ZAMBIA

Reform of the Water Sector Programme Phase II in Zambia

Baseline Survey Report for Chipili 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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ABBREVIATIONS

7NDP	Seventh National Development Plan
CAG	Community Action Group
CC	Community Champion
CDF	Constituency Development Fund
CHA	Community Health Assistant
CLTS	Community Led Total Sanitation
ComDev	Community Development
CP	Cooperation Partners
CTC	Chipili Town Council
CU	Commercial Utility
DDCC	District Development Coordinating Committee
DEBS	District Education Board Secretary
DHO	District Health Office
DPO	District Planning Officer
DWASH IP	District Water, Sanitation and Hygiene - Investment Plan
DWSS	Department of Water Supply and Sanitation
EHT	Environmental Health Technician
FANSER	Food and Nutrition Security and Enhanced Resilience
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
IDP	Integrated Development Plan
IPC	Infection, Prevention and Control
IWWS	Industrial Wastewater Survey
JMP	Joint Monitoring Programme
KII	Key Informant Interviews
LA	Local Authority
LAP	Local Area Plan
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
MWDS	Ministry of Water Development and Sanitation
NIS	NWASCO Information System
NHC	Neighbourhood health committee
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
NWSSP	National Water Supply and Sanitation Programmes
OD	Open Defecation
ODF	Open Defecation Free
O&M	Operation and Maintenance
PDHID	Provincial Department of Infrastructure and Development
PEO	Provincial Education Office
PHO	Provincial Health Office
PWSO	Provincial Water and Sanitation Officer
PTA	Parent-Teacher Association
RHC	Rural health centres
RHP	Rural health posts
RWS	Reform of the Water Sector
SDG	Sustainable Development Goals
SEHO	Senior Environmental Health Officer
SHN	School, Health and Nutrition
SOMAP	Sustainable Operations and Maintenance Programme
SUN	Scaling Up Nutrition
UNICEF	United Nations Children's Emergency Fund
VIP	Ventilated improved pit latrine
VWASHE	Village Water, Sanitation and Hygiene Education
WASH	Water, Sanitation and Hygiene
WDC	Ward Development Committee
WHO	World Health Organization
WSS	Water Supply and Sanitation
ZAMSTATS	Zambia Statistical Agency
ZESCO	Zambia Electricity Supply Corporation
ZMW	Zambian Kwacha

EXECUTIVE SUMMARY

Introduction

The WASH stakeholders in Chipili 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 (DWASH IP).

It 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 DWASH IPs while taking into account Scaling Up Nutrition (SUN) principles.

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. The quantitative phase involved household and institutional interviews at ward level with representative sample of 382 households, 27 schools, 11 health care facilities, 4 public places (markets, bus stations and traditional arenas) and 10 non-domestic places (offices, lodges, restaurants and industries etc.) distributed at ward level. The household samples were translated into a margin of error of 5% at a 95% confidence level.

Key WASH Findings

1. Households

- ***Water Supply***: The proportion of Chipili District using safely managed services is 4%.

  In 2022, out of an estimated population of 56,809 in Chipili District, 54,537 people lacked safely managed services.

- ***Sanitation:*** The proportion of Chipili District using safely managed services is 0%.

  In 2022, out of an estimated population of 56,809 in Chipili District, 56,809 people lacked safely managed services.

- ***Hygiene:*** The proportion of Chipili District using basic services is 17%.

  In 2022, out of an estimated population of 56,809 in Chipili District, 47,054 people lacked basic services.

2. Schools

- ***Water Supply:*** The proportion of schools in Chipili District using advanced services is 13.04%.

  In 2022, out of 49 schools in Chipili District, 43 schools lacked advanced services.

- ***Sanitation:*** The proportion of schools in Chipili District using advanced services is 0%.

  In 2022, out of an estimated 49 schools in Chipili District, 49 schools lacked advanced sanitation services.

- ***Hygiene:*** The proportion of schools in Chipili District 4.35% were having advanced hygiene service.

  In 2022, out of 49 schools in Chipili District, 47 schools lacked advanced services.

3. Health Care Facilities (HCF)

- ***Water Supply:*** The proportion of HCFs in Chipili District using advanced services is 25%.

  In 2022, out of 20 HCFs in Chipili District, 15 HCFs lacked advanced services.

- ***Sanitation:*** The proportion of HCFs in Chipili District using advanced services is 0%.

  In 2022, out of an estimated 20 HCFs in Chipili District, 20 HCFs lacked advanced services.

- ***Hygiene:*** The proportion of HCFs in Chipili District using advanced service is 41.65%.

  In 2022, out of 20 HCFs in Chipili District, 12 HCFs lacked advanced services

- ***Health Care Waste Management:*** The proportion of HCFs in Chipili District using basic service is 75%.

  In 2022, out of 20 HCFs in Chipili District, 5 HCFs lacked advanced services.

- ***Environmental Cleaning:*** The proportion of HCFs in Chipili District using advanced service is 12.5%.

  In 2022, out of 20 HCFs in Chipili District, 10 HCFs lacked advanced services.

4. Public Places

- ***Water Supply:*** The proportion of public places in Chipili District using basic services is 0%.

  In 2022, out of the 4 public places in Chipili District, All public places lacked basic services.

- ***Sanitation:*** The proportion of public places in Chipili District using basic services is 0%.

  In 2022, out of the of 4 public places in Chipili District, All public places lacked basic services.

- ***Hygiene:*** The proportion of public places in Chipili District using basic service is 0%.

  In 2022, out of 4 public places in Chipili District, All public places lacked basic services.

5. Non-Domestic Places

- ***Water Supply:*** The proportion of non-domestic places in Chipili District using basic services is 0%.

  In 2022, out an estimated total of the 19 non-domestic places in Chipili District, All non-domestic places lacked basic services.

- ***Sanitation:*** The proportion of non-domestic places in Chipili District using basic services is 16.67%.

  In 2022, out an estimated total of the 19 non-domestic places in Chipili District, All non-domestic places lacked basic services.

- ***Hygiene:*** The proportion of non-domestic places in Chipili District using basic service is 33.33%.

  In 2022, out of estimated total of 19 non-domestic places in Chipili District, 13 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 Joint Monitoring Programme (JMP) ladders across households, schools, health care facilities, public and non- domestic places.
2. Develop WASH interventions for improving access to WASH based on actual development trends guided by the planning boundary of Chipili District, the standards in the National Urban Water Supply and Sanitation Programme (NUWSSP) and principles in National Rural Water Supply and Sanitation Programme (NRWSSP).
3. Evidence based planning requires upscaling of survey in other districts through dissemination and orientation of partners on developed questionnaires, tools, and data analysis strategies for meeting the data requirements of WASH indicators.

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 (DWASH 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 (DWASH IP).

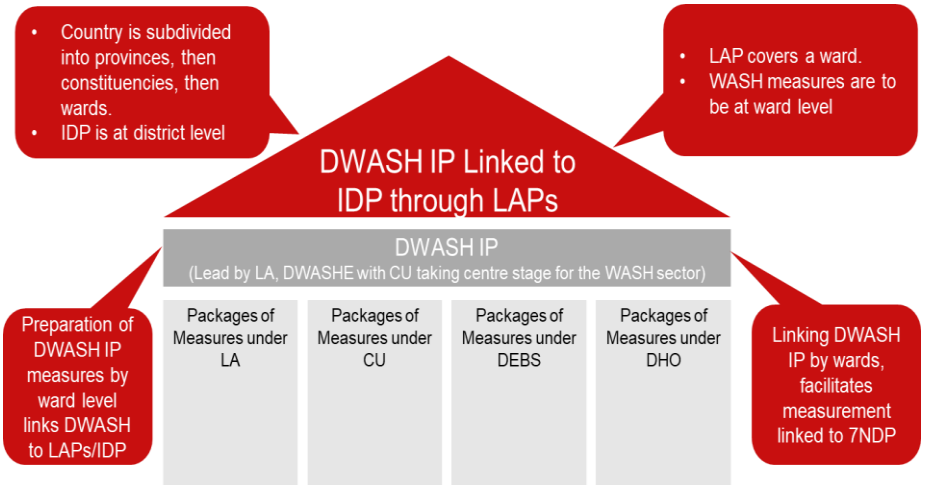


Figure 1: Packages of measures of the DWASH IP

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 centres 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 DWASH IPs while taking into account 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 places such as industries, institutions etc.	**Gender sensitivity data and information** ▪ Current practices ▪ Gender mainstreaming at community level structures, such as ward development committee (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 refer 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, Menstrual Hygiene Management (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		Review the available capacity of implementers and data availability for the development of a DWASH IP	Ministry of Water Development and Sanitation (MWDS)/DWSS Provincial Water and Sanitation Officer (PWSO) LpWSC Provincial Department of Infra-structure and Development (PDHID)/ CTC Provincial Education Office (PEO)/ DEBS District Health Office (DHO) Provincial Planning Provincial Chiefs Office Provincial Community Development (ComDev)	
2	Baseline survey Preparation Consultations		Gather the necessary data instruments required to design Baseline survey exercise	MWDS/DWSS (PWSO) CTC LpWSC DHO DEBS Dept of Chiefs Zamstats	This particular activity was on-going from preparation to implementation stage
3	Stakeholder Baseline Survey Kick Off Meeting	25th July 2022	Present the Baseline survey objectives, Survey Tools, Approach and obtain feedback from stakeholders	CTC DHO DEBS	
4	Training of Environmental Health Technicians (Enumerators) and Community Health Assistants (CHAs)	25th July to 27th July 2022	Train the EHTs on target areas of the survey & interviewees and also the process of surveying & questionnaires/tools to be used	6 EHTs 3 CHAs WASH Coordinator GFA Team	
5	Survey findings and interpretation of results	31st August 2022	Present the findings of the survey, obtain feedback, and validate	CTC LpWSC DHO DEBS	

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 WASH Coordinator heavily involved District and Ward Level Information Registered Businesses Information Facilitated access to the Public Places and Non-Domestic Facilitated the Stakeholder Consultative Meeting with Partners
2	DHO	Health Care Facility Information Facilitated engagement of Environmental Health Technicians (EHT) and Community Health Assistants (CHAs) to be enumerators (quantitative) Catchment/zonal information
3	DEBS	School Information/ Introductory letter Zonal Information
4	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 Geographical Information System (GIS) expert with experience in GIS and data collection as well as design. Additionally, GFA had to recruit on short-term basis a Monitoring and Evaluation (M&E) Expert and Data Analyst to complete the Survey Management Team.

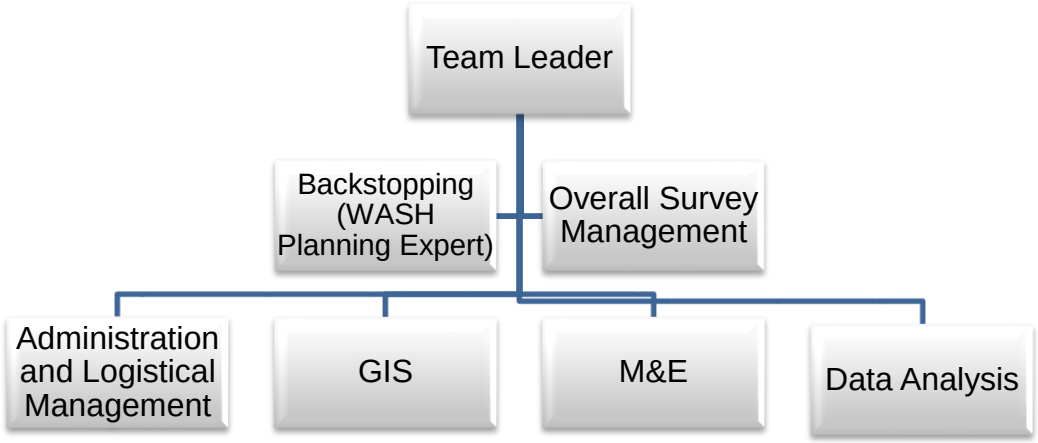


Figure 2: WASH baseline survey core management team

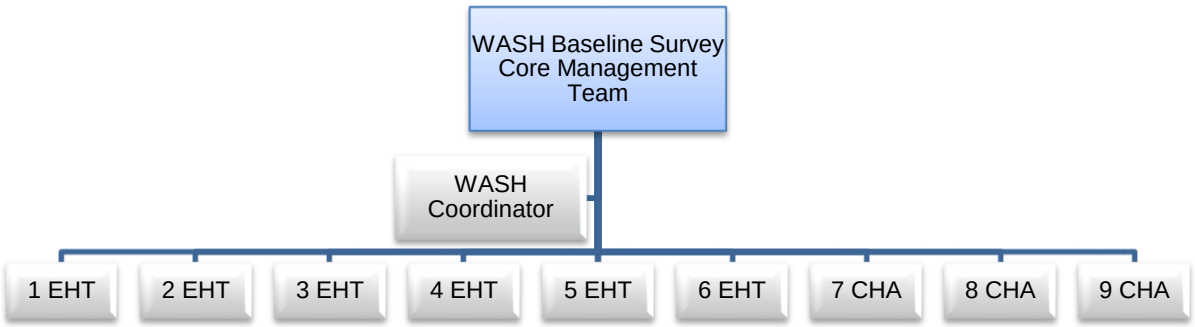


Figure 3: WASH baseline survey data collection team

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 • Review of the Baseline survey questionnaires and tools • Conducting Key Informant Interviews
Partners	CTC, 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	• Responsible for enumerator and team logistics services • Responsible for procurement of equipment and services for the survey • Made sure all required gadgets and stationery 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 mWater • Data collection and verification prior to the survey • Generating household survey samples and closely working with the EHTs 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 and Data Analyst	Mirja Kattelus	• Helping with the data cleaning prior to data analysis • Ensured quality data before data analysis could be done • Analysing data using the developed data analysis framework and production of supporting visuals for publication of results
WASH Coordinator	Joackim Chanda	• Responsible for the organisation of Stakeholder Consultative Meeting • Responsible for the engagement of DHO to have the EHT as Enumerators • Responsible for supervising the EHTs

Function	Name	Role and Responsibility
Enumerators	Blair Sililo (EHT) Alinase Kafunda (EHT) Collins Mhango (EHT) Henry Kalumba (EHT) Lazarus Phiri (EHT) Francis Mulenga (EHT) Justin Mwape (CHA) Webby Chikonde (CHA) Kennedy Mwansa (CHA)	• 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 oversaw the supervision of the exercise, conduction of Key Informant Interviews (KIIs), collaboration with counterparts' programmes, as well as development of survey tools, questionnaires, data analysis and reporting.

4.1.3 Enumerators

To carry out the baseline survey, the programme had engaged nine (9) Environmental Health Technicians (EHTs) and/or Community Health Assistants (CHAs) as enumerators to carry out the main data collection exercise in Chipili District. The enumerators were supported by a core survey management team from GFA and the council which ensured that high quality data was obtained during the entire survey process. The WASH Coordinator facilitated the engagement of the DHO to involve the EHTs/CHAs and supervised the data collectors.

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 major equipment that would ensure the data needed was collected efficiently was already procured during the Mansa and Mwense Data Collection Process inclusive of the data collection tools used in the Lusaka Industrial Wastewater Survey (IWWS) but only required the procurement of the operational equipment. The logistics that were put in place for the survey have been divided into 3 categories as follows:

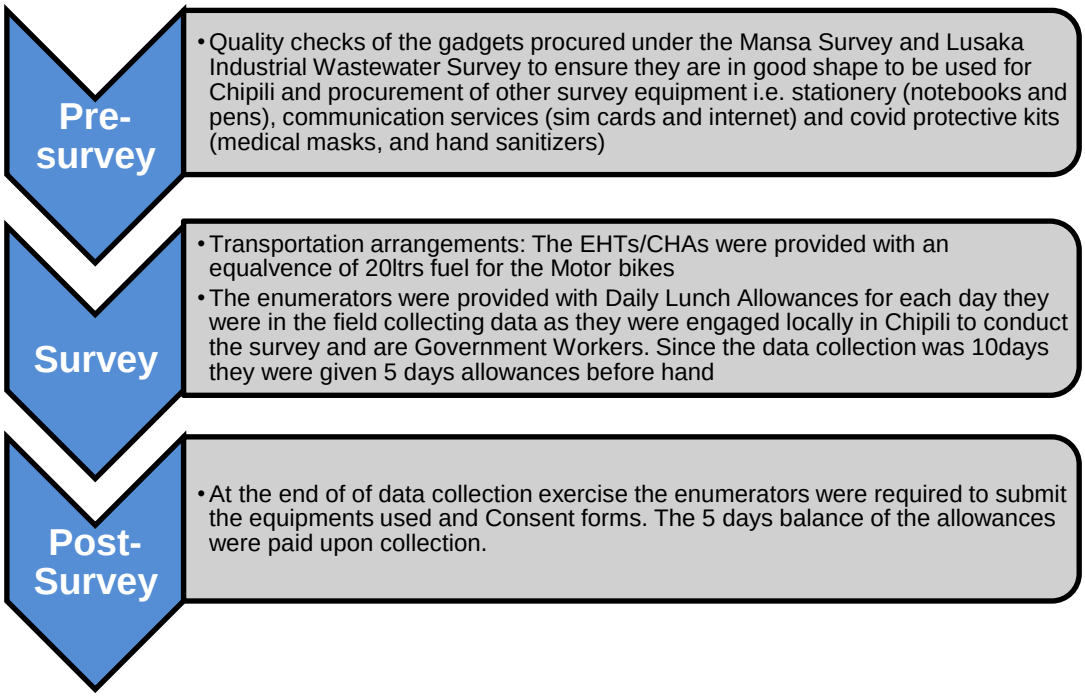


Figure 4: Chipili baseline survey logistics

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 MWater

MWater was selected as the software to host the questionnaires and the collected data. mWater is an operating system as well as a web base 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. The users typically focus on Surveying, Monitoring, Evaluation, & Learning, and Management.

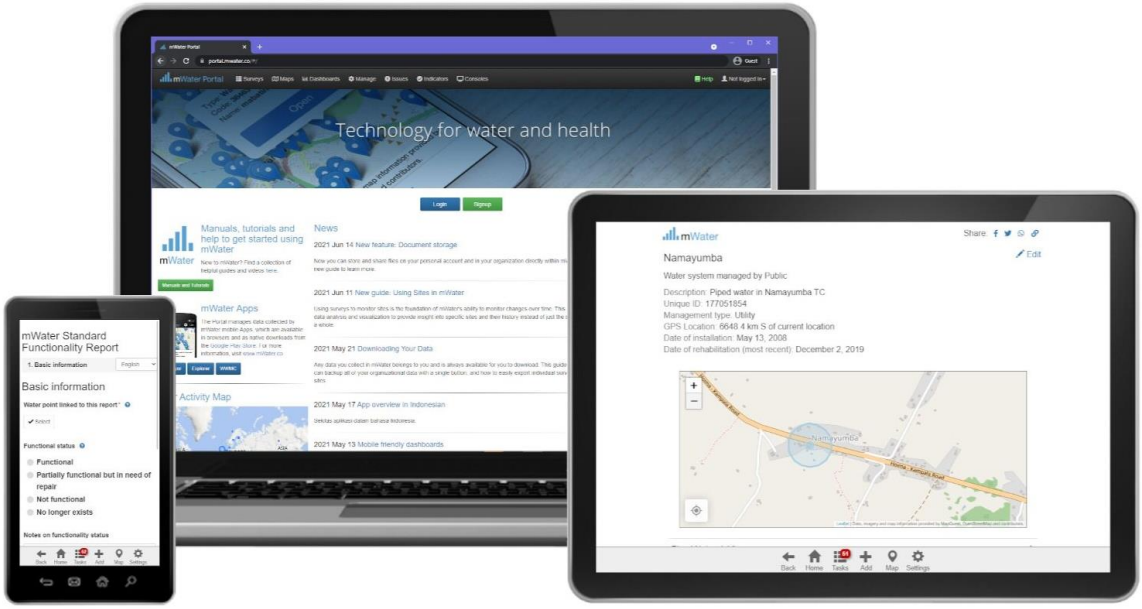


Figure 5: mWater interface on phones, tablets or any browser.

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

- Samsung Tab A
  - MWater Surveyor App - this is an Android application which was downloaded on each tablet for the actual data collection
  - Questionnaires - these would be loaded onto the Surveyor App tool from the server
  - Google Earth – for navigation and Maps of Wards and locations of selected sample units

Figure 6: Survey equipment procured for the baseline survey exercise

The mWater Surveyor 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 Surveyor Application prior to the field data collection:

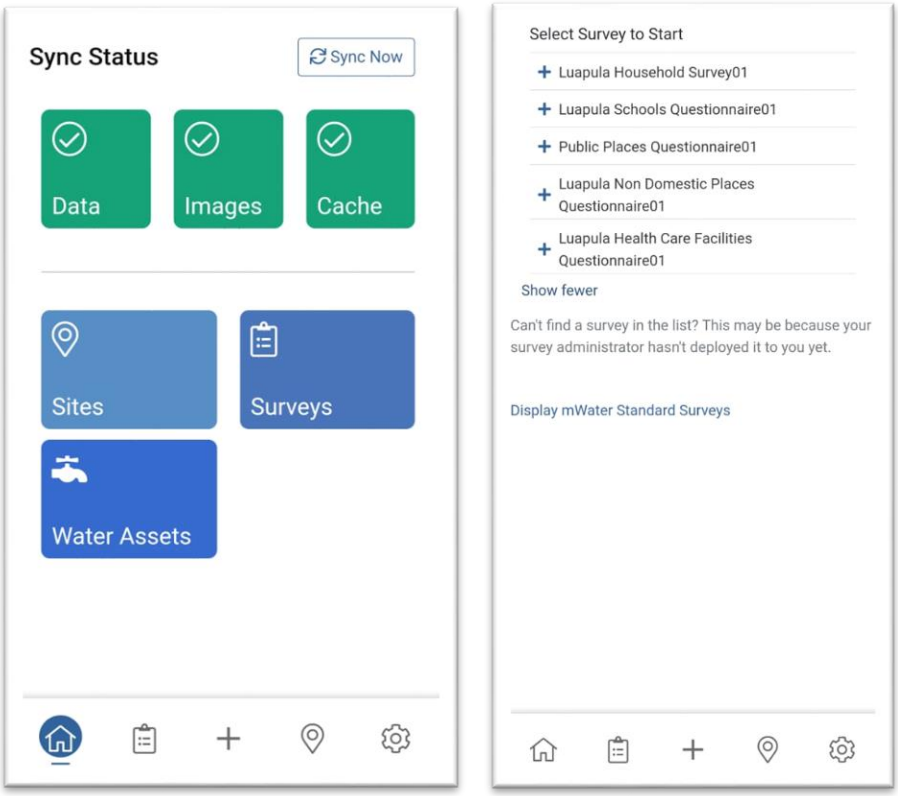


Figure 7: Main interface of the mWater mobile application and list of surveys forms developed

4.2.3 Testing of Tools and Questionnaires

Testing of the tools and questionnaires was extensively done. The enumerators had to go through a one and a half day workshop and one day of field testing of the questionnaires. The essence of the testing Survey was to refine the questionnaire for several aspects, including:

i. The clarification of the questions and thus refine the questionnaires and implement appropriate interventions that would enable interviewees cooperate with the enumerators
ii. Knowing the exact time required to complete one questionnaire
iii. The enumerators gained confidence in their significant interpersonal skills and became familiar with the questions and use of the app
iv. The general reception and perception of the different respondents was established
v. Looking out for potential challenges when carrying out the survey as well as coming up with possible remedies.

The enumerators later gave reviews of their field experience and suggested improvements/ additions to some of the questions to suite the context of Chipili District.

4.2.4 Key Informant Interviews

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.

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 8.

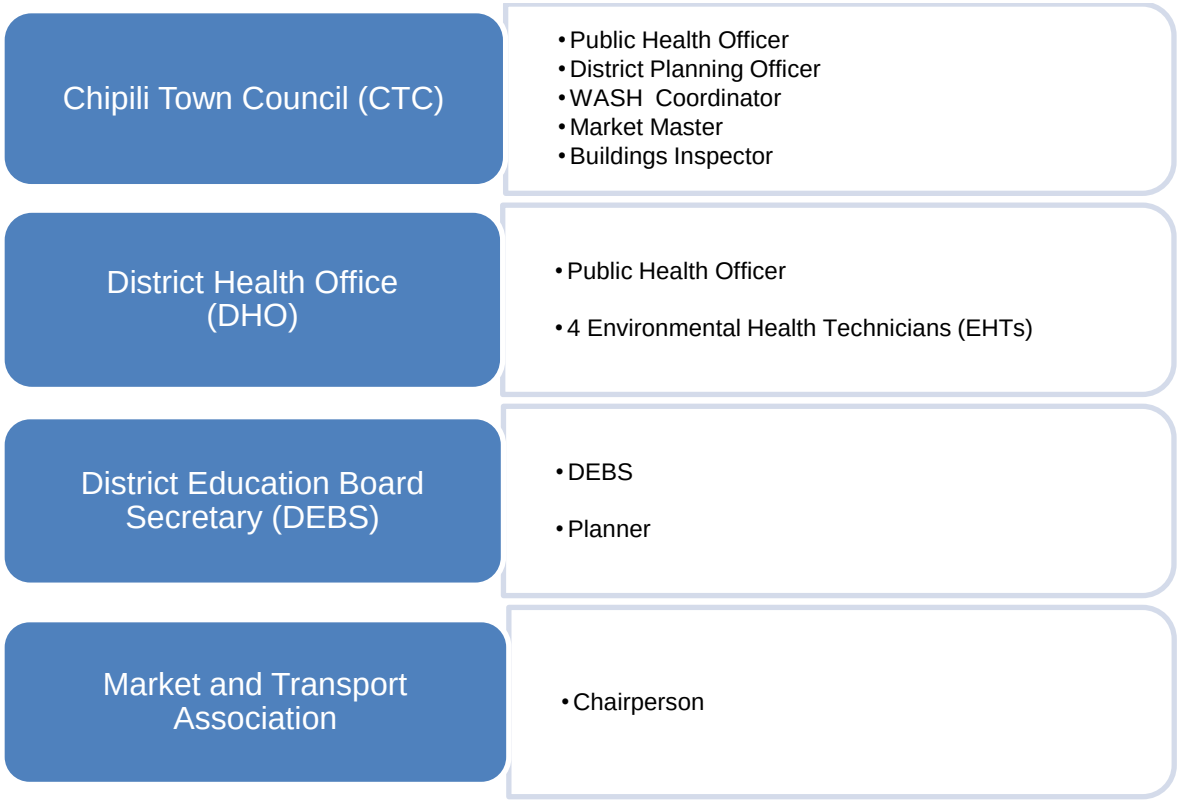


Figure 8: Target persons for Key Informant Interviews

The KIIs were designed to be implemented in 3 days. **Annex 2** provides a detailed plan for the KIIs 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	Chipili Town Council (CTC)	CTC through the DPO and WASH Coordinator provided data for the district boundaries as well as some information on the population. The Chipili 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	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: • 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 built up 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 i.e. Hospital, Rural Health centre and Rural Health Post and their location.
6	Ministry of Education – District Education Board Secretary (DEBS)	The DEBS provided the list of schools by type; secondary schools, primary schools as well as community schools and their location.
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 Chipili District were as follows;

Table 25: Key Chipili 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
Chipili	56,809	49	20	No Data	19

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 (56,809)
- **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 the 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 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 Chipili sample size calculations are presented in Table 26.

Table 26: Chipili District household sample size

Total Population in Chipili District	**56,809**	
Population sample size	**Initial sample size** *Calculated Population Sample Size*	**381**
	Revised sample size *Calculated Population Sample Size * 5 factor*	**1,905**
	Actual sample collected	**2340**
Household sample size ***(assume 5 people per household according to 2015 LCMS)***	**Initial sample size**	**76**
	Revised sample size	**382**
	Actual Sample Collected	**390**

The sample distribution across wards was weighted as follows;

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

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

Table 27: Chipili household ward level sample size

Name of ward	Projected population	Final sample size (Calculated Population Sample Size * 5 factor)	Actual Samples Collected
Chibalashi	6,917	47	52
Chululuongo	2,169	15	16
Kabuta	4,908	33	34
Kanshimba	4,796	32	30

Name of ward	Projected population	Final sample size (Calculated Population Sample Size * 5 factor)	Actual Samples Collected
Lufubu	4,795	32	32
Makabe	2,703	18	18
Mumbwe	5,129	34	34
Musufya	4,133	28	28
Mweshi	5,509	37	37
Nalupembe	8,320	56	58
Nkonge	5,072	34	34
Nsenga	2,358	16	17
	36,809	**382**	**390**

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: Chipili schools, HCF and non-domestic sample size

Chipili school sample size	Total number of schools	**49**
	Sample size	**27**
	Actual samples collected	**23**
Chipili HCF sample size	Total number of HCF	**20**
	Sample size	**11**
	Actual samples collected	**12**
Chipili non-domestic places	Total number of non -domestic places	**19**
	Sample size	**10**
	Actual samples collected	**6**

From the Table 28, it is observed that the schools were under sampled by 4 schools which was a result of some schools being hosted on the same property which meant it was not necessary to interview the same property twice. The HCFs were oversampled by 1 which is Kalundu Rural Health centre to represent Mumbwe Ward. The non-domestic places were under sampled by 4 samples and this was due to the government building/ offices being omitted in the data collection process.

