 Years				65+ Years				Total			
	Male		Female		Male		Female		Male		Female		Male		Female		Male		Female	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Nakonde	7.9	151	7.9	132	8.6	224	8.6	211	9.1	327	8.9	350	6.4	33	5.8	33	8.5	735	8.4	727
Chinsali	8.3	159	9.1	152	7.3	190	8.0	196	8.9	320	9.0	354	6.8	35	7.7	44	8.2	703	8.6	747
Mpika	7.1	136	6.1	102	7.4	193	8.2	201	8.6	309	8.2	323	5.4	28	4.9	28	7.7	665	7.6	654
Lunte	6.8	130	6.3	105	7.6	198	7.7	189	8.5	305	8.1	319	5.0	26	5.1	29	7.6	659	7.4	642
Mungwi	6.7	128	6.8	114	8.1	211	7.6	187	7.4	266	7.9	311	6.6	34	7.7	44	7.4	639	7.6	655
Kalomo	8.5	162	7.4	124	8.0	208	7.5	184	8.5	305	7.5	295	6.6	34	3.0	17	8.2	710	7.2	620
Kazungula	7.3	139	7.7	129	7.3	190	7.2	177	8.0	287	7.9	311	9.7	50	9.5	54	7.7	667	7.8	671
Mongu	8.8	168	8.8	147	7.9	206	7.4	182	7.6	273	7.8	307	11.2	58	11.1	63	8.2	705	8.1	699
Kalabo	11.9	227	11.7	196	12.0	313	12.3	302	9.4	337	10.0	394	12.0	62	12.0	68	10.9	939	11.1	960
Sesheke	9.4	180	9.3	156	8.3	216	8.6	211	8.6	309	8.9	350	11.0	57	11.2	64	8.8	761	9.0	781
Kaoma	9.2	176	9.7	162	8.4	219	8.3	204	8.2	294	7.9	311	7.8	40	5.4	31	8.5	729	8.2	708
Nalolo	8.1	155	9.1	152	9.1	237	8.6	211	7.3	262	8.0	315	11.4	59	16.5	94	8.26	713	8.9	772
n		**1910**		**1673**		**2606**		**2456**		**3590**		**3936**		**516**		**569**		**8625**		**8636**

3.2.1.1 Classification of Households by Wealth Quintile

Households that participated in the WASH Baseline Assessment were classified into; poorest, poor, middle, rich and richest. The classifications were based on the following: main material used for the floor and roof of the household's main house, ownership of livestock and agricultural land as well as ownership of selected household assets. As indicated in table 3.3, Kalabo (23%) reported the highest proportion of households classified as *poorest* among the 12 districts in the study. On the contrary, Kalomo (0.6%) as well as Mpika and Sesheke (1% each) reported the least proportion of households classified as *poorest*.

Table 3. 3: Classification of households by wealth quintile

District/Wealth Quintile	Poorest		Poor		Middle		Rich		Richest		Total	
	%	n	%	n	%	n	%	n	%	n	%	n
Nakonde	4.5	17	10.1	38	18.0	68	49.9	188	17.5	66	8.5	377
Chinsali	11.1	42	20.1	76	15.9	60	43.1	163	9.8	37	8.5	378
Mpika	1.1	4	5.0	18	11.9	43	57.2	206	24.7	89	8.1	360
Lunte	9.7	35	19.1	69	24.9	90	42.9	155	3.3	12	8.1	361
Mungwi	14.5	52	24.0	86	16.7	60	39.6	142	5.3	19	8.1	359
Kalomo	0.6	2	4.6	16	13.5	47	72.5	253	8.9	31	7.9	349
Kazungula	5.5	19	17.4	60	31.0	107	39.1	135	7.0	24	7.8	345
Mongu	6.4	23	20.6	74	15.8	57	44.4	160	12.8	46	8.1	360
Kalabo	22.5	101	36.5	164	22.9	103	14.5	65	3.6	16	10.1	449
Sesheke	1.3	5	7.0	27	20.7	80	46.6	180	24.4	94	8.7	386
Kaoma	11.3	40	35.5	126	20.8	74	20.3	72	12.1	43	8.0	355
Nalolo	13.8	51	41.7	154	28.2	104	14.6	54	1.6	6	8.3	369
Total	**8.5**	**391**	**20.1**	**908**	**20.0**	**893**	**40.4**	**1773**	**10.9**	**483**	**100**	**4448**

Furthermore, baseline assessment results indicate that Nalolo (42%), Kalabo (37%) and Kaoma (36%) reported the highest proportion of households classified as *poor*. Conversely, Mpika and Kalomo (5%) as well as Sesheke (7%) reported the least proportion of households classified as *poor*. Moreover, results of the baseline assessment suggest that Kazungula (31%), Nalolo (28%) and Lunte (25%) reported the highest proportion of households classified as *middle*. For the rest of the districts in the study, baseline assessment findings suggest that there are no major variations in terms of households categorised as *middle* (see table 3.3 for details).

In addition, results of the baseline assessment indicate that, Kalomo (73%) and Mpika (57%) reported the highest proportion of households classified as *rich*. In contrast, Kalabo and Nalolo (15% each) reported the least proportion of households classified as *rich* among all 12 districts in the study. With regards to households classified as *richest*, the WASH Baseline Assessment

indicate that, Mpika (25%) and Sesheke (24%) reported the highest proportion of households classified as *richest*. On the contrary, Nalolo (2%), Lunte (3%) and Kalabo (4%) reported the least proportion of households classified as *richest* among the 12 districts in the study.

3.2.2 Access to Water Services by Households

As stated in the introduction of this section, the WASH Baseline Assessment was, inter alia, designed to establish baseline values in terms of the proportion of households with access to *basic* and *safely managed* drinking water services. For purposes of this baseline assessment, the JMP criteria on access to water services was adopted. With regards to access to water services, a *safely managed* water source is an "improved source located on the premises, available when needed, and free from contamination". A *basic* water source is an "improved source protected from contamination, year-round access, within 30 minutes round trip collection time". *Unimproved* source, on the other hand, is one which does not protect against contamination while *none* refers to surface water.

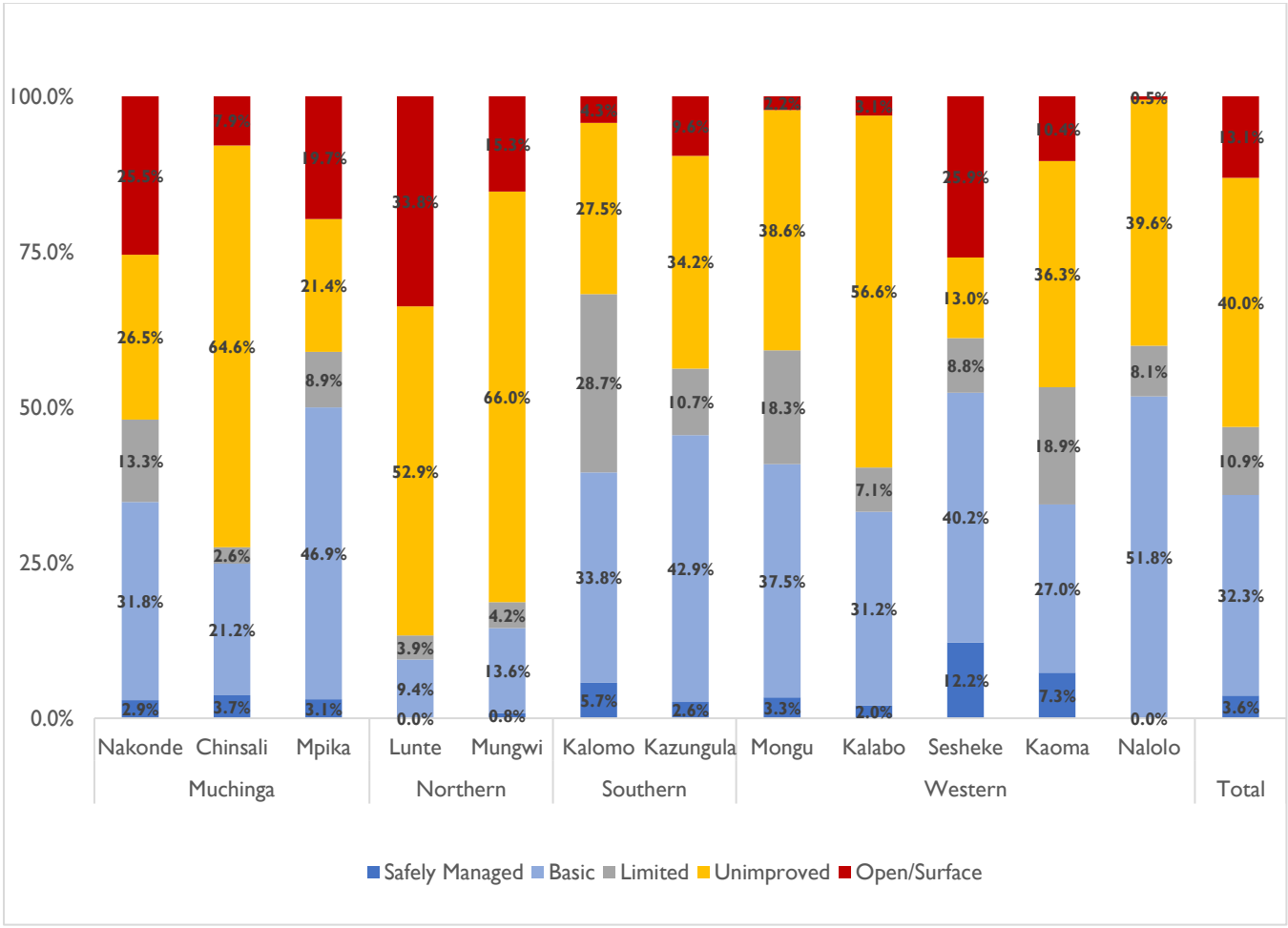

Figure 3. 1: Access to drinking water services by households per district

In this regard, as indicated in figure 3.1, results of the baseline assessment show that Nalolo (52%), Mpika (47%) and Kazungula (43%) districts reported the highest proportion of households with access to *basic drinking water services*. On the contrary, the findings of the baseline assessment indicate that Lunte (9%), Mungwi (14%) and Chinsali (21%) districts reported the least proportion of households with access to *basic drinking water services* among the districts in study.

Further, findings of the baseline assessment indicate that Sesheke (12%), Kaoma (7%) and Kalomo (6%) districts reported the highest proportion of households with access to *safely managed* drinking water services. In contrast, results further show that Mungwi (0.8%), Kalabo (2%) and Nakonde, Mpika, Kazungula as well as Mongu (3% each) districts reported the least proportion of households with access to *safely managed* drinking water services. In terms of access to *unimproved* water services, the baseline assessment results indicate that Mungwi (66%), Kalabo (57%) and Lunte (53%) districts reported that highest proportion of households with access to *unimproved* water services. Conversely, Sesheke (13%), Mpika (21%) and Nakonde (27%) districts reported the least proportion of households with access to *unimproved* water services among the study districts (refer to figure 3.1).

With regards to the proportion of households with '*no*' access to water services – water taken from unprotected dug well or spring, or surface water sources or an improved source that is more than 500 metres from the premises – baseline assessment findings indicate that Lunte (34%), Nakonde and Sesheke (26% each) as well as Mpika (20%) districts reported the highest proportion of households with *no* access to water services. Conversely, Nalolo (0.5%), Mongu (2%) and Kalabo (3%) districts reported the least proportion of households with *no access* to water services among the districts in the study.

Overall, results of the baseline assessment indicate that 13% (n=4,448) of households in the study have no access to water services. On the contrary, the results further indicate that, overall, only 4% of households in the study have access to *safely managed* water services. In addition, the results show that, overall, 40% of households in the study have access to *unimproved* water services while 32% have access to *basic* water services, refer to figure 3.1 for details.

Table 3. 4: Percentage distribution of households' access to water by location

Service Level	Rural		Rural Growth Centre		Peri-urban		Total	
		n		n		n		n
Safely Managed	0.5	19	15.3	19	16.0	124	4	162
Basic	29.0	1030	40.3	50	45.9	355	32	1435
Limited	11.3	401	14.5	18	8.8	68	11	487
Unimproved	43.7	1551	20.2	25	26.5	205	40	1781
None	15.5	549	9.7	12	2.8	22	13	583
Total	**100**	**3550**	**100**	**124**	**100**	**774**	**100**	**4448**

Furthermore, results of the WASH Baseline Assessment in relation to access to water were disaggregated according to rural, rural growth centre and peri-urban. As indicated in table 3.4, baseline assessment results show that 29% (rural), 10% (rural growth centre) and 13% (peri-urban) of households have access to *basic water services*. Findings further show that 0.5% (rural), 20% (rural growth centre) and 13% (peri-urban) of households have access to *safely managed* drinking water services. In this regard, results suggest that few (0.5%) households in rural areas in the study have access to *safely managed* water services compared to households in rural growth centres and peri-urban areas. Findings further suggest that there are minor variations in terms of access to *limited* water services, *unimproved* water services and *no access* to water services (none) between rural and rural growth centres (see table 3.4 for details).

Moreover, household respondents were asked if they pay for the water they use. According to the findings, overall, 25% (n=1,118) of households in the baseline assessment indicated that they pay for the water they use. Disaggregated by district, Mongu (66%) and Lunte (2%) reported the highest and the least proportion of households indicating that they pay for water used, respectively. In addition, household respondents who indicated that they pay for the water they use were asked to indicate the amount paid. On average, baseline assessment results indicate that, with the exception of Lunte, Kalabo and Kaoma districts, respondents in the rest of the districts in the study paid K52.6 or more. Nalolo (K4.50) reported the lowest average price paid for water while Nakonde (K71.40), reported the highest average price. In addition, 56% of respondents in Nakonde indicated that the amount paid was *not fair*. On the contrary, 41% of households respondents in Nalolo considered the amount paid to be *fair*, refer to table 3.5 for details.

Table 3. 5: Percentage distribution of households paying to access water, average amount paid and amount considered reasonable by district

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Household pay to access water																										
Yes	22.3	84	10.3	39	35.6	128	2.2	8	5.6	20	24.9	87	3.8	13	65.8	237	16.7	75	55.4	214	25.4	90	33.3	123	25.1	1118
No	77.7	293	89.7	339	64.4	232	97.8	353	94.4	339	75.1	262	96.2	332	34.2	123	83.3	374	44.6	172	74.6	265	66.7	246	74.9	3330
Total		**377**		**378**		**360**		**361**		**359**		**349**		**345**		**360**		**449**		**386**		**355**		**369**		**4448**
Average amount	71.4		63.8		59.0		10.6		87.2		54.7		64.9		65.7		30.2		63.9		55.3		4.5		52.6	
Perception on water user fees																										
Fair	25.0	21	56.4	22	40.6	52	12.5	1	15.0	3	23.0	20	15.4	2	35.9	85	33.3	25	39.3	84	31.1	28	40.7	50	35.2	393
Very Fair	19.0	16	0.0	0	19.5	25	50.0	4	20.0	4	23.0	20	30.8	4	7.2	17	13.3	10	17.3	37	12.2	11	35.0	43	17.1	191
Not Fair	56.0	47	43.6	17	39.8	51	37.5	3	65.0	13	54.0	47	53.8	7	57.0	135	53.3	40	43.5	93	56.7	51	24.4	30	47.8	534
n		**84**		**39**		**128**		**8**		**20**		**87**		**13**		**237**		**75**		**214**		**90**		**123**		**1118**
Reasonable amount to be paid																										
Less than K50	76.2	64	66.7	26	64.1	82	100.0	8	90.0	18	74.7	65	84.6	11	76.4	181	92.0	69	74.3	159	81.1	73	100.0	123	78.6	879
K50 - K149.9	20.2	17	25.6	10	29.7	38	0.0	0	5.0	1	24.1	21	7.7	1	20.7	49	6.7	5	22.0	47	15.6	14	0.0	0	18.2	203
K150 or more	3.6	3	7.7	3	6.3	8	0.0	0	5.0	1	1.1	1	7.7	1	3.0	7	1.3	1	3.7	8	3.3	3	0.0	0	3.2	36
n		**84**		**39**		**128**		**8**		**20**		**87**		**13**		**237**		**75**		**214**		**90**		**123**		**1,118**

3.2.2.1 Ownership and Repair of Water Source

The WASH Baseline Assessment further sought to establish ownership of the water sources in the target areas. As indicated in table 3.6, results show that the majority of water sources in Nakonde (36%), Lunte (47%), Kazungula (51%), Kalabo (70%), Sesheke (44%), Kaoma (61%) and Nalolo (85%) are owned by *villagers*. In contrast, according to the baseline assessment results, the majority of water sources in Kalomo (30%) and Mongu (32%) are owned by *government* while 33% of water sources in Chinsali are owned by *private individuals*. Overall, baseline assessment findings indicate that less than 20% of water sources are owned by respondents (*self*).

In addition, when asked about who repairs the water sources, the majority of household respondents, 32% (Nakonde and Mungwi), 40% (Kalomo), 62% (Kazungula), 54% (Mongu), 31% (Sesheke) and 35% (Kaoma) indicated that the water sources are usually repaired by *hired people*. Conversely, the majority of household respondents in Chinsali (31%), Lunte (20%), Kalabo (55%) and Nalolo (46%) reported that the water sources are usually repaired by *self* (respondents). Further, in Mpika, baseline assessment results indicate that the majority (31%) of household respondents said that the water sources are usually repaired by the water utility company.

Further, household respondents were asked to indicate the type of containers they use to draw and store water. According to the findings, 53% (Kazungula), 64% (Mongu), 75% (Kalabo) and 47% (Kaoma) of respondents reported that they use *20 litre containers* to draw and store water in their households. Moreover, 43% (Nakonde), 40% (Chinsali), 45% (Lunte) and 52% (Mungwi) of respondents indicated that they use *bucket with lid* to draw and store water in their households. The results of the WASH baseline assessment further indicate that 32% of respondents in Kalomo district reported that they use *bucket without lid* to draw and store water in their households. In addition, 41% and 59% of respondents in Sesheke and Kaoma districts indicated that their households use *multiple storage containers/buckets with lid* to draw and store water, respectively (refer to table 3.6 for details).

Table 3. 6: Percentage distribution of ownership of water source, repairs and types of containers used to store and draw water by district

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Ownership of water source																										
Villagers	36.1	136	23.0	87	21.1	76	47.4	171	32.0	115	19.5	68	50.7	175	35.3	127	70.4	316	44.0	170	60.8	216	84.8	313	44.3	1970
Government	19.4	73	19.6	74	33.1	119	5.0	18	4.5	16	29.8	104	14.5	50	37.8	136	16.5	74	35.2	136	5.4	19	6.0	22	18.9	842
Donors	0.0	0	2.9	11	14.7	53	0.0	0	0.3	1	14.6	51	21.4	74	0.3	1	4.0	18	1.6	6	0.0	0	1.4	5	4.9	220
Private individual	26.5	100	33.1	125	10.3	37	14.1	51	32.0	115	7.4	26	4.9	17	21.9	79	3.8	17	5.4	21	22.0	78	6.0	22	15.5	688
Don't Know	1.3	5	0.5	2	12.8	46	21.9	79	12.5	45	10.0	35	5.5	19	0.3	1	2.0	9	7.5	29	3.7	13	0.3	1	6.4	284
Self	16.7	63	20.9	79	8.1	29	11.6	42	18.7	67	18.6	65	2.9	10	4.4	16	3.3	15	6.2	24	8.2	29	1.6	6	10.0	445
Repair of Water source																										
Self	22.3	84	31.2	118	10.0	36	19.7	71	27.3	98	33.2	116	9.6	33	17.5	63	54.8	246	19.7	76	31.8	113	45.8	169	27.5	1223
Municipality	6.9	26	4.5	17	1.4	5	1.7	6	1.9	7	0.0	0	0.0	0	3.9	14	1.8	8	5.7	22	0.0	0	2.4	9	2.6	114
Water Utility Company	3.7	14	4.5	17	31.1	112	0.0	0	1.4	5	9.2	32	1.2	4	11.9	43	2.9	13	16.3	63	0.0	0	0.3	1	6.8	304
NGO	0.0	0	0.0	0	10.0	36	0.0	0	0.0	0	3.7	13	6.4	22	0.0	0	0.4	2	0.3	1	0.0	0	1.1	4	1.8	78
Hire other people	31.8	120	19.8	75	27.5	99	13.9	50	31.8	114	39.8	139	62.3	215	53.6	193	35.6	160	30.6	118	52.1	185	35.2	130	35.9	1598
Not Applicable	35.3	133	39.9	151	20.0	72	64.8	234	37.6	135	14.0	49	20.6	71	13.1	47	4.5	20	27.5	106	16.1	57	15.2	56	25.4	1132
Containers used to store and draw water																										
20l container	16.4	62	2.1	8	19.2	69	13.9	50	11.1	40	30.7	107	53.0	183	64.4	232	75.3	338	25.4	98	8.7	31	47.4	175	31.3	1393
Bucket without lid	6.9	26	22.5	85	3.3	12	30.2	109	21.4	77	32.4	113	32.2	111	6.9	25	6.0	27	13.0	50	2.3	8	6.2	23	15.0	666
Bucket with lid	34.0	128	40.2	152	45.3	163	38.2	138	51.5	185	21.8	76	5.8	20	8.6	31	2.9	13	19.2	74	5.1	18	13.8	51	23.6	1049
Drum	0.5	2	0.0	0	1.4	5	0.0	0	0.3	1	1.1	4	0.9	3	0.6	2	0.2	1	1.0	4	0.6	2	0.0	0	0.5	24
Multiple storage with lid	30.8	116	34.4	130	30.3	109	16.9	61	14.5	52	12.9	45	8.1	28	15.8	57	10.2	46	41.2	159	59.4	211	9.5	35	23.6	1049
Multiple storage without lid	11.4	43	0.8	3	0.6	2	0.8	3	1.1	4	1.1	4	0.0	0	3.6	13	5.3	24	0.3	1	23.9	85	23.0	85	6.0	266

3.2.2.2 Access to and Availability of Water

Household respondents were asked if, in the month prior to the survey, there ever was any time when their household did not have sufficient quantities of drinking water when needed. As indicated in table 3.7, WASH Baseline Assessment results suggest that, the majority of respondents in Mpika (53%), Mongu (59%) and Kalabo (58%) indicated that they did not have sufficient quantities of drinking water when needed in the month preceding the assessment, thus, affecting reliability. On the contrary, the majority of the respondents (52% or more), in the rest of the districts in the study, reported that their household always had sufficient drinking water when needed, prior to the assessment.

