ZAMBIA

Reform of the Water Sector Programme Phase II in Zambia

Baseline Survey Report for Mansa District

Setting Water Supply, Sanitation and Hygiene Targets in the Preparation of Gender Sensitive District Water, Sanitation and Hygiene Investment Plans (D-WASH IPs)

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF FINDINGS

ABBREVIATIONS

CBD	Central Business District
CC	Community Champion
ComDev	Community Development
DEBS	District Education Board Secretary
DHIS2	District Health Information System Tool
DHO	District Health Office
DPO	District Planning Officer
DWASH IP	District Water, Sanitation and Hygiene-Investment Plan
EHT	Environmental Health Technician
FANSER	Food and Nutrition Security and Enhanced Resilience
FFP	Focal Point Person
FGD	Focus Group Discussion
FSM	Faecal Sludge Management
GIS	Geographical Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit GmbH
GPS	Global Positioning System
GRID3	Geo-Referenced Infrastructure and Demographic Data for Development
GRZ	Government of the Republic of Zambia
HCF	Health Care Facility
HMIS	Health Management Information System
KAP	Knowledge, Attitudes and Practices
KII	Key Informant Interviews
JMP	Joint Monitoring Programme
LA	Local Authority
LpWSC	Luapula Water Supply and Sanitation Company
M & E	Monitoring and Evaluation
MoE	Ministry of Education
MoH	Ministry of Health
MHM	Menstrual Hygiene Management
MHM FP	Menstrual Hygiene Management Focal Point
MMC	Mansa Municipal Council
MWDS	Ministry of Water Development and Sanitation
NIS	NWASCO Information System
NSDI	National Spatial Data Infrastructure of Zambia
NRWSSP	National Rural Water Supply and Sanitation Programme
NUWSSP	National Urban Water Supply and Sanitation Programme
NWASCO	National Water Supply and Sanitation Council
ODF	Open Defecation Free
PDHID	Provincial Department of Infrastructure and Development
P-DWSS	Provincial Department of Water Supply and Sanitation
PEO	Provincial Education Office
PHO	Provincial Health Office
PPA	Provincial Planning Authority
PWSO	Provincial Water and Sanitation Officer
PTA	Parent-Teacher Association
RWS	Reform of the Water Sector
SDG	Sustainable Development Goals
SOMAP	Sustainable Operation and Maintenance Project
SUN	Scaling Up Nutrition

UNICEF	United Nations Children's Emergency Fund
USAID-SUNTA	United States Agency for International Development- Scaling Up Nutrition Technical Assistance
VWASHE	Village Water, Sanitation and Hygiene Education
WASH	Water, Sanitation and Hygiene
WDC	Ward Development Committee
WSS	Water Supply and Sanitation
ZAMSTATS	Zambia Statistical Agency
ZMW	Zambian Kwacha

EXECUTIVE SUMMARY

Introduction

The WASH stakeholders in Mansa District through the Reform of the Water Sector Phase II (RWS II) Programme established a WASH Baseline for the District for households, Schools, Health Care Facilities, Public Places and Non Domestic Places. The programme aims to support four districts (Mansa, Mwense, Mwansabombwe and Chipili) in Luapula Province in development of the District Water, Sanitation and Hygiene Investment Plans.

The DWASH IP provides guidance to the sector on how to develop a coordinated, common approach to WASH that facilitates the implementation and sustainability of WASH service provision through the entire District.

The planning process is highly dependent on the availability of data and capacity of partner institutions. A capacity needs and data availability assessment was conducted in all the four Districts and it was revealed that there was a need to bridge the data gap for evidence-based planning.

Main Objective of the Survey

To provide baseline data for setting water supply, sanitation and hygiene targets in the preparation of gender sensitive D-WASH IPs while taking into account Scaling Up Nutrition (SUN).

Approach and Methodology

The baseline survey adopted both qualitative and quantitative research approaches. The qualitative phase entailed Key Informant Interviews (KIIs) with key stakeholders and opinion shapers in the civil society space and government institutions; and Focus Group Discussions (FGDs) with various respondents such as community leaders, women and children. The quantitative phase involved household and institutional interviews at ward level with representative sample of 1082 households, 67 schools, 42 health care facilities, 28 public places (markets, bus stations and traditional arenas) and 90 non domestic places (offices, lodges, restaurants and industries etc.) distributed at ward level. The household samples were translated into a margin of error of 3% at a 95% confidence level.

Key WASH Findings

1. **Households**

- ***Water Supply***: The proportion using safely managed services is 22.4%, rural coverage being 6.4% and urban coverage being 35.1%. In 2021, out of an estimated population of 300,725 in Mansa District, 233,453 people lacked safely managed services
- ***Sanitation*****:** The proportion using safely managed services is 2.2%, rural coverage being 0.2% and urban coverage being 3.8%. In 2021, out of an estimated population of 300,725 in Mansa District, 294,109 people lacked safely managed services.
- **Hygiene**: The proportion using Basic services is 27.4%, rural coverage being 22.7% and urban coverage being 37.1%. In 2021, out of an estimated population of 300,725 in Mansa District, 216,221 people lacked basic services

2. Schools

- ***Water Supply***: The proportion of schools using advanced services is 26.9%, rural schools being 18.6% and urban schools being 41.7%. In 2021, out of an estimated 135 schools in Mansa District, 99 schools lacked advanced services
- ***Sanitation:*** The proportion of schools using advanced services is 2.99%, rural coverage being 0% and urban coverage being 8.3%. In 2021, out of an estimated 135 schools in Mansa District, 131 schools lacked safely managed advanced services.
- ***Hygiene****:* The proportion using basic services is 71.6%, rural schools being 67.4% and urban coverage being 79.2%. In 2021, out of an estimated 135 schools in Mansa District, 38 schools lacked basic services.

3. Health Care Facilities

- ***Water Supply***: The proportion of HCFs using advanced services is 33.3%, rural HCFs being 23.5% and urban HCFs being 75%. In 2021, out of an estimated 75 HCFs in Mansa District, 50 HCFs lacked advanced services.

- ***Sanitation:*** The proportion of HCFs using advanced services is 23.8%, rural coverage being 23.5% and urban coverage being 25%. In 2021, out of an estimated 75 HCFs in Mansa District, 57 HCFs lacked advanced services.
- ***Hygiene****:* The proportion of HCFs using advanced service is 19%, rural HCFs being 20.6% and urban coverage being 12.5%. In 2021, out of an estimated 75 HCFs in Mansa District, 61 HCFs lacked advanced services.
- ***Health Care Waste Management***: The proportion of HCFs using advanced service is 28.6%, rural HCFs being 26.5% and urban coverage being 37.5%. In 2021, out of an estimated 75 HCFs in Mansa District, 54 HCFs lacked advanced services.
- ***Environmental Cleaning***: The proportion of HCFs using advanced service is 42.9%, rural HCFs being 41.2% and urban coverage being 50%. In 2021, out of 75 HCFs in Mansa District, 43 schools lacked advanced services.

4. Public Places

- ***Water Supply***: The proportion of public places using basic services is 21.4%, rural public places being 12.5% and urban public places being 25%. In 2021, out of the 28 public places in Mansa District, 22 Public Places lacked basic services.
- ***Sanitation:*** The proportion of public places using basic services is 10.7%, rural coverage being 0% and urban coverage being 15%. In 2021, out of 28 public places in Mansa District, 25 public places lacked basic services.
- ***Hygiene****:* The proportion of public places using basic service is 35.7%, rural HCFs being 25% and urban coverage being 40%. In 2021, out of 28 public places in Mansa District, 18 public places lacked basic services.

5. Non-Domestic Places

- ***Water Supply****:* The proportion of non-domestic places using basic services is 66.7%, rural non-domestic places being 50% and urban public places being 67.4%. In 2021, out an estimated total of the 154 non-domestic places in Mansa District, 51 non-domestic places lacked basic services
- ***Sanitation:*** The proportion of non-domestic places using basic services is 74.4%, rural coverage being 100% and urban coverage being 73.56%. In 2021, out of the estimated total of 154 non-domestic places in Mansa District, 39 non-domestic places lacked basic services.
- ***Hygiene****:* The proportion of non-domestic places using Basic services is 84.4%, rural non-domestic places being 33.3% and urban coverage being 86.2%. In 2021, Out of estimated total of 154 non-domestic places in Mansa District, 24 non-domestic places lacked basic services.

Recommendations

Based on the above conclusions from the survey, the following are the recommendations:

1. Establish target improvement of access to WASH services according to JMP ladders for all the 5 categories.
2. Develop WASH interventions for improving access to WASH based on actual development trends guided by the planning boundary of Mansa District, the standards in the NUWSSP and principles in NRWSSP.

1 INTRODUCTION

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

The District WASH Investment Plan (D-WASH IP) is a process as well as an output, which draws on technical (i.e. collecting and analysing data on services and costs), strategic (i.e. visioning, milestones and target setting) and collaborative (i.e. seeking consensus on investment packages) capacities and uses various tools to collect and analyse data to support decision-making.

The 2030 Agenda for sustainable development recognizes safe drinking water, effective sanitation and good hygiene (WASH) as a driver of progress on many of the Sustainable Development Goals (SDGs), including health, nutrition, education and gender equality. To meet these targets, we need a better understanding of the progress made and a strategic approach to meet the challenges that lie ahead in our shared effort to reach every community.

Zambia is no exception to the need to accelerate the provision of adequate and safe water supply, sanitation and hygiene. Consequently the Government of the Republic of Zambia (GRZ) is committed to improving the living conditions of its citizens through continuous improvement of Water Supply and Sanitation (WSS) service delivery as contained in the country's Vision 2030 for universal coverage of water supply and sanitation to be achieved in alignment with the SDG 6 targets.

GRZ has adopted the "District Wide Approach", a systems-based approach which considers the district as the entry point whilst recognizing the broader national enabling environment. At district level, the holistic approach seeks to strengthen the district as a service authority in all its core functions, including planning for universal and sustainable services via the development of a District WASH Investment Plan (D-WASH IP).

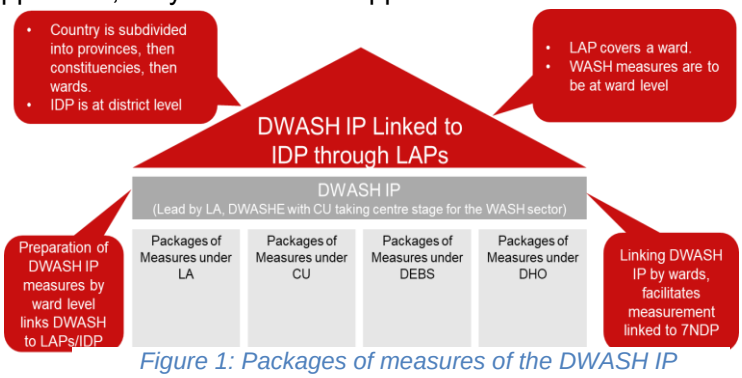


Figure 1: Packages of measures of the DWASH IP

The DWASH IP provides guidance to the sector on how to develop a coordinated, common approach to WASH that facilitates the implementation and sustainability of WASH service provision through the entire District.

Under GIZ support to the Government of Republic of Zambia, through the Ministry of Water Development and Sanitation, the Reform of the Water Sector Phase II (RWS II) aims to support four districts in Luapula Province in development of the aforementioned plans. It is anticipated that with improved planning as a basis, important prerequisites for the implementation of prioritized integrated investment packages to improve drinking water and sanitation in rural areas and growth centers would be established and thus improved access to clean water and sanitation in general. This support builds on the experiences of Reform of the Water Sector I (RWS I).

The planning process is highly dependent on the availability of data and capacity of partner institutions. To assess the situation, a capacity needs and data availability assessment was conducted in all the four Districts and it was revealed that there was a need to bridge the data gap for evidence-based planning. In most cases, the data from different agencies have varying focuses that suit their interventions which resulted in data that was not entirely comprehensive for the DWASH IP.

To provide baseline data for setting water supply, sanitation and hygiene targets in the preparation of gender sensitive D-WASH IPs while taking into account Scaling up Nutrition (SUN), surveys need to be conducted in Mansa, Mwense, Mwansabombwe and Chipili districts. Although, a number of surveys have been undertaken in the recent past and these provide WASH data, as well as cover aspects of particular interests (e.g. focus data related to nutrition), they do not cover the entire districts or the key elements of the DWASH IP.

2 OBJECTIVES OF THE SURVEY

The purpose of the baseline survey is to collect and analyse necessary data in order to establish the status of WASH services in the four target districts of Luapula namely; Mansa, Mwense, Mwansabombwe and Chipili. The specific objectives include:

I. To establish the baseline situation with regard to access to WASH services in target districts, covering households, schools, health care facilities and public places.
II. To determine people's behaviours and attitudes towards hygiene practices and menstrual hygiene management, including safe handling, storage and use of water, proper use and maintenance of excreta disposal facilities, handwashing at critical times, and open defecation.
III. To determine people's behaviours and attitudes towards hygiene practices that relate to nutrition such as food handling and storage, as well as and other nutrition-related aspects.
IV. To establish the status of the water supply systems in urban, peri-urban and rural areas, including growth centres. This includes operation and maintenance.
V. To determine the functional status and capacity of the institutional structures at community and ward levels, including management practices and the capacity to coordinate, plan, manage and implement WASH interventions.
VI. To determine the extent of gender mainstreaming in WASH, especially at community and ward level structures including knowledge and possible barriers for gender mainstreaming.
VII. To establish values for the baseline indicators in line with the National Water Supply and Sanitation Programmes (NWSSP), the Seventh National Development Plan (7NDP) and Sustainable Development Goals (SDGs), while taking into consideration the state of affairs of children, women and other vulnerable groups including the disabled and elderly, as well as their specific conditions and needs.

3 WASH INDICATORS / STANDARDS IN THE DWASH-IP

The structure of the survey was aligned to the National Water Supply and Sanitation Council (NWASCO) information system (NIS), SDGs, JMP Monitoring Ladder and National Water Supply and Sanitation Programmes. The Ministry of Education (MoE) and the Ministry of Health (MoH) have developed national standards to guide the provision of WASH in schools and health care facilities respectively. In order to establish values for the baseline indicators in line with the aforementioned guides, while taking into consideration the state of affairs of children, women and other vulnerable groups including the disabled and elderly, and their specific conditions and needs, it was intended to collect information according to expected results and indicators:

Table 1: Baseline Survey expected results and indicators

Access to drinking water supply service ▪ Safe ▪ Basic ▪ Limited ▪ Unimproved ▪ No service	**Access to sanitation** ▪ Safe ▪ Basic ▪ Limited ▪ Unimproved ▪ No service	**Access to Hygiene** ▪ Basic ▪ Limited ▪ No service
Access to Menstrual Hygiene Management services ▪ Schools ▪ Health Care Facilities ▪ Public Places such as markets, etc. ▪ Non-Domestic such as industries, institutions etc.	**Gender sensitivity data and information** ▪ Current practices ▪ Gender mainstreaming at community level structures, such as WDC, water committees ▪ Gender in WASH activities	**Data related to scaling up nutrition** ▪ Knowledge on care taker hygiene and infant/ young child feeding practices through improved WASH ▪ Recurrent diarrhoea diseases, diarrhoea cases and deaths under 5 ▪ Wasting and stunted children under 5

3.1 WASH in Households

The following SDG Joint Monitoring Programme (JMP) service ladders for Households were adopted:

- **Drinking Water Standards**

Drinking water services refers to the accessibility, availability and quality of the main source used by households for drinking, cooking, personal hygiene and other domestic uses.

Table 2: WASH indicators for household drinking water standards

Service level	Definition	Additional Comment
Safely managed	Drinking water from an improved water source which is located on the premises, available when needed, free from faecal & priority chemical contamination.	All criteria should be met to be safely managed water supply services If not, then the next level is to be considered according on its criteria.
Basic	Drinking water from an improved water source & the collection time for a roundtrip including queuing is not more than 30 minutes.	All criteria should be met to be basic water supply services (including those that didn't satisfy all criteria of safely managed). If not, then the next level is to be considered according on its criteria.
Limited	Drinking water from an improved water source & the collection time for a roundtrip including queuing exceeds 30 minutes.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
Unimproved	Drinking water from an unprotected dug well or unprotected spring	
Surface water	Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal	

Source: https://washdata.org/monitoring/drinking-water

- **Sanitation Standards**

Sanitation services refer to the management of excreta from the facilities used by individuals, through emptying and transport of excreta for treatment and eventual discharge or reuse.

Table 3: WASH indicators for household sanitation standards

Service level	Definition	Additional Comment
Safely managed	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite.	All criteria should be met to be safely managed sanitation services If not, then the next level is to be considered according on its criteria.
Basic	Use of improved facilities that are not shared with other households	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of safely managed). If not, then the next level is to be considered according on its criteria.
Limited	Use of improved facilities that are shared between two or more households.	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of basic).
Unimproved	Use of pit latrines without a slab, hanging latrines or bucket latrines.	
Open defecation	Disposal of human faeces in fields, forests, bushes, open bodies of water and other open spaces.	

Source: https://washdata.org/monitoring/sanitation

- **Hygiene Standards**

Hygiene refers to the conditions and practices that help maintain health and prevent spread of disease including handwashing, food hygiene, and menstrual hygiene management.

Table 4: WASH indicators for household hygiene standards

Service level	Definition	Additional Comment
Basic	Availability of a handwashing facility on premises with soap and water.	All criteria should be met to be basic hygiene services. If not, then the next level is to be considered according on its criteria.
Limited	Availability of a handwashing facility on premises without soap and water.	All criteria should be met to be basic hygiene services (including those that didn't satisfy all criteria of basic).
No facility	No hand washing facility on the premises.	

Source: https://washdata.org/monitoring/hygiene

See Annex 1 for the definition and clarifications on some of the Drinking water, Sanitation and Hygiene Terms.

National Indicators

- % of population (# households) in district # with access to safely managed drinking water supply;
- % of population (# households) in district # with access to basic water supply;
- % of population (# households) in district # using safely managed sanitation facilities, including a handwashing facility with soap and water;
- % of (# households) in district # using improved sanitation facilities, including a handwashing facility with soap and water.

3.2 WASH in Schools

JMP monitoring of WASH in schools includes tracking 'basic' drinking water, sanitation and hygiene services in pre-primary, primary and secondary schools. The following SDG Joint Monitoring Programme (JMP) service ladders for Schools were adopted. This coupled with the adapted standards from the MoE were integrated to define the WASH indicators for Schools. The criteria for an advanced level is clearly defined in the National Standards as guided by the JMP.

- **Drinking Water Standards**

Table 5: WASH indicators for school drinking water standards

Service level	Definition	Additional Comments
Advanced	Safely managed inclusive drinking water: Improved water facilities are located on premises, available when needed, accessible for children with disabilities and free.	All criteria should be met to be advanced water supply services. If not, then the next level is to be considered according on its criteria.
Basic	Drinking water from an improved source is available at the school.	All criteria should be met to be basic water supply services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	There is an improved source (piped, protected well/spring, rainwater, packaged/delivered water), but water not available at time of survey.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Service	No water source or unimproved source (unprotected well/spring, surface water).	

Source: https://washdata.org/monitoring/schools and Water Sanitation and Hygiene in Schools (WinS) National Standards & Guidelines Mitigation & Localization (Final draft), 2019

- **Sanitation Standards**

Table 6: WASH indicators for school sanitation standards

Service level	Definition	Additional Comments
Advanced	The school has improved sanitation facilities at the school premises, which are sufficient, MHM friendly, single-sex, usable and safely managed. Solid waste is frequently collected and/or disposed. Toilet to Pupil Ratio: Boys= 1:25; Girls=1:20	All criteria should be met to be advanced sanitation services. If not, then the next level is to be considered according on its criteria.
Basic	Improved facilities, which are single-sex and usable at the school Toilet to Pupil Ratio= 1:50	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of safely managed). If not, then the next level is to be considered according on its criteria.
Limited	There are improved facilities (flush/pour-flush toilets, pit latrine with slab, composting toilet), but not single-sex or not usable at time of survey Toilet to Pupil Ratio= 1:100	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of basic).
No Service	No toilets or latrines, or unimproved facilities (pit latrines without a slab or platform, hanging latrines, bucket latrines).	

Source: https://washdata.org/monitoring/schools and Water Sanitation and Hygiene in Schools (WinS) National Standards & Guidelines Mitigation & Localization (Final draft), 2019

- **Hygiene Standards**

Table 7: WASH indicators for school hygiene standards

Service level	Definition	Additional Comments
Advanced	The school has handwashing facilities with water and soap continually available at critical times. Group handwashing and hygiene promotion is integral part of curriculum and/or school routine Solid waste is frequently collected and/or disposed Handwashing Facility to Pupil Ratio Boys= 1:25 Girls=1:20	All criteria should be met to be advanced hygiene services. If not, then the next level is to be considered according on its criteria.
Basic	Handwashing facilities, which have water and soap available. Handwashing Facility to Pupil Ratio= 1:50	All criteria should be met to be basic hygiene services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	Handwashing facilities with water, but no soap.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Service	No handwashing facilities at the school or handwashing facilities with no water.	

Source: https://washdata.org/monitoring/schools and Water Sanitation and Hygiene in Schools (WinS) National Standards & Guidelines Mitigation & Localization (Final draft), 2019

- **Menstrual Hygiene Management (MHM) Standards**

To manage menstruation hygienically and with dignity, it is essential that girls have access to clean water, decent toilets and good hygiene in schools. Thus, the following criteria shall apply:

- The school is aware of and follows the National MHM Guidelines and MHM Toolkit within its capacity.
- There is a designated MHM Focal Point Person (MHM FP) at the school which that regularly orients male and female pupils in MHM to take a lead role in implementing MHM activities.
- They should stock emergency menstrual hygiene materials such as disposable pads, washable pads, cotton wool etc.
- The school involves health workers to educate and assist the girls on the management of menstrual pain and holds talks with the girls on proper personal hygiene during menses.
- The school supports the communities through the Parent-Teacher Association (PTA) committees and traditional leadership to understand facts on MHM aiming aimed at supporting the girls and boys at home, their families and the community to avail correct information.

See Annex 1 for the definition and clarifications on some of the Drinking water, Sanitation and Hygiene Terms.

3.3 WASH in Health Care Facilities

Achieving and maintaining WASH services in health care facilities is a critical element for a number of health aims including those linked to quality universal health coverage, infection prevention and control, patient safety, and child and maternal health, in particular the time around child delivery. JMP monitoring of WASH in health care facilities (HCF) includes tracking basic water, sanitation, hand hygiene, health care waste management, and environmental cleaning services.

- **Drinking Water Standards**

Table 8: WASH indicators for health care facilities drinking water standards

Service level	Definition	Additional Comments
Advanced	Safely managed inclusive drinking water: Improved water facilities are located on premises, available when needed, accessible to persons with limited mobility and good water quality.	All criteria should be met to be advanced water supply services If not, then the next level is to be considered according on its criteria.
Basic	Water is available from an improved source on the premises.	All criteria should be met to be basic water supply services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	An improved water source is within 500 metres of the premises, but not all requirements for basic service are met.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Service	Water is taken from unprotected dug wells or springs, or surface water sources; or an improved source that is more than 500 metres from the facility; or the facility has no water source.	

Source: https://washdata.org/monitoring/health-care-facilities

- **Sanitation Standards**

Table 9: WASH indicators of health care facilities sanitation standards

Service level	Definition	Additional Comments
Advanced	The HCF has improved sanitation facilities at the facility premises, which are sufficient, MHM friendly, single-sex for both staff and patients, usable and safely managed. Accessible to people with limited mobility.	All criteria should be met to be advanced sanitation services If not, then the next level is to be considered according on its criteria.
Basic	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.	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of safely managed). If not, then the next level is to be considered according on its criteria.
Limited	At least one improved sanitation facility, but not all requirements for basic service are met.	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of basic).
No Service	Toilet facilities are unimproved (pit latrines without a slab or platform, hanging latrines and bucket latrines), or there are no toilets or latrines at the facility.	

Source: https://washdata.org/monitoring/health-care-facilities

- **Hygiene Standards**

Table 10: WASH indicators for health care facilities hygiene standards

Service level	Definition	Additional Comments
Advanced	Functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at points of care, and within 5 metres of toilets. Availability of a shower.	All criteria should be met to be advanced hygiene services. If not, then the next level is to be considered according on its criteria.

Service level	Definition	Additional Comments
Basic	Functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at points of care, and within 5 metres of toilets.	All criteria should be met to be basic hygiene services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	Functional hand hygiene facilities are available at either points of care or toilets, but not both.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Service	No functional hand hygiene facilities are available at either points of care or toilets.	

Source: https://washdata.org/monitoring/health-care-facilities

- **Health Care Waste Management Standards**

Table 11: WASH indicators for health care facilities health care waste management standards

Service level	Definition	Additional Comments
Advanced	Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely. Organic waste separation.	All criteria should be met to be advanced health care waste management services If not, then the next level is to be considered according on its criteria.
Basic	Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely.	All criteria should be met to be basic health care waste management services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	There is limited separation and/or treatment and disposal of sharps and infectious waste, but not all requirements for basic service are met.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Service	There are no separate bins for sharps or infectious waste, and sharps and/or infectious waste are not treated/disposed of safely.	

Source: https://washdata.org/monitoring/health-care-facilities

- **Environmental Cleaning Standards**

Table 12: WASH indicators for health care facilities environmental cleaning standards

Service level	Definition	Additional Comments
Advanced	Basic protocols for cleaning are available, and staff with cleaning responsibilities have all received training. Availability of cleaning materials.	All criteria should be met to be advanced environmental cleaning services If not, then the next level is to be considered according on its criteria.
Basic	Basic protocols for cleaning are available, and staff with cleaning responsibilities have all received training.	All criteria should be met to be basic environmental cleaning services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	There are cleaning protocols and/or at least some staff have received training on cleaning.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Service	No cleaning protocols are available and no staff have received training on cleaning.	

Source: https://washdata.org/monitoring/health-care-facilities

3.4 WASH in Public Places and Non Domestic Places

WASH services are fundamental to economic development. The availability of safe WASH can facilitate business development, especially the informal sector, which contributes significantly to economic growth and development in many developing countries including Zambia. Public places include local markets, bus stations/taxi ranks and traditional ceremony arenas while non domestic places include bars, restaurants, lodges, offices/institutions, factories/warehouses and car washes. The following WASH indicators for Public Places were adopted from the World Health Organization (WHO) Guidelines on Sanitation and Hygiene.

- **Drinking Water Standards**

Table 13: WASH indicators for public places and/or non domestic drinking water standards

Service level	Definition	Additional Comment
Basic	Drinking water from an improved water source, available when needed.	All criteria should be met to be basic drinking water services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	Drinking water from an improved water source, not always available when needed.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No service	Drinking water from an unimproved water source or surface water.	

- **Sanitation Standards**

Table 14: WASH indicators for public places and/or non domestic sanitation standards

Service level	Definition	Additional Comment
Basic	Availability of an improved sanitation facilities dedicated to the public place or non-domestic places, Sex separated and accessible to persons with limited mobility.	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of advanced) If not, then the next level is to be considered according on its criteria.
Limited	Availability of a sanitation facility.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Access	The use of open places for urination or defecation.	

- **Hygiene Standards**

Table 15: WASH indicators for public places and/or non domestic hygiene standards

Service level	Definition	Additional Comment
Basic	Availability of a handwashing facility on premises with soap and water.	All criteria should be met to be basic sanitation services (including those that didn't satisfy all criteria of advanced). If not, then the next level is to be considered according on its criteria.
Limited	Availability of a handwashing facility on premises without soap and water.	All criteria should be met to be limited services (including those that didn't satisfy all criteria of basic).
No Access	No hand washing facility on the premises.	

3.5 Gender Sensitivity Data

Roles in collecting, using and making decisions on water as well as maintaining water infrastructure change markedly depending on gender and age. Hygiene needs and practices also vary according to gender and time of life; risk of violence is another important factor in determining water access. Analysing and responding to different needs, roles and dynamics improves WASH interventions so that they are more likely to be equally enjoyed by people in need. Some identified indicators of gender sensitivity in WASH are as follows:

Table 16: WASH indicators for gender sensitivity

Indicator	Definition
Roles and responsibilities	Men, women, boys' and girls' roles in WASH management and services
Impact of roles and responsibilities	Roles and responsibilities have an impact on reduced opportunities in school attendance, income generation, rest and child care
Leadership barriers	Men and women community leadership participation barriers

3.6 Menstrual Health

Menstrual health refers to 'a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle'. A detailed definition of menstrual health, including access to information, facilities, and supportive environments, was agreed upon by the Global Menstrual Collective through a multi-stage process and published in 2021. Until 2021, the JMP did not have indicators to monitor Menstrual Health. These indicators can be grouped into the four areas.

Table 17: WASH indicators for menstrual health

Indicator	Definition
Awareness	Awareness of menstruation before menarche (first menstruation)
Use of menstrual materials	Use of menstrual materials to capture and contain menstrual blood, such as sanitary pads, cloth, tampons, or cups. These can also be grouped into single-use and reusable materials
Privacy	Access to a private place to wash and change while at home
Participation	Participation in activities during menstruation, such as school, work and social activities.

3.7 Scaling-Up Nutrition

WASH play a fundamental role in improving nutritional outcomes. Undernutrition is directly caused by inadequate dietary intake and/or disease and indirectly related to many factors, including contaminated drinking-water and poor sanitation and hygiene. Lack of access to WASH can affect a child's nutritional status in many ways. Existing evidence supports at least three direct pathways: via diarrhoeal diseases, intestinal parasite infections and environmental enteropathy. WASH may also impact nutritional status indirectly by necessitating walking long distances in search of water and sanitation facilities and diverting a mother's time away from child care. Some identified indicators of nutritional related WASH are as follows:

Table 18: WASH indicators for scaling up nutrition

Indicator	Definition
Hand Hygiene	Wash hands with soap before feeding child, after defecation, after cleaning child
Food handling	Keep food safe (e.g. reheating food before serving infants, storing food safely in containers)
Water treatment	Treat and safely store water
Diarrhoeal diseases	Frequency of diarrhoeal diseases in children under 5

4 SURVEY METHODOLOGY

4.1 Survey Preparation and Management

4.1.1 Partner and Stakeholder Engagement

Stakeholder and partner involvement is critical to ensure a common understanding and buy-in of the WASH baseline survey exercise and highlight the use of the results and findings from the survey for WASH investment planning . It was important to engage the stakeholders and partners early in the process because they provided data sources that were required to successfully design and implement the baseline survey, the desirable maps, insights, capacities and resources to develop the baseline survey implementation plan. Partner and stakeholder engagement was an on-going process throughout baseline survey exercise.

Table 19: WASH Baseline Survey Partner Engagement Activities

Sn	Partner Engagement Activity	Dates	Objective	Partners	Comment
1	Capacity Needs and Data Availability Assessment	30th November to 10th December 2020	Review the available capacity of implementers and data availability for the development of a DWASH IP	MWDS/DWSS (PWSO) LpWSC PDHID/ MMC PEO/ DEBS PHO/ DHO Provincial Planning Provincial Chiefs Office Provincial ComDev	
2	Baseline survey Preparation Consultations	18th January to 8th October 2021	Gather the necessary data instruments required to design Baseline survey exercise	MWDS/DWSS (PWSO) MMC LpWSC PHO/DHO DEBS Dept of Chiefs Zamstats	This particular activity was on-going from preparation to implementation stage
3	Stakeholder Baseline Survey Kick Off Meeting	14th April 2021	Present the Baseline survey objectives, Survey Tools, Approach and obtain feedback from stakeholders	MWDS/DWSS (PWSO) MMC LpWSC DHO DEBS Dept of Chiefs	
4	Courtesy call to the chiefs	22nd April to 4th May 2021	Present the Baseline survey to the Chiefs and seek permission for the survey to be conducted in Chiefdoms	Dept of Chiefs Chief Chimese(22.04) Chief Kalaba (29.04) Chief Kalasa Lukangaba (29.04) Chief Matanda (30.04) Chief Mabumba (03.05) Chief Mibenge (04.05)	
5	Survey findings and interpretation of results	23rd February and 24th February 2022	Present the findings of the survey, obtain feedback and validate	MWDS/DWSS (PWSO) Provincial Planning ZamStats MMC LpWSC DHO DEBS Dept of Chiefs SUN-TA	

Table 20: Stakeholder contributions and/ or support to the baseline survey exercise

Sn	Stakeholder	Stakeholder contribution and/ or support to the baseline survey
1	LA	Provided Maps DPO and Town Planner Heavily involved District and Ward Level Information Registered Businesses Information Facilitated access to the Public Places and Non-Domestic
2	LpWSC	Provided Maps Customer information GIS Officer heavily involved Recognition of Enumerators in the field
3	PHO/DHO	Health Care Facility Information/ Introductory letter PHO heavily involved Facilitated contact with EHTs and community groups (quantitative and qualitative) Catchment/zonal information
4	DEBS	School Information/ Introductory letter Zonal Information
5	Dept of Chiefs and Traditional Affairs	Chiefdom Information Facilitated courtesy to the Chiefs (5) Facilitated contact with Village Headmen and Rural Communities
6	ZamStats	Provided Demographic information Facilitated maps and some Coordinates

4.1.2 Organisation and Management of Survey

The design of the survey was meant to be cost-effective considering the limited resources and data availability for validating. The design of the survey took into consideration the view that the most cost-effective approach would be for the Luapula GFA Team to manage the survey with support from partners and the recruited field supervisor and data collectors. This was influenced by the GFA Team having recruited a GIS expert with experience in GIS and data collection as well as design. Additionally GFA had to recruit on short-term basis an M&E Expert and Data Analyst to complete the Survey Management Team.

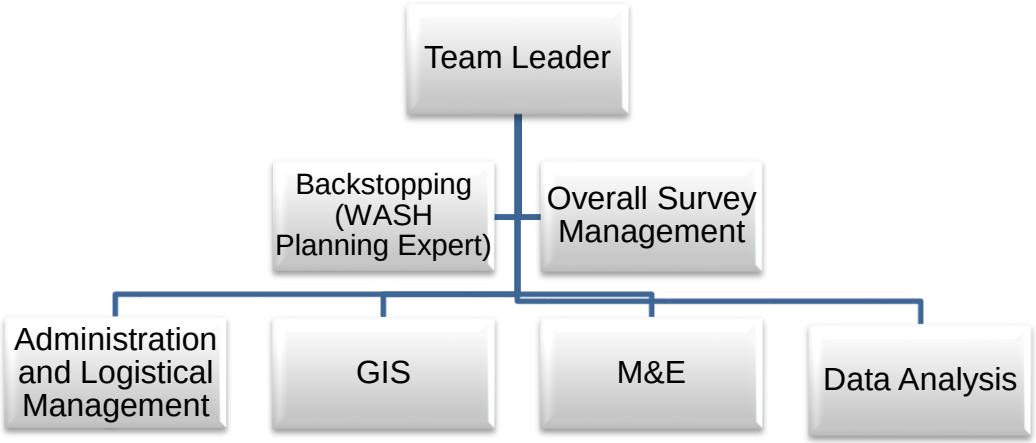


Figure 2: WASH Baseline Survey Core Management Team

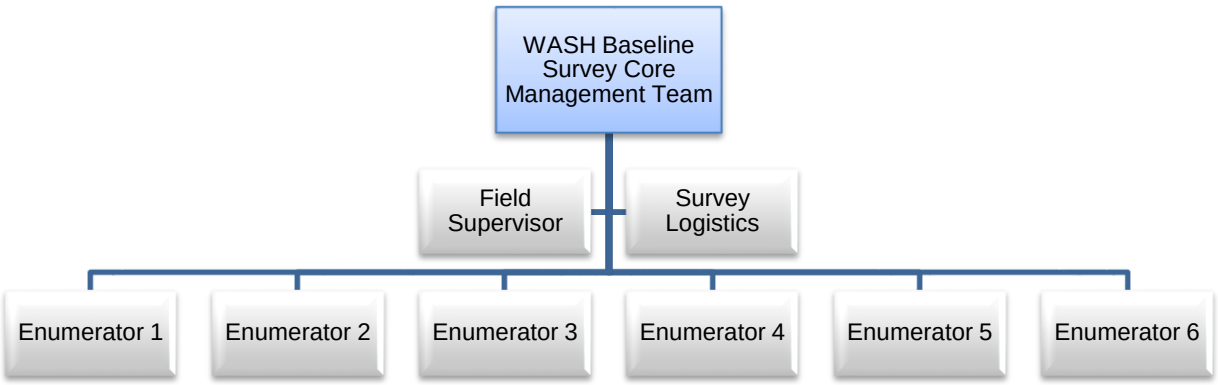


Figure 3: WASH Baseline Survey Data Collection Team

Roles and Responsibilities of Baseline Survey team

Within the baseline survey exercise the team members had the following roles and responsibilities:

Table 21: Roles and Responsibilities of the WASH Baseline Survey Team

Function	Name	Role and Responsibility
Team Leader	Yulia Titova	• Overall responsibility of the project
Backstopping	Ison Simbeye	• Ensure the survey is aligned to the desired indicators of the DWASH IP
Overall Survey Management	Mwaba Kapema	• Overall management and reporting of the survey • Responsible for the partner engagement and management • Responsible for the quality of the of the survey and ensuring the needs of the admin & logistics, GIS, M&E, Data Analysis and partners are met
Partners	MMC, LpWSC, DEBS, DHO, Chiefs and traditional affairs dept	• Provide all necessary information for planning and implementation of survey • Facilitate access to survey sample points
Administration and logistical management	Lillian Kafunda	• Contractual agreements with enumerators and logistics services • Responsible for enumerator and team logistics • Responsible for procurement of equipment and services for the survey • Made sure all required gadgets and stationary were purchased and availed to the enumerators • Made sure that payments were made on time
GIS	Gabriel Chibuye	• Proposing the survey tools • Designing the questionnaires in KoboTool box • Data collection and verification prior to the survey • Generating survey samples and closely working with the Field Supervisor to monitor the progress of the survey each day • Cleaning of the survey data in preparation for data analysis • Production of maps before, during and after the survey
M & E	Mirja Kattelus	• Checking all the survey tools and questionnaires • Testing the questionnaires to ensure the tools were working as expected • Formulating the sampling methodology • Helping with the data cleaning prior to data analysis • Enumerator evaluation during the enumerator training • Worked closely with the Data Analyst in formulating the data analysis framework

Function	Name	Role and Responsibility
		• Ensured quality data before data analysis could be done
Data Analysis	Patrick Chilumba	• Review of the Baseline survey questionnaires and tools • Designing and conducting KIIs and FGDs • Developing baseline data analysis framework in line with the survey concept • Data cleaning and quality control • Analysing data using the developed data analysis framework and production of supporting visuals for publication of results
Field Supervisor	Purity Chanda	• Overall responsibility of the enumerators in the field • Development of a daily field plan for each enumerator against days and samples provided • Daily and weekly reports to the Baseline Survey Core Management Team • Also had responsibilities of an enumerator
Enumerators	Gift Musonda Morgan Chansa Bright Besa Hazel Muteta Most Mwape Angela Makungu (Monica Mulenga)	• Survey Interviews • Collection of quality data from respondents/samples • Upload and read the maps given • Upload all data collected from the field • Take photos of water sources and toilets • Field feedback

The GFA survey core team were in charge of the supervision of the exercise, conduction of Focus Group Discussions (FGDs), collaboration with counterparts' programmes, as well as development of survey tools, questionnaires, data analysis and reporting.

4.1.3 *Enumerators*

In order to carry out the baseline survey, the programme engaged seven (7) enumerators to carry out the main data collection exercise in each of the four districts. The enumerators were supported by a core survey management team from GFA which ensured that high quality data was obtained from the entire survey process. The Field Supervisor supervised the data collectors, coordinated the field surveys, clarified and resolved any field problems that were encountered by data collectors.

The selection process of prospective candidates for interviews was based on recommendations from various partners in the province that had conducted surveys. These partners are namely: GIZ FANSER project which conducted a Knowledge, Attitudes and Practices (KAP) Survey, Luapula Water Supply and Sanitation Company (LpWSC) which conducted a WASH survey in Mansa and Samfya Districts in partnership with National Water Supply and Sanitation Council (NWASCO) and GIZ RWS I, as well as MWDS that cooperated with UNICEF/Aquaquest to conduct a Rural WASH Baseline Survey in 6 Districts. A proposed list of enumerators that were engaged to conduct the aforementioned various surveys was provided to the GFA Team. The GFA team contacted the enumerators and requested for Curriculum Vitae (CVs) to be submitted.

The purpose of the interviews and selection process was to pick the most suitable candidates who would best meet the requirements of the assignment, to find out which applicant will be successful, if contracted. To meet this goal, the team obtained and assessed information about the applicants in terms of age, academic qualifications, skills, experience, etc. The needs of the assignment were matched with the profile of the candidates. Out of the 12 candidates interviewed only one did not qualify to the 3rd and final stage of the recruitment process which is training and evaluation respectively.

To prepare the enumerators for the baseline survey in Mansa district, an enumerator training and assessment was carried out from 22nd March to 26th March 2021 at Teja Lodge in Mansa. The training was planned and organised by the GFA core survey management team.

At the end of the training, a pilot survey was conducted to ascertain the following: firstly, see if the questionnaires were flowing well and had little or no fault; secondly, that the enumerators had

grasped the use of the gadgets assigned to them to use during the survey and lastly to approximate the time it would take them to complete each questionnaire while conducting interviews. On the last day of the week of training, enumerators were then assessed through an evaluation focusing on how well the training objectives have been achieved in terms of internalising the training topics, understanding of the requirements for an enumerator and participation activity in the training. This process was carried out through a two-step process: For more details on the recruitment and training of the enumerators, refer to the Baseline Survey Enumerator training report incl. a written evaluation form and a grading matrix based on observations of the GFA core team. As well as the outcome of the evaluation process, the team was to identify 7 enumerators out of the total 11 trained to carry out the baseline exercise in the four target districts.

4.1.4 *Logistics*

The logistics in general comprised of the detailed organisation and implementation of the baseline survey, which involved the management of the baseline survey resources, administrative and transportation costs to meet the needs of the survey and that of the enumerators. The focus was to procure the necessary equipment that would ensure the data needed was collected efficiently. The logistics that were put in place for the survey have been divided into 3 categories as follows;

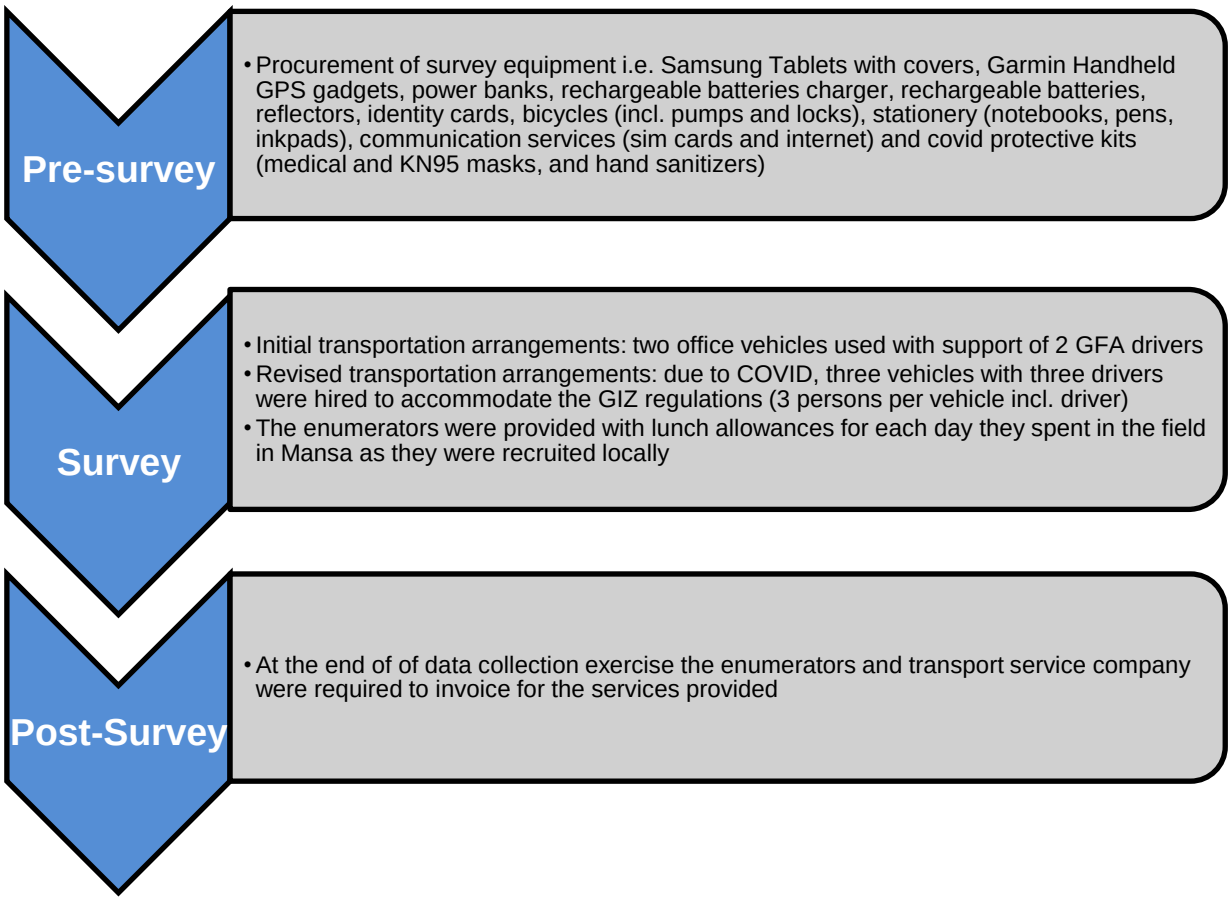


Figure 4: Mansa Baseline Survey Logistics

4.2 Survey Tools and Questionnaires

4.2.1 *Questionnaires*

It was essential to make sure that the questionnaires capture the key WASH indicators in line with national standards and address the following key focus areas and main topics under them:

Table 22: Key WASH indicators and their key focus areas and main questionnaire topics

Focus Areas:	Main topics
Access to drinking water services	• Current service level • Operation and maintenance • Willingness and ability to pay • Climate change and mitigation • Desired water supply services
Access to sanitation services	• Current service level • Operation and maintenance • Willingness and ability to pay • Emptying/frequency of emptying, cost implication • Desired sanitation services
Access to Hygiene Services	• Current service level • Hygiene practices • Health status
Access to MHM services	• Current practices • Culture and religion norms towards infrastructure & products • Design and construction of WASH facilities • Availability of menstrual products • School / work absence as a quantifiable effect of poor menstruation facilities • MHM focal points
Access to Solid Waste Services incl. Environmental Cleaning	• Status and nature of solid waste management approaches • Desired solid waste management services • Health Care Waste Management
Gender sensitivity data and information	• Gender disaggregated demographic data • Design and construction of WASH facilities • Current practices and roles in managing WASH facilities and services • School and income generation opportunities • Barriers to participating in community leadership
Social inclusion, vulnerable groups, elderly, girl child, disabled	• Design and construction of WASH facilities • Current practices • Social inclusion mainstreaming at community level structures e.g. people with disabilities i.e. increased participation & voice in decision making & management • Difficulties people with disabilities have in accessing the services • Awareness of rights • Schools with children with disabilities
Data related to scaling up nutrition	• Mothers / caretakers in households with knowledge on their hygiene and infant/ young child feeding practices • Recurrent diarrhoea diseases • School absence as a quantifiable effect of water borne diseases • Diarrhoea cases and deaths under 5 • Wasting children under 5 (low weight for height) • Children under 5 who are stunted (low height for age) • Availability and prices of protein rich foods • Food handling practices

There are five main questionnaire categories, which capture the above topics where applicable and with varying question formulation, including:

Table 23: The five main questionnaires categories and their expected respondents

Category	Questionnaire	Respondent
Household	Rural Household	Head of House or Spouse, additionally a girl child
	Urban Household (Landlord)	Head of House or Spouse, additionally a girl child
	Urban Household (Tenant)	Head of House or Spouse, additionally a girl child
School	Government, Community or Private (Primary, Secondary or combined)	Head of School, Deputy Head or Senior Representative
Health Care Facility	Government or Private (Hospitals, Clinics, Rural Health Posts/Clinics)	EHT or HCF Representative
Public Place	Market, Bus station or Traditional Arena	Chairpersons or representative
Non-Domestic	Lodges / Guesthouses, Bars, Restaurants, Offices, Institutions, Factories, Warehouses and Car Washes	Representative

4.2.2 Kobo Toolbox

Kobo Toolbox was selected as the software to host the questionnaires and the collected data. It is a suite of open source software applications that can be used for data collection, allowing for easy design and formatting of questionnaires. KoboCollect allow users to collect data online and offline on phones, tablets or any browser.

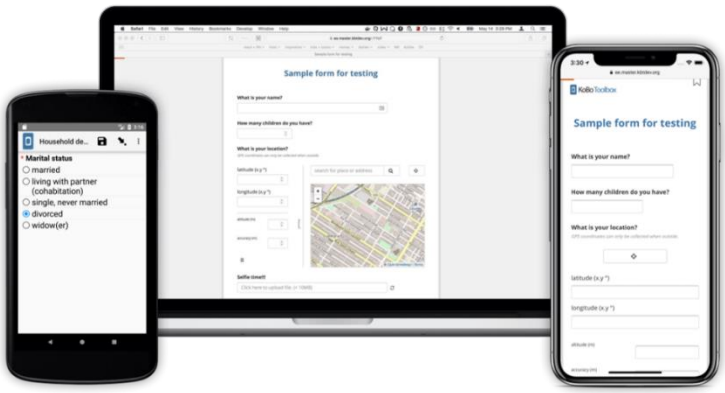


Figure 5: KoboCollect interface on phones, tablets or any browser.

The hardware/ software tools and other materials used during the survey include:

- Samsung Tab A
  - KoboCollect - this is an Android application which was downloaded on each tablet for the actual data collection
  - Questionnaires - these would be loaded onto the Kobocollect tool from the server
  - Camera - the camera of the tablet would be used for capturing the coordinates from the handheld device
  - Maps of Wards and locations of selected sample units
- Garmin Etrex10
  - For obtaining Location
  - Mapping Routes of each enumerator

- A hard copy of each questionnaire and some plain papers

Figure 6: Survey equipment procured for the baseline survey exercise

The KoboCollect application was customized and installed on the tablets for the purpose of data collection. The enumerators were familiarised on the setup, main structure and use of the KoboCollect Application prior to the field data collection:

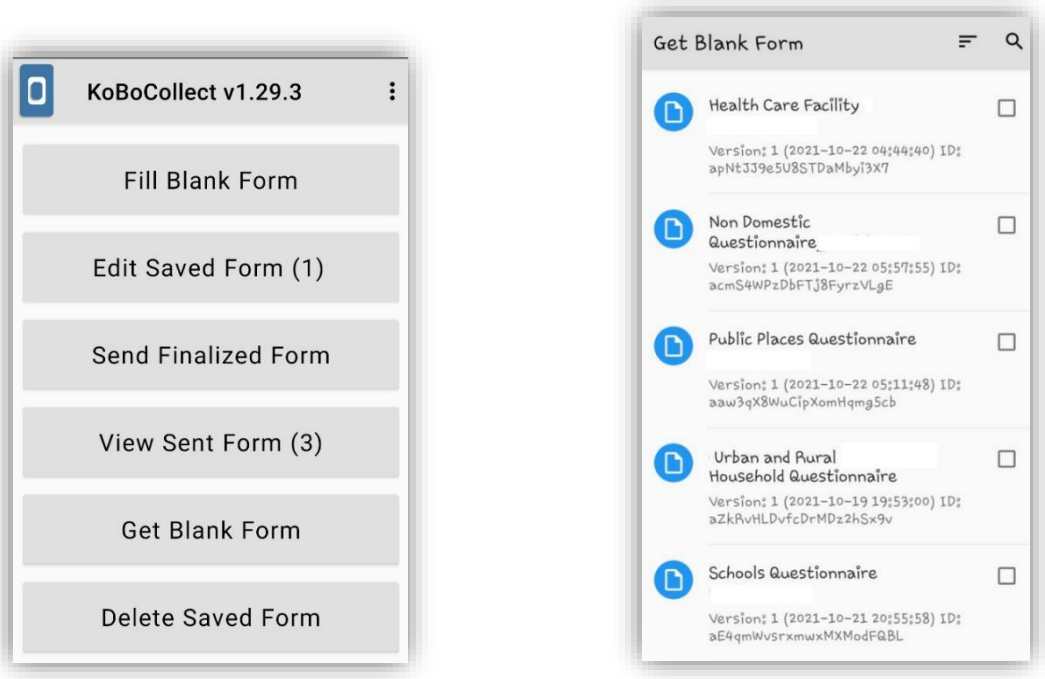


Figure 7: Main interface of the KoboCollecvt mobile application and list of blank forms developed for the pilot survey

The data collectors were also instructed how to take a picture of the point of interest, i.e. WASH facilities and how to capture the GPS coordinates both on the KoboCollect tool as well as on the GPS gadget:

Figure 8: Capturing GPS Coordinates on the Garmin Etrex10

4.2.3 Testing of Tools and Questionnaires

The essence of the pilot survey was to test the questionnaire for several aspects, including;

i. The relevance and clarity of the questions
ii. The time required to complete one questionnaire
iii. For the enumerators to gain confidence in their significant interpersonal skills and become familiar with the questions and use of the app
iv. The ease of accessing the targeted interviewee in an area
v. How easy it was to access the additional requirements such as taking photos of the water point and sanitation facilities
vi. To assess the general reception and perception of the different respondents and thus refine the questionnaires and implement appropriate interventions that would enable interviewees cooperate with the enumerators
vii. One of criteria of assessing the enumerators; ability to use the tools and the concepts learnt in the training such as ethical guidelines, survey exercise and Best Practices, the use of the tablets and the use of the GPS devices

The pilot survey was done in two phases:

Phase 1 – Pilot in training: The pilot testing was done using the household questionnaire. The enumerators were divided into three groups. All the enumerators went to one ward and the same locality Namwandwe, but spread themselves so that there would be no clashing of interviewees i.e. an interviewee being interviewed twice by two different enumerators. The following were the requirements of the successful completion of the survey;

- Each enumerator interviewed a minimum of three respondents
- Each enumerator be able to complete the whole questionnaire
- Each enumerator be able to take the photo of the sanitation facility
- Each enumerator be able to capture the GPS location of the respondent's house on both the tablet and the picture of the hand held GPS coordinates
- How the enumerators translated the questionnaire to the interviewees in the local language *bemba*

It is worth noting that the handheld GPS pictures were later substituted with the GPS waypoint number because the pictures took up a lot of space and the process of capturing pictures with the tablet was cumbersome for the enumerators.

The collected data was later analysed using the Kobocollect platform to give a quick overview on the data quality and how the results could be used later. The enumerators gave their feedback and suggestions on certain questions as well as some components of the Kobotool that were not working as expected. Suggestions were also given based on the interviewee's reactions or concerns to some questions. All the feedback was taken up for consideration and the questionnaires were later revised accordingly.

Phase 2 – First week of the survey: The second pilot survey was done a week prior to the commencement of the main survey. This was done from 3rd May to 7th May 2021. A short overview of the questionnaires was done to highlight changes such as new additions or modifications that had been done after the first pilot. The enumerators immediately went in the field to collect some data. This time the ward they went to was Muchinka. Each enumerator had the ward boundary uploaded on to the tablet and the sampled households to be interviewed. In addition the Android Google Earth application was installed on the tablets to view the boundary and the samples assigned to each enumerator. The completed questionnaires that were submitted could be seen on the web app by the administrator.

A review of the survey was done and the each enumerator was given some pointers on what has being done correctly and where they needed to pay more attention when conducting the survey. The enumerators also gave their feedback on what needed to be improved on the Kobotool before the final survey could commence. When all the reviews were done, the enumerators were ready to begin the survey on 11th May 2021.

4.2.4 Focus Group Discussions and Key Informant Interviews

Both focus group discussions and key informant interviews are designed to gather opinions on specific topics related to WASH. The information learned was to supplement the data collection process and guide future WASH interventions and actions.

Focus Group Discussions (FGD)

Focus Group Discussion is a small-group discussion guided by a trained leader to discuss complex topics in-depth. The design of the FGD in Mansa had 3 factors taken into consideration which are:

- Geographical aspects i.e. wards, along the river settlements
- Administrative aspects i.e. Headmen, WDCs, CCs, VWASHE etc.
- Demographical aspects i.e. women & children
- Type of area i.e. Urban, Peri-urban, Rural Growth Centre and Rural Settlements

Out of 20 wards in Mansa, Focus Group discussions were conducted in 5 wards as shown in Figure 9 below:

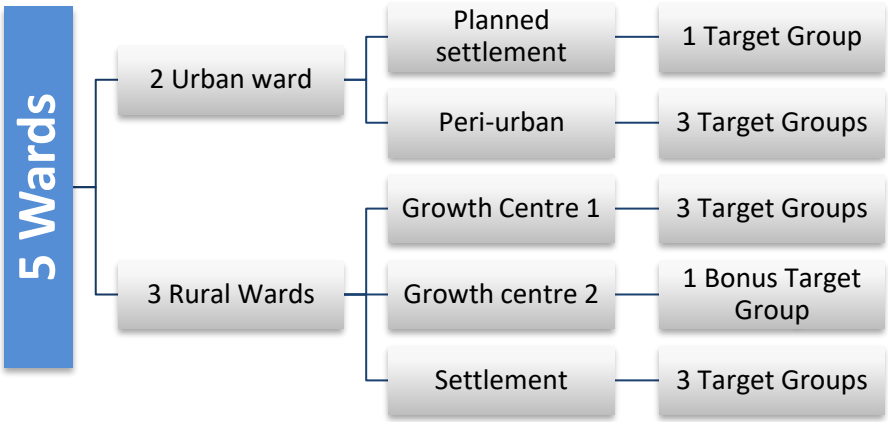


Figure 9: Focus Group Discussion Scenario

A total of 9 FGDs were planned for Mansa covering 3 different target groups spread across the 4 different wards as shown in the map Figure 10:

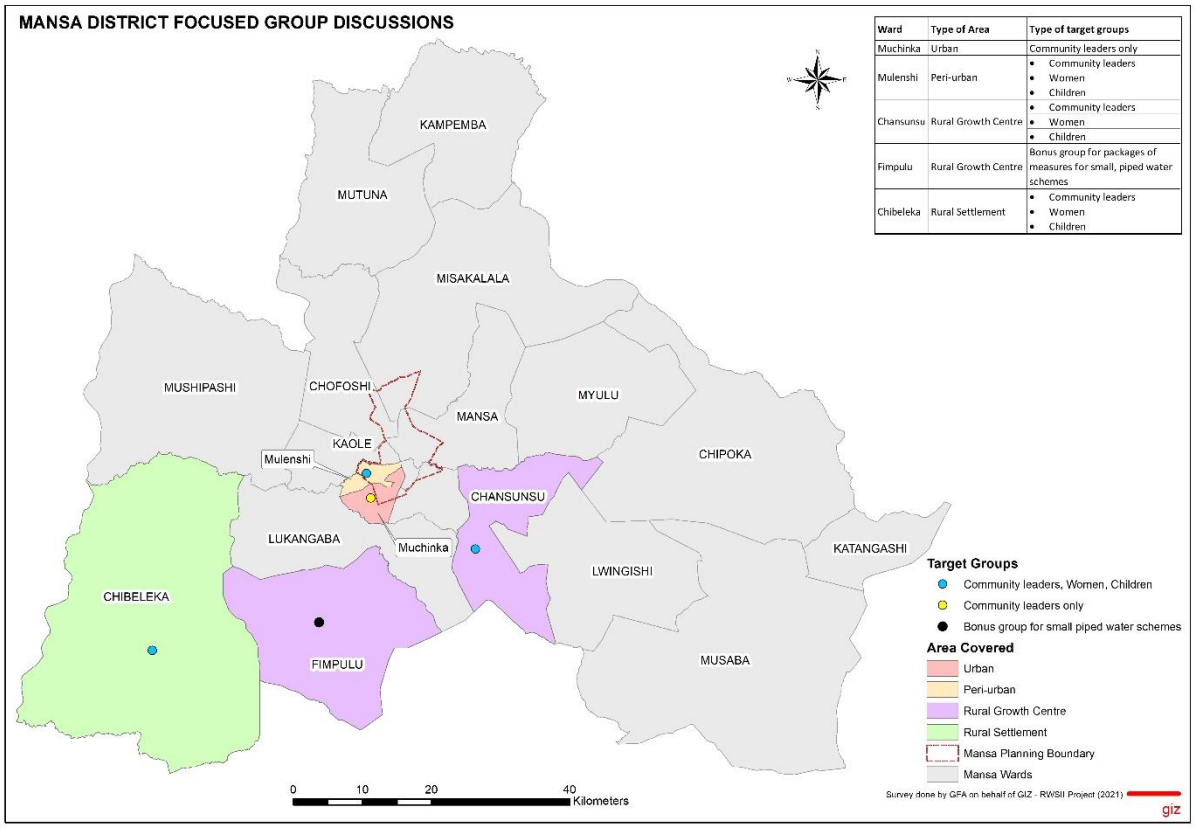


Figure 10: Map of Mansa District Focus Group Discussions Wards and with their target groups

The type of target groups for the group discussions are shown in Figure 11

Community leaders	Women Community Members	Children (18 and under)
•Duration: 2hrs •10-12 Participants	•Duration: 2hrs •10-12 Participants	•Duration: 1h 30mins •10-12 Participants •boys and girls

Figure 11: Types of target groups for the FGD

Key Informant Interviews (KII)

A key informant interview is an in-depth interview that collects information from individual experts. The key informant interviews were designed to target the key players that contribute to WASH service provision in the different categories namely; Households, Schools, HCFs, Public Places and Non Domestic Places. The duration for the KII was set for 2 hours and the target individuals for the interviews are shown in Figure 12.