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 100% samples for all public places.

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

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

Table 29: Chipili public places sample size

Chipili public places sample size	**Sample size** *(estimated for the sake of planning)*	**4**
	Actual samples collected	**4**

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 9shows how the population of Chipili district was extracted. Map 3 is an example of the ward population for the ward Kabuta. The population data was overlaid with settlements, built up and hamlets. This gave a picture of the ward's populated areas which was in line with 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. Map 4 shows the generated random samples with the settlement dataset which was a union of the settlements, hamlets and the built-up areas clipped from the GRID3 data.

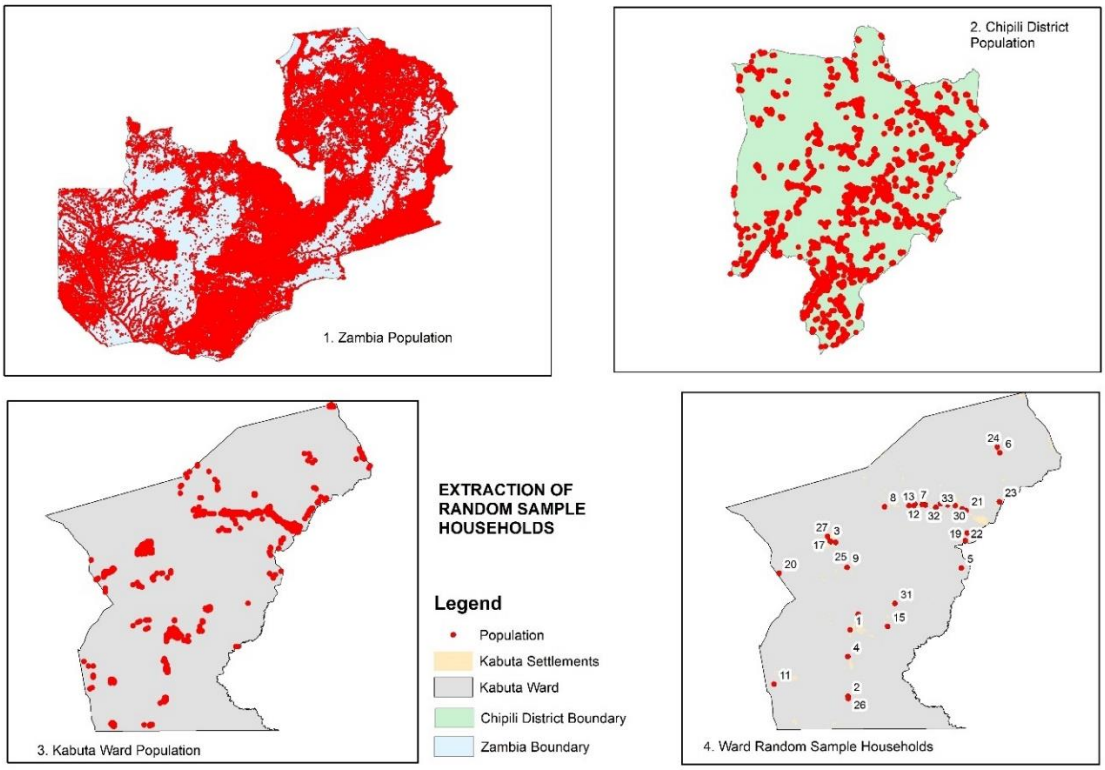


Figure 9: Chipili household sampling methodology

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.

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 by type i.e., basic, primary, combined 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.

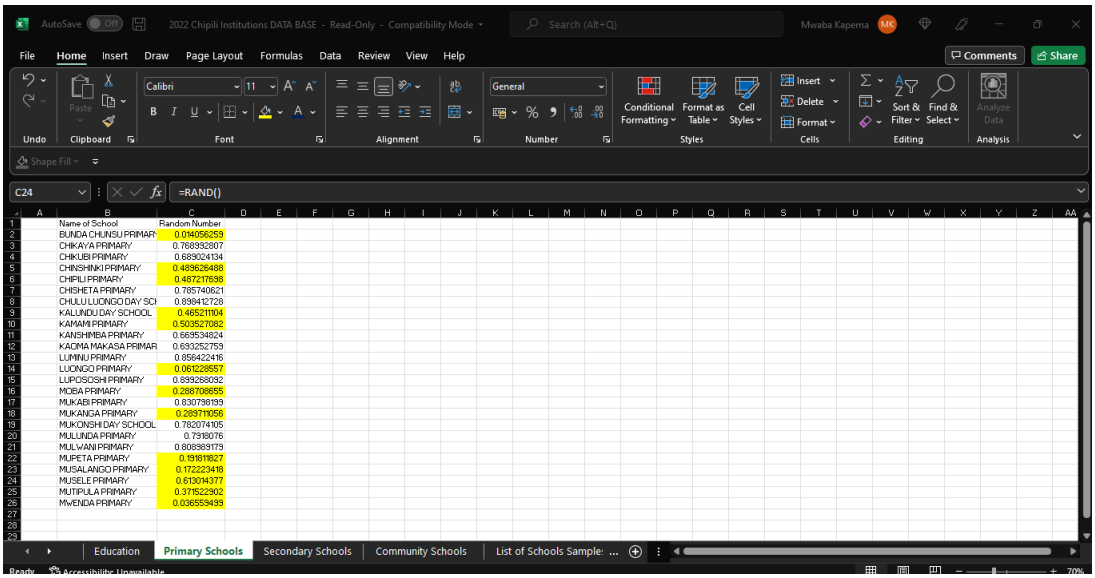
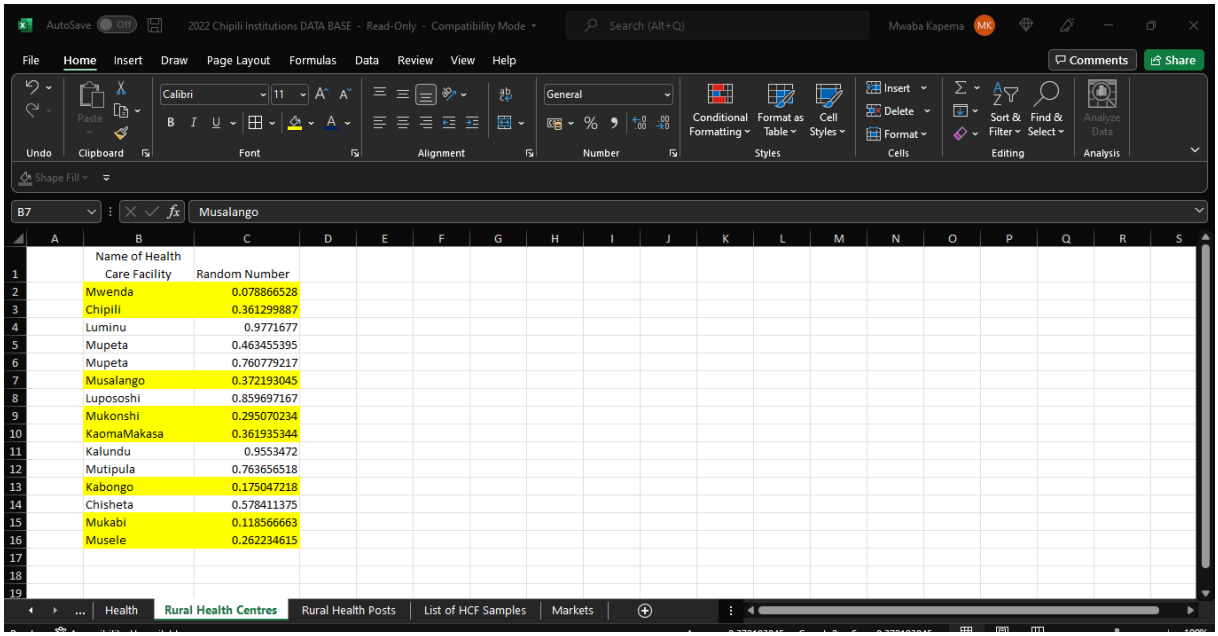


Figure 10: Chipili schools sampling methodology

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 like the schools were clustered by type i.e. rural health post, rural health centre and hospital.

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.



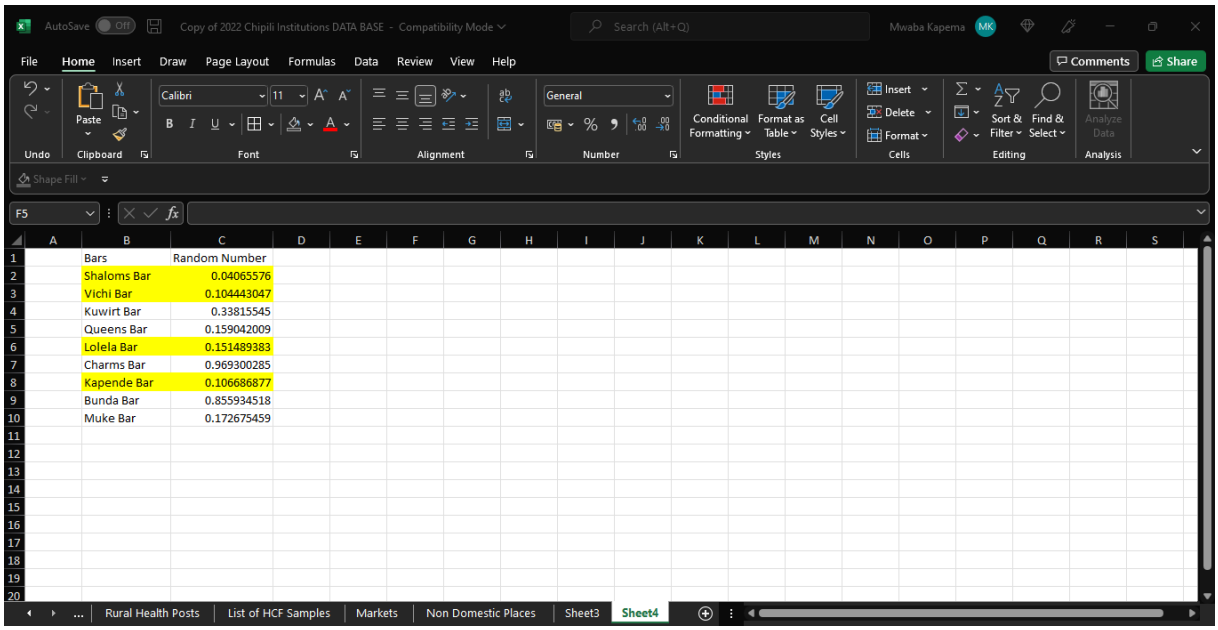
	Name of Health Care Facility	Random Number
2	Mwenda	0.078866528
3	Chipili	0.361299887
4	Luminu	0.9771677
5	Mupeta	0.463455395
6	Mupeta	0.760779217
7	Musalango	0.372193045
8	Lupososhi	0.859697167
9	Mukonshi	0.295070234
10	KaomaMakasa	0.361935344
11	Kalundu	0.9553472
12	Mutipula	0.763656518
13	Kabongo	0.175047218
14	Chisheta	0.578411375
15	Mukabi	0.118566663
16	Musele	0.262234615

Figure 11: Chipili 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 and office buildings by the stakeholders.

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.



	Bars	Random Number
2	Shaloms Bar	0.04065576
3	Vichi Bar	0.104443047
4	Kuwirt Bar	0.33815545
5	Queens Bar	0.159042009
6	Lolela Bar	0.151489383
7	Charms Bar	0.969300285
8	Kapende Bar	0.106686877
9	Bunda Bar	0.855934518
10	Muke Bar	0.172675459

Figure 12: Chipili 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 pick every public place they came across.

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 enumerators. 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 GIS Person according to the proximity of the wards they belong to.

Equipment preparations

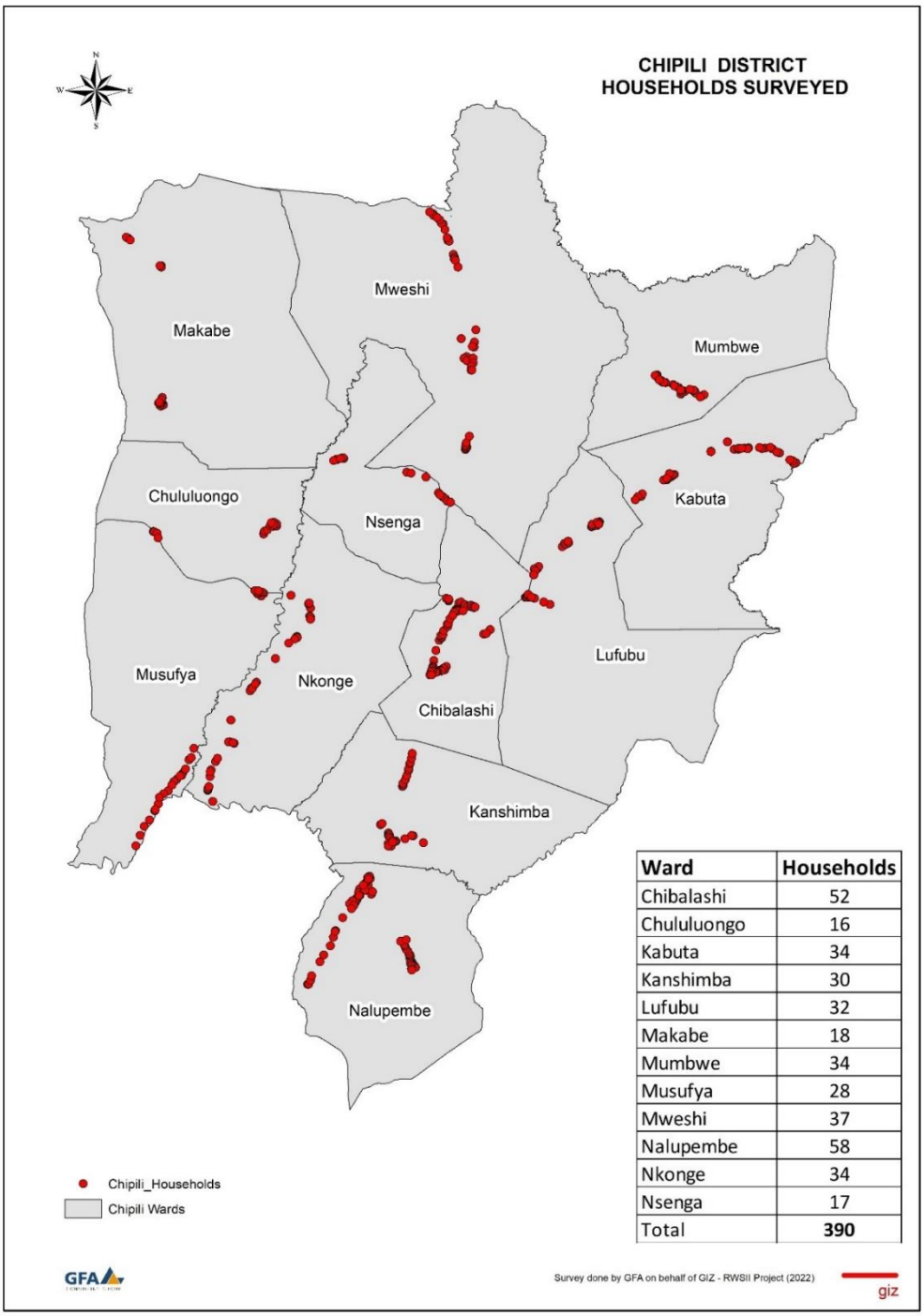
Prior to going to the field, the supervisor and enumerators ensured they had all functioning equipment and sufficient supplies to perform their work. The equipment (Tablets & Power banks) was given to the enumerators, and they were expected to have them charged prior to the field day.

Transportation arrangements

The enumerators were provided with fuel cash voucher for their motor bikes equivalent to 20ltrs each.

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, 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. Failure to which an alternative random point us given to the enumerator.



Ward	Households
Chibalashi	52
Chululuongo	16
Kabuta	34
Kanshimba	30
Lufubu	32
Makabe	18
Mumbwe	34
Musufya	28
Mweshi	37
Nalupembe	58
Nkonge	34
Nsenga	17
Total	**390**

Figure 13: Map of Chipili 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: Chipili District survey data collection roadmap

Date	Survey Activity
25th to 27th July 2022	Pre-Data Collection Training of EHTs/CHAs
29th July 2022	Commencement of Data collection in Chipili
15th August 2022	Data Collection Officially 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 five key informant interviews. All interviews were audio taped and transcribed verbatim.

4.6.2.1 Key Informant Interviews

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

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. Consent to conduct these interviews had to be obtained as the interviews had to be recorded for accuracy apart from the note taking.

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 right at the beginning of the survey. Each enumerator was provided with medical masks which they were expected to wear as they conducted the interviews. Since the enumerators used are officially officers under the Ministry of Health, COVID measures were adhered to according to the Ministry. 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 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 situation in Chipili regarding 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 14.

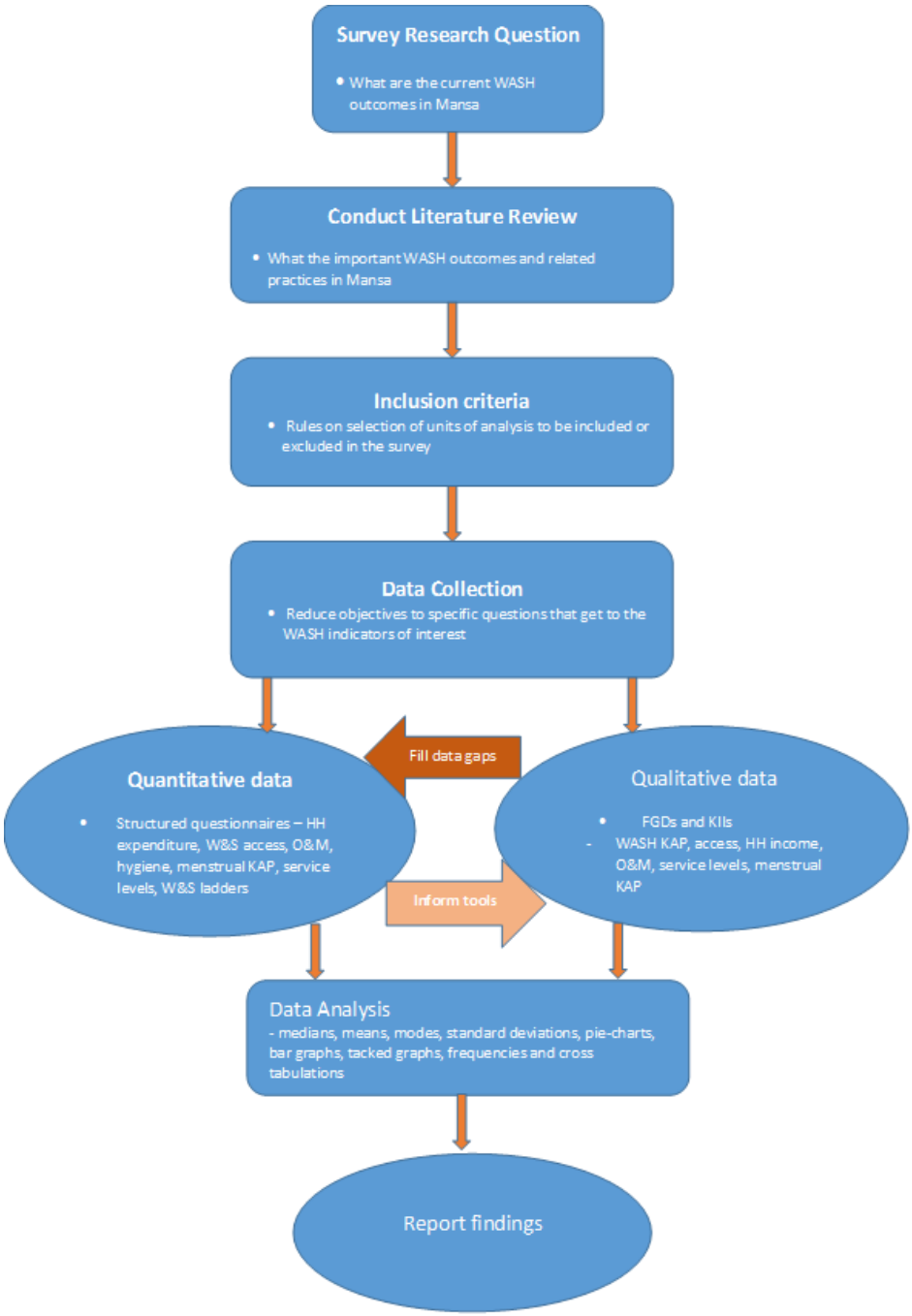


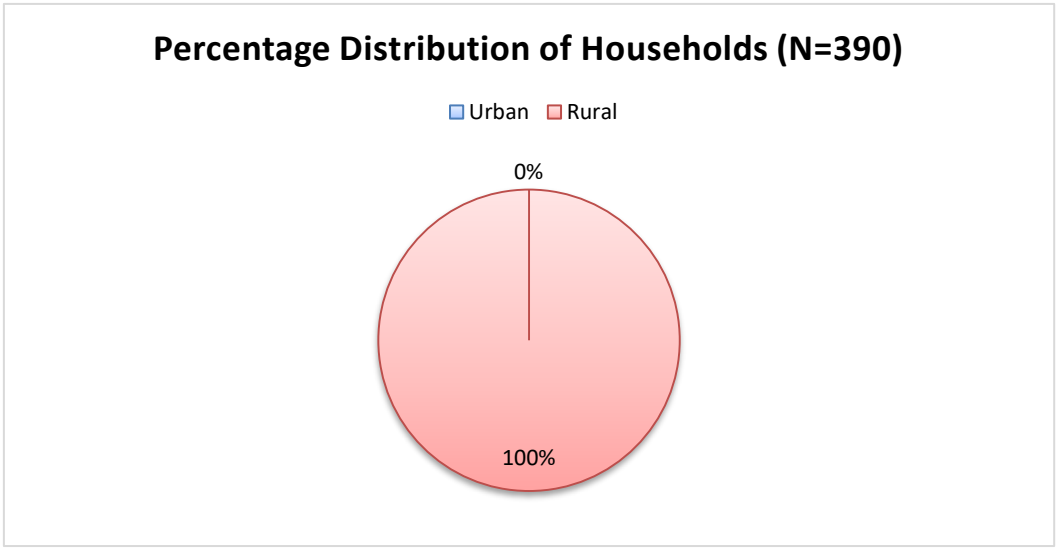
Figure 14: Data analysis conceptual framework

5 FINDINGS

5.1 Households

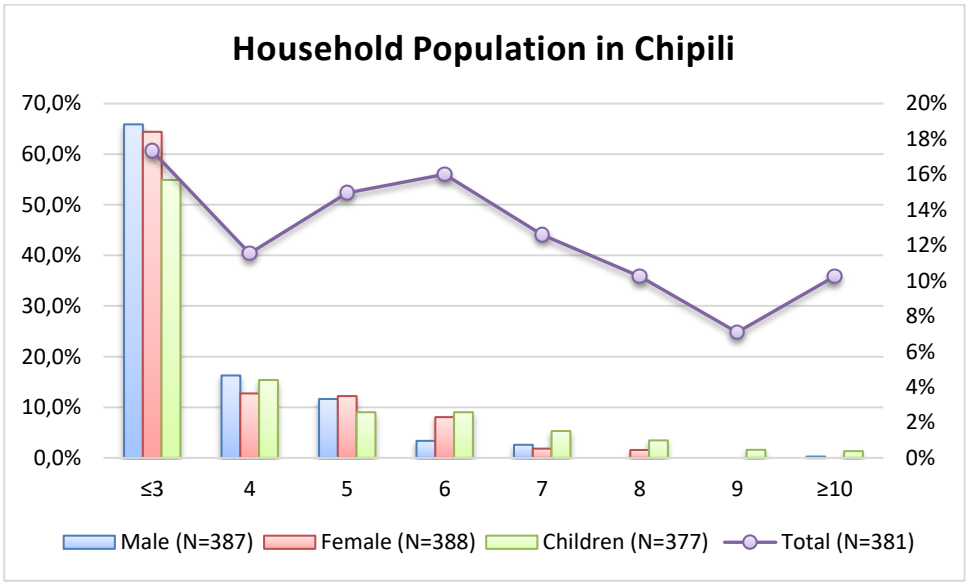
5.1.1 Socio-Economic Status & Electricity Connectivity

Average household size for urban and rural areas in Chipili



Findings 1: Chipili District distribution of households (N = 390)

All of households interviewed were from rural. This generally represents the spread of population in Chipili which is primarily rural. There is township which was recently opened up and yet to accommodate the population.