Furthermore, household respondents were asked to estimate the quantity of water their households use per day. According to the findings, with the exception of Nakonde, the majority (47% or more) of respondents in the rest of the districts in the study approximated that their households used less than 50 litres of water per day. In the case of Nakonde, the majority (41%) of the respondents estimated that their households used between 50-99 litres of water per day. Moreover, in general, baseline assessment findings indicate that very few households in all the districts in the study used approximately 200 litres of water or more per day. In this regard, the findings suggest a low per capita consumption of water in most households – using less than 200 litres of water per day.

In addition, Household respondents in the study were asked to indicate the number of days in a week water is available. According to the findings, the majority (73% or more) of respondents in all the districts in the study indicated that water is available for 6 to 7 days in a week. Further, respondents were asked to estimate the number of hours water is available in a day for their respective households. As indicated in table 3.7, the majority (38% or more) of respondents in all the districts in the study reported that they have water for 18 to 24 hours in a day. Disaggregated by districts, Mongu (43%) and Kalabo (38%) on one hand and, Lunte (99.7%) and Mungwi (96%) on the other, reported the least and the most proportion of households reporting availability of water for 18 to 24 hours respectively.

Furthermore, household respondents were asked to estimate the quantity of water their households draw per day. As indicated in table 3.7, the majority (17% or more) of the respondents across all the districts in the study indicated that they draw 1.01 to 5 (20 litre containers) in a day.

Table 3. 7: Percentage distribution of households' access to and water use and availability and adequacy of water by district

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Not having enough drinking water in the past month																										
Yes at least once	46.9	177	20.4	77	52.5	189	25.5	92	32.3	116	32.7	114	33.9	117	58.9	212	58.1	261	39.1	151	43.1	153	14.9%	55	38.5%	1714
o, always sufficient	51.5	194	79.4	300	41.7	150	62.6	226	56.8	204	60.5	211	64.6	223	33.9	122	41.2	185	54.4	210	55.8	198	81.6%	301	56.7%	2525
Don't Know	0.5	2	0.0	0	1.9	7	0.8	3	1.4	5	5.2	18	1.4	5	1.7	6	0.7	3	0.8	3	0.3	1	0.8%	3	1.3%	56
Not Applicable	1.1	4	0.3	1	3.9	14	11.1	40	9.5	34	1.7	6	0.0	0	5.6	20	0.0	0	5.7	22	0.8	3	2.7%	10	3.5%	154
Water used per day by household																										
Less than 50l	39.5	149	56.3	213	61.7	222	64.0	231	58.8	211	46.1	161	61.4	212	48.3	174	60.4	271	68.9	266	70.1	249	47.2%	174	56.9%	2533
50l - 99l	41.1	155	25.1	95	28.6	103	26.6	96	27.3	98	35.8	125	29.3	101	26.4	95	34.5	155	21.8	84	25.4	90	38.5%	142	30.1%	1339
100l - 149.9l	14.3	54	13.0	49	6.7	24	6.4	23	9.2	33	10.6	37	8.1	28	11.1	40	4.9	22	6.5	25	2.5	9	9.2%	34	8.5%	378
150l - 199.9l	1.6	6	1.3	5	0.6	2	0.6	2	0.8	3	2.3	8	0.9	3	3.9	14	0.2	1	1.0	4	0.3	1	2.7%	10	1.3%	59
200l or more	1.3	5	3.4	13	2.5	9	0.8	3	1.9	7	4.9	17	0.0	0	4.7	17	0.0	0	1.3	5	1.7	6	2.4%	9	2.0%	90
Not sure	2.1	8	0.8	3	0.0	0	1.7	6	1.9	7	0.3	1	0.3	1	5.6	20	0.0	0	0.5	2	0.0	0	0.0%	0	1.1%	48
Number of days in a week water is available																										
A day	0.0	0	0.0	0	0.3	1	0.3	1	0.0	0	7.4	26	0.0	0	0.8	3	0.0	0	1.0	4	0.0	0	0.0%	0	0.8%	35
2 - 3 days	2.1	8	0.8	3	5.3	19	0.3	1	0.6	2	7.2	25	1.2	4	10.6	38	0.4	2	1.6	6	1.4	5	0.8%	3	2.6%	117
4 - 5 days	12.7	48	4.5	17	20.0	72	0.3	1	3.1	11	12.0	42	2.0	7	11.4	41	12.9	58	8.8	34	1.4	5	1.9%	7	7.7%	343
6 - 7 days a week	85.1	321	94.7	358	74.4	268	99.2	358	96.4	346	73.4	256	96.8	334	77.2	278	86.6	389	88.6	342	97.2	345	97.3%	359	88.9%	3954
Hours water is available in a day																										
1 - 6 hours	11.7	44	2.9	11	22.8	82	0.0	0	0.8	3	6.6	23	2.9	10	34.4	124	3.6	16	6.0	23	3.1	11	1.9%	7	8.0%	354
7 - 11 hours	4.5	17	2.1	8	11.4	41	0.0	0	2.2	8	2.0	7	5.2	18	18.9	68	23.6	106	9.6	37	4.2	15	7.3%	27	7.9%	352
12 - 17 hours	5.6	21	4.0	15	1.4	5	0.3	1	1.4	5	3.4	12	12.5	43	4.2	15	35.0	157	6.5	25	5.4	19	10.8%	40	8.1%	359
18 - 24 hours	78.2	295	91.0	344	64.4	232	99.7	360	95.5	343	88.0	307	79.4	274	42.5	153	37.9	170	78.0	301	87.3	310	79.9%	295	76.1%	3383
Water drawn per day in 20l containers																										
20l or less	2.1	8	2.9	11	1.7	6	1.1	4	3.3	12	4.3	15	1.7	6	0.3	1	0.4	2	1.8	7	0.0	0	7.6%	28	2.2%	100
1.01 - 5 (20l containers)	57.0	215	42.6	161	54.7	197	42.7	154	47.1	169	43.3	151	51.0	176	27.5	99	17.8	80	70.5	272	63.1	224	17.3%	64	44.1%	1962
5.01 - 10 (20l containers)	37.4	141	16.1	61	16.7	60	27.1	98	21.7	78	10.0	35	12.8	44	17.2	62	2.9	13	25.1	97	31.3	111	16.3%	60	19.3%	860
10.01 or more 20l containers	1.3	5	1.9	7	1.4	5	3.6	13	2.2	8	2.9	10	1.4	5	4.2	15	0.2	1	1.3	5	2.8	10	9.2%	34	2.7%	118

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Can't Tell/Do not know	2.2	8	36.5	138	25.5	92	25.5	92	25.7	92	39.5	138	33.1	114	50.8	183	78.7	353	1.3	5	2.8	10	49.6%	183	31.7%	1409
Total		**377**		**378**		**360**		**361**		**359**		**349**		**345**		**360**		**449**		**386**		**355**		**369**	100.0%	4448

Nalolo (17%) and Kalabo (18%) reported the least proportion of households indicating that they draw 1.01 to 5 (20 litre containers) of water per day. Conversely, Sesheke (71%) and Kaoma (63%) reported the highest proportion of households indicating that they draw 1.01 to 5 (20 litre containers) of water per day.

3.2.2.3 Treatment of Drinking Water

Household respondents in the WASH Baseline Assessment were asked if they treat their drinking water in any way to make it safe to drink. According to the results, as shown in table 3.8, most households (58% or more) in all the 12 districts in the study indicated that they do not treat their drinking water to make it safe. Relatively, few households (42% or less) in all the 12 districts in the study reported that they treat their drinking water to make it safe. Among the households reporting that they treat their drinking water to make it safe, Nakonde and Mungwi (42% each), Lunte (35%) as well as Chinsali (33%) reported the highest proportion of households indicating that they treat their drinking water to make it safe. On the contrary, Nalolo (4%), Kalabo (5%) and Kazungula (8%) reported the least proportion of households indicating that they treat their drinking water to make it safe.

In addition, household respondents who indicated that they treat their drinking water to make it safe were asked to state the methods they used to treat their drinking water. According to the findings, the most common method used to treat drinking water at household level in Nakonde (60%), Chinsali (61%), Mpika (63%), Lunte (58%), Mungwi (76%), Kalomo (66%), Mongu (85%), Kalabo (71%) and Kaoma (67%) is *use of chlorine*. In contrast, results of the baseline assessment indicate that the most common method of treating drinking water among households in Kazungula (78%), Sesheke (57%) and Nalolo (69%) is *boiling* (refer to table 3.8 for details).

Table 3. 8: Percentage distribution of households' treating drinking water, methods for treating the water and reasons for treating drinking water by province

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Treat water for drinking to make it safe																										
Treat water for drinking to make it safe	41.6	157	32.5	123	16.4	59	34.6	125	42.3	152	9.2	32	7.8	27	16.9	61	4.7	21	9.1	35	13.5	48	3.5	13	19.2	852
Do not treat water	58.4	220	67.5	255	83.6	301	65.4	236	57.7	207	90.8	317	92.2	318	83.1	299	95.3	428	90.9	351	86.5	307	96.5	356	80.8	3596
Method of treating drinking water to make it safe																										
Boil	40.1	63	39.0	48	35.6	21	32.8	41	22.4	34	34.4	11	77.8	21	14.8	9	28.6	6	57.1	20	31.3	15	69.2	9	34.9	298
Use Chlorine	59.9	94	61.0	75	62.7	37	58.4	73	75.7	115	65.6	21	14.8	4	85.2	52	71.4	15	42.9	15	66.7	32	23.1	3	62.8	536
Strained through cloth	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	7.4	2	0.0	0	0.0	0	0.0	0	0.0	0	7.7	1	0.4	3
Let it stand and settle	0.0	0	0.0	0	1.7	1	8.8	11	2.0	3	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	2.1	1	0.0	0	1.9	16
Main Reason for treating drinking water																										0
Remove the germs	96.2	151	98.4	121	96.6	57	88.0	110	96.7	147	100.0	32	96.3	26	98.4	60	100.0	21	100.0	35	97.9	47	92.3	145	95.5	951
Improve taste	0.0	0	0.0	0	0.0	0	1.6	2	1.3	2	0.0	0	3.7	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.5	5
Removes odours	0.0	0	0.0	0	0.0	0	1.6	2	0.7	1	0.0	0	0.0	0	1.6	1	0.0	0	0.0	0	0.0	0	0.0	0	0.4	4
Removes dirt	3.8	6	1.6	2	3.4	2	8.8	11	1.3	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	2.1	1	7.7	12	3.6	36

3.2.3 Access to Sanitation by Households

The WASH Baseline Assessment sought to establish the proportion of households verified as Open Defecation Free, as well as the proportion of households with access to basic sanitation service. The assessment was based on the JMP sanitation service ladder in terms of; safely managed, basic, limited, unimproved and open defecation.

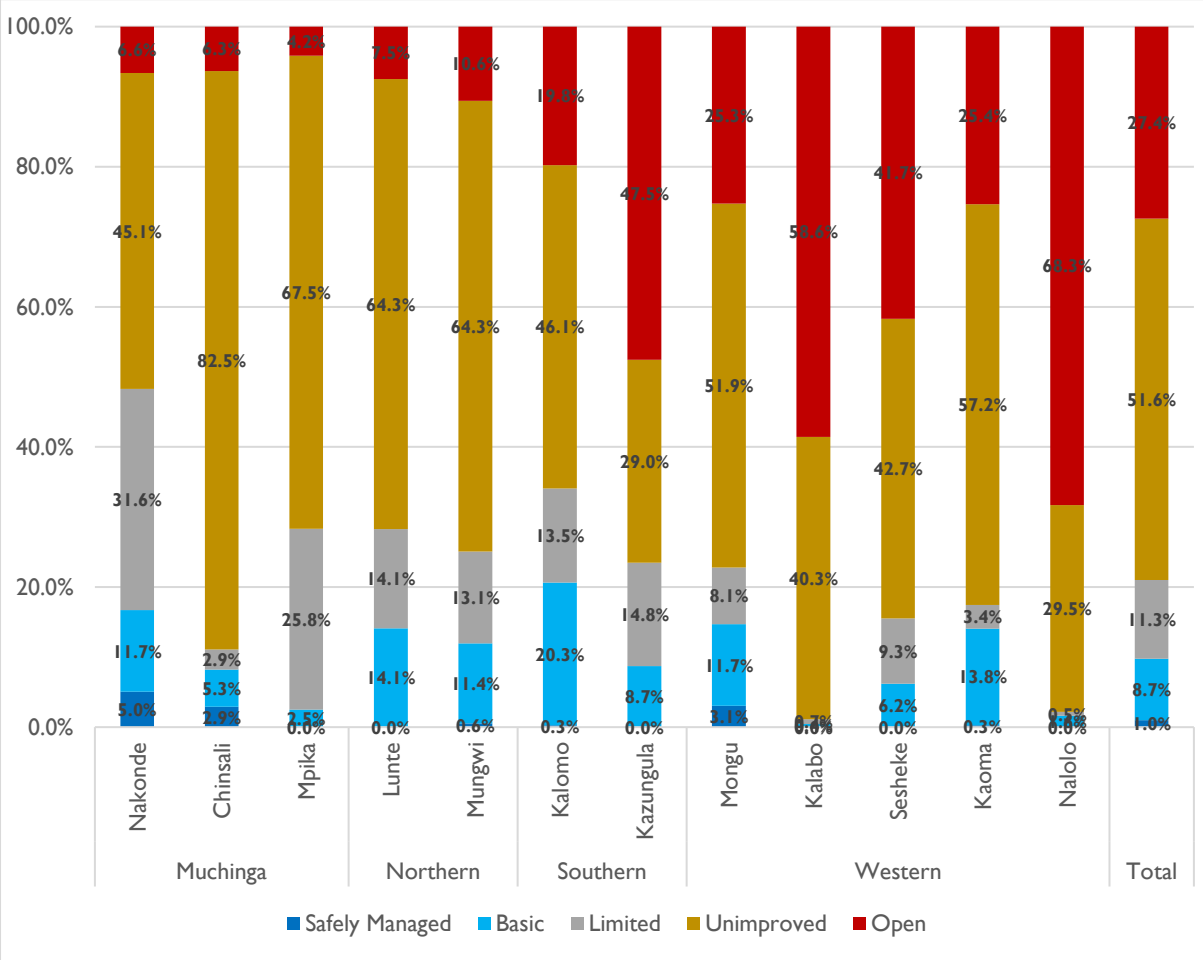

Figure 3. 2: Percentage distribution of households having access to sanitation services by district

According to the JMP sanitation service ladder, *safely managed* toilet facilities refer to "improved facilities that are not shared and where excreta are safely disposed of in situ or transported and treated off-site". *Basic* toilet facilities on the other hand refer to "improved facilities that are not shared with other households". While *limited* toilet facility refers to 'improved facilities shared between two or more households". *Unimproved* toilet facilities are "pit latrines without a slab or platform, hanging latrines, or bucket latrines". And, lastly, *open defecation*, refers to "disposal of human faeces in fields, bushes, open bodies of water, beaches or other open space or with solid water".

Results of the WASH Baseline Assessment indicate that most (52% or more) households in the 12 districts in the study have either no access (practice open defecation) or have access to *unimproved* sanitation services. With regards to the proportion of households practicing *open defecation*, results indicate that, Nalolo (68%), Kalabo (59%) and Kazungula (48%), reported the highest proportion of households practicing *open defecation*. In contrast, baseline assessment findings indicate that, Mpika (4%), Chinsali (6%) and Nakonde (7%) reported the least proportion of households practicing open defecation (see figure 3.2 for details).

In terms of access to *unimproved* sanitation services, findings of the baseline assessment suggest that, Chinsali (83%), Mpika (68%) and Mungwi (64%), reported the highest proportion of households with access to *unimproved* sanitation services. On the other hand, Kazungula (29%) and Nalolo (30%) reported the least proportion of households with access to *unimproved* sanitation services. In addition, baseline assessment results indicate that Nakonde (32%) and Mpika (26%) reported the highest proportion of households with *limited* access to sanitation services while Kaoma and Chinsali (3% each), reported the least proportion of households with *limited* access to sanitation services.

Furthermore, results of the WASH Baseline Assessment indicate that, Kalomo (20%), Lunte and Kaoma (14% each), reported the highest proportion of households with access to *basic* sanitation facilities. In contrast, Nalolo (0.5%), Kalabo (0.7%) and Mpika (3%) reported the least proportion of households with access to *basic* sanitation facilities. Moreover, Nakonde (5%) as well as Mongu and Chinsali (3% each) reported the highest proportion of households with access to *safely managed* sanitation facilities. For the rest of the districts in the study, findings indicate that access to *safely managed* sanitation facilities is none-existent or negligible (refer to figure 3.2 for details).

Overall, findings of the baseline assessment indicate that 27% (n=4,448) of households in the study practice *open defecation* while 52% have access to unimproved sanitation services. In addition, overall, 11% and 9% of households in the WASH Baseline Assessment have *limited* and *basic* access to sanitation services respectively.

Disaggregated by location (rural, rural growth centre and peri-urban), results of the WASH Baseline Assessment indicate that 33% of households in rural areas compared to 15% in rural growth centres and 3% in peri-urban areas practices *open defecation* across all 12 districts in the study. In addition, the findings indicate that most households in rural (51%), rural growth

centre (61%) and peri-urban (52%) have access to *unimproved* sanitation facilities in all 12 districts.

With regards to households' access to *basic* sanitation facilities, baseline assessment findings indicate that 7% (rural), 13% (rural growth centre) and 15% (peri-urban) of households in the 12 districts have access to *basic* sanitation facilities (see figure 3.3 for details).