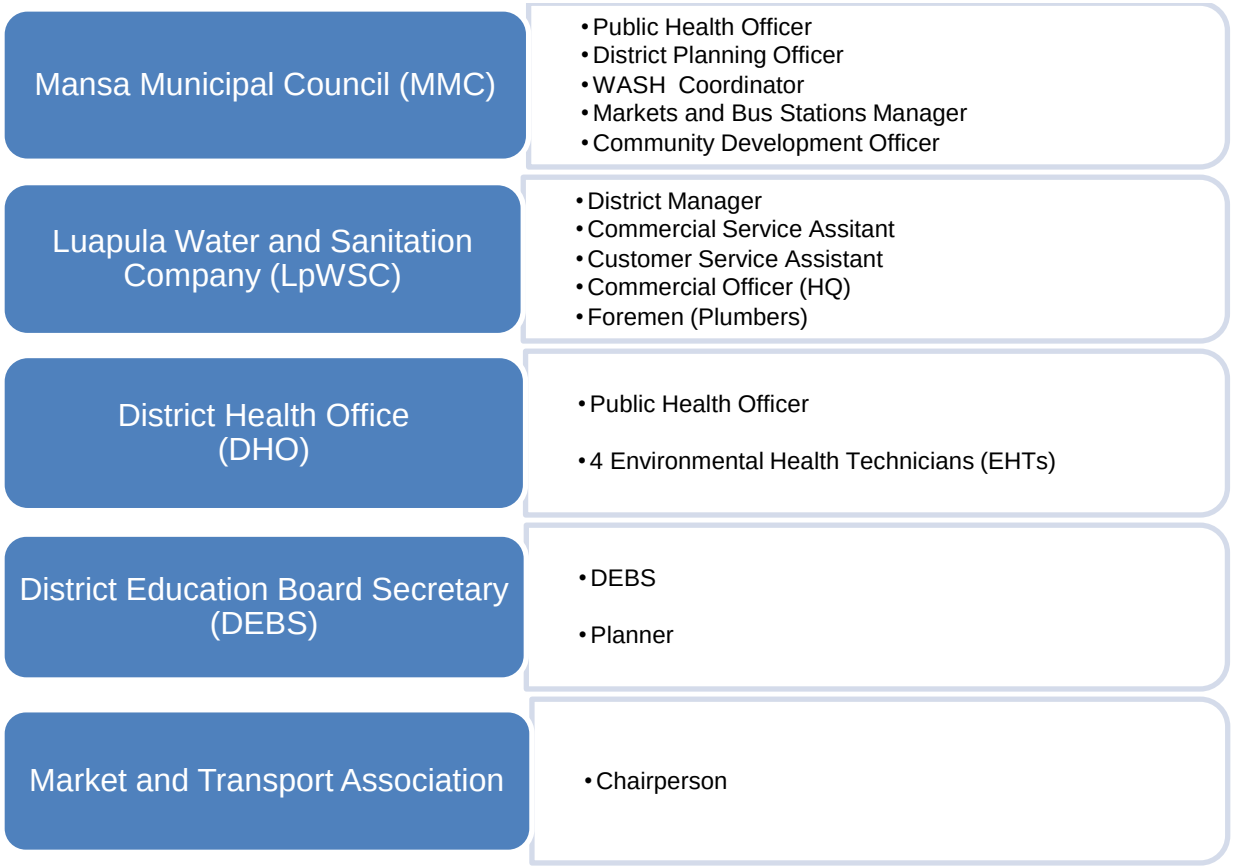


Figure 12: Target persons for Key Informant Interviews

The FGD and KIIs were designed to be implemented in 10 days. Annex 2 provides a detailed plan for the FGD and KII as well as its objective.

4.3 Data Instruments

4.3.1 Data Sources

There were various sources of data that were identified prior to the sampling and data collection exercise. Some of the sources that data was obtained from are listed below;

Table 24: List of primary data sources

Sn	Institution	Data Source
1	Mansa Municipal Council	MMC through the Director of planning and town planner provided data for the District Boundaries as well as some information on the population. The Mansa planning boundary data and ward maps were provided in shapefile format and the population was provided in excel. Other data that was provided were the list of public places as well as some of the non-domestic places through the business license list.
2	Luapula Water and Sanitation Company	The GIS unit of the provided data of the maps and shapefiles of their areas of operation as well as the utility lines for Mansa District both for water supply and sewerage.
3	GRID3 Project	Geo-Referenced Infrastructure and Demographic Data for Development (GRID3) works with countries to generate, validate and use geospatial data on population, settlements, infrastructure, and boundaries. GRID3 combines the expertise of partners in government, United Nations, academia, and the private sector to design adaptable and relevant geospatial solutions based on capacity and development needs of each country. The GRID3 Zambian data hub has a collection of spatial information from the various sources: the Ministry of Lands (from the National Spatial Data Infrastructure (NSDI)), Ministry of Health, the Zambia Statistics Agency, the Ministry of Education, and various organizations in different sectors which have contributed their data to the hub. From the GRID3 Hub the following information was obtained:

Sn	Institution	Data Source
		• Data on population of Zambia which was further narrowed down to ward population • Data on the location of schools • Data on location of Health Care Facilities • Data on the Settlements • Data on the location of Builtup areas • Data on the location of Hamlets • Data on the point of interest names
4	The Zambia Statistics Agency	Zamstats provided Demographic information and facilitated maps and some Coordinates.
5	Ministry of Health – District Health Office (DHO)	The DHO provided the list of health care facilities, by type and their location. The list was compared to the data from the GRID3 data, which provided the coordinates for the health care facilities.
6	Ministry of Education – District Education Board Secretary (DEBS)	The DEBS provided the list of schools; Secondary Schools, Primary Schools as well as community schools. The list was compared to the data from the GRID3 data, which provided the coordinates for the schools.
7	Luapula Provincial Planning Authority (Physical planning)	The Authority Provided some more shapefiles on the boundaries of the districts and the province which was used to make comparisons with data from the council as well as the NSDI (GRID3) data.
8	Department of Chiefs and Traditional Affairs	Provided information on the main chiefs in the districts, the traditional ceremonies as well as customs to be followed as the survey team went to visit the Chiefs to pay a status call.

4.3.2 Data Availability

From the different data instruments, we could establish the key statistical data that was required to apply the sampling methodology and / or approach to data collection in the field for representativeness and reduced biasness. The key statistics for Mansa District were as follows;

Table 25: Key Mansa Statistics for Baseline Survey sample size calculations

District	Estimated Population (GRID3)	Number of Schools (DEBS)	Number of Health Care Facilities (DHO)	Public Places (LA)	Non Domestic
Mansa	300,725	136	75	No Data	153

4.4 Survey Population and Sample size

4.4.1 Household Sample Size

The district wide sample size was determined using the following proportion method for sample size calculation (finite population) and conservative assumptions;

$$n = \frac{N}{1 + \frac{(N-1)\,(\frac{L}{100})^2}{1.96^2\,P(1-P)}}$$

Where:

n Sample population
N The population of a district (300,725)
Z Normal curve Z-score set at 1.96 as at 5% level of significance (95% confidence level)
P population proportion usually assumed to be 0.5 or 50% of the population with access to sanitation to maximize on th sample size required for this baseline survey
L The Margin of Error set between 2% and 5% for districts with high and low populations. A high population populate is assumed to have a low margin of error and a low population with a high margin of error

For the baseline, the most recommended Margin of error (L) of between 2% and 5% were assumed. Conservative margin of errors of 3%, 4%, 5.0%, and 5.0% were assumed and used for Mansa, Mwense, Mwansabombwe and Chipili districts respectively.

The results of the Mansa sample size calculations are presented in Table 26.

Table 26: Mansa District Household sample size

Total Population in Mansa District	**300,725**	
Population sample size	**Initial sample size** *Calculated Population Sample Size*	**1064**
	Revised sample size *Calculated Population Sample Size * 3 factor*	**3192**
Household sample size ***(assume 5 people per household according to 2015 LCMS)***	**Initial sample size**	**213**
	Revised sample size	**638**

The sample distribution across wards was weighted as follows;

$$Ward\ sample = District\ sample\ size \times \frac{ward\ population}{district\ population}$$

The results of the Mansa ward sample size is presented in Table 27:

Table 27: Mansa Household Ward level sample size

Name of ward	Projected population	Final sample size (Calculated Population Sample Size * 3 factor)	Actual samples collected
Katangashi	10498	23	30
Mutuna	7399	16	30
Myulu	7674	17	30
Mansa	31538	68	140
Misakalala	13265	29	30
Mushipashi	5257	11	30
Kaole	21727	47	78
Chansunsu	10912	24	30
Chibeleka	12573	27	30
Lukangaba	11526	25	30
Lwingishi	14671	32	32
Mulenshi	14942	32	150
Chilyapa	29977	65	108
Namwandwe	20190	44	77
Muchinka	38281	83	95
Fimpulu	11226	24	30
Kampemba	4663	10	30
Chipoka	10197	22	30
Musaba	18229	39	39
Chofoshi	5982	13	30
	300,727	**638**	**1079**

For representativeness, it was decided that each ward was to have a minimum of 30 samples. For the highlighted 6 wards in Table 27 which show a case of over sampling, this was as a result of the first statistical data set that was provided (using 2010 projections) excluding the 5 newly created wards that were not existing i.e. Fimpulu, Kampemba, Chipoka, Musaba and Chofoshi ward. Following an alternative data source for statistical data (GRID3), it was realized that the 6 highlighted wards had been over sampled.

4.4.2 Schools, Health Care Facilities and Non Domestic Sample Size

The aim was to sample 50% of all schools, HCFs and Non Domestic places. Their samples size were determined using the following proportion method for sample size calculation;

$$School\ sample\ size = \frac{Total\ No.of\ schools\ in\ District\ (according\ to\ DEBS\ database)}{2}$$

$$HCF\ Sample\ size = \frac{Total\ No.of\ HCFs\ in\ District\ (according\ to\ DHO\ database)}{2}$$

$$Non\ Domestic\ sample\ size\ = \frac{Total\ No.of\ Non\ Domestic\ (according\ to\ Business\ License\ List)}{2}$$

The results of the schools sample size is presented in Table 28.

Table 28: Mansa Schools, HCF and Non Domestic sample Size

Mansa School sample size	Total number of schools	**135**
	Sample size	**67.5~68**
	Actual samples collected	**67**
Mansa HCF Sample size	Total number of HCF	**75**
	Sample size	**37.5~38**
	Actual samples collected	**42**
Mansa Non Domestic Places	Total number of Non Domestic Places	**153**
	Sample size	**76.5~77**
	Actual samples collected	**90**

From the Table 28, it is observed that the HCFs and Non Domestic Places were oversampled. For the HCF, Mansa General Hospital was included as a one of the bonus samples as it is not on the DHO HCF data base as it is managed by the Provincial Health Office, for representation it was included as it is the only General Hospital in the Province. Another HCF that was added as a bonus sample is Home of Compassion, a private hospital not sampled with the random sample generation exercise, for representation it was included as it is the only private hospital in the Province. As for the Non Domestic places, the business license list from the Council which aided the sampling exercise excluded car washes, these were included as their primary resource for conducting the business is anchored on water.

4.4.3 Public places sample size

The aim was to bridge the public places data gap as there was no database that existed on markets, bus stations/taxi ranks and traditional ceremony arenas. Therefore this was set for a 100% samples for all public places.

$$Public\ places\ sample\ size = all\ public\ places\ in\ Mansa\ District$$

For planning purposes, the sample size was set as shown in the table below

Table 29: Mansa Public Places sample size

Mansa Public Places sample size	**Sample size** *(estimated for the sake of planning)*	**30**
	Actual samples collected	**28**

4.5 Sampling Methodology

In general, all sampling techniques at the various data collection points ensured representativeness and strict avoidance of bias. Thus different but appropriate types of random sampling techniques were applied wherever possible.

4.5.1 *Households sampling methodology*

The GRID3 projected provided data for households that was used for planning and coming up with sample sizes for each district. The raster gridded file used was downloaded from the GRID3 website. This geoTIFF raster contains estimates of total population size for each approximately 100m grid cell across Zambia. The values are the mean of the posterior probability distribution for the predicted population size in each grid cell. NA values represent areas that were mapped as unsettled according to building footprints data.

The raster file was converted to a feature point file in arcGIS. The point file was clipped to the specific districts and later wards. Each point data had a value that represented the average population per 100m grid. For any ward, the sum of total number of values of points in that ward was equal to the population of the ward. Figure 13 shows an example of how the population of the District was extracted, then the ward population for the ward Chipoka and finally the random sample for the ward. The ward populated areas were a combination of built-up areas, the settlements and the hamlets. This combined polygon dataset was used to generate random points based on the calculated sample size of the ward using the *random tool* in arcGIS. In Figure 13, the settlement dataset is a union of the settlements, hamlets and the built-up areas clipped from the GRID3 data.

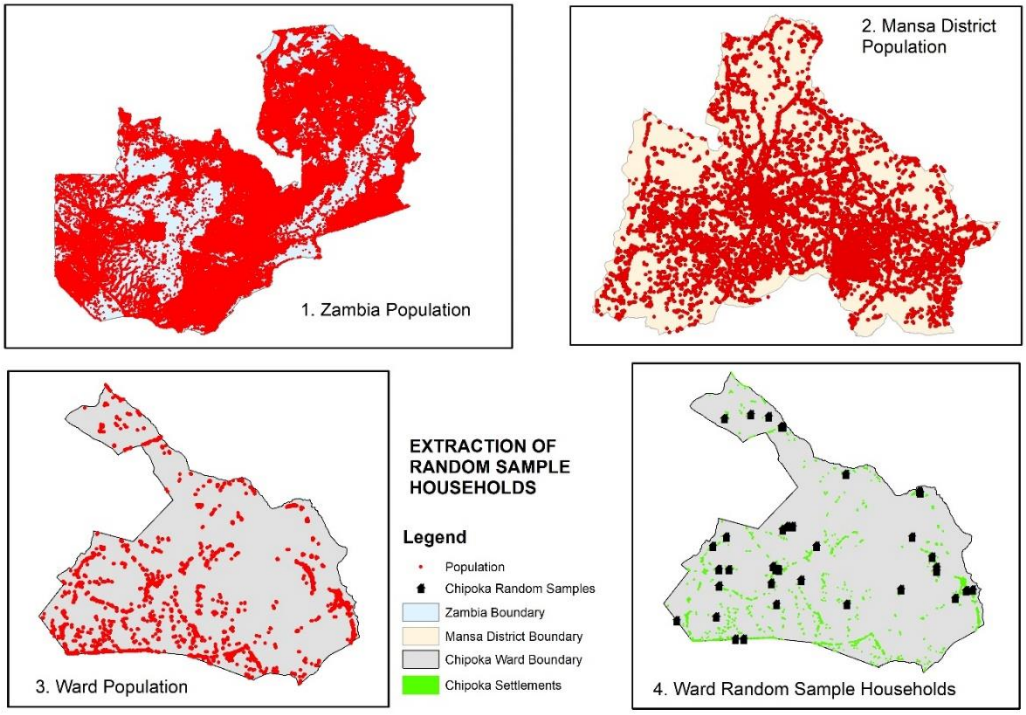


Figure 13: Mansa Household sampling methodology

The random points were numbered from number 1 to the last number. The feature random point file and the ward boundary were converted to Keyhole Markup Language (kml/ kmz) files. These files were uploaded onto the mobile Google Earth application on each enumerator's tablet. This helped the enumerators with navigating to their specific samples/ respondents.

For the in-field sampling, in order to achieve representativeness and to avoid bias, a combination of sampling techniques was employed, i.e. a multi-staged stratified cluster random sampling method. Firstly, proportionate stratified random sampling was employed with wards used as strata from which the calculated random samples of households were drawn in proportion to the size of each ward. Secondly, and to ensure variation of household characteristics in different parts of each

ward was accounted for, the wards were divided into smaller clusters of about 20 households each and then these were selected at random. Lastly, households were randomly selected form each cluster using the random GPS RANDOM point generator.

4.5.2 Other Premises

Schools

Excel was used to create random samples from the school database, in order to come up with 50% of schools to be surveyed. The schools were clustered into Urban, peri-urban and rural schools which were further clustered according to Government, community and private schools. The government schools were further classified according to primary and secondary schools. After the clustering of the schools was complete, they were put in different sheets of excel to have a 50% representation for each cluster. Generally, the RAND function in excel was used to assign a random number between 0 and 1 to each cell.

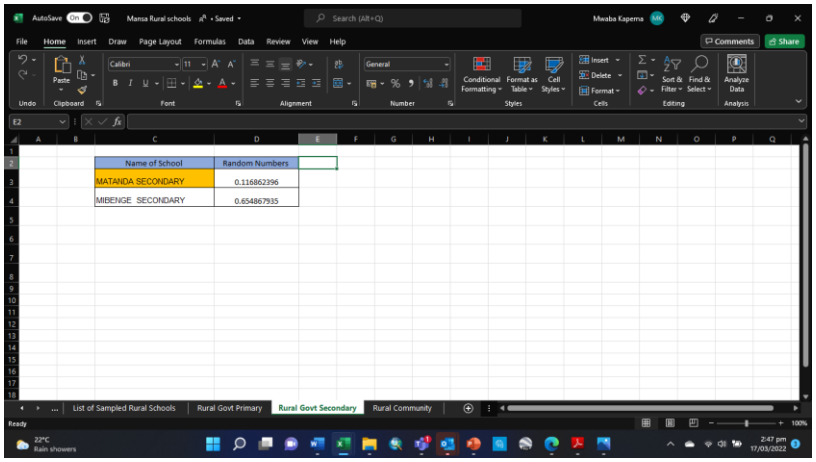


Figure 14: Mansa Schools sampling methodology

Health Care Facilities

Excel was used to create random samples from the HCF database, in order come up with 50% of HCFs to be surveyed. The HCFs were clustered according to wards, unlike the schools which was done by area and further by type. This was as a result of the HCF database was given by Zonal and not by Urban, Peri-urban and Rural.

After the clustering of the HCF was complete, they were put in different sheets of excel to have a 50% representation for each cluster. Generally, the RAND function in excel was used to assign a random number between 0 and 1 to each cell.

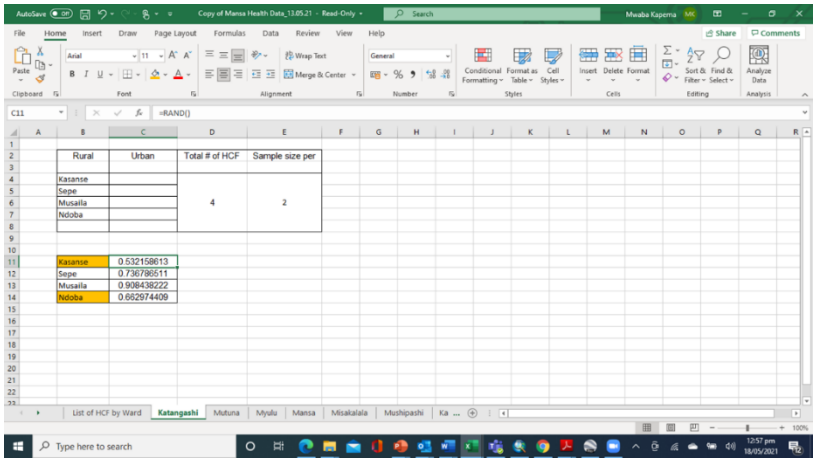


Figure 15: Mansa Health Care Facilities sampling methodology

Non-Domestic Premises

Excel was used to create random samples from the business license list, in order come up with 50% of non-domestic places to be surveyed. The non-domestic premises were clustered into bars / restaurants / lodges, offices, institutions and factories/warehouses by the Mansa Municipal Council.

After the clustering of the Non Domestic Premises was complete, they were put in different sheets of excel to have a 50% representation for each cluster. Generally, the RAND function in excel was used to assign a random number between 0 and 1 to each cell.

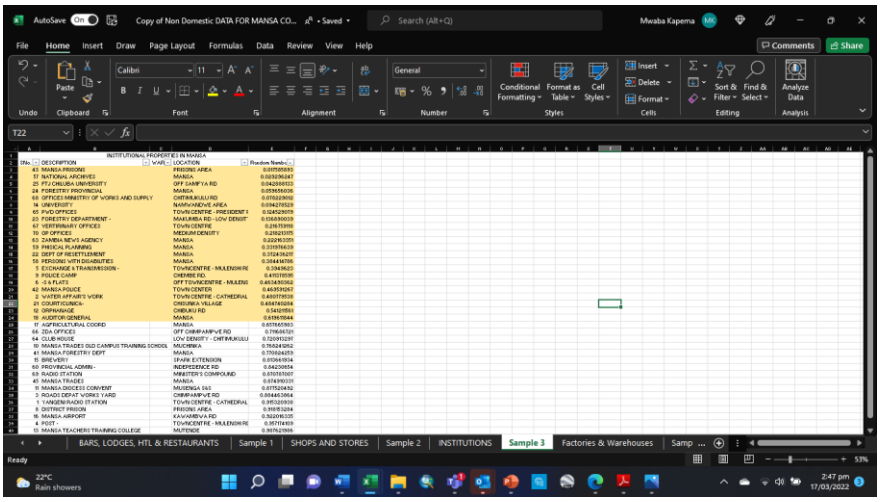


Figure 16: Mansa Non Domestic sampling methodology

Public Places

There was no sampling methodology that was used to sample public places as all properties were to be visited. The enumerators were instructed to visit all public places, i.e. markets, bus stations/taxi ranks and traditional ceremony arenas in the District. In order for this to happen the enumerators were to ask the communities about the locations of the existing public places during the data collection exercise in the wards.

4.6 Implementation of Data Collection

4.6.1 *Quantitative Data*

Quantitative Research is a structured way of collecting and analysing data obtained from different sources. This is the methodology which researchers use to test theories about people's attitudes and behaviours based on numerical and statistical evidence.

Planning for data collection

The data collection was planned according to a deployment plan prepared jointly by the core management team and the field supervisor. This plan gave a timetable of the fieldwork indicating the distribution of enumerators, samples assigned to each enumerator and expected dates of work to collect the samples. This helped to know the expected duration in the field, to avoid omissions/duplications of work in a ward, identify the samples assigned to the enumerators, in which ward each enumerator works every day and to define an efficient route to move from sample to sample. The planning was a prerequisite for a good data collection which required adequate resource allocation.

Assigning of data collection samples

The randomly sampled data collection points were distributed to the enumerators by the field supervisor in pairs for assigned wards.

Equipment preparations

Prior to going to the field, the supervisor and enumerators ensured they had all functioning equipment and sufficient supplies to perform their work. The equipment was stored at the GFA project office and were only collected for the field day.

Transportation arrangements

The enumerators reported daily to the GFA project office where they picked up their bicycles and a vehicle transported them from the Project office to the cycling point to collect the samples for the day. Typically, it was the responsibility of the GFA administration and logistics expert to make all logistical arrangements in consultation with the rest of the core management and field supervisor.

Selected Samples contact

The enumerators used Google earth loaded with the random samples to locate the selected samples. After location of samples, the enumerator was to make all efforts to meet the selected respondent, introduce themselves (ID and introductory letter useful), explain the purpose of the study and obtain their informed consent. In the incident where no respondent was found at the sampled household, the enumerators were asked to visit the closest household in the vicinity of the sampled random point.

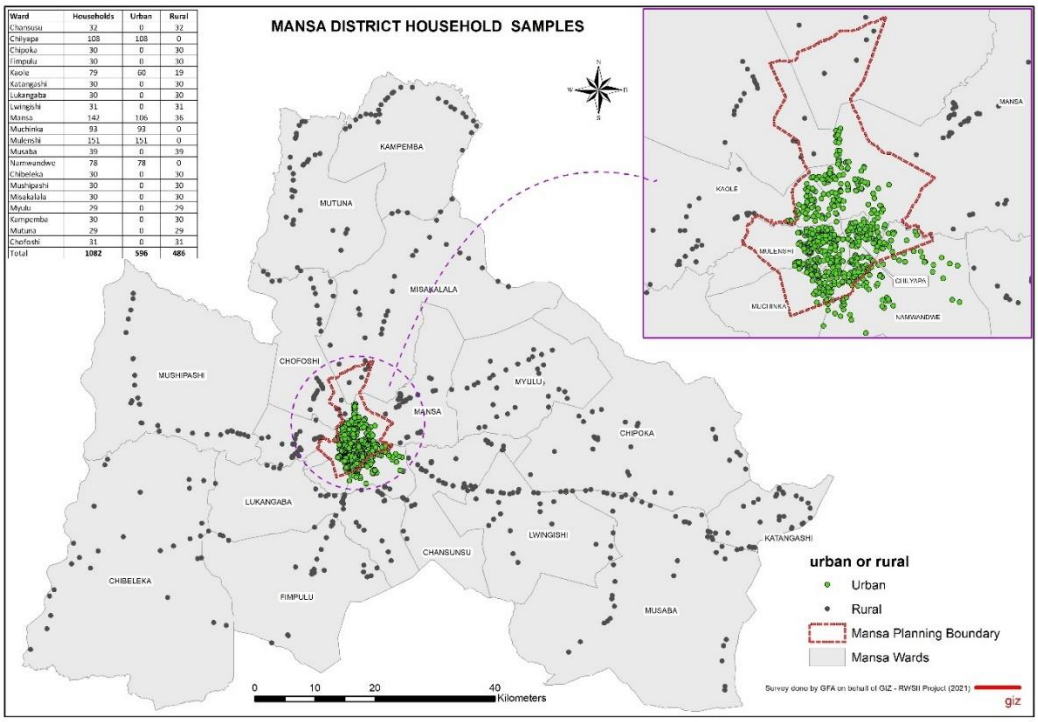


Figure 17: Map of Mansa District Household Samples

Ethical considerations

Ethical considerations and practices were carefully explained and discussed with the data collection team during the pre-data collection training. It involved a clear introduction of the enumerator, explanation of the purpose of the baseline survey, how the information would be used, and the respondent's voluntary participation in the survey as well as their freedom to exit/refuse participation at any stage without consequences. All this was done with the aim of obtaining an informed consent from each participant before proceeding with data collection. As the survey collected data from households, schools, health care facilities, non-domestic and public places, the survey team ensured that each participant interviewed selected a place where they felt comfortable and safe. Finally, at the end of the interview, the data collectors thanked the respondents for their time, willingness and effort to provide data for the baseline survey.

In-field data collection implementation roadmap

Table 30: Mansa District Survey Data Collection Roadmap

Date	Survey Activity
10th May 2021	Re-training of Enumerators
11th to12th May 2021	Household Questionnaire Pilot
13th May 2021	Official Household Survey
1st of June 2021	Other Questionnaire Survey Start (Schools, HCF and Public Places)
25th June to 13th September 2021	Survey Freeze due to Covid
28th September 2021	Non Domestic Survey Start
8th October 2021	Survey Ends

4.6.2 Qualitative Data

Qualitative data was obtained from observations, and semi structured interviews, through focus group discussions (for households) and Key Informant Interviews (for schools, health facilities and other important service providers). Qualitative data is generally non-numerical and further provides information to triangulate quantitative data obtained from questionnaires.

A descriptive qualitative study was conducted with eleven focus group discussions and five key informant interviews. All interviews were audio taped and transcribed verbatim.

4.6.2.1 Focus Group Discussions

Interview guides were developed to guide the discussions in the focus groups. The participants were picked and arranged with the help of two different institutions as follows:

- **Community Leaders Focus Group:** The Department of Chiefs and Traditional Affairs through the chiefs affairs officer, facilitated the community leaders which consisted of Headmen as the WDCs were dissolved following the general elections and were thus yet to be established
- **Women and Children Focus Groups:** The District Health Office through 3 EHTs from Fibale (Mulenshi ward), Matanda (Chibeleka ward) and Mabumba (Chansunsu ward) facilitated two groups namely women and children.

Informed consent was obtained before each discussion by firstly requesting for permission to take notes and record the discussions for purposes of transcription. Further, the process of the group discussions was explained to the participants including the length of time it would take, respect for each person's views, as well as the voluntary nature of participation including the right to opt out at any stage. The facilitator and notetaker had to be neutral in their behaviour and attitudes, without exhibiting either positive or negative bias to anything mentioned by the participants. Both verbal and nonverbal cues were to be avoided. The facilitator was careful not to add comments or reactions besides encouraging people to talk, regardless of what they say and how different the participants' views are in comparison to their own. The notetaker was as discreet and as neutral as possible, to ensure trust.

The facilitator did not push for consensus at the group level. It was ok if participants had different opinions on the discussed topics. At the end of the discussions, the participants were thanked for their participation. An explanation was given as to what would happen with the information shared at the FGD and their questions were responded to.

Shortly after each FGD, within 24 hours, the facilitator and notetaker reviewed the notes for completeness and accuracy. They also explained or expanded the shorthand, abbreviations or symbols, to ensure transcription is as smooth and as accurate as possible.

4.6.2.2 Key Informant Interviews

In-depth interviews were conducted with purposively selected people (key informants) for their first-hand knowledge about WASH in Mansa District with representatives from MMC, LpWSC, DHO, DEBS and market & transport association.

The interviews were loosely structured, relying on a list of issues to be discussed. The facilitator had a guide and 7 main topics which were used to probe information. The Core Team made appointments with key informants to avoid scheduling conflicts. As with FGDs informed consent was administered before the interviews commenced.

Initial contact is a critical part of the interview during which interviewers must establish rapport with key informants and create an atmosphere in which key informants are able to willingly communicate their views and opinions. The facilitator briefly explained the background, the objective of the interview, and the possible uses of the information and ideas provided by the key informant. The key informant was also assured of the confidentiality of information.

4.7 Adherence to COVID-19 Regulations

The commencement of the survey was at a time when COVID was already a reality and because of this, it was prudent to take precaution at each step of the way from training to commencement of the survey itself. Once the survey had commenced, meetings at the GFA office warranted logging in and with this came their checking of temperatures and sanitizing their hands. Once they were in the vehicles, each driver had sanitisers stationed in their vehicles to wipe down the interior of the vehicle and sanitise the enumerators as they settled into the vehicles. The enumerators were also given KN95 masks, hand sanitizers and social distancing was enforced during the not so critical COVID times.

This however did not suffice when winter came along as the COVID cases went on the rise at an alarming rate forcing the team to bring the survey to a halt for over a month. Upon resuming activities and calling the enumerators back, they were advised get vaccinated and this they willingly did as a measure to reduce the chances of them falling ill and or present mild symptoms if they did catch the virus. This was critical as their work entailed interacting with various people on a daily bases. They also wore their clinical masks, maintained the use hand sanitizers and observed social distancing as they conducted interviews. In addition to this, three vehicles were hired, two vehicles accommodated 3 people including the driver while the one had 4 people including the driver. This was in accordance with the GIZ COVID regulation protocol.

4.8 Data Analysis Framework

The data analysis framework in this report summarises the process of data collection and analysis used to arrive at descriptive statistics used to define and understand WASH outcome variables in Mansa in 2021. It allows us to navigate through data analysis process in an organized way and helps to describe the steps that were followed to examine the data in order to arrive to usable information for recommendations and decision making. In other words, the framework allows us to focus on the core objectives of the survey (baseline WASH outcomes) and possibly the actions and decisions that need to be taken to improve these outcomes.

Given the huge amount of data collected through the survey, the framework helps us to focus attention on the WASH outcomes that generate value or deal with critical WASH related outcomes first before examining all the other data that are available but of secondary importance.

The main analytical approach was descriptive analytics which helps us to understand the current state of affairs in Mansa with regard to WASH outcomes at the various units of analysis (households, schools, etc) described in the sampling section above. Information has been summarized using techniques such as modes, means, medians and proportions or percentages. The data has also been presented in frequencies, cross-tabulations, bar charts (including stacked charts for sanitation ladders) for ease of understanding.

The data analysis conceptual framework is visually summarized in Figure 18

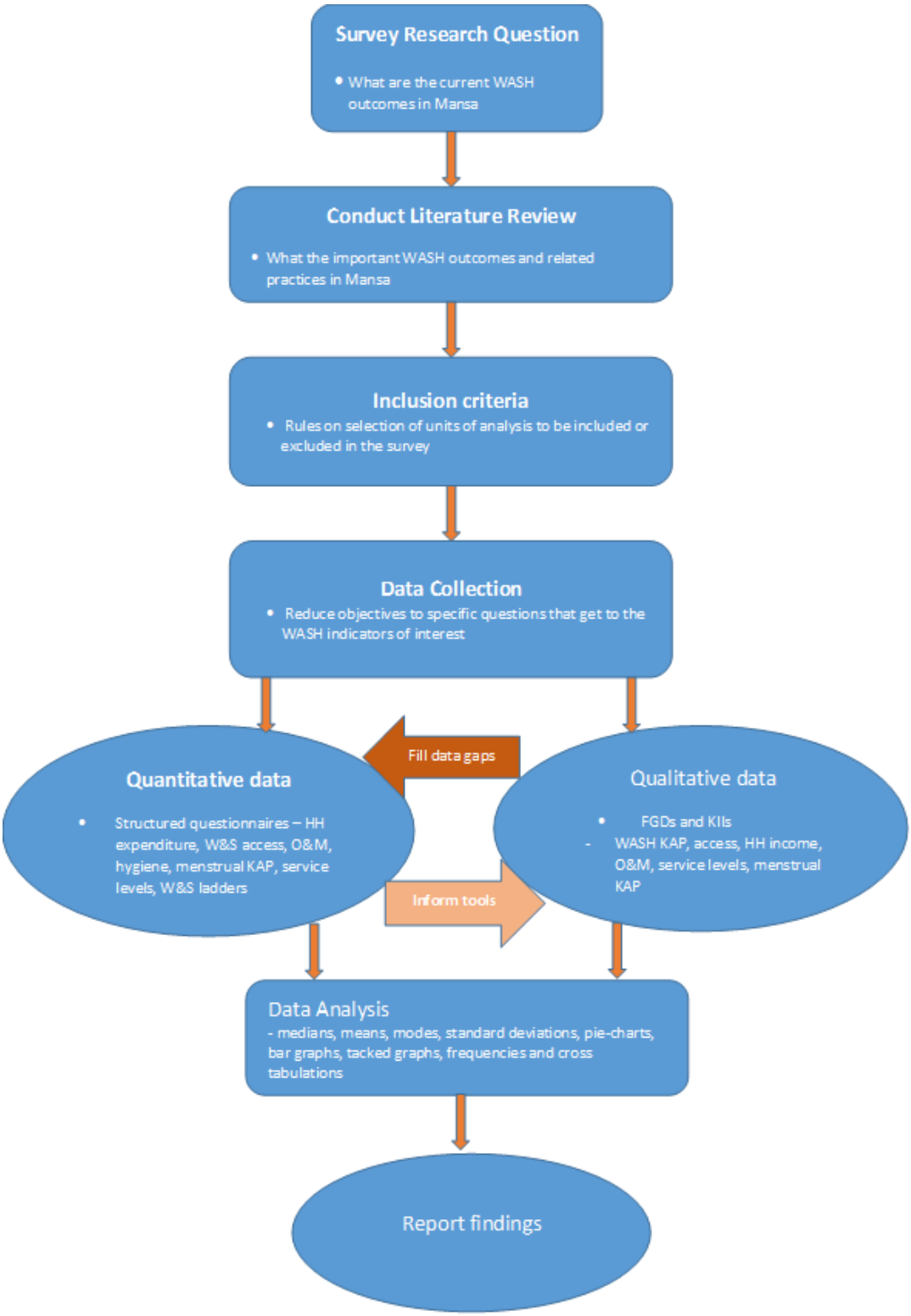


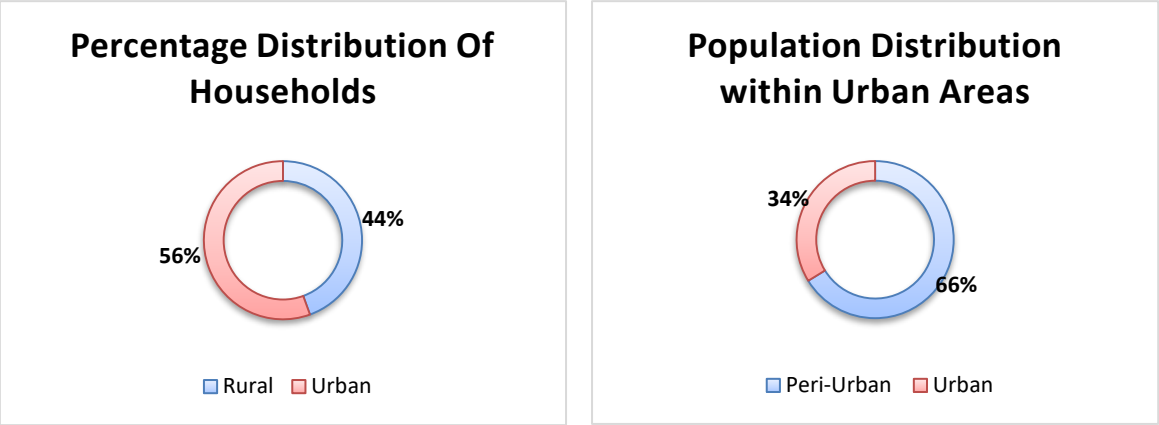
Figure 18: Data Analysis Conceptual Framework

5 FINDINGS

5.1 Households

5.1.1 Socio-Economic Status & Electricity Connectivity

Average household size for urban and rural in Mansa



Findings 1: Mansa District Distribution of Households (N = 1082)

Slightly more households from urban areas (56%, 601) were interviewed than those from rural areas (44%, 481). This generally represents the spread of population in Mansa which geographically has larger rural areas however has a higher population density in the peri-urban and urban areas.

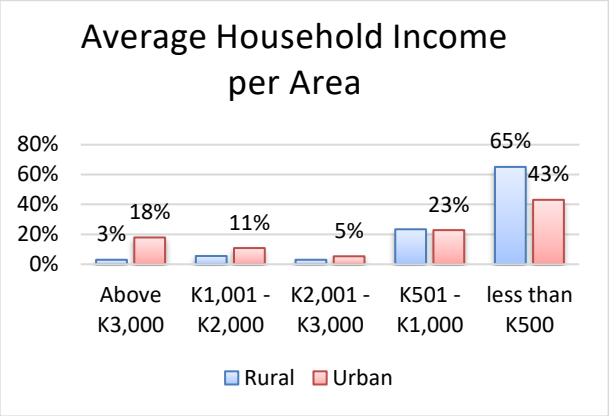
Average Size of Household in Mansa			*Average number of males per HH*			*Average number of females per HH*	
Mean	6.080555556		Mean	2.903195489		Mean	3.226976744
Standard Error	0.086026363		Standard Error	0.050330017		Standard Error	0.05688961
Median	6		Median	3		Median	3
Mode	5		Mode	2		Mode	3
Standard Deviation	2.827114784		Standard Deviation	1.641715464		Standard Deviation	1.865250612
Sample Variance	7.992578004		Sample Variance	2.695229666		Sample Variance	3.479159846
Kurtosis	4.254108602		Kurtosis	1.338663723		Kurtosis	2.150581276
Skewness	1.138579003		Skewness	0.894197577		Skewness	1.144936993
Range	27		Range	11		Range	13
Minimum	1		Minimum	0		Minimum	0
Maximum	28		Maximum	11		Maximum	13
Sum	6567		Sum	3089		Sum	3469
Count	1080		Count	1064		Count	1075

Findings 2: Mansa District Average Household Size

The average household size in Mansa was 6 inhabitants and it was equally split between males and female (3 males and 3 females per household).

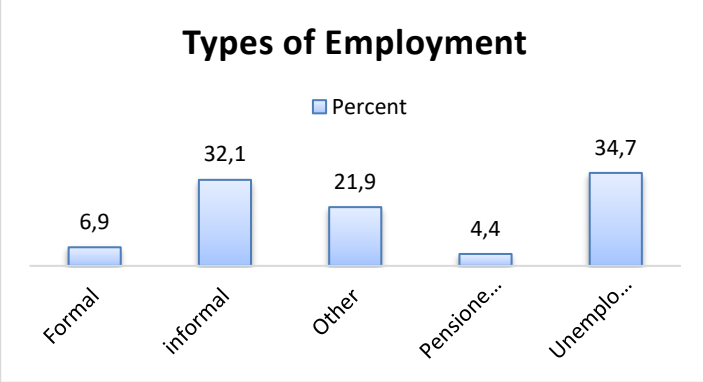
Employment

Very few people (6.9%) were in formal employment while 67% were in either unemployed or informally employed. 21% had some other form of employment. These jobs included farming, gardening, and businesses such as charcoal selling as well as minor jobs, amongst others.



Findings 3: Mansa District- Types of Employment (N = 1082)

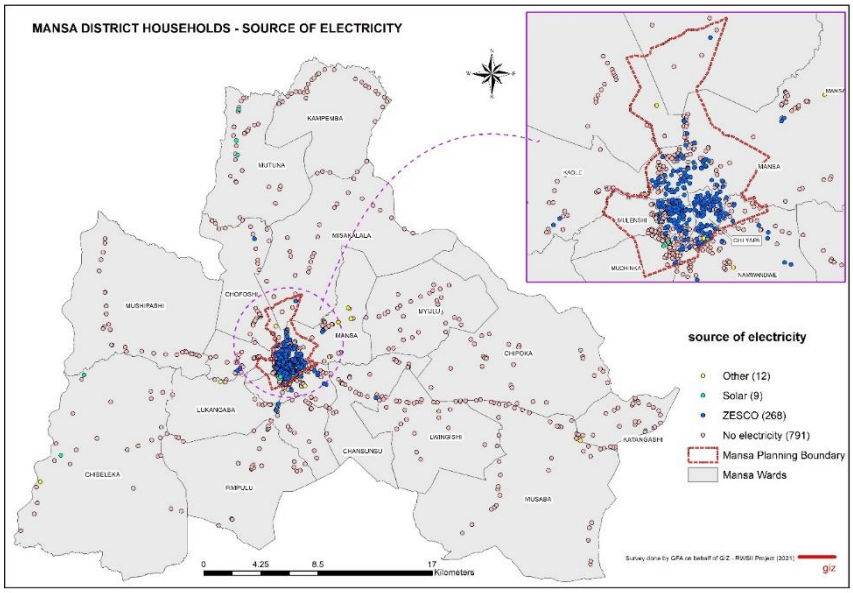
Average household income



Findings 4: Mansa District Average Household Income (N=944)

Most of the households with the least income bracket of less than K500 came from rural areas (65% of 436 rural households). In contrast more people (18% of the 508 urban households) in the higher income bracket above K3, 000 came from the urban areas. There was a minimal difference in the K501 to K1, 000 bracket. In general, the urban areas had a larger share of households with higher incomes while the rural areas hard a larger share of lower incomes

Access to electricity



Findings 5: Mansa District Household Source of Electricity

It is observed that most of Mansa District away from the township does not have access to electricity (73% of 1080 households) and for those that have, access to electricity is through alternative sources other than ZESCO (hydro-electricity). Willingness to connect to electricity out of those that had no access stood at 86%.

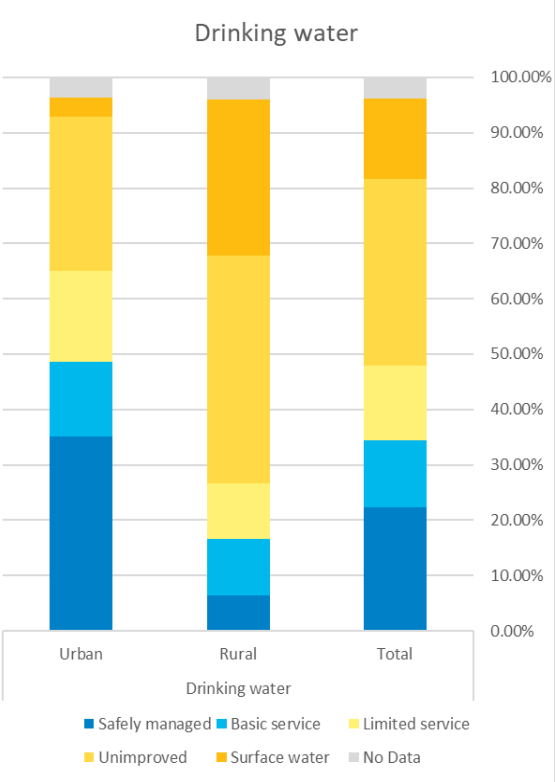
5.1.2 Water Supply Services

Mansa JMP Ladder for Drinking Water Services

The proportion of Mansa District using safely managed services is 22.4%, rural coverage being 6.4% and urban coverage being 35.1%.

In 2021, out of an estimated population of 300,725 in Mansa District, 233,453 people lacked safely managed services including 36,117 people with basic services, 40,869 people with limited services, 101,435 people using unimproved sources and 43,635 drinking surface water.

People living in the rural areas were five times as likely to lack safely managed services as those living in the urban areas. Please refer to Table 2 for the definition and clarifications on the service level indicators for drinking water.

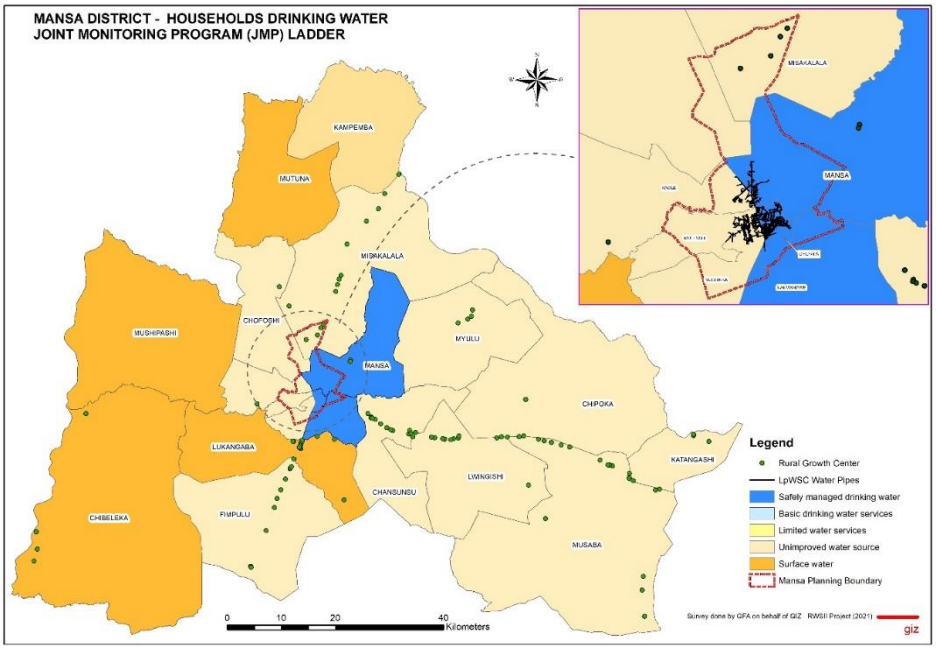


Findings 6: Mansa District JMP ladder for Drinking Water

Mansa	Drinking water		
	Total	Rural	Urban
Safely managed	22.37%	6.44%	35.11%
Basic service	12.01%	10.19%	13.48%
Limited service	13.59%	9.98%	16.47%
Unimproved	33.73%	41.16%	27.79%
Surface water	14.51%	28.27%	3.49%
No Data	3.79%	3.95%	3.66%
Total	**100.00%**	**100.00%**	**100.00%**

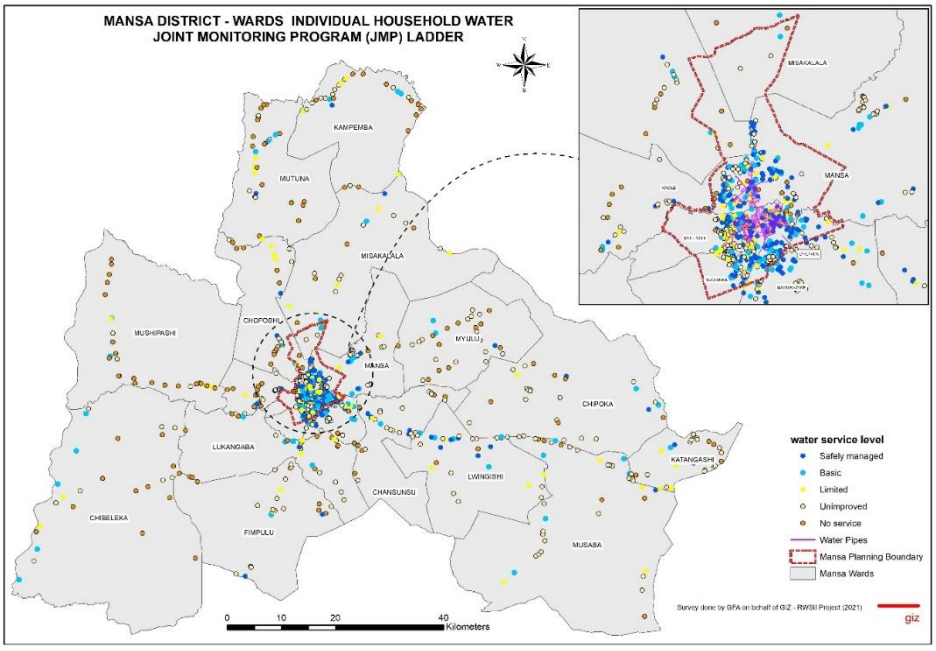
Note

One of the four criteria for safely managed drinking water is that it needs to be free from contamination. In this JMP ladder calculation this was estimated by the respondent's perception of the quality of the drinking water, i.e. the drinking water was considered to be free from contamination if it was perceived to be either 'Very good (does not require any further treatment)' or 'Good/fair (may require treatment by user)'.

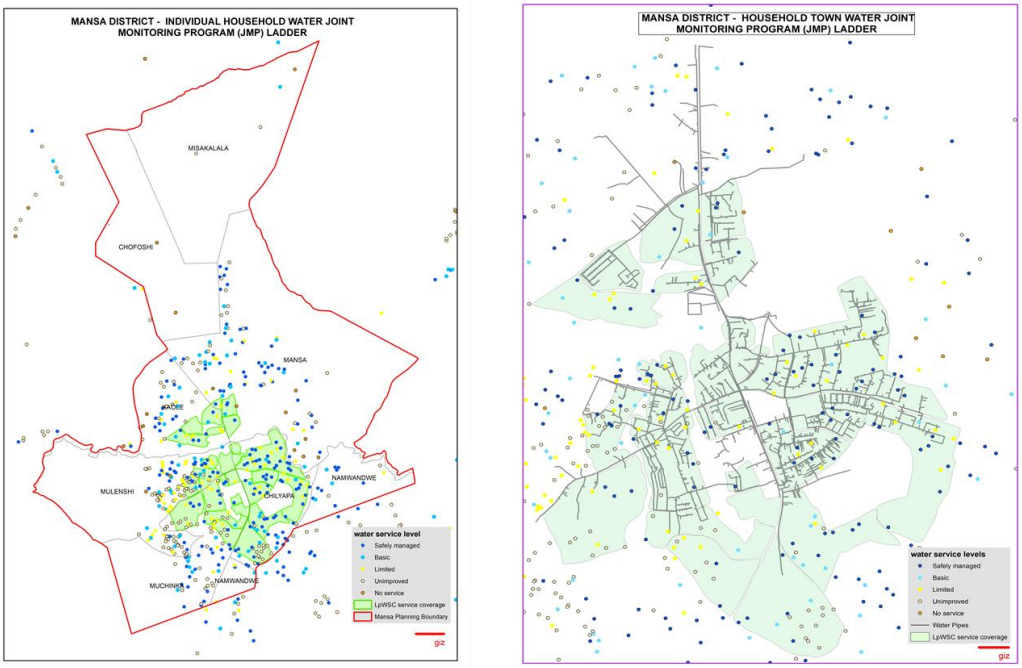


Findings 7: Mansa District Ward level JMP for Household Drinking Water Services

Findings 7 shows JMP indicators at ward level. Out of the 20 wards in Mansa District, only three wards, namely Chilyapa, Mansa and Namwandwe which are in the CBD have majority of its households having access to safely managed drinking water. Majority of the wards in Mansa District have access to unimproved water sources which relates to what is being reported in Findings 7**.** To see how this distribution is at individual household level refer to Findings 8**.**



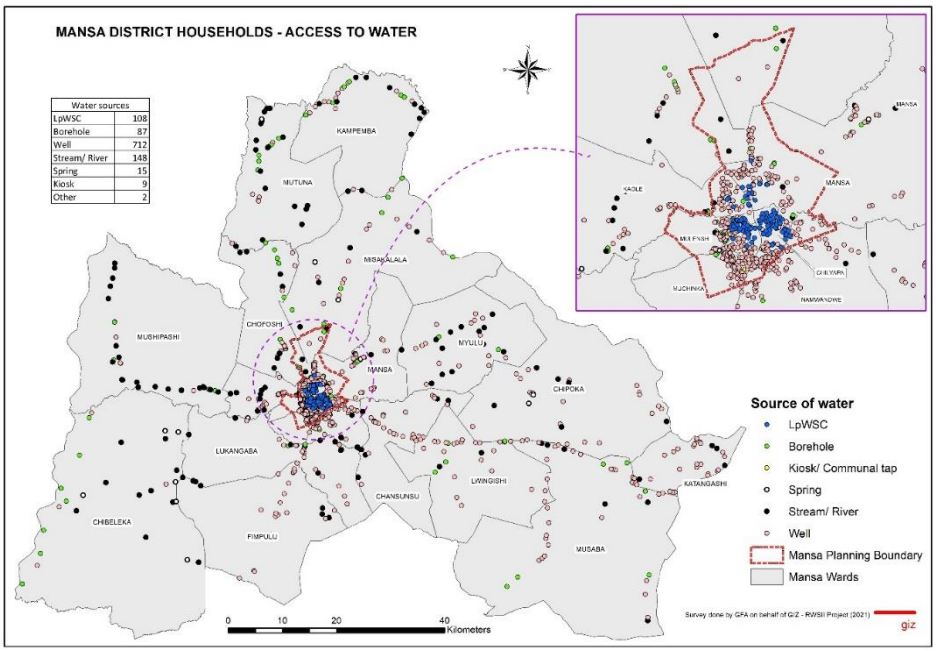
Findings 8: Map of Mansa District showing the JMP Ladder for Drinking Water



Findings 9: Map of Mansa District Drinking Water Service Level around the Mansa Planning Boundary and Current LpWSC Service Coverage Area

An operating service license from NWASCO has been issued to LpWSC to cover the entire district. But as one can see from Findings 9, LpWSC is currently only servicing one third of the Planning boundary of Mansa. It is expected that households along the service line of LpWSC would have access to safely managed services, but this is not the case because majority are using wells as their main source of water as they considered it more reliable. For many households with a connection to LpWSC the water is not available when needed, and they have to resort to alternative water sources.

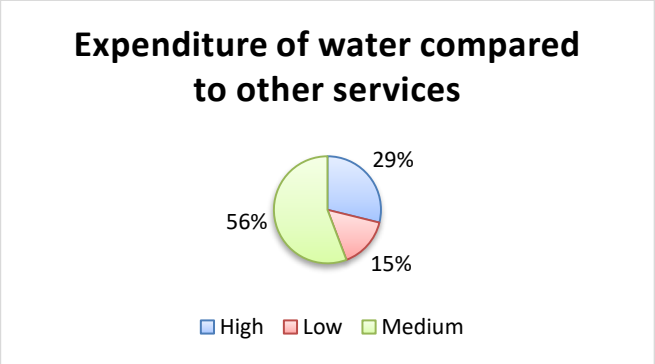
Type of water source



Findings 10: Mansa District Households-Type of Water Sources/ Access

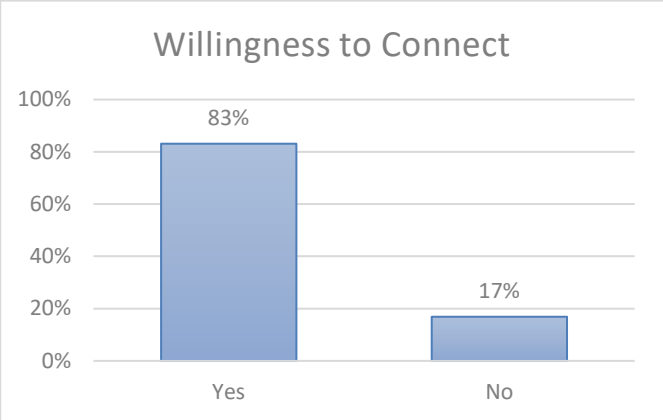
From Findings 10, it can be seen that majority of household access water from wells and only 10% of the enumerated plots were connected to LpWSC while 90% were not. And out of the 10% connected to LpWSC, 71% had individual meters while 29% had shared meters.

Affordability of the water service



Majority (71%) of the households thought the LpWSC water services were affordable. About 15% categorise water as a cheap service.

Findings 11: Mansa District Expenditure of Water compared to other services (N = 52)



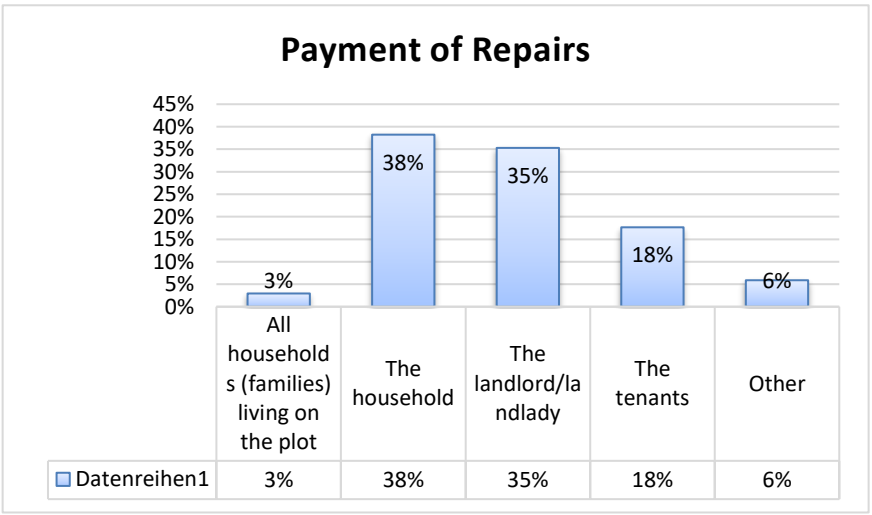
Willingness to Connect to LpWSC

Majority of the people (83%) were willing to connect to the LpWSC network. The appreciable number of those unwilling to connect sited the cost of connection even though when asked during FGDs most of them did not even know how much it costs to connect. Meanwhile, others were afraid of water bills.