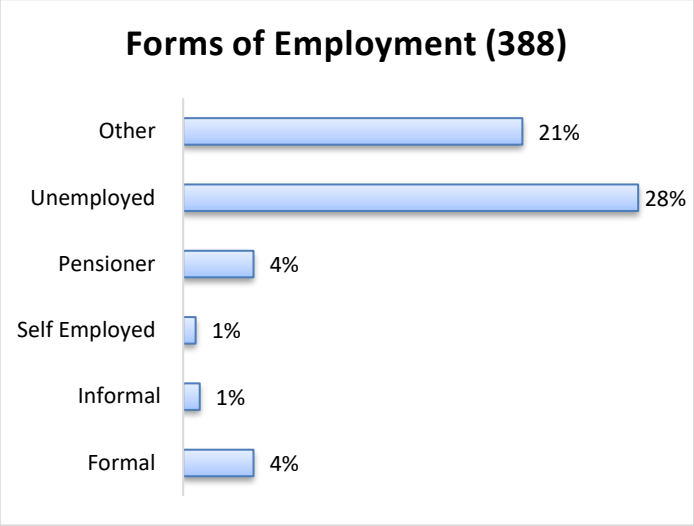


Findings 2: Chipili District Household Population

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

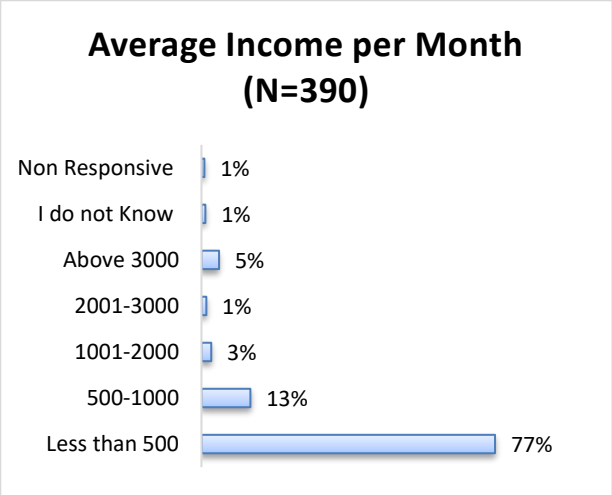
Employment

Very few people (4%) were in formal employment while 29% 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: Chipili District - types of employment (N = 388)

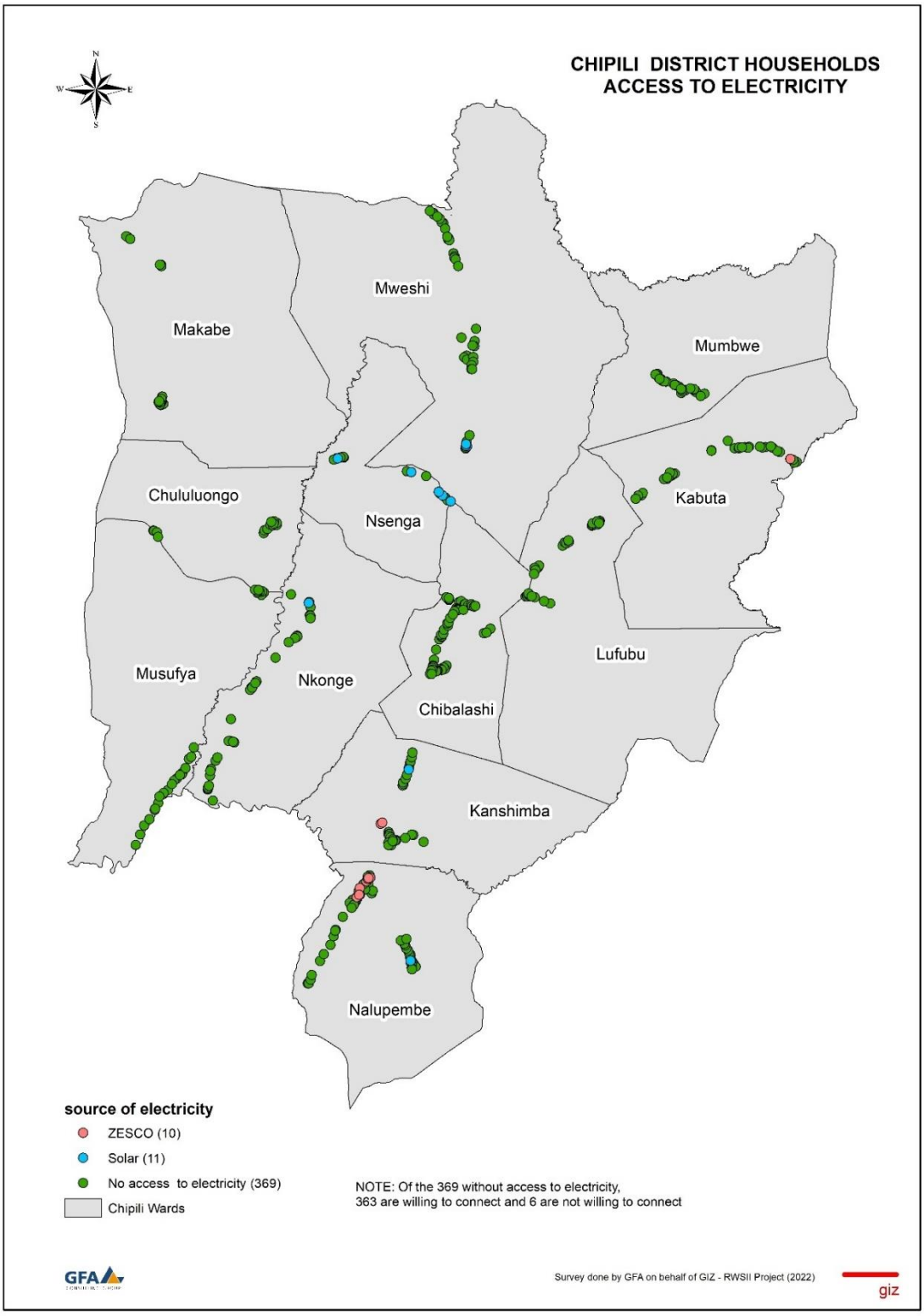
Average household income



Findings 4: Chipili District average household income (N=390)

Majority of the households have at least an income bracket of less than K500 (77% of 390 households)

Access to electricity

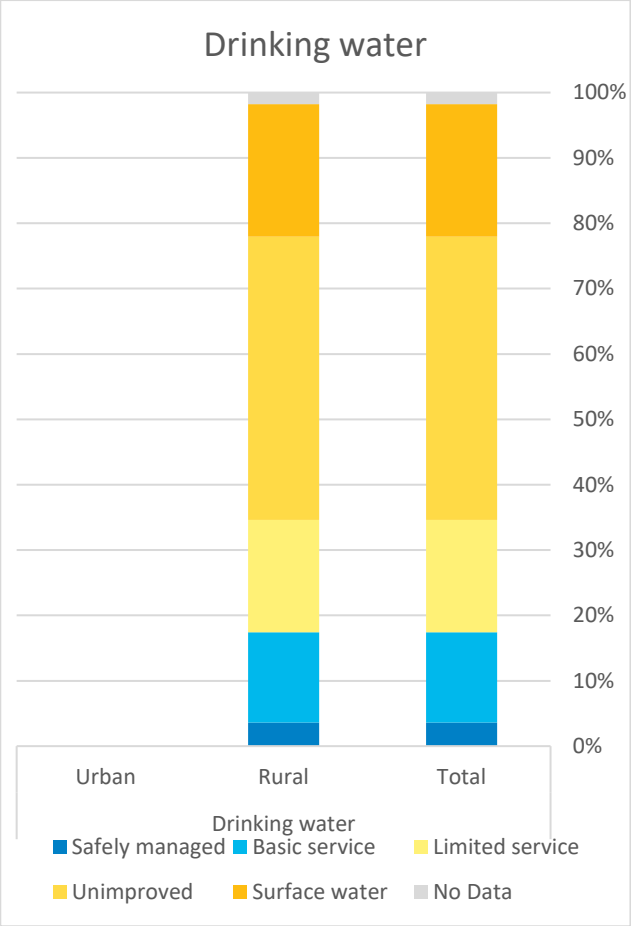


Findings 5: Chipili District household source of electricity (N=385)

It is observed that most of Chipili District does not have access to electricity (95% of 390 households) and for those that have access to electricity, their source of electricity is through ZESCO (hydroelectricity) 48% and solar 52%. Willingness to connect to electricity out of those that had no access stood at 98%.

5.1.2 Water Supply Services

Chipili JMP ladder for drinking water services



Findings 6: Chipili District JMP ladder for drinking water

Chipili	Drinking water		
	Total	Rural	Urban
Safely managed	4%	4%	
Basic service	14%	14%	
Limited service	17%	17%	
Unimproved	43%	43%	
Surface water	20%	20%	
No Data	2%	2%	
Total	**100%**	**100%**	

The proportion of Chipili District using safely managed services is 4%.

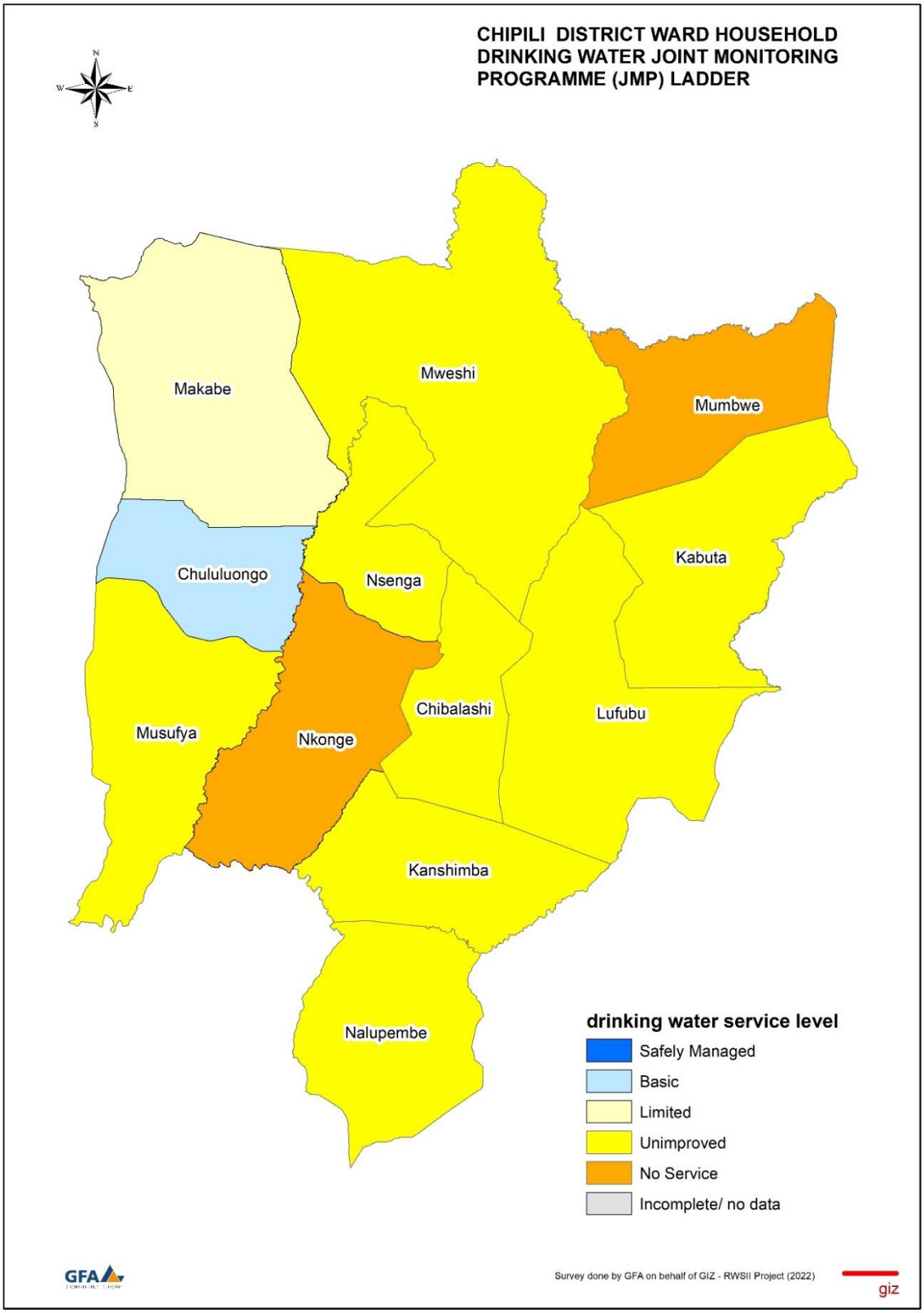
In 2022, out of an estimated population of 56,809 in Chipili District, 54,537 people lacked safely managed services including 8,116 people with basic services, 9,854 people with limited services, 24,926 people using unimproved sources and 11,594 drinking surfaces water.

Majority of the district's population is having access to unimproved water services.

Please refer to Table 2 for the definition and clarifications on the service level indicators for drinking water.

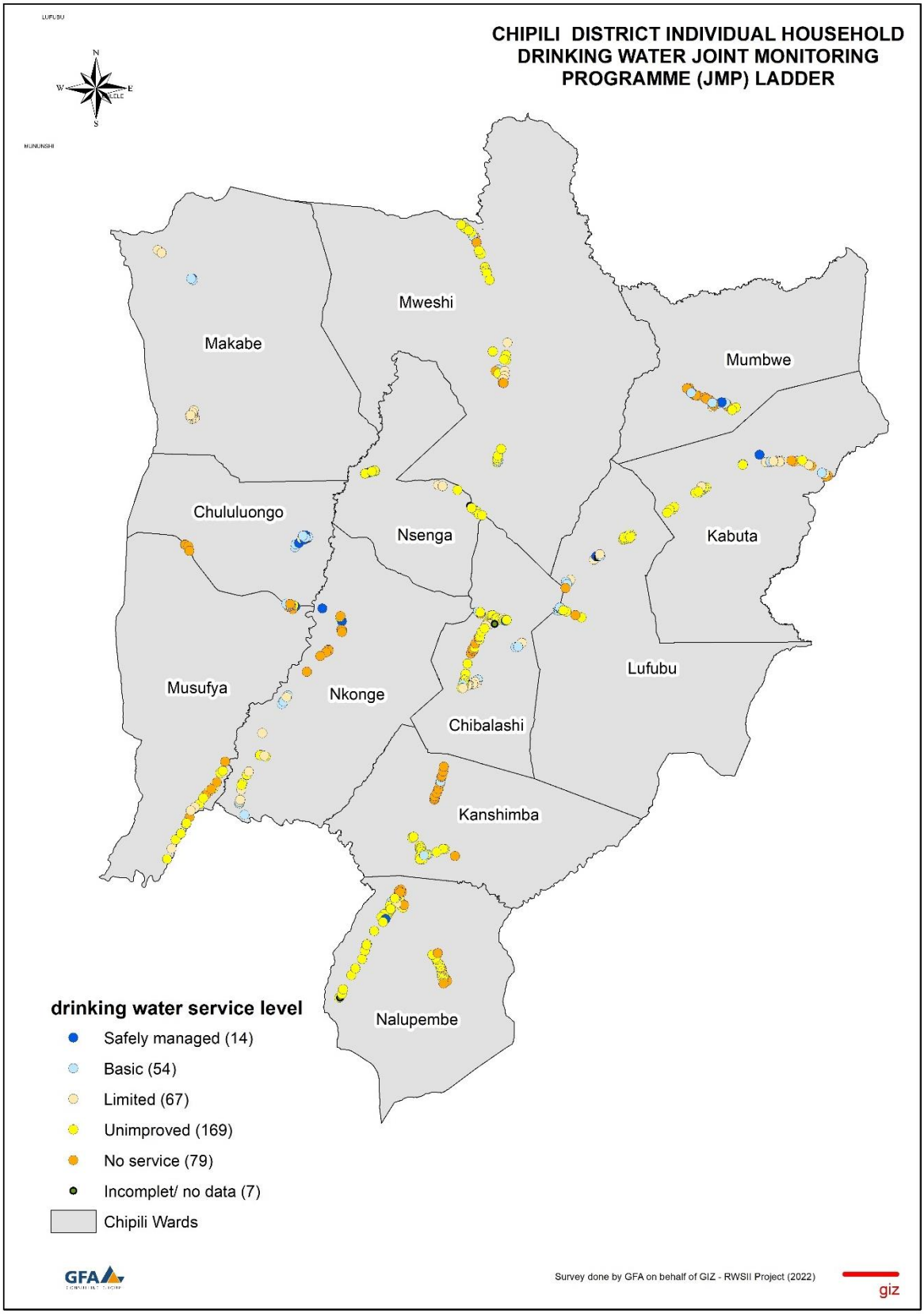
Note

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: Chipili District ward level JMP for household drinking water services

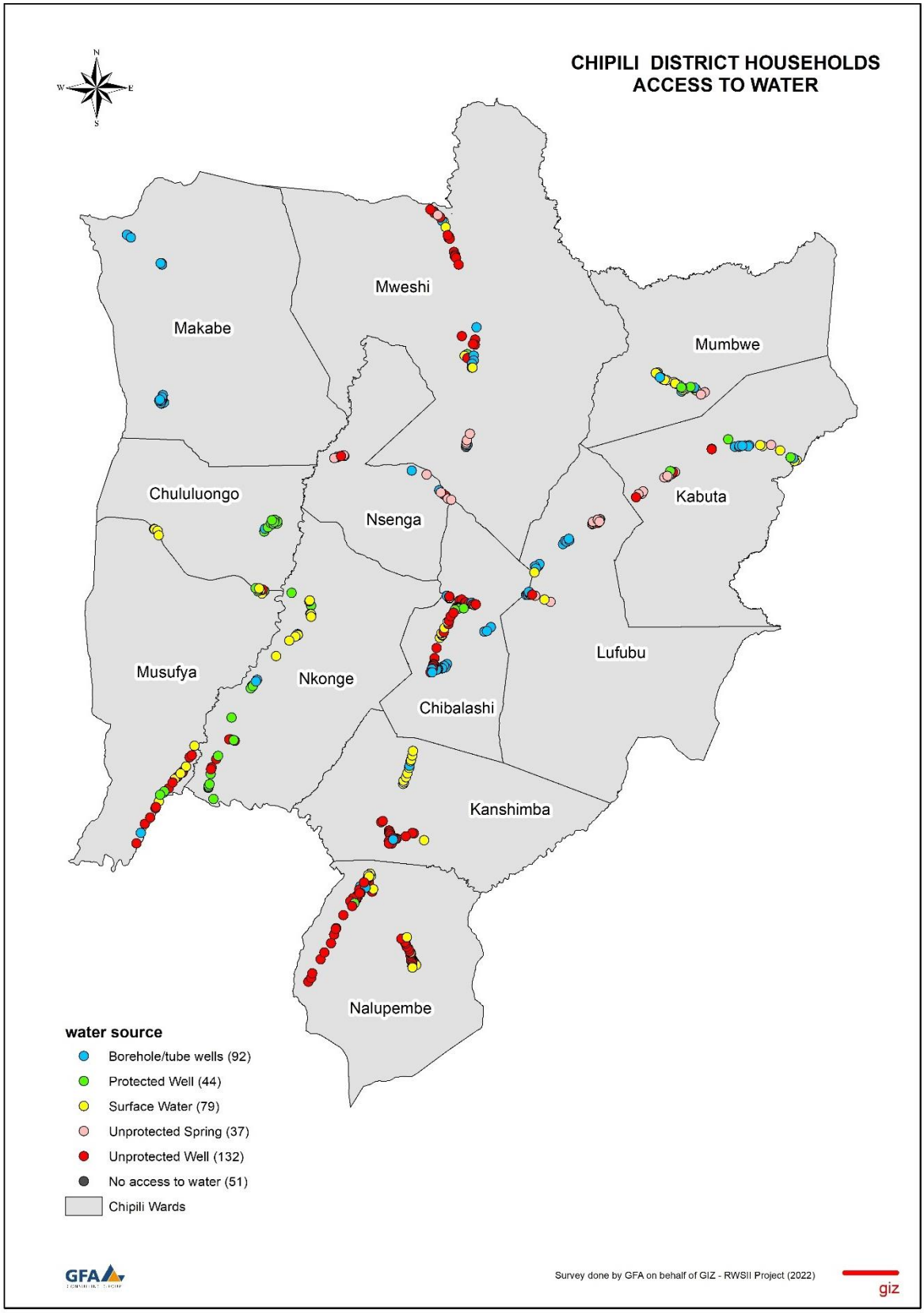
Findings 7 shows JMP indicators at ward level. Out of the 12 wards in Chipili District, only one ward, namely Chululuongo has majority of its households having access to basic drinking water. Majority of the wards in Chipili District have majority of the households accessing unimproved drinking water services which relates to what is being reported in Findings 7. Mumbwe and Nkonge wards have majority of their households having access to surface water. To see how this distribution is at individual household level refer to Findings 8.



Findings 8: Map of Chipili District showing the JMP ladder for drinking water at individual level

Luapula Water Supply and Sanitation Company (LpWSC) is currently not operating in Chipili District and therefore this means that they do not have infrastructure in the District to outline on the map. Findings 8 simply illustrates the service level on an individual level from Findings 7.

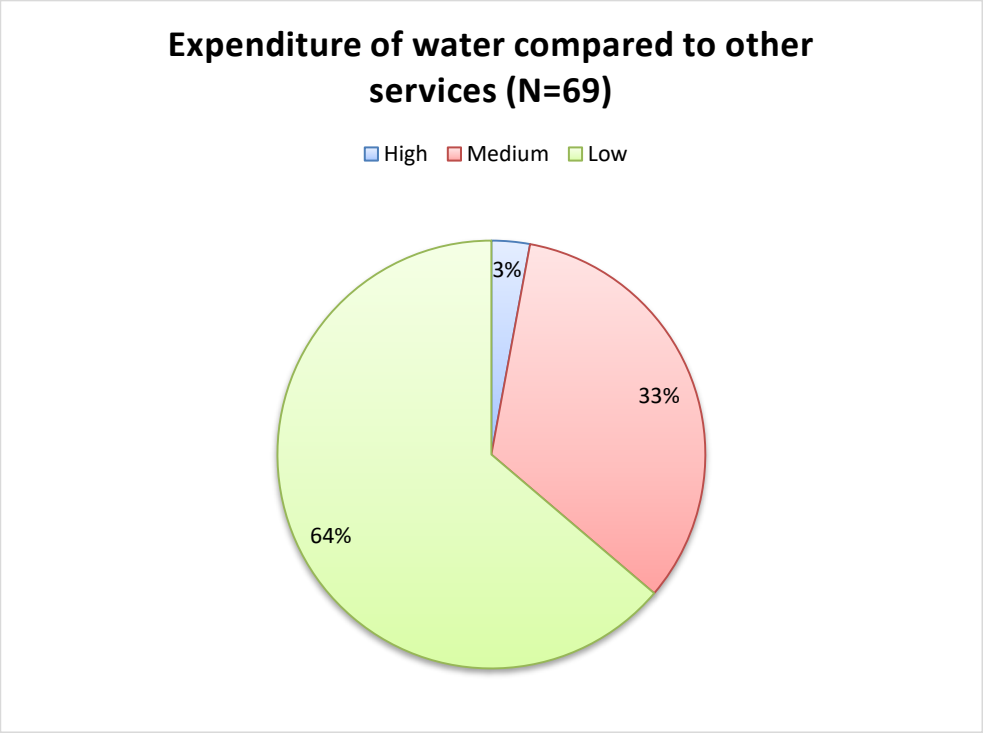
Type of water source



Findings 9: Chipili District households-type of water sources / access

From Findings 9, majority of household access water from unprotected wells seconded by Boreholes/ tube wells.

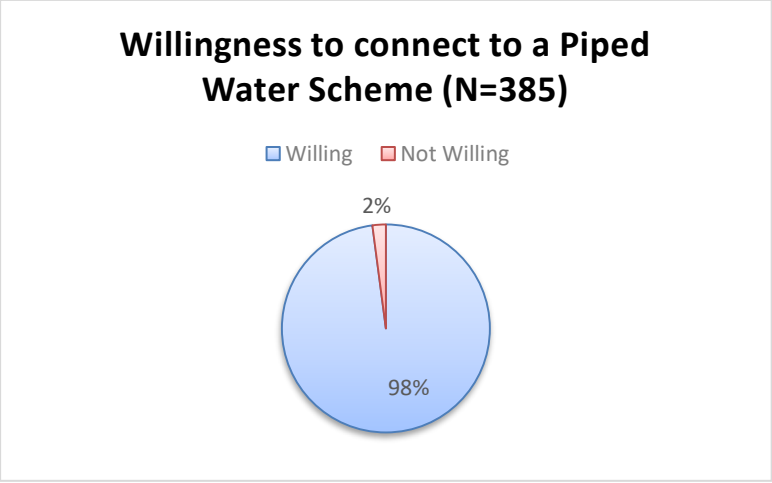
Affordability of the water service



Findings 10: Chipili District expenditure of water compared to other services (N=69)

Out of the 18% of households that pay for water, majority (64%) of those households thought the water services were cheap and about 33% categorise water as an moderately expensive service.

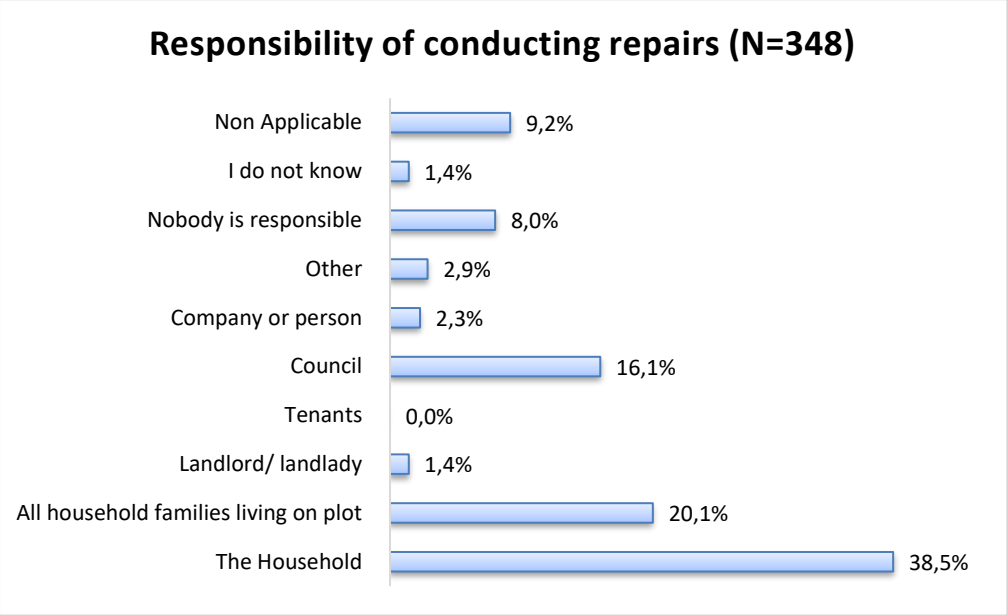
Willingness to connect to Piped Water Schemes



Findings 11: Chipili District willingness to connect to Piped water Schemes (N = 385)

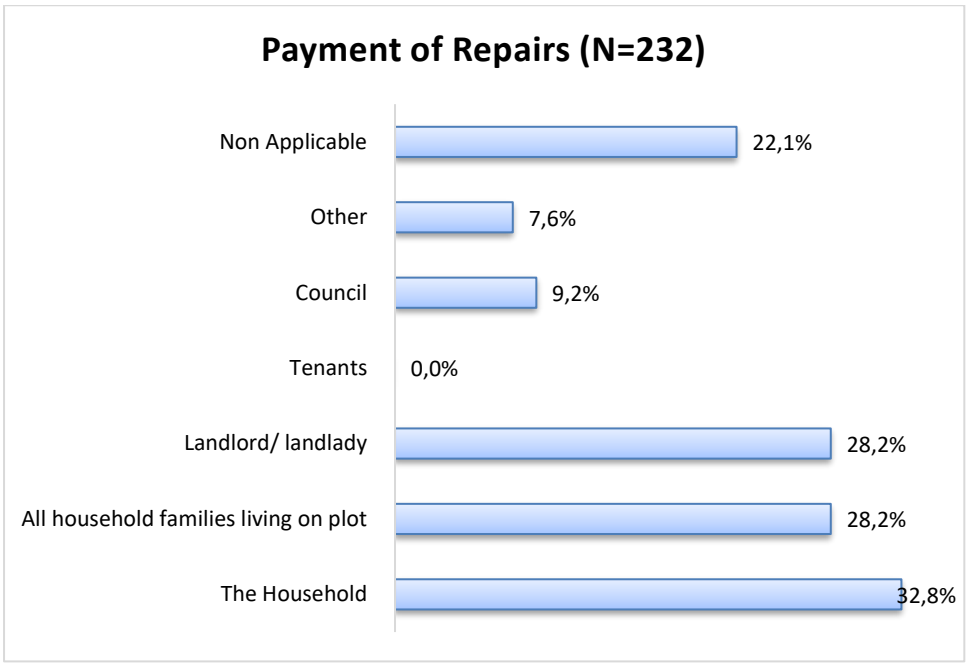
Findings 11 shows that Majority of the households (84%) were willing to connect to a piped water scheme. An appreciable proportion of 16% were unwilling to connect.

Maintenance of water services



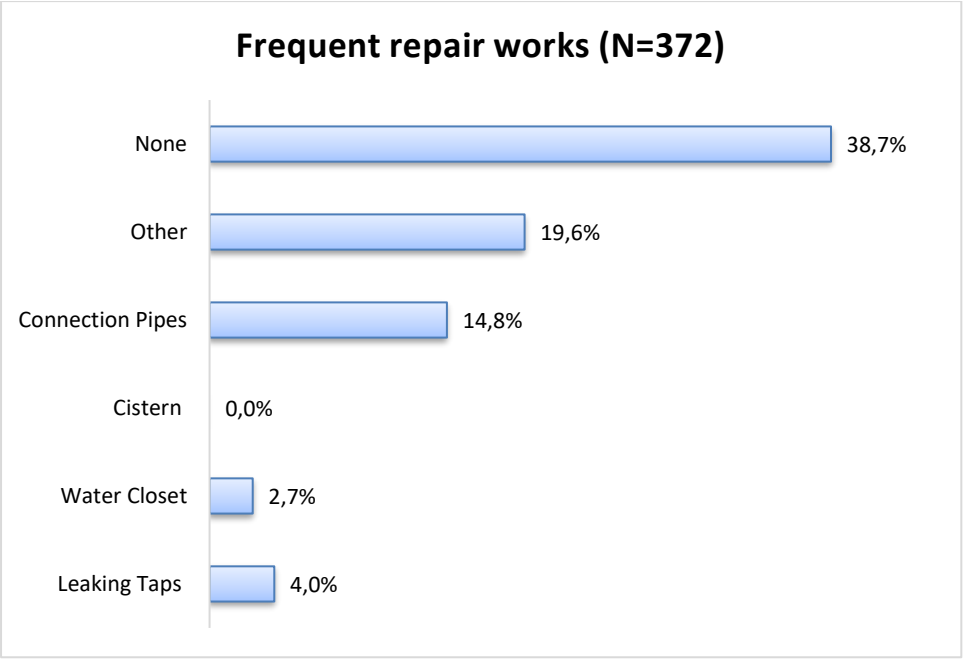
Findings 12: Chipili District responsibility to conduct repairs (N=348)

The responsibility of conducting these repairs is mainly with the households only or all household families living on the plot while reputable proportion that lies with the council .