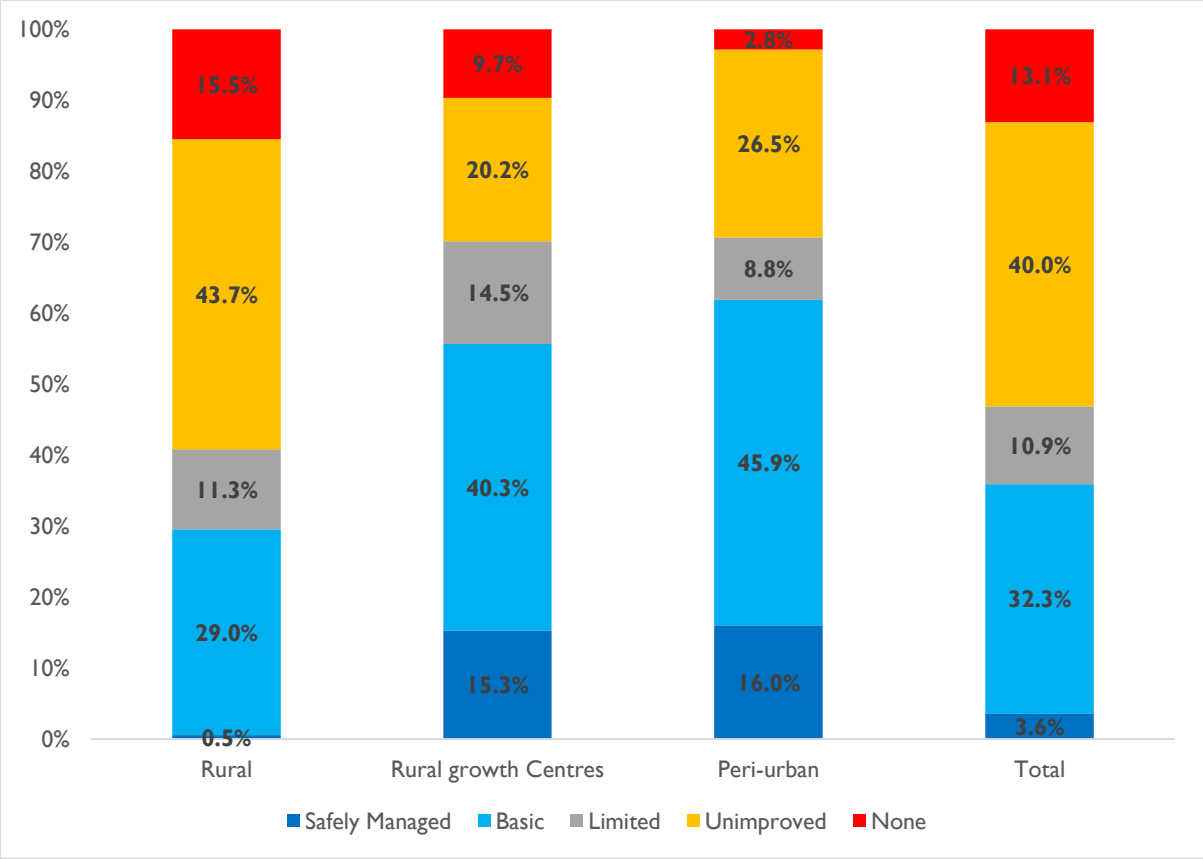

Figure 3. 3: Access to sanitation services by geographical location

Furthermore, household respondents who indicated that they have toilet facilities were asked to indicate whether the facility was built by themselves (respondent), mason, municipality, water and Sanitation Company etc. According to the findings, indicated in table 3.9, the majority of respondents (69% or more) indicated that the toilet facility was built by *self* (respondent).

WASH Baseline Assessment findings further show that very few toilet facilities were built by mason (30% or less) and municipality (3% or less) in all the 12 districts. Moreover, for household respondents who indicated that their toilet facility was built by mason, the majority (55% or more) – in all districts except for Kazungula and Sesheke – reported paying less K500 for the service, see table 3.9 for details.

Table 3. 9: Percentage distribution of individual/organization responsible for building household's toilet facilities and amount paid

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	N
Who built the toilet																										
Built by self	77.6	273	89.8	318	84.3	291	77.2	258	78.5	252	86.1	241	86.2	156	90.3	243	76.3	142	92.9	209	69.4	184	89.7	105	82.8	2672
Built by mason	15.6	55	6.5	23	5.8	20	18.0	60	18.1	58	0.4	1	0.0	0	8.6	23	23.7	44	0.0	0	29.8	79	9.4	11	11.6	374
Municipality	0.3	1	1.4	5	0.0	0	1.2	4	0.6	2	0.4	1	1.1	2	0.7	2	0.0	0	3.1	7	0.0	0	0.0	0	0.7	24
Water and Sanitation Company	0.0	0	0.3	1	4.6	16	0.0	0	0.3	1	0.0	0	1.1	2	0.4	1	0.0	0	1.8	4	0.0	0	0.0	0	0.8	25
NGO	0.0	0	0.0	0	1.7	6	0.0	0	0.0	0	1.4	4	1.7	3	0.0	0	0.0	0	0.0	0	0.4	1	0.0	0	0.4	14
School/School Community	0.0	0	0.3	1	1.4	5	1.2	4	0.6	2	5.0	14	1.7	3	0.0	0	0.0	0	0.9	2	0.0	0	0.0	1	1.0	32
GRZ/Institutional	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	3.6	10	6.6	12	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.7	22
Community	0.3	1	0.0	0	0.0	0	0.9	3	0.3	1	2.1	6	1.7	3	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.4	14
Landlord	1.7	6	1.4	5	2.0	7	0.3	1	0.3	1	0.4	1	0.0	0	0.0	0	0.0	0	0.9	2	0.4	1	0.0	0	0.7	24
Don't Know	3.7	13	0.0	0	0.0	0	1.2	4	1.2	4	0.0	0	0.0	0	0.0	0	0.0	0	0.4	1	0.0	0	0.0	0	0.7	22
Other, specify	0.9	3	0.3	1	0.0	0	0.0	0	0.0	0	0.7	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.9	0	0.2	6
n	100	352	100	354	100	345	100	334	100	321	100	280	100	181	100	269	100	186	100	225	100	265	100.0	117	100	3229
Amount on labour if built by mason																										
Less than K500	54.5	30	91.4	21	100.0	20	95.0	57	88.0	51	100.0	1	0.0	0	91.3	21	95.4	42	0.0	0	68.4	54	100.0	11	82	308
K500 - K4999	41.8	23	4.3	1	0.0	0	5.0	3	10.3	6	0.0	0	0.0	0	8.7	2	2.3	1	0.0	0	20.3	16	0.0	0	14	52
K5000 or more	3.7	2	4.3	1	0.0	0	0.0	0	1.7	1	0.0	0	0.0	0	0.0	0	2.3	1	0.0	0	11.3	9	0.0	0	4	14
n	**100**	**55**	**100**	**23**	**100**	**20**	**100**	**60**	**100**	**58**	**100**	**1**	**0.0**	**0**	**100**	**23**	**100**	**44**	**0.0**	**0**	**100.0**	**79**	**100.0**	**11**	**100**	374

3.2.4 Hygiene

The WASH Baseline Assessment sought to establish hand washing behaviour and practices among households in the study. In this regard, observations were made in relation to whether or not selected households possessed a hand washing station. According to the findings, there was no *hand washing place in dwelling/yard/plot* in the majority (46% or more) of cases observed in Nakonde, Chinsali, Mpika, Kalomo, Kazungula, Mongu, Kalomo, Sesheke and Kaoma districts. Moreover, Mongu (46%) and Nakonde (72%) reported the least and highest proportion of observed cases with *no hand washing place in dwelling/yard/plot*, respectively (see table 3.10 for details). In contrast, findings indicate that there was *mobile object (bucket/jug/kettle)* in 58% (Lunte and Nalolo) and 60% (Mungwi) of the cases of observed.

Furthermore, to establish hand washing practices among households in the study, respondents were asked to list the instances when they washed their hands. According to the results, as presented in table 3.10, majority of respondents (88% or more, except for Nalolo – 51%) in all districts in the study, reported that they wash their hands "*before eating"*. In addition, findings indicate that the other instances when respondents wash their hands is; "*after visiting the toilet"* (52% or more) and "*before touching food"* (39% or more). Moreover, baseline assessment findings indicate that Kalabo (51%) and Sesheke (54%) reported the least proportion of households that indicated that they wash their hands "*after vising the toilet"*. On the other hand, Mpika (39%), Kalomo (42%), and Nakonde (51%) reported the least proportion of households indicating that they washed their hands "*before touching food"*.

In addition, household respondents were asked to describe how members of their households wash their hands. According to the findings, the majority (51% or more) of respondents in all the districts except Mongu (29%), Nakonde (35%) and Mpika (48%) indicated that they wash their hands using a "*common dish"*. In addition, observations were made regarding the availability of water at place of hand washing. As shown in table 3.10, the findings of the WASH Baseline Assessment indicate that water was not availability in the majority (55% or more) of cases observed in Nakonde, Chinsali, Kalomo, Kalabo, and Kaoma districts. In contrast, baseline assessment findings indicate that water was available in the majority (54% or more) of the cases observed in Lunte, Mungwi, Kazungula, Mongu, Sesheke and Nalolo at the time of the study.

Table 3. 10: Percentage distribution of household members' hand washing practices and availability of hand washing stations and soap/detergent by district

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Where household members often wash their hands																										
Fixed facility observed (sink/tap) In dwelling	1.9	7	1.6	6	4.4	16	0.3	1	0.0	0	0.3	1	1.7	6	3.9	14	0.2	1	7.0	27	3.7	13	0.3	1	2.1	93
Fixed facility observed (sink/tap) In yard/plot	5.3	20	1.6	6	2.2	8	0.6	2	0.8	3	2.0	7	0.3	1	3.3	12	1.3	6	3.1	12	4.2	15	1.4	5	2.2	97
Mobile object observed (bucket/jug/kettle)	18.6	70	31.7	120	27.2	98	58.4	211	59.6	214	12.6	44	31.6	109	40.8	147	36.1	162	23.8	92	30.1	107	58.3	215	35.7	1588
No hand washing place in dwelling/yard/plot	72.4	273	65.1	246	63.9	230	31.3	113	28.1	101	71.3	249	53.3	184	46.1	166	61.0	274	65.3	252	51.3	182	31.7	117	53.7	2387
No permission to see	1.1	4	0.0	0	1.7	6	6.1	22	8.1	29	12.9	45	12.2	42	4.2	15	1.3	6	0.8	3	10.7	38	6.0	22	5.2	233
Other reason (specify)	0.8	3	0.0	0	0.6	2	3.3	12	3.3	12	0.9	3	0.9	3	1.7	6	0.0	0	0.0	0	0.0	0	2.4	9	1.1	50
n	**100**	**377**	**100**	**378**	**100**	**360**	**100**	**361**	**100**	**359**	**100**	**349**	**100**	**345**	**100**	**360**	**100**	**449**	**100**	**386**	**100**	**355**	**100**	**369**	100.0	4448
Hand washing practices (multiple responses)																										
Before eating	96.6	364	100.0	378	78.6	283	95.8	346	92.8	333	93.7	327	87.8	303	91.9	331	100.0	449	86.3	333	98.9	351	55.6	205	40.0	4003
After visiting the toilet	83.8	316	87.6	331	91.4	329	77.8	281	76.0	273	74.8	261	71.9	248	67.5	243	52.1	234	53.6	207	67.6	240	93.2	344	55.0	3307
Before touching food	51.2	193	69.6	263	39.2	141	78.7	284	71.3	256	41.5	145	65.8	227	67.8	244	60.1	270	60.6	234	56.9	202	61.8	228	52.2	2687
Don't wash after eating	0.0	0	0.0	0	0.0	0	0.6	2	0.3	1	0.6	2	0.9	3	1.7	6	0.2	1	0.0	0	0.3	1	0.8	3	0.4	19
How members wash their hands																										
Use common dish	34.5	130	57.1	216	47.8	172	51.0	184	51.8	186	76.8	268	55.9	193	29.4	106	53.5	240	64.0	247	76.6	272	61.8	228	54.9	2442
Pour water on hands using jar	65.5	247	42.9	162	52.2	188	49.0	177	48.2	173	23.2	81	44.1	152	70.6	254	46.5	209	36.0	139	23.4	83	38.2	141	45.1	2006
n	**100.0**	**377**	**100.0**	**378**	**100.0**	**360**	**100.0**	**361**	**100.0**	**359**	**100.0**	**349**	**100.0**	**345**	**100.0**	**360**	**100.0**	**449**	**100.0**	**386**	**100.0**	**355**	**100.0**	**369**	**100.0**	**4448**
Availability of water at place of hand washing																										
Water is available	34.7	131	43.7	165	30.3	109	58.4	211	56.0	201	23.5	82	54.5	188	54.7	197	44.8	201	61.4	237	28.5	101	56.6	209	45.7	2032
Water is not available	65.3	246	56.3	213	69.7	251	41.6	150	44.0	158	76.5	267	45.5	157	45.3	163	55.2	248	38.6	149	71.5	254	43.4	160	54.3	2416
n	**100.0**	**377**	**100.0**	**378**	**100.0**	**360**	**100.0**	**361**	**100.0**	**359**	**100.0**	**349**	**100.0**	**345**	**100.0**	**360**	**100.0**	**449**	**100.0**	**386**	**100.0**	**355**	**100.0**	**369**	100.0	4448
Have soap or detergent in household for hand washing				0		0		0		0		0		0		0		0		0		0		0		
Yes, Shown	25.5	96	16.9	64	31.7	114	56.0	202	49.6	178	17.2	60	31.3	108	51.1	184	33.4	150	49.5	191	27.0	96	52.6	194	36.8	1637
No, not shown	72.9	275	82.8	313	66.4	239	43.8	158	49.9	179	82.8	289	67.8	234	48.9	176	66.6	299	50.5	195	72.4	257	47.4	175	62.7	2789
Other Specify	1.6	6	0.3	1	1.9	7	0.3	1	0.6	2	0.0	0	0.9	3	0.0	0	0.0	0	0.0	0	0.6	2	0.0	0	0.5	22

Variable	Nakonde		Chinsali		Mpika		Lunte		Mungwi		Kalomo		Kazungula		Mongu		Kalabo		Sesheke		Kaoma		Nalolo		Total	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
n	**100.0**	377	**100.0**	378	**100.0**	360	**100**	361	**100**	359	**100**	349	**100**	345	**100**	360	**100**	449	**100**	386	**100**	355	**100**	369	100.0	4448
Availability of soap/detergent at place of washing																										
Bar or Liquid soap	63.7	65	87.7	57	57.9	70	87.2	177	91.1	164	83.3	50	74.8	83	65.8	121	84.0	126	89.5	171	65.3	64	97.9	190	80.6	1338
Detergent (Powder / Liquid / Paste)	29.4	30	10.8	7	35.5	43	11.8	24	7.2	13	11.7	7	12.6	14	14.7	27	10.0	15	7.9	15	28.6	28	2.1	4	13.7	227
Ash / Mud / Sand	6.9	7	1.5	1	6.6	8	1.0	2	1.7	3	5.0	3	12.6	14	19.6	36	6.0	9	2.6	5	6.1	6	0.0	0	5.7	94
n	**100.0**	**102**	**100.0**	**65**	**100.0**	**121**	**100.0**	**203**	**100.0**	**180**	**100.0**	**60**	**100.0**	**111**	**100**	**184**	**100.0**	**150**	**100.0**	**191**	**100.0**	**98**	**100.0**	**194**	100.0	1659

3.3 Institutional WASH

The WASH Baseline Assessment was designed to collect data on the proportion of institutions, specifically, day schools and health facilities with access to basic water services. Further, data was collected on the proportion of basic sanitation facilities provided in these institutions. This section, therefore, presents the findings of the WASH Baseline Assessment in this respect.

3.3.1 Access to Water in Institutional Settings

3.3.1.1 Characteristics of Health and Educational Facilities

As shown in table 3.11, overall, WASH Baseline Assessment results indicate that a total of 150 institutions (day schools and health facilities) were surveyed. Out of the 150 institutions, 51 (34%) were health facilities and 99 (66%) were day schools. In terms of type of schools, overall, results indicate that 76 (77%) were primary schools while 23 (23%) were secondary schools. Notably, all schools surveyed in Nakonde and Kaoma were primary schools while Kazungula (6) recorded the highest number of secondary schools interviewed. In addition, the findings show that, overall, 87 (88%) schools in the target areas are located in rural areas while 11 (11%) are located in peri-urban. Only one (1) school was in rural growth centres – in Kazungula district. Further, findings indicate that all (100%) the schools surveyed in Kalabo (4), Lunte (7), Nalolo (11), Sesheke (8) and Mpika (4) districts are located in rural areas.

In terms of the size of the population that the schools surveyed cater for, baseline assessment findings indicate that, overall, 61 (62%) schools in the study cater for less than one thousand people while, 38 (32%) are catering for more than one thousand people. Notably, all (100%) of schools surveyed in Kalabo and Mpika districts reported catering for a population of less than one thousand people. On average, each school in the sampled districts was catering for 3,000 leaners, with Mungwi district catering for almost twice the average.

With regard to the type of health facilities in the study areas, overall, findings indicate that 27 (53%) are *rural health centres*, while 19 (37%) are *health posts* and, only 5 (10%) are *urban health centres*. Overall, 26 (51%) and 21 (41%) health facilities reported catering for *5,000* or more and *1,000* to *4,999* people respectively.

Table 3. 11: Percentage distribution of the type, location and period of existence of health and education institutions

Variable	Nakonde	Chinsali	Mpika	Mungwi	Lunte	Kazungula	Kalomo	Mongu	Kalabo	Sesheke	Kaoma	Nalolo	Total	
	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	%	n
Institutional Type														
Health	33.3 (2)	26.3 (5)	42.9 (3)	11.1(1)	41.7(5)	33.3 (6)	45.8 (11)	33.3 (5)	57.1 (4)	38.5 (5)	28.6 (2)	15.4 (2)	34.0	51
Education	66.7 (4)	73.7 (14)	57.1 (4)	88.9 (8)	58.3(7)	66.7 (12)	54.2 (13)	66.7 (10)	42.9 (3)	61.5 (8)	71.4 (5)	84.6 (11)	66.0	99
Type of school														
Primary	100.0 (4)	92.9 (13)	75.0 (3)	75.0 (6)	71.4 (5)	50.0 (6)	69.2 (9)	80.0 (8)	66.7 (2)	62.5 (5)	100.0 (5)	90.9 (10)	76.8	76
Secondary	0.0 (0)	7.1(1)	25.0 (1)	25.0 (2)	28.6 (2)	50.0 (6)	30.8 (4)	20.0 (2)	33.3 (1)	37.5 (3)	0.0 (0)	9.1 (1)	23.2	23
Area where school is located														
Rural	75.0 (3)	85.7 (12)	100 (4)	50.0 (4)	100 (7)	91.7 (11)	92.3 (10)	80.0 (8)	100 (3)	100 (8)	80.0 (4)	100 (11)	87.9	87.0
Rural Growth Centre	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	8.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0	1.0
Peri-Urban	25.0 (1)	14.3 (2)	0.0 (0)	50.0 (4)	0.0 (00	0.0 (0)	7.7 (1)	20.0 (2)	0.0 (0)	0.0 (0)	20.0 (1)	0.0 (0)	11.1	11.0
Number of years school has been in existence														
0 – 10	0.0 (0)	21.4 (3)	0.0 (0)	0.0 (0)	14.3 (1)	8.3 (1)	7.7 (1)	10.0 (1)	0.0 (0)	25.0 (2)	20.0 (1)	0.0 (0)	10.1	10
11 – 20	0.0 (0)	7.1 (1)	50.0 (2)	12.5 (1)	14.3 (1)	16.7 (2)	7.7 (1)	0.0 (0)	0.0 (0)	25.0 (2)	40.0 (2)	0.0 (0)	12.1	12
21 – 30	0.0 (0)	0.0 (0)	25.0 (1)	12.5 (1)	0.0 (0)	16.7 (2)	23.1 (3)	0.0 (0)	0.0 (0)	12.5 (1)	0.0 (0)	18.2 (2)	10.1	10
31 – 40	0.0 (0)	7.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (2)	23.1 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	9.1 (1)	7.1	7
41+	100.0 (6)	64.3 (9)	25.0 (1)	75.0 (6)	71.4 (5)	41.7 (5)	38.5 (5)	90.0 (9)	100 (3)	37.5 (3)	40.0 (2)	72.7 (8)	60.6	60
Size of population school carters for														
Average population education institution carters for	3,048	1,526	543	6,784	1,670	995	1,238	559	737	1,225	1,000	,341	3,048	99
999 or less	50.0 (2)	50.0 (2)	100 (4)	87.5 (7)	57.1 (4)	58.3 (7)	30.8 (4)	90.0 (9)	100 (3)	75.0 (6)	60.0 (3)	45.5 (5)	61.6	61
1000 – 4999	25.0 (1)	50.0 (2)	0.0 (0)	0.0 (0)	28.6 (2)	41.7 (5)	69.2 (9)	10.0 (1)	0.0 (0)	25.0 (2)	40.0 (2)	27.3 (3)	32.3	32
5000 or more	25.0 (1)	0.0 (0)	0.0 (0)	12.5 (1)	14.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	27.3 (3)	6.1	6
School carters for persons with disabilities														
Yes	75.0 (3)	78.6 (11)	50.0 (2)	87.5 (7)	57.1 (4)	25.0 (3)	69.2 (9)	90.0 (9)	100.(3)	62.5 (5)	60.0 (3)	45.5 (5)	64.6	68
No	25.0 (1)	21.4 (3)	50.0 (2)	12.5 (1)	42.9 (3)	75.0 (9)	30.8 (4)	10.0 (1)	0.0 (0)	37.5 (3)	40.0 (2)	54.5 (6)	35.4	31
Type of health facility														
Health Post	0.0 (0)	20.0 (1)	33.3 (1)	100 (1)	60.0 (3)	33.3 (2)	36.4 (4)	20.0 (1)	25.0 (1)	60.0 (3)	50.0 (1)	50.0 (2)	37.3	19
Rural Health Centre	100.0 (2)	60.0 (3)	66.7 (2)	0.0 (0)	40.0 (2)	66.7 (4)	54.5 (6)	20.0 (1)	75.0 (3)	40.0 (2)	50.0 (1)	50.0 (2)	52.9	27
Urban Health Centre	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	9.1 (1)	60.0 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	9.8	5
Area where Health facility is located														
Rural	100.0 (2)	80.0 (4)	66.7 (2)	100 (1)	80.0 (4)	100.0 (6)	81.8 (9)	40.0 (2)	100 (4)	80.0 (4)	100 (2)	100 (2)	82.4	42
Peri-Urban	0.0 (0)	20.0 (1)	33.3 (1)	0.0 (0)	20.0 (1)	0.0 (0)	18.2 (2)	60.0 (3)	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	17.6	9
Number of years health facility has been in existence														
0 – 10	50.0 (1)	60.0 (3)	100 (3)	100 (1)	60.0 (3)	33.3 (2)	18.2 (2)	20.0 (1)	25.0 (1)	40.0 (2)	100 (2)	50.0 (1)	43.1	22
11 – 20	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	20.0 (1)	16.7 (1)	27.3 (3)	40.0 (3)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	17.6	9
21 – 30	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.0 (1)	25.0 (1)	40.0 (2)	0.0 (0)	0.0 (0)	9.8	5
31 – 40	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (1)	18.2 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	5.9	3
41+	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	20.0 (1)	33.3 (2)	9.1 (1)	20.0 (1)	50.0 (2)	20.0 (1)	0.0 (0)	0.0 (0)	17.6	9
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	27.3 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	5.9	3
Size of population health institutions carters for														
Average population health institution carters for	3,738.5	33,622.	9,451	4,004	7,543	10,682	8,545	6,222	3,879	2,775	2,454	3,325	3,739	51
999 or less	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	9.1 (1)	20.0 (1)	0.0 (0)	0.0 (0)	50.0 (1)	0.0 (0)	7.8	4
1000 – 4999	0.0 (0)	20.0 (1)	0.0 (0)	100 (1)	60.0 (3)	33.3 (2)	27.3 (3)	20.0 (1)	75.0 (3)	80.0 (4)	50.0 (1)	100 (2)	41.2	21
5000 or more	50.0 (1)	80.0 (4)	100.(3)	0.0 (0)	40.0 (2)	66.7 (4)	63.6 (7)	60.0 (3)	25.0 (1)	20.0 (1)	0.0 (0)	0.0 (0)	51.0	26
Health facility carters for persons with disabilities														
Yes	100.(2)	60.0 (3)	100 (3)	100 (1)	60.0 (3)	100 (6)	81.8 (9)	100 (5)	100 (4)	80.0 (4)	50.0 (1)	100 (2)	84.3	43
No	0.0 (0)	40.0 (2)	0.0 (0)	0.0 (0)	40.0 (2)	0.0 (0)	18.2 (2)	0.0 (0)	0.0 (0)	20.0 (1)	50.0 (1)	0.0 (0)	15.7	8