Findings 12: Mansa District willingness to connect to LpWSC (N = 971)

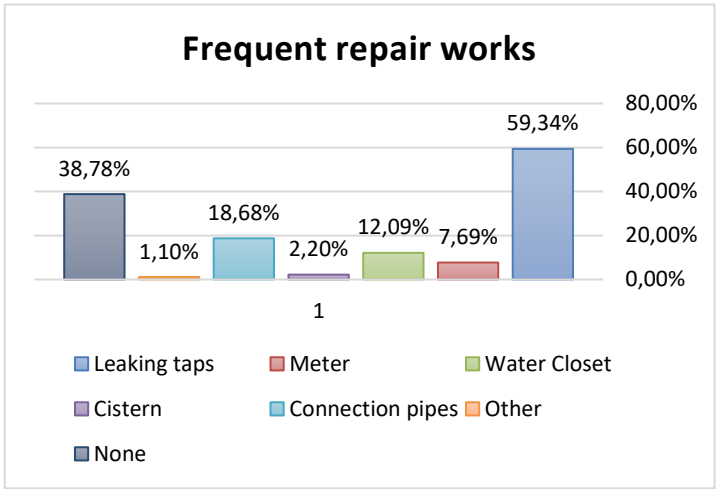
Maintenance of water services

Regarding the LpWSC connections, the responsibility to pay for maintenance/ repair works lies with the Household that is having access to the water source and also to the owner of the house i.e. the landlord/ landlady.



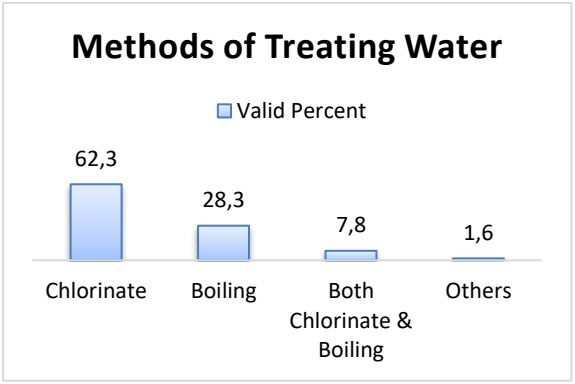
Findings 13: Mansa District Responsibility for Payment of Maintenance/ Repair works of the water source (N = 68)

Majority of the repairs done on LpWSC connections were leaking taps, seconded by the connection pipes. Meanwhile, 39% of households reported that no repair works had occurred.



Findings 14: Mansa District Water Service Frequent Repairs (N = 91)

Treatment of Drinking water



Findings 15: Mansa District Treatment of Drinking Water (N = 1080)

There was a higher number of households who do not treat drinking water (52%) than those who do treat (48%). On the other hand of those who treat water most of them chlorinate (62%) or boil (28%) or do both (8%).

5.1.3 Sanitation Services

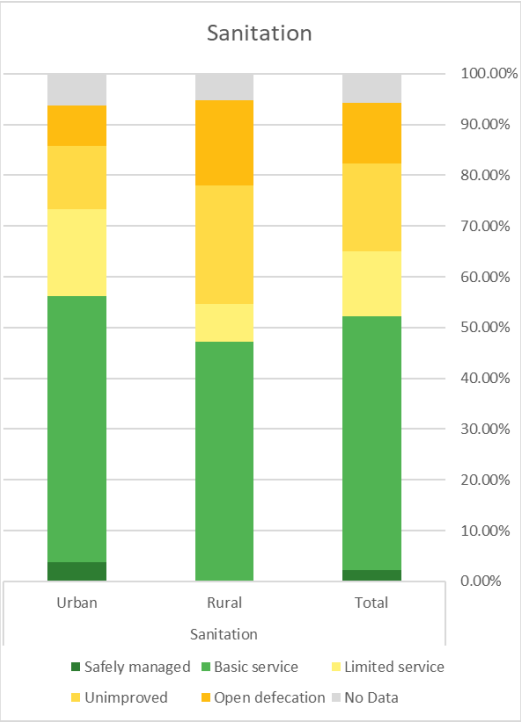
Mansa JMP Ladder for Sanitation Services

The proportion of Mansa District using safely managed services is 2.2%, rural coverage being 0.2% and urban coverage being 3.8%. While 71% of households had improved facilities (Waterborne/ Ecosan/ VIP/ Urine diversion/ Improved traditional latrine), only 0.5% emptied the facilities, meaning the excreta was not safely disposed in situ or offsite. This was the main factor that caused the low percentage of safely managed sanitation.

In 2021, Out of an estimated population of 300,725 in Mansa District, 294,109 people lacked safely managed services including 150,362 people with basic services, 38,643 people with limited services, 51,694 people using unimproved facilities and 35,846 praticing open defecation.

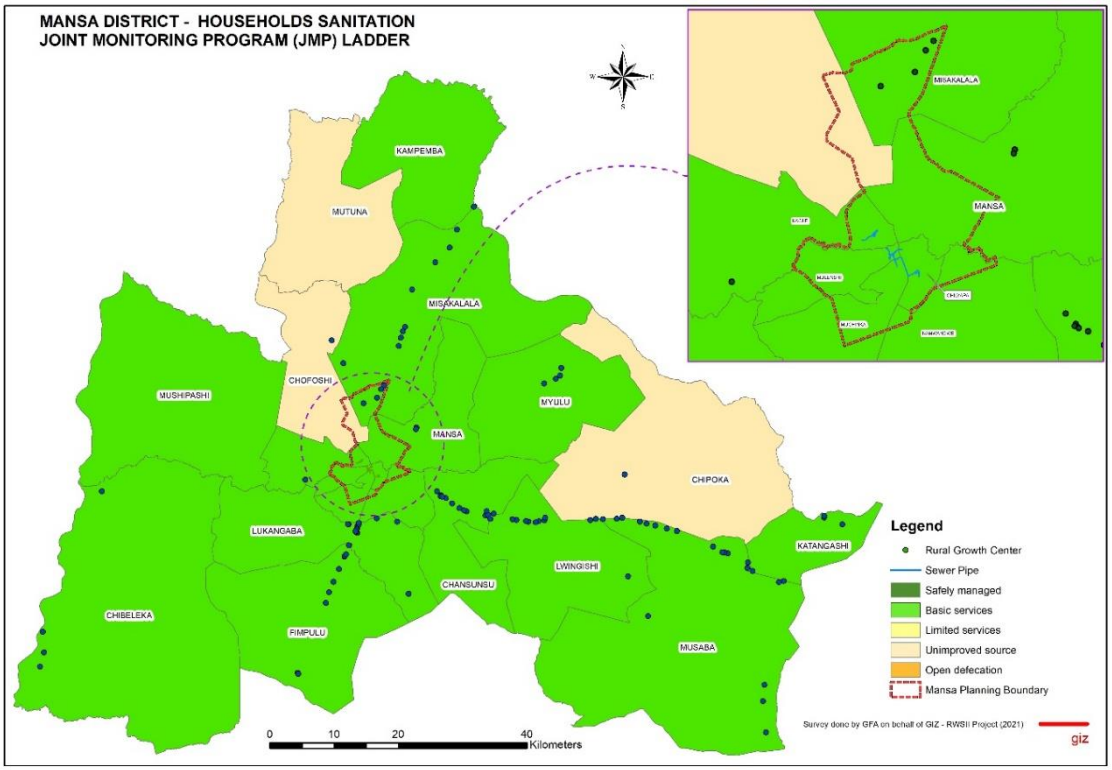
Two thirds of people who still lacked even basic services lived in rural areas. 59% of the population practising open defecation lived in rural areas.

Please refer to Table 3 for the definition and clarifications on service level indicators on sanitation.



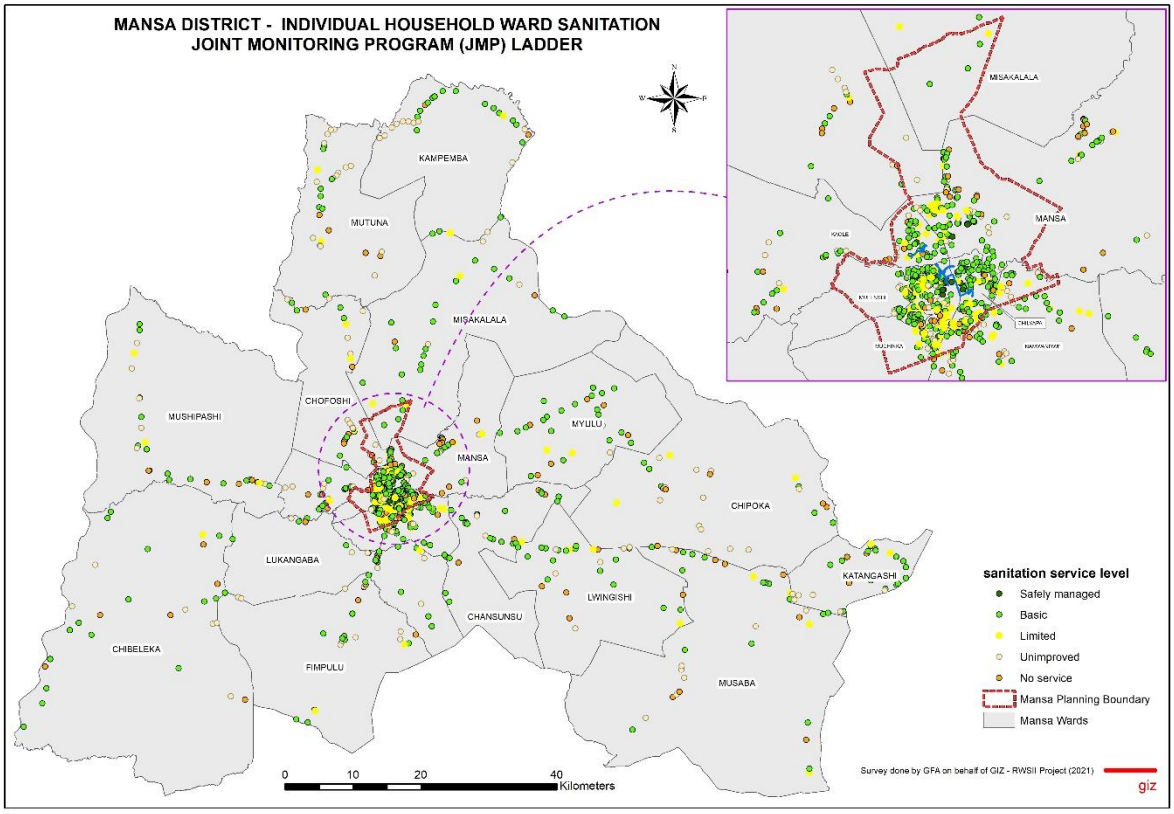
Mansa	Sanitation		
	Total	Rural	Urban
Safely managed	2.22%	0.21%	3.83%
Basic service	50.00%	46.99%	52.41%
Limited service	12.85%	7.48%	17.14%
Unimproved	17.19%	23.28%	12.31%
Open defecation	11.92%	16.84%	7.99%
No Data	5.82%	5.20%	6.32%
Total	**100.00%**	**100.00%**	**100.00%**

Findings 16: Mansa District JMP ladder for Sanitation Services

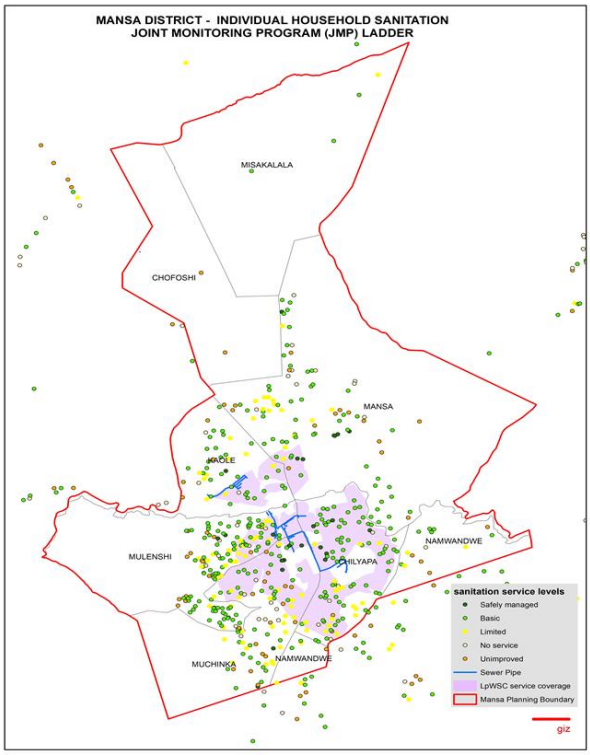


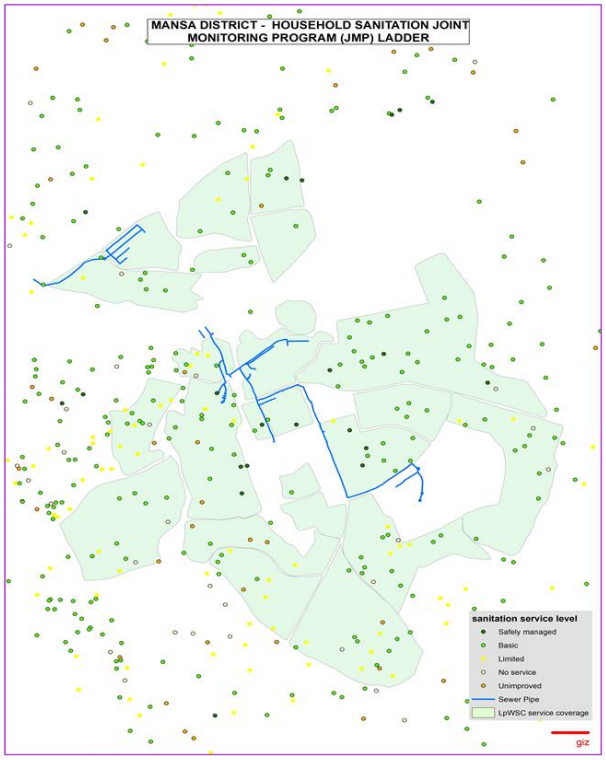
Findings 17: Mansa District Ward level JMP for Household Sanitation Services

Findings 17 shows JMP indicators at ward level, 17 out of the 20 wards in Mansa District, have majority of its households having access to basic sanitation services which relates to what is being reported in Findings 16**.** Three wards in Mansa District have majority of the households having access to unimproved sanitation facilities. To see how this distribution is at individual household level refer to Findings 18**.**



Findings 18: Mansa District Map Showing JMP Ladder for Sanitation Services

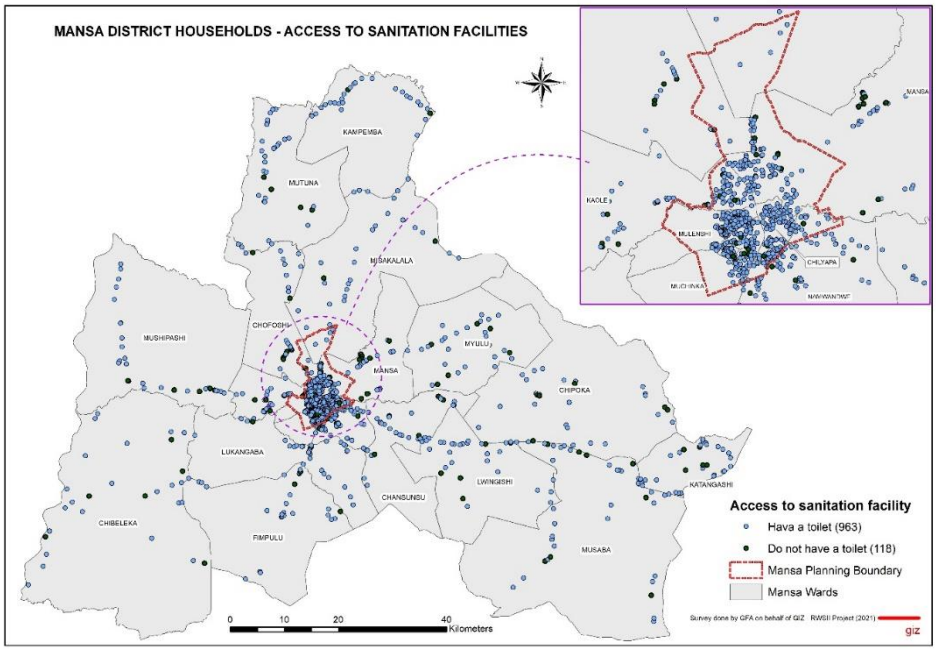




Findings 19: Map of Mansa District Sanitation Service Level around the Mansa Planning Boundary and Current LpWSC Service Coverage Area

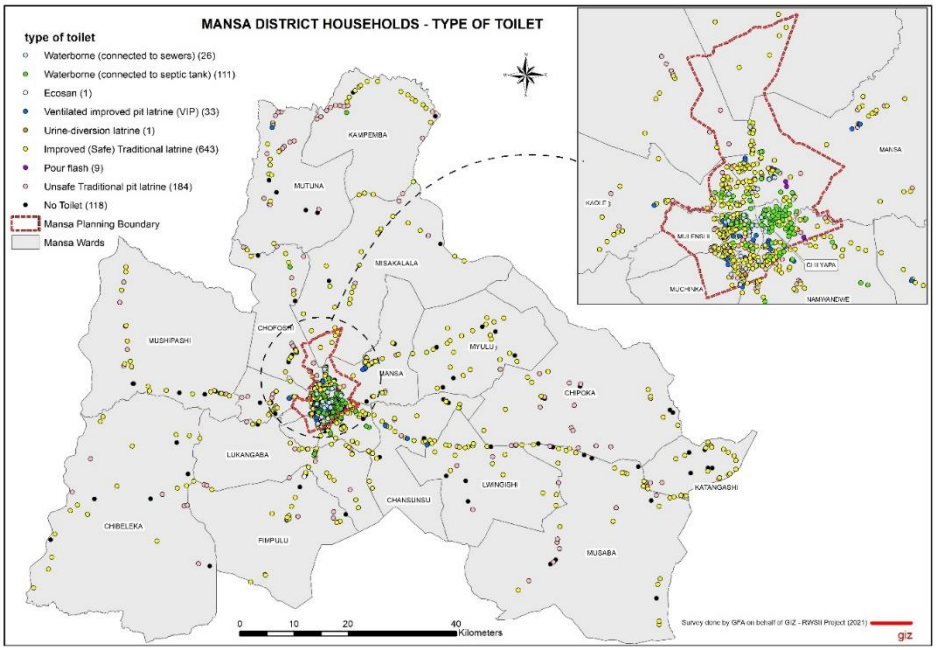
From the statistics provided by LpWSC, the current urban population on offsite sanitation stands at 14%. It is expected that most of the households connected to the sewer network would be having access to safely managed sanitation which is not the case as a result of a dilapidated sewer network which is mostly non-functional. But with the AfDB project, the existing sewer network is to be rehabilitated and redirected to the newly constructed wastewater treatment plant. At the time of the survey LpWSC had not been dealing with Onsite Sanitation as expected with the extended mandate through the OSS and FSM Regulatory Framework.

Access to Sanitation Facilities



Findings 20: Map of Mansa District Households- Access to Sanitation Facilities

From Findings 20**,** it is observed that not having access to a toilet is not only in the rural areas or outskirts as most would expect but the CDB of Mansa District also has households that do not have access to sanitation facilities.



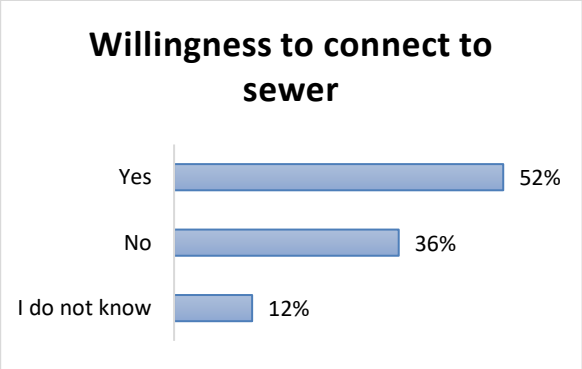
Findings 21: Map of Mansa District Households- Type of Sanitation Facilities

From Findings 21, it is observed that open defecation is not only practiced in the rural areas but the urban areas and specifically households around the CBD of Mansa District are also practicing open defecation. Majority of households in Mansa District use improved (safe) traditional latrines (67%). Out of the 88% that have access to sanitation facilities, only 18% share their sanitation facilities with other households.

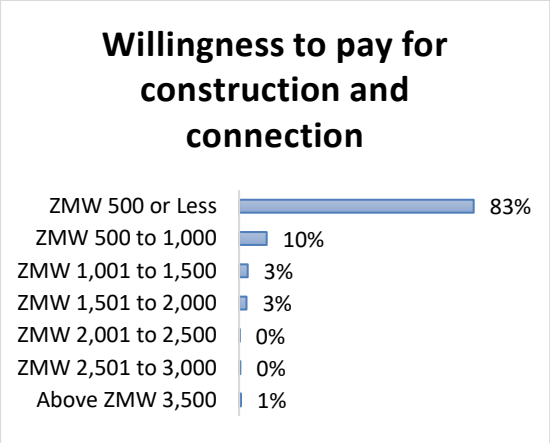
Willingness to connect to a sewer line

Majority (52%) of those households without a sewer connection are willing to connect to a sewer line.

However, most of the households are willing to pay 500 ZMW or less for constructing and connecting.

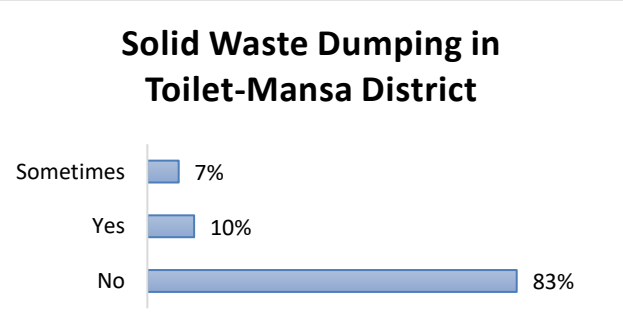


Findings 22: Mansa District Willingness to Connect to a Sewer line (N = 931)



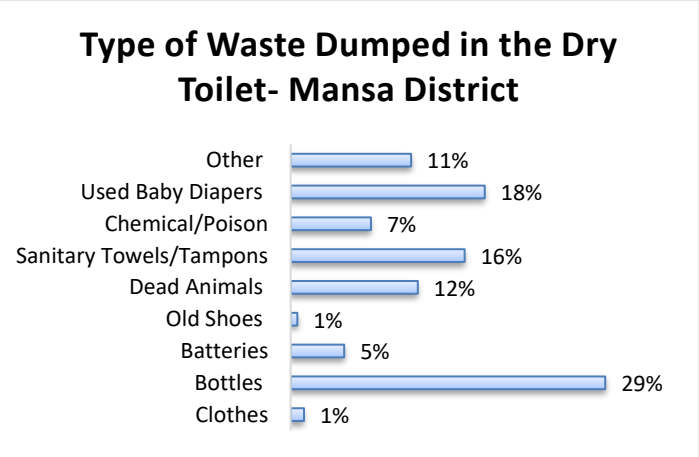
Findings 23: Mansa District Willingness to Pay for a Sewer line Connection (N = 460)

Solid Waste Dumping in Toilets



Majority (83%) of the households do report dumping solid waste in the dry toilets. This could have implications on Faecal Sludge Management as the quantities and qualities of sewer would have to be taken into account when managing sludge

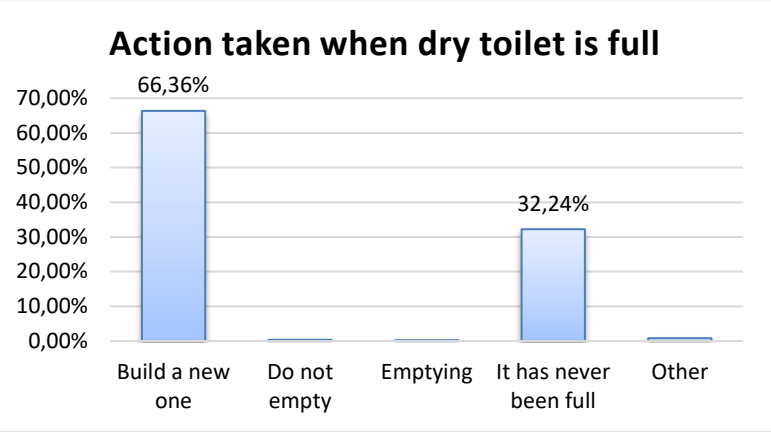
Findings 24: Mansa District Solid Waste Dumping Practices in the Toilets (N = 957)



Majority (29%) of the waste dumped in the Dry Toilets are bottles, then followed by baby diapers (18%) and sanitary towels (16%). This could have an impact on the empty technologies to be used when providing Onsite Sanitation Services. This is an importance factor to note when planning for FSM.

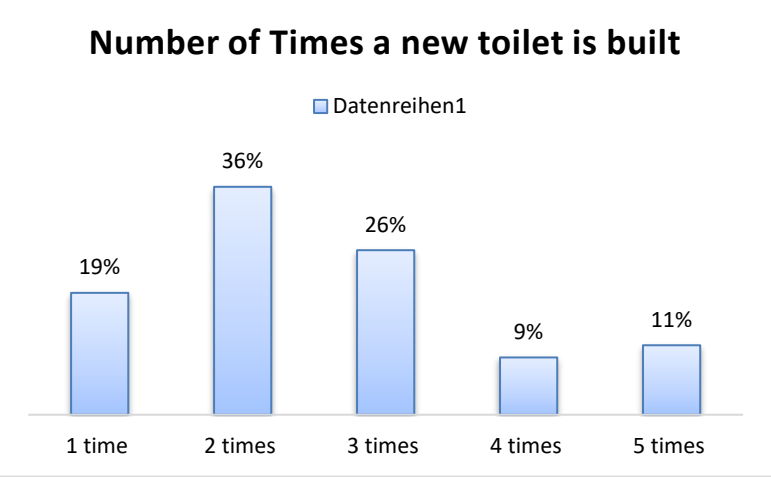
Findings 25: Mansa District Types of Wastes Dumped in the Dry Toilet (N = 100)

Emptying Practices



Findings 26: Mansa District Emptying Practices (N = 856)

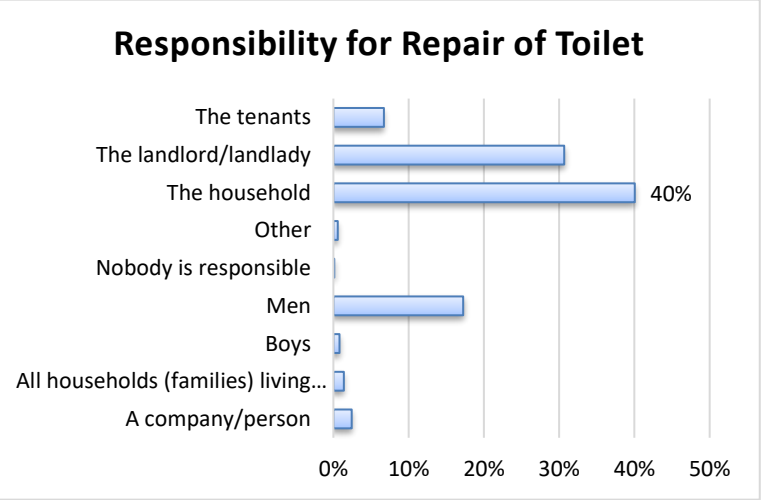
As confirmed by most of from KIIs, most people (66%) just build a new toilet when the old one gets full. This sentiment was mostly expressed by people who had enough land to be able to achieve this. While 32% of the people have never had to empty a dry toilet because it has never been full, those who empty it, leave it as it is or do something else were negligible. This is important data that could be used for FSM Planning.



Findings 27: Mansa District number of times a new toilet is built (N = 526)

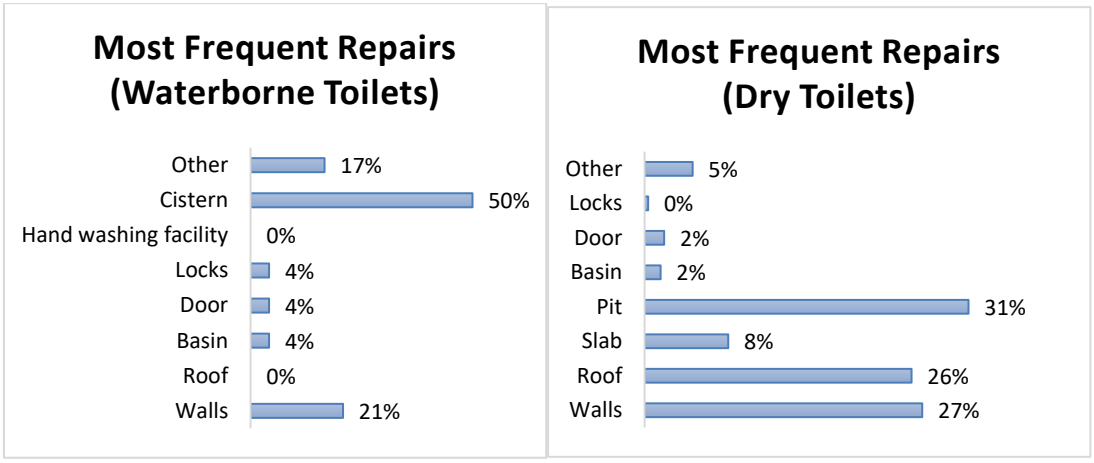
Although this question was not applicable to 45% of respondents, most of those who had built a new toilet before, did that once, twice or three times.

Maintenance of sanitation facilities



Findings 28: Mansa District Responsibility for Repair of Toilet (N = 864)

In general, the household mostly takes responsibility of repairing the toilets (40%). Specifically, however, within the household, it's mostly men (17%) who repair the toilets.



Findings 29: Mansa District Most Frequent Toilet Repairs (N = 474)

Majority of the repairs on the waterborne toilet involve repairs to the cistern (50%) while for the dry toilet it was the walls (27%), roof (26%) and the pit (31%). In addition, 65% of respondents with waterborne toilets and 36% with dry toilets reported that no repairs had been done.

Average cost of the construction of toilets in Kwacha

Cost of toilet with connection to sewer	
Mean	5685.714286
Standard Error	1706.071591
Median	4800
Mode	#N/A
Standard Deviation	4513.841147
Sample Variance	20374761.9
Kurtosis	3.455804589
Skewness	1.804519676
Range	13000
Minimum	2000
Maximum	15000
Sum	39800
Count	7

Cost of toilet connected to Septic Tank	
Mean	3386.875
Standard Error	713.7361147
Median	1550
Mode	500
Standard Deviation	4037.501173
Sample Variance	16301415.73
Kurtosis	1.44995979
Skewness	1.538495519
Range	14950
Minimum	50
Maximum	15000
Sum	108380
Count	32

Cost of Ecosan	
Mean	150
Standard Error	0
Median	150
Mode	#N/A
Standard Deviation	#DIV/0!
Sample Variance	#DIV/0!
Kurtosis	#DIV/0!
Skewness	#DIV/0!
Range	0
Minimum	150
Maximum	150
Sum	150
Count	1

Cost of improved traditional toilet	
Mean	379.7897
Standard Error	49.1746
Median	150
Mode	0
Standard Deviation	719.3624
Sample Variance	517482.2
Kurtosis	24.36662
Skewness	4.445161
Range	6000
Minimum	0
Maximum	6000
Sum	81275
Count	214

Cost of VIP	
Mean	922.2222222
Standard Error	216.3731882
Median	500
Mode	500
Standard Deviation	917.9936919
Sample Variance	842712.4183
Kurtosis	2.297193423
Skewness	1.58870287
Range	3500
Minimum	0
Maximum	3500
Sum	16600
Count	18

Cost of Urinary diverting toilet	
Mean	1200
Standard Error	0
Median	1200
Mode	#N/A
Standard Deviation	#DIV/0!
Sample Variance	#DIV/0!
Kurtosis	#DIV/0!
Skewness	#DIV/0!
Range	0
Minimum	1200
Maximum	1200
Sum	1200
Count	1

Cost of unsafe traditional toilet	
Mean	131.3191
Standard Error	22.28912
Median	100
Mode	0
Standard Deviation	152.8065
Sample Variance	23349.83
Kurtosis	5.485248
Skewness	2.100716
Range	750
Minimum	0
Maximum	750
Sum	6172
Count	47

Cost of other toilet	
Mean	575
Standard Error	252.8998
Median	650
Mode	1000
Standard Deviation	505.7997
Sample Variance	255833.3
Kurtosis	-4.31839
Skewness	-0.29559
Range	1000
Minimum	0
Maximum	1000
Sum	2300
Count	4

Findings 30: Mansa District Most Frequent Toilet Repairs

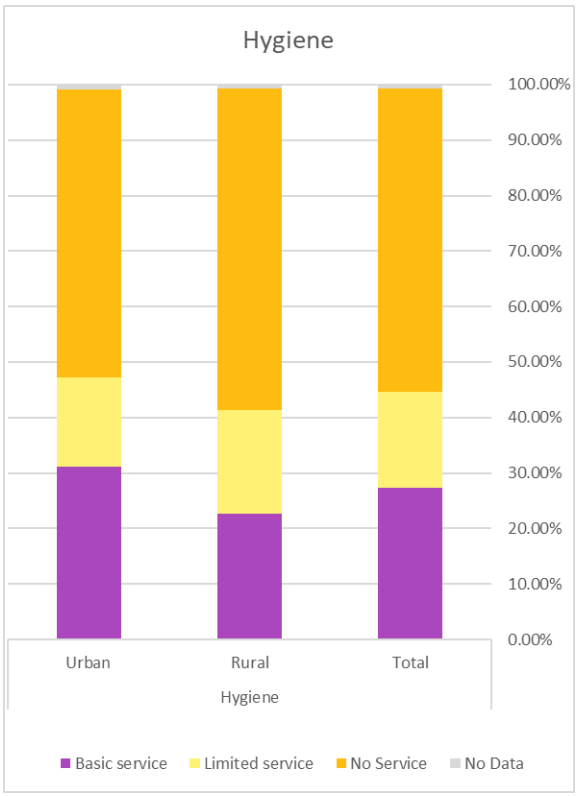
The cost of constructing the different types of toilets was varied according to the type. An average was calculated based on the median cost of constructing each type of toilet. As would be expected the water-borne toilets connected to the sewer system and to a septic tank were the costliest on average (K4, 800 and K1, 550 respectively). These were followed respectively by the urinary diverting toilet (K1, 500), other types of toilets (K650), VIP toilets (K650), with both the cost of the improved traditional toilet and Ecosan costing K150. The cheapest toilet was the unsafe traditional toilet which cost K100.

Note

The median cost has been used as the estimate for the average costs of constructing toilets because the data had significant outliers which showed even in the difference between the mean and median figures.

5.1.4 *Hygiene Services*

Mansa JMP Ladder for Hygiene services



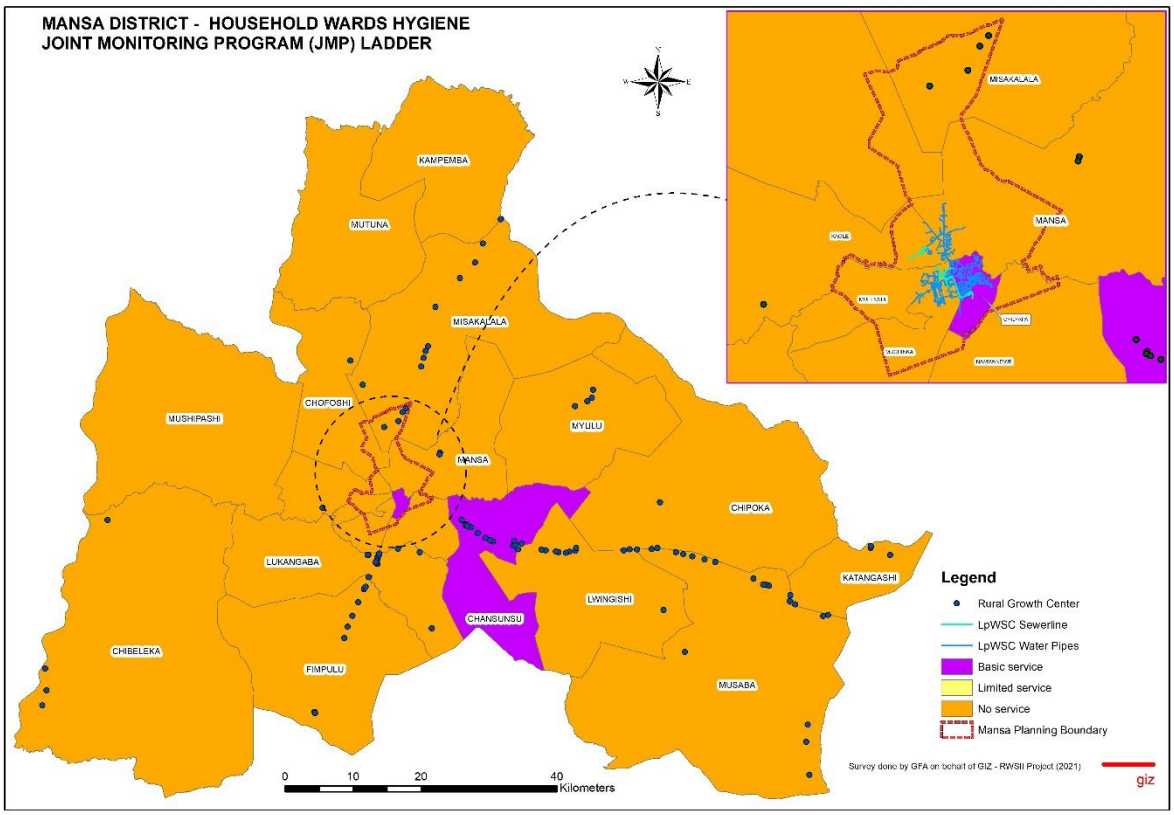
Mansa	Hygiene		
	Total	Rural	Urban
Safely managed	-	-	-
Basic service	27.36%	22.66%	31.11%
Limited service	17.28%	18.71%	16.14%
Unimproved	-	-	-
No Service	54.62%	58.00%	51.91%
No Data	0.74%	0.62%	0.83%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of Mansa District using Basic services is 27.4%, rural coverage being 22.7% and urban coverage being 37.1%.

In 2021, Out of an estimated population of 300,725 in Mansa District, 216,221 people lacked basic services including 164,256 with no handwashing facilities at all.

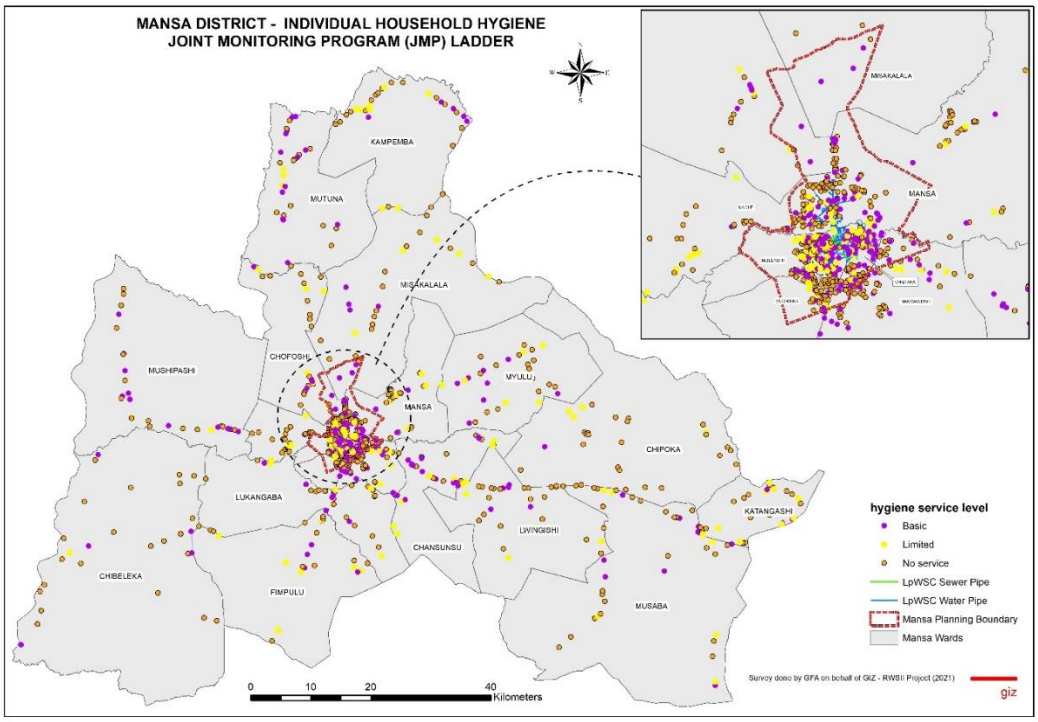
Please refer to Table 4 for the definition and clarifications on some of the Hygiene Terms.

Findings 31: Mansa District JMP Ladder for Hygiene Services



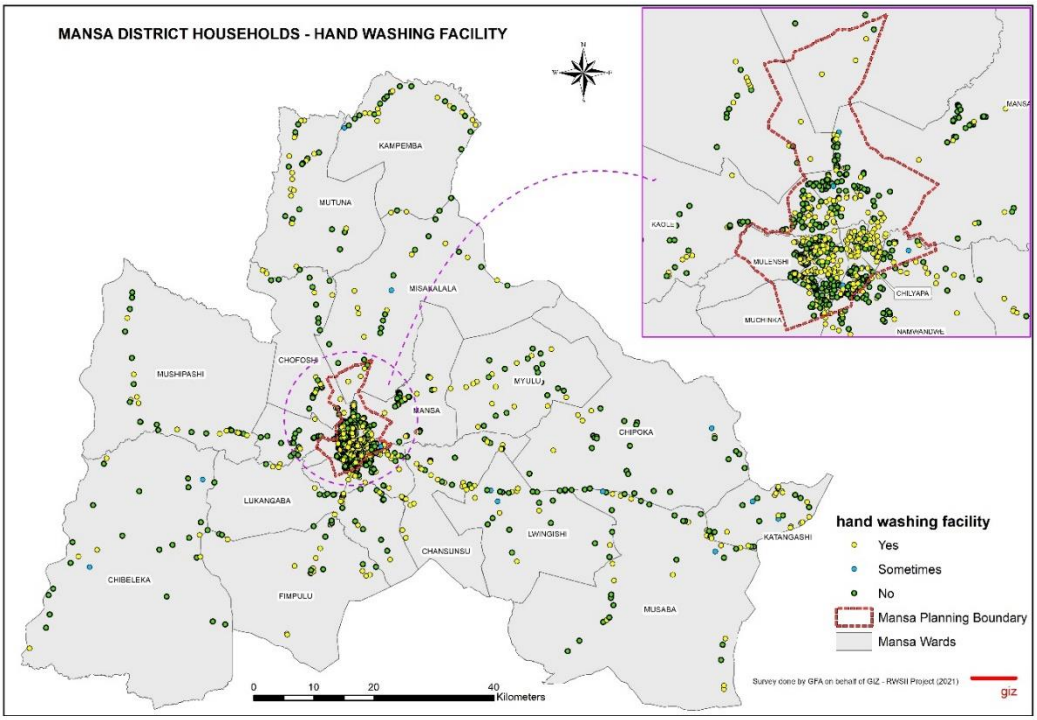
Findings 32: Mansa District Ward Level JMP for Household Hygiene Services

Findings 32 shows JMP indicators at ward level. Out of the 20 wards in Mansa District, only two wards, namely Chilyapa, and Chansunsu majority of its households having access to basic hygiene services. Majority of the wards in Mansa District have no access to hygiene services which relates to what is being reported in Findings 32**.** To see how this distribution is at individual household level refer to Findings 33.



Findings 33: Mansa District Map Showing JMP Ladder for Hygiene Services

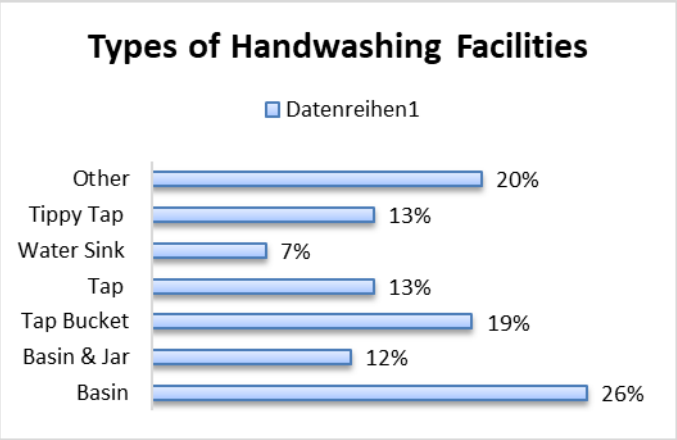
Access to Hygiene Facilities



Findings 34: Map of Mansa District Households- Access to Hygiene Facilities

From Findings 34, it is observed that not having access to a handwashing facility is not only in the rural areas or outskirts as most would expect but the CDB of Mansa District also has households that do not have access to handwashing facilities. Overall, out of the visited households, 45% (489 in total) had access to handwashing facilities, while 55% had no access or had sometimes access to handwashing facilities.

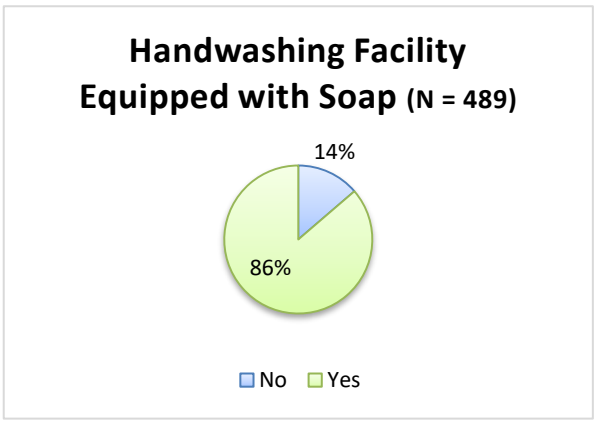
Type of Handwashing Facilities



Majority (26%) of the households that had handwashing facilities use a basin and other alternatives (20%) which mainly included an open bucket. Most of the other types of handwashing facilities include buckets and other small containers.

Findings 35: Mansa District types of Handwashing Facilities (N = 489)

Handwashing with Soap

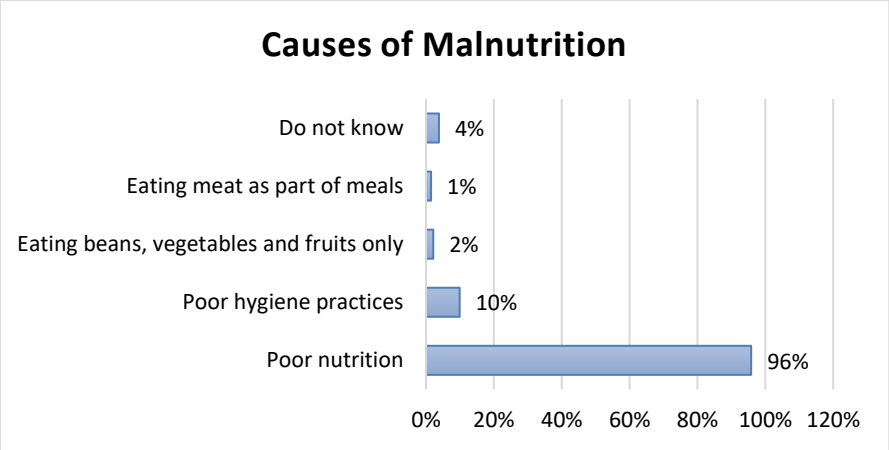


Findings 36: Mansa District Handwashing with Soap practices

From households that had handwashing facilities, 86% of them were equipped with Soap and from these about 81% washed their hands with soap after using a toilet. Those households that did not equip their handwashing facility with soap gave reasons such as cannot afford soap or the soap can be stolen.

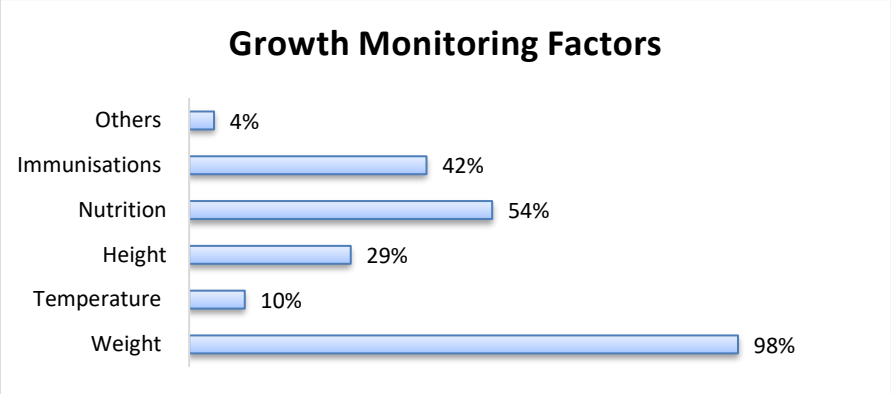
5.1.5 Scaling Up Nutrition

Child Nutrition



Findings 37: Mansa District Causes of Malnutrition (N = 1080)

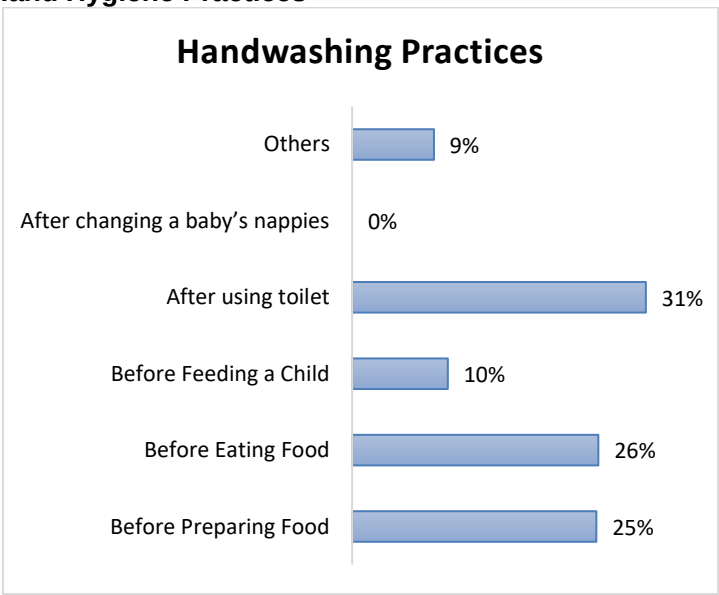
In general, majority of Mansa District relate malnutrition more to poor nutrition (96%) than poor hygiene practices.



Findings 38: Mansa District Growth Monitoring Factors for Children (N = 1060)

Weight was considered to be the most common growth factor while only 29% monitored height as well. But in order to determine stunted or wasted growth, the weight and height of the child needs to be compared with age.

Hand Hygiene Practices

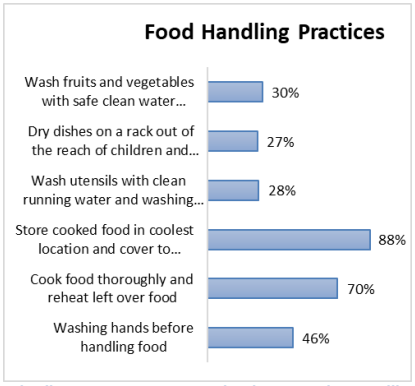


Findings 39: Mansa District Handwashing Practices (N = 488)

Majority of Mansa District wash their hands after using a toilet (31%), as well as before eating (26%) and before preparing the food (25%). It is observed that none practice handwashing after changing the baby's nappies. This may be due to a baby's faeces are not considered to be as contagious as an adult's. If none wash their hands after changing baby and only 10% are washing their hands before feeding the baby, chances of affecting the child are quite high.

Food Handling Practices

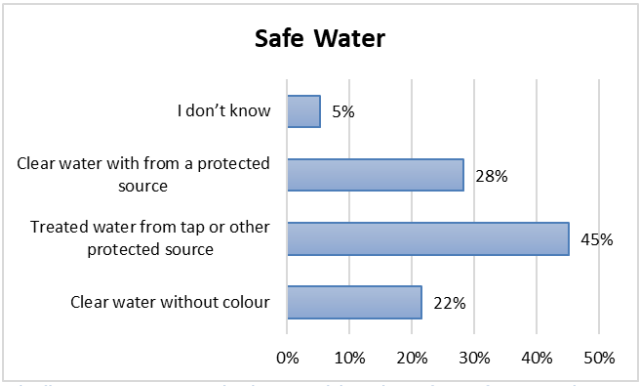
Majority of Mansa District (88%) store their cooked food in the coolest location and cover to protect from flies.



Findings 40: Mansa District Food Handling Practices (N = 1078)

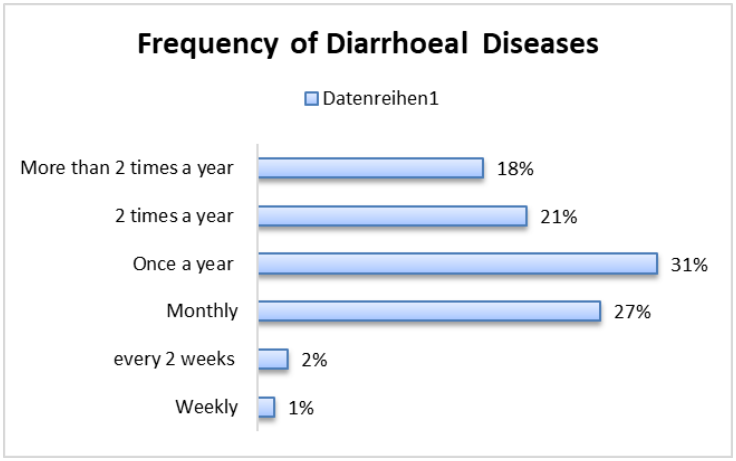
Safe Water

Majority (45%) categorise safe water as treated water from an improved water source. Meanwhile, 28% think safe water is clear water from an improved water source and 22% think it is clear water without colour.



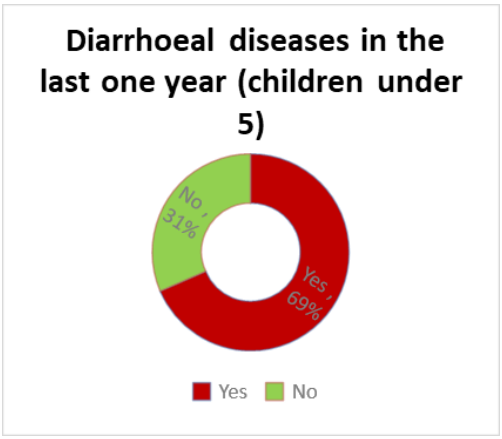
Findings 41: Mansa District considerations for safe water (N = 1079)

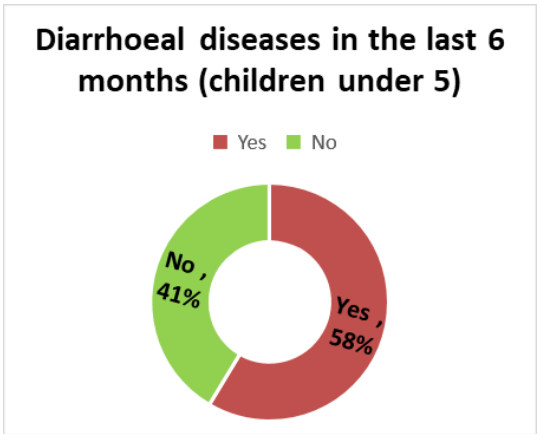
Diarrhoeal diseases



Findings 42: Mansa District Frequency of Diarrhoeal Diseases (N = 382)

The highest frequency for diarrhoeal diseases for children below the age of five years in Mansa is yearly (31%) and monthly (27%). In addition, 33% of households had never had diarrhoeal diseases for their children under five.

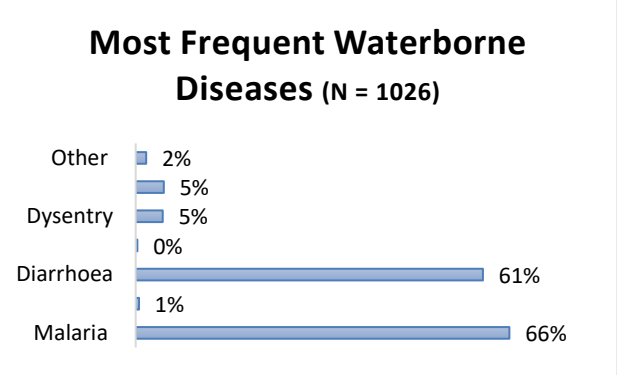


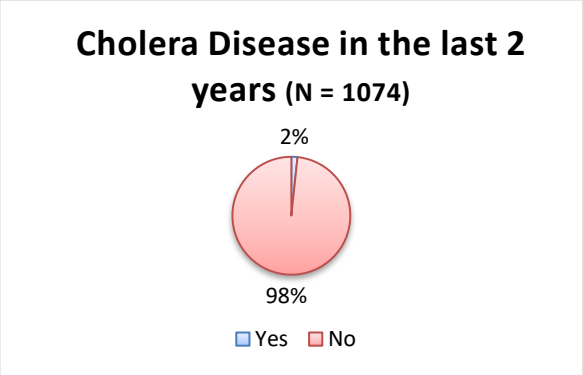


Findings 43: Mansa District Diarrhoeal Diseases in the last 6 months and 1 year (N = 548)

The proportion of children under the age of 5 that had diarrhoeal diseases in the last 6 months and 1 year were 58% and 69% respectively.

5.1.6 Water Borne Diseases

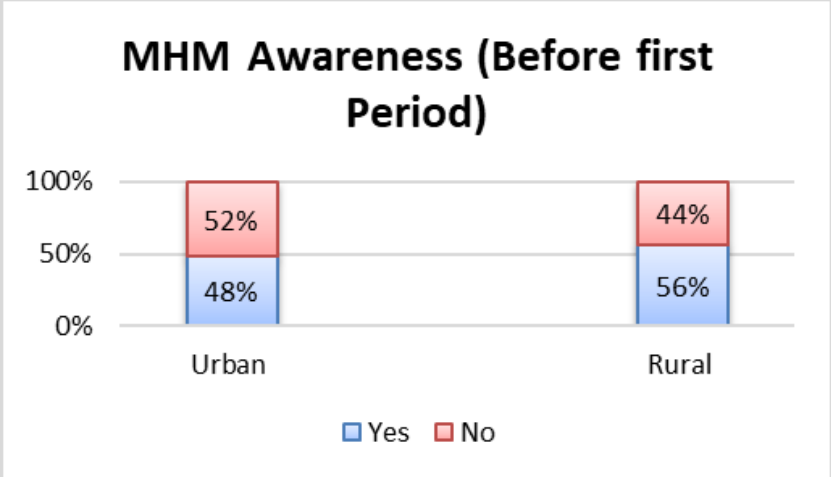




Findings 44: Mansa District Waterborne Diseases

The most frequent water borne diseases in Mansa District is Malaria (66%) and Diarrhoea (61%). Cholera is present in the District but the percentage of prevalence in the last two years is negligible.

5.1.7 Menstrual Health Management



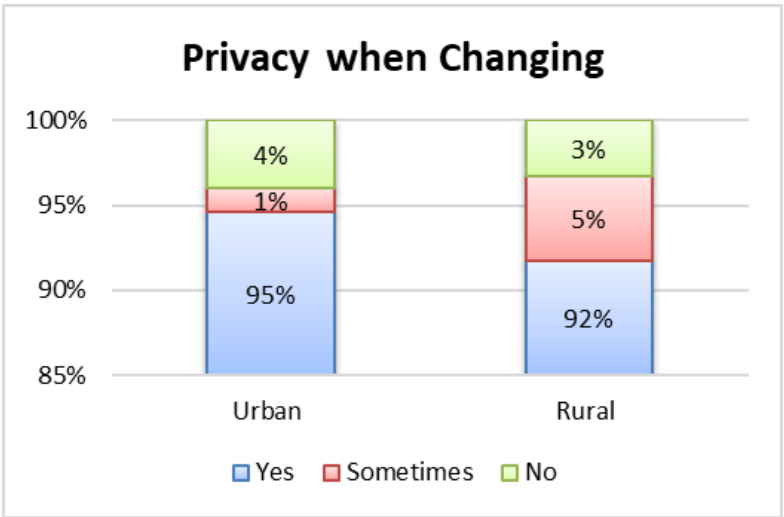
Awareness of menstruation before menarche

Majority in the rural areas (56%) were aware of MHM before their first period while the percentage was 48% in urban areas.