Findings 13: Chipili District responsibility for payment of maintenance repair works of the water source (N=232)

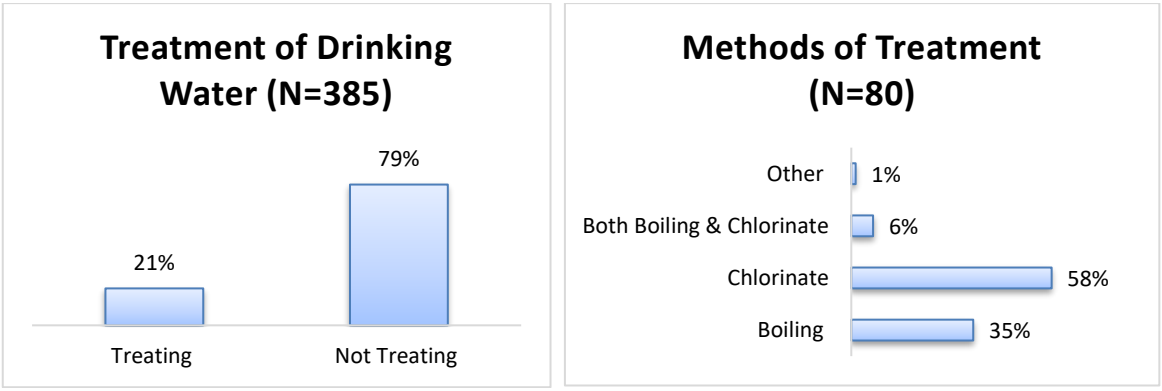
When asked who is pays for the repair works conduct, majority of the households indicated that the household or all household families on the plot was responsible for paying for the repairs conducted on the water facilities while there is reputable proportion that has landlords/landladies responsible for paying for the maintenance works.



Findings 14: Chipili District water service frequent repairs (N=372)

Majority (38.7%) of the households had no frequent repairs conducted. As for the households that conducted repairs majority of the frequent repairs were other repairs (19.6%) i.e. Cleaning of water source route, changing of bucket/container and well drying up. There is also a reputable proportion that has frequent repairs being connection pipes (14.8%).

Treatment of drinking water

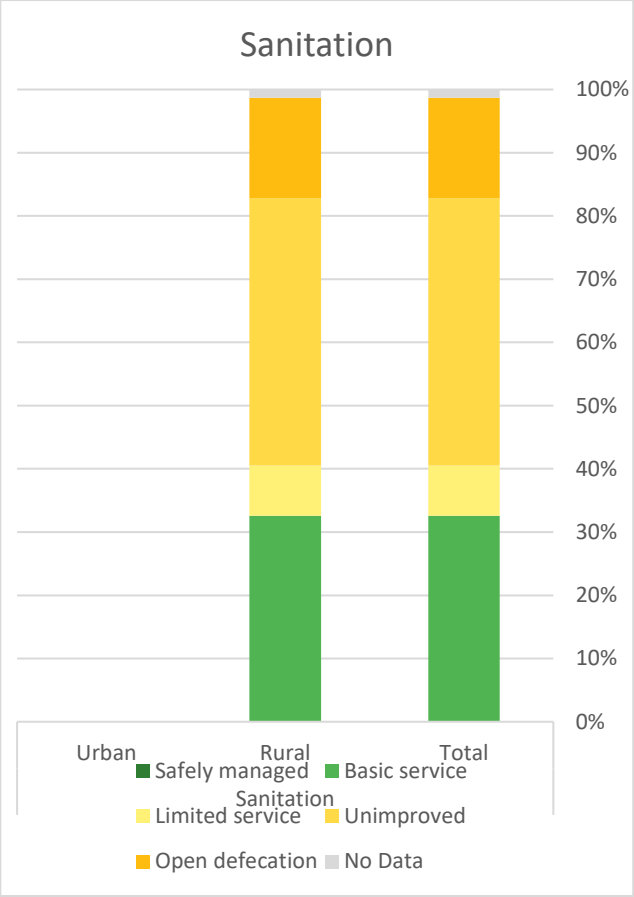


Findings 15: Chipili District treatment of drinking water

There was a higher number of households who do not treat drinking water (79%) than those who do treat (21%). On the other hand of those who treat water majority of them chlorinate (58%) and those that boil (35%) while there were those that do both (6%).

5.1.3 Sanitation Services

Chipili JMP ladder for sanitation services



Findings 16: Chipili District JMP ladder for sanitation services

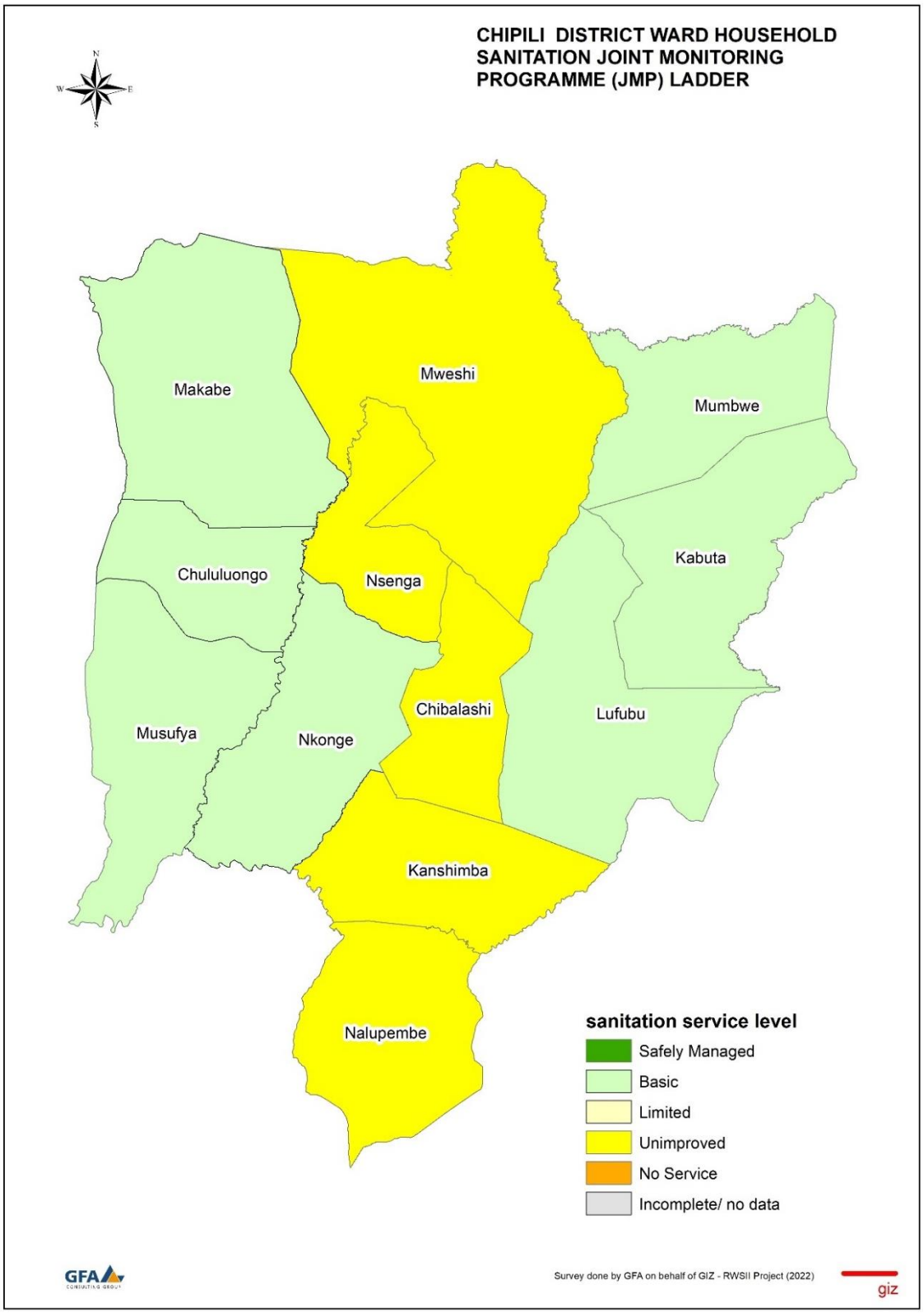
Chipili	Sanitation		
	Total	Rural	Urban
Safely managed	0%	0%	
Basic service	33%	33%	
Limited service	8%	8%	
Unimproved	42%	42%	
Open defecation	16%	16%	
No Data	1%	1%	
Total	**100%**	**100%**	

The proportion of Chipili District using safely managed services is 0%.

In 2022, out of an estimated population of 56,809 in Chipili District, 56,809 people lacked safely managed services including 18,936 people with basic services, 4,590 people with limited services, 24,100 people using unimproved facilities and 9,181 practicing open defecation.

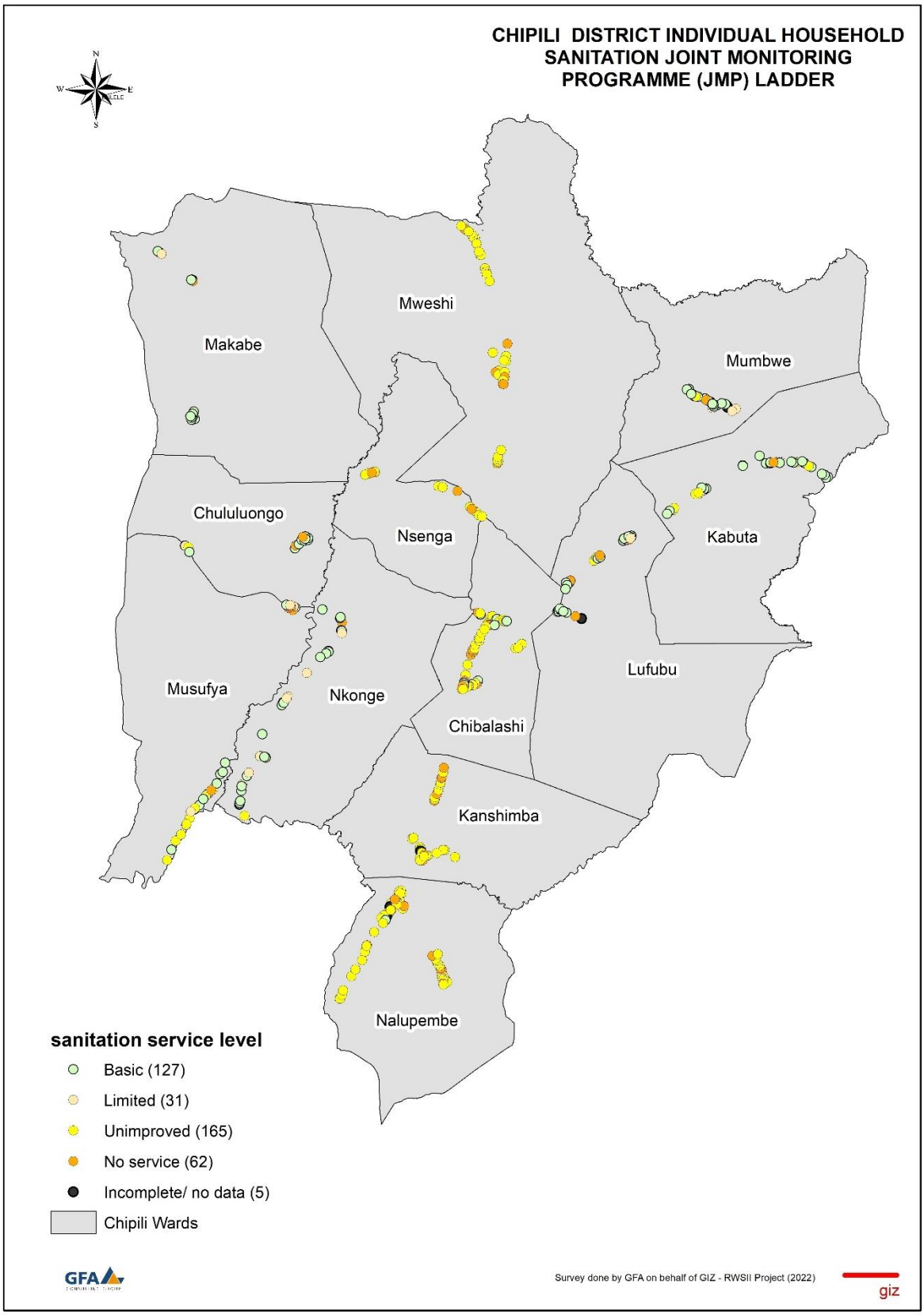
Majority of the district's population is having access to unimproved sanitation services.

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



Findings 17: Chipili District ward level JMP for household sanitation services

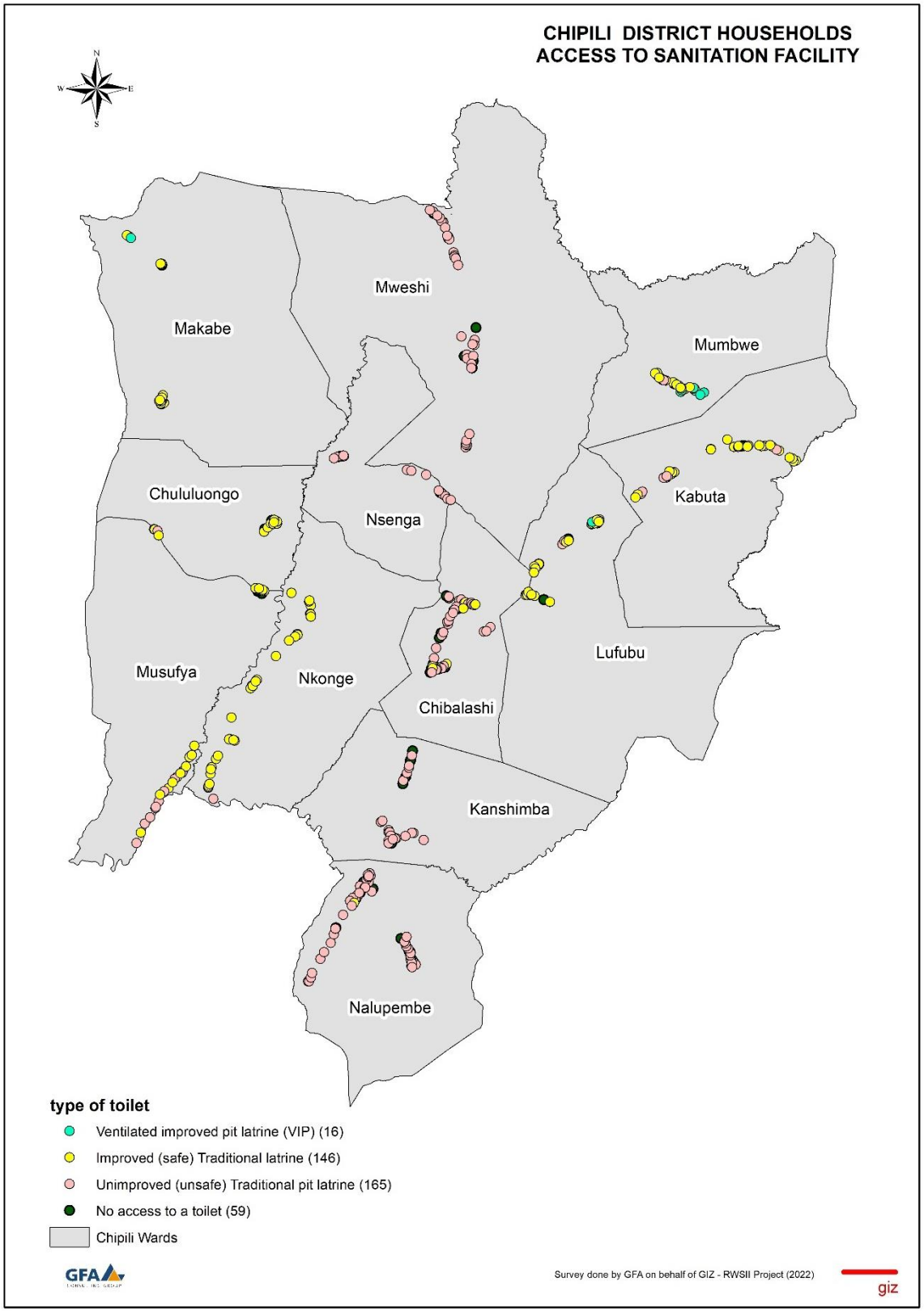
Findings 17 shows JMP indicators at ward level, 7 out of the 12 wards in Chipili District, have majority of its households having access to basic sanitation services which relates to what is being reported in Findings 16. The rest of the wards have majority of the households having access to unimproved service. To see how this distribution is at individual household level refer to Findings 18.



Findings 18: Map of Chipili District showing the JMP ladder for sanitation at individual level

There is currently no offsite sanitation in Chipili District and therefore this means that all the households in are primarily on onsite sanitation services.Findings 18 simply illustrates the service level on an individual level from Findings 17.

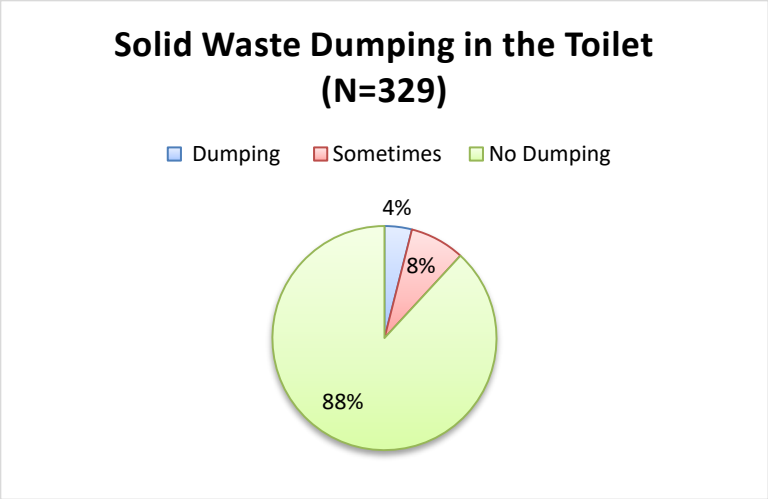
Access to sanitation facilities



Findings 19: Chipili district households – type of sanitation facilities

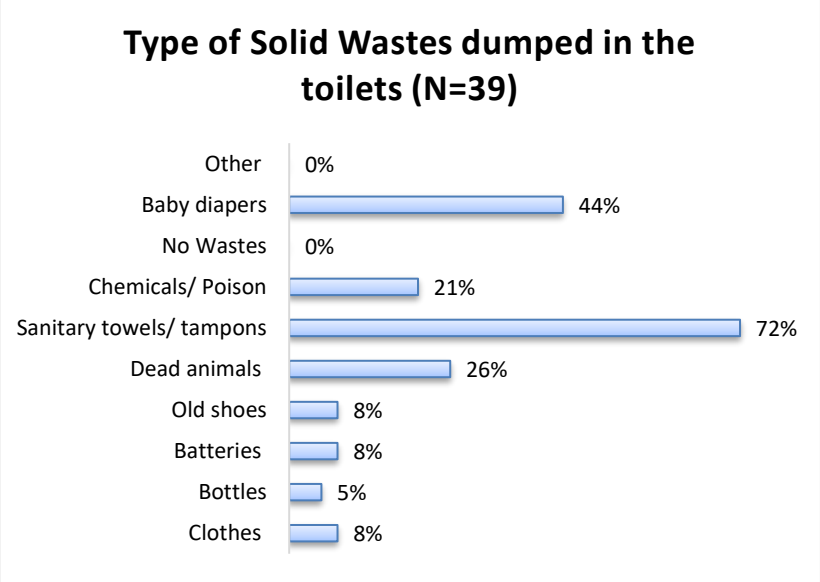
From Findings 19, Majority of households that have access to toilets in Chipili District use unimproved (unsafe) traditional latrines (50%). Out of the 85% that have access to sanitation facilities, only 18% share their sanitation facilities with other households.

Solid waste dumping in toilets



Findings 20: Chipili District solid waste dumping practices in the toilets (N =329)

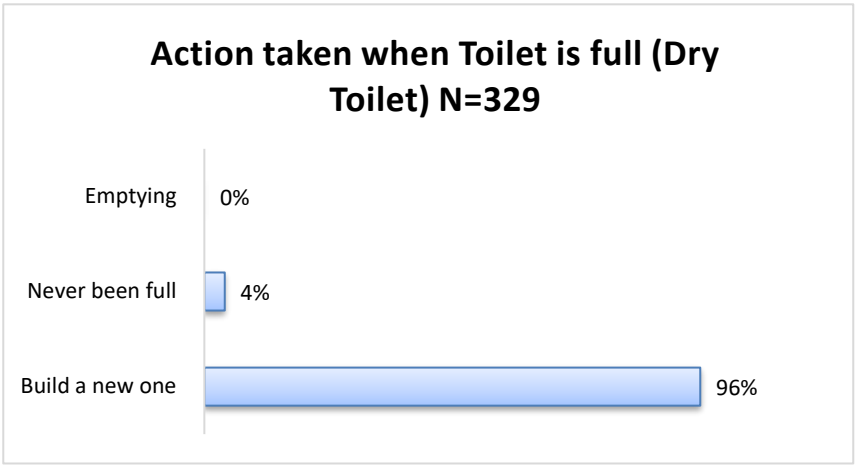
Majority (88%) of the households do report not dumping solid waste in the dry toilets. 4% do report dumping solid waste in dry toilets while 8% sometimes do it.



Findings 21: Chipili District types of wastes dumped in the dry toilet (N = 39)

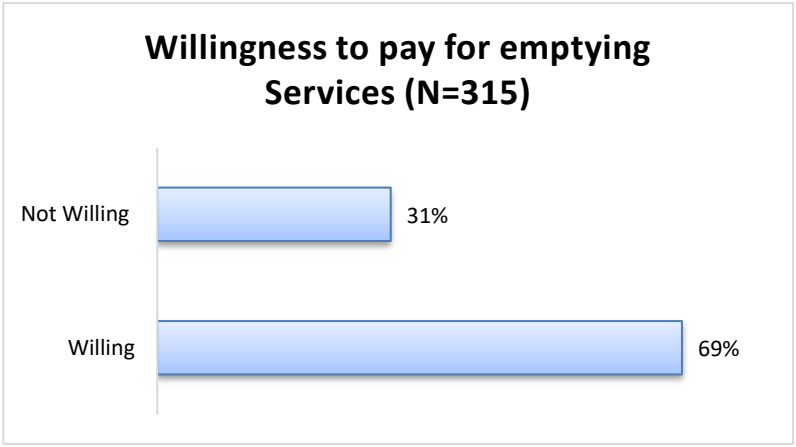
Majority (72%) of the waste dumped in the dry toilets are sanitary towels/tampons, then followed by baby diapers (44%), dead animals (26%) and baby chemicals/poison (21%). This could have an impact on the empty technologies to be used when providing onsite sanitation services. This is an important factor to note when planning for FSM.

Emptying practices



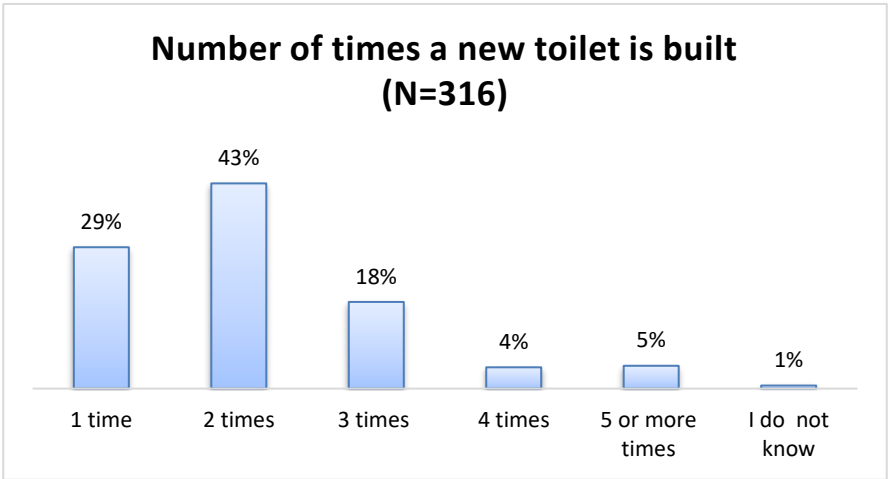
Findings 22: Chipili District action taken when toilet is full (N = 329)

Of those with dry toilets, 96% build a new toilet when the toilet gets full, while 4% have never had full toilets. There are no emptying activities taking place in Chipili District.



Findings 23: Chipili District-Willingness to pay for emptying services (N=315)

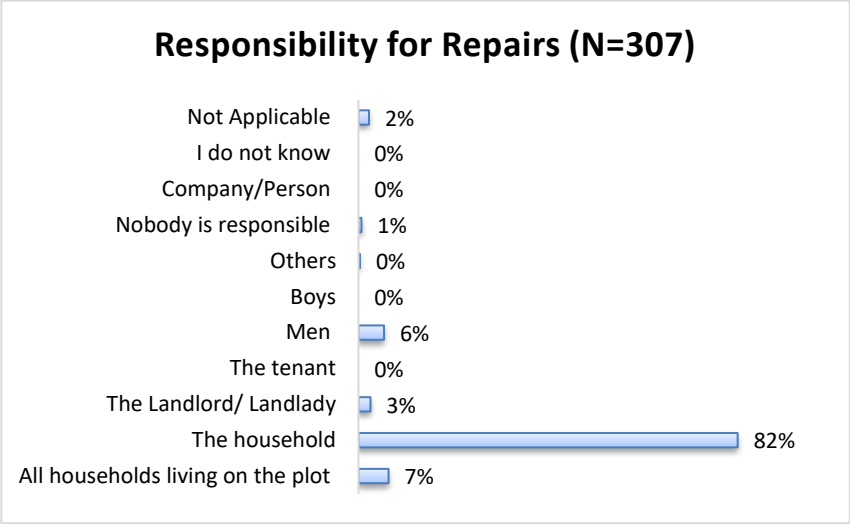
When asked if the households were willing to pay for emptying services, majority were willing to pay (69%) while a reputable proportion was not willing (31%)



Findings 24: Chipili District number of times a new toilet is built (N = 316)

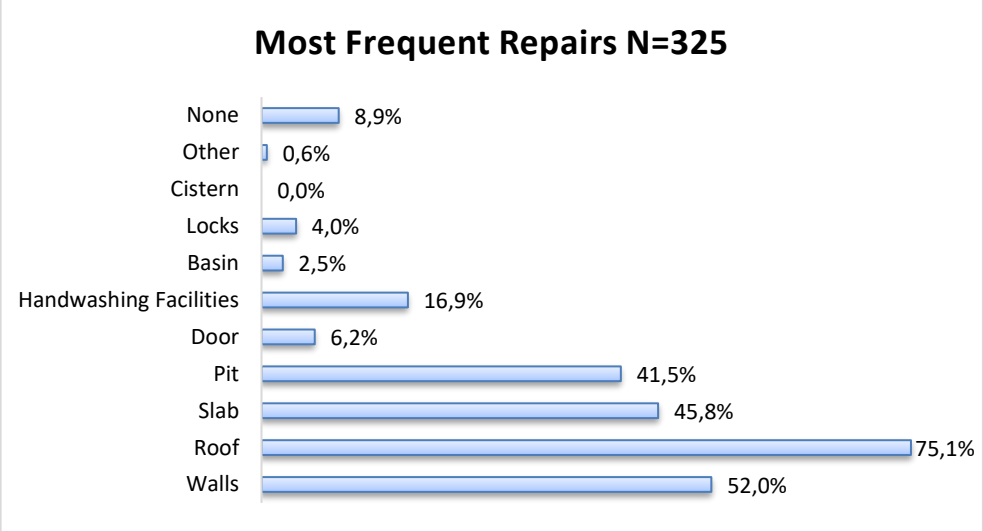
Although this question was not applicable to 4% of respondents, whose toilets have never been full. Majority 43% have built a new toilet twice and 29% One-time with 18% having built a new toilet three times.

Maintenance of sanitation facilities



In general, the household mostly takes responsibility of repairing the toilets (82%).