3.3.1.2 Access to Basic Water Services in Institutional Settings

The WASH Baseline Assessment was designed to collect data on the proportion of institutions, specifically, day schools and health facilities with access to basic water services. Further, data was collected on the proportion of basic sanitation facilities provided in these institutions.

In determining the WASH service levels in institutional settings, the WASH Baseline Assessment adopted the JMP criteria. According to the JMP criteria on access to water services, institutional settings (health facilities and schools) can be classified as having *basic service*, *limited service* or *no service*. *No service* implies that "water is taken from unprotected dug wells or spring, or surface water sources; or an improved source that is more than 500 meters from the premises; or there is no water source". On the other hand, *limited service* refers to "an improved water source that is within 500 metres of the premises, but not all requirements for basic service are met". *Basic service* means "water is available from an improved source on the premises".

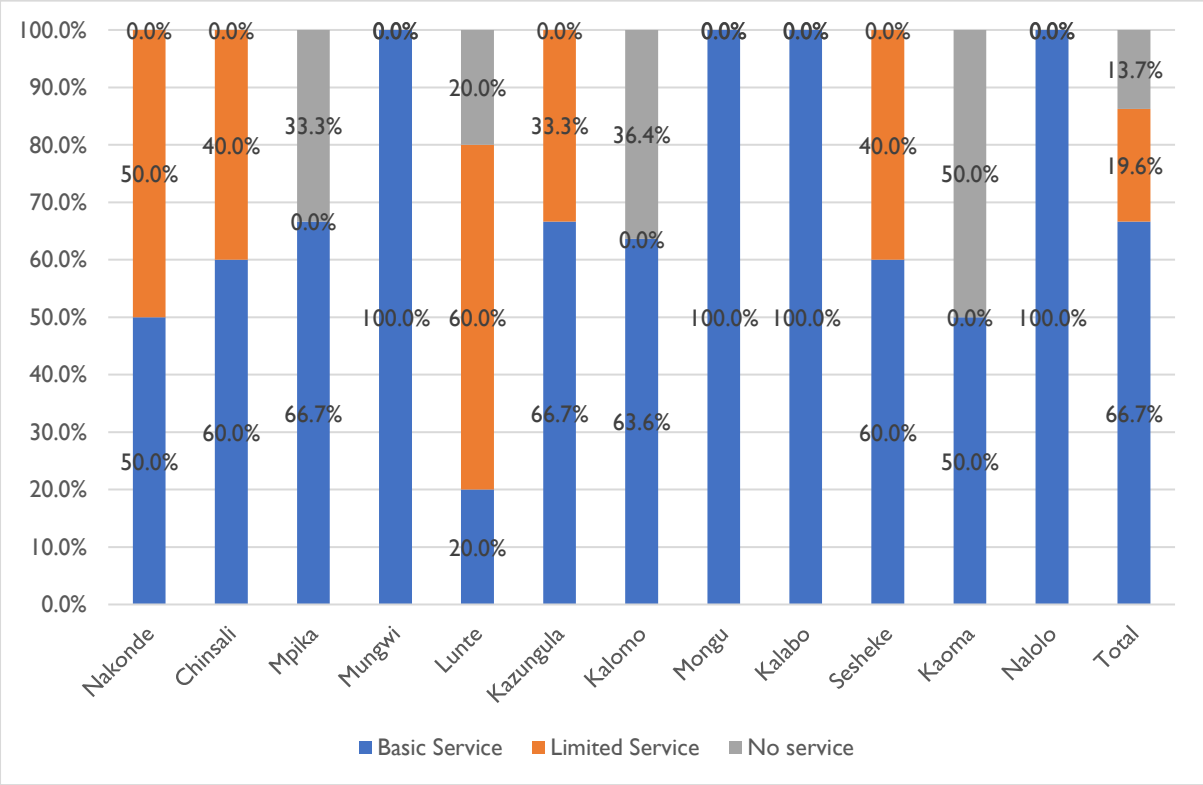

Figure 3. 4: Access to Water service in Health Facilities

The WASH Baseline Assessment sought to determine the proportion of institutions with access to basic water services. The computation was based on the access to water stands in institutional settings. The findings of the baseline assessment, as indicated in figure 3.4, overall,

67% (n=51) of health facilities in the assessment have access to *basic* water services while 20% have access to *limited* sanitation services. In contrast, findings indicate that only 14% of health facilities in the assessment have no access (*no service*) to water services.

Disaggregated by districts, results shows that all (100%) health facilities in Nalolo, Kalabo, Mongu and Mungwi districts have access to *basic* water services. On the contrary, the results indicate that 20% of health facilities in Lunte districts have access to *basic* water services. In addition, the findings indicate that 60% (Lunte), 50% (Nakonde), 40% (Chinsali and Sesheke) and 33% (Kazungula) of health facilities have access to *limited* water service. Baseline assessment findings further show that 50% (Kaoma), 36% (Kalomo), 33% (Mpika) and 20% (Lunte) of health facilities reported having *no access* to water services, refer to figure 3.4.

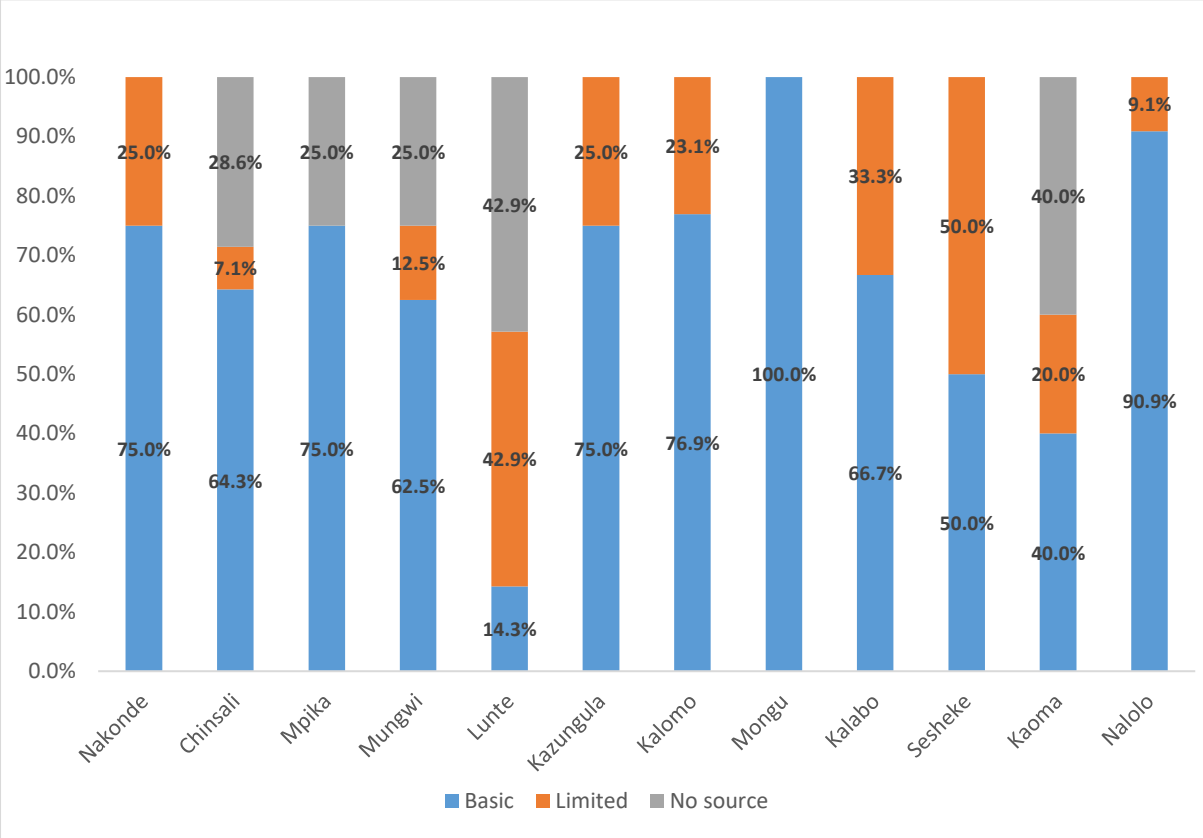

Figure 3. 5: Access to basic water services in schools

In terms of access to *basic* water services in schools, results of the WASH Baseline Assessment, as shown in figure 3.5, indicate that, overall, 69% (n=99) of schools in the assessment have access to *basic* water services while 19% have access to *limited* water services. On the contrary, results from the assessment show that 12% of schools in the study have no access to water services (*no service*).

Disaggregated by district, findings indicate that, Mongu (100%) and Nalolo (91%) reported the highest proportion of schools with access to *basic water services*. Moreover, findings also indicate that 60% or more of schools in Nakonde, Chinsali, Mpika, Mungwi, Kazungula, Kalomo and Kalabo have access to *basic* water services. Furthermore, results of the baseline assessment indicate that 50% (Sesheke) and 43% (Lunte) of schools reported having *limited* access to services compared to 7% and 9% in Chinsali and Nalolo districts, respectively. In addition, findings suggest that 25% or more of schools in Chinsali, Mpika, Mungwi, Lunte and Kaoma have *no access* to water services. As a case in point, Lunte district reported the least proportion of schools with access to basic water services, at 14% (n=7) only.

In terms of ownership of water points, WASH Baseline Assessment results, as shown in table 3.12, indicate that, 66% (n=63) of schools in the study indicated that the water points on their premises are owned by *Government*. Further, according to the findings, 13% (n=12) of schools in the study reported that the water points on their premises are owned by *institutions* (school). Moreover, results of the baseline assessment indicate that 4% (n=4), 10% (n=9) and 7% (n=7) of the water points in the schools in the study are owned by *Municipality*, *Community* and *NGO* respectively.

In addition, the WASH Baseline Assessment established the number of functional water points in the schools in the study. According to the findings, as indicated in table 3.12, overall, 66% (n=59) of schools in the study reported having one functional water point. Further, 25% (n=23) reporting having 2 functional water point on their premises while only 8% (n=7) of schools reported having 3 or more functional water points on their premises.

Disaggregated by districts, except for Mungwi districts, the majority (45% or more) of the schools in the rest of the districts in the study indicated that they have one functional water point on their premises. In the case of Mungwi, the majority (57%) of the schools reported having 2 functional water points on their premises.

Results of the WASH Baseline Assessment further indicate that, overall, the majority (64%) of schools in the study do not test the water for quality purposes. On the contrary, only 36% (n=36) of schools in the study indicated that they tested their water for quality purposes. Disaggregated by districts, the findings indicate that all (100%) schools in Mpika and 56% (n=6) of schools in Nalolo indicated that they test their water for quality purposes.

In terms of ownership of water supply sources at health facilities, results show that, overall, 61% (n=28) of health facilities in the study reported that the water points on their premises are owned by the *Government*. According to the findings of the baseline assessment, overall, only 9% (n=4) of water points are owned by institutions (health facilities). The findings further show that 17% (n=8) are owned by the *Community*, 9% (n=4) are owned by *Municipality* and 4% (n=2) are owned by *NGO*, refer to table 3.12 for details.

Table 3. 12: Ownership of Water Sources, Number of Water Access Points and Water Quality Testing in Education and Health institutions by district

Variable	Nakonde	Chinsali	Mpika	Mungwi	Lunte	Kazungula	Kalomo	Mongu	Kalabo	Sesheke	Kaoma	Nalolo	Total	
	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	%	n
Ownership of Main water source - schools														
Government	75.0 (3)	50.0 (7)	50.0 (2)	85.7 (6)	83.3 (5)	41.7 (5)	61.5 (8)	100. (10)	66.7 (2)	87.5 (7)	33.3 (1)	63.6 (7)	66.3	63
Municipality	25.0 (1)	7.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	8.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	4.2	4
Community	0.0 (0)	35.7 (5)	0.0 (0)	14.3 (1)	16.7 (1)	0.0 (0)	7.7 (1)	0.0 (0)	0.0 (0)	0.0 (0)	3.3 (1)	0.0 (0)	9.5	9
NGO	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (2)	0.0 (0)	0.0 (0)	33.3 (1)	12.5 (1)	0.0 (0)	27.3 (3)	7.4	7
Institution	0.0 (0)	7.1 (1)	50.0 (2)	0.0 (0)	0.0 (0)	33.3 (4)	30.8 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	9.1 (1)	12.6	12
Number of functional water points in schools														
1	75 (3)	77.7 (7)	50 (2)	28.5 (2)	50 (3)	75 (9)	84.6 (11)	77.8 (7)	66.6 (2)	75.0 (6)	66.6 (2)	45.4 (5)	66.3	59
2	25 (1)	11.1 (1)	50 (2)	57.1 (4)	50 (3)	16.6 (2)	7.7 (1)	11.1 (1)	33.3 (1)	12.5 (1)	33.3 (1)	45.4 (5)	25.8	23
3+	0 (0)	11.1 (1)	0 (0)	14.2 (1)	0 (0)	8.3 (1)	7.7 (1)	11.1 (1)	0 (0)	12.5 (1)	0 (0)	9.1 (1)	7.9	7
Testing water quality – schools														
Yes	50.0 (2)	35.7 (5)	100 (2)	25.0 (2)	14.3(1)	41.7 (5)	46.2 (6)	20.0 (2)	0.0 (0)	12.5 (1)	40.0 (2)	54.5 (6)	36.4	36
No	50.0 (2)	64.3 (9)	0.0 (0)	75.0 (6)	85.7 (6)	58.3 (7)	53.8 (7)	80.0 (8)	100.0 (3)	87.5 (7)	60.0 (3)	45.5 (5)	63.6	63
Ownership of Main water source –health facilities														
Government	50 (1)	60.0 (3)	66.7 (2)	100 (1)	80 (4)	33.3 (2)	57.1 (4)	80.0 (4)	100 (4)	20.0 (1)	0.0 (0)	100 (2)	60.9	28
Municipality	50 (1)	20.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	14.3 (1)	0.0 (0)	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	8.7	4
Community	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	20.0 (1)	16.7 (1)	14.3 (1)	20.0 (1)	0.0 (0)	40.0 (2)	100 (1)	0.0 (0)	17.4	8
NGO	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	33.3 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4.3	2
Institution	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	16.7 (1)	14.3 (1)	0.0 (0)	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	8.7	4
Number of functional water points in health facilities														
1	50.0 (1)	50.0 (2)	100.0 (3)	0.0 (0)	33.3 (1)	50 (3)	66.7 (4)	60.0 (3)	100.0 (4)	75.0 (3)	100.0 (1)	100.0 (2)	65.9	27
2	50.0 (1)	50.0 (2)	0.0 (0)	100.0 (1)	33.3 (1)	33.3 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	17.1	7
3+	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	33.3 (1)	16.7 (1)	33.3 (2)	40.0 (2)	0.0 (0)	25.0 (1)	0.0 (0)	0.0 (0)	17.1	7
Testing water quality – health facilities														
Yes	50.0 (2)	80.0	100 (3)	0.0	80.0 (5)	100 (6)	27.3 (3)	40.0 (2)	0.0 (0)	60.0 (3)	50.0 (1)	100 (2)	56.9	29
No	50.0 (2)	20.0	0.0 (0)	100.0	20.0 (1)	0.0 (0)	72.7 (8)	60.0 (3)	100 (4)	40.0 (2)	50.0 (1)	0.0 (1)	43.1	22

Respondents (n=36) from schools who indicated that their treated their water for quality purposes were asked to state the institution or the individuals responsible for testing the water. According to the findings, overall, as indicated in table 3.13, in the majority (72%) of cases, the water is tested by the EHTs. Apart from the RHTs, findings also indicate that, overall, 19% (n=7) of schools in the study reported that their water is tested by the council.

Overall, majority of schools 71% (n=70) reported that water available at their school is safe to drink without treatment. In contrast, 29% (n=29) of schools in the study reported that the water from their water points is not safe to drink without treatment. In addition, all (100%) respondents in Mpika, Nalolo and Sesheke reported that the water available at their schools was safe to drink without treatment. In contrast, all (100%) respondents in Kalabo and Kaoma reported that the water at their schools is not safe to drink without treatment. Further, Lunte district reported the least proportion (14%) of schools reporting that the water available at the school was safe to drink without treatment. Moreover, overall, findings of the baseline assessment also suggest that *filtration and breaching/adding chlorine* were the most commonly used methods of water treatment at 52% (n=15) and 41% (n=12), respectively.

In addition, respondents were asked if their school had any broken water points on their premises. According to the findings, overall, 44% (n=44) of the schools in the study reported that they have broken water supply points on their premises. Nakonde and Kazungula districts reported the highest proportions of schools with more than one broken water supply points, 67% (n=2) and 50% (n=3) respectively, refer to table 3.13 for details.

Further, respondents (n=29) from health facilities who reported that the water from their water points is tested for quality purposes were asked to indicate the individuals or institutions responsible for testing the water. According to the findings, overall, in the majority (86%) of cases, the EHTs were reasonable for testing the water for quality purposes.

Moreover, respondents in health facilities were asked to indicate whether the water from their water points was safe to drink without treatment. According to the findings, as presented in table 3.13, overall, the majority (69%) of respondents in health facilities reported that their water was safe to drink without treatment. Further, according to the findings, all (100%) respondents in health facilities in Mongu, Nalolo, Nakonde and Mungwi reported that the water from the water points at their facilities is safe to drink without treatment.