Findings 45: Mansa District MHM - Awareness before first menstruation (N = 731)

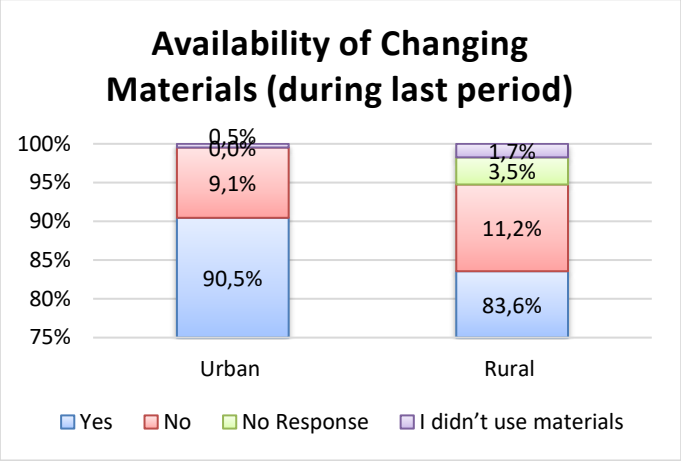
Privacy when changing

Majority had access to a private place to wash and change their sanitary towels at home.



Findings 46: Mansa District MHM - Privacy when changing (N = 725)

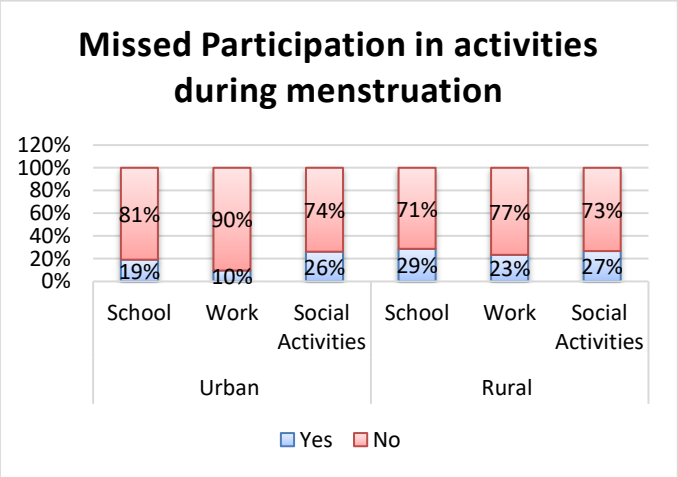
Use of menstrual materials



Majority had access to menstrual materials to capture and contain menstrual blood during their last period, while 3.5% of the respondents in the rural areas refused to respond to this question.

Findings 47: Mansa District MHM - Use of menstrual materials (N = 705)

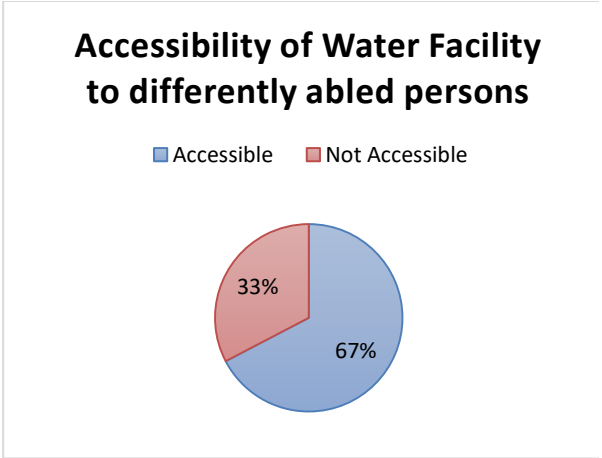
Participation in activities during menstruation



Participation in various activities during menstruation was observed to not be a challenge. From the population that had challenges, majority were from the rural areas.

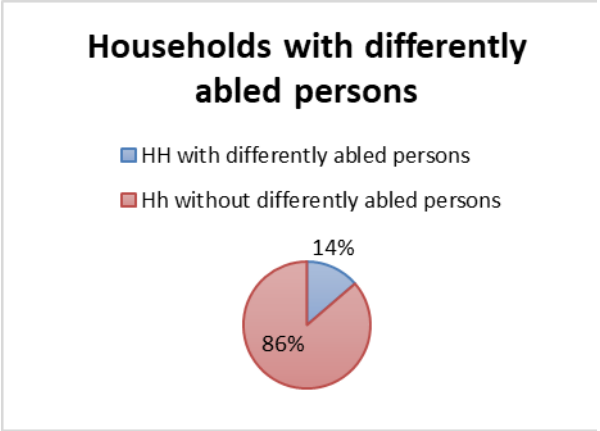
Findings 48: Mansa District MHM - Participation in activities during menstruation (N = 195 for schools, N = 198 for work and N = 613 for social activities)

5.1.8 Social Inclusion



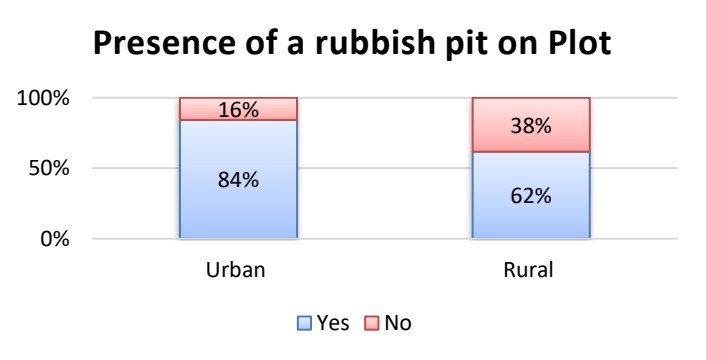
Findings 49: Mansa District Households Accessibility of Water facility to differently abled persons (N = 98)

14% of households in Mansa District have persons with limited mobility living with them.



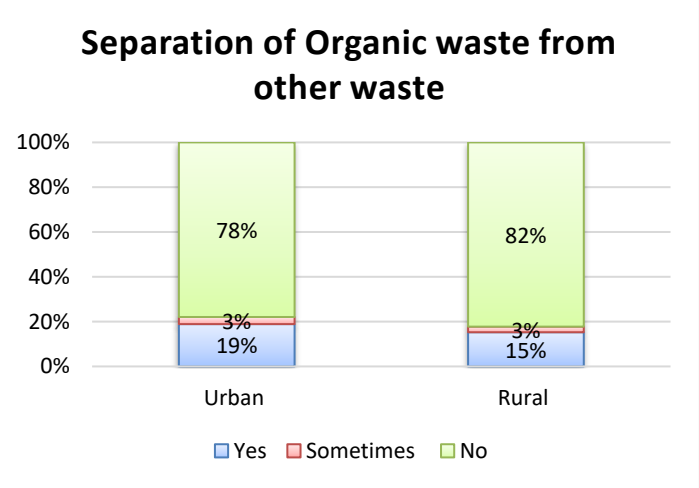
Findings 50: Mansa District Households - Persons with limited mobility (N = 724)

5.1.9 Solid Waste Management



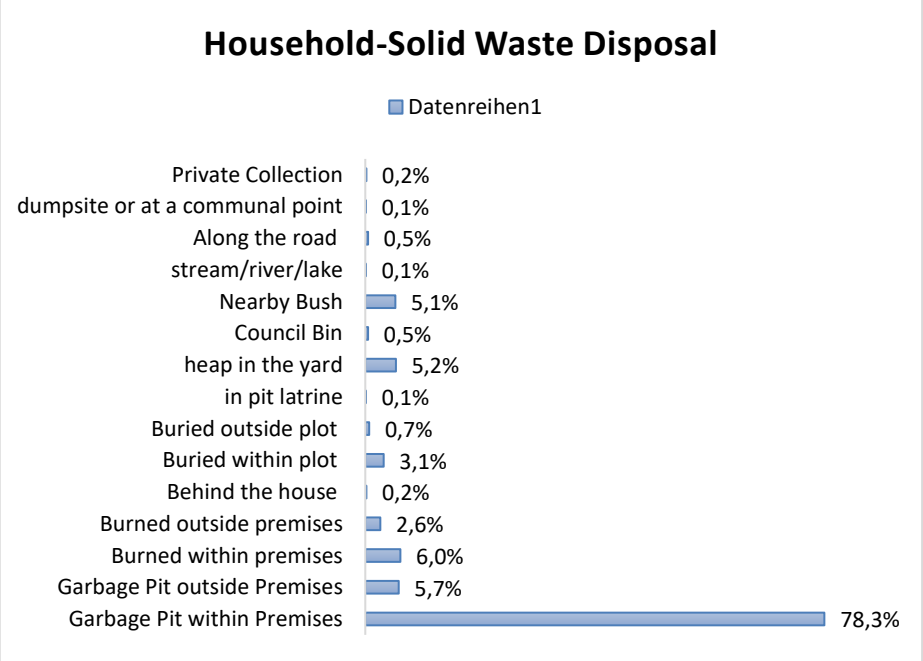
Majority of households in the urban areas (84%) had a rubbish pit on their plot, while this was the case for only 62% of rural households.

Findings 51: Mansa District Solid Waste Management - pit system (N = 1078)



While most households gathered their waste in the rubbish pits, most households, 78% of urban and 82% of rural, did not separate organic waste from other waste.

Findings 52: Mansa District Solid Waste Management - Separation of waste (N = 1076)

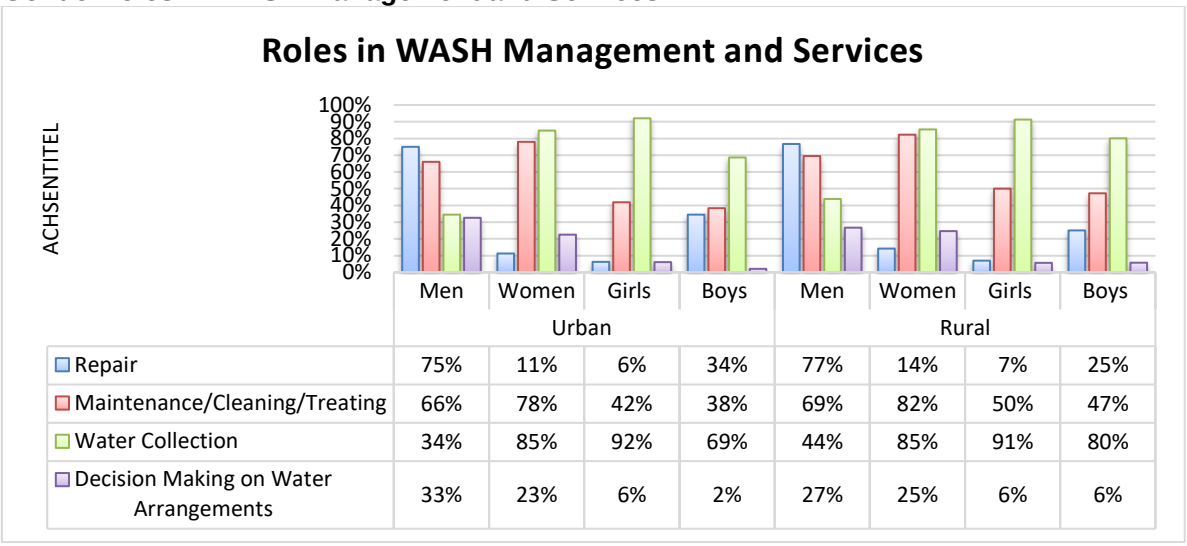


Findings 53: Mansa District Solid Waste Disposal Practices in Households (N = 1052)

Majority (78%) of households in Mansa District use garbage pits within their premises to dispose solid waste. This is a practice that has been discouraged by the councils.

5.1.10 Gender sensitivity data and information

Gender roles in WASH Management and Services

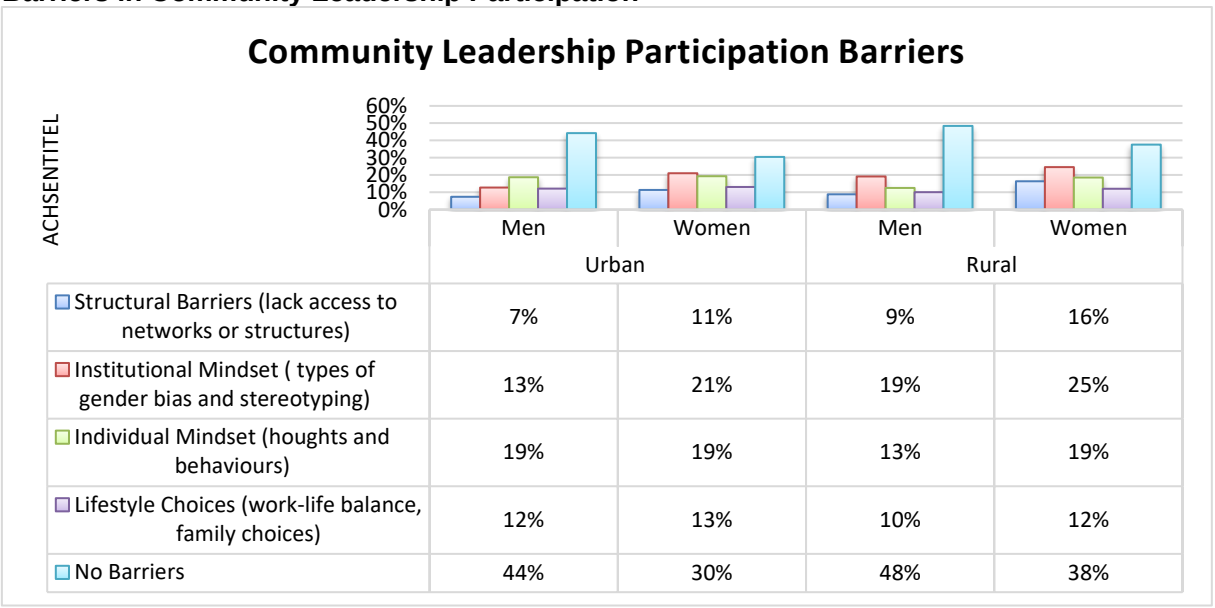


	Urban				Rural			
	Men	Women	Girls	Boys	Men	Women	Girls	Boys
Repair	75%	11%	6%	34%	77%	14%	7%	25%
Maintenance/Cleaning/Treating	66%	78%	42%	38%	69%	82%	50%	47%
Water Collection	34%	85%	92%	69%	44%	85%	91%	80%
Decision Making on Water Arrangements	33%	23%	6%	2%	27%	25%	6%	6%

Findings 54: Mansa District Gender Roles in WASH Management and Services (N = 1052)

In both urban and rural areas, the men's main role in WASH was observed as to make repairs and maintenance while for the women it was mainly water collection and maintenance. While as for boys and girls, their main role in WASH was water collection.

Barriers in Community Leadership Participation



	Urban		Rural	
	Men	Women	Men	Women
Structural Barriers (lack access to networks or structures)	7%	11%	9%	16%
Institutional Mindset (types of gender bias and stereotyping)	13%	21%	19%	25%
Individual Mindset (houghts and behaviours)	19%	19%	13%	19%
Lifestyle Choices (work-life balance, family choices)	12%	13%	10%	12%
No Barriers	44%	30%	48%	38%

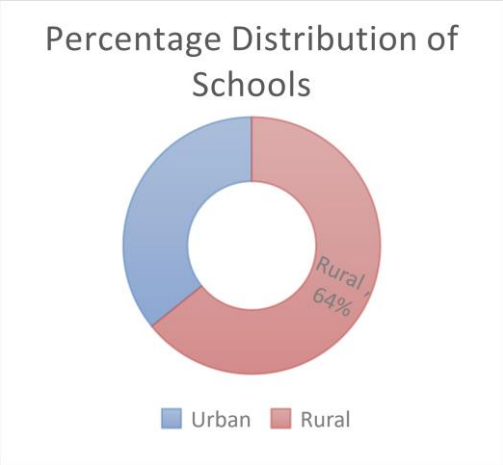
Findings 55: Mansa District Barriers in Community Leadership Participation (N = 915)

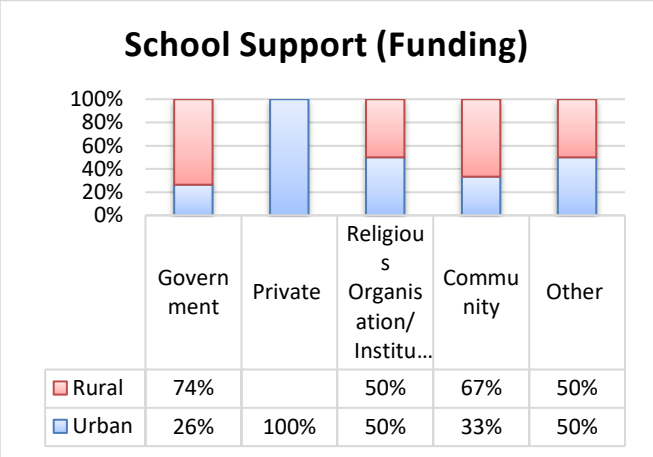
Men are most likely to not experience any barriers to community leadership participation both in urban (44%) and rural (48%) areas, while a fair proportion of women also seemed to not experience any barriers both in urban (30%) and rural (38%) areas. Out of the proportion that experienced barriers to community leadership participation, majority of the men indicated to have experienced barriers regarding individual mind-set i.e. thoughts and behaviours in the urban (19%) and institutional mind-set i.e. gender biasness and stereotyping in rural (19%) while for the women, it was mainly institutional mind-set i.e. gender biasness and stereotyping both in the urban (21%) and rural (25%) areas.

5.2 Schools

5.2.1 School Demographics & Electricity Connectivity

Average Distribution of Schools in Mansa

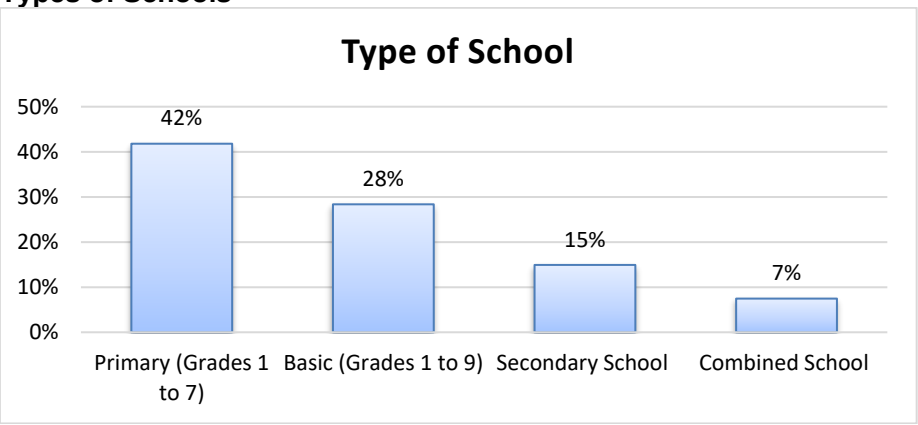




Findings 56: Mansa District Distribution of Schools (N=67)

There were more schools interviewed in the rural areas (64%) than in the urban areas. This generally represents the distribution of schools in Mansa. Most of the Government schools were in the rural areas while 100% of the private schools were in the urban areas.

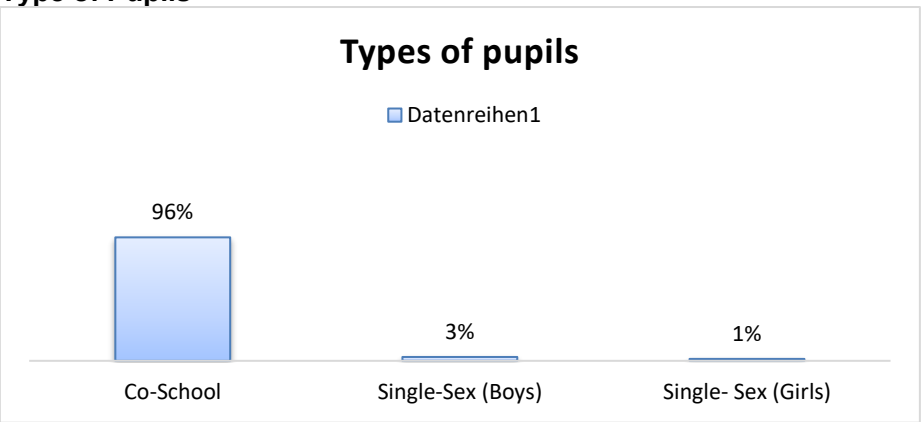
Types of Schools



Majority of the schools interviewed were primary schools (42%) and basic schools (28%).

Findings 57: Mansa District Type of Schools (N=67)

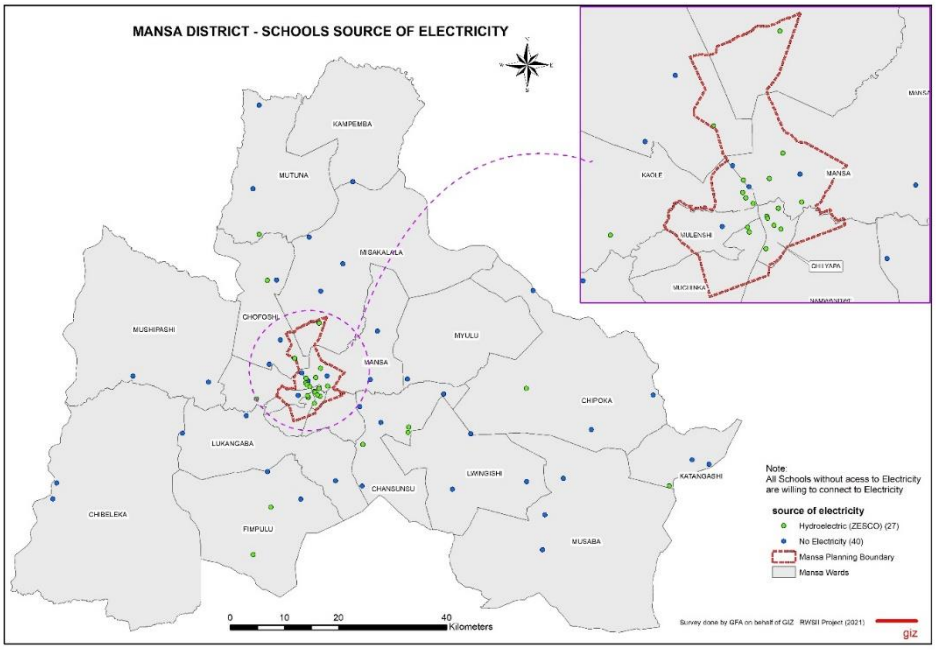
Type of Pupils



Majority of the schools interviewed were co-schools (96%) which means had a mixture of both and girls

Findings 58: Mansa District Schools Type of Pupils

Connection to Electricity

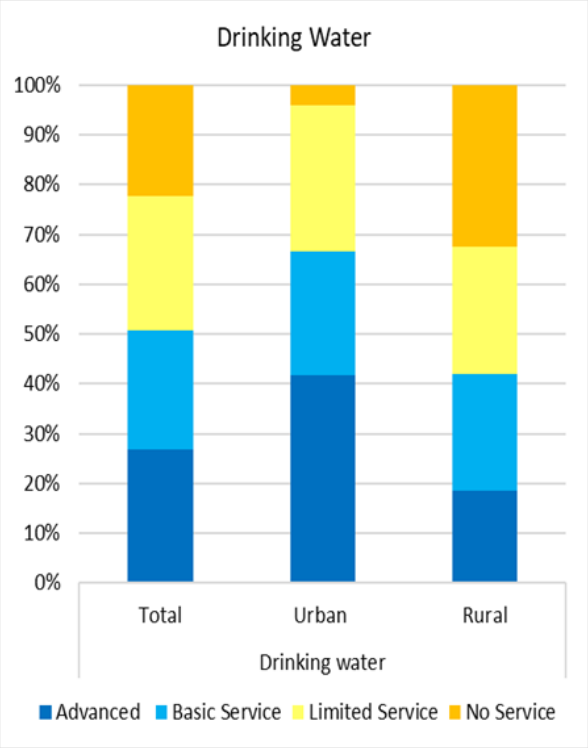


Findings 59: Mansa District - connection to electricity in schools

Majority of the schools in the urban areas were connected to electricity unlike the rural areas. When asked if the schools without electricity were willing to connect, all schools indicated that they were willing to connect to electricity.

5.2.2 Water Supply Services

Mansa JMP Ladder for Drinking Water Services



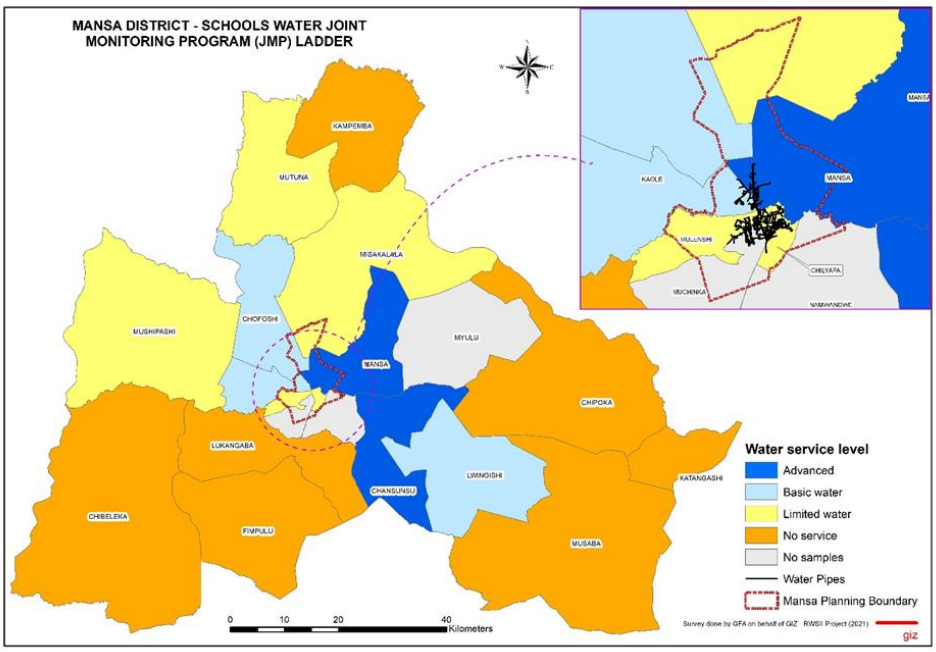
Mansa	Drinking water		
	Total	Urban	Rural
Advanced	26.87%	41.67%	18.60%
Basic Service	23.88%	25.00%	23.26%
Limited Service	26.87%	29.17%	25.58%
No Service	22.39%	4.17%	32.56%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of schools in Mansa District using advanced services is 26.9%, rural schools being 18.6% and urban schools being 41.7%.

In 2021, out of 135 schools in Mansa District, 99 schools lacked advanced services, including 31 schools with basic services, 36 schools with limited services, 30 schools having no water source or having access to an unimproved water source.

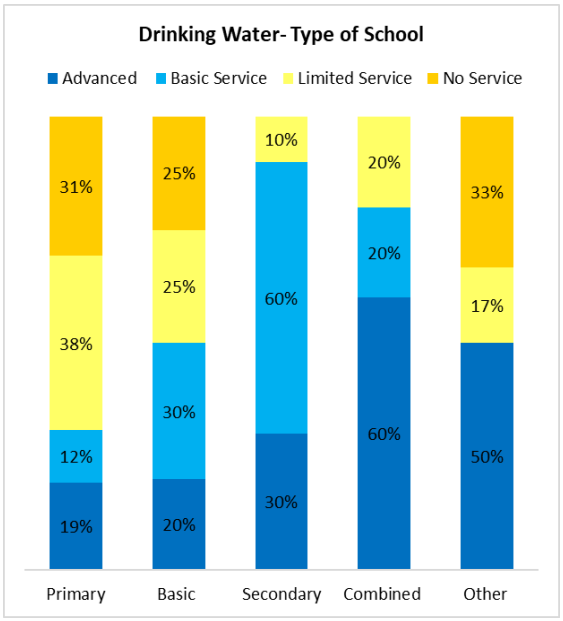
Schools in the rural areas were twice as likely to lack safely managed services as those in the urban areas. Please refer to Table 5 for the definition and clarifications on some of the drinking water terms.

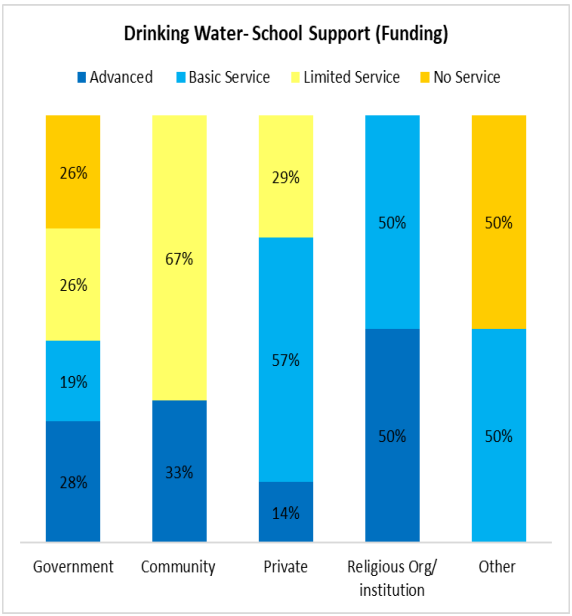
Findings 60: Mansa District Schools JMP for Drinking Water Services



Findings 61: Mansa District Ward Level JMP for Drinking Water Services in Schools

Findings 61 shows JMP indicators at the ward level, out of the 20 wards in Mansa District, only 2 wards, namely Mansa and Chansunsu, have majority of its schools having access to advanced service.

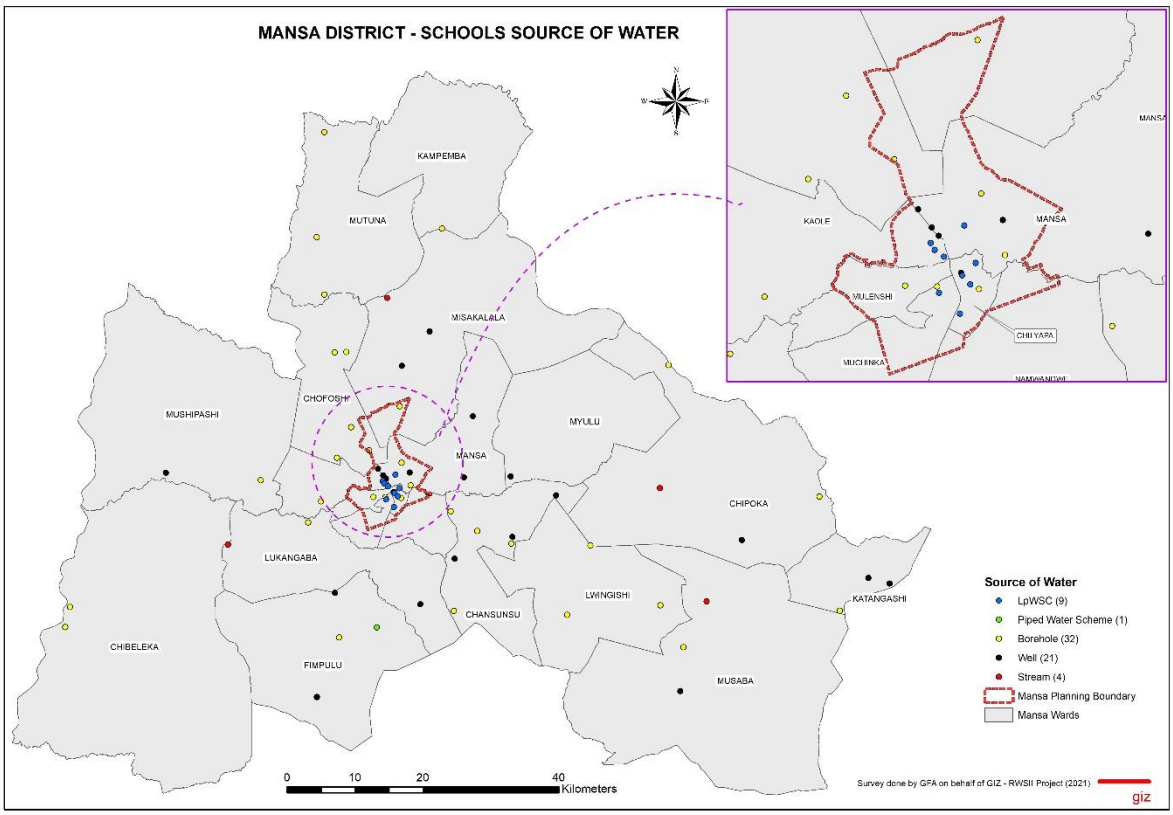




Findings 62: Mansa District JMP for School - Drinking Water Services by School Type and Funder

Most combined schools have access to advanced services unlike the primary schools and the most with both limited and no service are the primary schools. While most schools funded by religious organisations have the most advanced service in drinking water unlike the private schools.

Type of water source

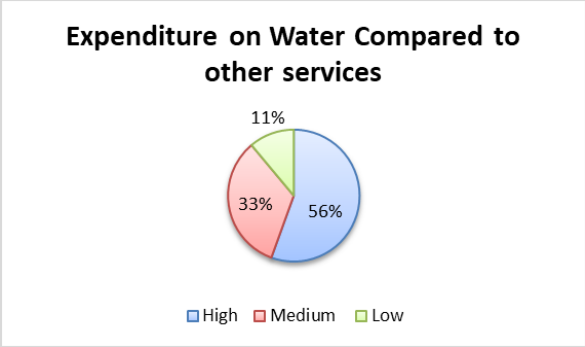


Findings 63: Mansa District Schools -Type of Water Sources/ Access

From Findings 63, in general, the main source of water for schools was Boreholes (56%) and wells (36%) with primary and basic schools taking up the largest share of 42% and 28% respectively. Very few schools are connected to LpWSC water network. The highest level was among the private schools (57%) and government schools at 9%. All the rest of the school had alternative sources other than LpWSC.

Affordability of the water service

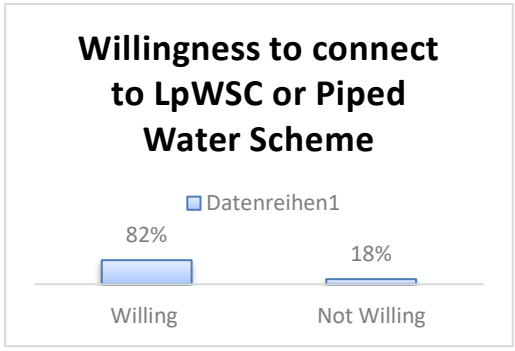
Majority (56%) of the schools thought water services were very expensive and therefore preferred the use of alternative sources. About 11 % categorise water as a cheap service.



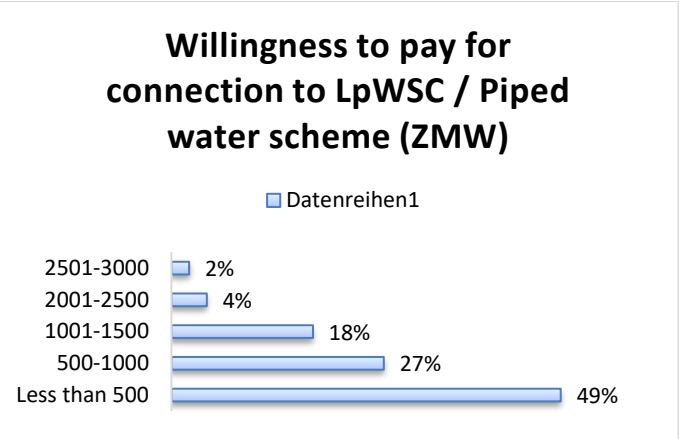
Findings 64: Mansa District Schools - Expenditure of water compared to other services (N=9)

Willingness to Connect to LpWSC

Majority of the schools (82%) were willing to connect to the LpWSC network or piped water scheme. The appreciable number of those unwilling to connect especially in the urban sited their past experience with LpWSC not being satisfying



Findings 65: Mansa District Schools - Willingness to connect to LpWSC and Piped Water Scheme (N=57)

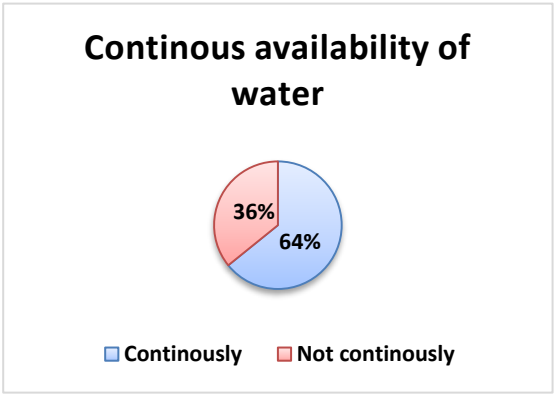


However, most of the schools are willing to pay less than 500 ZMW or less in connection fees for LpWSC or piped water scheme.

Findings 66: Mansa District Schools - Willingness to pay for connection to LpWSC and Piped Water Scheme (N=47)

Water Availability

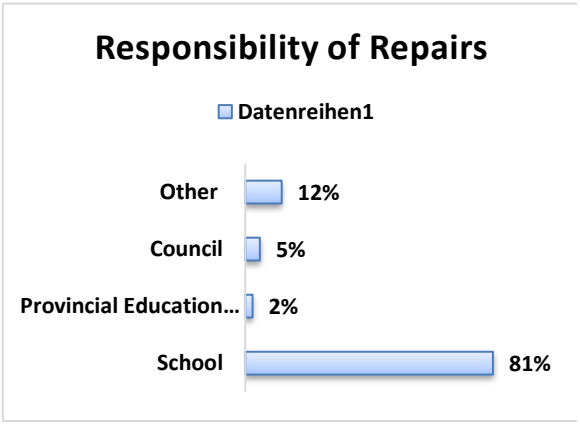
Majority of the schools (64%) indicated water to be continuously available.



Findings 67: Mansa District Schools Availability of Water (N=67)

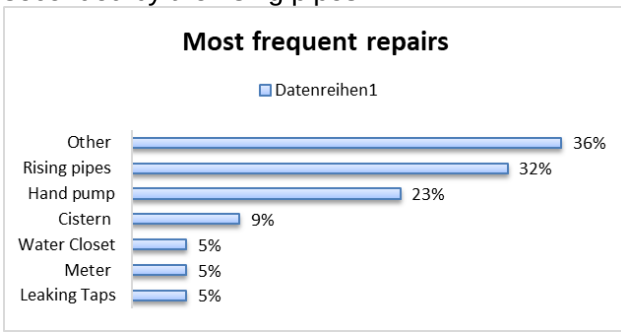
Maintenance of water services

The responsibility to pay for maintenance / repair works lies with the school that is having access to the water source.



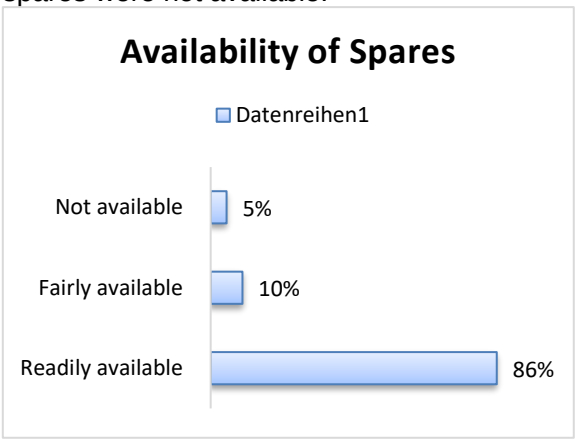
Findings 68: Mansa District Responsibility for Maintenance/ repair works of the water source for schools (N=42)

Majority of the repairs done on the water source were categorised under other repairs which mostly included the replacement of rubbers, seconded by the rising pipes.



Findings 69: Mansa District School Water Service Frequent Repairs (N=22)

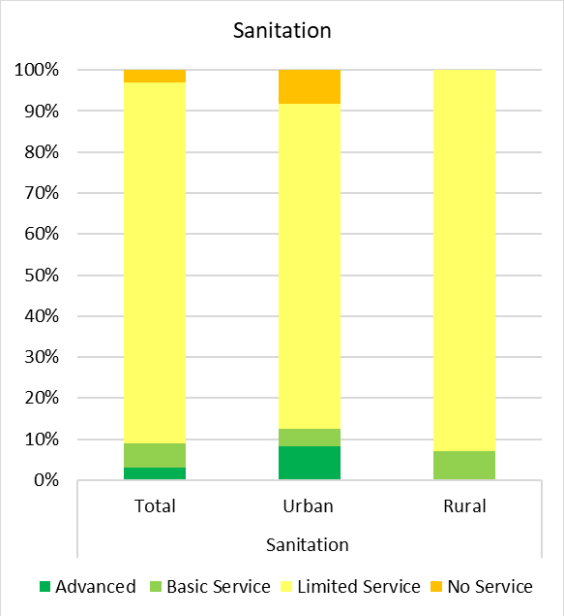
86% of the schools noted that spares were readily available, only 5% indicated that spares were not available.



Findings 70: Mansa District School availability of spares (N=21)

5.2.3 Sanitation Services

Mansa JMP Ladder for Sanitation Services



Mansa	Sanitation		
	Total	Urban	Rural
Advanced	2.99%	8.33%	0.00%
Basic Service	5.97%	4.17%	6.98%
Limited Service	88.06%	79.17%	93.02%
No Service	2.99%	8.33%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**

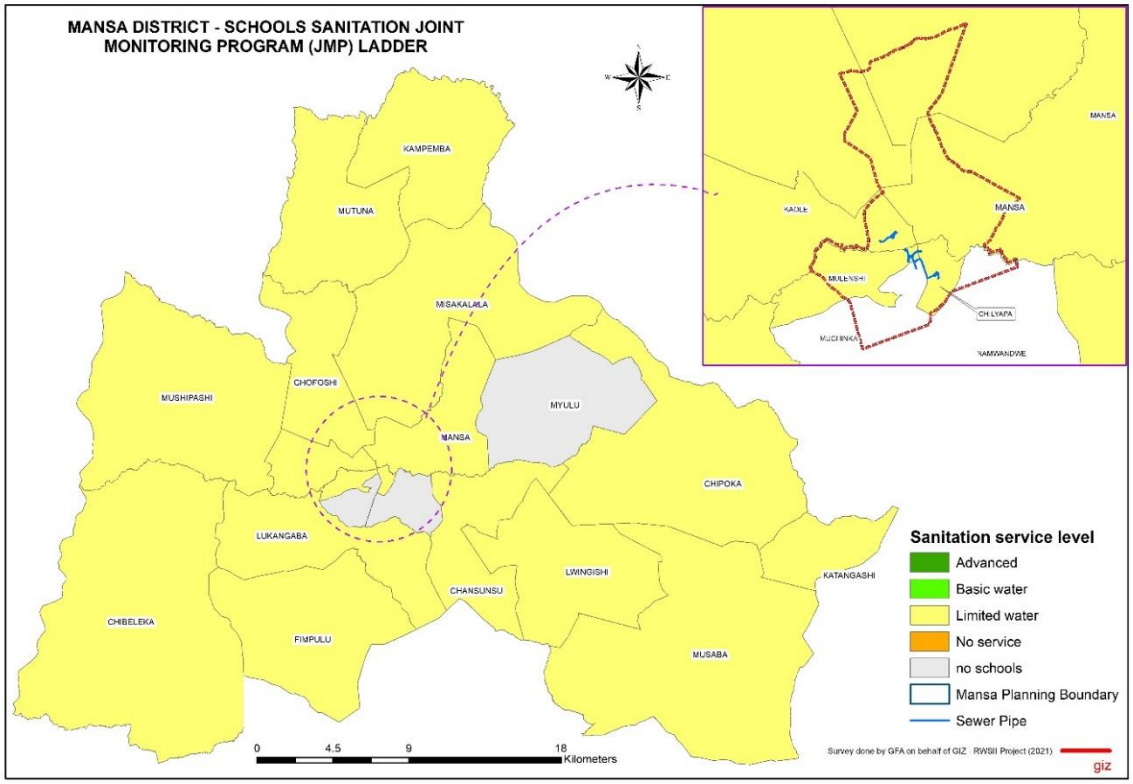
The proportion of schools in Mansa District using advanced services is 2.99%, rural coverage being 0% and urban coverage being 8.333%.

In 2021, Out of an estimated 135 schools in Mansa District, 131 schools lacked safely managedadvanced services including 8 schools with basic services, 119 schools with limited services and 4 schools having no toilet or having access to an unimproved facilities .

Findings 71: Mansa Schools JMP laddr for Sanitation

There was no school in the rural areas with advanced sanitation service. Most schools fall in the category of limited service because of the toilet to pupil ratio which was averaging at 175 for boys and 160 for girls.

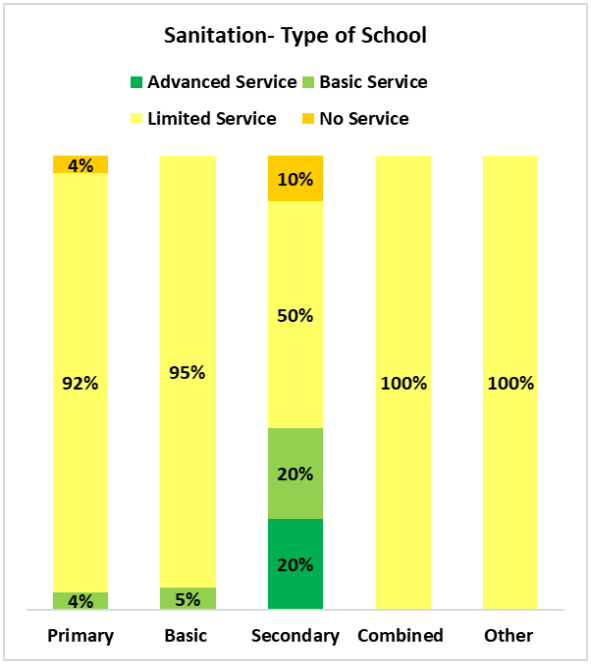
Please refer to Table 6 for the definition and clarifications on some of the sanitation terms.

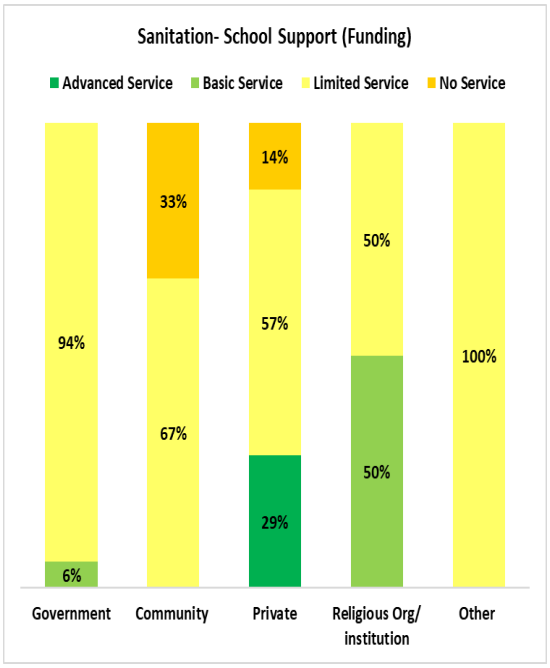


Findings 72: Mansa District Ward level JMP for School Sanitation Services

Findings 72 shows JMP indicators at the ward level, Out of the 20 wards in Mansa District, none have majority of its schools having access to advanced service.

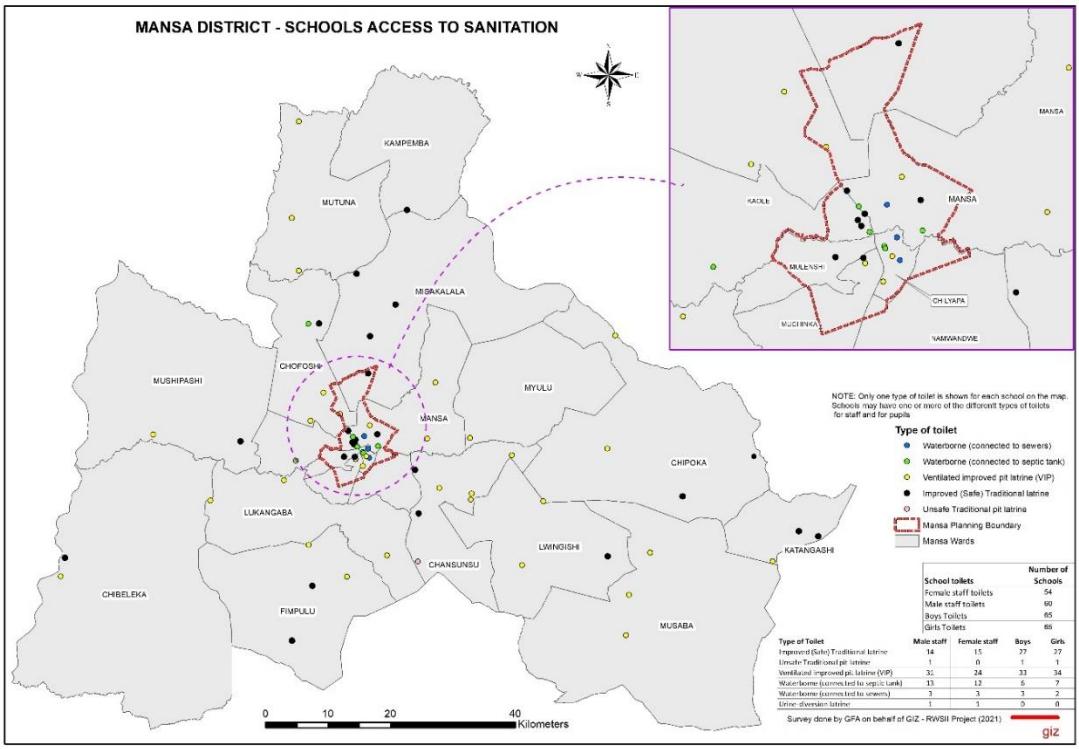
20% of secondary schools are the only type that have access to advanced sanitation while basic service is only in primary, basic and secondary. While advanced service is only in privately funded schools.





Findings 73: Mansa District JMP for School Sanitation Services by school type and funder

Access to Sanitation Facilities



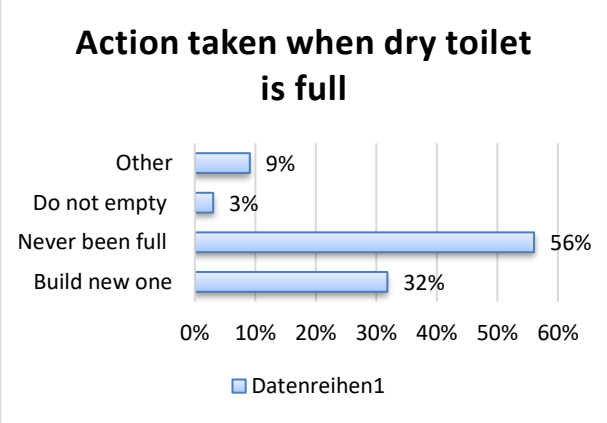
Findings 74: Map of Mansa District Schools - Access to sanitation facilities

From Findings 74, in general, the main type of sanitation for schools was VIPs, seconded by improved safe traditional and then waterborne to septic tanks. Very few schools are connected to LpWSC sewer network and use Urine Diversion Latrines.

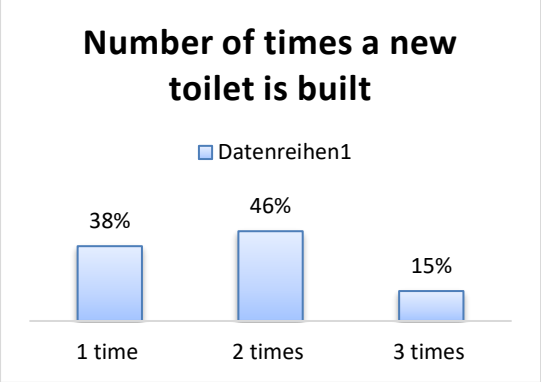
Emptying Practices

Like the households, school toilet emptying practices are to build a new one while most school's toilets have never been full. This information is cardinal in FSM Planning

Most of the schools which had built a new toilet before, did that twice (46%) or once (38%) or three times (15%).



Findings 75: Mansa District School ß Toilet Emptying Practices (N =66)

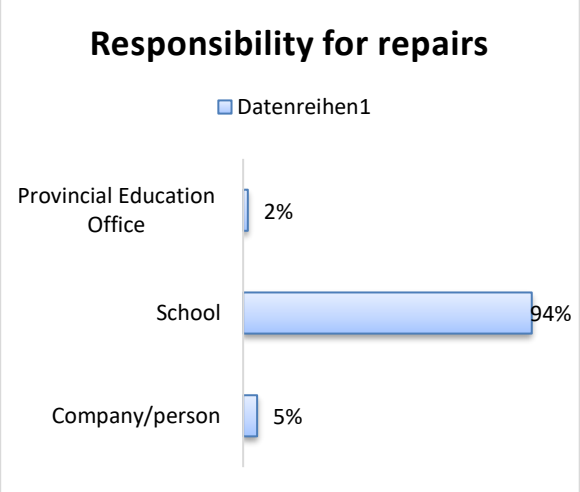


Findings 76: Mansa District School - Number of times a new toilet is built (N=13)

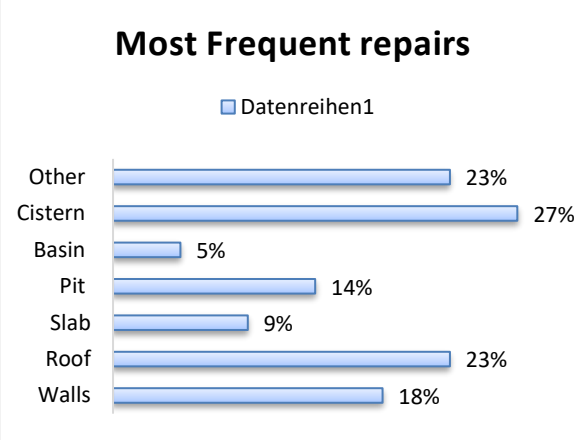
Maintenance of sanitation facilities

In general, the school mostly takes responsibility of repairing the toilets (94%).

Majority of the repairs on the toilets involve repairs to the cistern (27%), roof (23%) and other (23%).

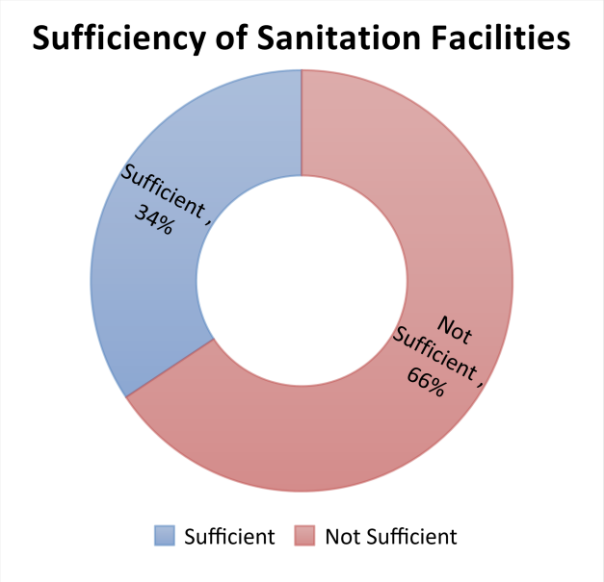


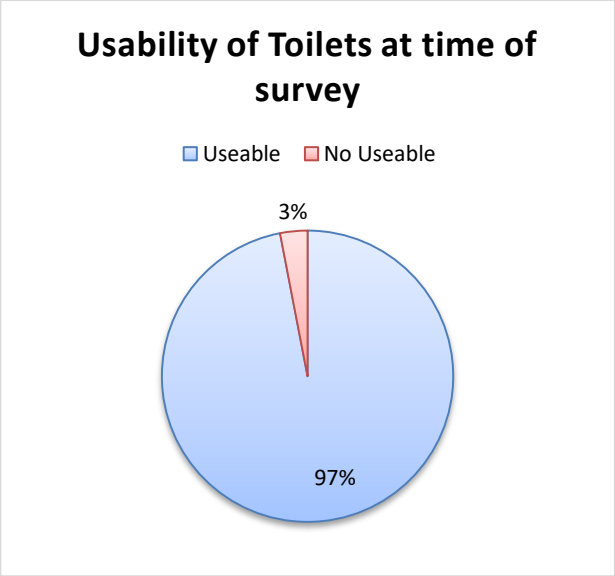
Findings 77: Mansa District Schools - Responsibility for repair of toilet (N=66)



Findings 78: Mansa District Schools - Most frequent toilet repairs (N=22)

Sufficiency and Usability of Toilets



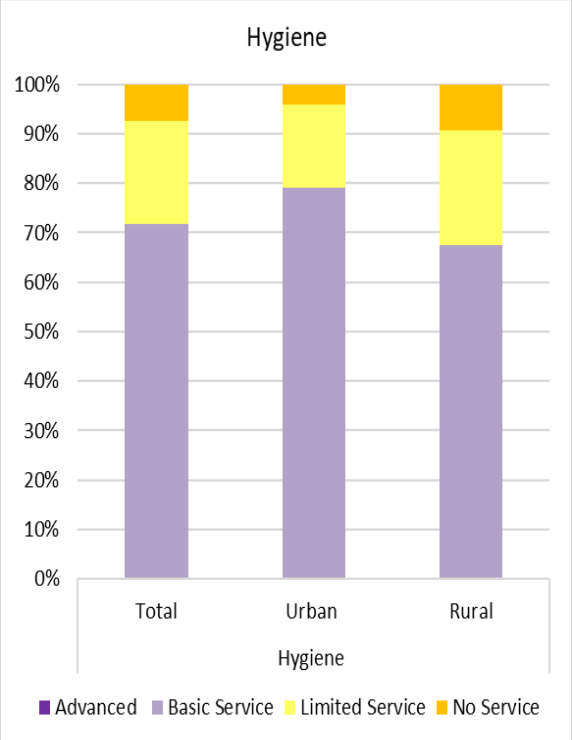


Findings 79: Mansa District Schools - Sufficiency (N=66) and Usability (N=67) of Sanitation Facilities

66% of the schools in Mansa have insufficient toilets while 97% of the toilets were useable at the time of the survey.

5.2.4 Hygiene Services

Mansa JMP Ladder for Hygiene services



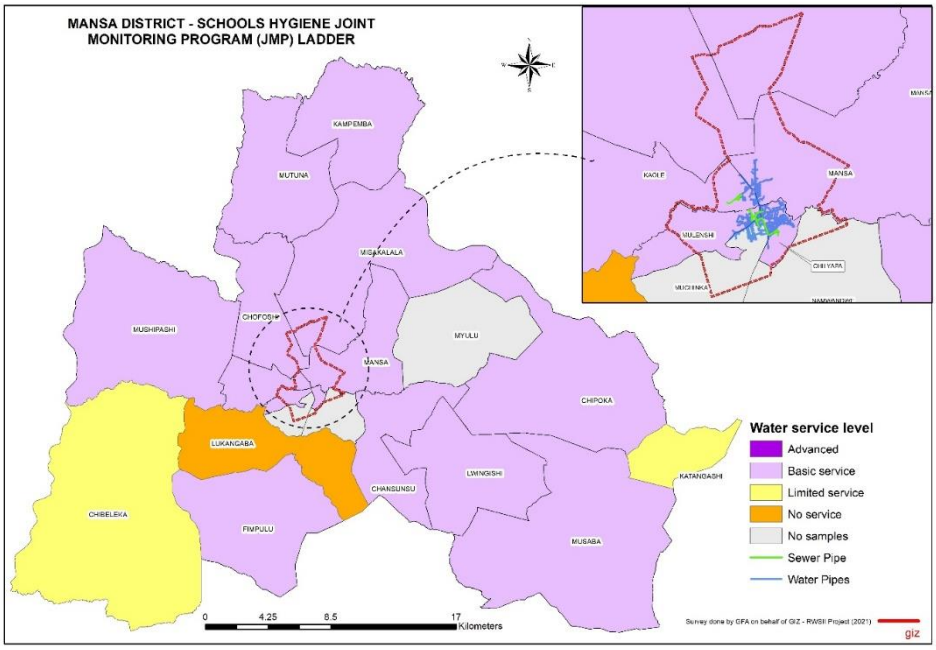
Mansa	Hygiene		
	Total	Urban	Rural
Advanced	-	-	-
Basic Service	71.64%	79.17%	67.44%
Limited Service	20.90%	16.67%	23.26%
No Service	7.46%	4.17%	9.30%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of Schools in Mansa District using Advanced service was not analysed as there was a missing variable on knowing how handwashing facilities the school had to calculate pupil to handwashing facility ratio. Therefore, the analysis only began with basic service which is at 71.6%, rural schools being 67.4% and urban coverage being 79.2%.