Findings 25: Chipili District responsibility for repair of toilet (N = 307)

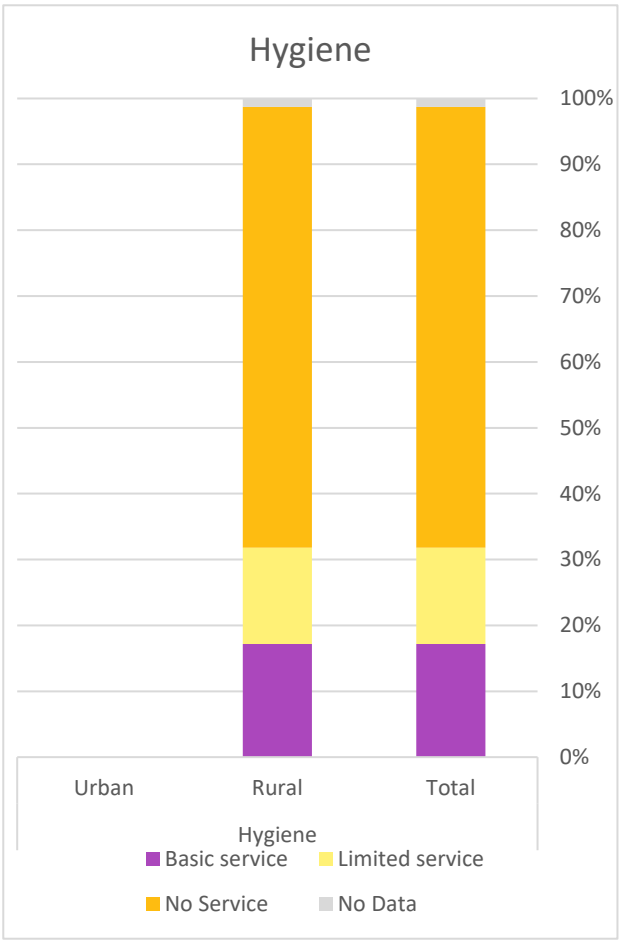


Findings 26: Chipili District most frequent toilet repairs (N=325)

According to Findings 26, majority of the households responded that roofs (75.1%), walls (52%), slabs (45.8%) and pits (41.5%) have been the most frequent repairs.

5.1.4 Hygiene Services

Chipili JMP ladder for hygiene services



Findings 27: Chipili District JMP ladder for hygiene services

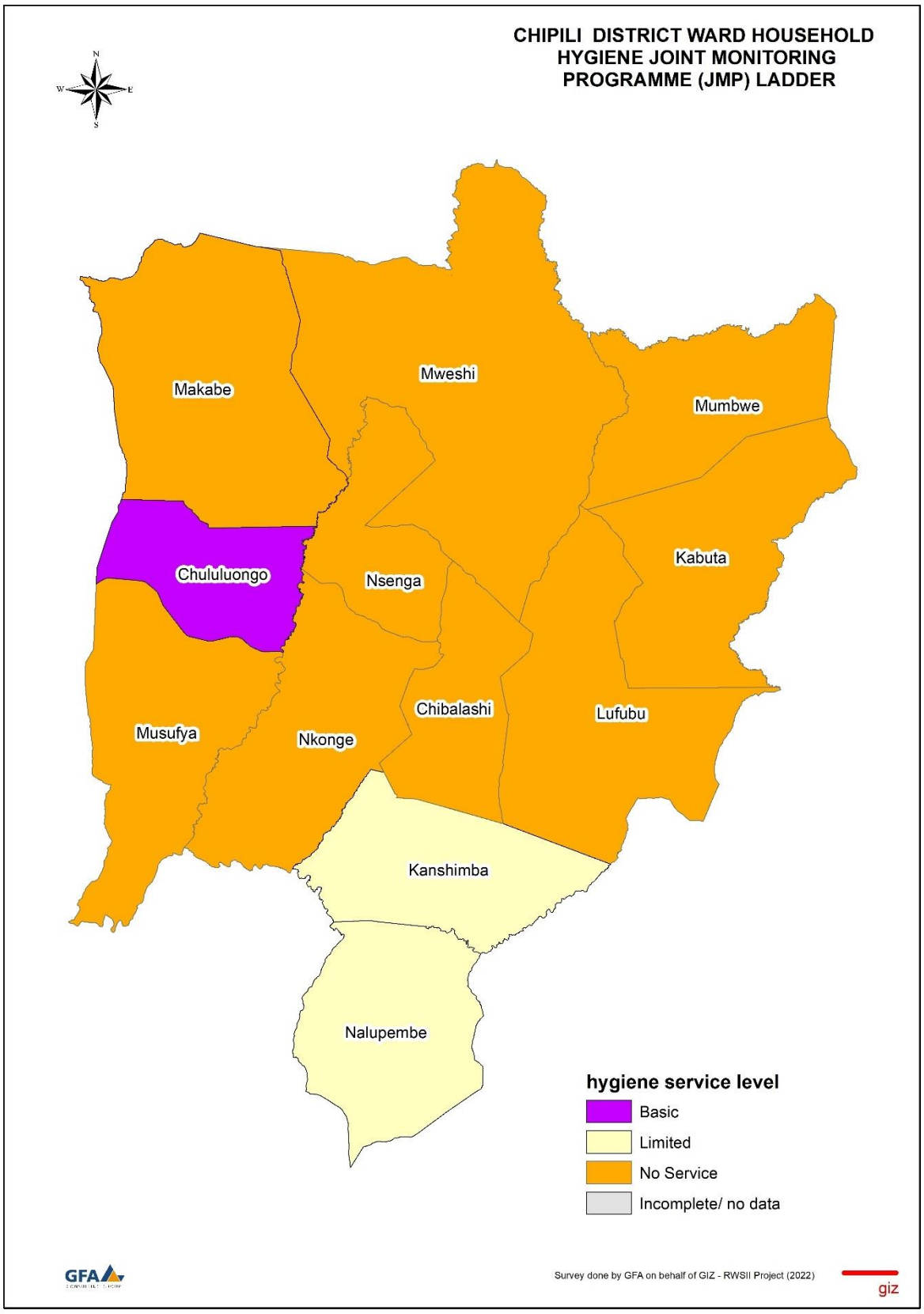
Chipili	Hygiene		
	Total	Rural	Urban
Safely managed	-	-	
Basic service	17%	17%	
Limited service	15%	15%	
Unimproved	-	-	
No Service	67%	67%	
No Data	1%	1%	
Total	**100%**	**100%**	

The proportion of Chipili District using basic services is 17%.

In 2022, out of an estimated population of 56,809 in Chipili District, 47,054 people lacked basic services including 8,607 people having limited service and 38,446 with no handwashing facilities at all.

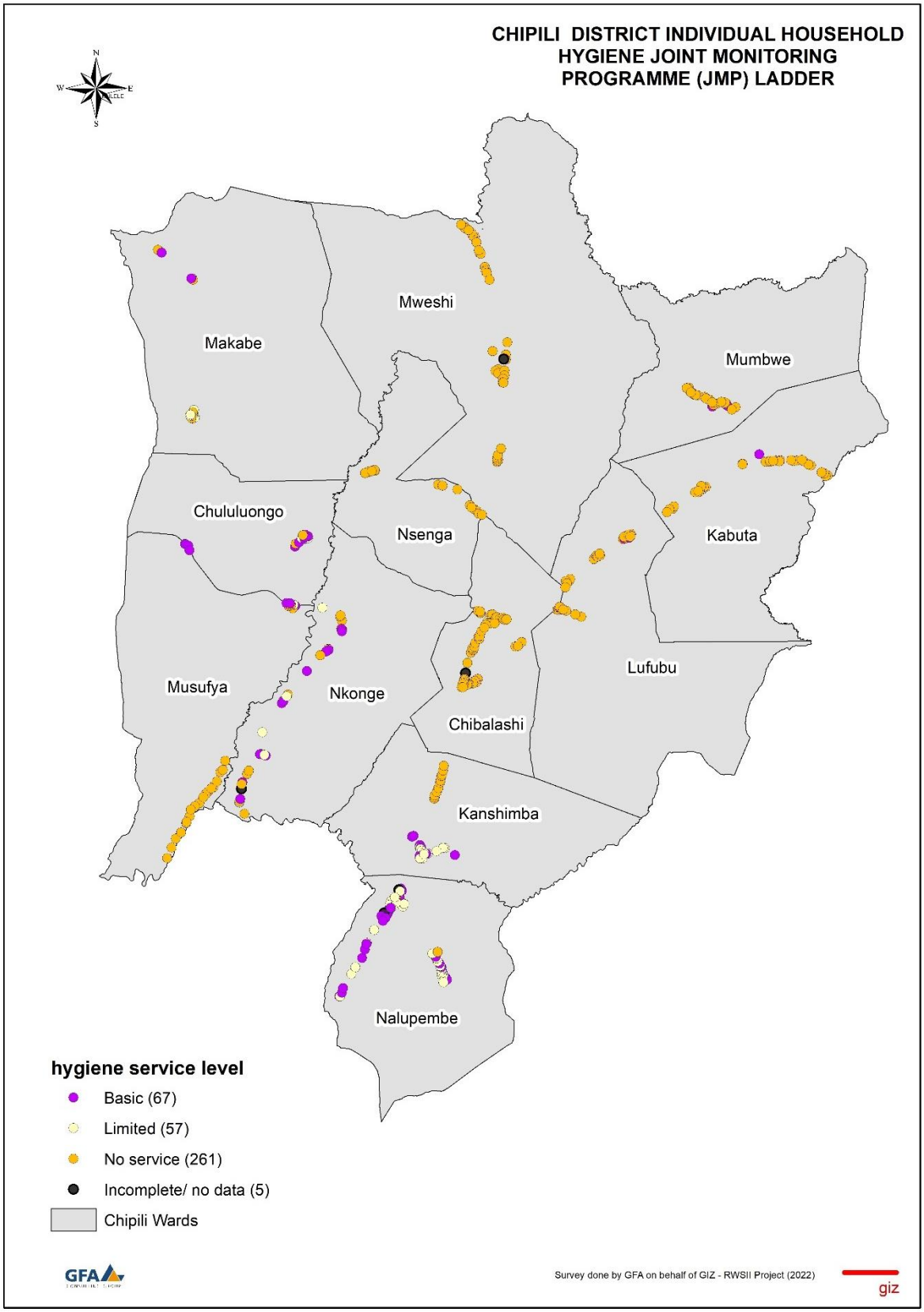
Majority of the people in Chipili lack access to hygiene services.

Please refer to Table 4 for the definition and clarifications on some of the hygiene terms.



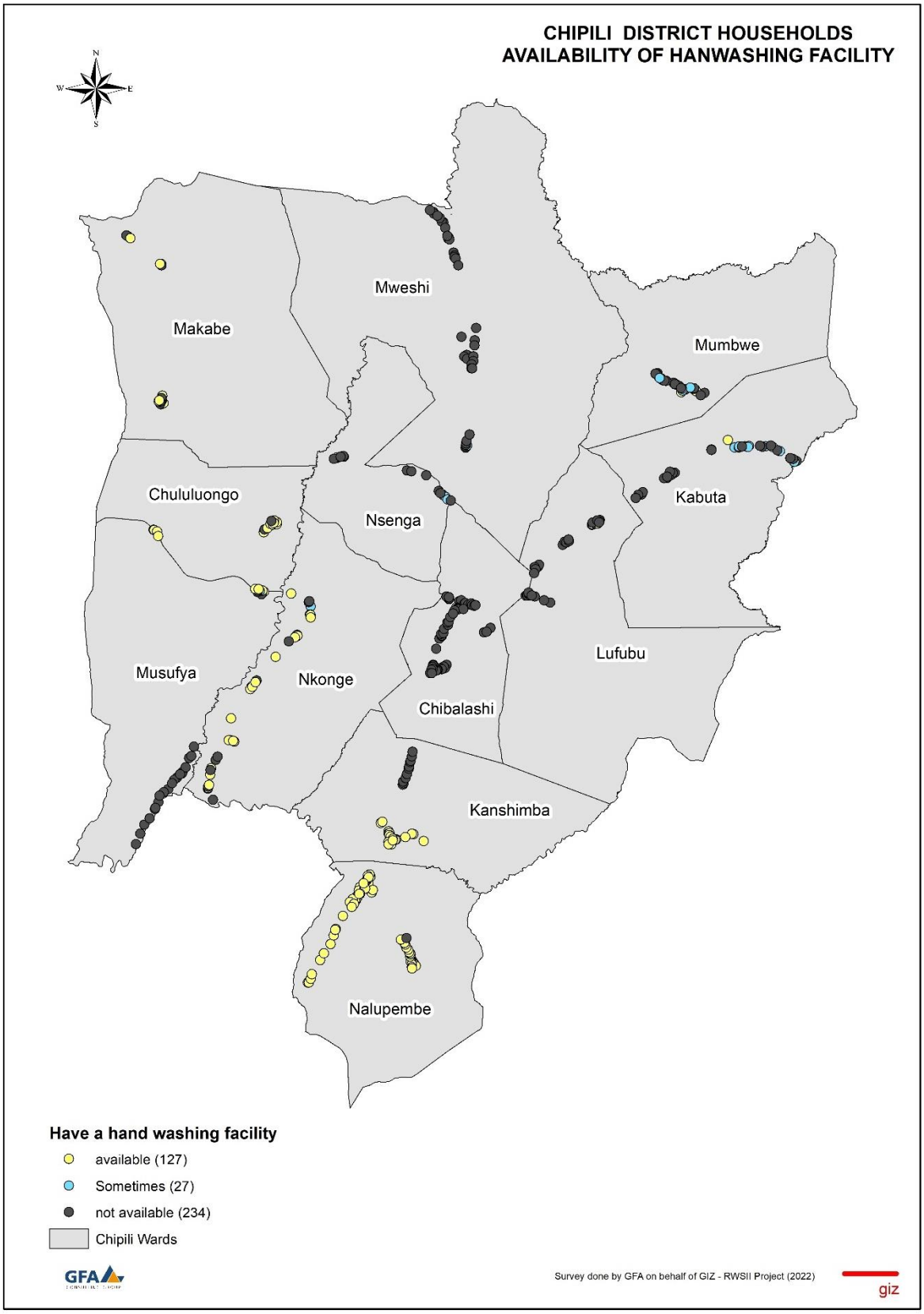
Findings 28: Chipili District ward level JMP for household hygiene services

Findings 28 shows JMP indicators at ward level. Out of the 12 wards in Chipili District, only one ward (Chululuongo) has majority of its households having access to basic hygiene services. There are 2 wards ward in Chipili District that have majority of the households with limited access to hygiene services while the rest have no service. To see how this distribution is at individual household level refer to Findings 29.



Findings 29: Chipili District map showing JMP ladder for hygiene services

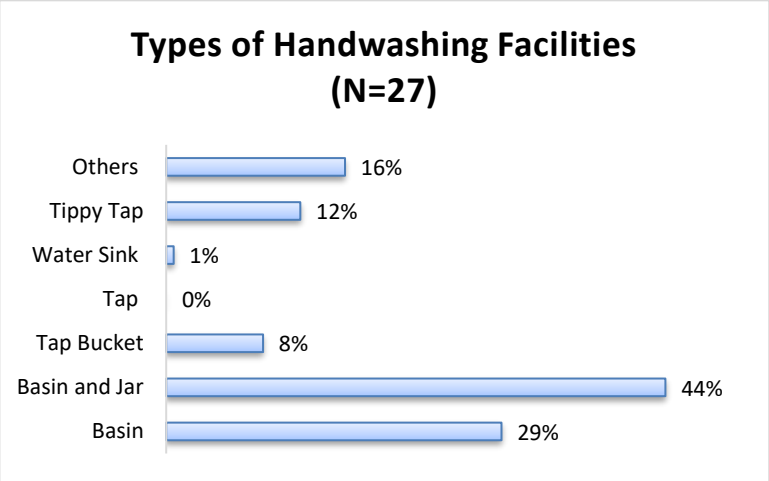
Access to hygiene facilities



Findings 30: Chipili District households- access to hygiene facilities

From Findings 30, overall, out of the visited households, 33% (127 in total) had access to handwashing facilities, while 67% had no access or had sometimes access to handwashing facilities.

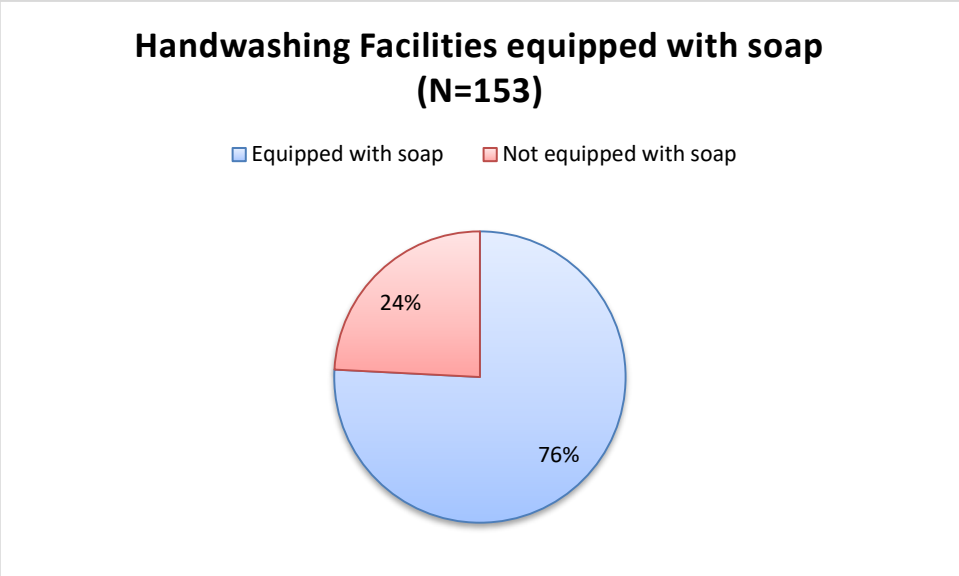
Type of handwashing facilities



Majority (44%) of the households that had handwashing facilities use a basin and jar and a reputable proportion use basin (29%) and other i.e. a bottle or container.

Findings 31: Chipili District types of handwashing facilities (N = 27)

Handwashing with soap

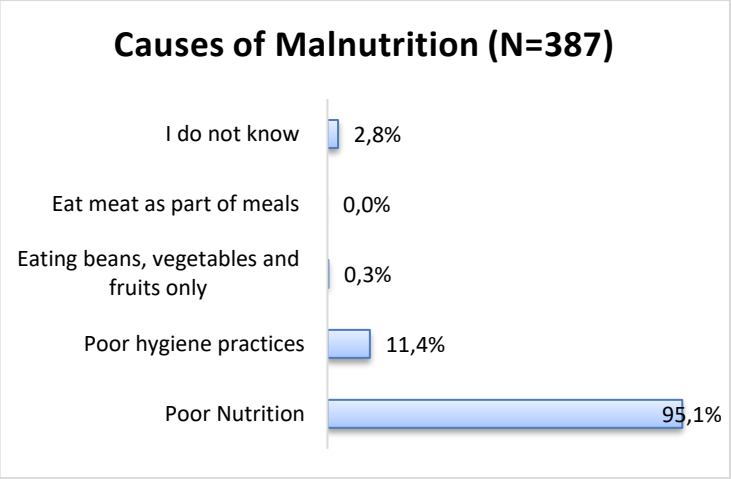


Findings 32: Chipili District handwashing with soap practices (N=153)

From households that had handwashing facilities, 76% of them were equipped with Soap while 24% do not have handwashing facilities equipped with soap.

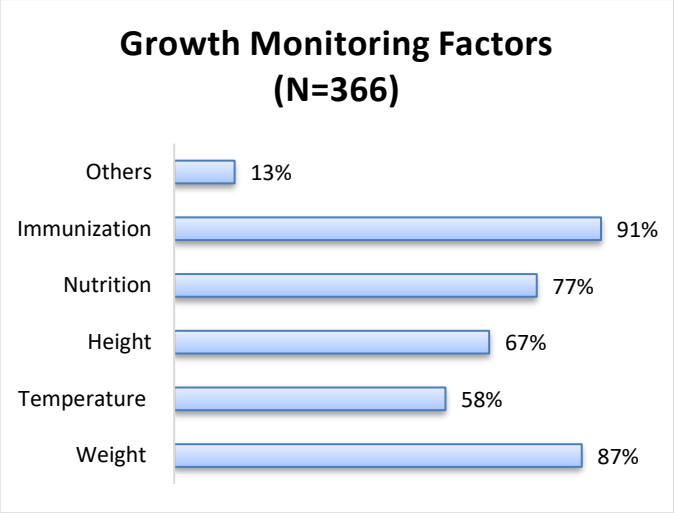
5.1.5 Scaling Up Nutrition

Child nutrition



Findings 33: Chipili District causes of malnutrition (N = 387)

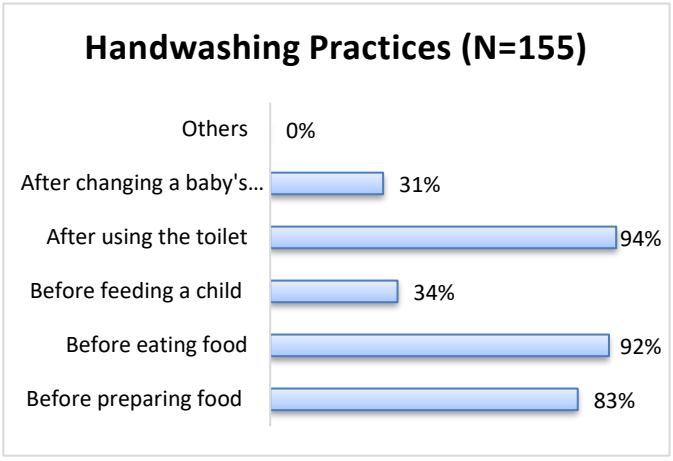
In general, majority of Chipili District relate malnutrition more to poor nutrition (95%) than poor hygiene (11%).



Findings 34: Chipili District growth monitoring factors for children (N = 366)

Immunisation (91%) and Weight (87%) were the most common growth factors that were monitored while only 67% monitored height as well. But to determine stunted or wasted growth, the weight and height of the child needs to be compared with age.

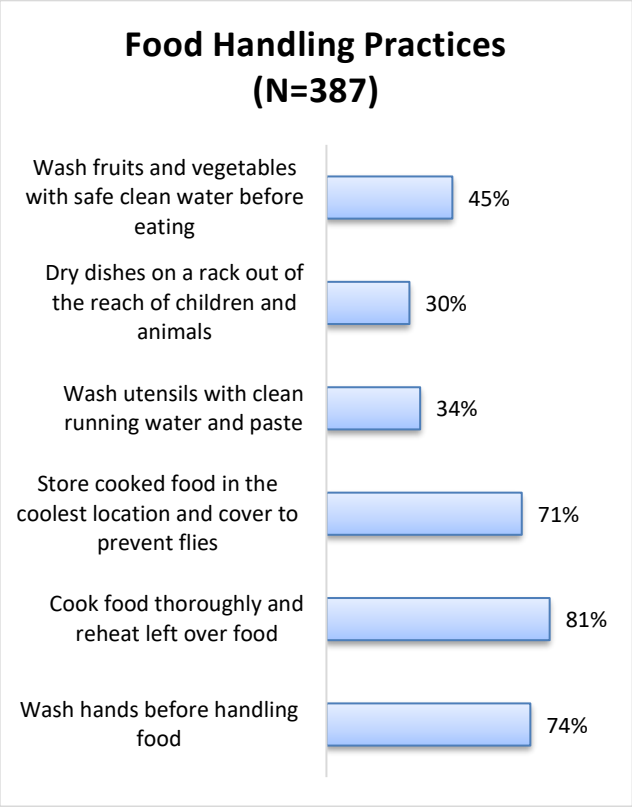
Hand hygiene practices



Findings 35: Chipili District handwashing practices (N = 154)

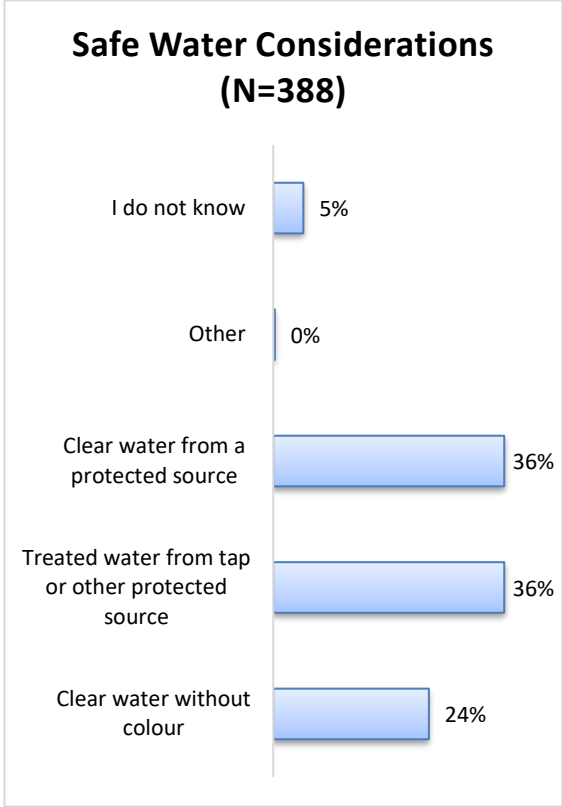
Majority of Chipili District wash their hands either after using the toilet (94%), before eating (92%) or before preparing food (83%). It is observed that only 31% from the visited households practice handwashing after changing the baby's nappies and 34% before feeding a child. This may be due to a baby's faeces are not considered to be as contagious as an adult's. If the minority wash their hands after changing baby and before feeding the baby, chances of infecting the child are quite high.

Food handling practices



Findings 36: Chipili District food handling practices (N = 387)

Safe water

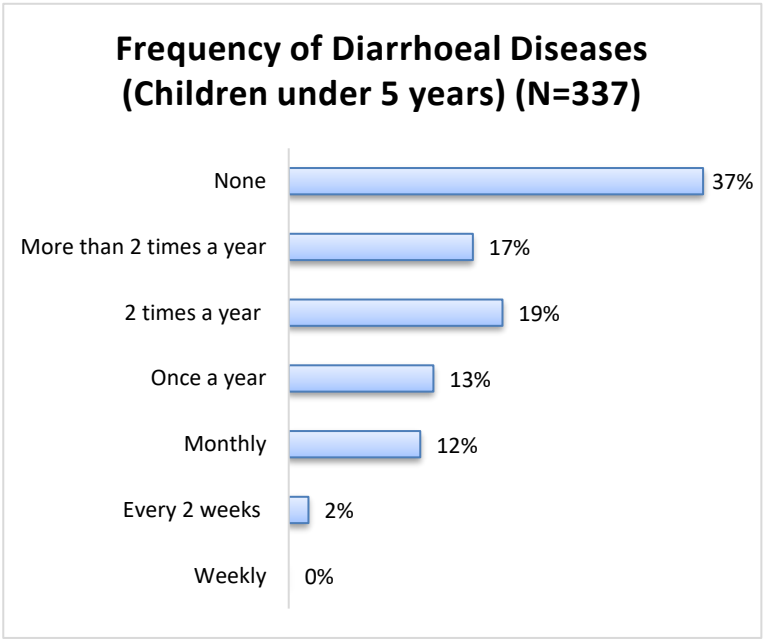


Findings 37: Chipili District considerations for safe water (N = 388)

Majority of Chipili District cook food thoroughly and reheat left over food (81%), wash their hands before handling food (74%) or store cooked food in the coolest location and cover to prevent flies (71%).

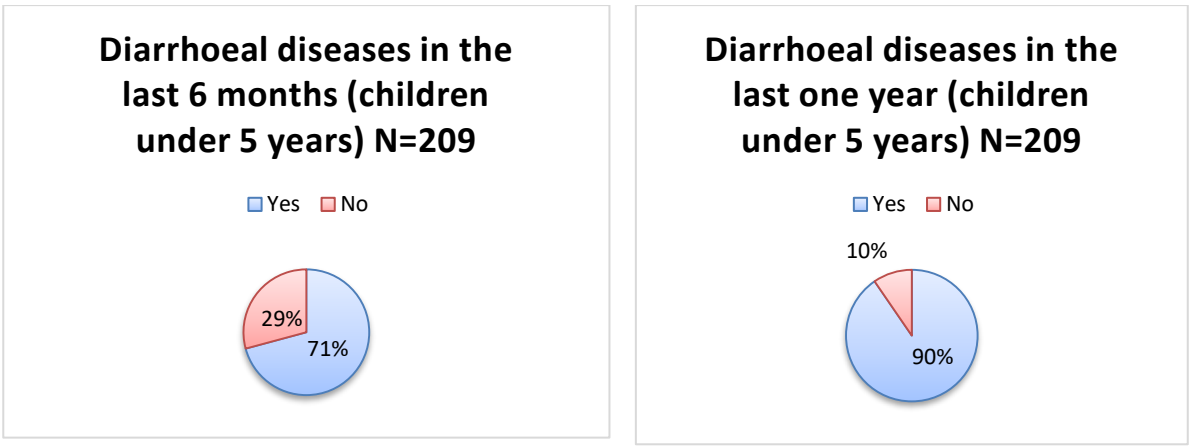
Majority (36%) categorise safe water as clear water without colour or treated water coming from tap or other protected source.