Table 3. 13: Percentage distribution of water treatment, methods of treatment and functional water points in schools and health facilities by District

Variable	Nakonde	Chinsali	Mpika	Mungwi	Lunte	Kazungula	Kalomo	Mongu	Kalabo	Sesheke	Kaoma	Nalolo	Total	
	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	%	n
Water testing in schools														
Contractor	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (1)	2.8	1
Council	100 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.0 (1)	0.0 (0)	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (3)	19.4	7
EHT	0.0 (0)	100 (5)	75.0 (3)	100 (2)	100 (1)	80.0 (4)	100 (6)	50.0 (1)	0.0 (0)	100.0 (1)	100.0(2)	16.7 (1)	72.2	26
Government	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (1)	2.8	1
Water Affairs	0.0 (0)	0.0 (0)	25.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.8	1
Water safe to drink without treating - schools														
Yes	50.0 (2)	64.3 (9)	100 (4)	62.5 (5)	14.3 (1)	75 (9)	92.3 (12)	90 (9)	0.0 (0)	100 (8)	0 (0)	100 (11)	70.7	70
No	50 (2)	35.7 (5)	0.0 (0)	37.5 (3)	85.7 (6)	25 (3)	7.7 (1)	10 (1)	100 (3)	0 (0)	100 (5)	0 (0)	29.3	29
Method of treating drinking water in schools														
Boil	0.0 (0)	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	3.4	1
Add bleach/chlorine	50.0 (1)	20.0 (1)	0.0 (0)	66.7 (2)	50.0 (3)	100.0 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	40.0 (2)	0.0 (0)	41.4	12
Solar Disinfectant	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	3.4	2
Other/Filtration	50.0 (1)	80.0 (4)	0.0 (0)	0.0 (0)	33.3 (2)	0.0 (0)	100.0 (1)	100.0 (1)	100.0 (3)	0.0 (0)	60.0 (3)	0.0 (0)	51.7	15
Broken water points in schools														
Yes	75 (3)	50 (7)	0 (0)	62.5 (5)	71.4 (5)	50 (6)	46.2 (6)	10 (1)	33.3 (1)	12.5 (1)	60 (3)	54.5 (6)	44.4	44
No	25 (1)	50 (7)	100 (4)	37.5 (3)	28.6 (2)	50 (6)	53.8 (7)	90 (9)	66.7 (2)	87.5 (7)	40 (2)	45.5 (5)	55.6	55
Number of broken water supply points in schools														
1 broken water point	33.3 (1)	85.7 (6)	0 (0)	80 (4)	60 (3)	50 (3)	83.3 (5)	100 (1)	100 (1)	100 (1)	100 (3)	100 (6)	77.3	34
2 or more broken water point	66.7 (2)	14.3 (1)	0.0 (0)	20 (1)	40 (2)	50 (3)	16.7 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	22.7	10
Water testing in health facilities														
Council	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	6.9	2
EHT	0.0 (0)	100 (4)	66.7 (2)	0.0 (0)	100 (4)	100 (6)	100 (3)	50.0 (1)	0.0 (0)	100 (3)	100 (1)	50.0 (1)	86.2	25
The Government	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	3.4	1
The staff	100 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	3.4	1
Water safe to drink without treating health facilities														
Yes	100 (2)	20 (1)	66.7 (2)	100 (1)	60 (3)	66.7 (4)	54.5 (6)	100 (5)	0 (0)	80 (4)	50 (1)	100 (2)	68.9	20
No	0 (0)	80 (4)	33.3 (1)	0 (0)	40 (2)	33.3 (2)	45.45 (5)	0 (0)	100 (4)	20 (1)	50 (1)	0 (0)	31.1	9
Method of treating drinking water health														
Boil	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	25.0 (1)	100.0 (1)	0.0 (0)	0.0 (0)	10.0	2
Add bleach/chlorine	0.0 (0)	75.0 (3)	100. (1)	0.0 (0)	50.0 (1)	50.0 (1)	20.0 (1)	0.0 (0)	25.0 (1)	0.0 (0)	100.0 (1)	0.0 (0)	45.0	9
Other/Filtration	0.0 (0)	25.0 (1)	0.0 (0)	0.0 (0)	50.0 (1)	50.0 (1)	80.0 (4)	0.0 (0)	50.0 (2)	0.0 (0)	0.0 (0)	0.0 (0)	45.0	9
Broken water point in health facilities														
Yes	0 (0)	40 (2)	0 (0)	0 (0)	60 (3)	50 (3)	45.5 (5)	20 (1)	0 (0)	60 (3)	0 (0)	0 (0)	33.3	17
No	100 (2)	60 (3)	100 (3)	100 (1)	40 (2)	50 (3)	54.5 (6)	80 (4)	100 (4)	40 (2)	100 (2)	100 (2)	66.7	34
Number of broken water supply points in heal														
1 broken water point	0.0 (0)	100 (2)	0.0 (0)	66.7 (2)	0.0 (0)	60.0 (3)	100 (1)	0.0 (0)	66.7 (2)	0.0 (0)	0.0 (0)	0.0 (0)	58.8	10
2 or more broken water point	0.0 (0)	0.0	0.0 (0)	33.3 (1)	100 (3)	40.0 (2)	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	41.2	7

On the contrary, Kalabo and Chinsali districts reported the highest proportions of respondents in health facilities indicating that their water is not safe to drink without treatment, 100% (n=4) and 80% (n=4), respectively. In addition, results of the baseline assessment indicate that, overall, *breaching/adding chlorine* and *other/filtration* are the most common methods of water treatment in health facilities across all 12 districts, at 45% (n=9).

Furthermore, respondents in health facilities were asked if they had any broken water supply point at the time of the study. According to the findings, overall, only 33% (n=17) of health facilities in the study reported that they had a broken water supply point at the time of the assessment. Out of those who indicated that they had a broken water supply point, the majority (59%) reported that they have one (1) broken water supply point, refer to table 3.13 for details.

3.3.1.3 Financial and Technical Support

The WASH Baseline Assessment sought to establish whether schools and health facilities in the target areas received financial and technical support for water improvement. According to the findings, overall, 18% (n=18) of the schools in the assessment reported receiving financial and technical support for water improvement. Disaggregated by districts, findings indicate that none of the schools in Mungwi, Lunte, Mpika, Kalabo and Kaoma reported having received any financial and technical support for water improvement. In contrast, Mongu (60%), Kazungula (33%), Kalomo (31%) and Nakonde (25%) reported the highest proportion of schools indicating that they received financial and technical support for water improvement, refer to table 3.14.

With reference to health facilities, overall, results of the baseline assessment indicate that only 20% (n=10) of health facilities reported receiving financial and technical support for water improvement. Disaggregated by districts, only health facilities in Nakonde (50%), Chinsali (40%), Kazungula (17%), Mongu (60%), Sesheke (40%) and Nalolo (50%) reported that they received financial and technical support for water improvement. Among the districts reporting that they received technical and financial support for water improvement, Mongu (60%) and Kazungula (17%) reported the highest and the least proportion of health facilities that received technical and financial support, respectively. Similar to what has been observed with regards to receipt of financial and technical support in schools, none of the health facilities in Mungwi, Lunte, Mpika, Kalabo and Kaoma reported having received financial and technical support for water improvement (see table 3.14).

Table 3. 14: Percentage distribution – technical and financial support received by schools and health facilities by District

Variable	*School received financial and technical support for water improvement*		*Health facility received financial and technical support for water improvement*	
	Yes (%)	**n**	**Yes (%)**	**n**
Nakonde	25.0	4	50	2
Chinsali	7.1	14	40	5
Mpika	0.0	4	0.0	3
Mungwi	0.0	8	0.0	1
Lunte	0.0	7	0.0	5
Kazungula	33.3	12	16.7	6
Kalomo	30.8	13	0.0	11
Mongu	60.0	10	60.0	5
Kalabo	0.0	3	0.0	4
Sesheke	12.5	8	40	5
Kaoma	0.0	5	0.0	2
Nalolo	9.1	11	50.0	2
Total	**18.2**	**99**	**19.6**	**51**

3.3.2 Access to Basic Sanitation Services in Institutional Settings

Access to basic sanitation services in Institutional settings (schools and health facilities) in the target districts in the study was assessed in accordance with the JMP criteria on access to sanitation services. That is: *Basic Service* – "improved sanitation facilities are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility"; *Limited Service* – "at least one improved sanitation facility is available, but not all requirements for basic service are met"; and *No service* – "toilet facilities are unimproved (i.e. pit latrines without a slab or platform, hanging latrines, buckets latrines) or there are no toilets".

According to the findings, as presented in figure 3.6, none of the toilet facilities in all (n=51) the health facilities across all the 12 districts in the baseline assessment meet the *basic service* level of sanitation. In addition, findings indicate that all (100%) of health facilities in Nakonde, Chinsali, Mpika, Mungwi, Lunte, Mongu, Kalabo, and Nalolo have *limited* access to sanitation services. In contrast, results of the baseline assessment indicate that 17% (Kazungula), 27% (Kalomo), 20% (Sesheke) and 50% (Kaoma) of health facilities have no access to sanitation services (no service), refer to figure 3.6 for details.

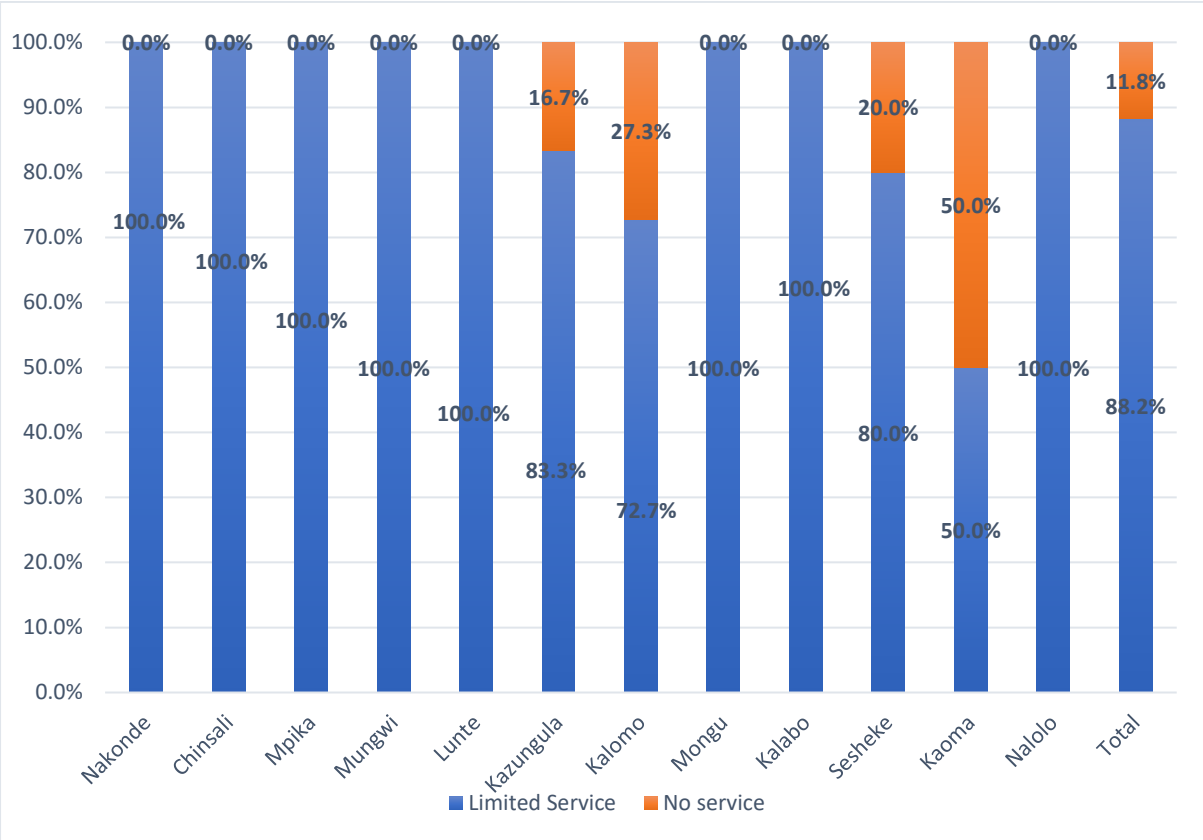

Figure 3. 6: Access to Sanitation Services in Health Facilities by district

Overall, baseline assessment results indicate that, the majority (88%) of health facilities in the study have *limited* access to sanitation services. Further, overall, only 12% (n=51) of health facilities in the study have no access (no service) to sanitation services.

In terms of access to *basic* sanitation services in schools, results of the WASH Baseline Assessment indicate that, none of the toilet facilities in all the schools across all 12 districts in the assessment meet the *basic* sanitation service level. Overall, baseline assessment results indicate that 97% (n=99) of schools in the assessment have access to *limited* sanitation services. In contrast, findings indicate that only 3% of schools in the assessment have no access (*no service*) to sanitation services.

Disaggregated by district, results of the baseline assessment indicate that, all schools in Nakonde, Chinsali, Mpika, Mungwi, Lunte, Mongu, Kalabo, Kaoma and Nalolo have *limited* access to sanitation services. In contrast, findings indicate that 92% (Kazungula and Kalomo), and 88% (Sesheke) of schools have *limited* access to sanitation services. Moreover, results of the baseline assessment suggest that 8% (Kazungula and Kalomo) and 13% (Sesheke) of schools have no access (no service) to sanitation services, refer to figure 3.7 for details.

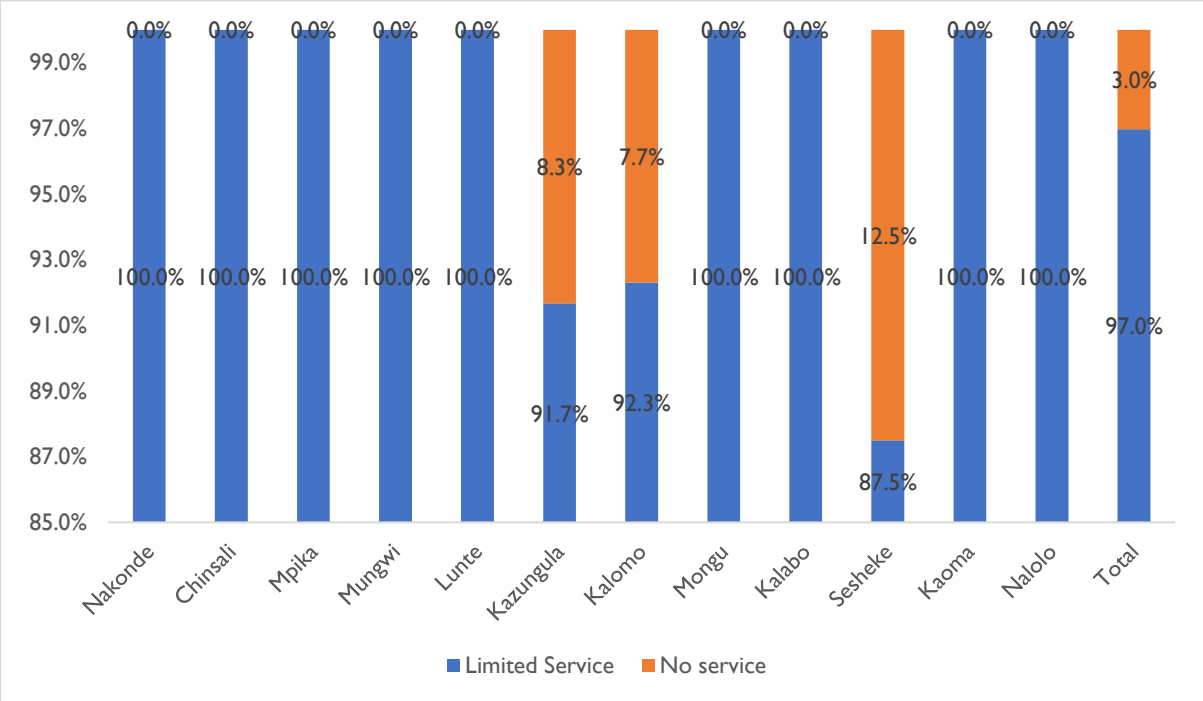

Figure 3. 7: Access to Basic Sanitation Services in Schools by District

3.4 WASH Policy and Governance, Financing and Coordination

This section presents findings of the WASH Baseline Assessment on WASH policy and governance in relation to WASH policy and governance, financing and coordination, enforcement of sanitation laws and cross cutting issues. The information presented here was collected through desk review and key informant interviews from various stakeholders in the study areas.

3.4.1 WASH Policy and Governance

The main policy guiding the provision of water and sanitation is the National Water Supply and Sanitation Policy (NWSSP), developed in 2020 by the Ministry of Water Development and Sanitation (MWDS), formerly, Ministry of Water Development, Sanitation and Environmental Protection and other stakeholders. The policy aims at accelerating universal access to clean and safe water as well as adequate sanitation in Zambia.

Implementation of the 2020 NWSSP's is through National Development Plans and National Strategic Plans. The policy aims to set coherent policy measures to guide the development and implementation of national strategies and programmes to achieve improved water supply and sanitation. It also provides an institutional and legal framework, sector coordination and

management, infrastructure development and technological options, governance, behaviour change, communication and awareness, financing and investment as well as strengthening and mainstreaming of cross cutting issues into various WASH programmes. Strategies for the implementation of the policy include; Capacity Development Strategy (under review), Open Defecation Free Strategy, Urban Sanitation Strategy, Community Led Total Sanitation (CLTS), WASH Communication Strategy, Sector Coordination Mechanism as well as the Monitoring and Evaluation (M&E) Framework Guide.

To assess the performance of institutions responsible for WASH policy and governance, the HL 8.3.3 indicator – number of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation as a result of USG assistance, was adopted. Depending on the mandate, institutions were assessed based the following categories; human resources, monitoring systems, project planning and implementation, enforcement of policies (watershed protection, allocation systems etc.), financial management (budget execution, ability to pass an annual audit), equity (tariff setting, poor inclusive policy, gender mainstreaming policy) and accountability to stakeholders. This indicator was assessed at policy, regulation and implementation levels.

The following are the findings on the status of these categories in the various institutions at the aforementioned levels. At policy level (the Ministry), findings indicate that the Ministry of Water Development and Sanitation (MWDS) employs an M&E Framework, including an Integrated Information Management System for monitoring progress on water and sanitation. With regard to creating an enabling environment for private sector engagement in service delivery, the baseline assessment found that private sector participation has been provided for in the areas of technology development, sanitation marketing and pit emptying. It was, however, noted that not much progress has been made in this regard. On cross cutting issues, findings indicate that the MWDS has adopted the Menstrual Hygiene Management Guidelines developed by the Ministry of General Education. On equity, specifically, inclusive and gender mainstreaming are included in the 2020 NWSSP policy. Findings, however, show that the guidelines for inclusive WASH facilities are currently being development, refer to table 3.15 for details.

At regulation level, findings show that the 2020 NWSSP provides for regulation of the different aspects of WASH services by National Water and Sanitation Council (NWASCO), Water

Resources Management Authority (WARMA), Zambia Environmental Management Agency (ZEMA) and the local authorities. Regulation plays a critical role in ensuring universal access to water and sanitation. For example, NWASCO is responsible for ensuring efficiency and sustainability of WSS services. It is therefore key in ensuring service improvement through regulation of water supply and sanitation services. However, NWASCO has, until 2000 regulated piped water supply and off-site sanitation in urban and peri-urban areas. This is despite the national water policy and law (WSS Act No. 28 of 1997) having recognized onsite sanitation and faecal sludge management (FSM) as mandates for NWASCO and the water utilities or Commercial Utilities[1]. This has led to unhealthy emptying methods and burying of pits, including illegal dumping of faecal sludge hence.