In 2021, Out of 135 schools in Mansa District, 38 schools lacked basic services including 10 with no handwashing facilities at all.

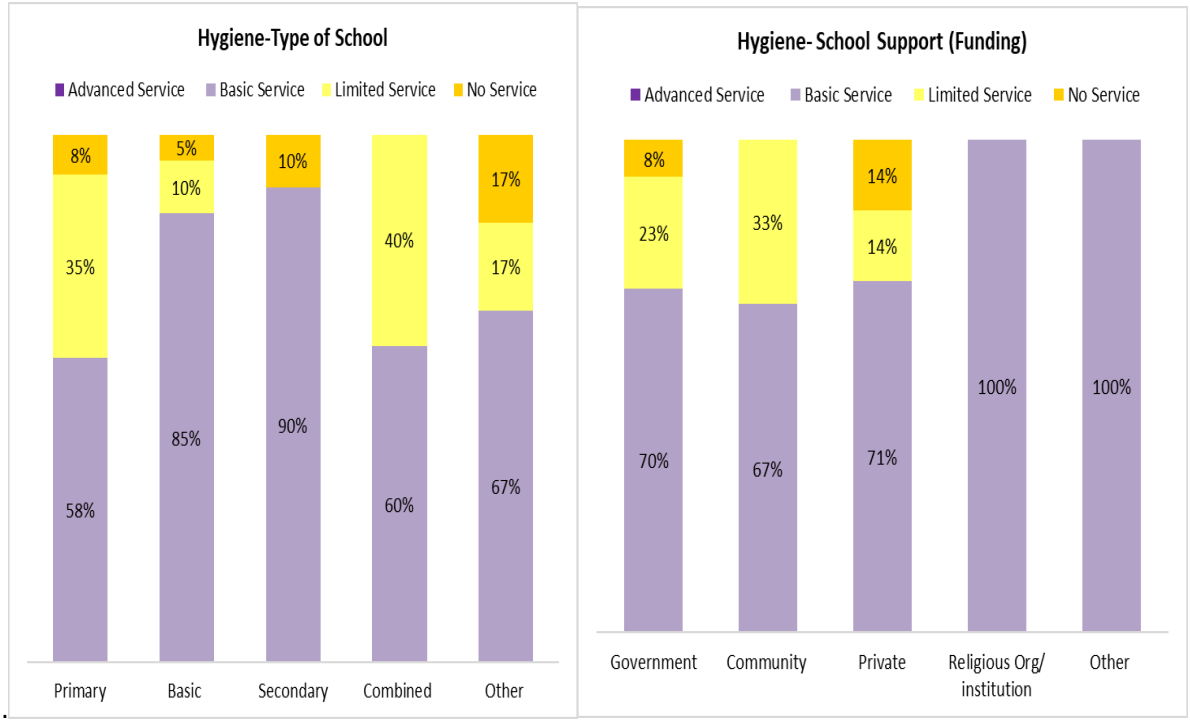
Please refer to Table 7 for the definition and clarifications on some of the hygiene terms.

Findings 80: Mansa District Schools JMP ladder for Hygiene Services



Findings 81: Mansa District Ward level JMP for School Hygiene Services

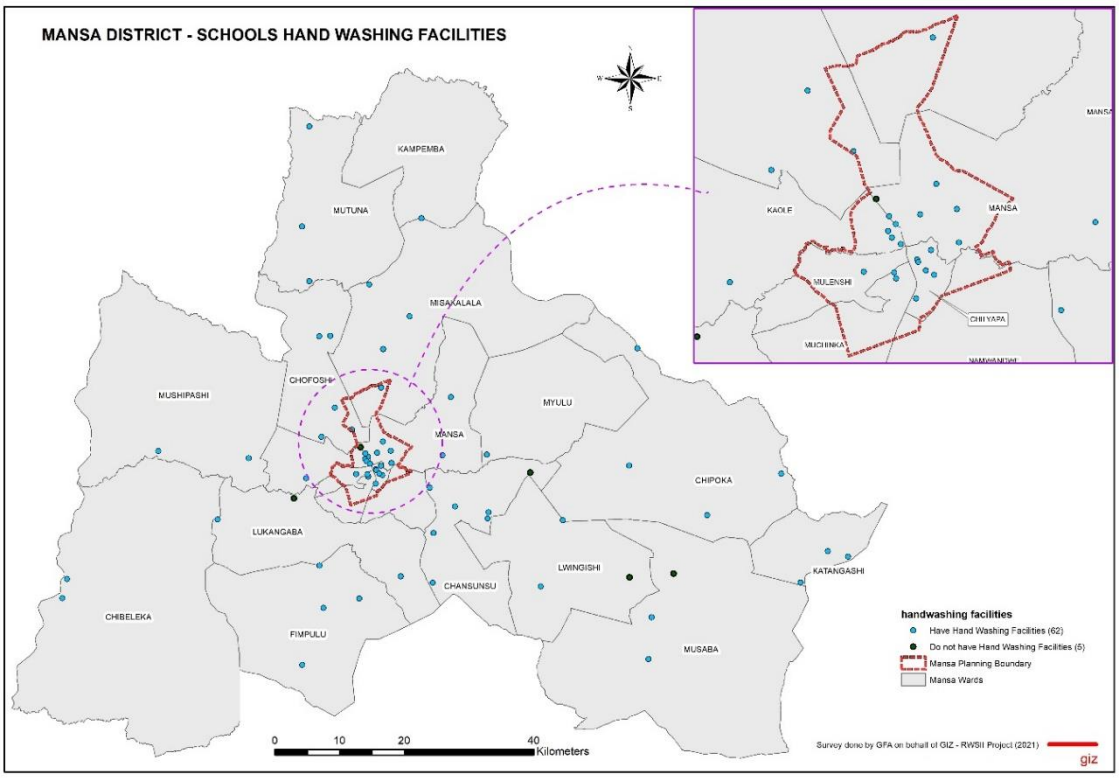
Findings 81 shows JMP indicators at the ward level. Out of the 20 wards in Mansa District, only 3 wards, namely Chibeleka, Lukangaba and Katangashi majority of its schools did not have access to basic hygiene services. Majority of the wards in Mansa District have school with access to basic hygiene services.



Findings 82: Mansa District JMP for School Hygiene Services by school type and funder

Majority of the schools have access to basic hygiene, while a good proportion still have limited and no hygiene service.

Access to Hygiene Facilities

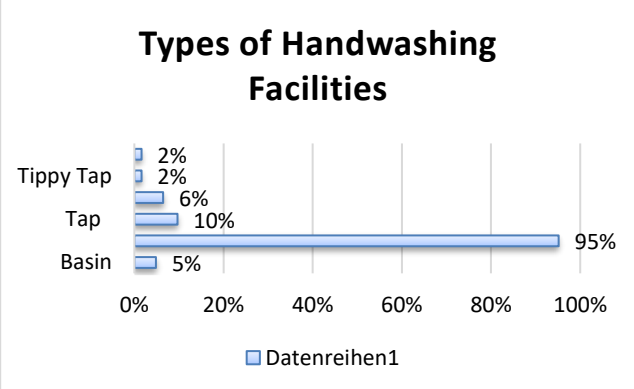


Findings 83: Map of Mansa District Schools - Access to Hygiene Facilities

From Findings 83**,** it is observed that majority have access to handwashing facilities but from the schools that do not have access to a handwashing facility, they are spread out to both urban and rural areas of Mansa.

Type of Handwashing Facilities

Majority (95%) of the households that had handwashing facilities use tap bucket.



Findings 84: Mansa District Schools - Types of Handwashing Facilities (N=62)

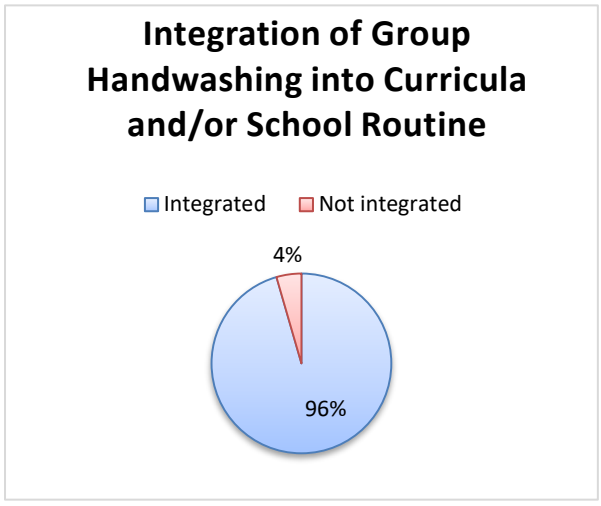
Handwashing with Soap

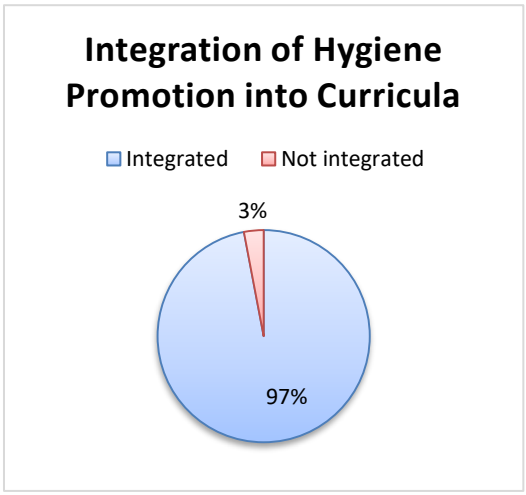
79% of the handwashing facilities were equipped with soap

Findings 85: Mansa District - Handwashing with soap practices (N=62)

Hygiene Promotion

Majority of the schools in Mansa District have integrated hygiene promotion measures into the school curricula.

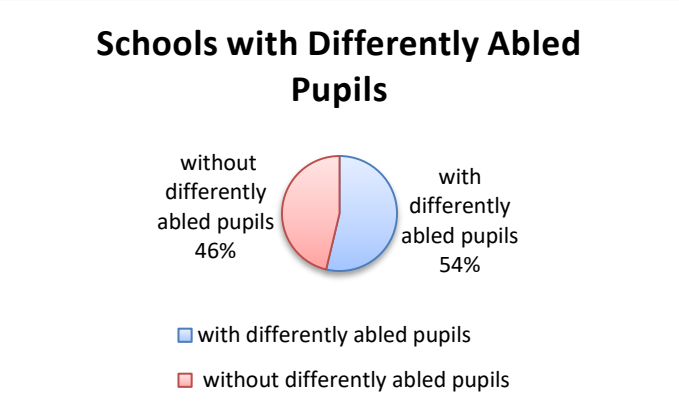




Findings 86: Mansa District Schools Handwashing and Hygiene Promotion Curricula integration (N=67)

5.2.5 Social Inclusion

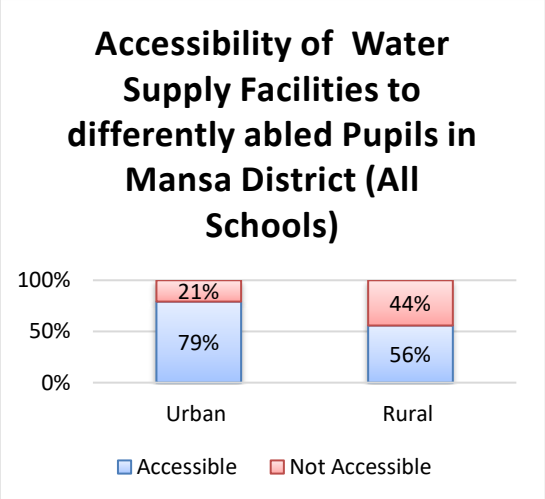
Differently abled pupils

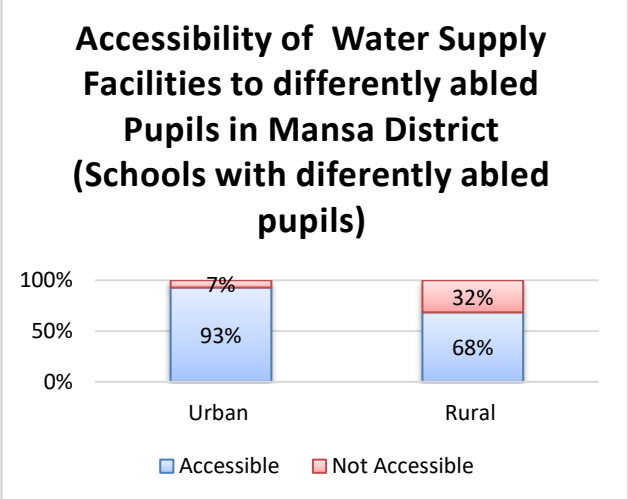


54% of the schools in Mansa have pupils who are differently abled. Out of the schools that have differently abled pupils, 58% are rural schools and 42% are urban

Findings 87: Mansa District Schools with differently abled pupils (N=67)

Accessibility to Water Supply Facilities

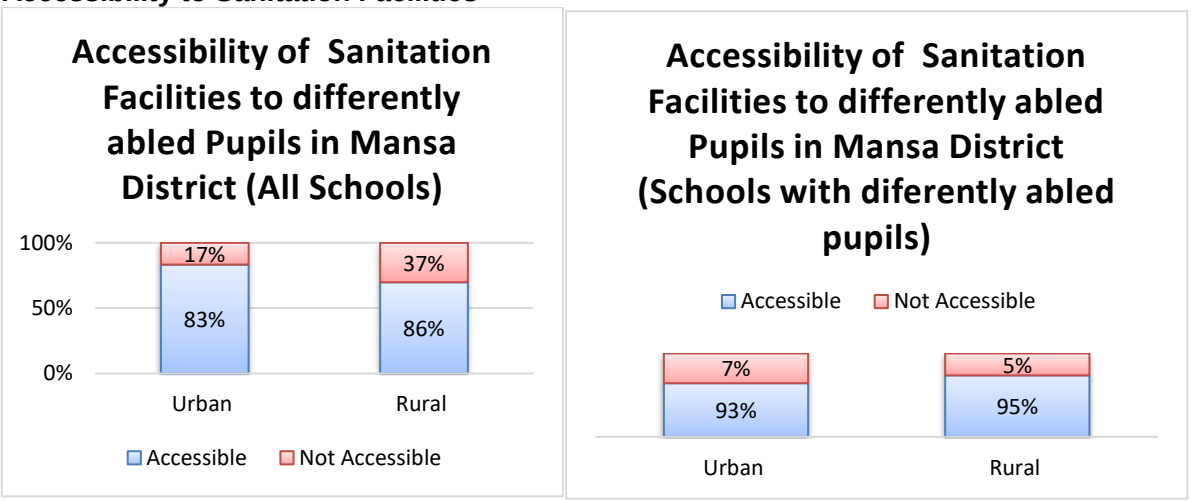




Findings 88: Mansa District Schools - Water facility accessibility to differently abled pupils: all schools (N=67) and schools with differently abled pupils (N=33)

Majority of the schools in the urban (79%) areas have water supply facilities accessible to differently abled pupils and the rural schools stands at 56%. From the schools that had pupils that were differently abled, 93% and 68% have facilities that were accessible in the urban and rural respectively.

Accessibility to Sanitation Facilities



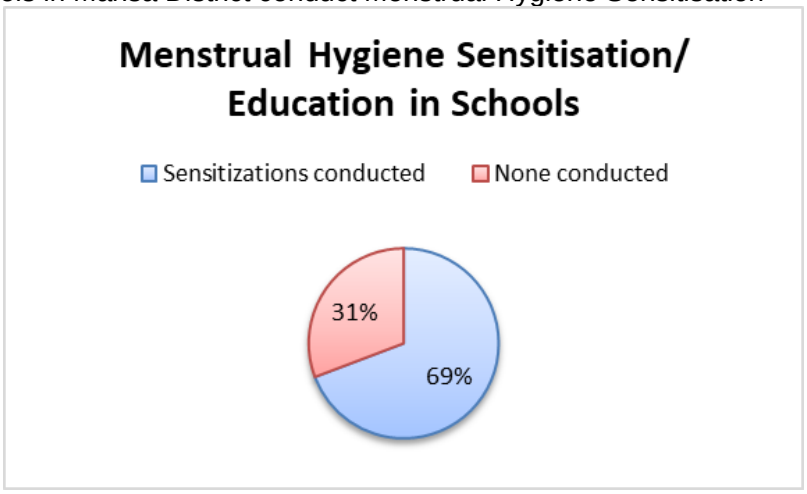
Findings 89: Mansa District Schools Water Facility accessibility to differently abled pupils, all schools (N=67) and schools with differently abled pupils (N=33)

Majority of the schools in the urban (83%) areas have sanitation facilities accessible to differently abled pupils and the rural schools stands at 86%. From the schools that had pupils that were differently abled, 93% and 95% have facilities that were accessible in the urban and rural respectively.

5.2.6 Menstrual Health Management

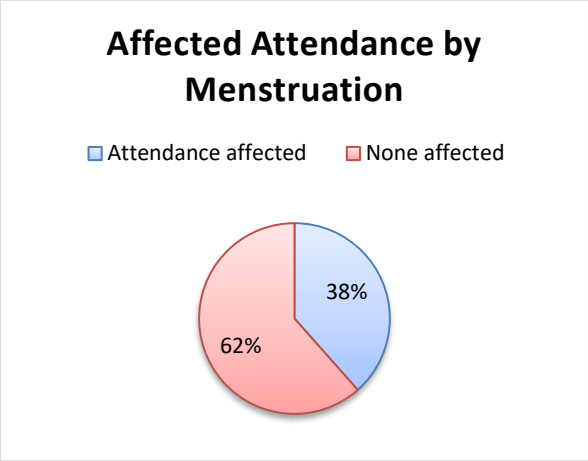
Menstrual Hygiene Sensitisation and Education

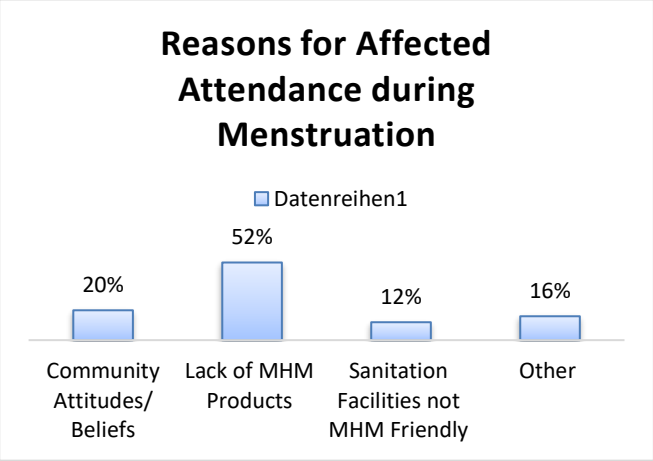
69% of the schools in Mansa District conduct Menstrual Hygiene Sensitisation



Findings 90: Mansa District Schools Menstrual Hygiene Sensitisation

Participation in school during menstruation



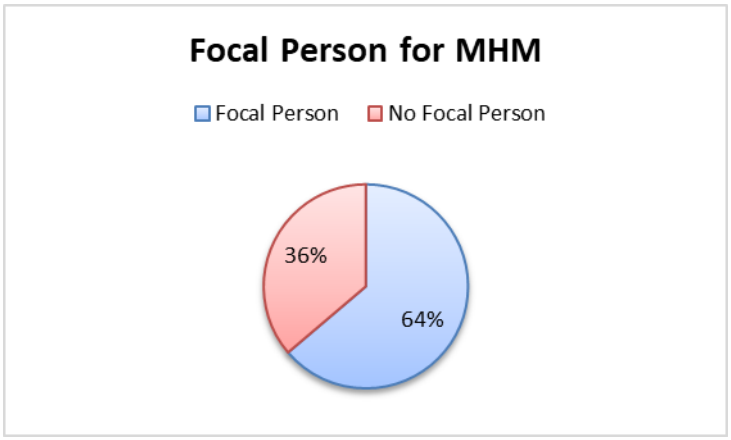


Findings 91: Mansa District Schools - Participation during menstruation (N=65) and reasons (N=22)

38% of the schools in Mansa have the girl child's school attendance being affected by menstruation among the reasons for this impact, the one that stands out the most is due to lack to MHM Products (52%) and community attitudes/ beliefs (20%).

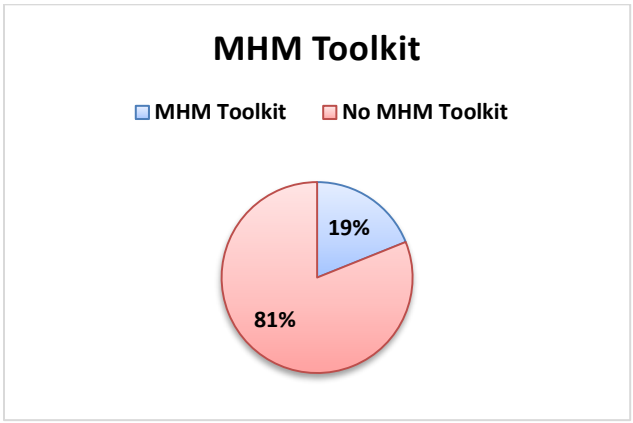
MHM Focal Point

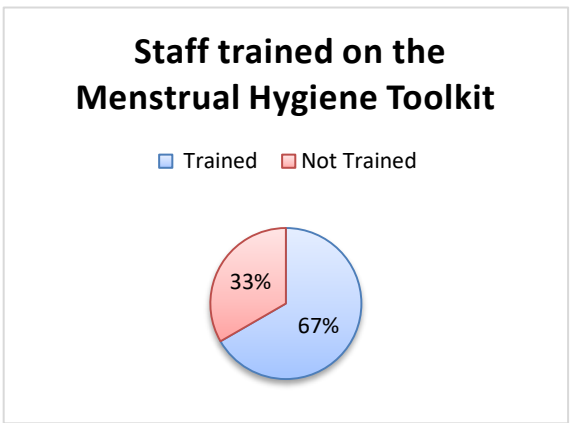
64% of the schools in Mansa District have a MHM Focal Point person.



Findings 92: Mansa District Schools - MHM Focal Points (N=65)

MHM Toolkit

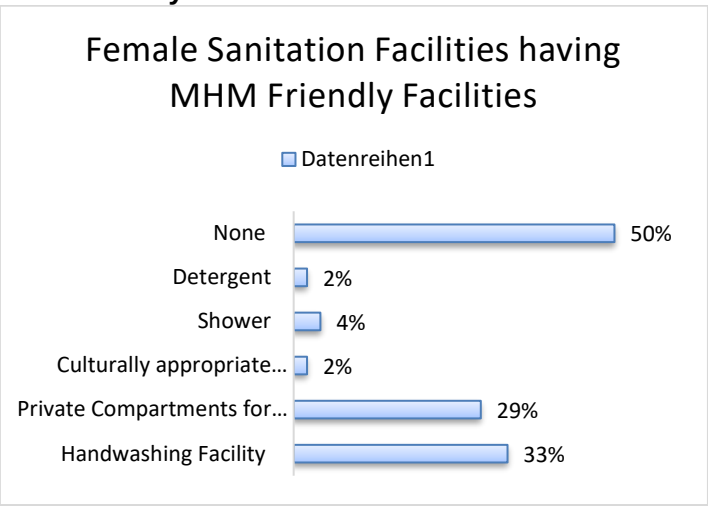




Findings 93: Mansa District Schools MHM Toolkit (N=65) and Training (N=12)

Only 19% of the schools in Mansa have an MHM Toolkit, from these only 67% have staff that have been trained on the MHM Toolkit.

MHM Friendly Facilities

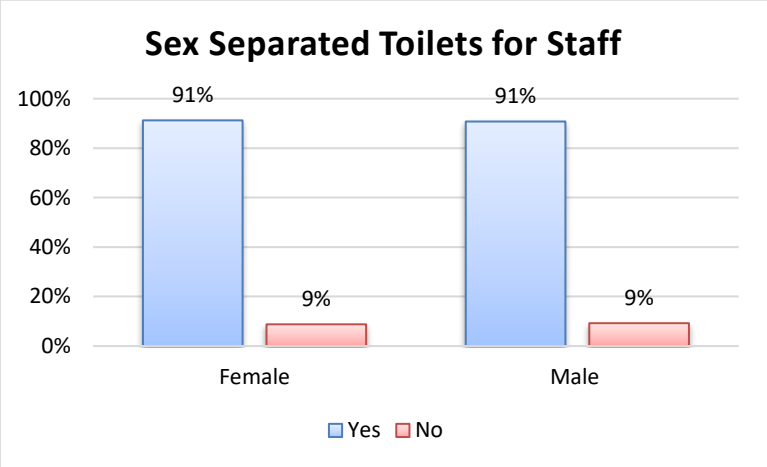


Majority of the schools do not fulfil the indicators for MHM friendly sanitation facilities.

Findings 94: Mansa District Schools - MHM friendly services in female sanitation facilities (N=48)

5.2.7 Gender sensitivity data and information

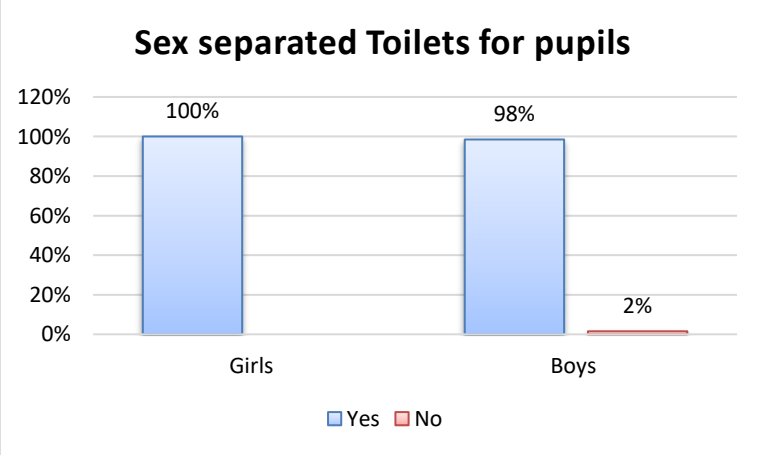
Sanitation facilities for Staff



Out of all the schools in Mansa with female and male staff, 91% had toilets dedicated to them

Findings 95: Mansa District Schools Sex separated toilets for schools with female (N=57) and male (N=65) staff

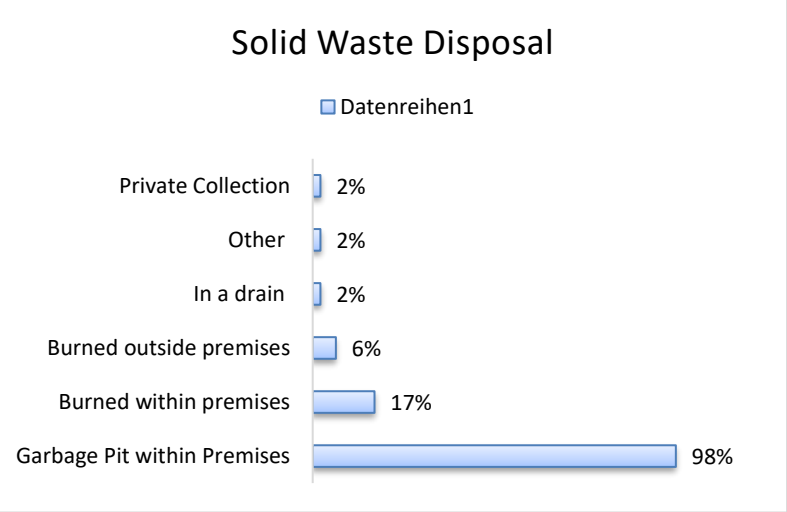
Sanitation facilities for Pupils



All the schools in Mansa with girls as pupils had toilets dedicated to them while for those that boys as pupils 98% had toilets dedicated to them.

Findings 96: Mansa District Schools Sex separated toilets for schools with girls (N=65) and boys (N=66) pupils

5.2.8 Solid Waste Management



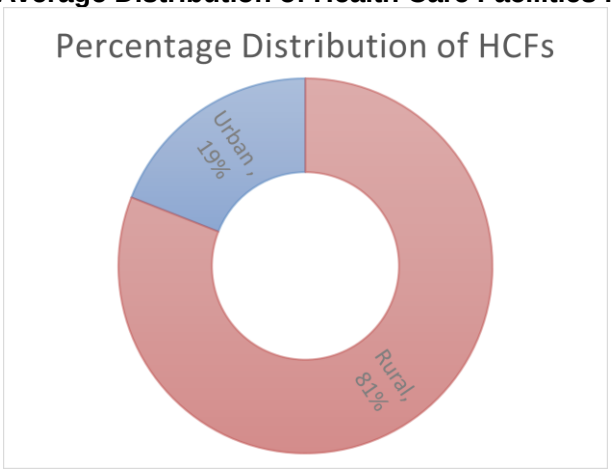
Majority of the Schools use garbage pits within the premises to dispose of Solid waste

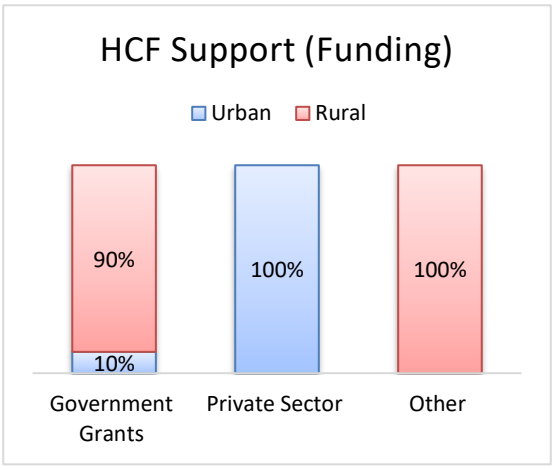
Findings 97: Mansa District Schools Solid Waste Disposal (N=48)

5.3 Healthcare Facilities

5.3.1 Health Care Facility Information & Electricity Connectivity

Average Distribution of Health Care Facilities in Mansa

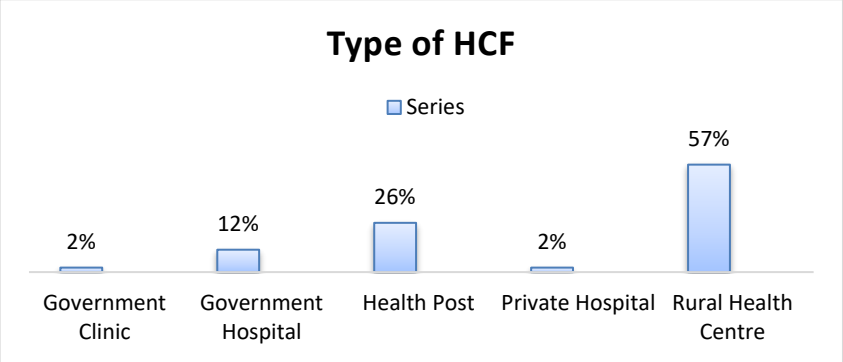




Findings 98: Mansa District Distribution of Health Care Facilities and sources of funding (N = 42)

There were more HCFs interviewed in the rural areas (81%) than in the urban areas. This generally represents the distribution of HCFs in Mansa. By far the majority of the HCF in Mansa (86%) are funded through government grants. This had a bearing on expenditure patterns as most of the goods and services are centrally purchased through the ministry of health and delivered to the HCF.

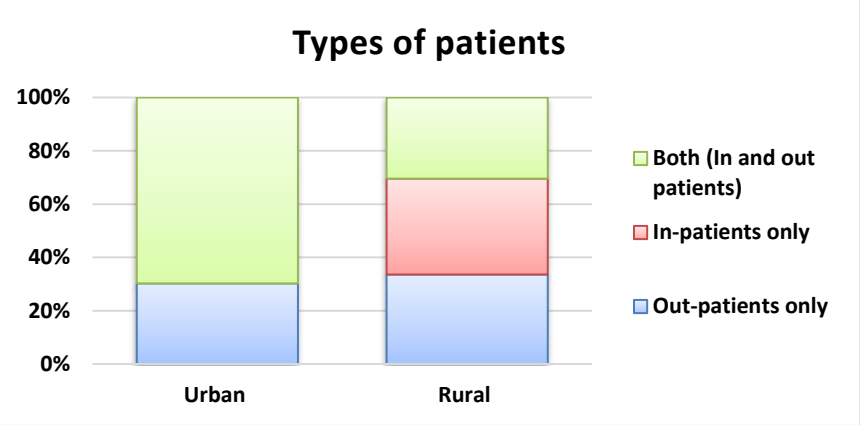
Types of HCFs



Majority of the HCFs interviewed were rural health centres (57%) and health posts (26%).

Findings 99: Mansa District Type of Health Care Facility (N = 42)

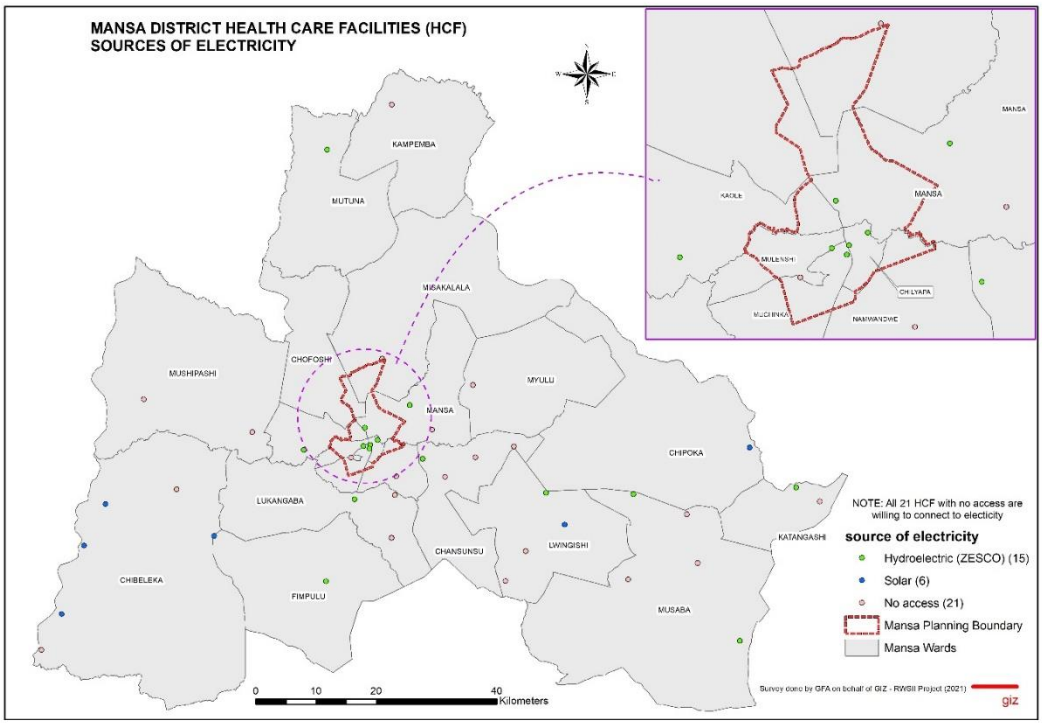
Type of Patients



The urban areas has patients categorised as Both and also out-patient only while the rural areas has all 3 categories.

Findings 100: Mansa District Health Care Facility catering for in- and out-patients (N = 41)

Connection to Electricity

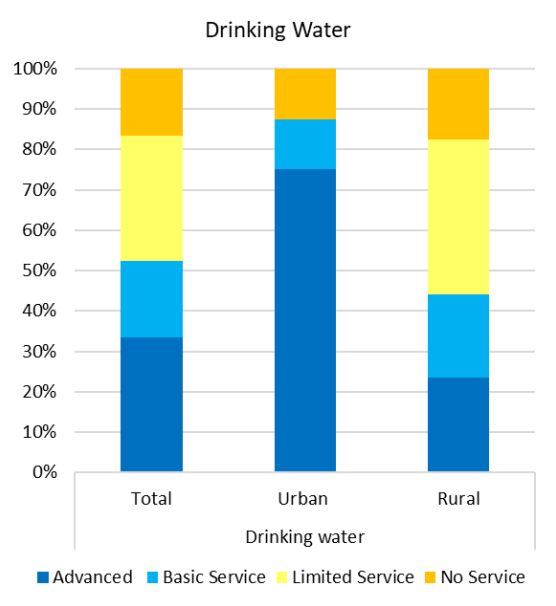


Findings 101: Mansa District Health Care Facilities - Connection to electricity

Half of the health care facilities in Mansa District do not have access to electricity and are willing to be connected. For the HCFs that are connected to electricity, they use either hydro-electricity or solar.

5.3.2 Water Supply Services

Mansa JMP Ladder for Drinking Water Services



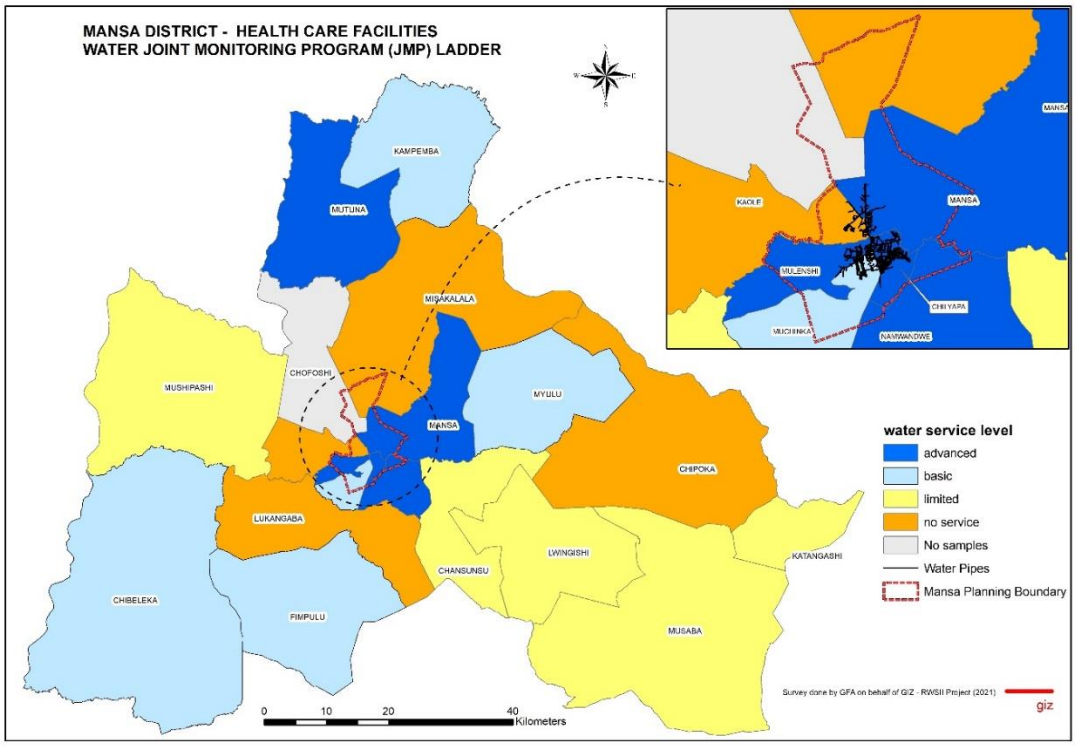
Findings 102: Mansa District Health Care Facilities - JMP for Drinking Water Services

Mansa	Drinking water		
	Total	Urban	Rural
Advanced	33.33%	75.00%	23.53%
Basic Service	19.05%	12.50%	20.59%
Limited Service	30.95%	0.00%	38.24%
No Service	16.67%	12.50%	17.65%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of HCFs in Mansa District using advanced services is 33.3%, rural HCFs being 23.5% and urban HCFs being 75%.

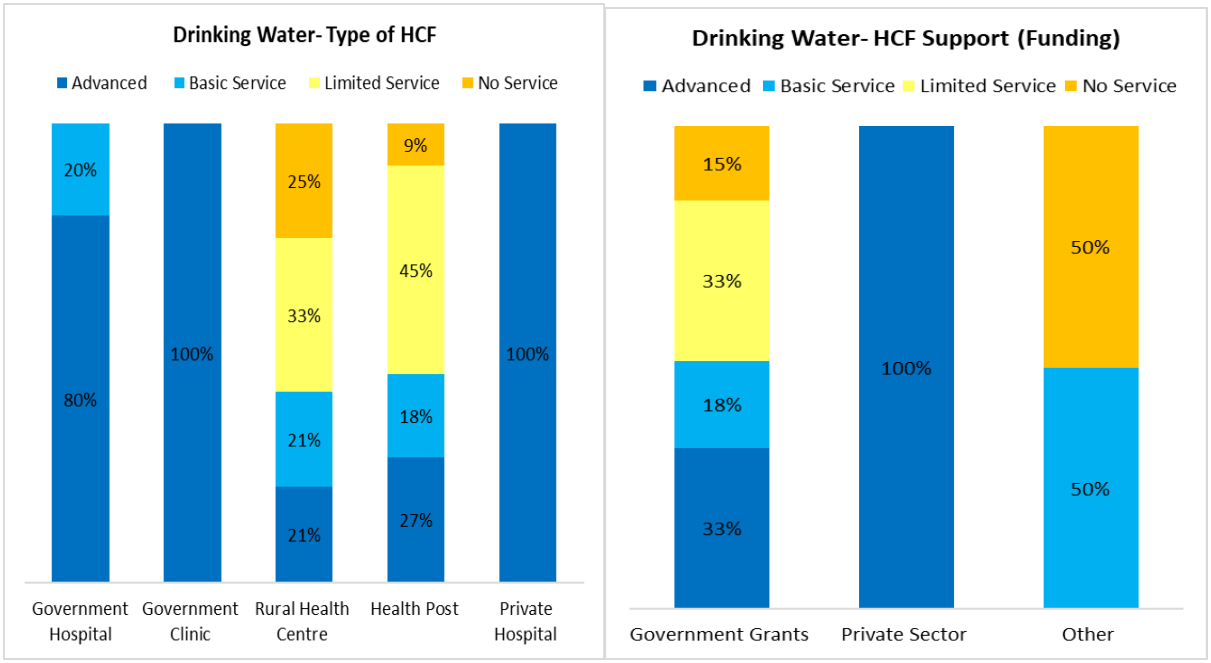
In 2021, out of 75 HCFs in Mansa District, 50 HCFs lacked advanced services including 14 schools with basic services, 23 schools with limited services, 13 schools having no water source or having access to an unimproved water source.

HCFs in the rural areas were three times as likely to lack advanced services as those in the urban areas. Please refer to Table 8 for the definition and clarifications on some of the Drinking water terms.



Findings 103: Mansa District Ward Level - JMP for HCF Drinking Water Services

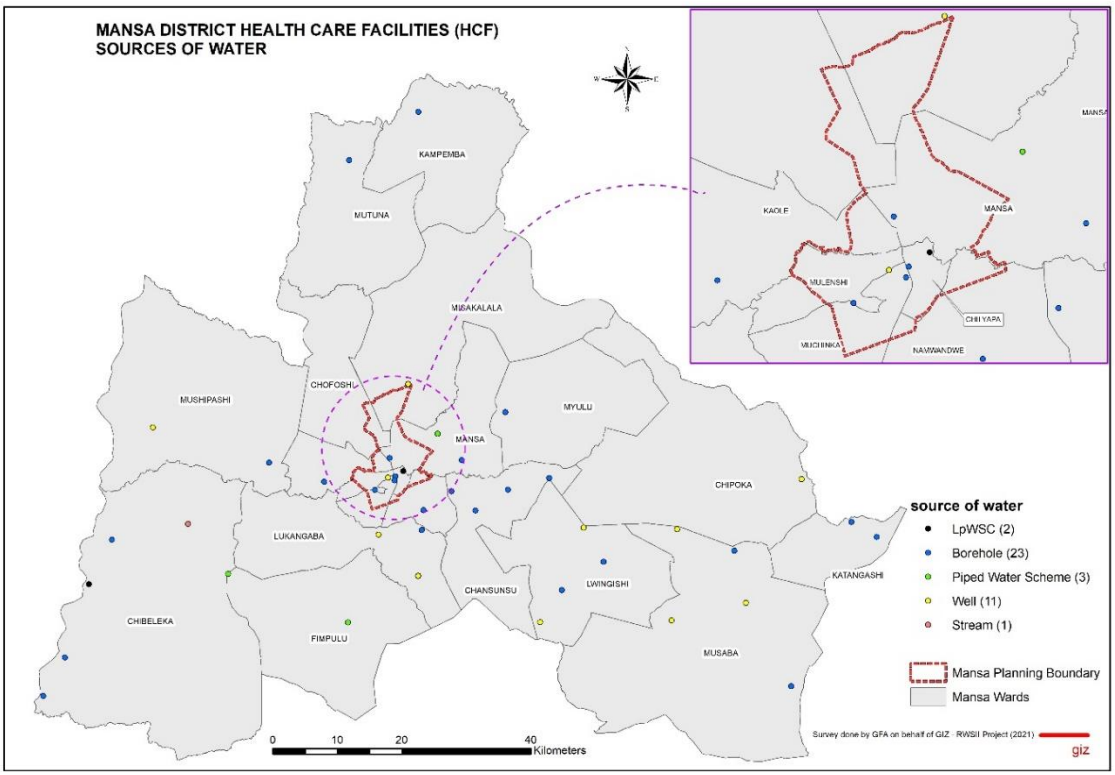
Findings 103 shows JMP indicators at the ward level. Out of the 20 wards in Mansa District, 4 wards, namely Mansa, Mutuna, Mulenshi, and Namwandwe, have majority of their HCFs having access to advanced service.



Findings 104: Mansa District - JMP for HCF Drinking Water Services by HCF Type and Funder

Most government hospitals, clinics and private hospitals have access to advanced services unlike the rural health centres and health posts having mostly unlimited and no service. Meanwhile, the private sector funded schools had advanced water services.

Type of water source

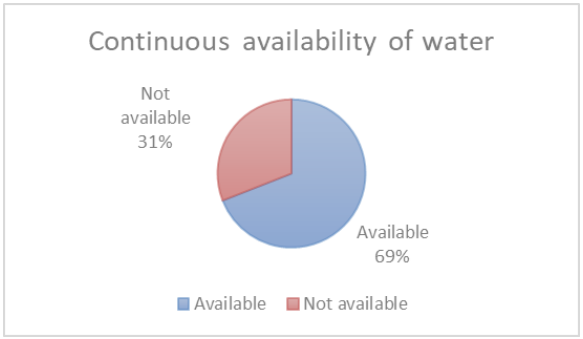


Findings 105: Mansa District HCFs - Type of Water Sources/ Access

From Findings 105, in general, the main source of water for HCFs was boreholes (58%) and wells (28%).

Water Availability

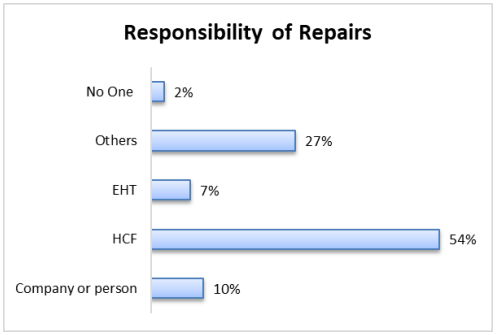
Majority of the HCFs (69%) indicated water to be continuously available.



Findings 106: Mansa District - Availability of water for HCFs (N = 42)

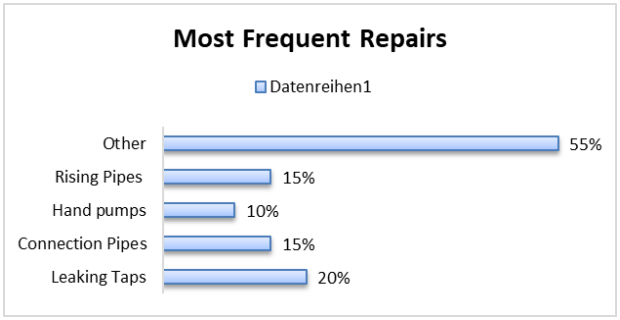
Maintenance of water services

The responsibility for maintenance/ repair works lies with the HCF that is having access to the water source.



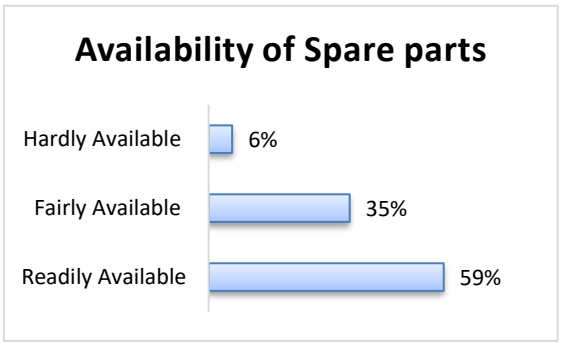
Findings 107: Mansa District - Responsibility for maintenance / repair works of the water source for HCFs (N = 41)

Majority of the repairs done on the water source were categorised under other repairs (55%) which mostly included the replacement of rubbers, seconded by leaking taps (20%). In addition, 51% of HCFs reported no repairs.



Findings 108: Mansa District HCF Water Service Frequent Repairs (N = 19)

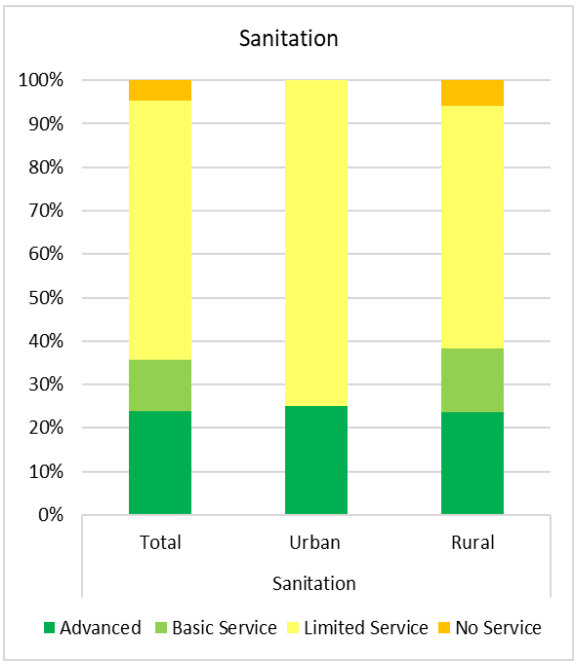
59% of the HCFs noted that spare parts were readily available and only 6% indicated that they were hardly available.



Findings 109: Mansa District HCF availability of spare parts (N = 17)

5.3.3 Sanitation Services

Mansa JMP Ladder for Sanitation Services



Findings 110: Mansa HCF JMP ladder for sanitation

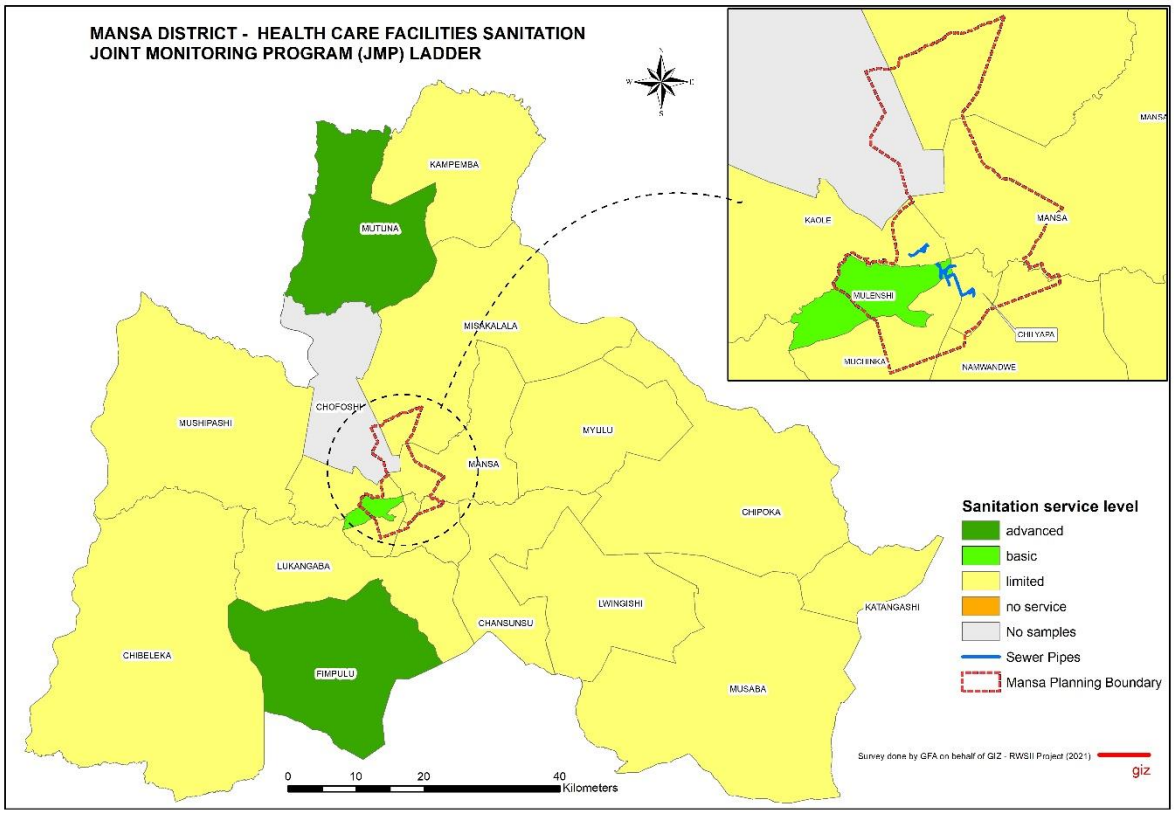
Mansa	Sanitation		
	Total	Urban	Rural
Advanced	23.81%	25.00%	23.53%
Basic Service	11.90%	0.00%	14.71%
Limited Service	59.52%	75.00%	55.88%
No Service	4.76%	0.00%	5.88%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of HCFs in Mansa District using advanced services is 23.8%, rural coverage being 23.5% and urban coverage being 25%.

In 2021, out of an estimated 75 HCFs in Mansa District, 57 HCFs lacked advanced services including 9 HCFs with basic services, 45 HCFs with limited services and 4 HCFs having no toilet or having access to unimproved facilities.

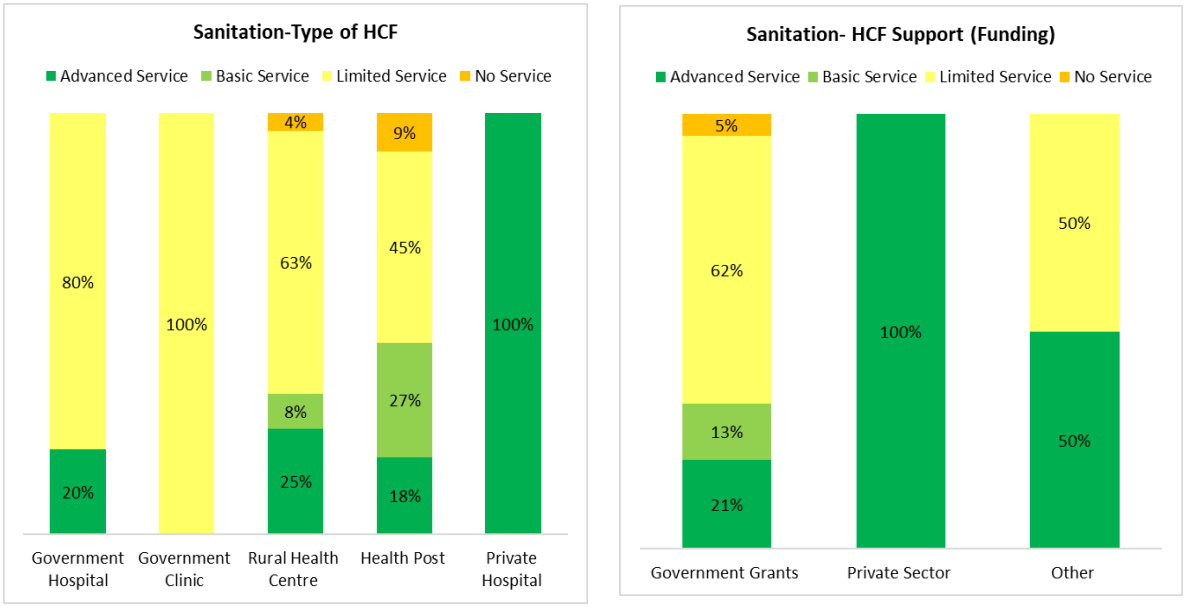
There was no HCF in the urban areas having access to basic service or no service. Majority of the HCFs in Mansa District have access to limited service because of they did not have atleast one facility dedicated to staff.

Please refer to Table 9 or the definition and clarifications on some of the sanitation terms.



Findings 111: Mansa District Ward level JMP for HCF Sanitation Services

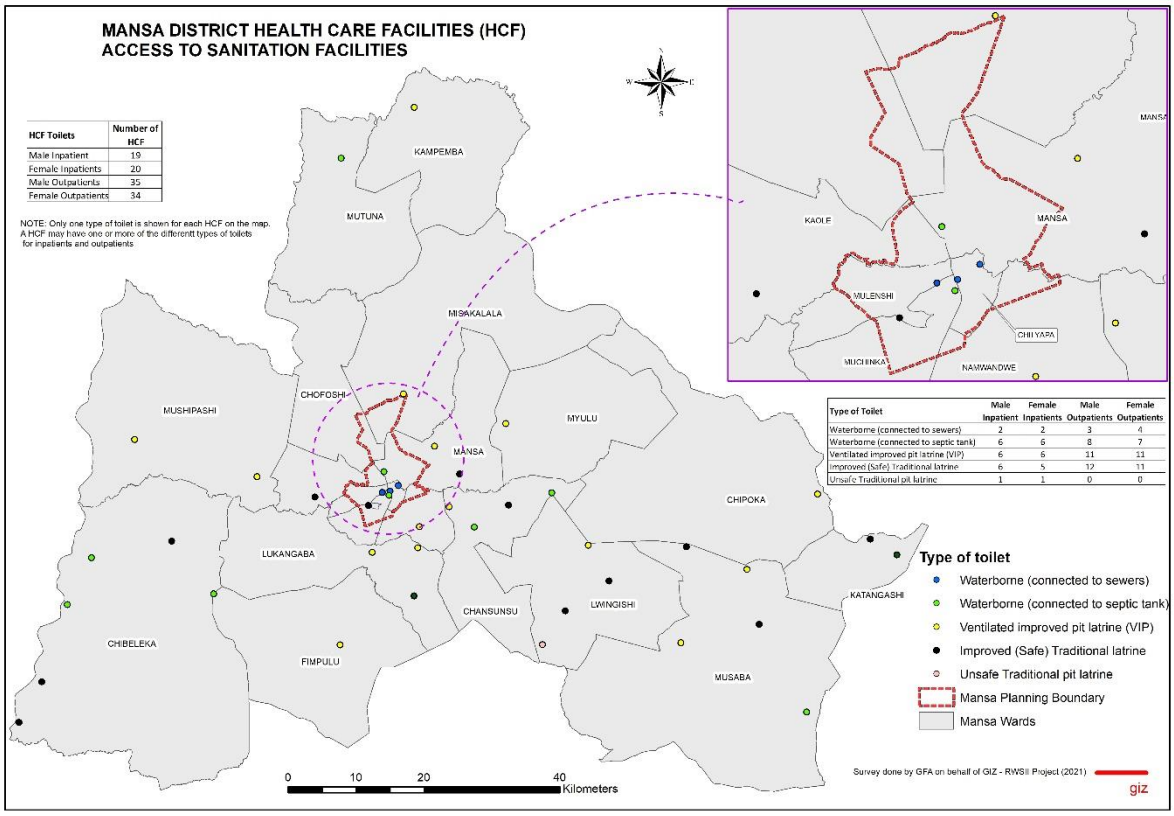
Findings 111 shows JMP indicators at ward level. Out of the 20 wards in Mansa District, only 2 wards, Fimpulu and Mutuna, have HCFs with access to advanced service. The majority of the wards in Mansa District have HCFs with access to limited sanitation services.