Diarrhoeal diseases



Findings 38: Chipili District frequency of diarrhoeal diseases (N = 337)

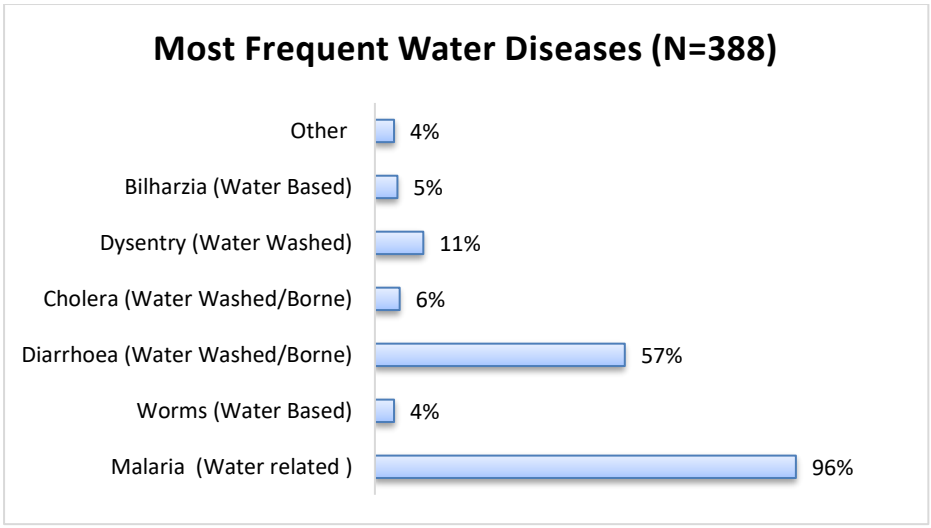
The highest frequency for diarrhoeal diseases for children below the age of five years among those that have diarrhoeal diseases in Chipili is two times a year (19%) or more than twice a year (17%). In addition, 37% of households do not have a frequent occurrence of diarrhoeal diseases for their children under five.



Findings 39: Chipili District diarrhoeal diseases in the last 6 months and 1 year

The proportion of children under the age of 5 that had diarrhoeal diseases in the last 6 months and 1 year were 71% and 90% respectively.

5.1.6 Water Borne Diseases

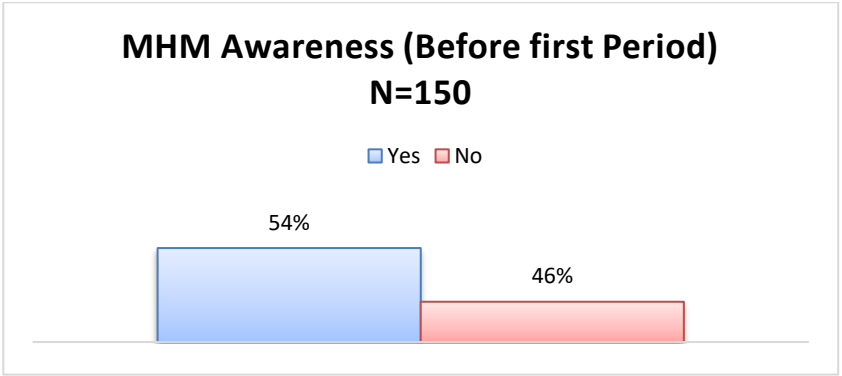


Findings 40: Chipili District waterborne diseases (N=388)

The most frequent disease in Chipili District is malaria (96%) and diarrhoea (57%).

5.1.7 Menstrual Health Management

Awareness of menstruation before menarche

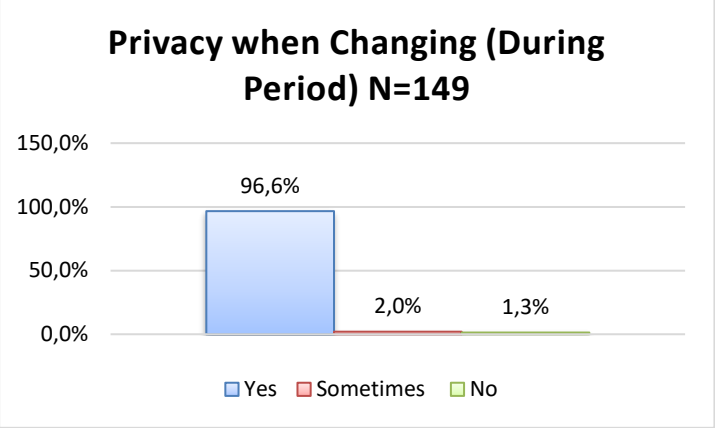


Majority (54%) of the females in Chipili were aware of MHM before their first period.

Findings 41: Chipili District MHM - Awareness before first menstruation (N = 150)

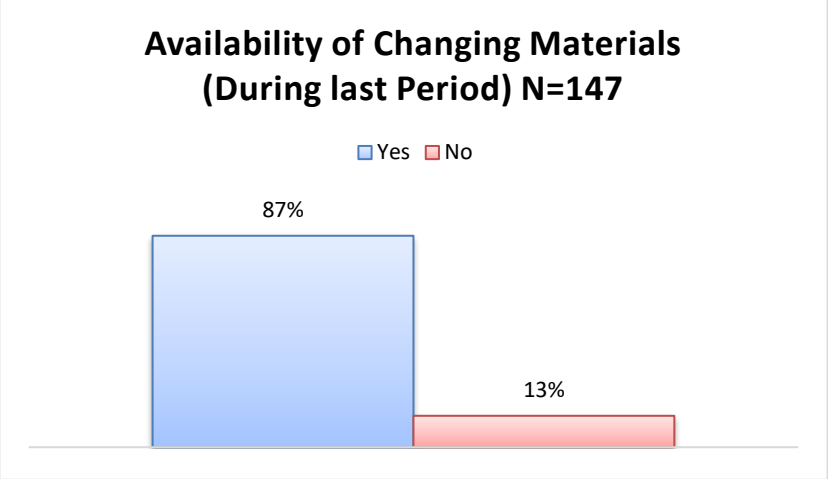
Privacy when changing

Majority (96.6%)had access to a private place to wash and change their sanitary towels at home.



Findings 42: Chipili District MHM - Privacy when changing (N=149)

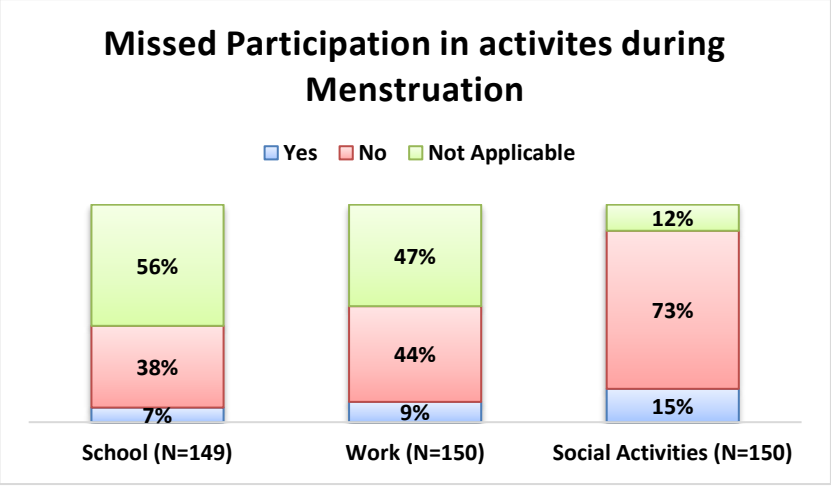
Use of menstrual materials



Majority had access to menstrual materials to capture and contain menstrual blood during their last period.

Findings 43: Chipili District MHM - Use of menstrual materials (N = 147)

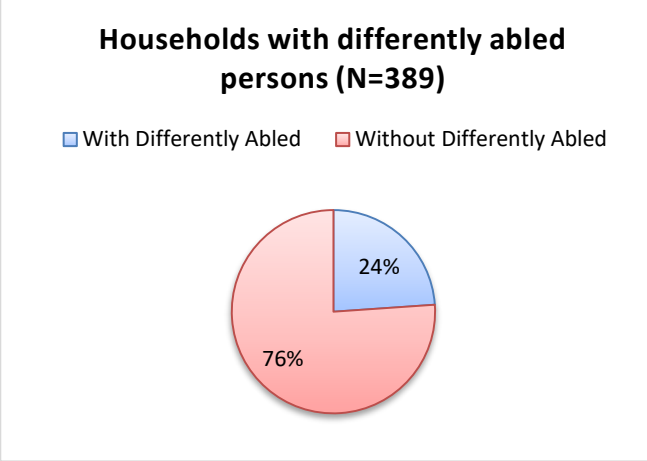
Participation in activities during menstruation



Participation in various activities during menstruation was observed to not be a challenge for majority of the females.

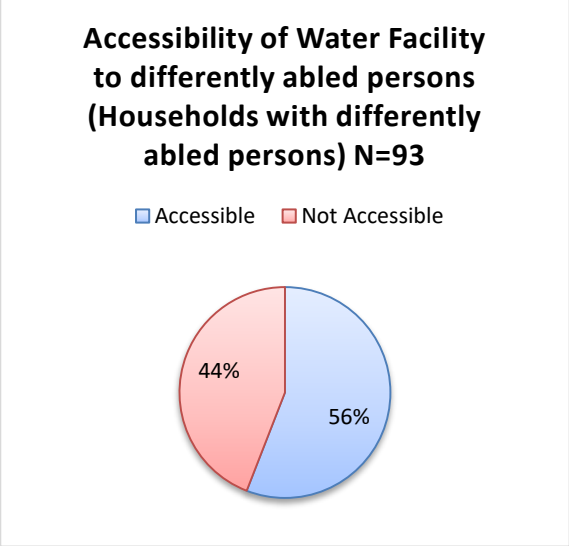
Findings 44: Chipili District MHM - Participation in activities during menstruation

5.1.8 Social Inclusion

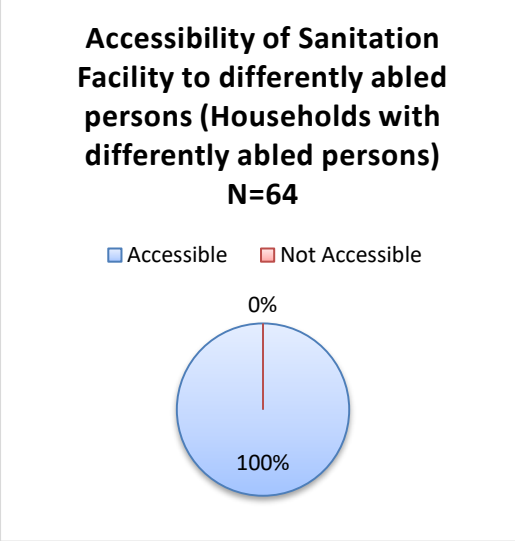


24% of households in Chipili District have persons with limited mobility living with them.

Findings 45: Chipili District Households living with differently abled persons (N = 389)



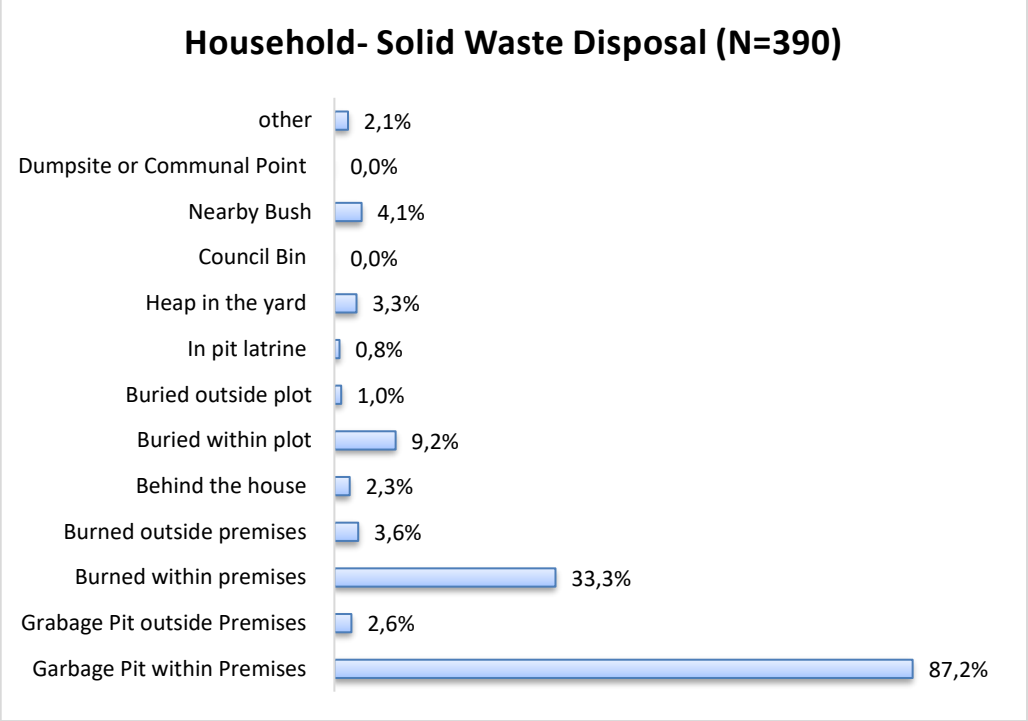
Findings 46: Chipili District households with water facilities accessible to differently abled persons (N = 93)



Findings 47: Chipili District households with sanitation facilities accessible to differently abled persons (N = 64)

Majority of the households with differently abled persons have water and sanitation facilities which are accessible to these persons. The main form of accessibility for the water facility and sanitation facility is a clear path without stairs/steps and free from obstruction

5.1.9 Solid Waste Management

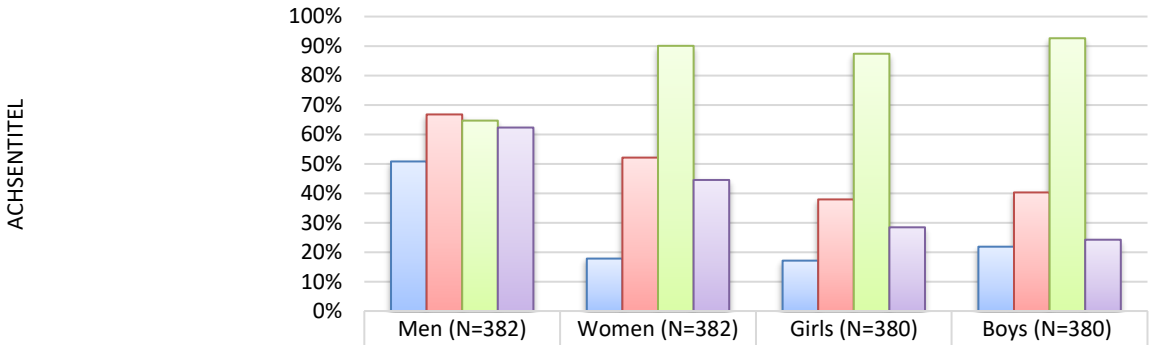


Findings 48: Chipili District solid waste disposal practices in households (N = 390)

Majority (87.2%) of households in Chipili District use garbage pits within their premises to dispose solid waste.

5.1.10 Gender Sensitivity Data and Information

Gender roles in WASH management and services

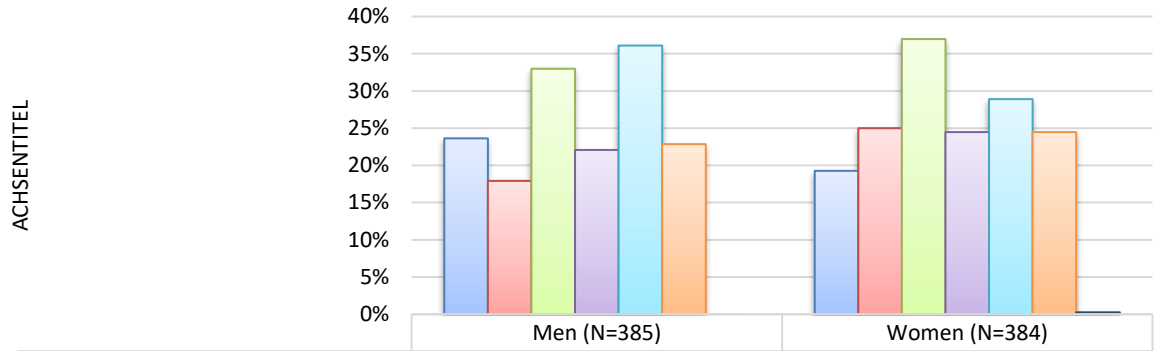


	Men (N=382)	Women (N=382)	Girls (N=380)	Boys (N=380)
Repair	51%	18%	17%	22%
Maintenance/Cleaning/ Treating	67%	52%	38%	40%
Water Collection	65%	90%	87%	93%
Decision Making on Water Arrangements	62%	45%	28%	24%

Findings 49: Chipili District Gender Roles in WASH Management and Services

The men's main role in WASH was observed as to maintenance, water collection and decision making while for the women it was mainly water collection. While as for boys and girls, their main role in WASH was water collection.

Barriers in community leadership participation



	Men (N=385)	Women (N=384)
Structural Barriers (lack access to networks or structures)	24%	19%
Institutional Mindset (type of gender bias and stereotyping)	18%	25%
Individual Mindset (thoughts and behaviours)	33%	37%
Lifestyle Choices (work-life balance, family choices)	22%	24%
No Barriers	36%	29%
I don't Know	23%	24%
Other	0%	0%

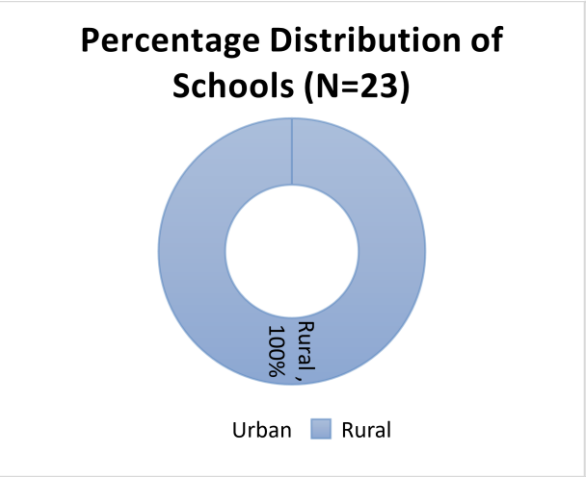
Findings 50: Chipili District Barriers in Community Leadership Participation

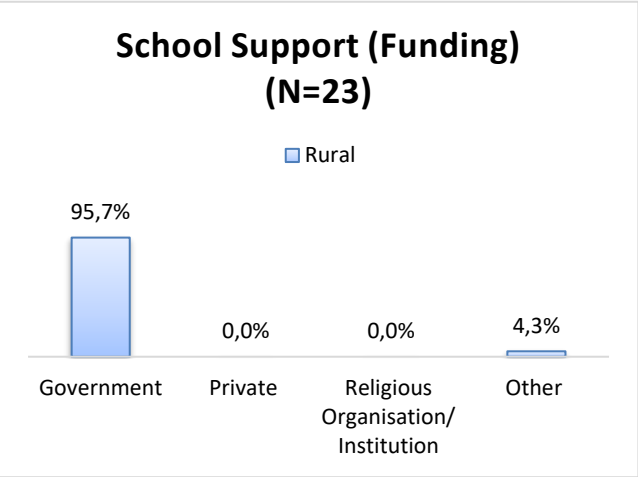
Men are most likely to not experience any barriers to community leadership participation in Chipili District unlike the women. Out of the proportion that experienced barriers to community leadership participation, majority of the men and women indicated to have experienced barriers regarding either individual mindset (33% for men and 37% for women).

5.2 Schools

5.2.1 School Demographics & Electricity Connectivity

Average distribution of schools in Chipili

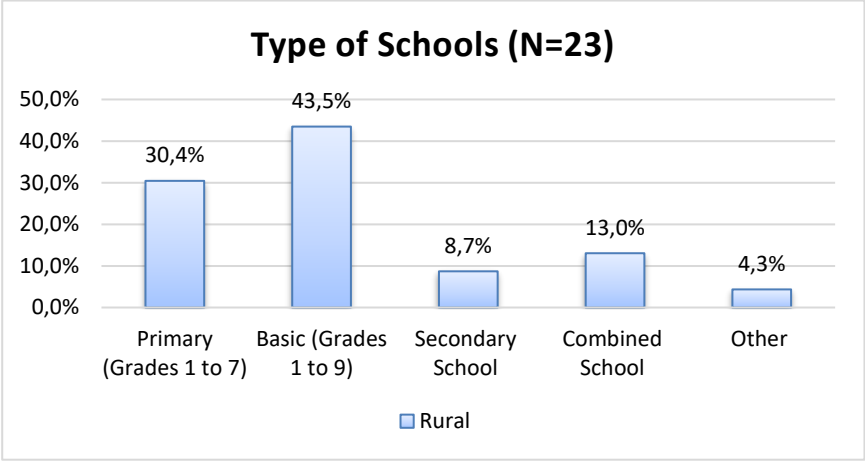




Findings 51: Chipili District distribution of schools (N=23)

Like the households, all the schools interviewed were rural schools. This generally represents the distribution of schools in Chipili District as it is still primarily rural. From the interviewed schools, majority were Government (95.7%).

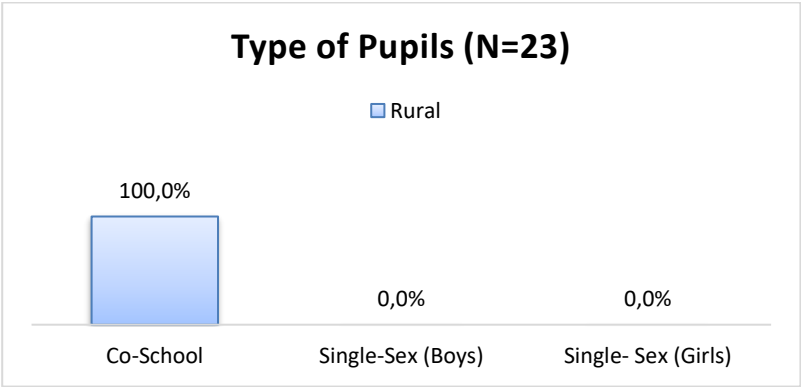
Types of schools



From the interviewed schools, majority were basic (43.5%) followed by primary (30.4%). Those that fall in the other category included community school.

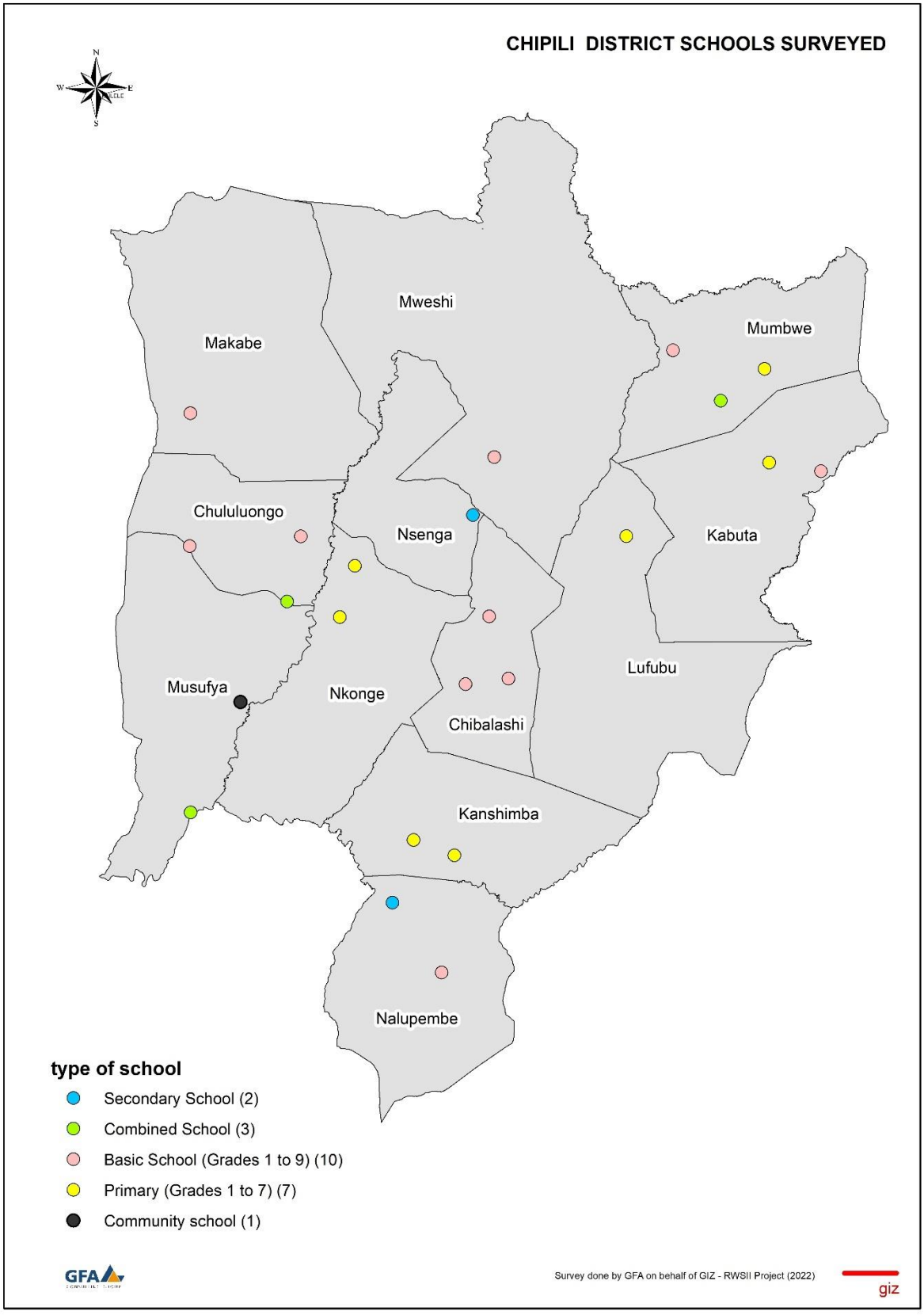
Findings 52: Chipili District type of schools (N=23)

Type of pupils



All the schools interviewed were co-schools.