[1] On Urban Onsite Sanitation and Faecal Sludge Management: Framework for Provision and Regulation in Zambia, April 2018

Table 3. 15: WASH Policy and Governance

Category	Institution NWASCO Findings	WARMA Findings	ZEMA Findings
Mandate	Established by the Water Supply and Sanitation Act No. 28 of 1997 and responsible for ensuring efficiency and sustainability of WSS services.	Established by the Water Resources Management Act No. 21 of 2011 and is responsible for the management, development, conservation, protection and preservation of water resources and its ecosystems.	Established by the Environmental Management Act, 2011 which gives it the mandate to protect the environment and prevent/control pollution.
Human Resources	Adequate for regulation of urban water and sanitation but inadequate for regulation of rural water and sanitation.	Some catchment councils are understaffed.	Adequate
Monitoring systems	Requires support towards data management including surveys, information management, GIS mapping for existing and new facilities. Requires support in information management for regulation of provision of water supply and sanitation in rural areas	Lack of up-to-date information on available water from the various water sources, critical especially with climate variability which has had a huge impact on the water quantities.	N/A
Project planning and implementation	Not involved	Not involved	Not involved
Regulation and Enforcement of policies (e.g. watershed protection, allocation systems etc.)	Urban Onsite Sanitation and Faecal Sludge Management Framework for Provision and Regulation in Zambia is yet to be finalized to enforce regulation of On-site sanitation aptitude	Financial constraints leading to failure to conduct scheduled inspections and other compliance activities. Resulting in illegal abstraction and over abstraction of water leading to challenges in water allocation.	Has standards and limits for sludge and sewage effluent but not for faecal sludge
Financial management (budget execution, ability to pass an annual audit)	Passed financial audits, but usually fails audits by Auditor General's Office since they include compliance reviews besides financial reviews.	Passed financial audits, but usually fails audits by Auditor General's Office since they include compliance reviews besides financial reviews.	Passed financial audits, but usually fails audits by Auditor General's Office since they include compliance reviews besides financial reviews.
Equity (tariff setting, poor inclusive policy, gender mainstreaming policy)	Current tariffs are inclusive of the poor (increasing block tariff) but is non-cost recovery (largely due to increase in the cost of inputs, i.e. electricity).	• Has inclusive policies in terms of gender, • The tariff does not support equity	• Polluter pays principle is applied
Accountability to stakeholders	• Has a board of directors. • Participates in various meeting with technical working groups and other stakeholders	• Has a board of directors. • Participates in various meeting with technical working groups and other stakeholders	• Has a board of directors. • Participates in various meeting with technical working groups and other stakeholders

According to the National Decentralization Policy of 2013, there is need for citizens to participate in governance and local affairs in order to foster meaningful development. The National Decentralization Policy demands "transfer of authority, functions and responsibilities, with matching resources from central government to lower levels" of government in order to provide various socio-economic services, including WSS services at district level. In this regard, Local Authorities have the overall mandate to oversee implementation of WSS programmes in all areas, including rural growth centres and rural areas. For this reason, local authorities (LA) and Commercial Utilities (CU's) are key implementation at level. For example, LA are required to coordinate all the different water and sanitation sector players at district level.

Therefore, the assessment of the LA's was based on project planning and implementation as well as enforcement of policies and laws (e.g., Public Health Act and bye-laws) and human resources. According to the findings of the WASH Baseline Assessment, all the 12 districts in the study have DWASHE committees in place. The committees serve as a platform for planning and implementation of WASH related projects in the respective districts. Further, the committees draw their membership from; the Department of Water Resource Development and other line ministries such as; Health, Education, Chiefs and Traditional Affairs and Community Development. Other members include community-based organizations and non-governmental organization such as Red Cross, UNICEF and NACRO, World Vision, Care International and African REVIVA including Commercial Water Utility.

When asked to describe the roles of DWASHE committees, respondents indicated that the committees were, among other things, responsible for resource mobilization, capacity building, policy guidance, joint planning and support in the implementation of WASH projects and activities.

Furthermore, with the exception of Lunte district, all the DWASHE committees assessed reported that they have standards and guidelines for improving water and sanitation supply in their respective districts. In addition, of the twelve (12) districts, five (5) of the DWASHE committees; Mongu, Kaoma, Kalabo, Kalomo and Nakonde reported having strategies for improving service delivery regarding drinking water services and safely managed sanitation services. In the case of Kaoma district, DWASHE rated the monitoring and evaluation activities for WASH in the district at 60%, while Kalabo rated it at 80%. The challenges cited

in the execution of monitoring and evaluation for WASH projects and activities included lack of transport, limited funding, lack of monitoring tools as well as lack of motivation for the personnel involved. The key informants argued that these challenges could be overcome if vehicles were procured and adequate funding provided to support implementation of planned activities.

Moreover, three (3) Commercial Utilities in the study, that is, Southern Water Supply and Sanitation Company (SWASCO) covering Southern Province, Western Water Supply and Sanitation Company (WWSC) covering Western Province and Chambeshi Water Supply and Sanitation Company (CWSC) covering Muchinga and Northern Provinces, were assessed. It should be noted that the mandate to provide water and sanitation services in rural areas, previously under the LA, has been transferred to Commercial utilities. However, this process is still ongoing and CU's are yet to fully execute the mandate. In addition, CU's have the responsibility to provide services in peri-urban areas. The results of the assessment are presented in table 3.

Table 3. 16: Performance of Commercial Utility Companies

	Commercial Utility		
Category	**SWASCO**	**WWSC**	**CWSC**
Human Resources (Staffing plan)	For the mandate in urban and peri-urban, key job functions and descriptions are available All key positions are filled Parallel structure for provision of rural water and sanitation is being developed	For the mandate in urban and peri-urban, key job functions and descriptions are available 50% of the key positions are filled Parallel structure for provision of rural water and sanitation is being developed	For the mandate in urban and peri-urban, key job functions and descriptions are available All key positions are filled Parallel structure for provision of rural water and sanitation is being developed
Availability of financial management system	Yes	Yes	Yes
Financial management (availability and execution of budget) Financial management (ability to pass an annual audit)	A budget is available and is executed, though budget does not cover for all expenses. As per requirements in the 2018 Public Finance Management Act, the utility companies are audited yearly. Passed financial audits but not audits conducted by Auditor General's Office since such audits include compliance reviews as well.	A budget is available and is executed, though budget does not cover for all expenses. As per requirements in the 2018 Public Finance Management Act, the utility companies are audited yearly. Passed financial audits but not audits conducted by Auditor General's Office since such audits include compliance reviews as well.	A budget is available and is executed, though budget does not cover for all expenses. As per requirements in the 2018 Public Finance Management Act, the utility companies are audited yearly. Passed financial audits but not audits conducted by Auditor General's Office since such audits include compliance reviews as well.
Availability of Operations and Maintenance (O&M) Guidelines, plans and budgets	Available	Available	Available
Equity (tariff setting, poor inclusive policy, gender mainstreaming policy)	Current tariffs are inclusive of the poor (increasing block tariff, the lower bands are cheaper with increase in cost with increasing consumption).	Current tariffs are inclusive of the poor (increasing block tariff the lower bands are cheaper with increasing cost with increasing consumption)	Current tariffs are inclusive of the poor (increasing block tariff the lower bands are cheaper with increasing cost with increasing consumption)
Service provision in peri-urban areas	Provision of water but not sanitation services (plans are available but awaits funding which)	Provision of water but not sanitation services	Provision of water and sanitation services (pit emptying for on-site sanitation)
Service provision in new developed areas	Provision of water but not sanitation services (not all areas have been serviced)	Provision of water in some areas but no sanitation services are being provided	Water and sanitation (pit emptying through engagement with private sector)
Private Sector participation	No private sector participation in any area of operation of the CU	No private sector participation in any area of operation of the CU	Private sector engaged in pit empty for on-site sanitation.
Accountability to stakeholders	Has a board of directors Participate in various meetings with technical working groups and other stakeholders	Has a board of directors Participate in various meetings with technical working groups and other stakeholders	Has a board of directors Participates in various meetings with technical working groups and other stakeholders

3.4.2 Enforcement of Sanitation Laws

Results from key informants indicate that the Public Health Act at urban level and, Community Led Total Sanitation (CLTS) at rural level, are the main frameworks put in place to enforce sanitation in the 12 districts in the study. In addition, Kazungula district reported using a sanitation plan as an additional framework for enforcing sanitation laws. Further, current sanitation facilities in use and allowed in the districts included water borne toilets in urban areas, VIP and simple latrines in rural. Further, all the districts stated that pits and septic tanks were the containment facility used for onsite sanitation.

Regarding prevention of open defecation, results from key informants indicate that most districts have put up Community Led Total Sanitation (CLTS) interventions, sanitation and hygiene promotions, and traditional authority engagement as ways of mitigating open defecation. Results further indicate that stakeholders such as; Sun II, UNICEF, Ministry of Health, SNV and World Vision were supporting the prevention of open defecation in some districts.

3.4.3 Financing for Water and Sanitation

Financing for water and sanitation is reported under HL.8.4-1, "value of new funding mobilized to the water and sanitation sectors as a result of USG assistance", hence, the need for baseline to be established. According to the findings of the WASH Baseline Assessment, the two major sources of funding for WASH in the districts in the study are public resources and development or donor funds. In the case of public resources, a total of K2, 165,472,368 out of K119, 616,011,615 was allocated to the water sector in the national budget in 2021. In 2022, a total of K2, 199,693,903 was allocated out of K172, 989,077,535. The allocation was meant for the three subsectors; water supply and sanitation, water resources development as well as environment.

With regards to funding from donors, results from key informants in the DWASHE committees indicate that funding for WASH related interventions in their districts mainly came from; the Africa Development Bank, World Vision, UNICEF, Village Water and Lions aid. In terms of the role of DWASHE committees, findings suggest that the DWASHE chairpersons interviewed indicated that one of their key roles is to mobilize funding for WASH interventions in their districts. This is usually done through the development of plans for sourcing funds as well as advocating for more funding to support WASH interventions.

3.4.4 WASH Coordination

Regarding stakeholder engagement and coordination, results from all key informants from councils (districts) indicated that the local authorities were responsible for stakeholder engagement and coordination. Furthermore, findings from key informants suggest that all the councils in the study have a district institutional arrangement for capacity development for institutions involved in WASH. In addition, the key informants from the councils mentioned that the local authorities have the role to coordinate all the key players in WASH through monthly and quarterly DWASHE meetings. Findings further show that adherence to scheduled meetings and reporting was not consistent in most districts, thereby, negatively affecting the ability of stakeholders to coordinate. A stakeholder matrix indicating the area of interest, relevance, influence and impact of each stakeholder of the DWASHE is presented in Appendix 5.

3.4.5 Crosscutting Issues

Stakeholders in the DWASH committees in the districts in the study were asked whether there are policies and/or laws addressing gender equality (e.g., menstrual hygiene management, and WASH female-friendly toilets,) that have been drafted, approved or being implemented. According to the findings from key informants in Mongu, the DWASHE committee was gender balanced while in Kaoma, it was reported that the district is in the process of mainstreaming gender in the DWASHE. Kaoma and Nakonde DWASHE reported as follows:

> *"We want to mainstream gender equality so we have gender balance in water committees at community level and advocating for menstrual hygiene"* (KI, Kaoma).

> *"Okay, as a DWASHE, we are advocating for inclusiveness in the construction of new sanitation facilities because previously, we never used to take into account the issues of gender mainstreaming as well as differently abled people in the construction of wash facilities. But for now, we are advocating for inclusion of these people in the new construction. Like the toilets that we designed under SNV support, you find that the entrance is bigger to accommodate a wheelchair, there is a ramp, we also find that the rooms, the cubicle are wide enough. There's even a place where somebody can sit if they are pregnant, they don't have to squat. So, we've taken those into consideration in the new construction that we're doing.*

There was even a task force for gender equality that was formed from the DWASH members. So, I think we're going into that direction" (KI, Nakonde).

Further, key informants were asked about the mechanisms put in place to ensure gender equity and inclusion in WASH processes and interventions at district and ward levels. Results indicate that all the districts reported taking affirmative action by encouraging 50% male and 50% female representation in all WASH activities. In Kaoma and Lunte, the following views were shared:

"There is nothing much we can do at district level because of qualifications, but at community level, we engage the locality to balance gender in the water committees" (KI, Kaoma).

"I include gender equality for whatever I'm forming, whether VWASH or DWASHE. … We don't select to say this one. And moreover, the VWASHES that we've made so far, it comprises both female and male. It is both we don't segregate" (KI, Lunte).

"We have incorporated this [gender inclusion] component in the new wash interventions, involvement of all stakeholders through the ZPID. We also have the ward community development committees which is the ones on the ground spearheading the WASH activities. At the ward level" (KI, Nakonde).

4. CONCLUSIONS, CHALLENGES AND RECOMMENDATIONS

4.1. Conclusion

The results of the WASH Baseline assessment suggest that the USAID Expanding Water and Sanitation Project is aligned to the National Water Supply and Sanitation Policy II (NWSSP II) and the Sustainable Development Goals (SGD) targets 6.1 and 6.2. To achieve its objectives, the USAID Expanding Water and Sanitation Project must work with other key stakeholders in the target districts. These stakeholders include but not limited to; Ministry of Water Development and Sanitation (MWDS), NWASCO, WARMA, ZEMA, water utility companies as well as local authorities. However, findings of the WASH Baseline Assessment indicate that these institutions are faced with various challenges, ranging from, high labour turnover and limited funding to lack of capacity to fully undertake their mandates. To ensure project success, these challenges need to be addressed.

In addition, findings of the WASH Baseline Assessment indicates that none of the schools and health facilities in the study have access to *basic* sanitation services. Further, results of baseline assessment suggest low access to *safely managed* and *basic* water and sanitation services among households in all the districts. According to the findings, access to *safely managed* water services ranges from 0% to 12% while access to *basic* water services ranges from 9% to 52% across all districts in the study. Further, access to *safely managed* sanitation services among households ranges from 0% to 5% while access to *basic* sanitation services ranges from 0% to 20% across all the 12 districts. Therefore, viewed within this context, the USAID Expanding Water and Sanitation Project is relevant and, can positively contribute towards the achievement of the benchmarks set under the NRWSSP II as well as the SDGs when and if successfully implemented.

4.2 Recommendations

To address the generally high proportion of unimproved water and sanitation service levels, both at household and in institutional settings, especially in rural areas, it is therefore recommended that:

2. The USAID Expanding Water and Sanitation Project should consider supporting the provision of WASH services in rural areas and rural grow centres both at regulatory and implementation levels by;

e. Supporting the finalization and development of regulatory tools (standards and limits for faecal sludge by ZEMA), finalization of the Urban Onsite Sanitation and Faecal Sludge Management Framework for Provision and Regulation in Zambia by NWASCO,

f. Supporting the development of a comprehensive data management system to establish status of services delivery in rural areas and to inform interventions in water and sanitation.

g. Supporting the review of staffing plan in CU's so as to improve their capacity to implement their WASH mandate in rural areas,

h. Conduct hygiene education, CLTS and sanitation marketing to raise awareness and ensure appropriate latrines are constructed in the districts in rural areas.

4.3. Challenges and Recommendations

S/N	Institution	Challenge	Recommendation
1	Local Authority	Low proportional of functional water supply system (boreholes)	Undertake maintenance and address water quality in areas
		Low sanitation coverage in the district	Intensify Community Led Total Sanitation activities, Establish a local framework for sanitation legal enforcement
		Low income from own resources as a result limited budget allocation for Wash	Use participatory planning in place with ward and district committees to tap into the CDF financing to improve WASH services
		Reliance on National programmes (CLTS, RWS) for addressing sanitation	Need to develop a sanitation plan/investment plan for the district and also at local ward level.
		Limited coordination between the Local Authority and the Commercial Utilities	Inclusion of the Water Utility in the planning for land alienation to enable planning for services to customers.
2	District Water Affairs (Department of Water resources Development)	Haphazard funding for survey, planning and monitoring activities	Ensure that amount budgeted is disbursed on time by central and provincial government
		Lack of transport for activities- rely on other stakeholders	Provide the department with transport
		Partners e.g. NGOs don't disclose their full information on investments	Development of partnership agreements with full disclosure requirements
3	Water Utility Companies	Unable to provide water supply 24 hrs. due to limited capacity of water treatment plant	Government should consider allocating for funds to CU's
		Lack of coordination with local authority in provision of services	Work with Local authority to develop an expansion and investment plan to source for funding to meet demand
		Limited sanitation service provision (most is on-site sanitation; unlined pit latrines, limited vacuum tanker service)	Engage in CLTS and sanitation marketing to raise awareness Engage private sector in pit emptying Secure funding to construct a Faecal Sludge Treatment Plant.
		Limited or no sanitation coverage	Secure funding to construct sewer lines and Faecal Sludge Treatment Plant.
		Lack of a transition plan for transferring the provision of WASH services in rural areas from LA to CU's	Develop transition plan for transferring the provision of WASH services from in rural areas from LA to CU's
5	Ministry of Water Development and Sanitation	Limited national budget allocation, most activities are supported by partners	Government should consider increasing allocations for WASH in national budgets
		Slow actualization of Public Private Partnership (PPP's) as well as low participation of the private sector	Finalize modalities of entering into PPP's to leverage resources and efficiencies of the private sector

6	Water Resources Management Authority (WARMA)	Encroachment on recharge areas	Designating of water resource protection areas and enactment of SI to protect the recharge areas
		Riverbank cultivation leading to pollution e.g. from pesticides and increased sediments	Community sensitization and promotion of catchment protection activities such as promotion of good farming practices and afforestation
		Limited funds to undertake regulatory functions	Engage partners to support regulatory activities
7.	National Water and Sanitation Council (NWASCO)	Non-cost recovery tariff (cost of inputs has gone up yet tariff has remained static)	Advocate for a cost recovering tariff or government to provide grants to cover the high costs of inputs

5. APPENDICES

5.1 Stakeholder Matrix Results

Ministry of Water development and Sanitation	**National**	WASH policy development and investment	Policy formulation, sector reforms and resourcing	High	High
National Water and Sanitation Council	**National**	Regulation of Water utility Companies	Regulates Water utility companies responsible for water Sanitation n urban and rural areas	High	Medium
Ministry of Local Government	**National**	Policy making, Resourcing and local government reforms	Supervises local authorities and implementation of decentralization	Medium	Medium
Zambia Environmental Management Agency	**National**	Environmental management and regulation – Pollution Control/abatement	Pollution control – FSM /Sanitation	Low	Medium
Water Resources Management Authority	**National**	Water resources management and catchment protection	Catchment and headwater protection	Medium	Medium
Local authorities	**District**	Local policy development/ implementation/Service delivery	Local authority – mandate for service delivery	High	High
Civil society organizations	**District/National**	Policy interpretation/advocacy/awareness creation and implementation	Capacity development and resourcing for projects	Medium	High
Traditional Leaders/Royal establishment	**District**	Custodians of all traditional land in the district	Responsible for the welfare of their subjects/ entry point in the communities	High	High
D-WASH committees	**District**	Coordination platform for all WASH activities in the district	Brings stakeholders of WASH together for collaboration	High	Medium
Sanitation Action groups	**Community level**	Community action groups for Sanitation	Foot soldiers for sanitation/champions	High	Medium
Community based enterprises	**Community**	Offer various sanitation/Water products and services at community level	Service providers – bridges service gaps	Medium	Medium
Special interest groups –	**District**	Advocacy and information dissemination on	Advocacy and information dissemination	Medium	Medium

people living with disability		social safeguard issues			
Provincial administrative office	**Provincial**	Provincial administration mandate	Supervises government programs	High	High
District Administrative office	**District**	District administration mandate	Supervises government projects	Medium	Medium
Water Watch groups	**District**	Consumer watch groups	Consumer protection	Low	Medium
Donor/development agencies	**District/National**	Capacity development and investments	Investments and capacity development	High	Medium
Faith based organizations	**Community**	Awareness creation and advocacy	Entry points in some communities	Medium	Medium
District Education board secretary (DEBSs)	**District**	Manages and supervises all schools within the district	WASH in school promotion/Investments	Medium	Medium
Water and Sanitation Company	**District/provincial**	Mandate for sanitation and Water service delivery	Provides service in both rural and urban areas within a province and district level	High	High
Department of water Affairs	**District/provincial**	Responsible for borehole drilling and water schemes	Resourcing	Low	Low
Ministry of Health - District office	**District**	Health Provision	Safeguarding public health	Medium	Medium
Ward development committees	**Community**	Lowest governance structure	Entry point for the community	High	High
Local communities	**Community**	Residents and visitors etc.	Consumers/beneficiaries /partners	**High**	**High**
Local business/local business community	**District /community**	Business owners or operators	Consumers/beneficiaries /partners	**Medium**	**Medium**
Farmers/development cooperatives	**Community**	**Coalition groups**	**Consumers/beneficiaries/partners/PoL**	**Medium**	**Medium**
Civic Leaders	**District/Community level**	**Elected civic leaders**	**Popular opinion Leaders (POL)**	**Medium**	**High**