Findings 112: Mansa District JMP for HCF Sanitation Services by HCF type and funder

100% of the private hospitals have access to advanced sanitation while most of the other facilities fall under limited. Only 21% of the hospitals funded by Government grants have access to advanced sanitation and about 5% of these have no service.

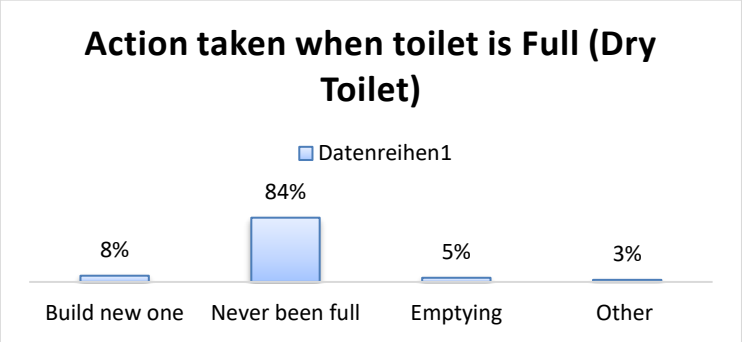
Access to Sanitation Facilities



Findings 113: Map of Mansa District HCFs - Access to Sanitation facilities

From Findings 113, in general, the main type of sanitation for HCFs were VIPs, seconded by improved safe traditional latrines. Very few HCFs are connected to LpWSC sewer network.

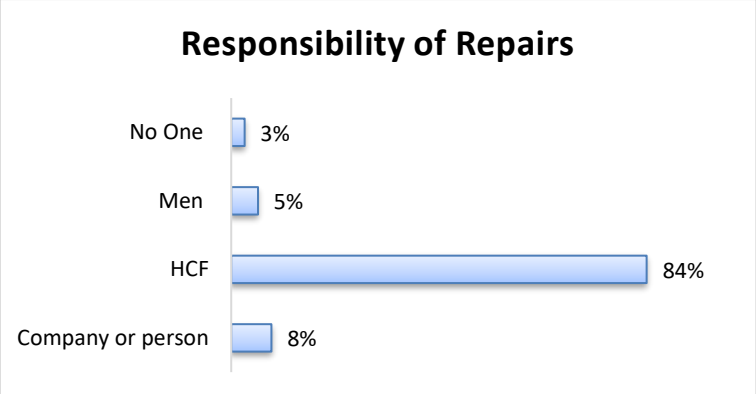
Emptying Practices



Similar to the households and schools, HCF toilet emptying practices are to build a new one while most HCF's toilets have never been full.

Findings 114: Mansa District HCF Toilet Emptying Practices (N = 37)

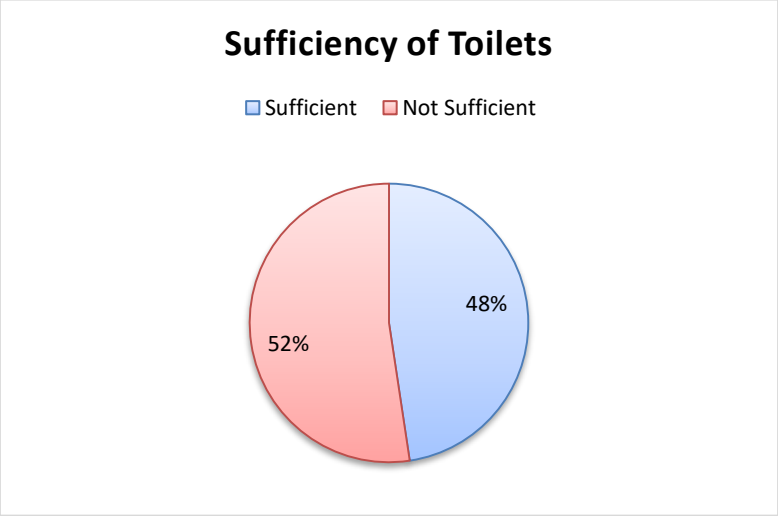
Maintenance of sanitation facilities



In general, the HCF mostly takes responsibility of repairing the toilets (84%).

Findings 115: Mansa District HCFs-Responsibility for Repair of Toilet (N = 37)

Sufficiency of Toilets

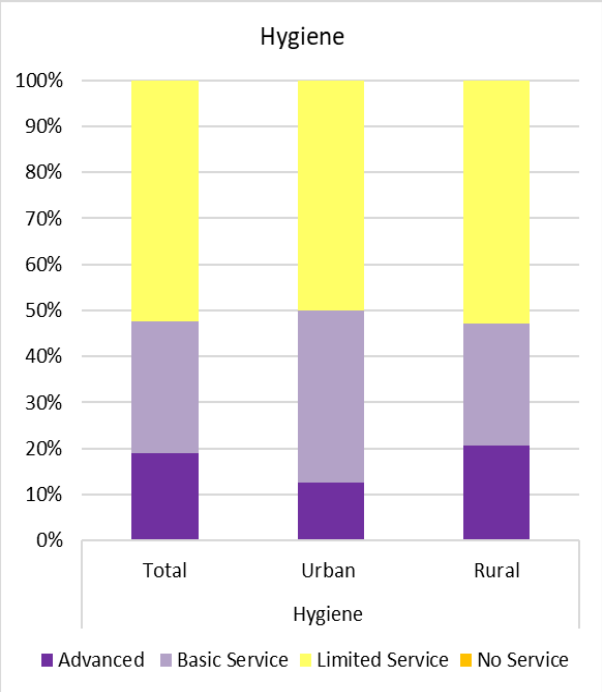


52% of the HCFs in Mansa have insufficient toilets this is because the number of toilets does not match the population and no toilets dedicated for staff

Findings 116: Mansa District Schools-Sufficiency and Usability of Sanitation Facilities (N = 42)

5.3.4 *Hygiene Services*

Mansa JMP Ladder for Hygiene Services



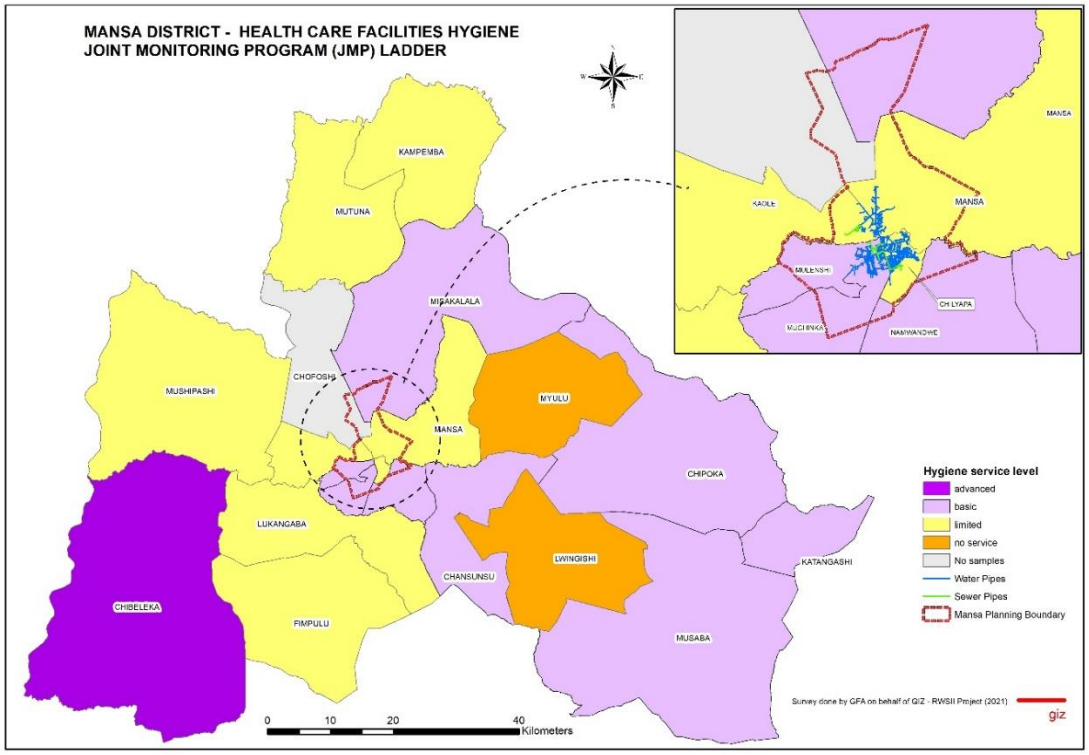
Findings 117: Mansa District Health Care Facilities JMP ladder for Hygiene Services

Mansa	Hygiene		
	Total	Urban	Rural
Advanced	19.05%	12.50%	20.59%
Basic Service	28.57%	37.50%	26.47%
Limited Service	52.38%	50.00%	52.94%
No Service	0.00%	0.00%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of HCFs in Mansa District using advanced service is 19%, rural HCFs being 20.6% and urban coverage being 12.5%. This is because there was need for a showering facility in place

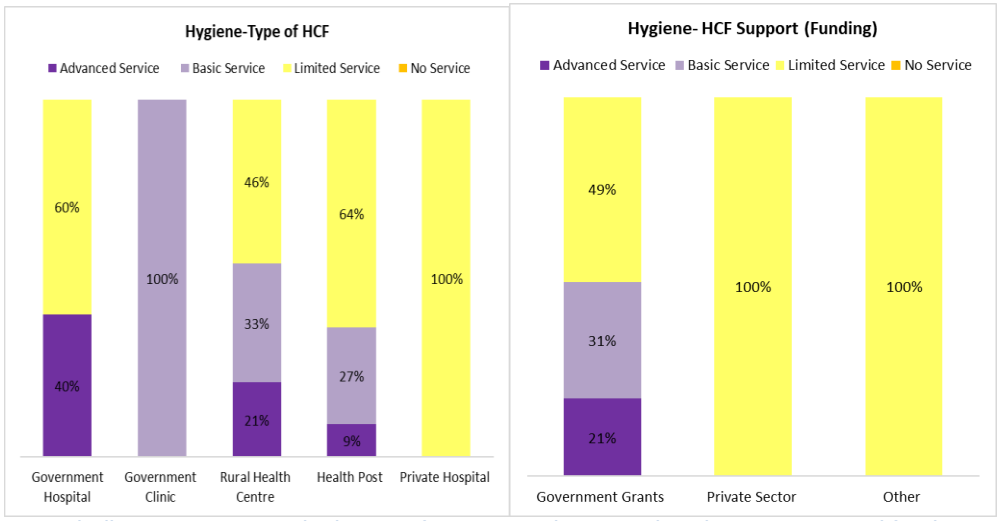
In 2021, out of 75 HCFs in Mansa District, 61 HCFs lacked advanced services including 21 with basic services and 39 with limited service. There were no HCFs with no service.

Please refer to Table 9 for the definition and clarifications on some of the Hygiene Terms.



Findings 118: Mansa District Ward Level JMP for HCFs Hygiene Services

Findings 118 shows JMP indicators at the ward level. Out of the 20 wards in Mansa District, only 1 ward, Chibeleka has HCFs with access to advanced hygiene services. Majority of the wards in Mansa District have HCFs with access to either basic or limited hygiene services.

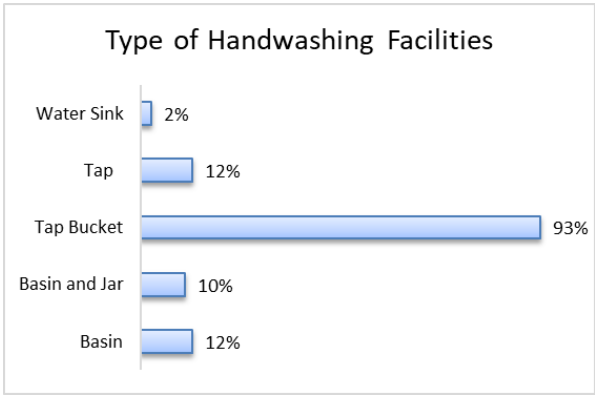


Findings 119 Mansa District JMP for HCF Hygiene Services by HCF type and funder

40% of the Government Hospitals have access to advanced service while 100% of the private hospitals have access to limited service i.e. the hand hygiene facilities are available at either points of care or toilets but not both.

Type of Handwashing Facilities

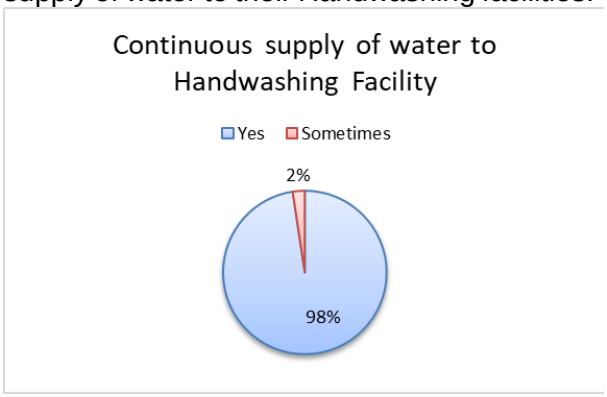
Majority (93%) of the HCFs use tap bucket.



Findings 120: Mansa District HCFs-types of Handwashing Facilities (N = 42)

Continuous availability of water

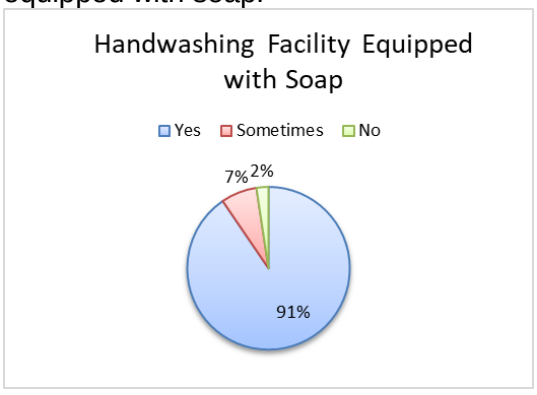
Majority (98%) of the HCFs have continuous supply of water to their Handwashing facilities.



Findings 121: Mansa District HCF handwashing facility supplied with water continually (N = 42)

Handwashing with soap

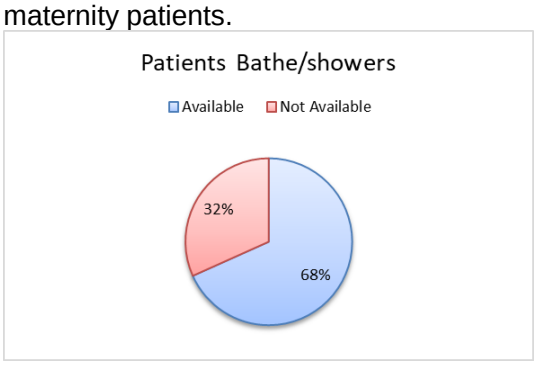
91% of the handwashing facilities were equipped with soap.



Findings 122: Mansa District Handwashing with Soap practices (N = 42)

Shower Provision

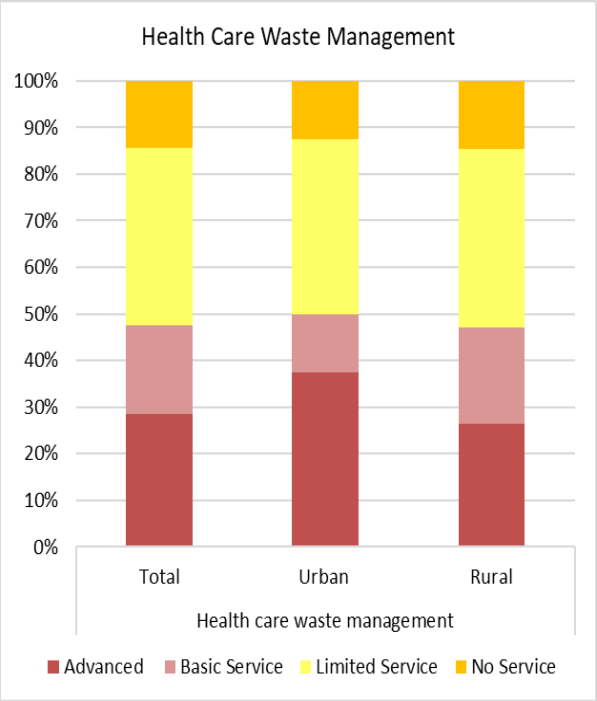
68% of the HCFs have a patient's bathe or shower available, for 32% the alternative was to use nearby household especially for the maternity patients.



Findings 123: Mansa District HCF place for the patients to shower or bathe (N = 41)

5.3.5 Health Care Waste Management

Mansa JMP Ladder for Health Care Waste Management Services



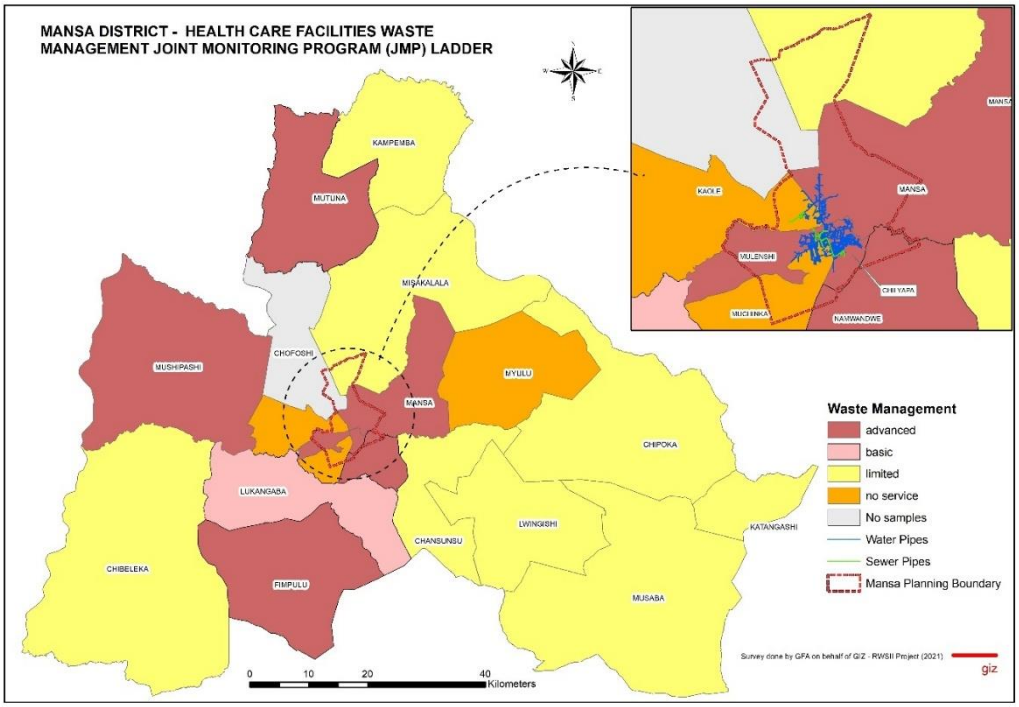
Findings 124: Mansa District Schools JMP Ladder for Health Care Waste Management Services

Mansa	Health care waste management		
	Total	Urban	Rural
Advanced	28.57%	37.50%	26.47%
Basic Service	19.05%	12.50%	20.59%
Limited Service	38.10%	37.50%	38.24%
No Service	14.29%	12.50%	14.71%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of HCFs in Mansa District using advanced service is 28.6%, rural HCFs being 26.5% and urban coverage being 37.5%. This is because there was need for the separation of organic waste.

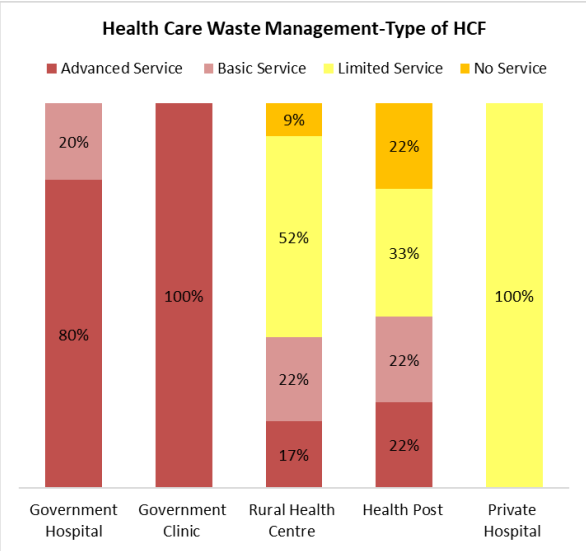
In 2021, Out of 75 HCFs in Mansa District, 54 HCFs lacked advanced services including 14 with basic services, 29 with limited service and 11 HCFs with no separation bins for sharps or infectious waste and/or the sharp and infectious waste is not treated.

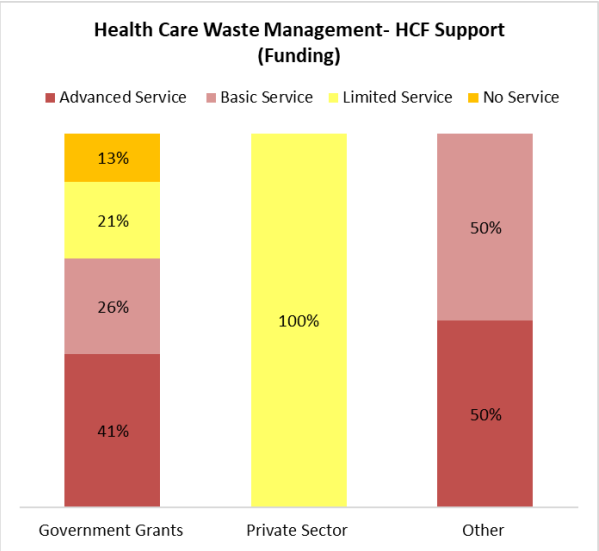
Please refer to Table 11 for the definition and clarifications on some of the Health Care Waste Management Terms.



Findings 125: Mansa District Ward Level JMP for HCFs Waste Management Services

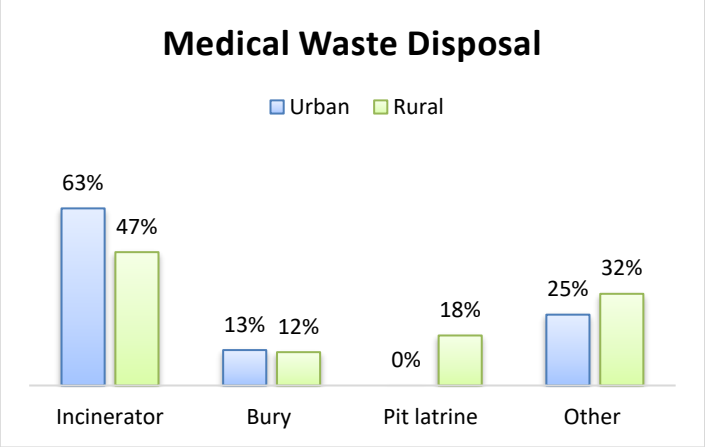
Findings 125 shows JMP indicators at the ward level. Out of the 20 wards in Mansa District, 7 wards have HCFs with Waste Management at advanced level. The majority have limited level of Waste Management.





80% of the Government Hospitals have access to advanced service while 100% of the private hospitals have access to limited service i.e. limited separation of waste.

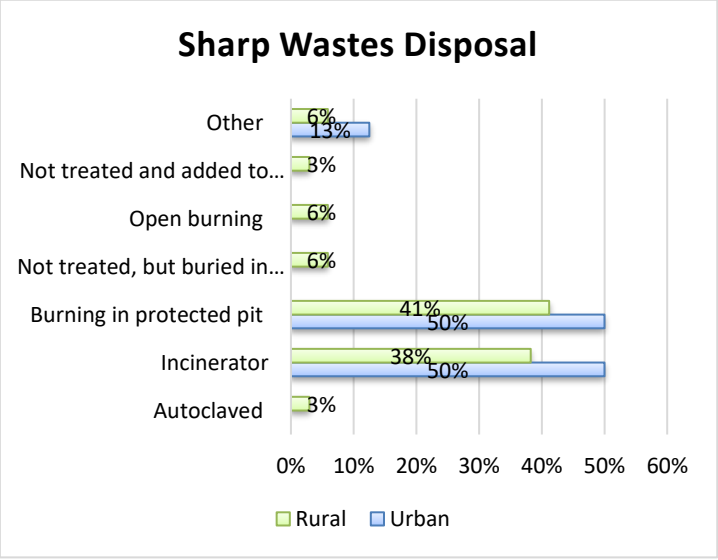
Medical Waste Disposal



Majority of the HCFs in the urban (63%) and rural (47%) areas use incinerators to dispose medical waste.

Findings 126: Mansa District HCFs-medical wastes disposal (N = 42)

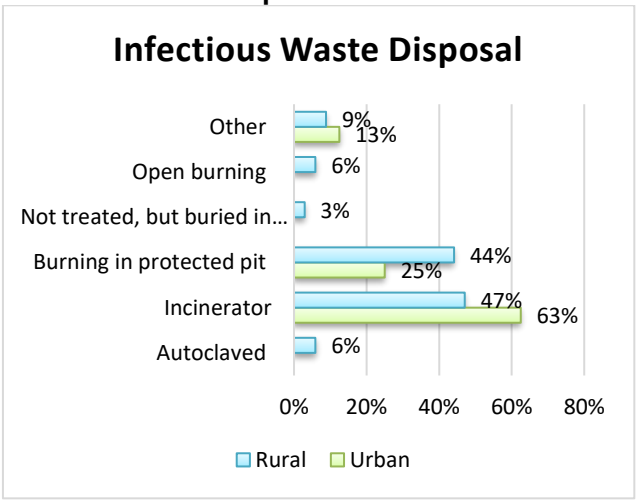
Sharp Wastes Disposal



Majority of the HCFs in the urban and rural areas use incinerators to dispose sharp wastes and also burning in protected pit.

Findings 127: Mansa District HCFs-sharp wastes disposal (N = 42)

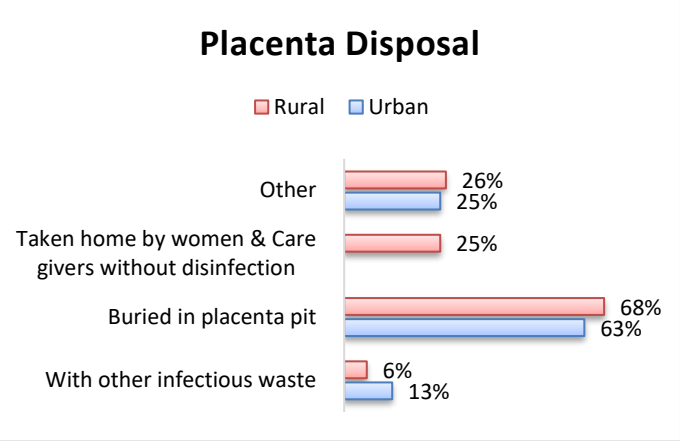
Infectious Waste Disposal



Majority of the HCFs in the urban and rural areas use incinerators to dispose infectious wastes and also burning in protected pit.

Findings 128: Mansa District HCFs-infectious wastes disposal (N = 42)

Placenta Disposal

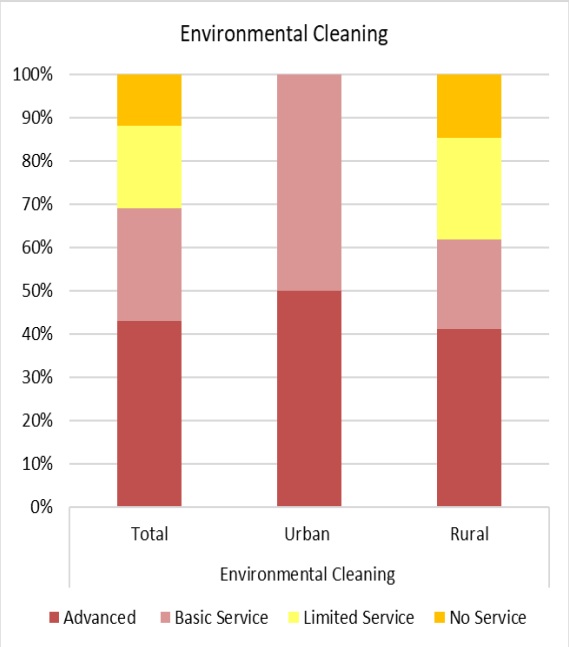


Majority of the HCFs in the urban and rural areas bury in placenta pits to dispose of placentas or burn in a protected pit.

Findings 129: Mansa District HCFs- placenta disposal (N = 41)

5.3.6 *Environmental Cleaning*

Mansa JMP Ladder for Environmental Cleaning Services



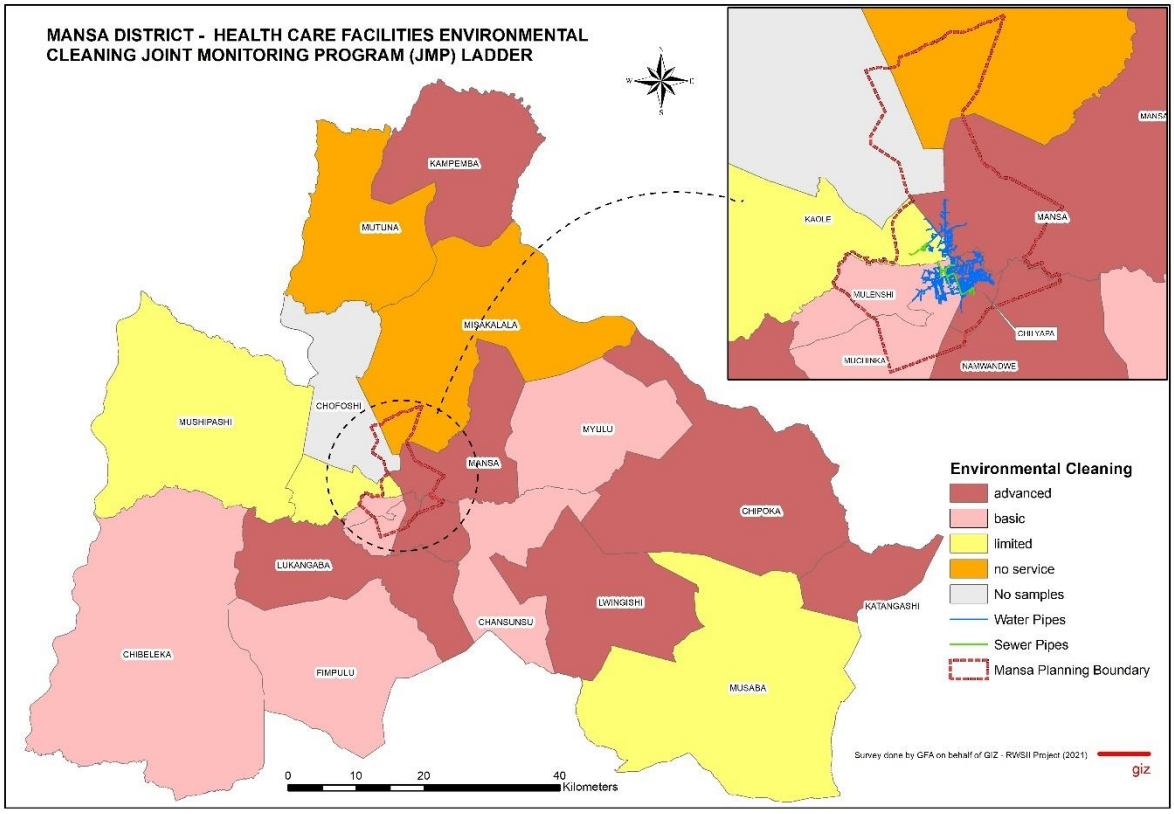
Findings 130: Mansa District Schools JMP Ladder for Environmental Cleaning Services

Mansa	Environmental Cleaning		
	Total	Urban	Rural
Advanced	42.86%	50.00%	41.18%
Basic Service	26.19%	50.00%	20.59%
Limited Service	19.05%	0.00%	23.53%
No Service	11.90%	0.00%	14.71%
Total	**100.00%**	**100.00%**	**100.00%**

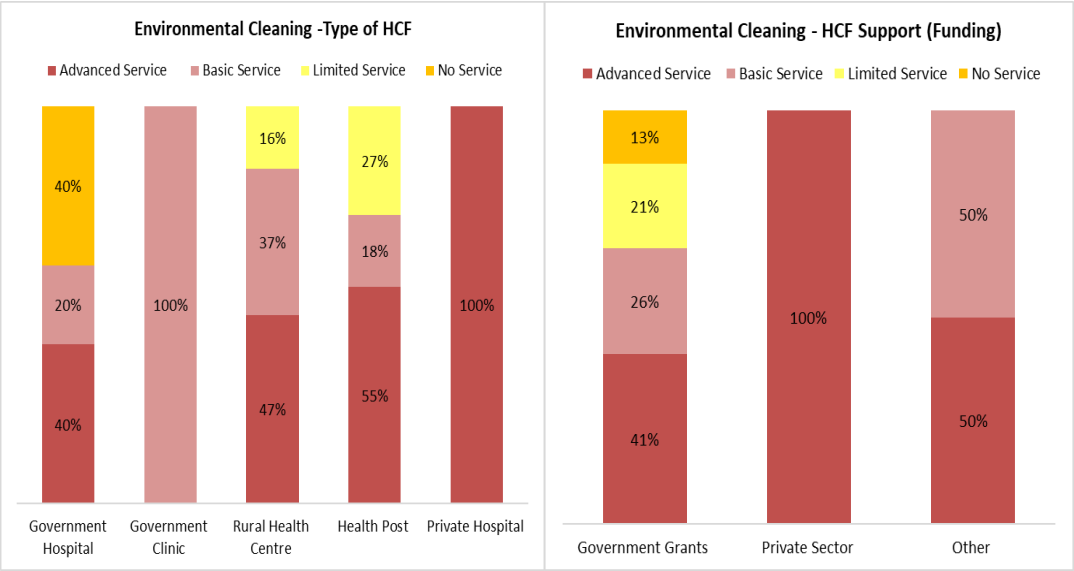
The proportion of HCFs in Mansa District using Advanced service is 42.9%, rural HCFs being 41.2% and urban coverage being 50%.This is because there was need cleaning materials to be available.

In 2021, Out of 75 HCFs in Mansa District, 43 schools lacked advanced services including 20 with basic services, 14 with limited service and 10 with no cleaning protocols available and no staff having received training on cleaning.

Please refer to Table 12 for the definition and clarifications on some of the Environmental cleaning Terms.



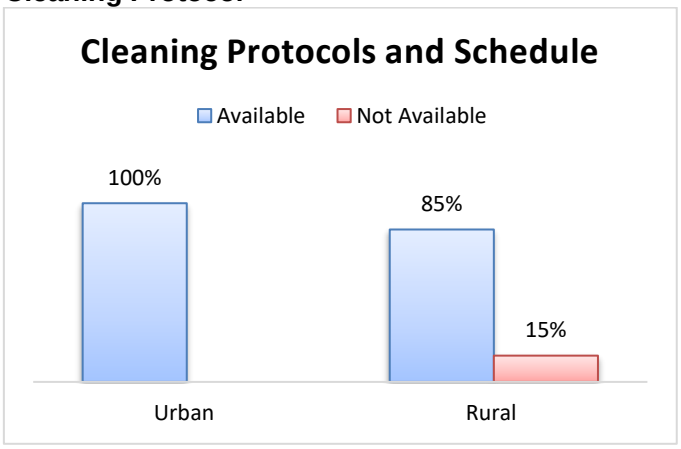
Findings 131: Mansa District Ward level JMP for HCFs Environmental Cleaning Services



Findings 132: Mansa District JMP for HCF Environmental Cleaning Services by HCF type and funder

40% of Government Hospitals have access to advanced service while 100% of the private hospitals have access to advanced service.

Cleaning Protocol



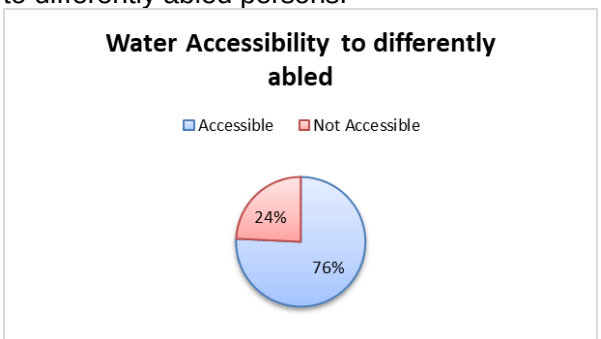
100% of the HCFs have cleaning protocols and cleaning schedule while 15% of HCFs in rural areas do not.

Findings 133: Mansa District HCFs-cleaning protocols (N = 41)

5.3.7 Social Inclusion

Accessibility of Water Facilities

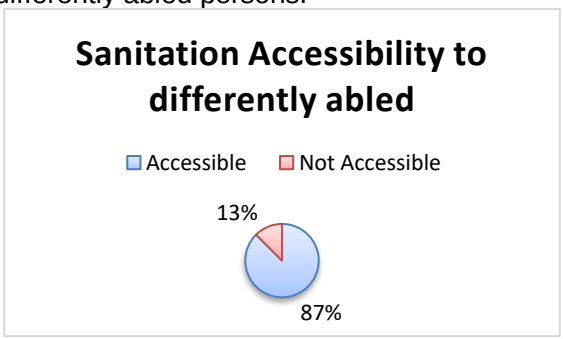
76% of the water supply facilities are accessible to differently abled persons.



Findings 134: Mansa District HCFs - Water accessible for people with disabilities (N = 33)

Accessibility of Sanitation Facilities

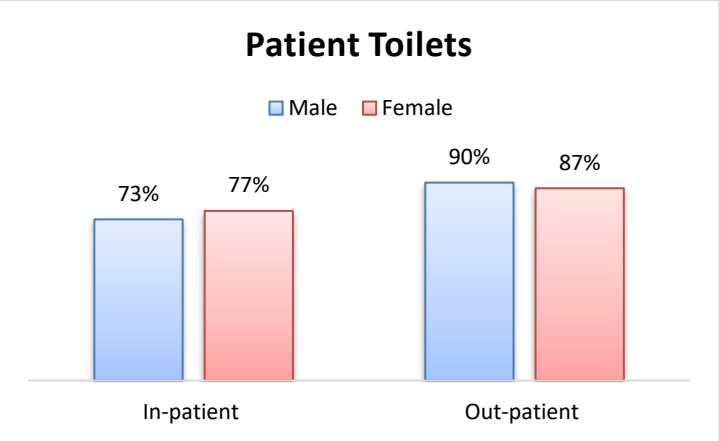
87% of the sanitation facilities are accessible to differently abled persons.



Findings 135: Mansa District HCFs – Sanitation Facilities accessible for people with disabilities (N = 40)

5.3.8 Gender sensitivity data and information

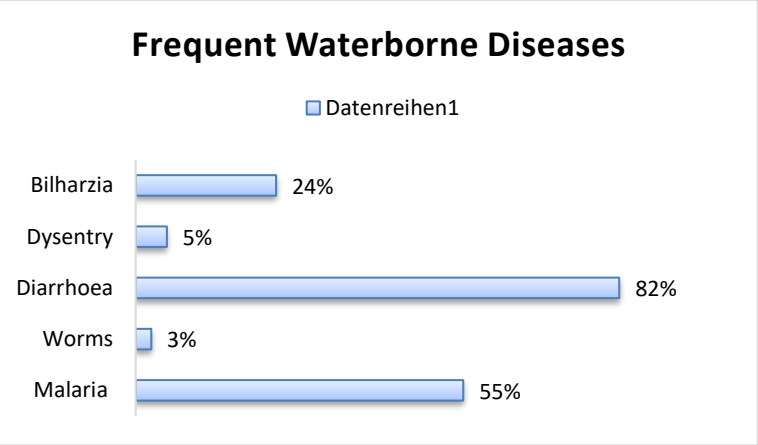
Patient Toilets



There are more sex separated toilets for out-patient toilets than for in-patient toilets.

Findings 136: Mansa District HCFs – Toilet availability for Male / Female Inpatients/ Outpatients (N = 41)

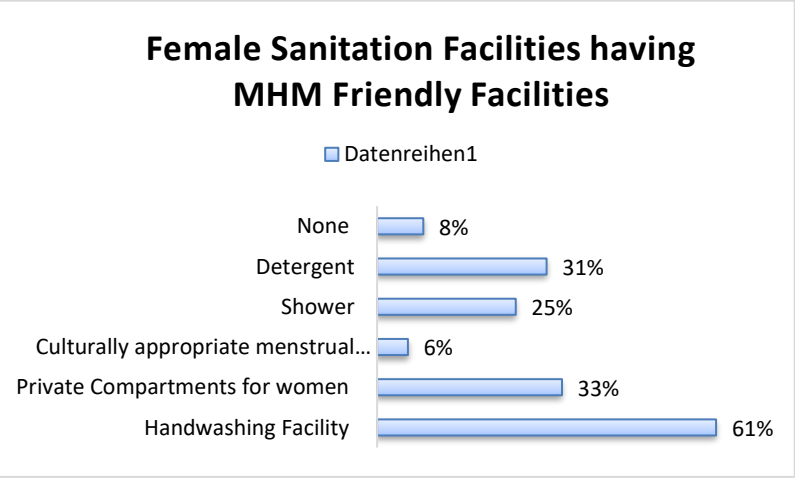
5.3.9 Waterborne Diseases



82% of the frequent cases attended to at the HCFs are diarrhoea diseases and Malaria 55%.

Findings 137: Mansa District HCF - Most frequent water borne disease in the Health Care Facility (N = 41)

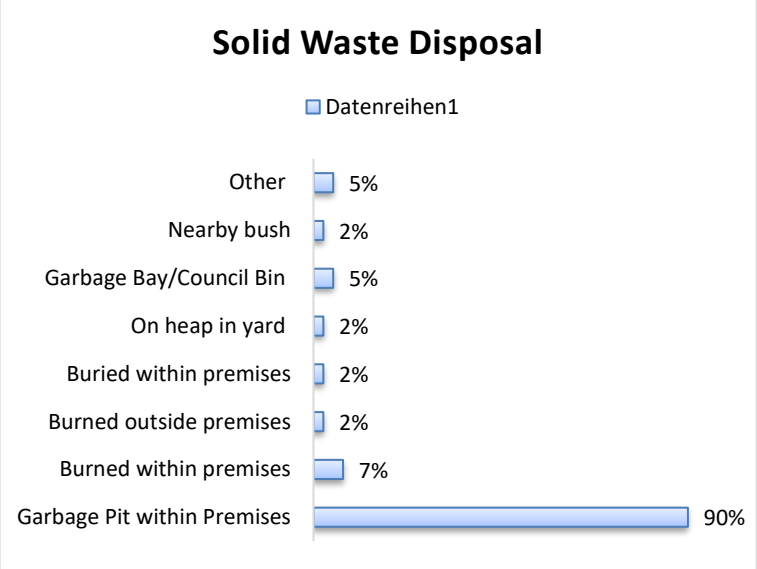
5.3.10 Menstrual Hygiene Management



Majority of the HCFs have handwashing facilities but lack most of the other indicators for MHM friendly sanitation facilities.

Findings 138: Mansa District HCF - Female sanitation facilities MHM friendly (N = 29)

5.3.11 *Solid Waste Management*



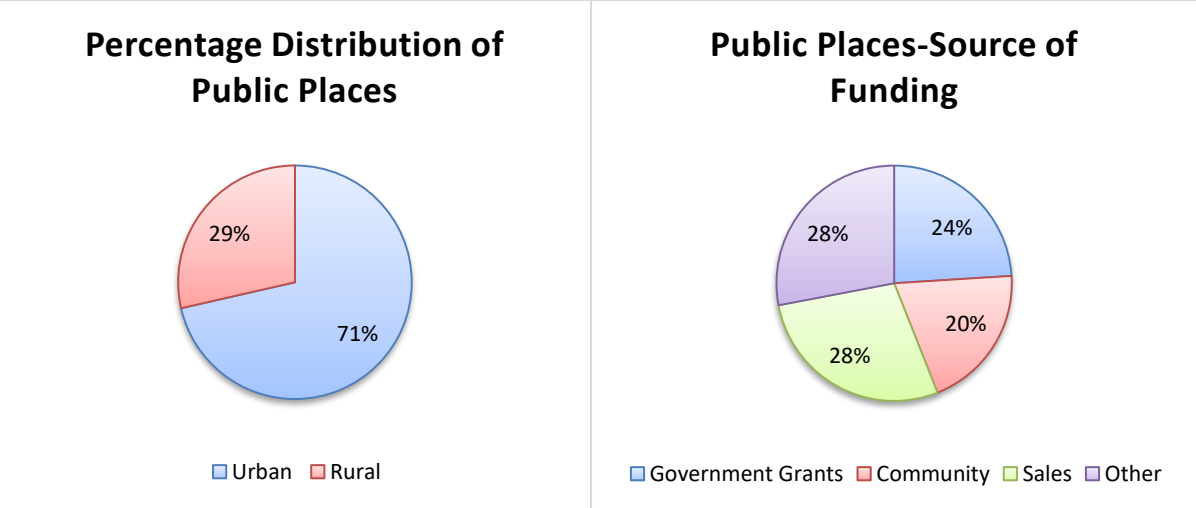
Majority of the HCFs use garbage pits within the premises to dispose of Solid waste.

Findings 139: Mansa District HCFs Solid Waste Disposal (N = 42)

5.4 Public Places

5.4.1 *Overview of Public Places & Electricity Connectivity*

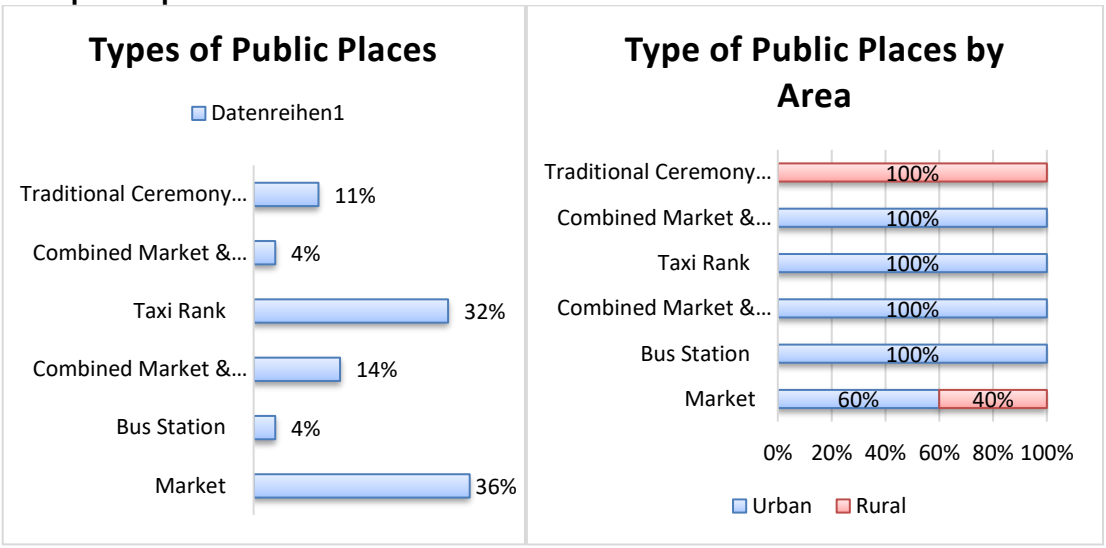
Average Distribution of Public Places in Mansa



Findings 140: Mansa District Distribution of Public Places (N = 28)

There were more public places interviewed in the urban areas (71%) than in the rural areas. This represents the distribution of public places in Mansa as all properties were visited. Funding for public places is generally spread out across all areas with the category of other mainly being no funding.

Types of public places

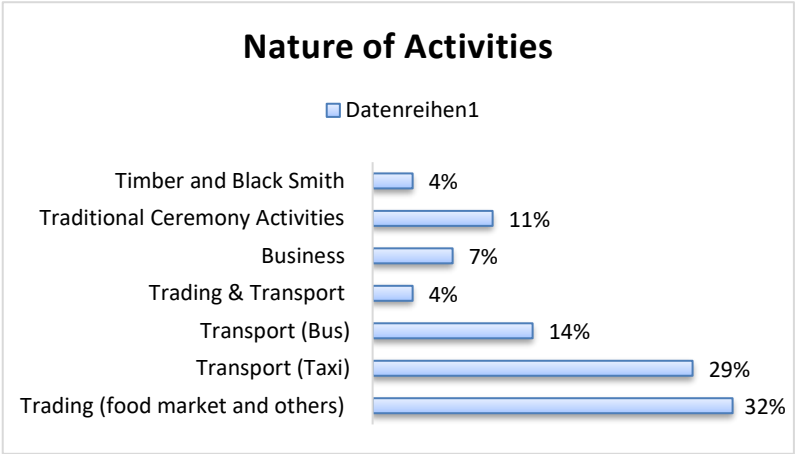


Findings 141: Mansa District - Types of public places (N = 28)

Majority of the public places in Mansa District are markets (36%) and taxi ranks only (32%). From these 60% of the markets are in the urban areas while all of these taxi ranks only are in the urban.

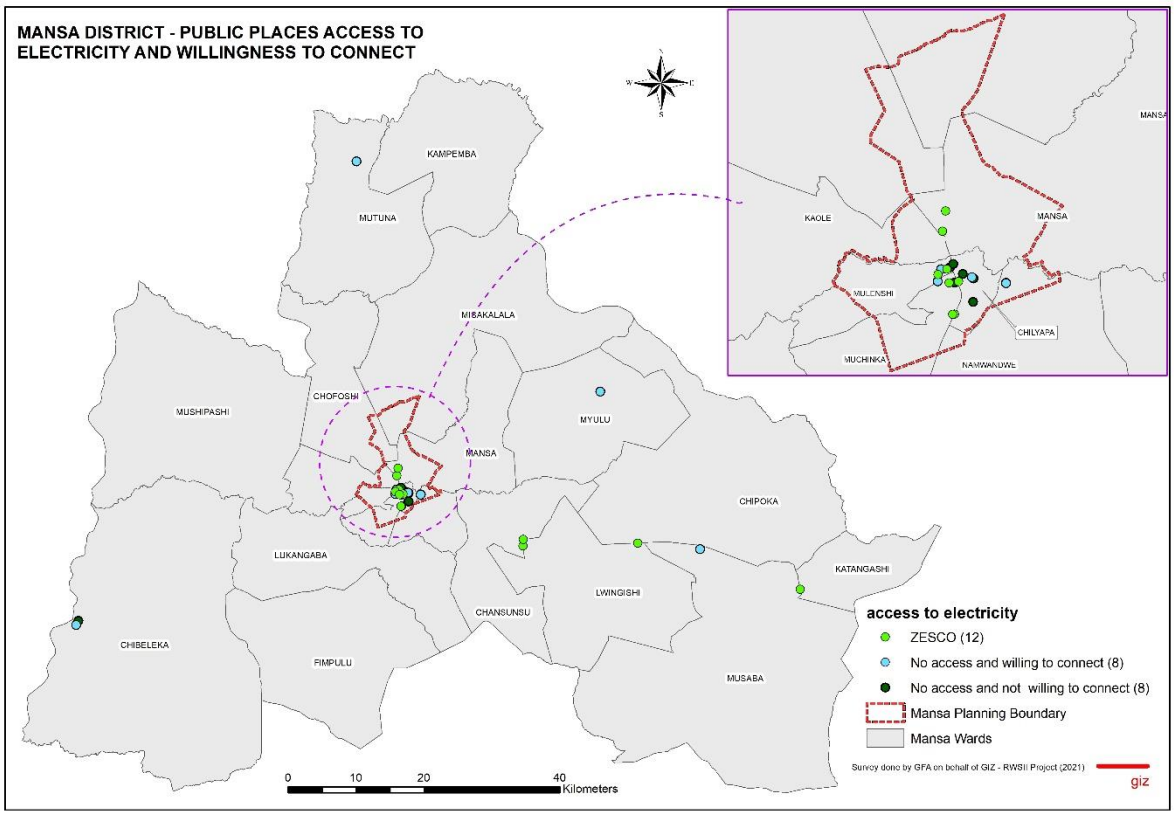
Nature of Activities

The nature of activities of majority of the public places in Mansa is trading and transportation.



Findings 142: Mansa District- Public Places Nature of activities (N = 28)

Connection to Electricity

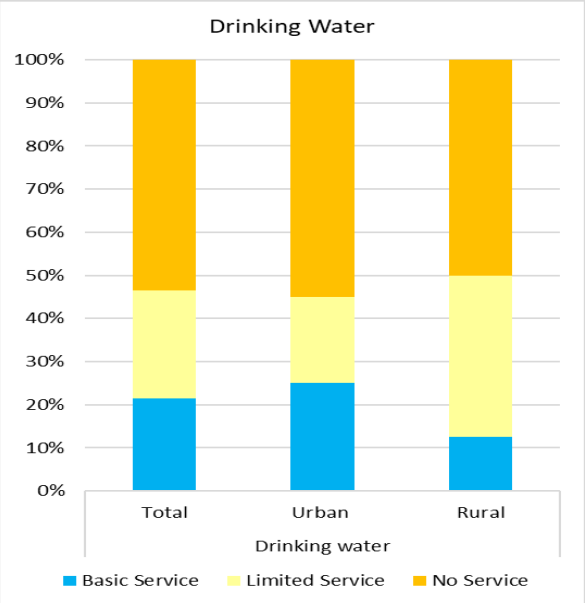


Findings 143: Mansa District - Electricity connection of public places (N = 28)

Most of the public places in Mansa are not connected to electricity, out of those that are not connected there are still places that are not willing to connect to electricity.

5.4.2 Water Supply Services

Mansa JMP Ladder for Drinking Water Services



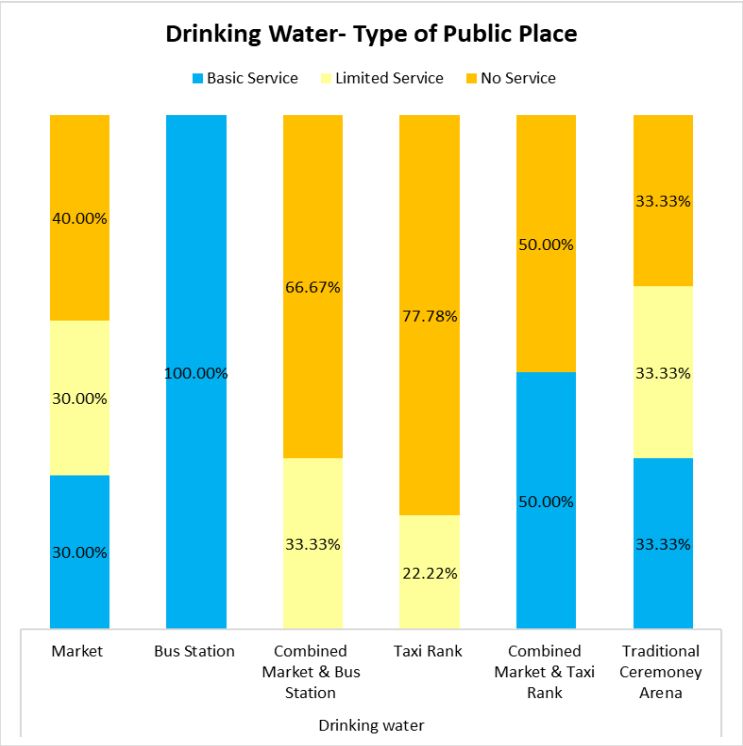
Findings 144: Mansa District Ward Level JMP for public places Drinking Water Services

Mansa	Drinking water		
	Total	Urban	Rural
Basic Service	21.43%	25.00%	12.50%
Limited Service	25.00%	20.00%	37.50%
No Service	53.57%	55.00%	50.00%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of Public Places in Mansa District using basic services is 21.4%, rural public places being 12.5% and urban public places being 25%.

In 2021, Out of the 28 Public Places in Mansa District, 22 Public Places lacked basic services including 7 public places with limited services, and 15 public places having no water source or having access to an unimproved water source.

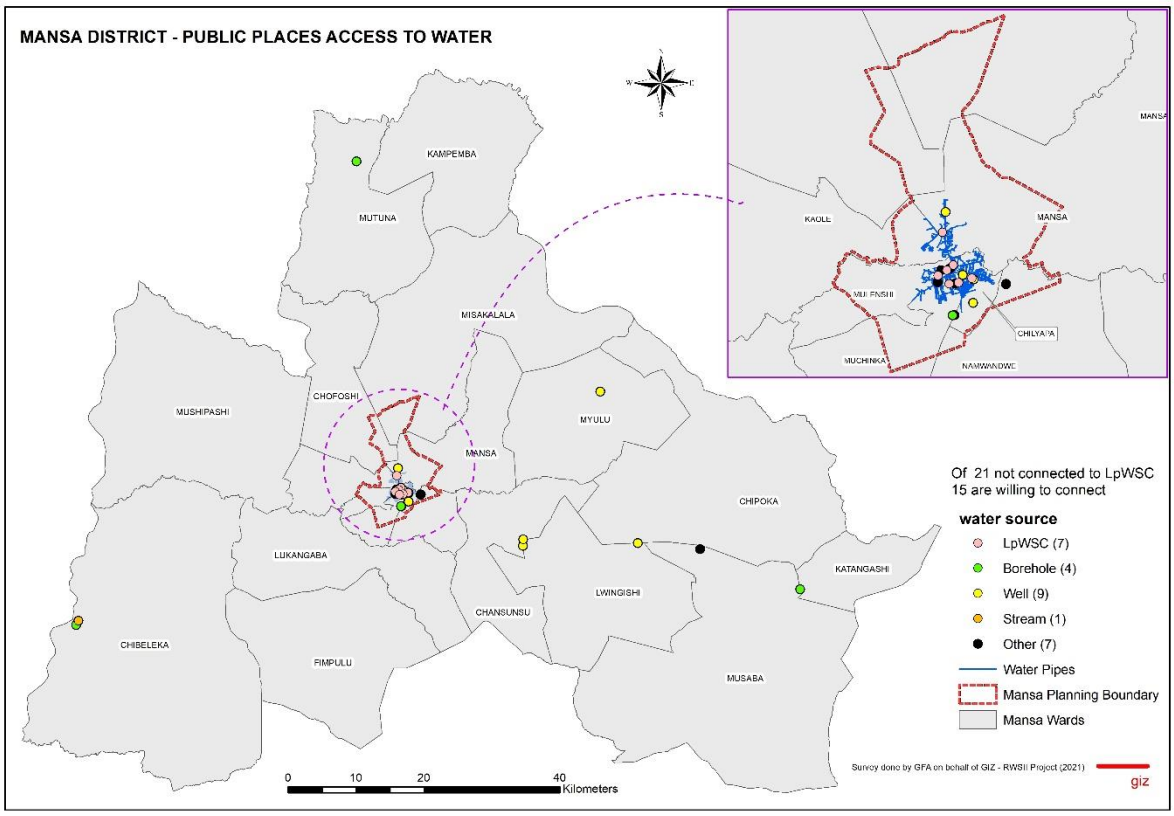
Public places in the rural areas were twice as likely to lack basic services as those in the urban areas. Please refer to Table 13 for the definition and clarifications on some of the drinking water terms.