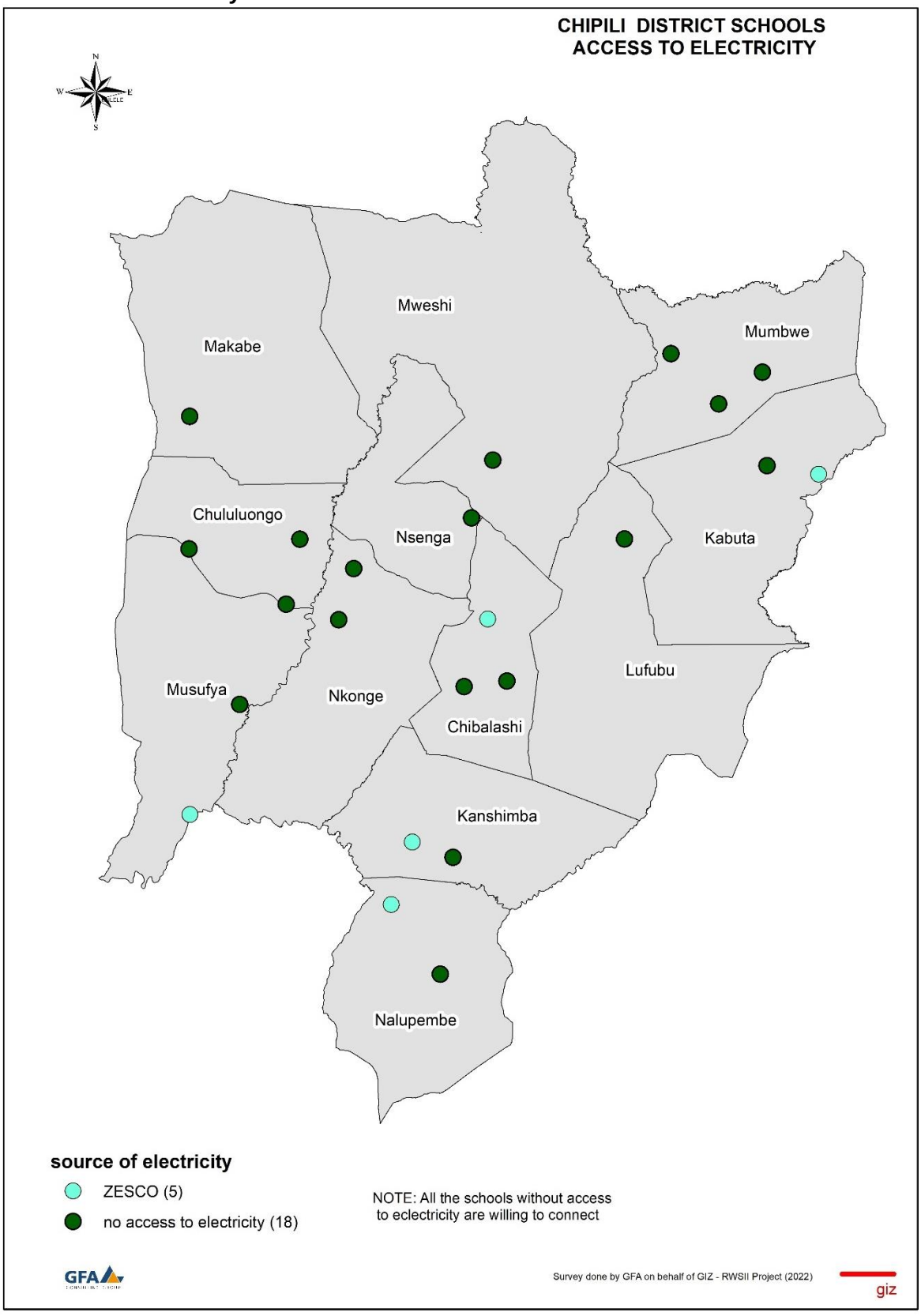
Findings 53: Chipili District schools' type of pupils (N=23)



Findings 54: Chipili District – Distribution of schools

The majority of the schools in Chipili are primary and basic schools. A total of 23 schools were surveyed in the district

Connection to electricity

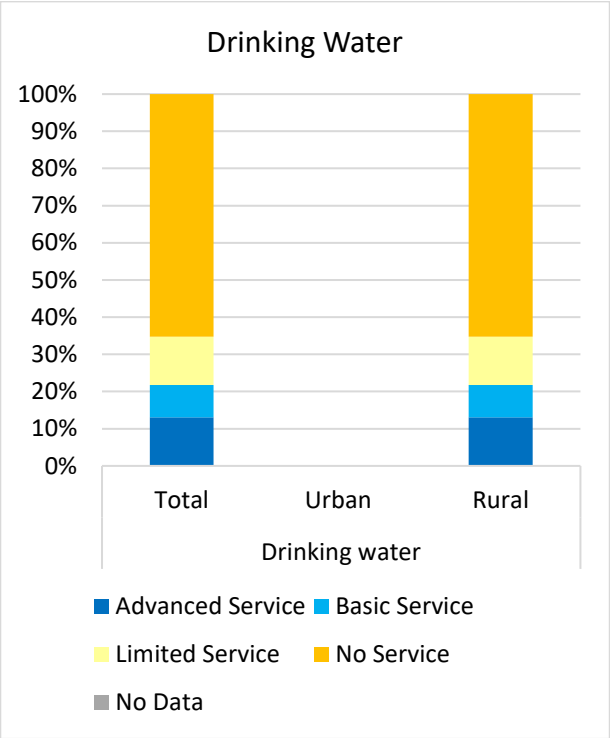


Findings 55: Chipili District - connection to electricity in schools

A few of the schools (22%) are connected to electricity which is primarily hydropower under ZESCO. 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

Chipili JMP ladder for drinking water services



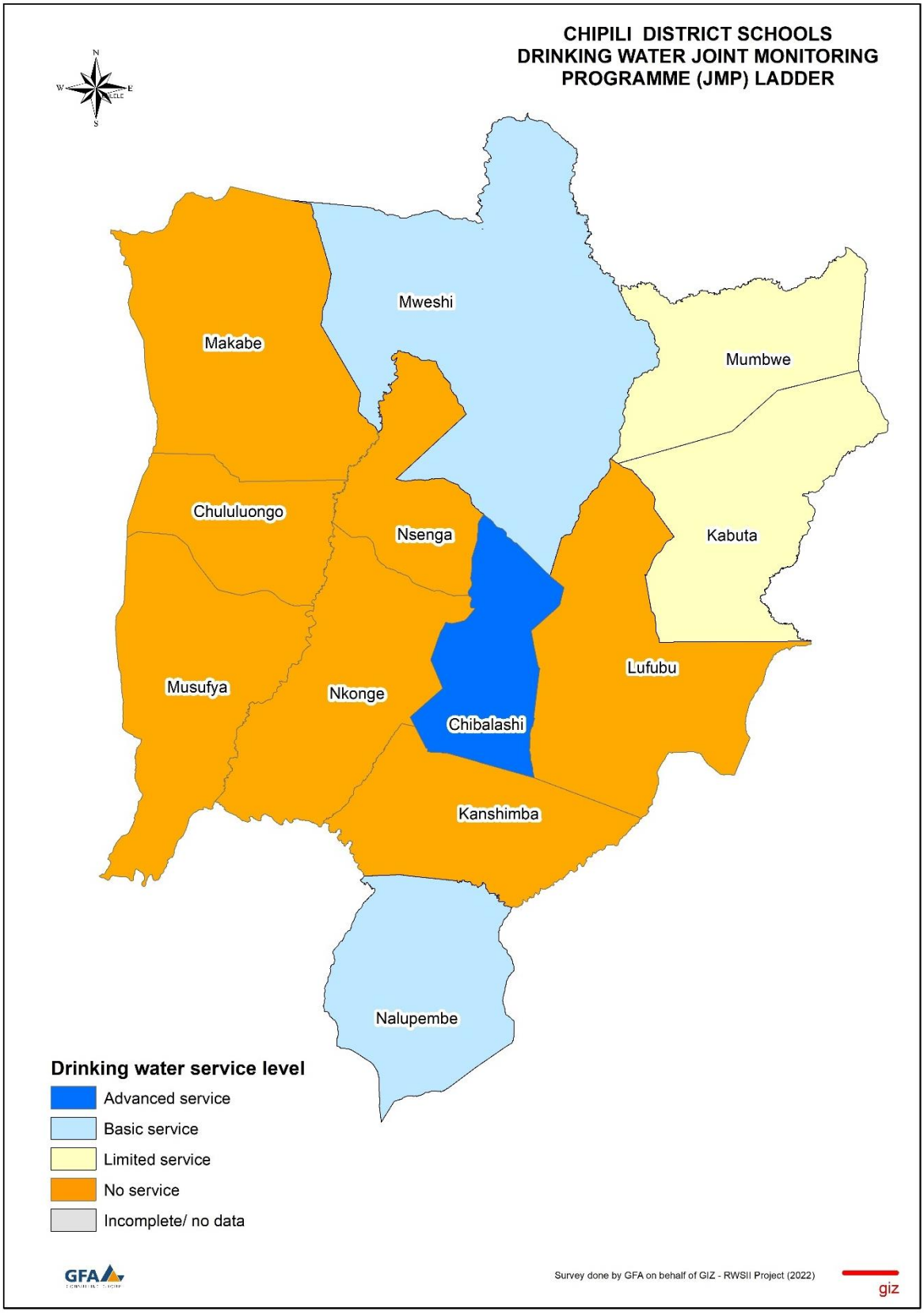
Findings 56: Chipili District schools JMP for drinking water services

Chipili	Drinking water		
	Total	Urban	Rural
Advanced Service	13.04%	-	13.04%
Basic Service	8.70%	-	8.70%
Limited Service	13.04%	-	13.04%
No Service	65.22%	-	65.22%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of schools in Chipili District using advanced services is 13.04%.

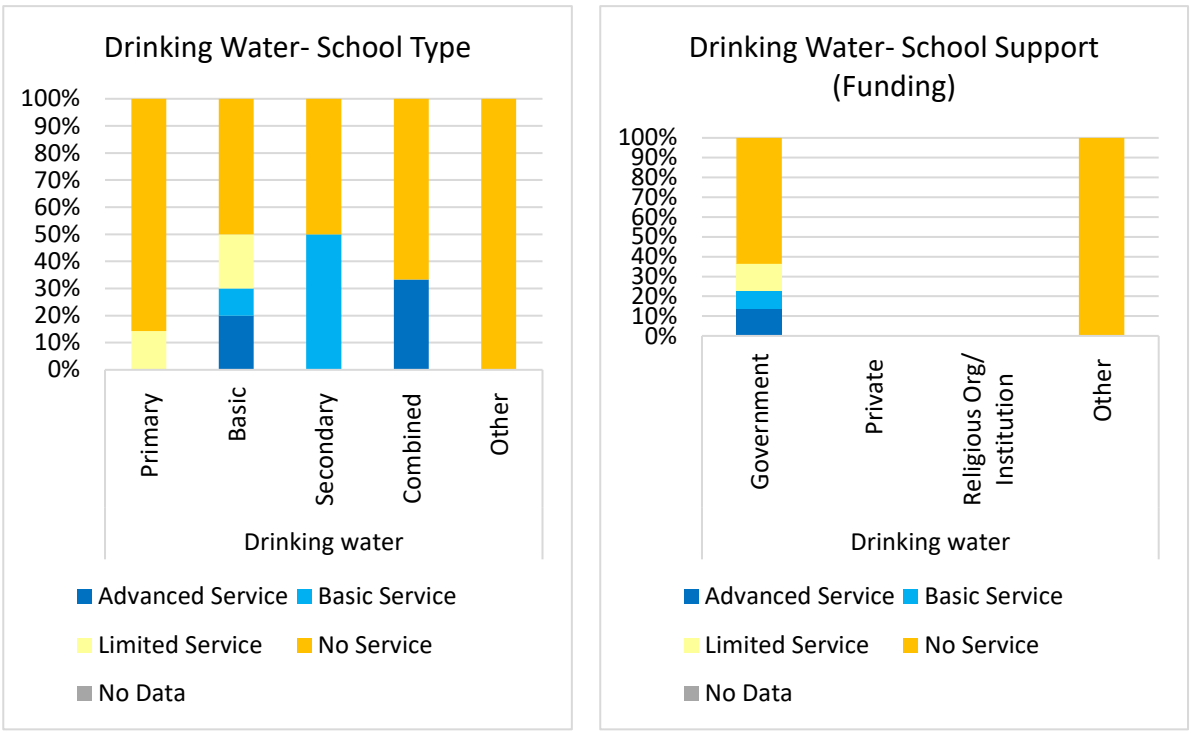
In 2022, out of 49 schools in Chipili District, 43 schools lacked advanced services, including 4 schools with basic services,6 schools with limited services, 32 schools having no water source or having access to an unimproved water source.

Please refer to Table 5 for the definition and clarifications on some of the drinking water terms.



Findings 57: Chipili District ward level JMP for drinking water services in schools

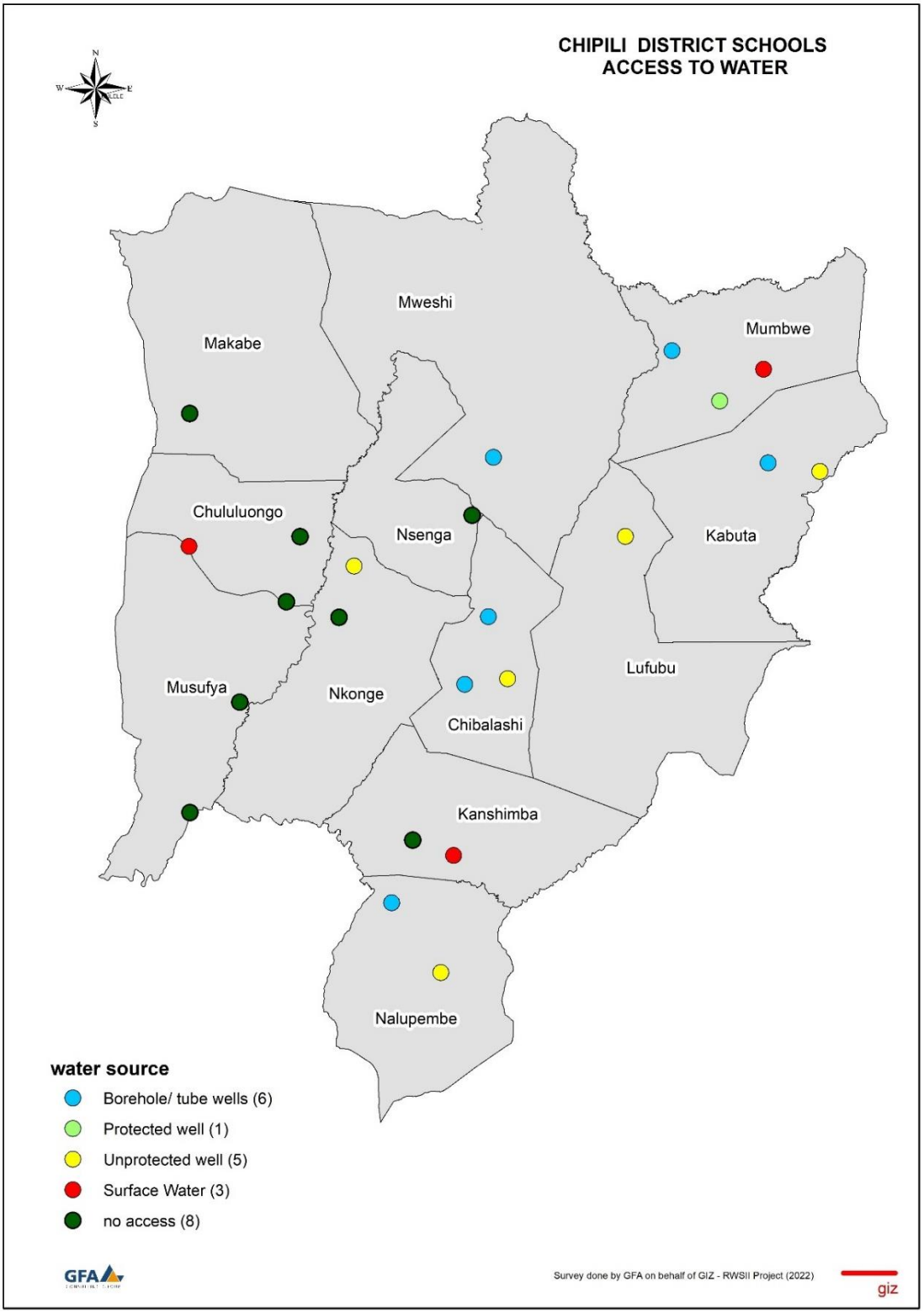
Findings 57 shows JMP indicators at the ward level, out of the 12 wards in Chipili District, 1 ward Chibalashi has the majority of its schools having advanced water service. 2 wards, namely Nalupembe and Mweshi have majority of their schools having access to basic service. 2 wards have majority with limited service (Mumbwe and Kabuta), and the rest of the wards having majority of schools with no service which relates what is being reported in Findings 56.



Findings 58: Chipili District JMP for school - drinking water services by school type and funder

Only basic and combined schools have some access to advanced service and secondary schools have access to some basic services while all other schools (community) have no service. The schools funded by the government have a mixture of service levels in drinking water unlike those funded by community which all have no service.

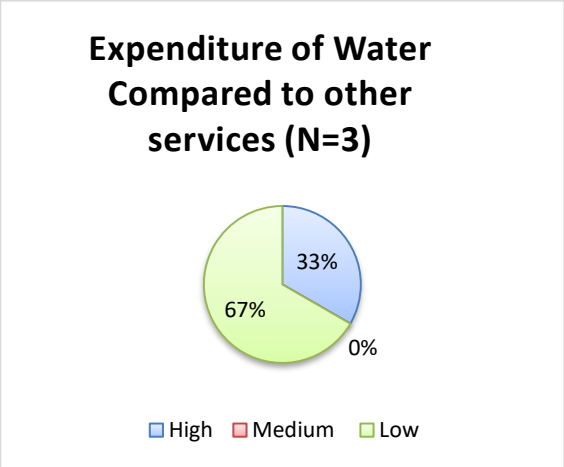
Type of water source



Findings 59: Chipili District Schools -Type of Water Sources/ Access

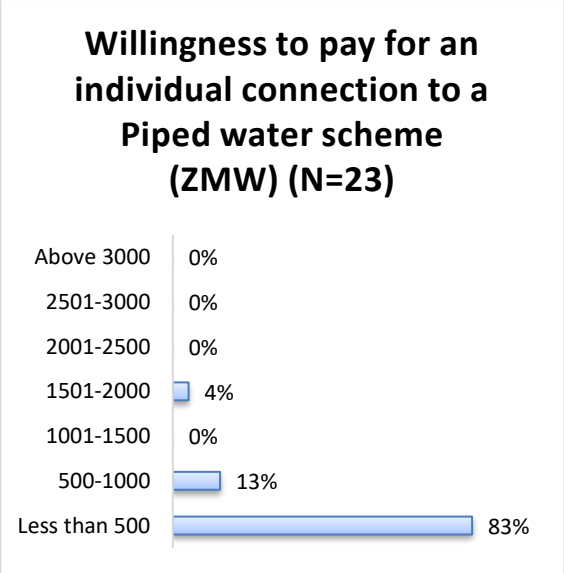
From Findings 59, in general, out of the 65% of schools with access to water the main source of water for schools was Boreholes (40%) and the rest had a mixture of wells (protected and unprotected) and surface water.

Affordability of the water service



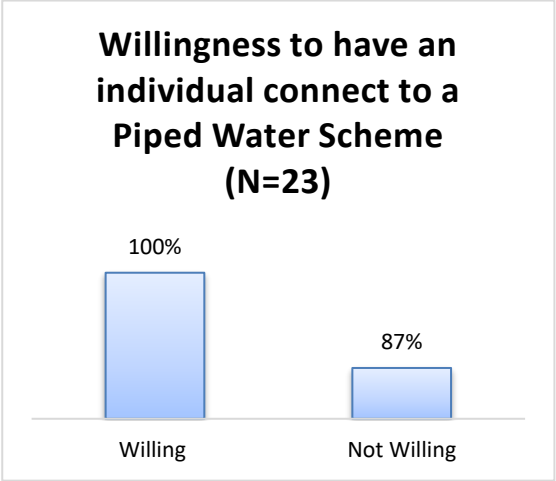
Findings 60: Chipili District schools - expenditure of water compared to other services (N=3)

Majority of the schools thought water services were cheap (67) while 33% perceived it to be expensive.



Findings 62: Chipili District schools - willingness to pay for connection to LpWSC and piped water scheme (N=23)

Willingness to connect to a piped water scheme

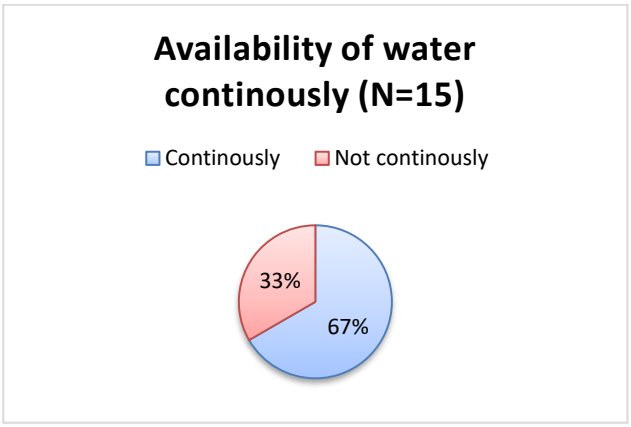


Findings 61: Chipili District schools - willingness to connect to a piped water scheme (N=23)

100% of the schools not connected to a piped water scheme were willing to connect to a piped water scheme.

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

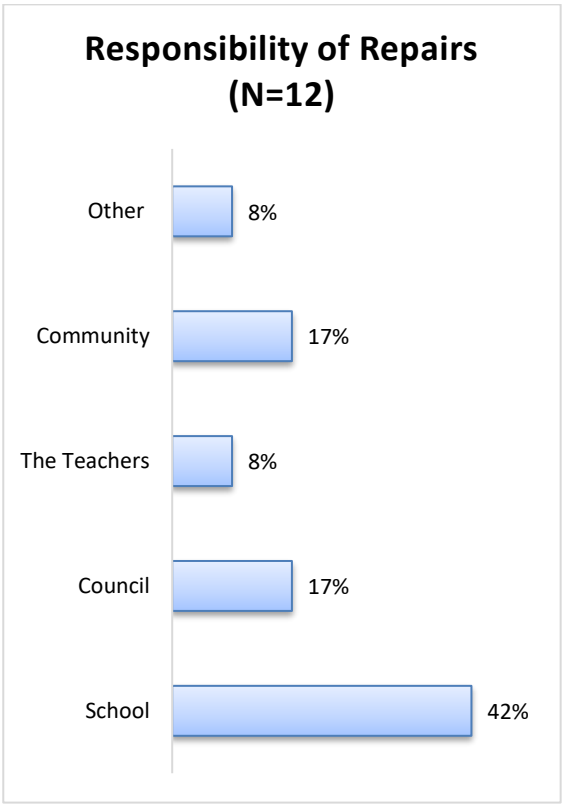
Water availability



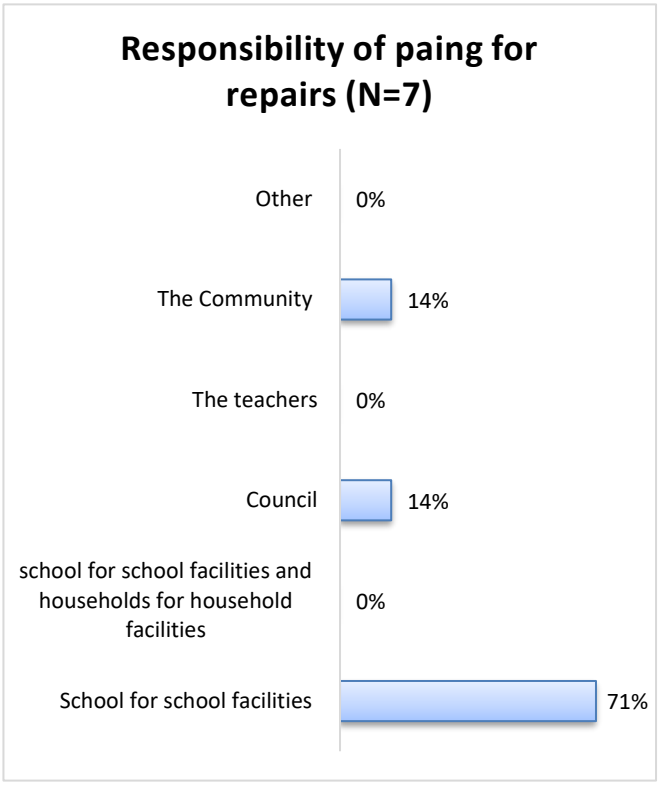
Majority of the schools (67%) indicated water to be continuously available.

Findings 63: Chipili District schools' availability of water (N=15)

Maintenance of water services

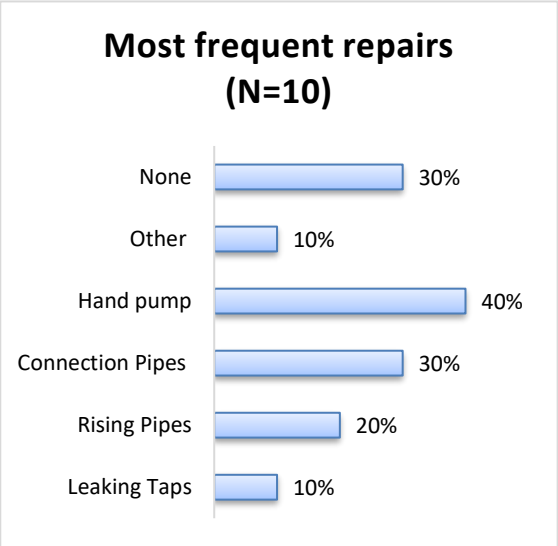


Findings 64: Chipili District responsibility for maintenance/ repair works on the water source for schools (N=12)



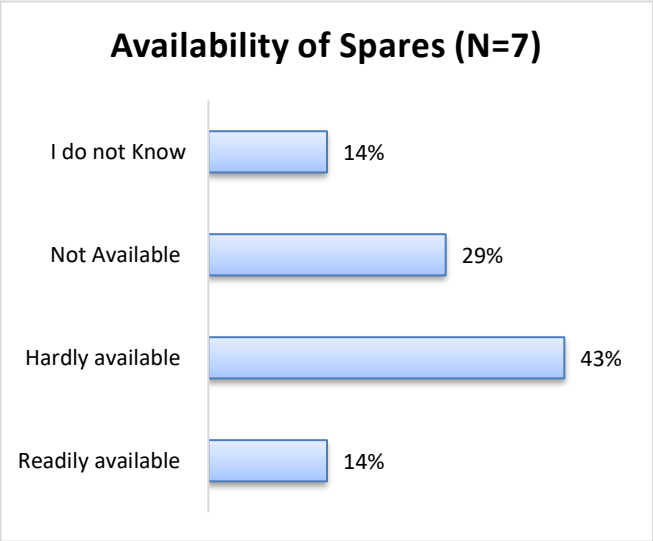
Findings 65: Chipili District responsibility of paying for repair works on the water source (N=7)

The responsibility to conduct maintenance / repair works lies with the school (42%) as for paying for these works it is the school (71%) that is having access to the water source.



Findings 66: Chipili District school water service frequent repairs (N=10)

The most frequent repairs done are hand pumps (40%) and connection pipes (30%).

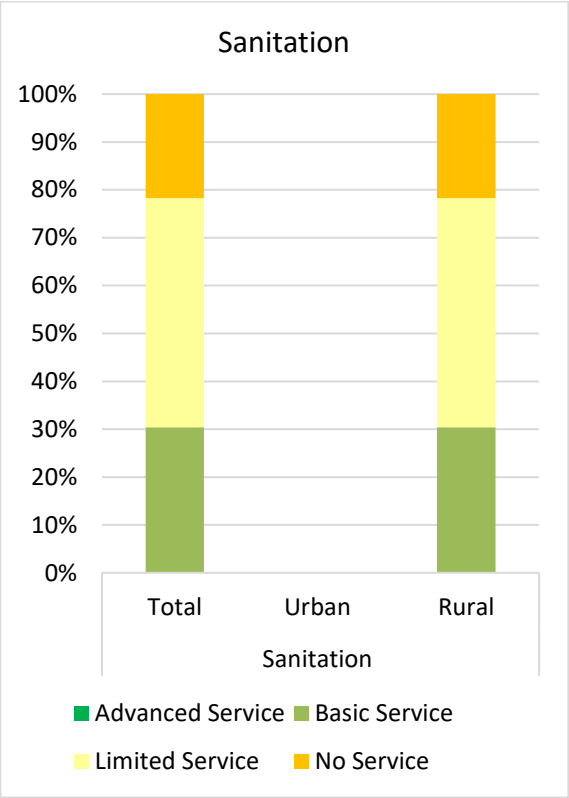


Findings 67: Chipili District school availability of spares (N=15)

43% of the schools noted that spares were hardly available, 29%, not available and 14% indicated that spares were readily available.