5.2 List of Institutions Interviewed

S/N	DISTRICT	SCHOOLS	HEALTH FACILITIES
1	**Kaoma District**	Road Camp School	
		Katoya Primary	Katoya Health Post
		Chani Primary	Kacholola Health Post
		Lalafuta Primary	
		Shikombwe Community School	
2	**Kalabo District**	Mapungu Primary School.	Mapungu Rural Health Centre.
		Liumba Day Secondary School.	Liumba Rural Health Centre.
		Sihole Day Secondary School.	Sihole Rural Health Centre
		Matondo Primary School	Rural Health Centre.
3	**Mpika District**	Katibunga primary	Tazara health center
		Katibunga secondary	Kasenga Rural health center
		Mano camp secondary	Katibunga Rural health center
		Kasenga primary.	
4	**Chinsali**	Mwaba primary.	Mundu
		Nkula primary.	Nkula.
		K lombe	Location
		Tongo Tongo primary.	Musanya
		Kalasha primary.	Cheswa
		Kaluya community school.	
		Lameck primary.	
		Cheswa primary	
		Mulapukikwa primary	
5	**Lunte**	Masonde primary	Filipo health post
		Mpalapata school	Chitoshi health post
		Mukupa Kaoma primary	Mpalapata health post
		Shapi primary	Buyantanshi Health Facility
		Filipo primary	
		Mulwende Primary School	
		Sambala	
6	**Mungwi**	Henry Kapata primary	Mutale Malamba Health Centre
		Shula primary	
		Musenga School	
		Malamba Primary School	

S/N	DISTRICT	SCHOOLS	HEALTH FACILITIES
		Melele Primary School	
		Catholic School	
		Mutemba Primary School	
		Mutale Kapipi Community School	
7	**Kazungula**	Nanpyani Basic school	Nyawa health centre
		Makunka primary school	Mandia health centre
		Makunka secondary school	Mahululu health centre
		Nyawa primary school	Makunka mission hospital
		Nyawa secondary school	Ngwezi health centre
		Nguba primary school	Musokotwane health centre
		Mandia basic school	
		Kooma primary school	
		Mahululu basic school	
		Musokotwane basic school	
		Ngwezi basic school	
8	**Kalomo**	Namwianga Combined School	Namwianga Mission Health Center
		Mutala A Primary School	Mawaya Health Center
		Mutala B Primary School	Kalonda Health Post
		Kalonda Primary School	Siachitema Health Center
		Siachitema Combined School	Mubanga Health Center
		Mubanga Primary School	Nakatala Health Post
		Nakatala Primary School	Nabulangu Health Post
		Nabulanga Primary School	Dimbwe Health Post
		Dimbwe Combined School	Spatunyana Health Center
		Inkumbi Primary School	Kalundu Health Post
		Kalundu Community School	
9	**Nalolo**	Sianda primary	Mukukutu health center
		Matongo primary	Nanjucha health center
		Nanjucha primary	
		Likuma primary	
		Mouyo primary.	
		Nasiwayo pro	
		Mukukutu pri	
		Lyamutinga Pri	
		Lwimba Primary	
10	**Sesheke**	Kabuyu primary school	Mangamu RHC

S/N	DISTRICT	SCHOOLS	HEALTH FACILITIES
		Makanda primary school	Kalobolelwa RHC
		Mangamu primary school	Ngambe RHC
		Kalobolelwa secondary school	
		Ngambwe primary school	
		Lusu primary school	
		Lilonga primary school	
11	**Nakonde**	Chitambi Primary School	Chitambi Health Post
		Waitwika Secondary School	Waitwika Rural Health Center
		Kantongo Secondary School	Iwula Health Center
		Ntindi Secondary School	Nakonde Urban Clinic
		Ntindi Primary School	Katozi Rural Health Post
		Eagle Private School	Chanka Rural Health Post
		Katozi Secondary School	
		Chibamba Secondary School	
		Chanka Secondary School	
12	**Mongu**	Nanjeko Primary School	Prisons Urban Clinic
		Mbekise Primary School	Luandui Rural Health Center
		Luandui Basic School	Mulambwa Urbab Clinic
		Namachaha Basic School	Loma Rural Health Center
		Kanyongo Sec School	Liyoyelo Urban Clinic
		Imwiko Basic School	Sefula Rural Health Center
		Nalwei Basic School	
		Loma Basic School	
		Imwiko Sec School	
		Tapo Primary School	

5.3 Key Informants Interviewed

S/N	District	KII Interview Conducted
	Northern Province	
1	**A. Lunte**	DWASH Committee member
		Council Chairperson
2	**Mungwi**	DWASH Committee chairperson
		Chambeshi Water and Sanitation Company
		Chambishi Water and Sanitation Company
		Council Chairperson
	Muchinga Province	
3	**Chinsali**	DWASH Committee member
		Council Chairperson
4	**Mpika**	DWASH Committee chairperson
		Chambeshi Water and Sanitation Company
		Chambishi Water and Sanitation Company
5	**Nakonde**	DWASH Committee member
		Council Chairperson
		Chambishi Water and Sanitation Company
		District Commissioner
	Southern Province	
6	**Kalomo**	Southern Water and Sanitation Company (SWASCO)
		Local Authority
		DWASH
		Members of the DWASH Committee
		Department of Water Resources Management (Department of Water Affairs)
7	**Kazungula**	DWASH Chairperson
		Southern Water and Sanitation Company
		District water affairs
		DWASH Chairperson (didn't make appt)
	Western province	
8	**Kalabo**	Kalabo District Council
		D-WASH Committee
		Western Water and Sanitation Company
9	**Kaoma**	Kaoma District Council
		Western Water and Sanitation Company
		District Water Affairs Department
10	**Mongu**	Nalolo District Council
11	**Sesheke**	DWASH
		Local Authority
12	**Nalolo**	District Water Affairs Department

5.4 Household Questionnaire

HOUSEHOLDS QUESTIONNAIRE Research Triangle Institute (RTI) USAID Expanding Water and Sanitation Project (USAID ZEWSP)				
	Household Identification Characteristics	**RESPONSE**		
ID01	Province			
ID02	District			
ID03	Ward			
ID04	Village /Township			
ID05	Household Number			
ID06	Geographical Location	Rural Rural Growth Centre Peri Urban	1 2 3	
ID07	Enumeration Area (EA) Code			
ID08	GPS Location			
ID09	Date & Time			
ID10	Name of Interviewer			
ID11	Name of Supervisor			

SECTION 1: SOCIO-ECONOMIC & DEMOGRAPHIC BACKGROUND INFORMATION

Qn#	Question	Response	Code
Q101	Age of Respondent	[ ]	
Q102	Sex of Respondent	Male Female	1 2
Q103	Marital Status of the respondent	Single Married Divorced Separated Widowed	1 2 3 4 5
Q104	Household Population and Age Segmentation		
Q105	Are there any persons with disability living in your HH?	Yes No	1 2
Q106a	How many are Blind	[ ]	

Age Group	# Male	# Female
Below 5 years		
5 – 14 years		
15 -64 years		
65 years & above		
Total		

Qn#	Question	Response	Code
Q106b	How many are Lame		
Q106c	How many are Deaf		
Q107	What is the Employment status of the HH Head?	Unemployed Formal Employment Informal Employment/Self-employment)	1 2 3
Q108	What main material is the floor of the dwelling house made of? Observe	Earth/sand Dung Wood planks Palm/bamboo/reeds Parquet or polished wood Vinyl (PVC) or asphalt strips Ceramic/terrazzo tiles Concrete cement Carpet Other - specify	1 2 3 4 5 6 7 8 9 10
Q109	What main material is the roof mad of? (Observe)	No roof Thatch/palm leaf Rustic mat Palm/bamboo Wood planks Cardboard Metal/iron sheets Wood Asbestos Other -Specify	1 2 3 4 5 6 7 8 9 10
Q110	How many of the following animals does this household own? **ENTER 99999 IF YOU DON'T KNOW**	a) Dairy Cattle b) Other cattle c) Horses, donkeys, or mules d) Goats e) Sheep f) Chickens or other poultry	
Q111	Does any member of this household own any agricultural land?	Yes No	1 2
Q112	If yes to Q112, how many hectares of agricultural land do members of this household own? **IF 95 OR MORE, ENTER '95' AND 99 IF THEY DO NOT KNOW**		
Q113	Does your household have:	Electricity Radio Television Non-Mobile Telephone Computer Refrigerator	0 1 0 1 0 1 0 1 0 1 0 1
Q114	Does any member of this household own?	Watch Mobile Phone Bicycle Motorcycle/Scooter Animal-Drawn Cart Car/Truck. Boat with Motor	0 1 0 1 0 1 0 1 0 1 0 1 0 1

SECTION 2: WATER - Core questions for drinking water

Qn#	Question	Responses	Code
Q201	What is the **main** source of drinking water for members of your household?	Piped water Piped into dwelling Piped into compound, yard or plot Piped to neighbour Public tap / standpipe Borehole or tube well Dug well Protected well Unprotected well Water from spring Protected spring Unprotected spring Rainwater collection Delivered water Tanker-truck Cart with small tank / drum Water kiosk Packaged water Bottled water Sachet water Surface water (river, stream, dam, lake, pond, canal, irrigation channel) Other (specify)	 11 12 13 14 15 21 22 23 24 31 32 33 41 42 43 45 46
Q202	Does your household pay to access water?	Yes No	1 2
Q203	If Yes to Q202, on average, how much do you use each month for the water that your household uses? Amount in ZMW	ZMW [ ]	
Q204	How do you perceive the water user fees?	Fair Very Fair Not fair	1 2 3
Q205	In your opinion, how much would be reasonable household monthly expense on water supply? **Amount in ZMW**	ZMW [ ]	
Q206	How long does it take to fetch water from your water source? Please include the amount of time you wait	Less than 5min Less than 10min 11min - 30min 31min - 1hour Over 1 hour	1 2 3 4 5
Q207	In the last month, has there been any time when your household did not have sufficient quantities of drinking water when needed?	Yes, at least once No, always sufficient Don't know	1 2 8
Q208	Who owns the water source?	Villagers Government Donors Private individual Don't Know	1 2 3 4 8
Q209	Who repairs the water source when it breaks down?	Self Council/Local Authority Water Utility Company NGO Other, Specify	1 2 3 4 5
Q210	What type of container do you use to draw and store water? OBSERVE	20ltr container Bucket without lid Bucket with lid	1 2 3

Qn#	Question	Responses	Code
		Drum	4
Q211	How much water do you use per day in your household?	Record number of Litres [ ]	
Q212a	How many days out of the week is water available?		
Q212b	How many hours out of the day is water available?		
Q213	What is the distance of you water source from nearest contamination source such as latrines?	Within 10 metres Between 10metres to 30 metres Between 30metres to 100 metres Beyond 100 metres	1 2 3 4
Q214	Do you treat your drinking water in any way to make it safe to drink? IF NO, Go to Q218	Yes No	1 2
Q215	What do you do to the water to make it safe to drink?	Boil Use Chlorine Strained through cloth Let it stand and settle	1 2 3 4
Q216	Why do you treat your water?	To remove germs Improve taste Removes odours Removes dirt	1 2 3 4
Q217	How much water do you draw per day?	Number of 20 litres containers [ ]	

SECTION 3: SANITATION

Q#	Question	Responses	Code
Q301	*What kind of toilet facility do members of your household usually use?* If 'Flush' or 'Pour flush', probe: Where does it flush to? If not possible to determine, ask permission to observe the facility.	Flush / pour flush Flush to piped sewer system Flush to septic tank Flush to pit latrine Flush to open drain Flush to don't know where Dry pit latrines Pit latrine with slab Pit latrine without slab / Open pit Composting toilets 1. Twin pit with slab 2. Twin pit without slab 3. Other composting toilet Bucket Container based sanitation Hanging toilet / hanging latrine No facility / Bush / Field Other (specify) .	 11 12 13 14 15 21 22 23 31 32 33 41 42 43 45
Q302	Who built this toilet?	Built by self Built by mason Municipality Water and Sanitation Company NGO Other, specify	1 2 3 4 5 6

Q#	Question	Responses	Code
Q303	If built by Mason, how much did you spend on labour costs for the construction? Amount in Zambian Kwacha		
Q304	What is the type or Classification of the toilet facility is it? OBSERVE	Simple pit-latrine VIP latrine Composting type (FSM) Septic System Water borne toilet	1 2 3 4 5
Q305	Parameters of an adequate sanitation facility which the household sanitation facility meets *ENUMERATOR: THIS IS AN OBSERVATION QUESTION, SEEK PERMISSION TO INSPECT THE FACILITY*	Has a Smooth Cleanable Floor Has a Superstructure that provides Privacy Has a Hand Washing Station Availability of Water Availability of Soap	1 2 3 4 5
Q307	Do you share this facility with others who are not members of your household?	Yes No	1 2
Q308	Including your own household, how many households use this toilet facility?	No. Of Households If Less Than 10 . . . . . [ ] 10 Or More Households . . . . 95 Don't Know 98	
Q309	Has your (septic tank/pit latrine/composting toilet) ever been emptied?	Yes No Don't Know	1 2 8
Q310	The last time the (septic tank/pit latrine/composting toilet) was emptied, was it emptied by a service provider?	Yes No Don't Know	1 2 8
Q311	Where were the contents emptied to?	A Treatment Plant Buried in A Covered Pit Uncovered Pit/Bush/Field/ Open Ground Surface Water (River/Dam/ Lake/Pond/Stream/Canal/Irrigation Channel) Other (Specify) Don't Know	1 2 3 4 5 6 7
Q312	Can you please show me where members of your household most often wash their hands?	Fixed facility observed (sink/tap) In dwelling In yard/plot Mobile object observed (bucket/jug/kettle) No handwashing place in dwelling/yard/plot No permission to see Other reason (specify)	1 2 3 4 5 6 7 8
Q313	When do you wash your hands?	Before eating After visiting toilet Before touching food Don't wash After eating	0 1 0 1 0 1 0 1
Q314a	How do you wash your hands before using the toilet?	Use common dish Pour water on hands using jar	1 2
Q314b	How do you wash your hands after using the toilet?	Use common dish Pour water on hands using jar	
Q315	*Observe availability of water at the place for handwashing.* Verify by checking the tap/pump, or basin, bucket, water container or similar objects for presence of water.	Water is available Water is not available	1 2
Q316	Do you have soap or detergent in your household for washing hands? Can you show it to me?	Yes, shown No, not shown Other (specify)	1 2 3

Q#	Question	Responses	Code
Q317	Observe availability of soap or detergent at the place for handwashing	Bar or Liquid soap	1
		Detergent (Powder / Liquid / Paste)	2
		Ash / Mud / Sand	3
		None	4

We have come to the end of our interview.
Thank you very much for your time

5.5 Institutional Questionnaire – Health Facilities & Schools

Institutions Assessment Quantitative Questionnaire

Research Triangle Institute (RTI)

USAID Expanding Water and Sanitation Project (USAID ZEWSP)

Date of interview: ____/____/_____

Name of Interviewer: _____ Name of Supervisor: _____

Starting Time: _____Ending Time: _____

SN	Facility Identification Characteristics	Response	Code
ID1	Province		
ID2	District		
ID3	Ward		
ID4	Village /Township		
ID5	Type of institution:	Health Education	1 2
ID6	If education institution, type of school?	Primary Basic Secondary	1 2 3
ID7	Including staff, what is the total population the school caters for?	[ ]	
ID8	If health institution, type of facility?	Health Post Rural Health Centre Urban Health Centre District Hospital	1 2 3 4
ID9	Geographical Location	Rural Rural Growth Centre Peri Urban	1 2 3
ID10	How many years has this facility been in use or operational?	_____ years	
ID11	Size of the catchment population the institution caters or services		
ID12	Does this institution cater for persons with disabilities?	Yes No	1 2
ID13	If yes to question… above, how many persons with disabilities does the institution cater for?		
ID14	Disability Population size by type of Disability	Mental Movement Sight Hand-capped	[ ] [ ] [ ] [ ]

A. WATER SUPPLY

S/N	Question	Responses	Code
IWS1	What is the institution's **main** water source? *(Single response)*	Piped water	
		Piped into dwelling	11
		Piped into compound, yard or plot	12
		Piped to neighbour	13
		Public tap / standpipe	14
		Borehole or tube well	15
		Dug well	
		Protected well	21
		Unprotected well	22
		Water from spring	
		Protected spring	23
		Unprotected spring	24
		Rainwater collection	31
		Delivered water	32
		Tanker-truck	33

S/N	Question	Responses	Code
		Cart with small tank / drum Water kiosk Packaged water Bottled water Sachet water Surface water (river, stream, dam, lake, pond, canal, irrigation channel) Other (specify)	41 42 43 44 46 47 48
IWS2	Who owns this water source?	Government Municipality Water Utility Company Community NGO Self-Developed or Built by the Institution	1 2 3 4 5 6
IWS3	How many water access points does this institution have? Count of functional taps/hand pumps		
IWS4a	If water is supplied by CU, how many days out of the week is water available?		
IWS4b	If water is supplied by CU, how many hours out of the day is water available?		
IWS5	If the water source is self-developed by the institution, what is the capacity of the tank	[ ]	
IWS6	Is the water tested for quality purposes?	Yes No	1 2
IWS7	If yes (water is tested for quality purposes), who tests water to confirm the quality?	[ ]	
IWS8	Is the water available to the institution safe to drink without treatment?	Yes No	1 2
IWS9	If the answer to the above question is No, what method of water treatment does the institution use to treat water for drinking at this institution?	Boil Add Bleach/Chlorine Water Filter (Ceramic/Sand, Composite Solar Disinfectant Strain it through a cloth Other, specify	1 2 3 4 5 6
IWS10	If your answer to the above question is Other, please specify		
IWS11	If the institution has no onsite source of water supply, how far away is the nearest water access point to the institution?	Less than 30 minutes 30-60 minutes More than 1 hour	1 2 3
IWS12	Does the institution have broken water supply facilities?	Yes No	1 2
IWS13	If yes to the question above, how many broken water supply points does this institution have?		
IWS14	Is this institution receiving any financial or technical support aimed at improving water supply?	Yes No	1 2

B. INSTITUTIONAL SANITATION

Q#	Question	Responses	Code

IS1	*What kind of toilet facilities are available at this institution/facility?* If 'Flush' or 'Pour flush', probe: Where does it flush to? If not possible to determine, ask permission to observe the facility.	Flush / pour flush Flush to piped sewer system Flush to septic tank Flush to pit latrine Flush to open drain Flush to don't know where Dry pit latrines Pit latrine with slab Pit latrine without slab / Open pit Composting toilets 4. Twin pit with slab 5. Twin pit without slab 6. Other composting toilet Bucket Container based sanitation Hanging toilet / hanging latrine No facility / Bush / Field Other (specify) .	 11 12 13 14 15 21 22 23 24 25 26 31 32 33 34 35
IS2	Number of Toilets the institution or facility has?		
IS3	Number of not functional toilet facilities		
IS4	Has the institutional facilities (septic tank/pit latrine/composting toilet) ever been emptied?	Yes No Don't Know	1 2 3
IS5	The last time the (septic tank/pit latrine/composting toilet) was emptied, was it emptied by a service provider?	Yes No Don't Know	1 2 3
IS6	Where were the contents emptied?	A Treatment Plant Buried in A Covered Pit Uncovered Pit/Bush/Field/Open Ground Surface Water (River/Dam/Lake/Pond/Stream/Canal/Irrigation Channel) Don't Know Other (Specify)	1 2 3 4 5 6
IS7	Are the toilet facilities suitable for use by the disabled people i.e. access and design?	Yes No	1 2

C. INSTITUTIONAL OBSERVATION

Note: Please observe the following within the health facility or school

Q#	Question	Responses	Code
IS9	Can you please show me where people that visit this institution most often wash their hands?	Fixed facility observed (sink/tap) within the Institution/Building Fixed facility observed (sink/tap) within yard/plot Mobile object observed(bucket/jug/kettle) No handwashing place Within the Building/yard/plot No permission to see Other reason (specify)	1 2 3 4 5 6
IS10	*Observe availability of water at the place for handwashing.* Verify by checking the tap/pump, or basin, bucket, water container or similar objects for presence of water.	Water is available Water is not available	1 2
IS11	Does the Institution have soap or detergent for washing hands? Ask respondent to show you the soap or hand-washing detergent?	Yes, shown No, not shown Other (specify)	1 2 3
IS12	Observe availability of soap or detergent at the place for handwashing	Bar or Liquid soap Detergent (Powder / Liquid / Paste) Ash / Mud / Sand None available	1 2 3 4

End time		
GPS Location		

We have come to the end of our interview.
Thank you very much for your time.

5.6 KII REGULATORS

If you have any questions, you may contact: …….
Given this background, we would like to ask you a number of questions. Please, answer the questions as honest as possible.
Name of interviewer: _____
Contact phone numbers: _____

PART A: Zambia Environmental Management Agency (ZEMA)
Date of interview: ……..
Sex of respondent: ……..
Position of respondent: ……..

Governance, Financing and Coordination

HL.8.3-3 Number of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services as a result of USG assistance
HL.8.5-1 Number of people benefiting from the adoption and implementation of measures to improve water resources management as a result of USG assistance.