All bus stations have access to basic water services while the markets and taxi ranks which take majority of the public places have majority have access to limited services or no access at all

Findings 145: Mansa District JMP for Public Places Drinking Water Services by public places type

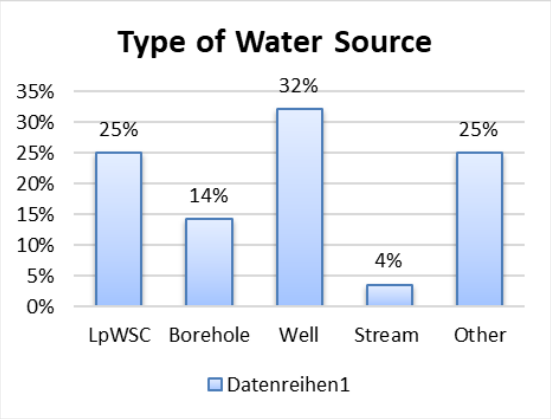
Access to Water



Findings 146: Mansa District - Type of Water Access for Public Places (N = 28)

Type of Water Source

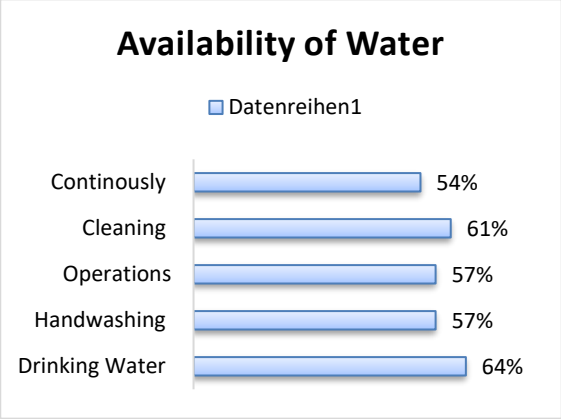
Most of the public places are using wells (32%) as a main source of water as well as LpWSC (25%) and other (25%). The category of other includes the purchasing of water and also accessing it from neighbouring facilities.



Findings 147: Mansa District Type of Water Source for Public Places (N = 28)

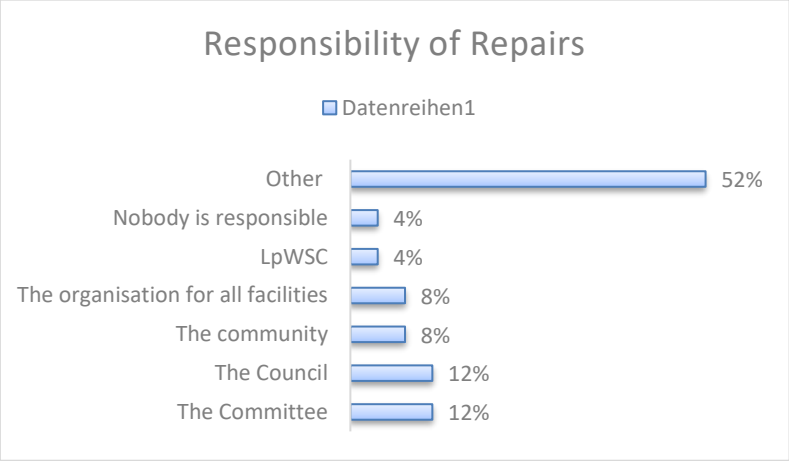
Availability of Water

54% of the public places have water which is continuously available. Water was mostly available for drinking (64%) and cleaning (61%).



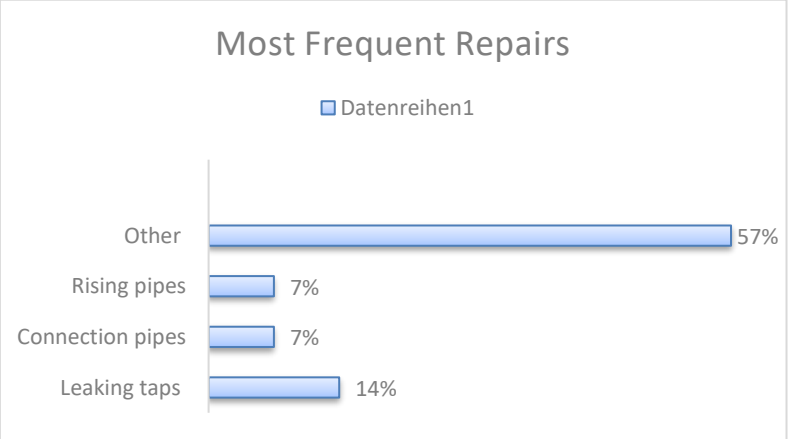
Findings 148: Mansa District Water Availability for Public Places (N = 28)

Maintenance



The responsibility of repairs were different from the response options that were provided which automatically translated to the other category which mainly included the owners of the facilities as alternative water sources were mainly used

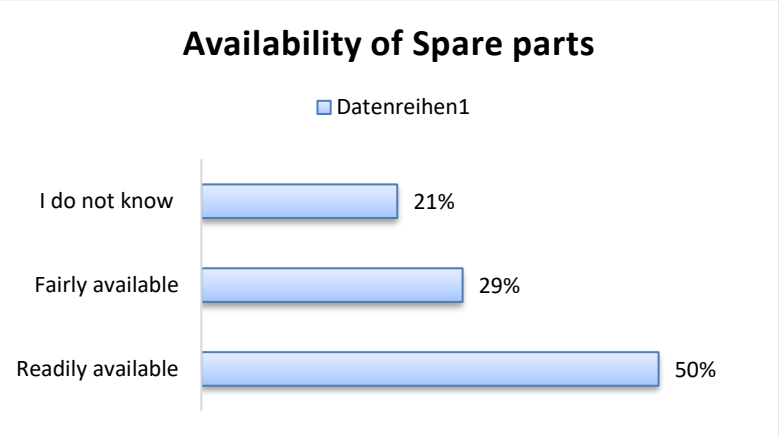
Findings 149: Mansa District Water Facility - Responsibility of repairs for Public Places (N = 25)



The most frequent repairs were other repairs from the response options that were provided which mainly included the rubbers

Findings 150: Mansa District Water Facility - Frequent repairs for public places (N = 14)

Availability of Spares

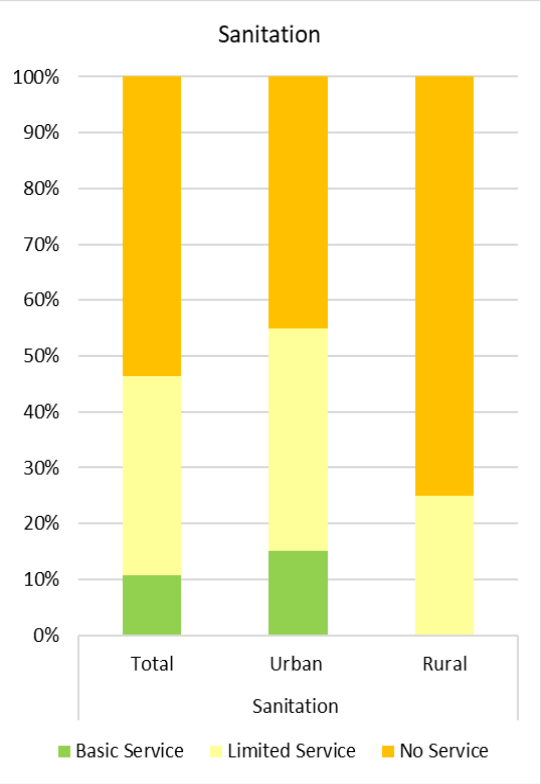


Majority of the public places indicated that spare parts were available

Findings 151: Mansa District - Availability of spare parts for public places (N = 14)

5.4.3 Sanitation Services

Mansa JMP Ladder for Sanitation Services



Findings 152: Mansa Public Places JMP Ladder for Sanitation

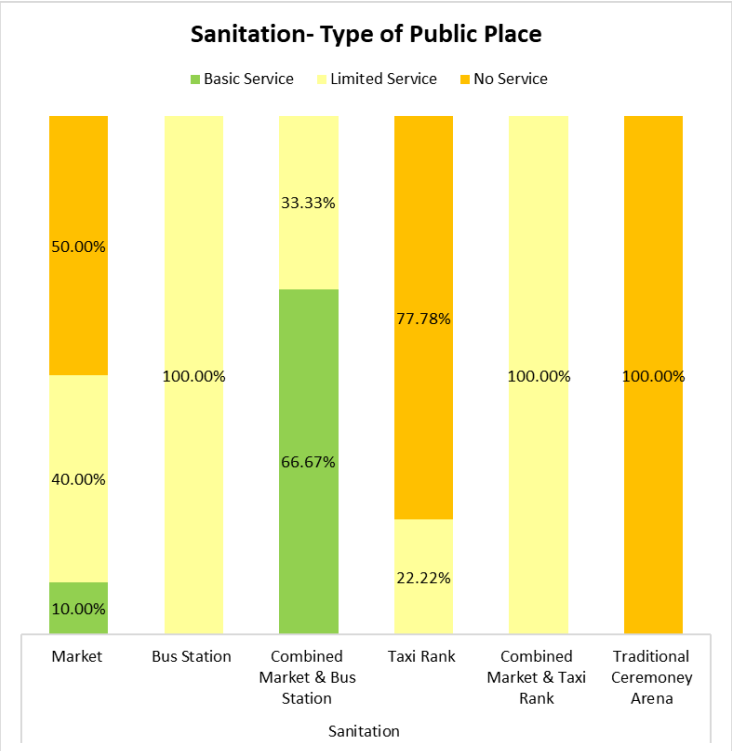
Mansa	Sanitation		
	Total	Urban	Rural
Basic Service	10.71%	15.00%	0.00%
Limited Service	35.71%	40.00%	25.00%
No Service	53.57%	45.00%	75.00%
Total	**100.00%**	**100.00%**	**100.00%**
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of public places in Mansa District using basic services is 10.7%, rural coverage being 0% and urban coverage being 15%.

In 2021, out of the of 28 public places in Mansa District, 25 public places lacked basic services including 10 public places with limited services and 15 public places having no toilet or having access to unimproved facilities .

There was no public place in the rural areas having access to basic service. Majority of the Public places in Mansa District have no access to sanitation service and this is mainly the taxi ranks.

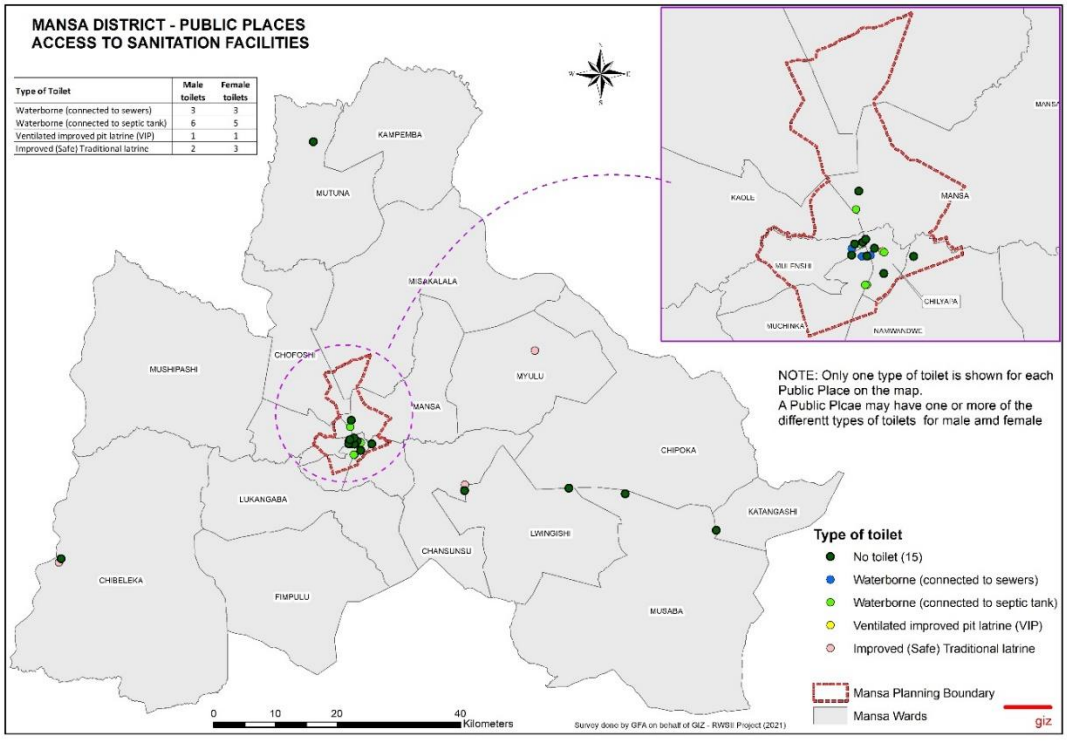
Please refer to Table 14 for the definition and clarifications on some of the sanitation terms



Combined Markets and Bus stations majority had basic service while combined market and taxi ranks all had limited service. All traditional ceremony arenas in Mansa District do not have sanitation service this is mainly due to the use of temporary toilets only when the ceremony is occurring.

Findings 153: Mansa District JMP for Public places Sanitation Services by public place type

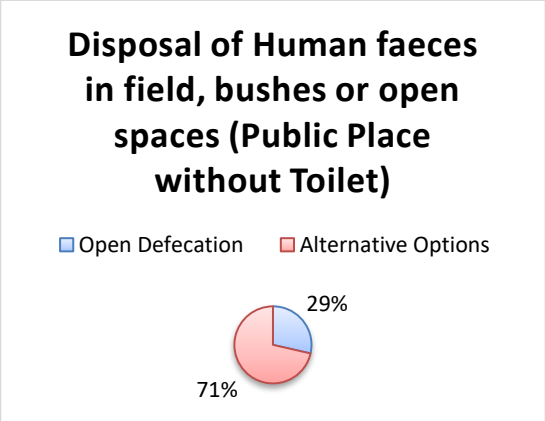
Access to Sanitation Facilities



Findings 154: Map of Mansa District Public Places - Access to Sanitation facilities

From Findings 154, in general, the main type of sanitation for public places in the urban is the waterborne to septic tank while in the rural it's the improved traditional pit latrines. Very few public places are connected to LpWSC sewer network. 54% of the public places do not have access to toilets.

29% of the public places without toilets are practicing open defecation while the rest use alternative options.

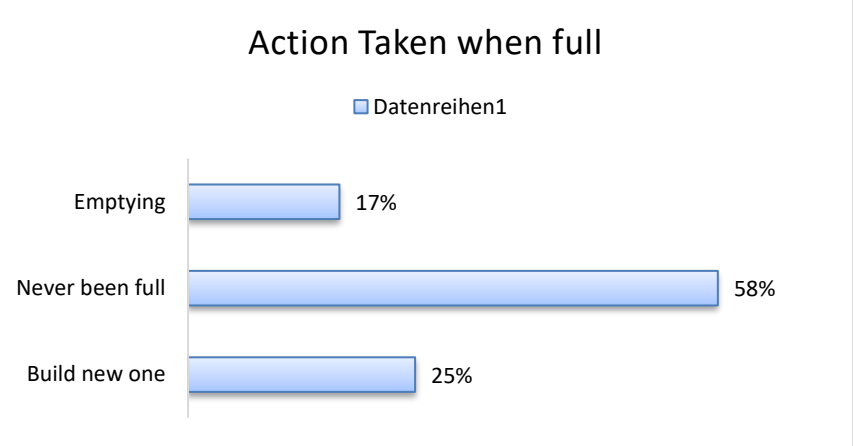


Findings 155: Mansa District Open Defecation in Public Places (N = 14)

Majority of the public places that use alternative options for toilets are using nearby toilets to the public place.

Findings 156: Mansa District Alternative Sanitation Solutions in Public Places (N =14)

Emptying Practices



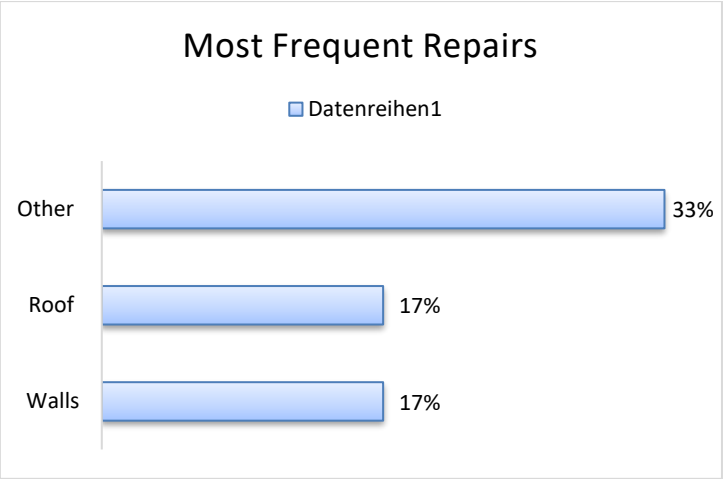
Like the households, school and HCFs, public places toilet emptying practices are to build a new one while most public place's toilets have never been full. For the 17% that empty their toilets, it is mainly manual emptying.

Findings 157: Mansa District - Emptying Practices in Public Places (N =12)

Maintenance of sanitation facilities

In general, the Council mostly takes responsibility of repairing the toilets (46%) as well as the committee (23%).

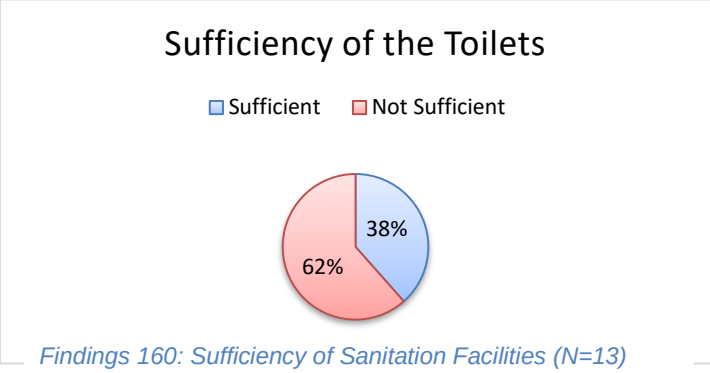
Findings 158: Mansa District Public Places-Responsibility for Repair of Toilet (N = 13)



Most frequent repairs done on the toilets in Public Places is other repairs which mainly included door and urinal

Findings 159: Mansa District Public Places-Most frequent repairs for toilets (N=6)

Sufficiency of Toilets

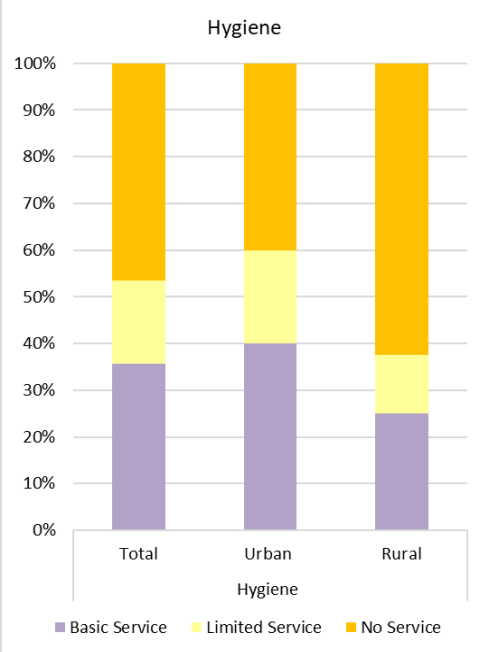


62% of the public places in Mansa have insufficient toilets this is because the number of toilets does not match the population.

Findings 160: Sufficiency of Sanitation Facilities (N=13)

5.4.4 *Hygiene Services*

Mansa JMP Ladder for Hygiene services



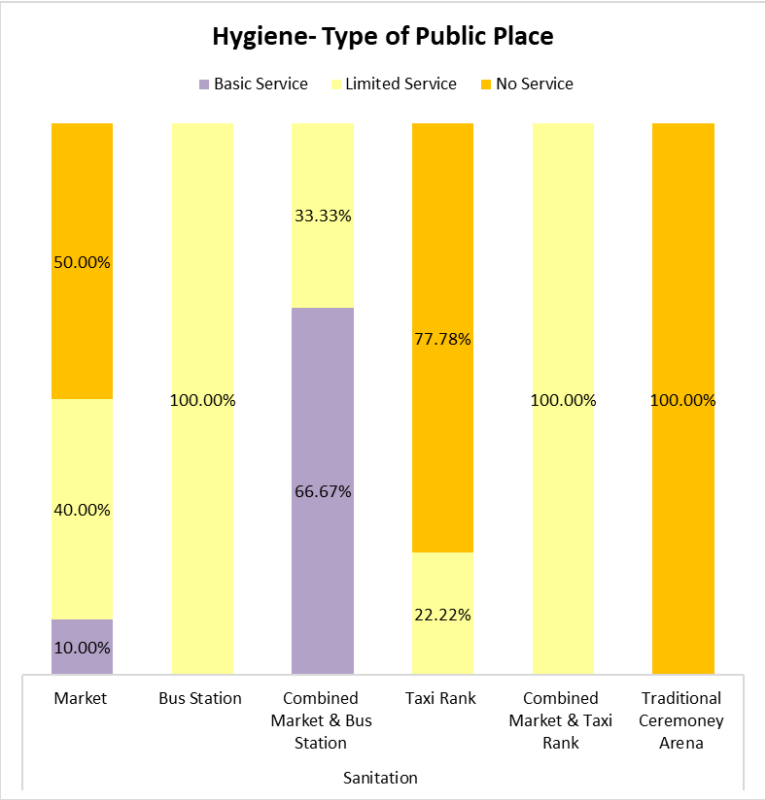
Findings 161: Mansa District Public Places JMP ladder for Hygiene Services

Mansa	Hygiene		
	Total	Urban	Rural
Basic Service	35.71%	40.00%	25.00%
Limited Service	17.86%	20.00%	12.50%
No Service	46.43%	40.00%	62.50%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of Public Places in Mansa District using Basic service is 35.7%, rural HCFs being 25% and urban coverage being 40%.

In 2021, Out of 28 Public places in Mansa District, 18 Public Places lacked basic services 5 with limited service and 13 with no service.

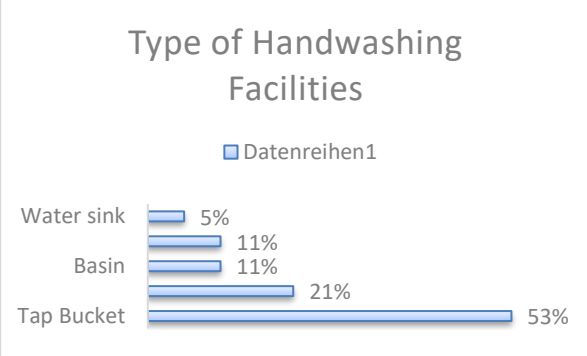
Please refer to Table 15 for the definition and clarifications on some of the hygiene terms



Combined Markets and Bus stations majority had basic service while combined market and taxi ranks all had limited service. All traditional ceremony arenas in Mansa District do not have hygiene services.

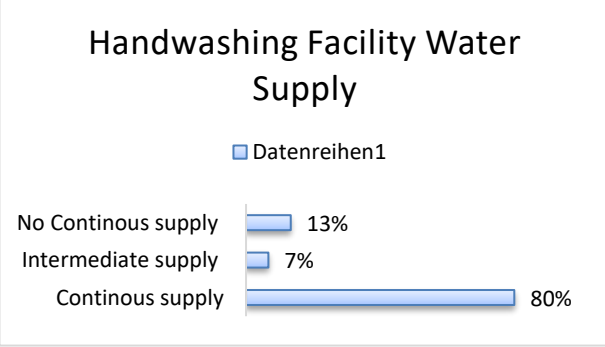
Findings 163: Mansa District JMP for Public Places Hygiene Services by public place type

Type of Handwashing Facilities
Majority (53%) of the Public Places use the tap bucket.



Findings 164: Mansa District Public Places-types of Handwashing Facilities (N=19)

Continuous availability of water supply
Majority (80%) of the Public places with Hand washing Facilities have continuous supply of water to them.



Findings 165: Mansa District Public Places- Water Supply to Handwashing Facility (N=15)

5.4.5 Social Inclusion

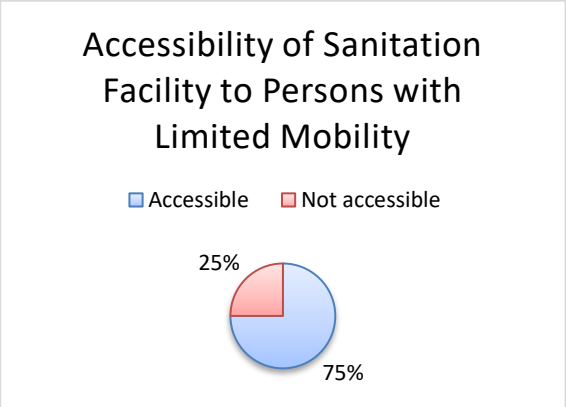
Accessibility of Water Facilities

85% of the water supply facilities are accessible to differently abled persons

Findings 166: Mansa District Public Places- Water facility accessibility to persons with limited mobility (N =20)

Accessibility of Sanitation Facilities

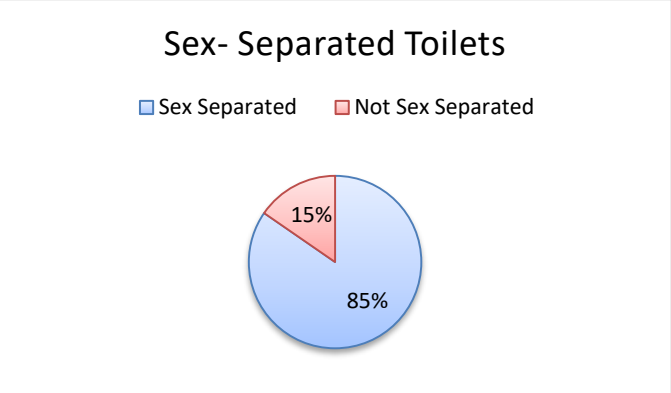
75% of the sanitation facilities are accessible to differently abled persons.



Findings 167: Mansa District Public Places- Sanitation facility accessibility to persons with limited mobility (N =12)

5.4.6 Gender sensitivity data and information

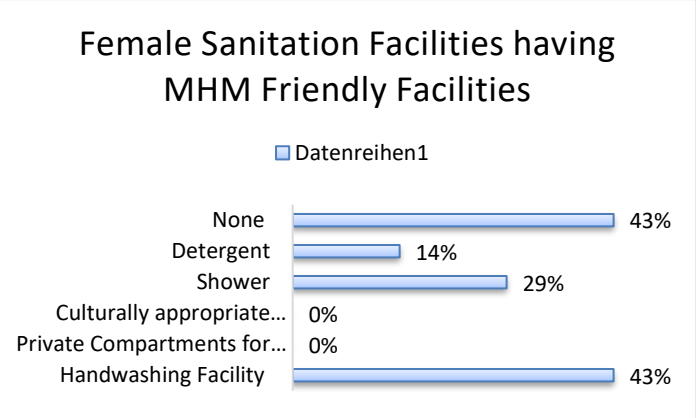
Public Places Toilets



85% of the Public places with toilets have sex separated toilets

Findings 168: Mansa District - Sex-separated toilets for public places (N =13)

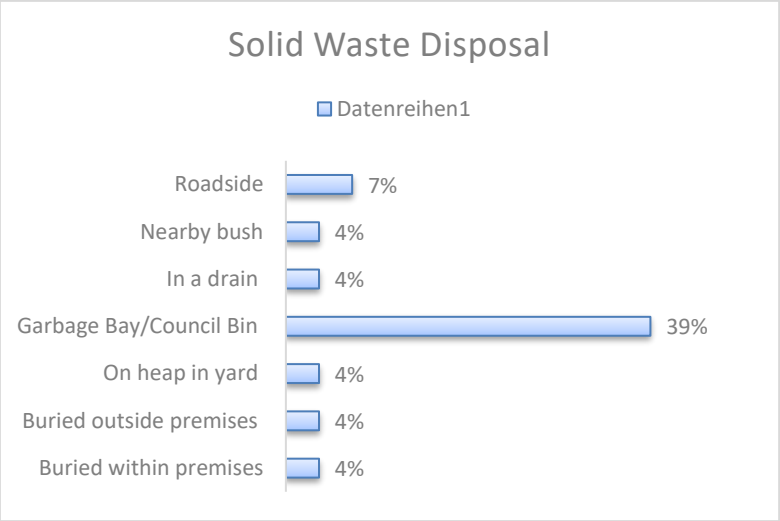
5.4.7 Menstrual Hygiene Management



Majority of the public places do not have MHM friendly services especially privacy and waste bins

Findings 169: Mansa District - MHM Friendly Female Sanitation Facilities in Public Places (N=7)

5.4.8 Solid Waste Management



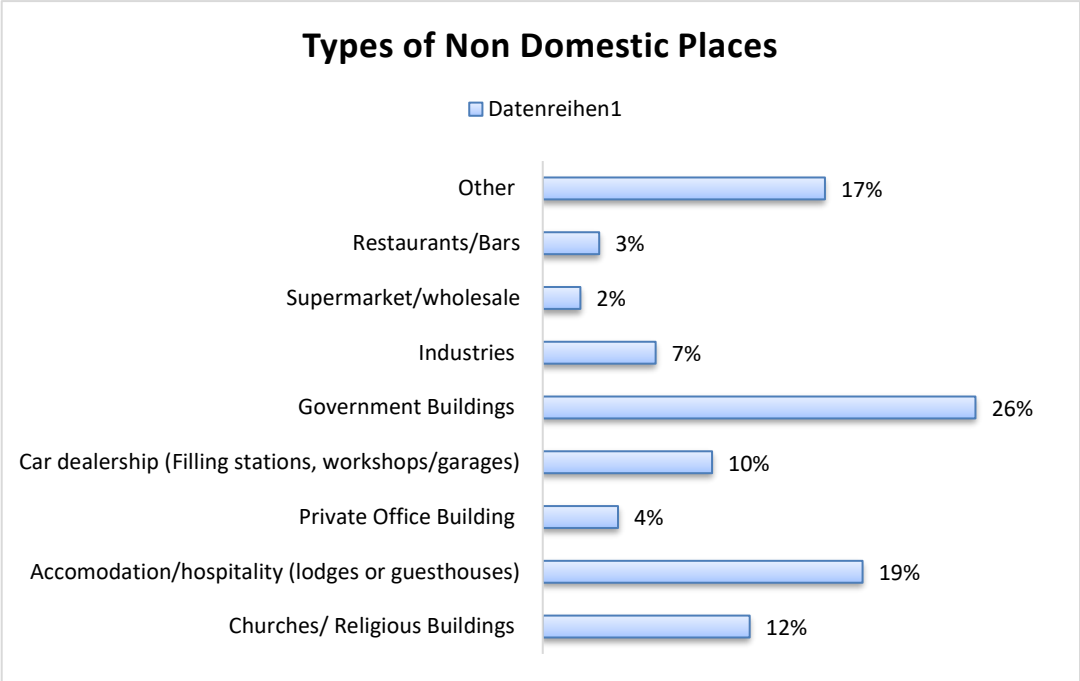
Majority of the public places use the garbage bay or council bin to dispose of Solid waste

Findings 170: Mansa District Solid Waste Disposal in Public Places (N =28)

5.5 Non-Domestic Premises

5.5.1 Overview of Non-Domestic Premises & Electricity Connectivity

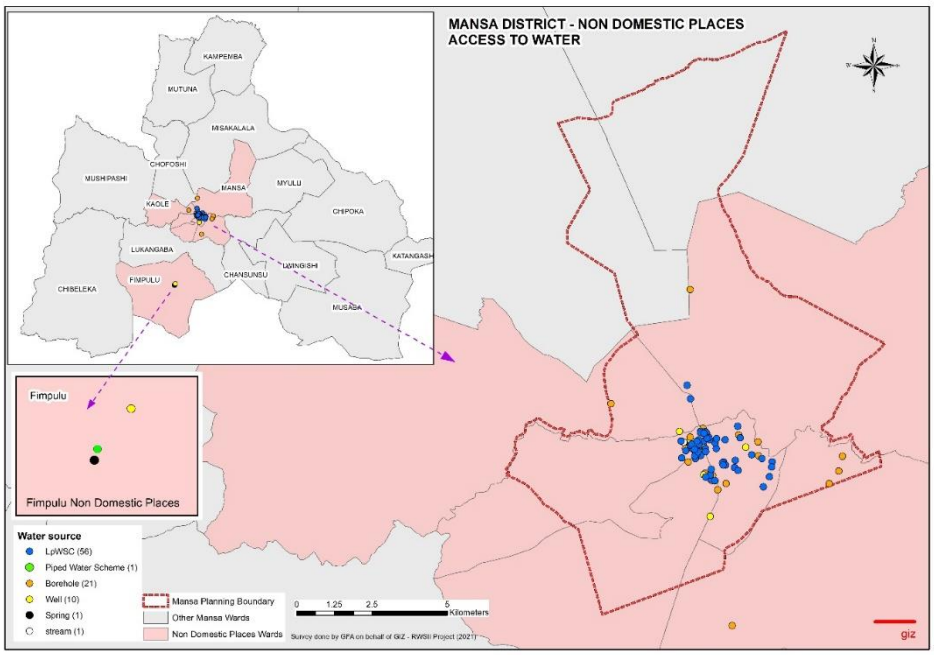
Types of Non Domestic Places



Findings 171: Mansa District Types of Non Domestic Places

Majority of the non-domestic places in Mansa District are Government Offices or buildings (26%) and accommodation (19%).

Connection to Electricity

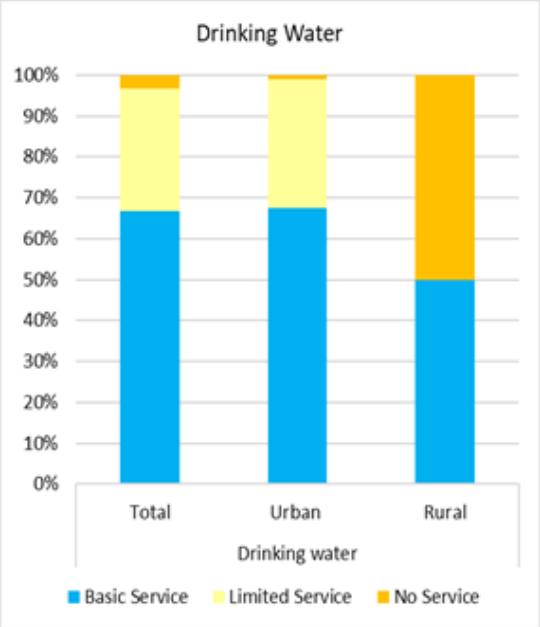


Findings 172: Mansa District Non Domestic- Connection to electricity

All Non Domestic Places around the CBD of Mansa District have access to electricity specifically ZESCO while those outside the CBD do not have access.

5.5.2 Water Supply Services

Mansa JMP Ladder for Drinking Water Services



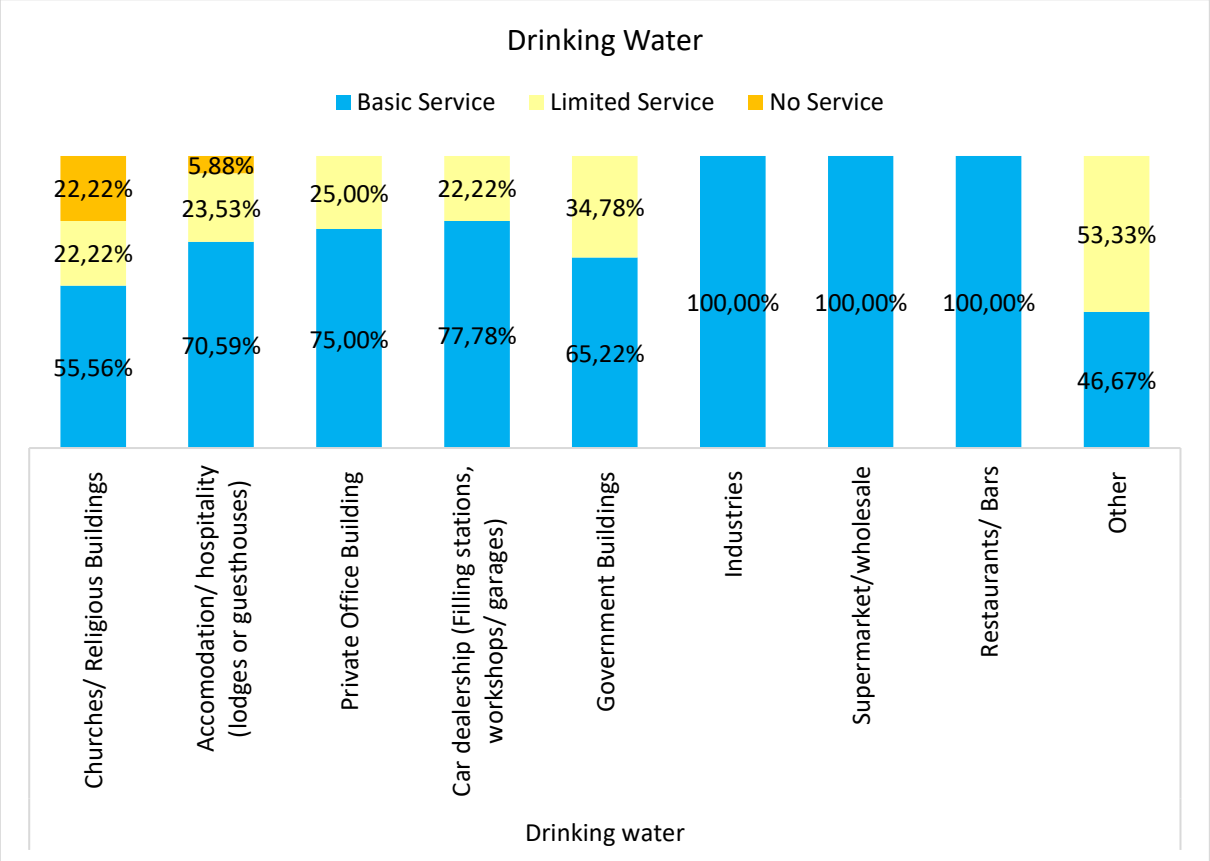
Findings 173: Mansa Non Domestic JMP ladder for Drinking Water

Mansa	Drinking water		
	Total	Urban	Rural
Basic Service	66.67%	67.44%	50.00%
Limited Service	30.00%	31.40%	0.00%
No Service	3.33%	1.16%	50.00%

The proportion of non-domestic places in Mansa District using basic services is 66.7%, rural non-domestic places being 50% and urban public places being 67.4%.

In 2021, out an estimated total of the 154 non-domestic places in Mansa District, 51 non-domestic places lacked basic services including 46 non-domestic places with limited services, and 5 non-domestic places having no water source or having access to an unimproved water source.

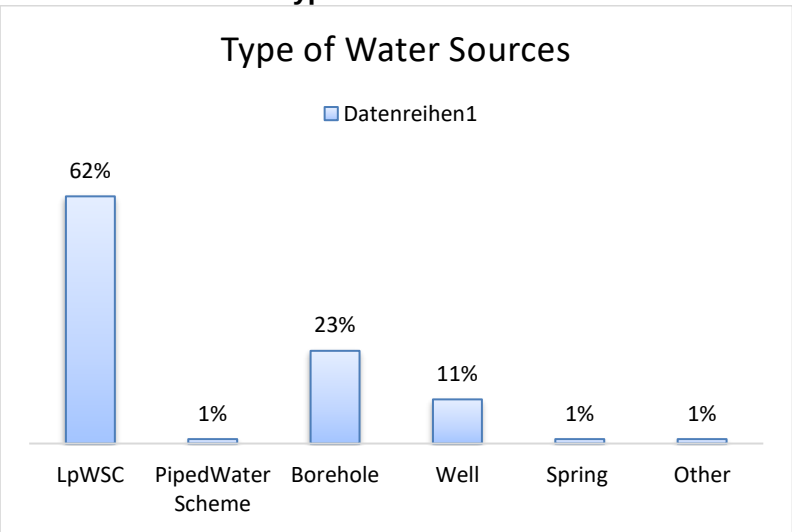
Please refer to Table 13 for the definition and clarifications on some of the drinking water terms.



Findings 174: Mansa District JMP for Public Places Drinking Water Services by Type

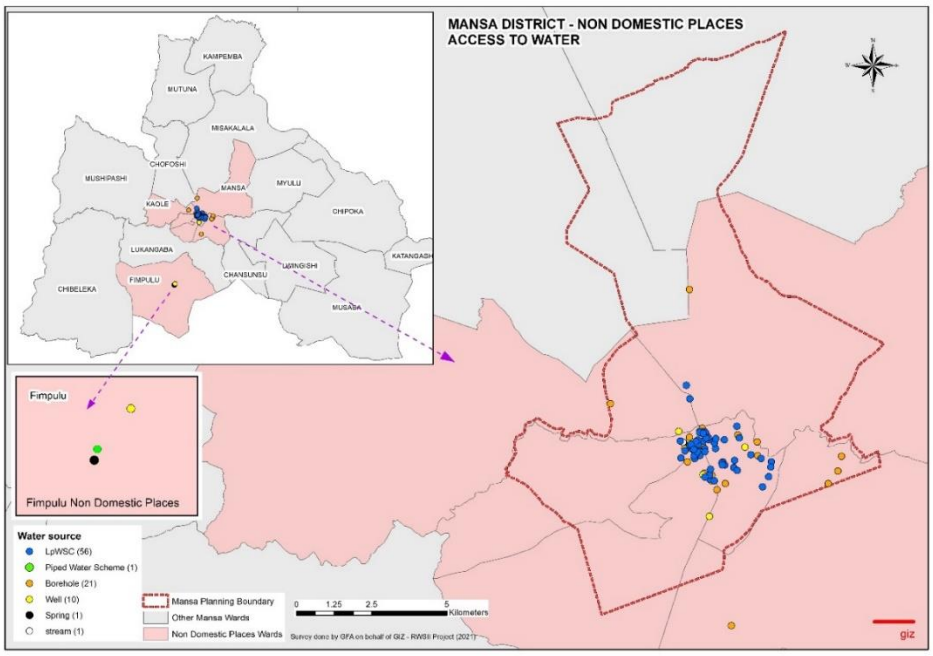
Majority of the non-domestic places have access to basic water services with all industries, supermarkets / wholesale and restaurants / bars have access to basic water service. There are some churches / religious buildings and accommodation facilities with no service i.e. having no water source or having access to an unimproved water source.

Access to Water and type of water source



Majority of the non-domestic places in Mansa District have access to LpWSC (62%) and boreholes (23%).

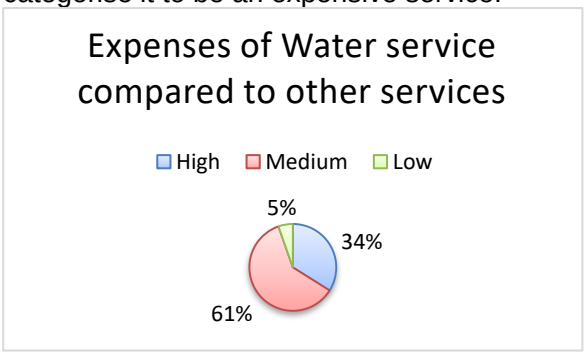
Findings 175: Mansa District Non Domestic Places - Type of Water Source (N =90)



Findings 176: Mansa District Non Domestic Water Access (N=90)

Affordability of Water Service

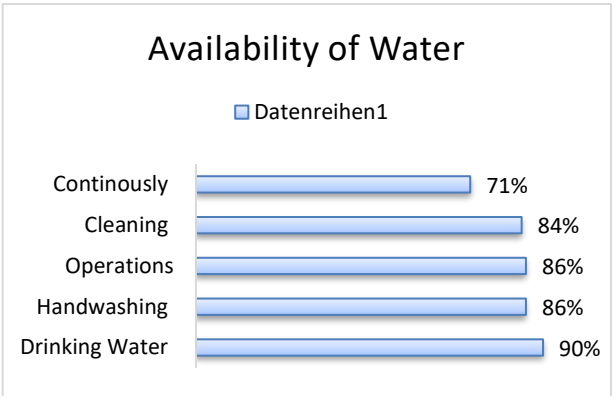
61% of non-domestic places categorise water service to be fairly expensive while 34% categorise it to be an expensive service.



Findings 177: Mansa District-Non-Domestic Water Expenses compared to other services (N=56)

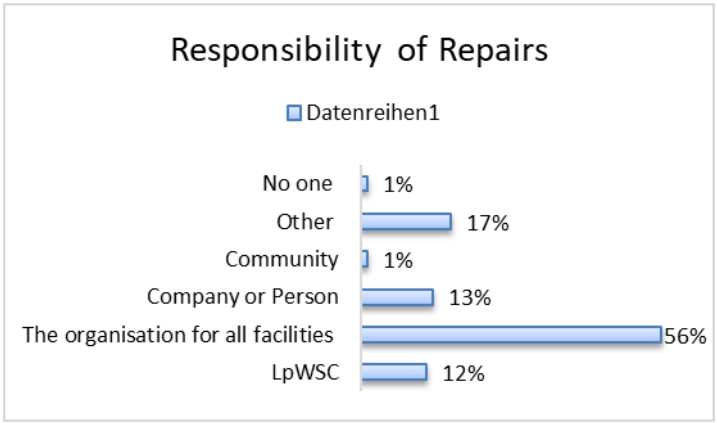
Availability of Water

71% of the non-domestic places have water which is continuously available. Water was mostly available for drinking (90%).



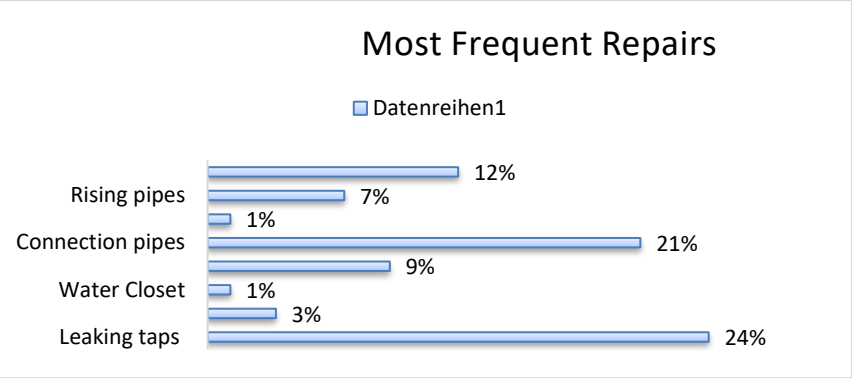
Findings 178: Mansa District-Non-Domestic Availability of Water (n=90)

Maintenance



The responsibility of repairs lies with the organisation or institution that owns the water source.

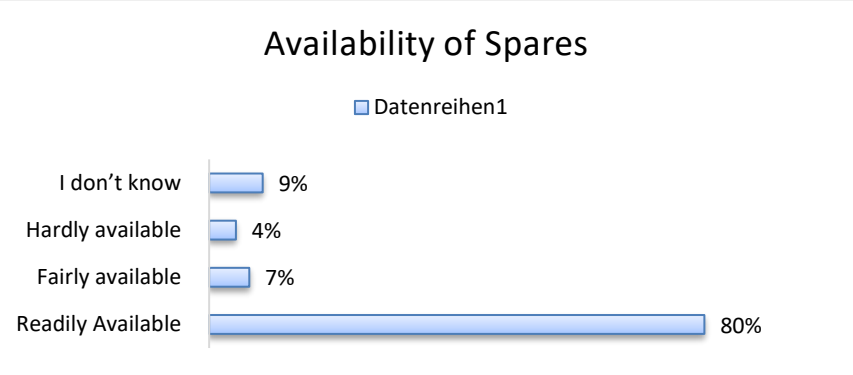
Findings 179: Mansa District Non-Domestic Places - Responsibility of Repairs (N=90)



Findings 180: Mansa District Non Domestic-Most frequent repairs (N=90)

The most frequent repairs were leaking taps (24%) and connection pipes (21%)

Availability of Spares

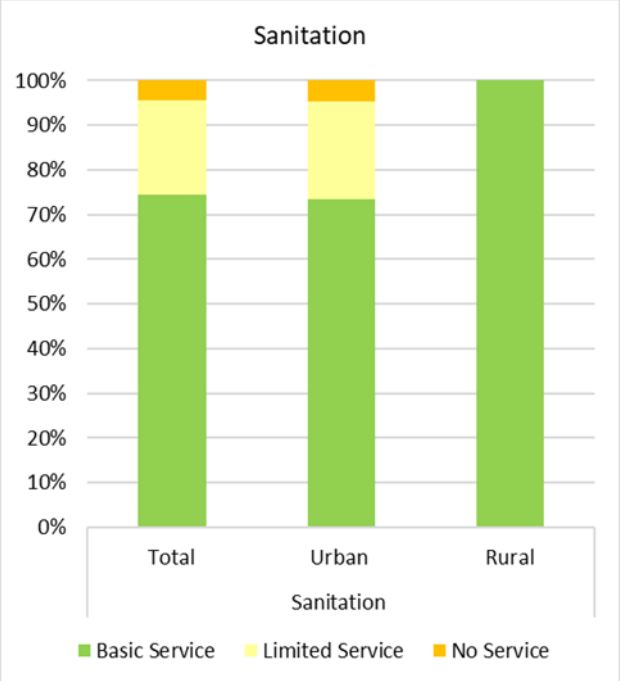


Findings 181: Mansa District Non Domestic- Availability of Spares (N=46)

Majority (80%) of the non-domestic places indicated that spare parts were available

5.5.3 Sanitation Services

Mansa JMP Ladder for Sanitation Services



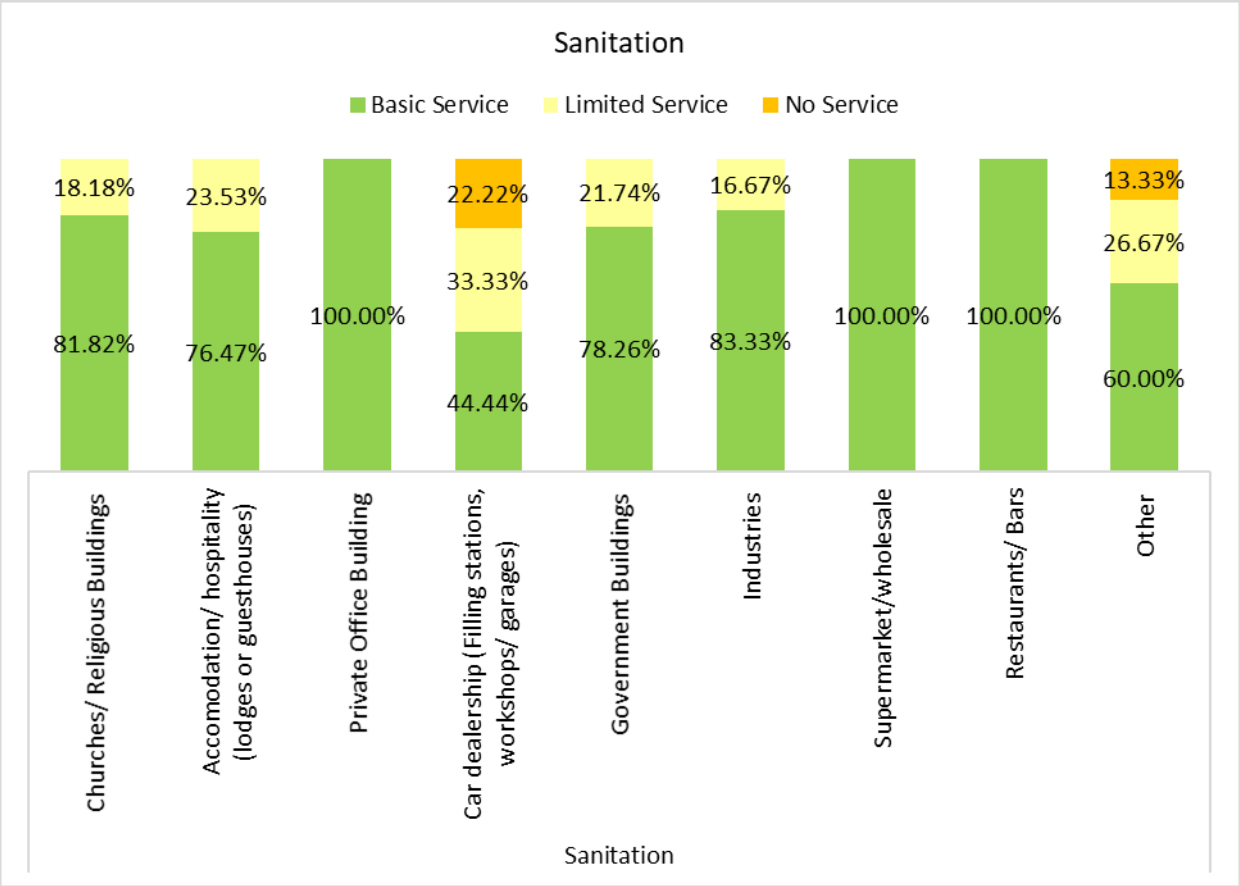
Findings 182: Mansa Non Domestic Places JMP ladder for sanitation

Mansa	Sanitation		
	Total	Urban	Rural
Basic Service	74.44%	73.56%	100.00%
Limited Service	21.11%	21.84%	0.00%
No Service	4.44%	4.60%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of non-domestic places in Mansa District using basic services is 74.4%, rural coverage being 100% and urban coverage being 73.56%.

In 2021, out of the estimated total of 154 non-domestic places in Mansa District, 39 non-domestic places lacked basic services including 32 non-domestic places with limited services and 7 non-domestic places having no toilet or having access to unimproved facilities.

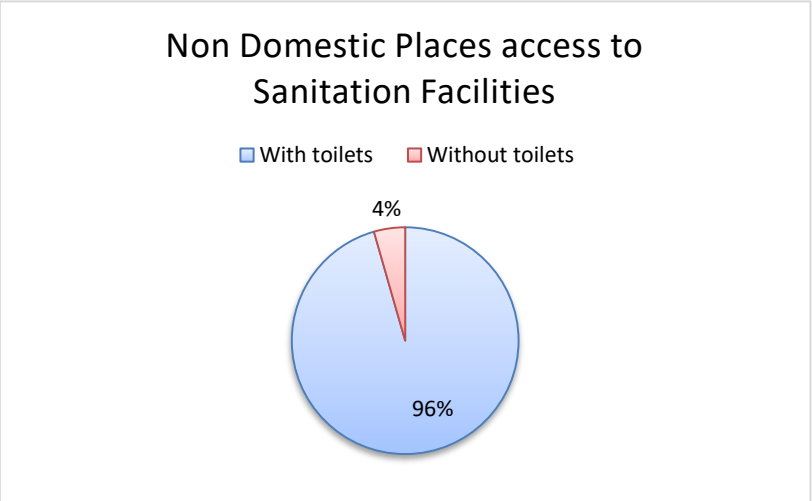
Please refer to Table 14 for the definition and clarifications on some of the sanitation terms.



Findings 183: Mansa District JMP for Non-Domestic Places Sanitation Services by Type

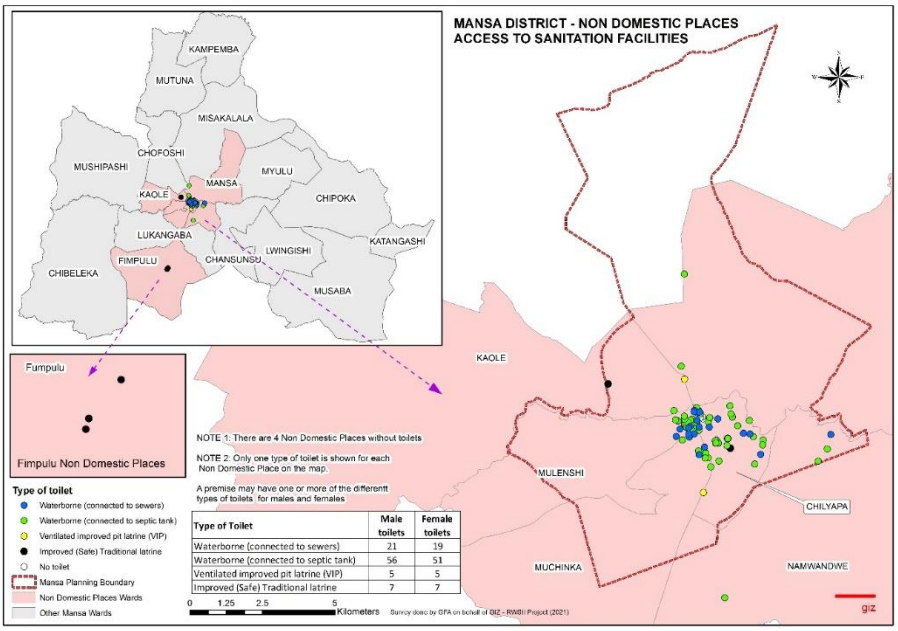
Majority of the non-domestic places have access to basic sanitation services with all supermarkets / wholesale and restaurants / bars having access to basic sanitation services. There are some car dealerships and others (car washes etc.) with no service i.e., having no sanitation facility or having access to an unimproved sanitation facility.

Access to Sanitation Facilities



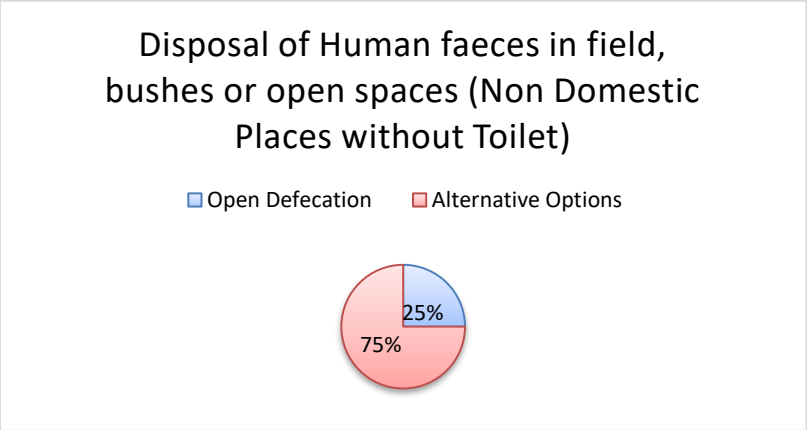
Majority (96%) of the non-domestic places have access to sanitation facilities

Findings 184: Mansa District Non Domestic Places- Access to Sanitation facilities (N =90)



Findings 185: Map of Mansa District Non Domestic Access to Sanitation facilities

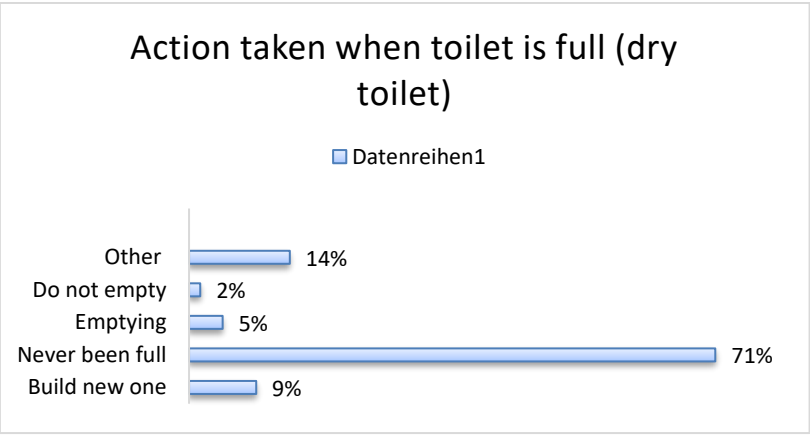
From Findings 185, in general, the main type of sanitation for non-domestic places is the waterborne to septic tank. Very few non-domestic places use dry toilets as sanitation facilities.



25% of the non-domestic places without toilets are practicing open defecation while the rest use alternative options. One of the options used was an old septic tank turned to a temporal toilet and also the use of nearby toilets.

Findings 186: Mansa District Non Domestic Places - Open Defecation (N=4)

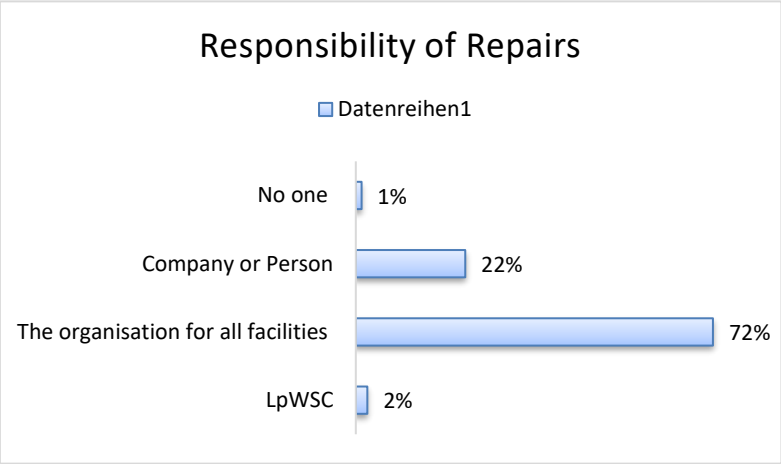
Emptying Practices



71% of the dry toilets used by the non-domestic places have never been full.