1	What is the role of ZEMA in WASH		
2	What programmes are supported by ZEMA in the provinces and district to enhance safe water supply for All		
3	What is the role of ZEMA in sustainable Sanitation		
4	What programmes are supported by ZEMA to end OD in provinces and district		
5	What is your view on Coordination and collaboration amongst the regulators such as WARMA, NWASCO and LAs on issues of WASH enforcement and regulation		
6	If no what can be done to strengthen it If yes what joint programmes are in place amongst the said regulators.		

Part B: Water Resources Management Authority (WARMA
Date of interview: ……..
Sex of respondent: ……..
Position of respondent: ……..

Governance, Financing and Coordination
HL.8.5-1 Number of people benefiting from the adoption and implementation of measures to improve water resources management as a result of USG assistance

1	What is the role of WARMA in Urban and Rural WASH	Rural Urban	
2	What challenges affect the water resource security to ensure safe supply for all?		
3	What active steps has your organization taken to address the highlighted issues?		
4	How are you collaborating with regulatory bodies such as NWASCO, ZEMA and LA to monitor and ensure collective enforcement efforts for WASH		
5	How can community, district, provincial and national level stakeholders be engaged to strengthen and promote a sustainable water resources management.		

Part C National Water and Sanitation Council (NWASCO)
Date of interview: ……..
Sex of respondent: ……..
Position of respondent: ……..

Governance, Coordination and Financing
HL.8.3-3 Number of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services.

6	What is the is the role of NWASCO in WASH?	☐ Rural ☐ Urban ☐ Peri urban	
7	What have you noticed to be the major challenges affecting adequate safe water supply and sanitation services delivery	☐ Rural ☐ Urban ☐ Peri-urban	

	What active steps has your organization taken to address the highlighted issues? In your view, how can/what else can be done to address these issues?		
8	How are different stakeholders such as privates and donors engaged to reduce these challenges		

Is there anything critical that we have left out that you would like to add?

Thank you very much for your contributions.

5.7 Key Informant Interview Guide – Local Authority

Read this to the interviewee

Introduction and Consent

Good morning/afternoon. My name is _____ and I am working with RTI International. We are carrying out a WASH Baseline Assessment in the four (4) provinces, namely Muchinga, Northern, Southern and Western provinces. For water, the following districts will be the areas of focus: Lunte and Mungwi districts in Northern Province; Kalomo and Kazungula in Southern Province; and Nakonde in Muchinga Province while Nalolo, Kalabo, Sesheke, Mongu, and Kaoma districts in Western Province; and Chinsali and Mpika in Muchinga Province will focus on sanitation.

The purpose of the baseline study is to form an important part of the monitoring and evaluation process of the project as well as inform interventions at the same time help RTI and partners to understand project context.

Please note that your participation in this survey is voluntary but highly desirable and appreciated. Therefore, you may choose not to participate in the survey or, if you feel uncomfortable, you may withdraw your participation at any point during the interview. Further note that there are no risks for choosing not to participate in the survey, either to you or the community. In addition, you will not receive any direct benefits from us for choosing to participate in the evaluation. However, your participation (highly desirable and appreciated) will help RTI and its partners to design interventions which would inform interventions as well as to be able to measure performance of the project – through the key performance indicators as part of the accountability framework

The information we seek to collect from you will not be shared with anyone outside the survey team and RTI international. However, all data will be aggregated and presented in a report to be shared with RTI International and other relevant stakeholders such as government institutions.

If you have any questions, you may contact: ……..

Given this background, we would like to ask you a number of questions. Please, answer the questions as honest as possible.

Name of interviewer: _____

Contact phone numbers: _____

Background Information

Name of district: …….

Name of organization/institution: ……

Date of interview: ……..

Sex of respondent: ……..

Position of respondent: ……..

7. KII LOCAL AUTHORITY/MUNICIPALITY

Qn#	Question	Response	
ID01	Province Name		
ID02	District Name		
ID03	Number of Wards in the district Note: Request for district spatial map for wards		
ID04	What is the district population		
Part A: Water Supply **HL.8.1: Sustainable access to safe drinking water**			
A1	What proportion of the district is Rural or Urban?	Rural % Peri-Urban Urban %	[ ] [ ] [ ]
A2	What is the water supply coverage for the two segments	Rural Water Coverage % Urban Water Coverage % Not sure	
A3	What is your role as LA in water supply within your area of jurisdiction?	Rural Water Supply Urban Water Supply None	
A5	State the current water supply systems that exist in your district?		
A6	What are the current sources of supply?		

A7	What proportion of the water supply systems are currently working and functional?		
A8	How is land use and planning integrated in water supply issues?	New development areas with safe water supply by % Unplanned settlement with upgraded water supply by	----% -----%
Part B Sustainable Sanitation HL.8.2: Sustainable access & use of sanitation & the practice of key hygiene behaviors			
	HL.8.2-1 Number of communities certified as **open defecation free** (ODF): - How many communities in your district have been declared ODF?	Number [ ]	
B1	What is the current sanitation coverage levels in the district within the area of jurisdiction of the local authority?	____ Offsite by % _____Onsite by %	
B2	What framework is in place to enforce sanitation laws within the district?		
B3	What are the current sanitation facilities existing and allowed in the district?	☐ Public places ☐ HH level	
B4	What kind of containment facilities are used for onsite sanitation?	☐ ☐	
B5	What is the status of offsite waste water treatment in the district	☐ Exist and functional ☐ Exist but not Functional ☐ Does not Exist	
B6	What happens when the onsite facilities are full?		
B7	What standards and guidelines are currently used to regulate On-site Sanitation and Faecal Sludge Management?		
B8	Where do these companies discharge the faecal sludge collected from on-site facilities?		
B9	With regard to on-site sanitation, who are the players at each stage of the sanitation service chain in your town?	User interface: Collection/storage Emptying & transportation Treatment Reuse and/or Disposal	1 2 3 4 5
B10	To what extent is open defecation still practiced in the district? How many communities have been declared ODF in the district? What are the challenges with maintaining ODF for some communities?	☐ % By proportion of district population (Rural) ☐ % By proportion of district population (Urban) ☐ Not known	
B11	Do households and general public perceive open defecation a problem?	Yes No	1 2
B12	What programmes has the local authority put in place to curb open defecation problem	State	
B13	State stakeholders currently supporting OD programs in the district?	State	
B14	Land tenure does it influence resident and business people operation in your district from building a toilet?	State	
C WASH Governance, Coordination and Financing HL.8.3-3 Number of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services. HL.8.4-1 Value of new funding mobilized to the water and sanitation sectors**.**			
C1	What mechanisms are available for stakeholder engagement and coordination at district level with regards to WASH? Who is responsible for their coordination?		
C2	What is the district institutional arrangement for capacity development for institutions involved in WASH?		
C3	What role does the structure role in enhancing corporations amongst stakeholders?		
C4	What programs are in place for enforcing WASH related laws/regulation in the district?		
C5	Is there a WASH district plan?		

C6	How is the municipality coordinating and cooperating with CSOs, private sector and other government institutions on issues of water supply and sanitation within the district?		
C7	Is there a WASH investment plan in place at district, Ward and Community level?	Yes No	
C8	To what extent does the municipality annual budget cover WASH and sanitation need at district or ward level?	Explain	
C9	To what extent does the municipality undertake participatory planning and engagement around issues of WASH at district and Ward level	Explain	
C10	What mechanism are in place to ensure gender equity and inclusion in WASH processes and interventions at district and ward level	Explain	
C11	How are residents and business operators of the district engaged on WASH related issues		
C12	Is there a tax a levy collection mechanism for WASH related services	☐ sanitation levy ☐Solid waste levy ☐ Toilet levy	
D. **Environmental Protection and conservation** HL.8.5-1 Number of people benefiting from the adoption and implementation of measures to improve water resources management as a result of USG assistance			
D1	To what extent does is the municipality implementing activities and projects to preserve natural resources especially protecting ecological assets of water recharge importance.	State	

5.8 Policy Makers KII

KEY INFORMANT INTERVIEW GUIDE – MINISTRY OF WATER DEVELOPMENTAND SANITATION

Read this to the interviewee

Introduction and Consent

Good morning/afternoon. My name is _____ and I am working with…..

Please note that your participation in this survey is voluntary but highly desirable and appreciated.

.

If you have any questions, you may contact: ……..

Given this background, we would like to ask you a number of questions. Please, answer the questions as honest as possible.

Name of interviewer: _____

Contact phone numbers: _____

Background Information

Date of interview: ……..

Sex of respondent: ……..…..

Position of respondent: ……..

MINISTRY OF WATER DEVELOPMENT AND SANITATION

Part 1: POLICY AND GOVERNANCE		
HL 8.3-3 Water and sanitation sector institutions strengthened to improve water supply and sanitation services		
a)	What policy (ies) are governing provision of water and sanitation?	
b)	How inclusive is the current policy (ies) governing provision of water and sanitation?	
c)	Does it (they) allow for private sector participation in water and sanitation service provision? If yes, in which specific areas?	
d)	Are the standards and guidelines for improving WASH?	
e)	What strategies are obtaining towards improved service quality from an existing basic to safely managed drinking water service	
f)	What strategies are obtaining towards improved access to safely managed sanitation services	
g)	Is there a national monitoring information system in place?	
h)	What mechanism is in place for civil society to advocate for WASH	
i)	What is the percentage of national or sub-national budget dedicated to WASH	
j)	What is the percentage increase in government investment in WASH	
HL. 8.4-1 Value of new funding mobilized to the water and sanitation sector for new construction, replacement, rehabilitation or improvement of WASH infrastructure.		
a)	Domestic public resources; what is the proportion on the national budget on WASH	
b)	Has the allocation increased or decreased from the previous year? What could be the reason for this?	

c)	Besides the national budget, is there another national initiative funding to support service provision of water and sanitation? Could you mention or share these?	
d)	Is service provision supported though other domestic public financing such as bond issuance? What which one?	
e)	To what degree is the tariff expected to contribute to O&M cost recovery?	
f)	Is service provision supported private/commercial financing (such as via a commercial bank or microfinance institution)	
g)	Is service provision supported by private financing the public-private partnerships (PPP) or Global Development Alliances (GDA) and how much?	
h)	Is service provision supported by development partner or donor funds and how much?	
CROSS CUTTING ISSUES		
a)	Number of laws or policies addressing gender equality (e.g., menstrual hygiene management, gender-based violence (GBV), and WASH, female-friendly toilets, workforce equality) enhanced, drafted, approved or implemented at national, district, municipal or utility level.	

5.9 District Water Affairs Department

KEY INFORMANT INTERVIEW GUIDE – DISTRICT WATER AFFAIRS DEPARTMENT

Read this to the interviewee
Introduction and Consent
Good morning/afternoon. My name is _____ and I am working with…..
Please note that your participation in this survey is voluntary but highly desirable and appreciated.
. If you have any questions, you may contact: ……..
Given this background, we would like to ask you a number of questions. Please, answer the questions as honest as possible.
Name of interviewer: _____
Contact phone numbers: _____

Background Information
Date of interview: ……..
Sex of respondent: ……..
Position of respondent: …….

Part 1: POLICY AND GOVERNANCE		
HL 8.3-3 Water and sanitation sector institutions strengthened to improve water supply and sanitation services		
a)	Who are the implementing partners/ authorities for water supply and sanitation at district level?	
b)	Please list some of the roles of each partner?	
c)	How are the implementing partners involved in planning and implementation of water and sanitation supply?	
d)	What are the standards and guidelines for improving water and sanitation supply?	
e)	How often do authorities meet at district level to discuss and update on water and sanitation supply issues?	
f)	What strategies are obtaining towards improved service quality from an existing basic or safely managed drinking water service?	
g)	What strategies are obtaining towards improved access to safely managed sanitation services?	
h)	Could you tell us about the office's general monitoring and evaluation for water and sanitation service delivery?	
i)	How is your office collaborating monitoring and evaluation activities in the district?	
j)	Do you receive annual budgetary allocation as budgeted? Are there times when they don't receive? What do you do when this happens? ,	
k)	Have you seen any percentage increase in government investment in WASH in recent years?	
HL. 8.4-1 Value of new funding mobilized to the water and sanitation sector for new construction, replacement, rehabilitation or improvement of WASH infrastructure.		
a)	Who have been the implementing partners/ authorities for water supply investment at district level?	
b)	Please comment on strengths and weaknesses of the office's coordination process with other governmental organizations, private and non-governmental organizations in mobilizing for funding in your district.	
c)	Could you highlight how coordination has enabled the district to identify water supply issues and plan for investment accordingly?	

d)	Has the funding attracted been able to bring improvement to the district target for funding? .	
e)	Have there been any bottlenecks to receiving funding the in your opinion? Could you highlight these bottlenecks?	
CROSS CUTTING ISSUES		
a)	What are your district views on gender equality (e.g., menstrual hygiene management, and WASH, female-friendly toilets,) enhanced, drafted, approved or implemented district, municipal or utility level?	

We have come to the end of our interview.
Thank you very much for your time.

5.10 DWASH Committee Member (Chairperson)

KEY INFORMANT INTERVIEW GUIDE – DWASH

Read this to the interviewee
Introduction and Consent
Good morning/afternoon. My name is _____ and I am working with…..
Please note that your participation in this survey is voluntary but highly desirable and appreciated.
If you have any questions, you may contact: ……..
Given this background, we would like to ask you a number of questions. Please, answer the questions as honest as possible.
Name of interviewer: _____
Contact phone numbers: _____
Background Information
Date of interview: ……..
Sex of respondent: ……..
Position of respondent: …….

Part 1: POLICY AND GOVERNANCE		
HL 8.3-3 Water and sanitation sector institutions strengthened to improve water supply and sanitation services		
a)	What is your role in ensuring that there is improvement in water supply and sanitation services in the district?	
b)	Please list some of the stakeholders you work with?	
c)	What is the role of the stakeholders involved in planning and implementation of water and sanitation supply?	
d)	Do you have standards and guidelines as partners for improving water and sanitation supply?	
e)	How often do you meet with stakeholders to discuss and update on water and sanitation supply issues?	
f)	Do you have a strategy towards improved service quality for drinking water service?	
g)	Do you have a strategy for improved access to safely managed sanitation services?	
h)	What is your role in monitoring and evaluation for water and sanitation service delivery?	
i)	How is would you rate the monitoring and evaluation activities in the district?	
j)	What are the challenges or success of monitoring and evaluation activities in the district?	
k)	What can be done to improve that challenges if any?	
HL. 8.4-1 Value of new funding mobilized to the water and sanitation sector for new construction, replacement, rehabilitation or improvement of WASH infrastructure.		
a)	Who have been the implementing partners/ authorities for water supply investment at district level?	
b)	What has been your role in mobilizing for funding in your district?	
c)	How much funding have you been able to attract in the district?	
d)	Has the funding attracted been able to bring improvement to the district? .	
e)	Have there been any bottlenecks to receiving funding the in your opinion? Could you highlight these bottlenecks?	
CROSS CUTTING ISSUES		

a)	What are DWASH views on gender equality (e.g., menstrual hygiene management, and WASH, female-friendly toilets,) enhanced, drafted, approved or implemented district, municipal or utility level?	

We have come to the end of our interview.
Thank you very much for your time.

5.11 Key Informant Interview Guide – Water Utility

Read this to the interviewee
Introduction and Consent
Good morning/afternoon. My name is _____ and I am
If you have any questions, you may contact: ……..
Given this background, we would like to ask you a number of questions. Please, answer the questions as honest as possible.
Name of interviewer: _____
Contact phone numbers: _____
Background Information
Name of Province: ……..
Name of District: …….
Name of Water Utility…….
Total number of service areas (communities) in the district……
Date of interview: ……..
Sex of respondent: ……..
Position of respondent: ……..

PART 1: WATER		
HL.8.1-3: number of people receiving improved service quality from an existing basic or safely managed drinking water service		
Water sources in the district		
a)	How many water sources or schemes does the district have?	
b)	How many water sources or schemes are operated by	Water Utility (No.)…….. Private sector (No.)……
c)	What is the quantity of water produced per day (m^3/day or m^3/hr.)?	
d)	What is the current percentage of Non-Revenue Water for the district (if known)	
Serviced Area in the District (Repeat this part for each service area)		
e)	Name of Service Area or Community	
f)	Type of service area	☐ Rural ☐ Rural Growth Centres ☐ Peri-Urban ☐ Urban
g)	Number of connections (customers)	
h)	Type of water source or water scheme for the service area and coordinates	☐ Water Distribution Centre ☐ Small Water Supply Scheme ☐ Borehole ☐ None
i)	Name and Coordinates of the water source identified in (h above)	
j)	Who owns and manages the water source in h above?	☐ Water Utility ☐ Private Sector
k)	Is the water source (identified in h above) currently functional?	☐ Yes ☐ No
l)	Current hours of Supply	……hrs
m)	Is this water source or scheme metered?	☐ Yes ☐ No
n)	What is the quantity of water supplied per day (m^3/day or m^3/hr)?	
o)	What is the current service level	☐ Safely managed ☐ Basic

p)	Type of service connection (Small Water Supply Schemes)	☐ House or ☐ Yard connection ☐ Communal (Standpipes and Kiosks) ☐ Mixed (state) …….
q)	Number of customers metered (House, yard or standpipes)	
r)	What is the current percentage of Non-Revenue Water for the service area (if known)	☐ Not computed ☐ Computed, figure…….
s)	Does the water quality meet set standards?	☐ Meets set standards ☐ Meet only some of the set standards Parameter (s) not met…… …….. ……..
Areas not serviced in the area of operation (district) *to be filled once		
a)	Number of New Development Areas in the district	
b)	Estimated population	Male …… Female……. Total……
c)	Current service level in new development area	☐ Basic ☐ Limited
d)	Number of Peri-urban or informal settlements in the district	
e)	Estimated population	Male …… Female……. Total……
f)	Current Service level in peri-urban or informal settlements	☐ Basic ☐ Limited
PART 2: SANITATION		
HL8.2-3 Number of people gaining access to safely managed sanitation services (service area that a community should be the same as in Part 1)		
a)	Defecation status of Community? Confirm response with observation	☐ OD ☐ ODF
b)	Type of sanitation service	☐ Off-site ☐ On-site
c)	Service level	☐ Safely managed ☐ Basic
d)	Functional components of the sanitation service chain	☐ Containment ☐ Emptying ☐ Transport (Conveyance) ☐ Treatment ☐ Enduse /Disposal
e)	Private sector participation along the sanitation service chain (tick applicable)	☐ Containment ☐ Emptying ☐ Transport (Conveyance) ☐ Treatment ☐ Disposal/Enduse
Areas not serviced in the area of operation (district) *to be filled in once		
a)	Number of New Development Areas	
b)	Estimated population	Male …… Female……. Total……
c)	Current service level in new development area	☐ Basic ☐ Limited
d)	Number of Informal Settlements (Peri-urban Areas)	
e)	Estimated population	Male …… Female……. Total……
f)	Current Service level in informal settlement	☐ Basic ☐ Limited
HL.8.2-7 Number of people receiving improved sanitation service quality from an existing "limited" or "basic" service		

a)	Behavior change campaigns (hygiene education) undertaken e.g. CLTS	☐ Yes Number……. ☐ No
b)	Sanitation marketing activities undertaken	☐ Yes Number……. ☐ No
c)	Pit emptying services provided	☐ Yes Frequency……. ☐ No
d)	Where is collected Faecal Sludge discharged?	
e)	Are pit emptying services offered by the utility or private sector?	
f)	Does the utility have a Faecal Sludge Treatment Plant?	☐ Yes ☐ No
PART 3: OPERATIONS AND MAINTENANCE (O&M)		
a)	Are Operations and Maintenance (O&M) guidelines available?	☐ Yes ☐ No
b)	Is there an Operations and Maintenance (O&M) plan in place?	☐ Yes ☐ No
c)	Is there an Operations and Maintenance budget in place?	☐ Yes ☐ No
d)	Is the private sector involved in O&M?	☐ Yes ☐ No
PART 4: GOVERNANCE		
HL.8.3-3 Number of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services		
a)	Is there a staffing plan with key job functions and descriptions available?	☐ Yes ☐ No ☐ Not sure
b)	What proportion of the key positions in the organization structure are filled?	
c)	Is there a capacity development plan in place?	☐ Yes ☐ No
d)	If yes (in c above), is the plan supported with a budget?	☐ Yes ☐ No
e)	Is there an annual budget for the various activities in the organisation?	☐ Yes ☐ No
f)	What financial management system is in place in the organisation?	

We have come to the end of our interview.

Thank you very much for your time.