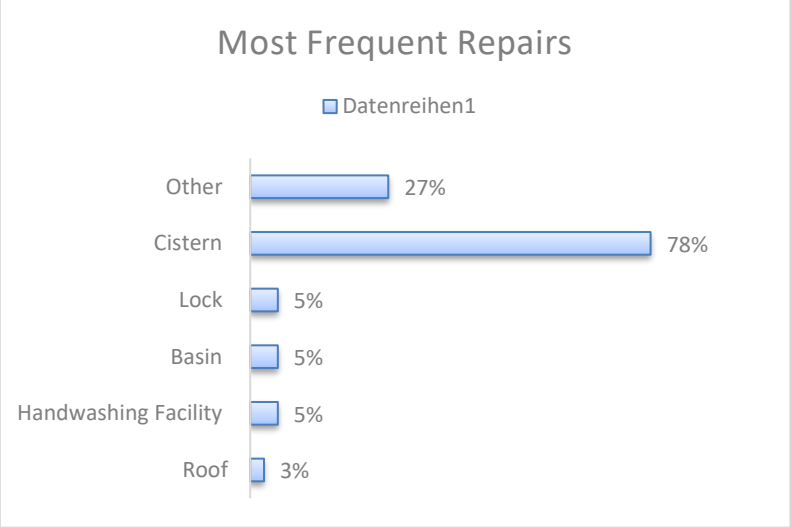
Findings 187: Mansa District Non Domestic Places - Toilet Emptying Practices (N=66)

Maintenance of sanitation facilities



In general, the organisation mostly takes responsibility of repairing the toilets (72%) in non-domestic places

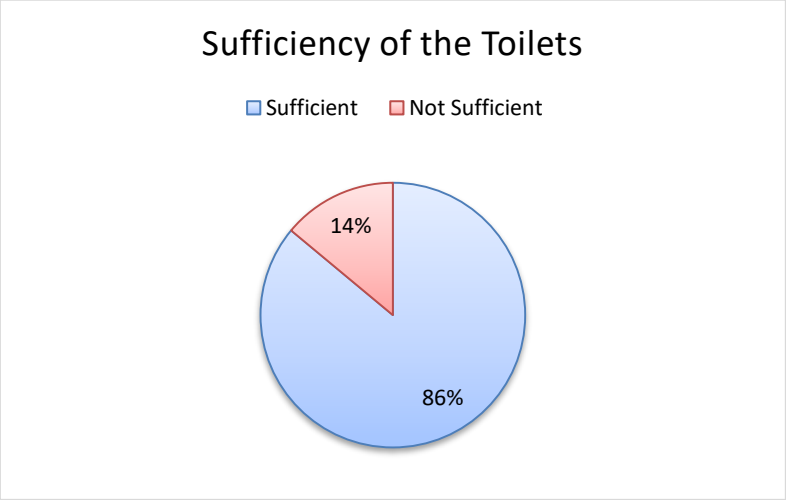
Findings 188: Mansa District Non Domestic Places - Responsibility for repair of toilet (N=86)



Most frequent repairs done on the toilets in non-domestic places is the repairs on the cistern

Findings 189: Mansa District Non Domestic Places - Most frequent repairs for toilets (N=37)

Sufficiency of Toilets

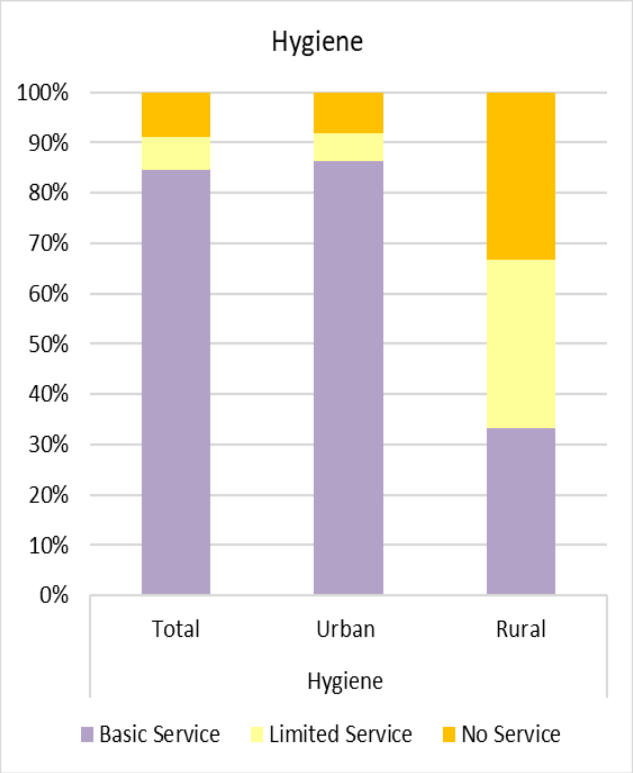


86% of the non-domestic places in Mansa have sufficient toilets

Findings 190: Mansa District Non Domestic Places - Sufficiency of Sanitation Facilities (N=86)

5.5.4 *Hygiene Services*

Mansa JMP Ladder for Hygiene services



Findings 191: Mansa District Non Domestic Places JMP Ladder for Hygiene Services

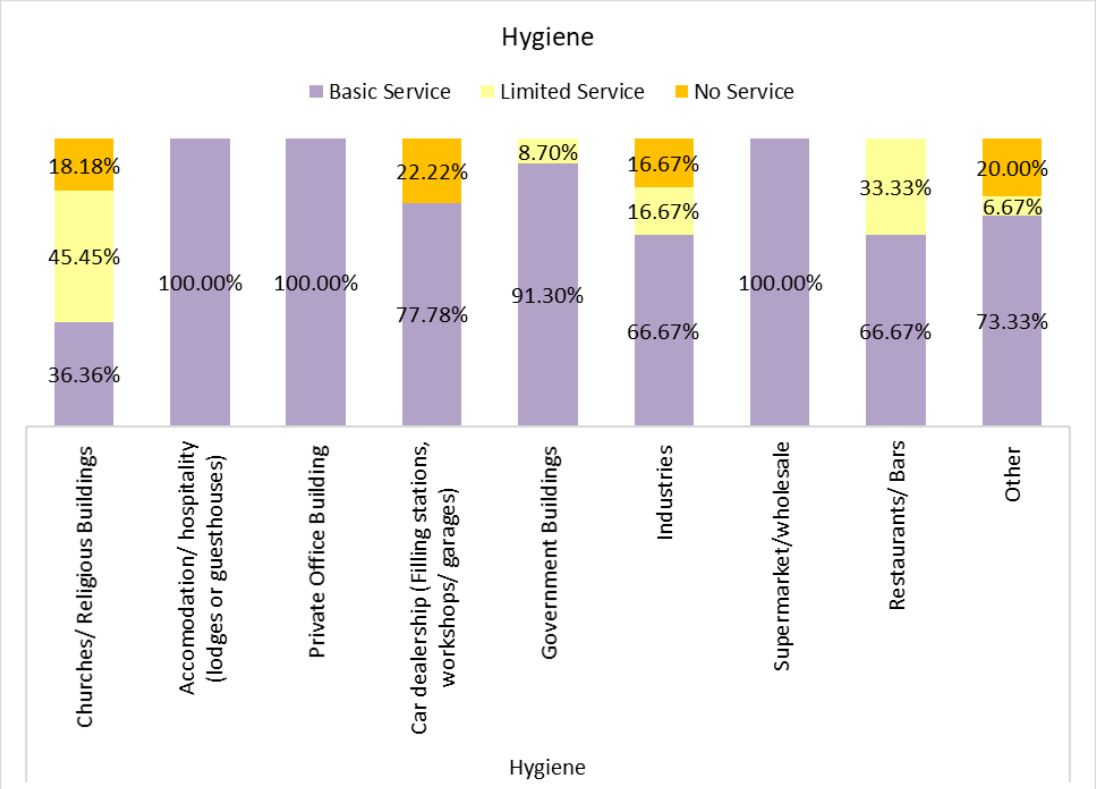
Mansa	Hygiene		
	Total	Urban	Rural
Basic Service	84.44%	86.21%	33.33%
Limited Service	6.67%	5.75%	33.33%
No Service	8.89%	8.05%	33.33%
Total	**100.00%**	**100.00%**	**100.00%**

The proportion of Non-Domestic Places in Mansa District using Basic service is 84.4%, rural Non Domestic Places being 33.3% and urban coverage being 86.2%.

In 2021, Out of estimated total of 154 Non Domestic places in Mansa District, 24 Non Domestic Places lacked basic services 10 with limited service and 14 with no service.

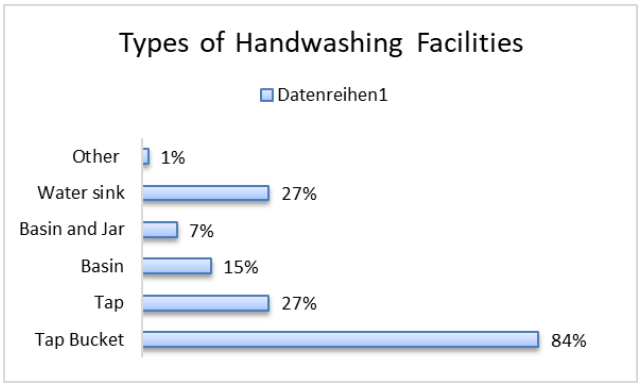
Please refer to Table 15 for the definition and clarifications on some of the hygiene terms.

Majority of the non-domestic places have access to basic sanitation services with all supermarkets / wholesale. Accommodation facilities and private office buildings having access to basic sanitation services. There are some churches / religious buildings, car dealerships, industries and others (car washes etc.) with no service i.e. having no handwashing facility at all on the premises.



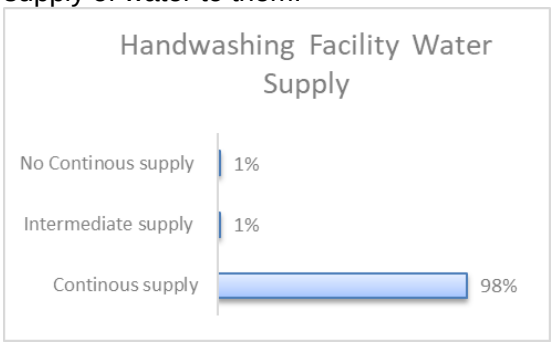
Findings 192: Mansa District JMP for Non-Domestic Places - Hygiene Services by Type

Type of Handwashing Facilities
Majority (84%) of the non-domestic places use the tap bucket.



Findings 193: Mansa District Non Domestic Places - Types of Handwashing Facilities (N =82)

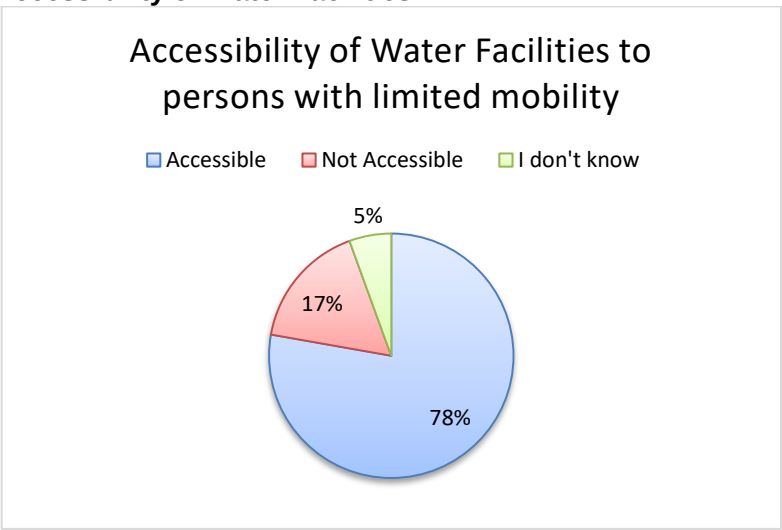
Continuous availability of water
Majority (98%) of the non-domestic places with hand washing facilities have continuous supply of water to them.



Findings 194: Mansa District Non Domestic Places - Water supply to handwashing facility (N=82)

5.5.5 Social Inclusion

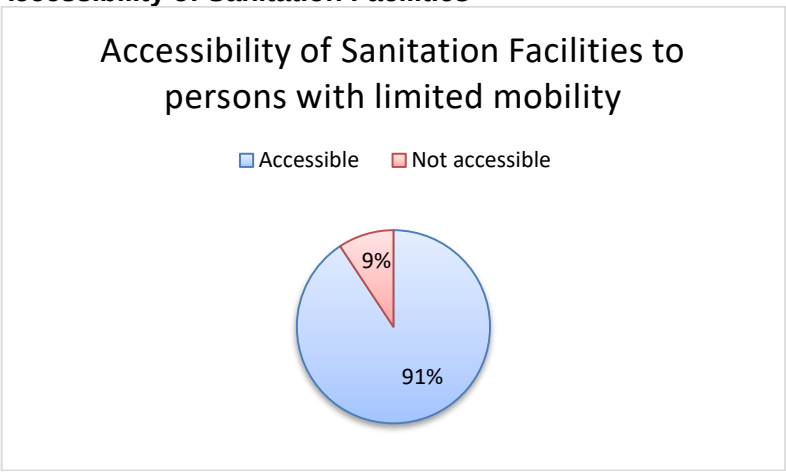
Accessibility of Water Facilities



78% of the water supply facilities are accessible to differently abled persons

Findings 195: Mansa District Non Domestic Places - Water facility accessibility to persons with limited mobility (N=90)

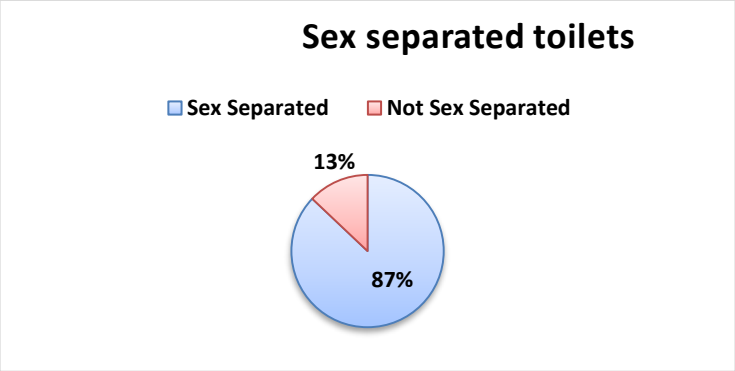
Accessibility of Sanitation Facilities



91% of the sanitation facilities are accessible to differently abled persons.

Findings 196: Mansa District Non Domestic Places - Sanitation facility accessibility to persons with limited mobility N=86)

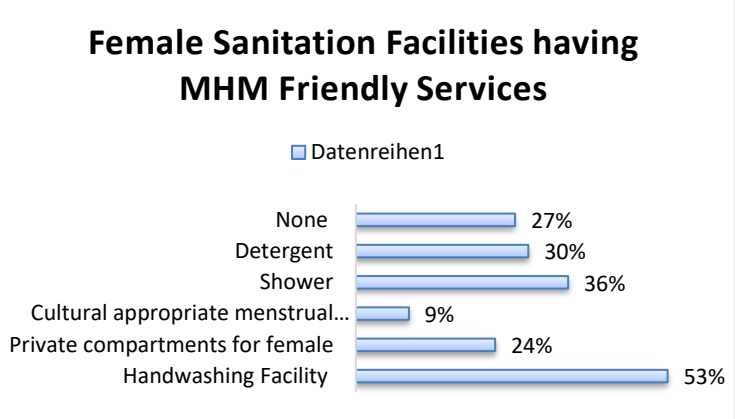
5.5.6 Gender sensitivity data and information



87% of the non-domestic places with toilets have sex separated toilets.

Findings 197: Mansa District Non Domestic Places Sex separated toilets (N=85)

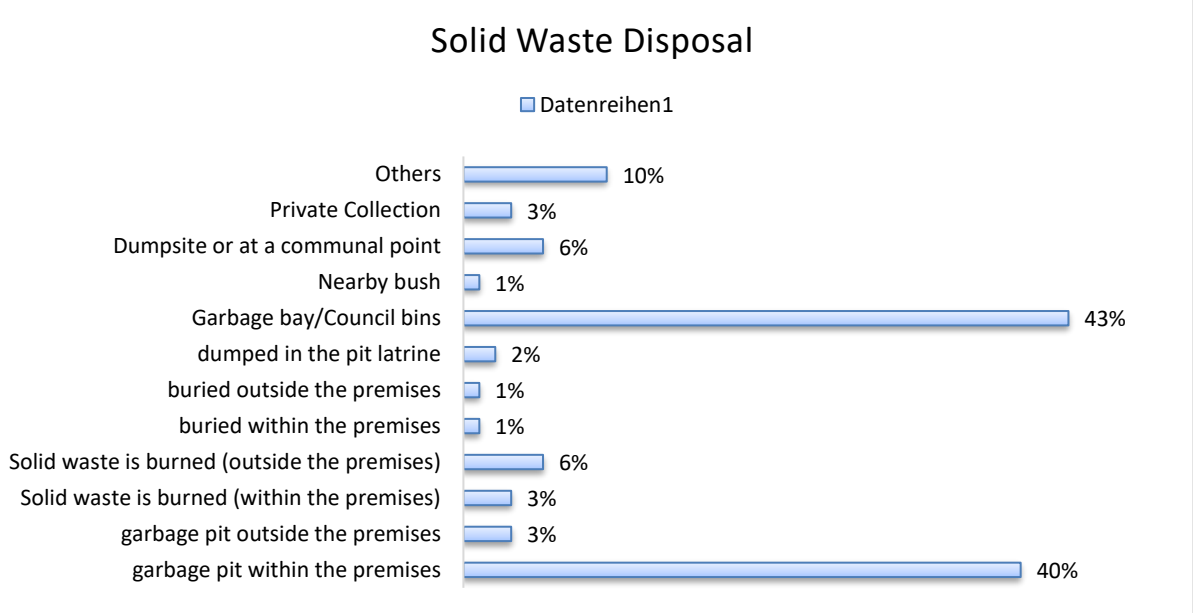
5.5.7 Menstrual Hygiene Management



Majority of the non-domestic places do not fulfil most of the MHM friendly services for sanitation facilities expect mainly having a handwashing facility especially privacy and waste bins.

Findings 198: Mansa District Non Domestic Places - MHM friendly sanitation facilities for females (N=88)

5.5.8 Solid Waste Management



Findings 199: Mansa District Non Domestic Places Solid Waste Disposal (N-=88)

Majority of the non-domestic places use the garbage bay or council bin (43%) to dispose solid waste or have a garbage pit within the premises (40%).

5.6 Key Informant Interviews

5.6.1 Luapula Water Supply and Sanitation

The Commercial Utility is a delegated service provider by the Local Authorities to provide water supply and sanitation services to the urban and peri-urban areas and the Council where LpWSC is not providing the service.

Water Supply and Sanitation

The District Office ensures that all complaints are taken into consideration and problems such as leakages are attended to, to prevent contamination. This ensures that water reaching the people is up to standard.

The catchment area for the utility is urban and peri-urban areas which are being expanded with the help of the Africa Development Bank (AfDB) under the integrated small towns water supply and sanitation project. Under this project, old pipes are being replaced, water supply is being increased with the use of pumps and the extension of production facilities leading to extended hours of supply.

Currently there are 18 hours of water supply on average. Some areas such as Mutende and Low Density are almost all connected to the LpWSC water supply.

Pumps are only turned off when production point has been met although the project with Development Bank of Zambia aims at improving the current water situation by using reservoirs. This is because areas such as Low Density use a dilapidated network where roots are growing into pipes, as a result some parts do not receive appropriate pressure.

There is a production target and if the target volume is reached they cut the supply. This is ensured by the production supervisor and records are kept.

Currently all 9 communal taps (Kiosk's) are inactive. People prefer fetching water from shallow wells rather than from the communal taps which is more of a mind-set problem attributed to the cost of the service, affordability of the service and the availability of a cheaper alternative.

There is currently no charge for water connections simply because the client procures all the needed materials. Connection made from the line to the stand taps. Customers are advised on the cost of materials following a site visit but are also at liberty to source for their own quotations. Furthermore, clients are not charged for labour because the customer does their own trenching. 60% of the cost is meant to be covered by the customer and 40% by LpWSC where there are no existing networks but in practise the percentage is slightly different as LpWSC does not have the capacity to meet such costs.

Currently LpWSC has primarily been a water supply company. Under the AfDB project there will be a new wastewater treatment plant set up and the old sewer network which is almost non-existent rehabilitated. Upon completion, LpWSC will start providing sanitation services to both offsite and onsite (through a vacuum tanker).

Water Quality

The District Office is tasked to ensure that all water parameters are adhered to and water quality testing materials are available. The water monitoring is done by plant operators and in the field it is done by plumbers who are on the ground. These activities are done daily, samples are taken monthly and sent to the head office.

Feedback on the water testing results is given to the clients within a week of a compliant. Bad results lead to the reinvestigation of the treatment process in order to establish where contamination could have taken place. Customers are mostly satisfied although at times complaints are made on the colour of the water which is as a result pipes having dead ends. These pipes are flushed out occasionally to prevent the water coloration. Sometimes there is a pipe burst and there is a backflow of dirty water which could also lead to water coloration as well.

Planning and Coordination

LpWSC coordinates with the council to sensitize people in the field; this sensitization is also conducted through the radio. Vacuum tankers are also used to transport and empty sewage. The

district office identifies companies with these tanks but the head office engages them. There is a charge per load of K700 but this is exclusive of transportation costs which is to be borne by the customer.

Operation and Maintenance

Operations and maintenance primarily rests with the Head Office under the Senior Manager Engineering, and it trickles down to the plumbers because they are the contact persons in the field.

For kiosks set up by organisations other than the Utility, the responsibility for training vendors rests with the owners. However maintenance is done by LpWSC. This maintenance comes at no charge and the vendor is paid strictly by commission.

5.6.2 Mansa Municipal Council

The Planning Department is responsible for development planning, forward planning and socio-economic planning. Under the WASH section which falls under the Department of Development Planning, there is a WASH Coordinator who reports to the District Planning Officer (DPO), who reports to the Director of Development Planning, a Senior Manager in the council who in the end reports to the Town Clerk.

Water Supply and Sanitation (Operations and Maintenance)

The Coordinator is responsible for quality assurance of rural WASH, ensuring that there is clean and safe water and sanitation. The council does not provide sanitation services such as sewer network but merely responsible for sensitization on its importance and enforcement of the Public Health Act. The Coordinator monitors the open defecation (OD) status of the District and also conducts sensitization to end OD. The monitoring of OD has been greatly affected by the COVID pandemic. Similarly, there hasn't been an ODF celebration in the District yet. Recently though, the district had planned to conduct an ODF celebration but experienced a halt in sensitization which led to slippage due to lack of transport and funds for talk-time for Community Champions. LpWSC is responsible for service provision in the urban and peri-urban areas while the Council is responsible for areas where LpWSC is not providing services. In these areas one of the main maintenance issues relates to fixing damaged pumps. The pump minders write a request in a case of a malfunctioning borehole and the council supplies the parts. The council has a SOMAP shop were equipment and spare parts are sold. The minders do not pay for the parts but use a subscription fees paid by communities at the beginning of the year.

Water Quality

There are minimal complaints with regards to water quality as most people in Mansa get their water from the boreholes which seem to have good quality to the naked eye. With regards to quantity however, there are many areas in Mansa without access to water supply and much could be done to improve this predicament.

The council does not have technology to determine the quality of water so the Public Health Department highly depends on the District Health Office and EHTs for water quality testing. The public health inspectors within the council have not been trained or equipped to test the water.

Planning and Coordination

Mansa has a District Development Coordinating Committee (DDCC), who sit quarterly chaired by the District Commissioner and Town Clerk. The Secretariat is the Director of Development Planning. This committee follows the 5 pillars of the 7th National Development Plan to form sub-committees who report to the DDCC.

The Council also has sits councillors from wards in a full council. There is also various committees that sit before the full council.

Planning for the year begins in September for the budget review, Stakeholder consultations are made prior to the finalisation of the budget and councillors are also requested for input.

Local Committees submit suggestions but so far there has been no suggestions on technology or innovation. The suggestions are often infrastructure or better water solutions. After the councillors

make the final say on what is important or need immediate attention. Implementation is influenced by availability of funds.

Data Management

The main form of system used is the DHIS2 which is based at the Ministry of Health. There are plans to use AutoCAD as well as GIS to map out water points, and identify the functional and non-functional points. Data collection requires logistics in place with funding but this is planned for 2022.

5.6.3 District Health Office

The District Health Office is responsible for WASH service provision in the health care facilities. There is no specific department that looks at WASH because this falls under public health.

Water Supply and Sanitation

The focus is to ensure all health facilities have enough water supply and sanitation provided. Interactions are there with staff at HCF to emphasize water sanitation and hygiene. Quarterly water sampling is done and where there are concerns, the DHO flags such concerns and corrective measures are done such as provision of chlorine for contaminated water.

The DHO aggregates the various planned needs/activities conducted by the health facilities. The DHO then sets prioritises the critical activities for implementation given the limited budgets they have.

Challenges include the fact that the needs are too many and those that are not of high priority are not carried out.

There is need for more community champions to be trained to sensitize the community on the importance of sanitation.

Data and Information Management

The surveillance officer uses a surveillance report called ND1. There's a monthly report that shows the sanitation situation which is inputted into DHIS2. HMIS is the software used and the DHO does not face any challenges with it although not everyone is conversant with it. Sometimes copies of important papers are not made available and because the DHO lacks funding and therefore they are not able to make copies.

Sanitation reports show us the number of boreholes, pit latrines and area pump minders. These sanitation reports are verified by on the ground by EHTs.

Nutrition and Health

The headmen play a key role when it comes to communicating health and nutrition issues with people during community meetings. Nutrition programs are designed for the community with the help of SUN TA. The programs are very effective because they check people's living standards. Community volunteers conduct cooking demonstrations for a healthier way to prepare food.

There are also teams of growth monitoring volunteers who are trained by MOH and operate as partners. Staff from HCFs give technical support to the volunteers and they supervise as well.

Women are affected because if the child falls sick the mother will have to step in to take care of the child physically and emotionally. Men step in for financial support. Children are more likely to fall sick compared to adults. Women nurse children more at the hospitals.

5.6.4 District Education Board Secretary

District Education Board Secretary (DEBS) is the chief administrator for the district and is responsible for schools in Mansa District. The District Education Standards Officer ensures that quality education is delivered to the learners in the district. The Planner is responsible for planning programs under the district in terms of monitoring and evaluation.

Water Supply and Sanitation

The quality of education is non-existent if there's no water, therefore, the DEBS office ensures there's water in the schools and if none is available, there is an opportunity to work with the Ministry

of Water and the council for alternatives. When we go to schools we monitor everything at the schools these things to ensure the quality of education.

There's a challenge of water in a lot of these schools. Schools are dependent on boreholes and during the dry seasons they dry up, causing pupils to resort to shallow wells. Some schools don't have boreholes or piped water and as a result, generally water supply is insufficient and of poor quality for most schools

The situation is worse in the rural schools because urban schools have water from boreholes and are also piped from LpWSC while rural schools only have one option. However, some schools that receive piped water from LpWSC find it too expensive in terms of water bills.

The quality of water is only checked when the borehole is sunk, i.e. there is no routine monitoring of water quality.

Planning and Coordination

For the office of the DEBs, planning is limited to monitoring while provision of funds for activities like maintenance is not done by the DEBS office as the budget does not include infrastructure development.

School led total sanitation has some engagement through club activities. At school level these clubs sensitize their fellow pupils about sanitation and they also go out to the community to sensitize people about hygiene.

Some challenges faced include the untimely opening and closing of schools due to COVID-19. Leadership is another challenge faced because we require a patron to help but these people are voluntary.

Operations and Maintenance

The school administration is responsible for operations and maintenance. Schools receive grants from central although sometimes funds are raised by individual schools The funds are used according to what the government decides and therefore, the schools are not allowed to spend as they please.

Nutrition and Health

The wellbeing of humans is dependent on the quality of water because one cannot have good nutrition without the usage of water. Good nutrition and sanitation work hand in hand for humans' wellbeing.

There's one program that occurs in schools to teach pupils how to wash hands and have good sanitation, this is under School Health and Nutrition (SHN). They also identify vulnerable learners and check if they are healthy.

The school's plans in the District Plan but we also monitor school health and sanitation. We have stakeholders in those activities who sometimes provide needs to schools. The monitoring system informs the DEBS on what's lacking in other schools. World Vision helps DEBS with their cause with regards to COVID 19 and SUNTA with WASH.

Mainstreaming Menstrual Health Management (MHM) in Schools and FPPs

There's no program currently on menstrual hygiene but some schools, although few, receive sanitary towels. A pilot study was supposed to be done by an NGO to spearhead the program in 2018. This program is coming up again under gender and equity.

They are requesting for toilets that have a provision to let the girl child to shower and take a bath so that the girl child can take a bath and remain in school rather than opting to go home. Partners sometimes get on board to help through the use of clinics to some schools.

Schools also have a guidance teacher to help girls understand what is happening to their bodies but also allows the girls to have someone to talk to about such issues. The guidance teacher is trained and where there's a male as a guidance teacher, two female teachers are brought in so the girls can be more comfortable but also to reduce their vulnerability.

DEBS suggests that girls should be educated so that know how to take care of themselves during this time. A continuation of the provision of sanitary towels at a higher level is necessary. There is also a need for more water. More guidance and counselling are needed to help the girls even if the people offering this guidance and counselling are men. There is need for more girl friendly toilets in the schools because sometimes girls miss school and come back only after a week. Advocacy is a critical because the girl child has to be reminded of what is at stake with regards to her education when she misses school.

5.6.5 Transport Association

The vice chairperson coordinates programs with the drivers. The association is made up of the disciplinary committee which disciplines the ranks, the financial committee, the funeral committee and an executive committee. The executive committee is above the other committees and its meetings are chaired by the chairman.

Water Supply and Sanitation

There are currently no WASH services for all transportation points i.e. bus station and taxi ranks. They buy water from small shops or shoprite if money is available. They use public toilets or go home. The public toilets used are fee paying toilets.

The drainage system in Mansa is very poor and there are blockages right there by the rank where they pick up people. We propose that when road contracts are given, the people contracted should work on the drainages.

If taps could be provided to some of these ranks even at a small fee the idea would be more than welcome.

The sanitation situation is bad so places like Chilyapa and shoprite get closed and then they're forced to rush to their homes.

Most diseases experienced in Zambia such as cholera and dysentery are as a result of bad water. An environment with bad sanitation is not conducive therefore it is important.

Bad sanitation such as bad sewer systems leads to other diseases that still bring us back to the essence of water because it can lead to water borne diseases.

The association is willing to contribute to joint ventures to help improve facilities such as toilets. They are also willing to support the maintenance and construction of the facilities by using them at a fee with different paying strategies.

Solid Waste Management

The council brought a program of providing bins but areas such as UB market do not have these solid waste bins, they use carton boxes that are emptied later on but not everyone follows this procedure. There is no organisation that sensitizes the community about disposal.

Keep Zambia clean campaigns are adhered to every last Saturday of the month. On this day all taxis don't move till 10 am until they clean the taxi ranks. Every taxi driver is responsible for the cleanliness of their own rank.

5.7 Focus Group Discussions

5.7.1 Rural

Water Supply

Most of the villages do not have clean and safe drinking water as the people in these areas have their water source from the Luapula River, hand dug wells and shallow wells. Fimpulu is the only place that has a water scheme run by Access Water 4 Zambia, although this does not cater for all the villages. For the places with boreholes, most of these are dry and rundown while those that are still operational give out rusty water which discolours clothes and smells rusty. Community members pay a fee in order to have access to water and this fee is used for the maintenance of the boreholes.

Organisations such as JICA and China aid have played a part in drilling boreholes in some of these communities.

Due to the lack of clean safe water, there is a high rise in cases of diarrhoea especially in children and a few in adults.

Women are the ones that fetch water most of the time especially the young ones as it is believed that they are more hygiene conscious compared to men.

Sanitation
The toilets mainly used are pit latrines, these are not improved toilets as they do not have doors, concrete floors or roofing sheets so people resort to using the bush.

Toilets are damaged and collapse during the rainy season and they have dirt and are not user friendly for children and in one of the villages a toilet collapsed around a boy but he was rescued. Some communities all have pit latrines due to fines that have been put in place by chiefs for those who do not have toilets.

Some communities have celebrated ODF and some of the places that have not has been due to a lack of proper latrines and or laziness.

Hygiene
Most communities cannot afford to buy chlorine and find boiling water time consuming and so they drink their water directly.

Some people wash their hands after using the toilet, eating, changing diapers but others don't.

Solid waste is dumped in the pit latrines and some is burned or buried in rubbish pits.

EHT teaches about sanitation by going door to door and at under 5 and they inspect wells, handwashing stations and toilets.

Challenges
Due to a lack of clean water, there are high diarrhoea cases especially with children.

Sanitation gets worse in the rain season when water mixes with dirt that is run down from the ground.

Most girls stay home and do not go to school as their parents consider the boys as those that will excel in school. Girls are therefore the ones that do most of the chores at home, escort their mothers to the field and remain at home to look after the sick.

Recommendations
There is need for proper toilets as the pit latrines usually collapse. Having flushable toilets for places that have running water will be good as well.

There is an urgent need for proper durable boreholes in order to access clean, safe drinking water and reduce the frequency of diseases. These should be many and available to a small number of people to avoid them getting damaged as there are large populations of people using a borehole and this causes them to breakdown faster.

A proper road network would be good in most of the communities as the current ones gets really bad with the rains.

5.7.2 *Urban*

Water Supply
Water sources in some of the urban areas are shallow wells and streams despite Luapula water having put up communal taps. This is due to the fact that community members cannot afford to pay the fees associated with these communal taps and because water from the stream is readily available and free, they prefer it even though it is contaminated.

The majority have their female children fetch water but some said their sons fetch water for the household.

Sometimes the water is boiled and if it is urgently needed, it is drunk without it being treated.

Some areas have boreholes that were sunk with the help of SUN-TA and China aid through applications made through the counsel in seeking aid. Sometimes community members have contributed towards the sinking of boreholes and the maintenance of them. Spare parts are bought from SOMAP shops found in these areas.

It takes up to 20 to 60 minutes to fetch water as some of the streams are far away and the wells have long queues.

Sanitation
Most communities have toilets and these are mainly pit latrines and communities have taught themselves on how to keep them clean, covered and the importance of having a hand washing station.

Due to the use of water from streams and shallow wells, there have been cases of diarrhoea in these areas.

Hygiene
Solid waste is dumped in rubbish pits as the Head men have enforced this rule on each household and those who do not comply are fined or reported to the chief if they fail to pay the fine.

Challenges
During the rainy season many people fetch water that is cloudy and dirty and this has led to a number of diarrhoeal diseases.

It is very difficult to fetch water during the dry seasons of the year as the wells dry up.

Women get up as early as 4AM in the morning to fetch water and in one case a woman was attacked.

Some areas have loose soil (sand soil) which makes it difficult to put up strong toilets without the use of cement as people cannot afford cement but these toilets collapse very easily.

Recommendations
The council may need help as they do not respond quickly to the needs of the community as they do not follow through with plans.

The pipes being laid by Luapula water should be done in such a way that the communal taps cater for 10 household per tap.

Most people being unable to afford prepaid water provided by Luapula Water, boreholes would be a better way to go.

A comments were made that Luapula water did not consult the communities when they put up the communal taps, they just went ahead and put them up and this should not have been so.

There is a need for toilets but seeing as people cannot afford to build their own, it said that these could be built for them.

6 LESSONS LEARNED

6.1 Field Data Collection

6.1.1 *Logistics*

Having to hire 3 vehicles though very efficient in the process of collecting data in 3 different wards by 3 different groups at the same time proved to be expensive and this took up much of the survey budget costs which was unforeseen as these were hired much earlier than was anticipated.

Having procured bicycles to help with navigating foot paths while in the remote areas was a good initiative and while this was a brilliant idea, we soon discovered that the bicycles needed servicing every now and again, a cost we did not foresee as well. It would be safe to say that bicycles if used during a survey need a more secure way to be carried than pilled one on top of the other as this misaligns their wiring. A mattress was procured to cushion them but the mattress was stolen in one of the villages after a couple of weeks.

6.1.2 *Covid-19 Restrictions*

In relation to COVID 19, it is safe to say that it is here to stay for now and having not foreseen how bad it would get forcing us to bring it to a halt for a time and this deterred our timeline in relation to the duration of the survey in Mansa and this to spill over into the other districts. Having to outsource vehicles earlier than planned due to the alarming rate of the COVID 19 cases rising.

6.1.3 *Elections*

With August 2021 elections at play, conducting the survey at the same time as the campaigns were going on was cutting it close as people in the villages automatically associated the survey to the campaigns and because of rivalries, sometimes participants were not willing to be interviewed. Some participants wanted monitory incentives and others like clinics did not want to be associated with campaigns and refused to attend to enumerators because of the same. Planning away from elections of any sort would be prudent.

6.2 Scalability of the approach for all districts in the Province

6.2.1 *Up-scaling Comprehensive WASH Baseline Survey Objective*

The objective of up-scaling comprehensive WASH baseline survey is to enable evidence-based planning for investment that will identified areas of priority during the implementation of WASH. No wards should be left behind when it comes to interventions, resources and development and the marginalised areas would be identified and strategic approaches developed on how the gap will be bridged.

6.2.2 *Components for up-scaling*

Developing a suitable scaling up approach means having to manage and overcome many of the challenges and risks outlined below. Figure 19 outlines the different steps and interlinking components that have to be addressed. These include laying the foundations for scaling up (WASH Indicators, and Key implementing Actors/Partners) as much as setting up key institutional mechanisms for implementation (information systems and financing mechanism). Ultimately, there are developed questionnaires, tools and data analysis strategies for meeting the data requirements of WASH indicators presented in Chapter 3.[1]

[1] GIZ, 2015. Closing the Last Mile for Millions

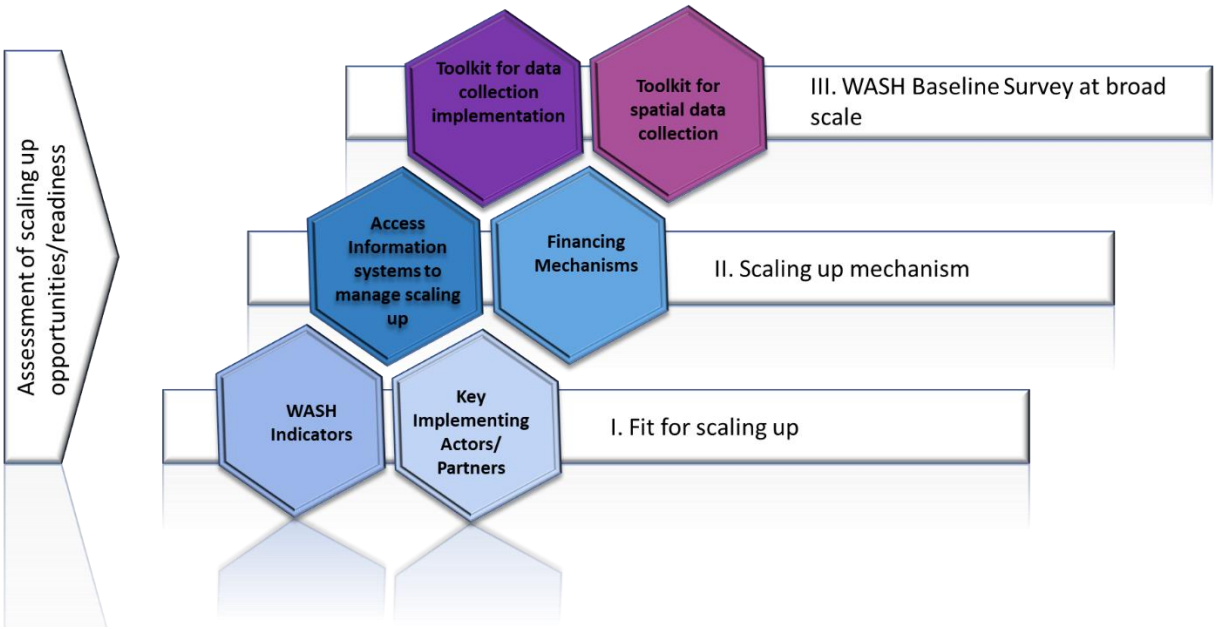


Figure 19: Components for Up-scaling WASH Baseline Survey Approach

The components are:

1. **WASH Indicators**: The water sector indicators are framed to categorise according to service levels which are clearly defined and outlined in Chapter 3. These indicators are defined according to Households, Schools, Health Care Facilities, Public Places and Non Domestic Places. The type of data to be collected can be seen from the definitions of the service levels.
2. **Key Implementing Actors/Partners**: It is the overall responsibility of the LAs to ensure all the people have access to adequate WASH services in the District. The LA is further specifically responsible for rural households, Public Places and Non Domestic Places as well as provide official ward and township/planning boundaries of the District. The CU is responsible for service provision for urban, peri-urban and growth centres i.e. they are given a license to cover the entire District. The DEBS and DHO are responsible for WASH service provision in the Schools and Health Care Facilities. The department of chiefs under the LA is responsible for all chiefs and traditional affairs. The CU, LA, DEBS and DHO should work together in order to elaborate data collection at district level. In terms of official statistics, ZamStats as well as the GRID3 need to be involved to ensure the data being used is official statistics.
3. **Information Systems**: The GIZ WASH Baseline Survey Concept Note with as well as the Joint Monitoring Programme reports, Sustainable Development Goals, Ministerial Guidelines and Standards (MWDS, MoH and MoE) serve as information systems for planning for a comprehensive WASH baseline Survey. A key element in a Baseline survey is the availability of planning data at ward level i.e. population per ward, number of schools, HCFs and Non Domestic Places per ward. Public places data is usually never readily available. There is need for spatial information available like District and ward maps, CU service area maps and settlement patterns in the Districts which can be accessed through GRID3.
4. **Mode of Financing:** Financing in Zambia for WASH projects is normally by GRZ, the Corporating Partners, individual CUs, NGOs, private sector, etc. The Equalisation Fund by GRZ is provided to districts as part of the decentralisation strategy. This is one possible mode of financing the implementation of district WASH Baseline Survey in Luapula Province. A financing mechanism needs to be developed for the survey that takes care of integrated and inter-sectoral coordination.

6.2.3 Up-scaling Resources

The preliminary estimated resources required for the up-scaling process for WASH Baseline Survey are presented in the following **Annex 3**. This initial concept table will eventually need to be further detailed.

However, an estimated budget of over **500,000 ZMW** will be needed just for logistics for transportation and remuneration.

There may be a need to involve external experts (if they are not present) for a period to be determined, in order to support the WASH Baseline Survey exercise. A preliminary list of experts may be:

- Monitoring and Evaluation/WASH Expert
- Data Analysis Expert
- GIS Expert.

7 RECOMMENDATIONS FOR DWASH-IPS

1. The Baseline situation in WASH for Mansa established in terms of numbers, covering **Households, Schools, HCFs, Public Places and Markets, Non-Domestic**. This shall be used to:
   - ✓ Set WASH district targets linked to National Urban and Rural WSS programmes, the National Development Plans, Regulatory Framework of provision of WASH services (NWASCO), ODF Zambia Strategy, WASH targets according MoE and MoH, aligned to Vision 2030 and SDG
   - ✓ **Establish target improvement of access to drinking water, sanitation and hygiene services according to JMP ladders for households, schools, HCFs, Public Places and Markets, Non-domestic, etc.** Note JMP ladders for school WASH have localised.
   - ✓ Set these above targets by ward, using access to WASH services from the Baseline Survey and wards population available from Zambia Statistical Agency.
   - ✓ Develop water supply interventions for improving access to drinking water services based on actual development trends guided by the planning boundary of Mansa District, the standards in the NUWSSP and principles in NRWSSP. (Current coverage of CU is based on area serviced by CU and not necessarily the urban area as per LA planning boundary).
   - ✓ Finalise draft for Citywide Inclusive Sanitation for Mansa District, with maps from Mansa Municipal Council and interventions.
   - ✓ Develop Infrastructure Investment Needs based on above and actual situation on the ground, covering WASH in **households, schools, HCF, Public Places and Markets, Non-domestic**, in **district wide and inclusive manner.**
   - ✓ Link these infrastructure investment plans to national investment plans, efforts by the MWDS, MoE, MoH in improving WASH services for all: Households, Schools, HCFs, Public Places and Market Places, Non-domestic, etc.
2. The baseline for the social economic situation of Mansa established. This includes the average household size, employment status, household income, sources of water, treatment of water, average cost of construction of various types of toilets, willingness to connect, pit latrine emptying practices, etc., covering households, schools, HCF, Public Places and Markets, Non Domestic Properties. This shall be used to:
   - ✓ All interventions and design of WASH facilities shall use this data.
3. The behaviours and attitudes towards hygiene practices and menstrual hygiene management established. This shall be used to:
   - ✓ Develop key strategies, sensitisation and awareness plans (budgeted) and action plans shall be developed working with our partners such as MMC, LpWSC, DEBS, DHO at district level and sub-district levels. Measures shall be costed.
4. The behaviours and attitudes towards nutrition related hygiene practices established. The role that WASH plays in cutting transmission barriers such as food handling, washing of hands, etc. This shall be used to:
   - ✓ Develop key strategies, sensitisation and awareness plans (budgeted) and action plans shall be developed working with our partners such as MMC, LpWSC, DEBS, DHO at district level and sub-district levels. Measures shall be costed.
5. Operation and maintenance status of WSS in urban, peri-urban and rural areas including growth centres establish. This shall be used to:
   - ✓ Develop key strategies and improvement measures for O&M to cover WASH services in urban, peri-urban and rural areas, including growth centres for households, schools, HCFs, public places and markets, non-domestics places.
   - ✓ Equipment, tools and spare needs shall be recommended.
   - ✓ Estimate budget requirements.

6. Institutional Structure Capacities at Community and Ward Levels, including management practices established. This shall be used to:
   - ✓ Develop key strategies and improvement measures for strengthening these institutional structures in terms of building capacity.
   - ✓ Estimate budget requirements.
7. Extent of gender mainstreaming in WASH especially at community and ward levels, including knowledge and barriers of gender mainstreaming established. This shall be used to:
   - ✓ Develop key strategies and improvement measures for improving participation and involvement of women in WASH. Agree with district WASH partners on targets for involving women.
   - ✓ Estimate budget requirements.
8. Baseline indicators for women, children and vulnerable groups established. This shall be used to:
   - ✓ Ensure DWASH IP is inclusive, in terms of taking care of interests of women, children and vulnerable groups.
   - ✓ Estimate budget requirements.
   - ✓ All measures in the above component to be consolidated into the DWASH IP, covering short, medium and long interventions linked to national programmes, frameworks, strategies and guidelines.
   - ✓ All these measure developed in a consultative manner working with our partners, partners taking lead as per mandates.

8 WAY FORWARD

8.1 Data Access, Privacy and Documentation Plan

One of the key features in any survey is the availability of data for reuse and reference in other future WASH related surveys for either Households, Schools, Health Care Facilities, Non Domestic Places or Public Places. Thus, in this survey potential tools were reviewed to help come up with options for data access, privacy and documentation. The main tool that has been proposed is **mWater platform** for storage, sharing and management of the collected data. A description of the platform is included in the next section. All data is yet to be uploaded into the platform.

The final cleaned Excel/ csv files and shape files for each of the questionnaires will be shared with the key partners for their own use in GIS platforms or any systems that they may want to work with. It will be ensured that no household can be identified from the data, and therefore the names and contact details will be removed from the data prior to sharing.

8.2 mWater Platform

mWater is a free, open-source operating system and a web-based platform for digital governance used by governments, civil society organizations, and water and sanitation service providers in over 180 countries. The mWater platform can be used in various data-driven workflows by end-users. mWater users typically focus on using the platform to access data for Surveying, Monitoring, Evaluation, and Learning, and Management.

1. **Surveying** - Data collection using Surveys on a one-off basis. Users can record data for any surveys, track infrastructure data with sites, use the online or offline functionality, and use phones, tablets, browser to input this data. The advantage is that this data is available in real-time and can be imported in a Microsoft Excel spreadsheet format.
2. **Design and manage** – is used to design surveys easily and quickly, localize surveys to any language, manage deployments for any number of users and responses, validate and clean incoming data and send feedback to enumerators.
3. **Monitoring, Evaluation, and Learning** - Data collection using Sites and Surveys repeatedly informs programming and adapts the monitoring process. Users can analyse and visualize data, create comprehensive reports, perform calculations on their data, visualize collected data on a map, track results over time, share visualizations with stakeholders, and export their data at any point.
4. **Management** - Assignment of in-field actions and reporting to identify, update, resolve, and approve issues in the field. Users can collaborate by managing data collection at any scale, up to national data monitoring. They can also share data with others, set up organizations to keep track of large-scale data collection efforts, harmonize data collection with standard forms and indicators, and connect with other platforms using mWater API.

All features on mWater are free for unlimited use, and anyone can sign up and start collecting data in minutes. Moreover, the users own their data and decide what to share and keep private. mWater is also secure and reliable; that is, all data is stored in secure cloud-based servers, and users can download any or all of their data at any time. More information on mWater, including training materials, can be obtained on the mWater website https://www.mwater.co/platform.

8.3 Data management and user access

The mWater platform will used for storing, updating, and sharing data with stakeholders interested in any of the datasets. Those with administrative access can change or modify responses and questions, delete entries, and add entries. In addition, they can create new maps, reports, data grids, charts, dashboards, and consoles. They can share with any user from various organisations. Ordinary users can be given specific access rights to view and download this data, while general users can be given quick access to only visualize the data by giving them a sharable link that can

be opened in any browser. The link to the site with the user access information will be shared with each partner responsible for that dataset as the key custodian of the data. It is proposed that the datasets and organisations will be organized in mWater as follows:

Table 31: Data management and user access

Dataset (Questionnaire)	Administrators	Specific Access rights	Restricted Access rights
Households	Mansa Council, LpWSC	ZAMSTATS	Any organization interested in the data
Schools	DEBs, LpWSC	Mansa Council	Any organization interested in the data
Health Care Facilities	DHO, LpWSC	Mansa Council and other planning authorities	Any organization interested in the data
Non Domestic Places	Mansa Council, LpWSC		Any organization interested in the data
Public Places	Mansa Council, LpWSC		Any organization interested in the data

Please note: This is a tentative proposal to have key organisations responsible for data management. Changes can be made at the time of implementation.

8.4 mWater Training

Training of mWater users is going to be done for all the partners who will be involved in the data management or any kind of usage. The training will cover all users at administrative level as well as those who may only view specific data. A training manual will also be provided for any users interested in using the data.

ANNEXES

Annex 1: Definition and Clarifications on Drinking water, Sanitation and Hygiene terms

Definition on some Drinking Water Terms	Notes on classification
Protected well: is a dug well that is protected from runoff water by a well lining or casing that is raised above ground level to form a headwall and an apron that diverts spilled water away from the well. A protected well is also covered so that contaminated materials (including bird droppings and small animals) cannot enter the well. Water is delivered through a pump or manual lifting device	1. The term **drinking water source** refers to the point from which water is collected (for example the tap or borehole/well/spring) and not the origin of the water supplied (for example surface water or groundwater).
Protected spring: is a natural spring protected by a "spring box", made of brick, masonry, or concrete, that is built around the spring so that water flows directly out of the box into a pipe or cistern, without being exposed to runoff or other sources of contamination	2. **Improved drinking water sources** are those which by nature of their design and construction have the potential to deliver safe water. Improved sources include: piped water, boreholes or tube wells, protected dug wells, protected springs, rainwater and packaged or delivered water.
Unprotected well: is a dug well that lacks any of the following: a lining or casing that is raised above ground level to form a headwall; an apron that diverts spilled water away from the well; a cover which prevents contaminated materials (including bird droppings and small animals) from entering the well; or a pump or manual lifting device.	3. **Protected wells** may be fitted with a range of lifting devices (for example motorized pumps, hand pumps, ropes and windlasses with buckets) but if the well lacks a cover then it should be classified as 'unprotected well'.
Unprotected spring: is a natural spring that lacks a "spring box" to protect against run off and other sources of contamination (including bird droppings and animals).	4. **Unimproved drinking water sources** are those which by nature of their design and construction are unlikely to deliver safe water. Unimproved sources include: unprotected dug wells, unprotected springs, and surface water
	5. The term **drinking water source** refers to the point from which water is collected and not the origin of the water supplied. For example, piped water originating from a surface water reservoir would be classified as piped water, while water collected directly from a lake or river would be classified as surface water.
Definition on some Sanitation Terms	**Notes on classification**
No facility/bush/field: includes defecation in the bush or field or ditch; excreta deposited on the ground and covered with a layer of earth (cat method); excreta wrapped and thrown into garbage; and defecation into surface water (drainage channel, beach, river, stream or sea).	1. **Improved sanitation facilities** are those designed to hygienically separate human excreta from human contact. These include wet sanitation technologies such as flush and pour flush toilets connected to sewers, septic tanks or pit latrines, and dry sanitation technologies such as dry pit latrines with slabs and composting toilets.
Definition on some Hygiene Terms	**Notes on classification**
Handwashing facility: refers to a fixed or mobile device designed to contain, transport or regulate the flow of water to facilitate handwashing.	1. **Handwashing facilities** include sinks with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing.
Soap: includes bar soap, liquid soap, powder detergent and soapy water.	2. Ash, soil, sand or other traditional handwashing agents are less effective and do not count as '**soap**'.

Source: JMP-2018-core-questions-for-household-surveys.pdf (washdata.org)

Annex 2: KIIs and FGDs Work Programme Planned for Period 26th October to 5th November, 2021

Date	Time of Day	Activity Session	Purpose	Tools
Day 1 (Mon. 25.10.21)	Holiday	Preparations for the week		
Day 2 (Tues. 26.10.21)	Morning	Key Informant Interview with Mansa Municipal Council	Interview with Rural Water Sanitation Coordinator at MMC Planning Department to discuss water quality monitoring systems, sanitation, O&M, planning and coordination (leadership in WASH), solid waste, cross-cutting issues.	
	Afternoon	Typing, collating and summarizing of notes for day 2		
Day 3 (Wed. 27.10.21)	Morning	Key Informant Interview with LpWSC	Interview with District Manager in order to understand issues related to water quality monitoring systems, sanitation, O&M, planning and coordination (leadership in WASH), solid waste, cross-cutting issues.	
	Afternoon	Key Informant Interview with District Health Office Team	Interview with District Health Officer/Public Health Officer in order to get more in-depth understanding of WASH related health outcomes, nutrition and health, WASHE service provision, plans and programmes and projects, cross-cutting issues.	
Day 4 (Thu. 28.10.21)	Morning	Key Informant Interview with Market Masters	Interview Market/transport Association Officials capable of providing adequate information. This may include Market Manager, Secretary and Treasurer or others The purpose will be to establish knowledge attitudes and practices on WASHE, O&M, planning and coordination (leadership in WASH), solid waste, cross-cutting issues.	
	Afternoon	Typing and summarizing of notes of day **3 and 4**		
Day 5 (Fri. 29.10.21) **(Meeting 1)**	Morning	Key Informant Interview with DEBS	Interview with District Education Board Secretary (DEBS)/ DEBS Representative/DEBS representative for a zone of Schools to establish WASH Knowledge Attitudes and Practices, Plans and Programmes, O&M, planning and coordination (leadership in WASH), solid waste, cross-cutting issues.	
	Afternoon	Typing and summarizing of notes of day **5**		

Date	Time of Day	Activity Session	Purpose	Tools
Saturday (Sat. 30.10.21) Sunday (Sun. 31.10.21)	***Documentation, checking and review of notes***			
Day 6 (Mon. 01.11.21)	Morning 10:00-12:00	Key Informant Interview with DEBS	Interview with District Education Board Secretary (DEBS)/ DEBS Representative/DEBS representative for a zone of Schools to establish WASH Knowledge Attitudes and Practices, Plans and Programmes, O&M, planning and coordination (leadership in WASH), solid waste, cross-cutting issues.	
	Afternoon 14:00-16:00	FGD with Village Head men in Muchinka	In-depth qualitative information gathering to feel up gaps in quantitative data for community leaders	MoCTA help organize
Day 7 (Tue. 02.11.21)	Morning 09:00-11:00	FGD with Village Head men in Chansunsu	In-depth qualitative information gathering to feel up gaps in quantitative data for community leaders	MoCTA help organize
	Mid-Morning 12:00-14:00	FGDs with children in Chansunsu **Mabumba Area**	In-depth qualitative information gathering to feel up gaps in quantitative data on WATSAN issues peculiar to children	EHT help to organize
	Afternoon 15:00-17:00	FGD with women in Chansunsu **Mabumba Area**	In-depth qualitative information gathering to feel up gaps in quantitative data on WATSAN issues peculiar to women	EHT help to organize
Day 8	Morning 09:00-11:00	FGD with Village Headmen in Mulenshi	In-depth qualitative information gathering to feel up gaps in quantitative data for community leaders	MoCTA help organize

Date	Time of Day	Activity Session	Purpose	Tools
(Wed. 03.11.21)	Mid-Morning 12:00-14:00	FGD with Children in Mulenshi **Fibale Area**	In-depth qualitative information gathering to feel up gaps in quantitative data WATSAN issues peculiar to children	EHT help to organize
	Afternoon 15:00-17:00	FGD with women in Mulenshi **Fibale Area**	In-depth qualitative information gathering to feel up gaps in quantitative data on WATSAN issues peculiar to women	EHT help to organize
Day 9 (Thu. 04.11.21) **(Meeting 3)**	Morning 09:00-11:00	FGD with Village Headmen in Chibeleka **Matanda Area**	In-depth qualitative information gathering to feel up gaps in quantitative data for community leaders	MoCTA help organize
	Mid-Morning 12:00-14:00	FGD with Children in Chibeleka **Matanda Area**	In-depth qualitative information gathering to feel up gaps in quantitative data WATSAN issues peculiar to children	EHT help to organize
	Afternoon 15:00-17:00	FGD with women in Chibeleka **Matanda Area**	In-depth qualitative information gathering to feel up gaps in quantitative data on WATSAN issues peculiar to women	EHT help to organize
Day 10 (Fri. 05.11.21) **(Meeting 3)**	Morning	FGD with WDCs in Fimpulu Discussions may include members of the committees running kiosks etc	In-depth qualitative information gathering to feel up gaps in quantitative data for community leaders particularly O$M issues around water providers.	
	Afternoon	Collating and summarizing notes		

Annex 3: preliminary estimated resources required for the up-scaling process for WASH Baseline Survey

Activity	Output	Resources	Budget [2](ZMW)
Enumerator Allowances	• Transportation modalities • Communication Modalities	• Transport and lunch refund • Communication allowances	34,000
Enumerator Wages	• Enumerator services	• Enumerator fees • Supervisor fees	66,000
Workshops	• Stakeholder consultation meetings • Results interpretation Validation meeting Enumerator trained • Enumerator Transport refund	• Meeting rooms • Lunches • Transportation	42,000
Courtesy to Chiefs	• Courtesy call to chiefs • Transportation modalities (fuel)	• Gifts for chiefs • Transportation (fuel)	8,000
Equipment and Stationary	• Implementation modalities	• Tablets • GPS Gadgets • Voice recorders • Bicycles (pumps and locks) • Stationary (books, pens, ink pads etc)	105,000
Transportation Costs	• Transportation Modalities available	• Hiring of vehicles • Fuel Costs	250,000
Focus Group Discussions and Key Informant Interviews	• FGDs and KII conducted	• Transportation • Refreshments	13,000
TOTAL			518,000

[2] The budgets do not include external consultancy expert fee or field allowances for the survey management fees rates. The budgets reflect logistic costs.