5.2.3 Sanitation Services

Chipili JMP ladder for sanitation services



Findings 68: Chipili schools JMP ladder for sanitation

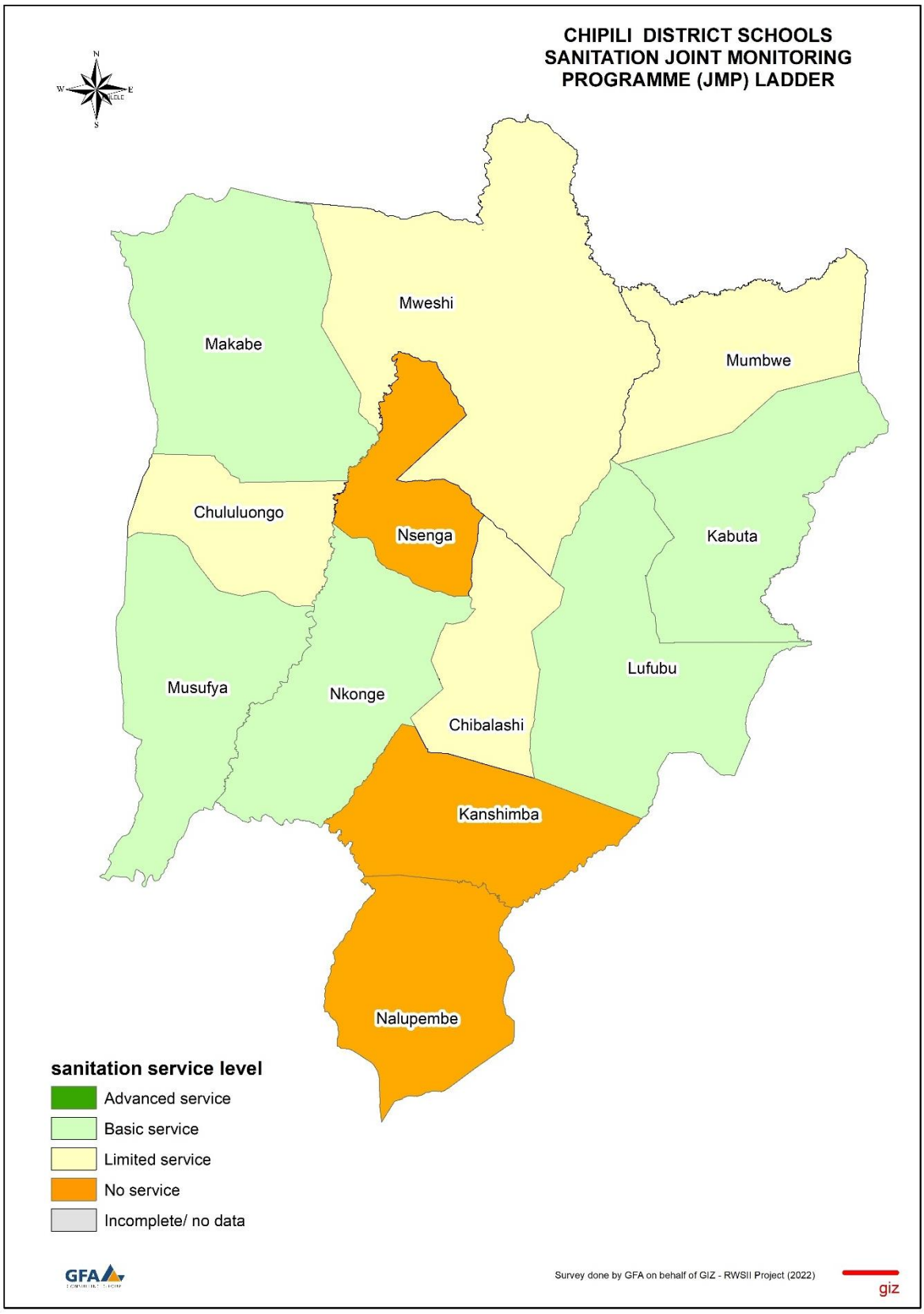
Chipili	Sanitation		
	Total	Urban	Rural
Advanced Service	0.00%	-	0.00%
Basic Service	30.43%	-	30.43%
Limited Service	47.83%	-	47.83%
No Service	21.74%	-	21.74%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of schools in Chipili District using advanced services is 0%.

In 2022, out of an estimated 49 schools in Chipili District, 49 schools lacked advanced sanitation services including 15 schools with basic services, 23 schools with limited services and 11 with no service.

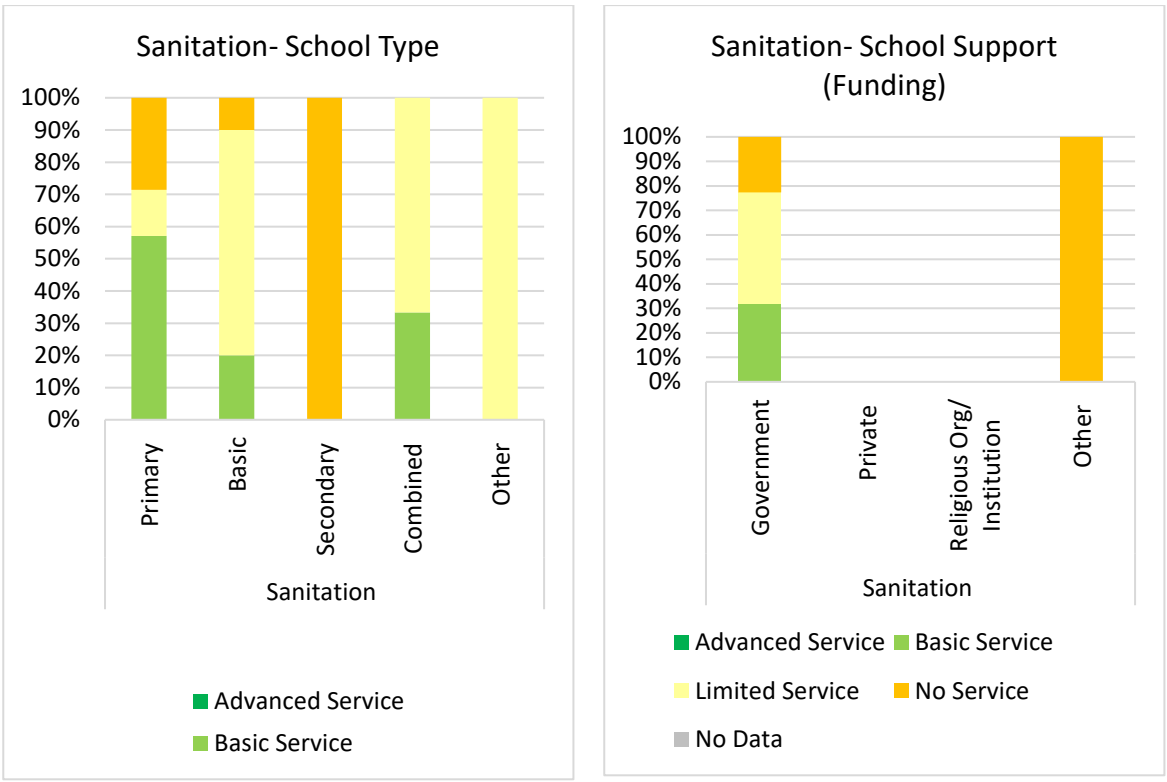
Most schools Chipili District fall in the category of limited service because of the toilet to pupil ratio which was averaging at 80 for both boys and girls.

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



Findings 69: Chipili District Ward level JMP for School Sanitation Services

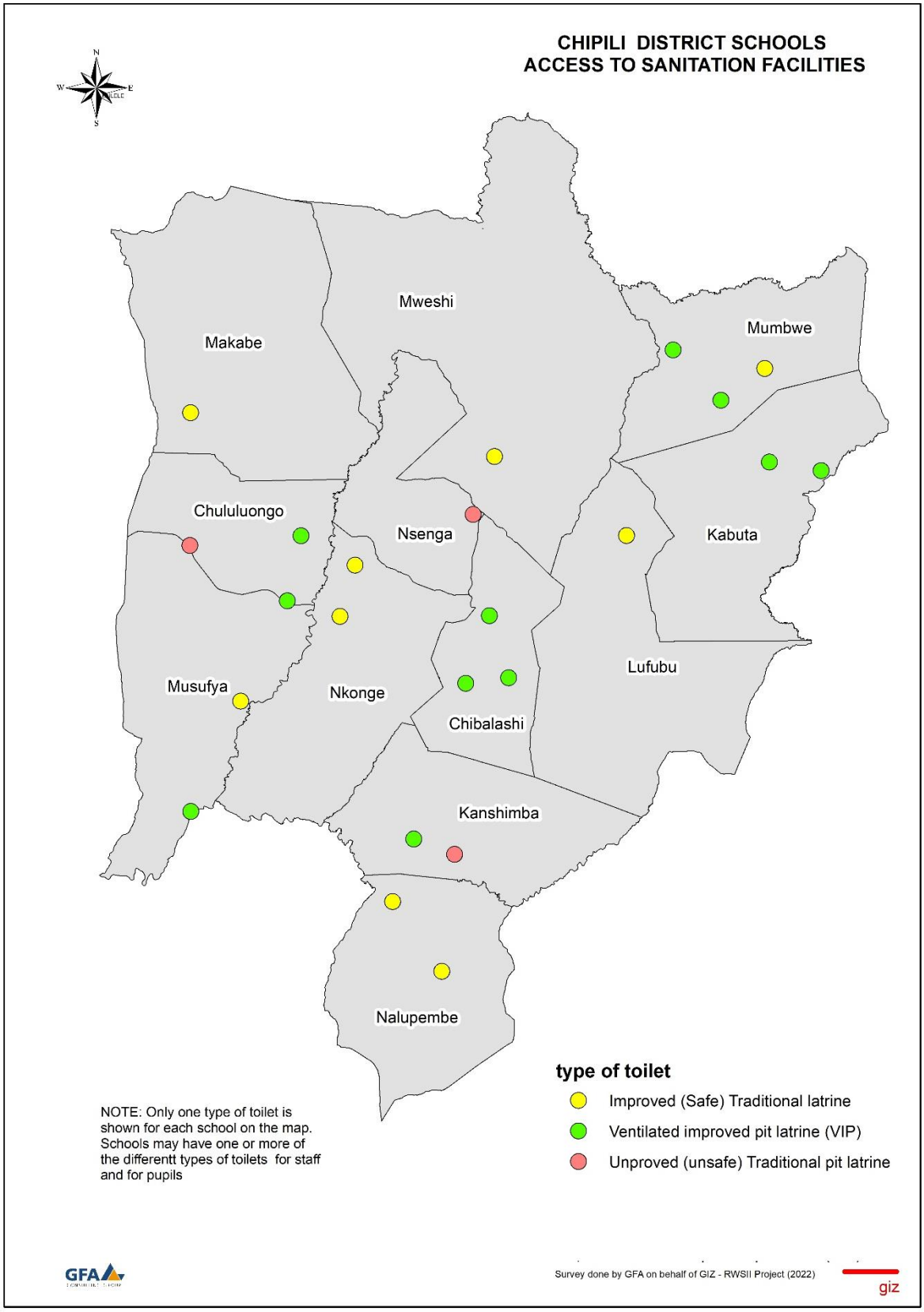
Findings 69 shows JMP indicators at the ward level, out of the 12 wards in Chipili District that were represented, none have majority of its schools having access to advanced service. About 5 wards have majority having basic service, 4 wards with limited service and 3 wards with no service.



Findings 70: Chipili District JMP for school sanitation services by school type and funder

The primary, basic and combined schools have a representation of basic sanitation while all secondary schools have no service and all other (community) have limited sanitation services. When it comes to school support, basic service is only in the government funded schools.

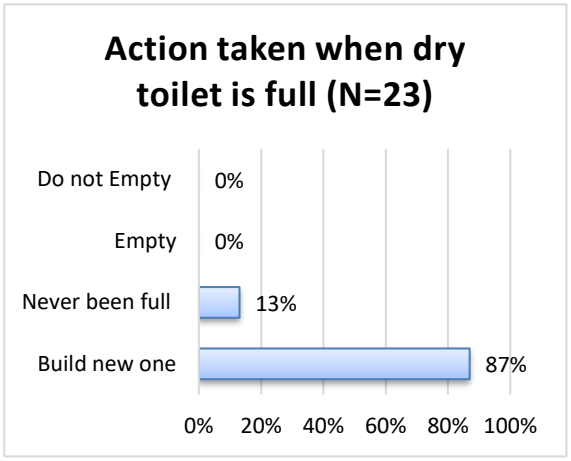
Access to sanitation facilities



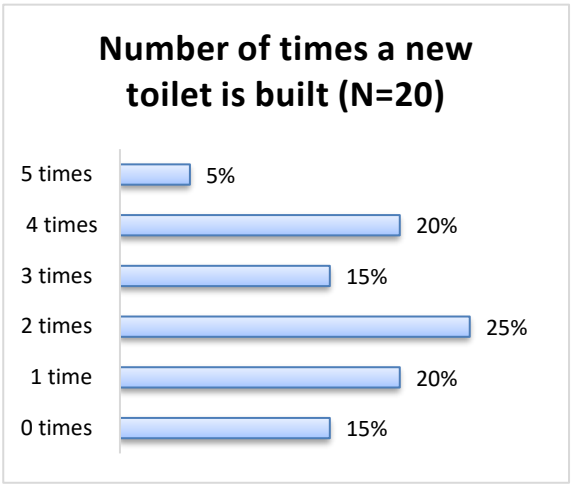
Findings 71: Map of Chipili District schools - access to sanitation facilities

From Findings 71, in general, the main type of sanitation for schools was ventilated improved pit latrine (VIP), seconded by improved safe traditional.

Emptying practices



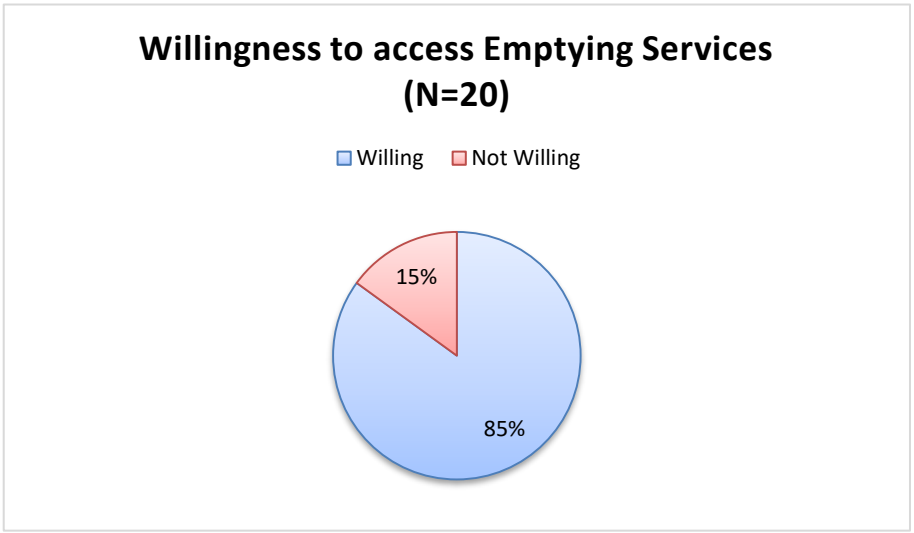
Findings 72: Chipili District school toilet emptying practices (N =23)



Findings 73: Chipili District school - number of times a new toilet is built (N=20)

Like the households, school toilet emptying practices are mainly building a new one once it is full (87%) while for the other schools their toilets haven't been full (13%). This information is cardinal in FSM planning.

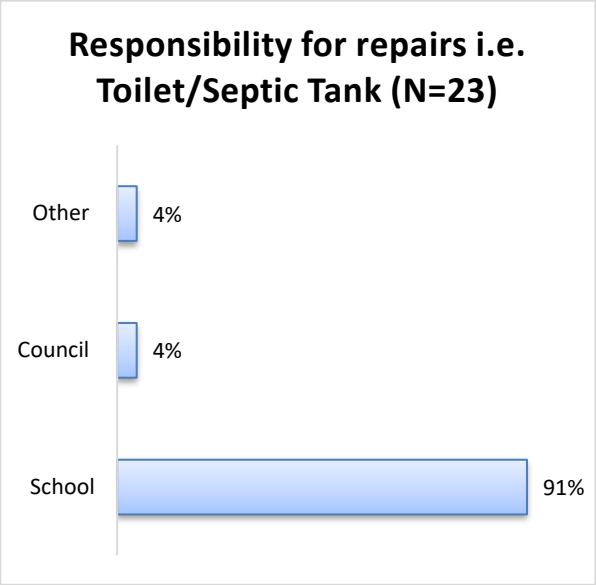
Most of the schools which had built a new toilet before, did this two times (25%) and one/four times (20%).



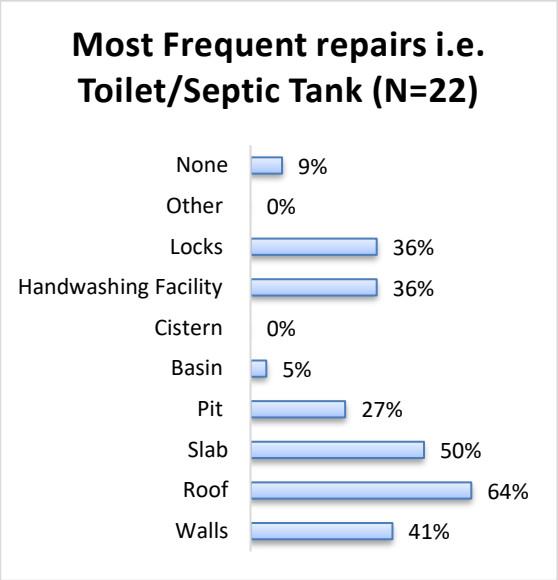
Findings 74: Chipili District School willingness to access emptying services (N=20)

Majority of the schools are willing to access emptying services (85%) while there is still a reputable proportion of schools not willing to access this service.

Maintenance of sanitation facilities



Findings 75: Chipili District schools – responsibility for repair of toilet (N=23)

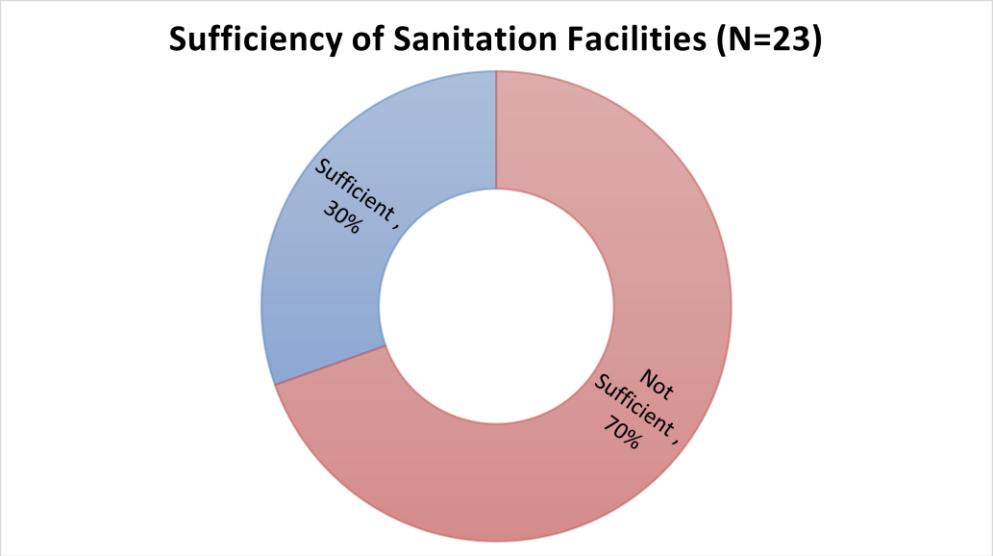


Findings 76: Chipili District schools - most frequent toilet repairs (N=22)

In general, the school mostly takes responsibility of repairing the toilets (91%).

The most frequent repairs on the toilets are the roof (64%), slab (50%) and walls (41%).

Sufficiency of toilets

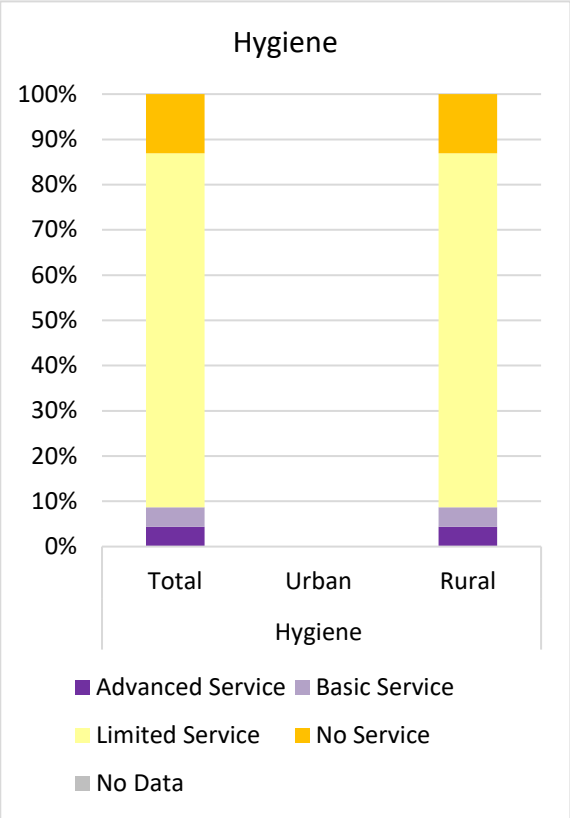


Findings 77: Chipili District schools - sufficiency of sanitation facilities (N=23)

70% of the schools in Chipili have insufficient and the main reason was the toilets are not enough to cater the number of pupils or staff at the schools hence resulting to a high toilet to pupil ratio.

5.2.4 Hygiene Services

Chipili JMP ladder for hygiene services



Findings 78: Chipili District schools JMP ladder for hygiene services

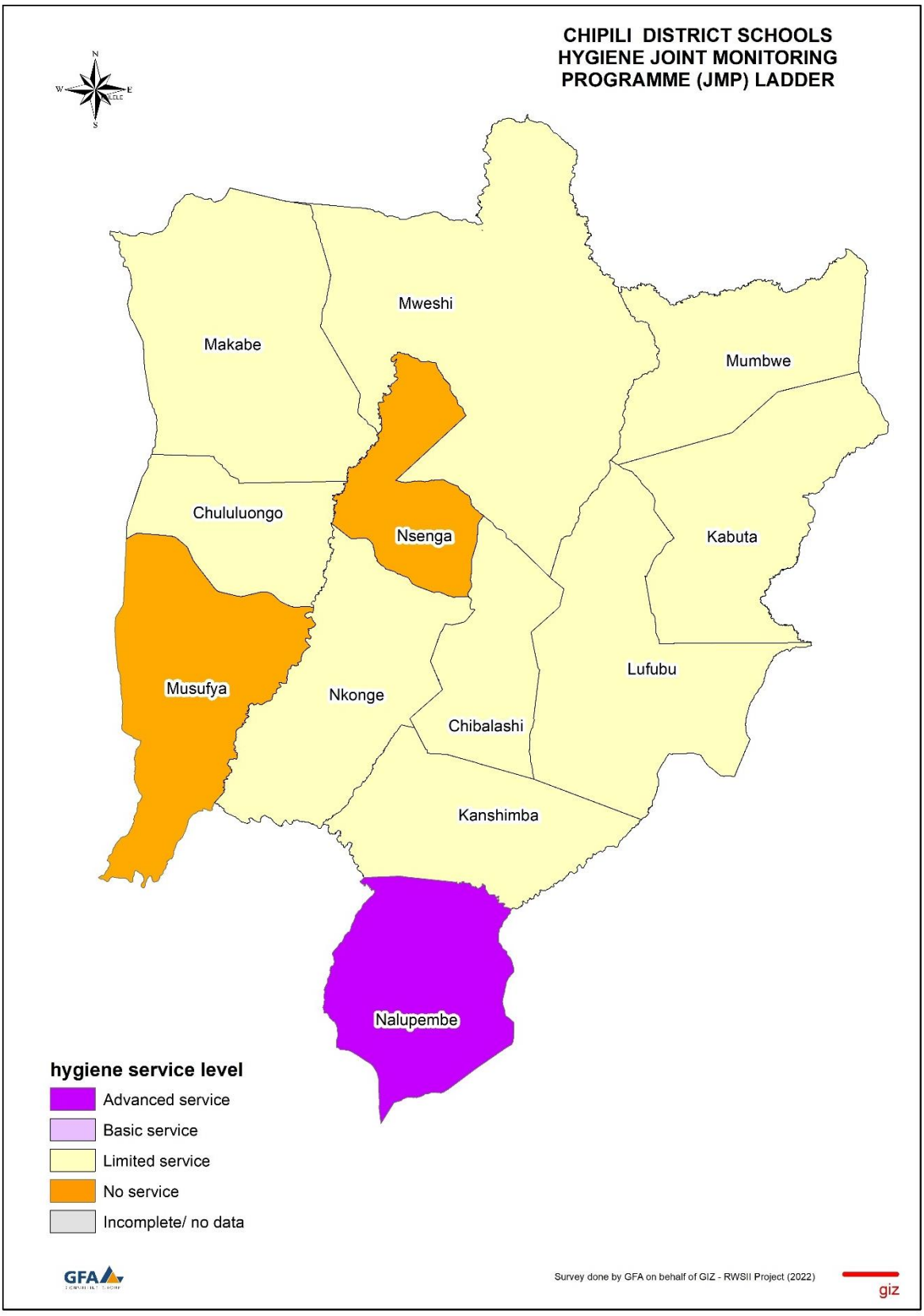
Chipili	Hygiene		
	Total	Urban	Rural
Advanced Service	4.35%	-	4.35%
Basic Service	4.35%	-	4.35%
Limited Service	78.26%	-	78.26%
No Service	13.04%	-	13.04%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of schools in Chipili District 4.35% were having advanced hygiene service.

In 2022, out of 49 schools in Chipili District, 47 schools lacked advanced services including 2 with basic service, 38 with limited service and 6 with no handwashing facilities at all.

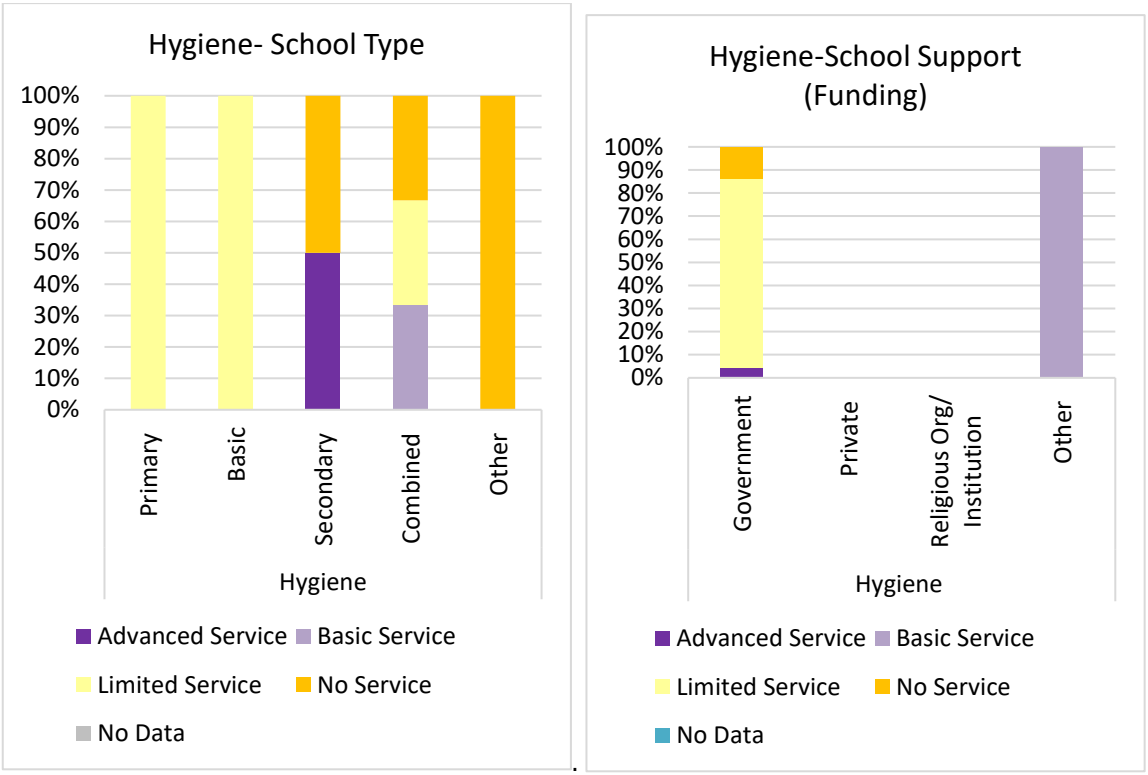
Most schools Chipili District failed to qualify for advanced service mainly due to the handwashing facility to pupil which was averaging at 109.

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



Findings 79: Chipili District ward level JMP for school hygiene services

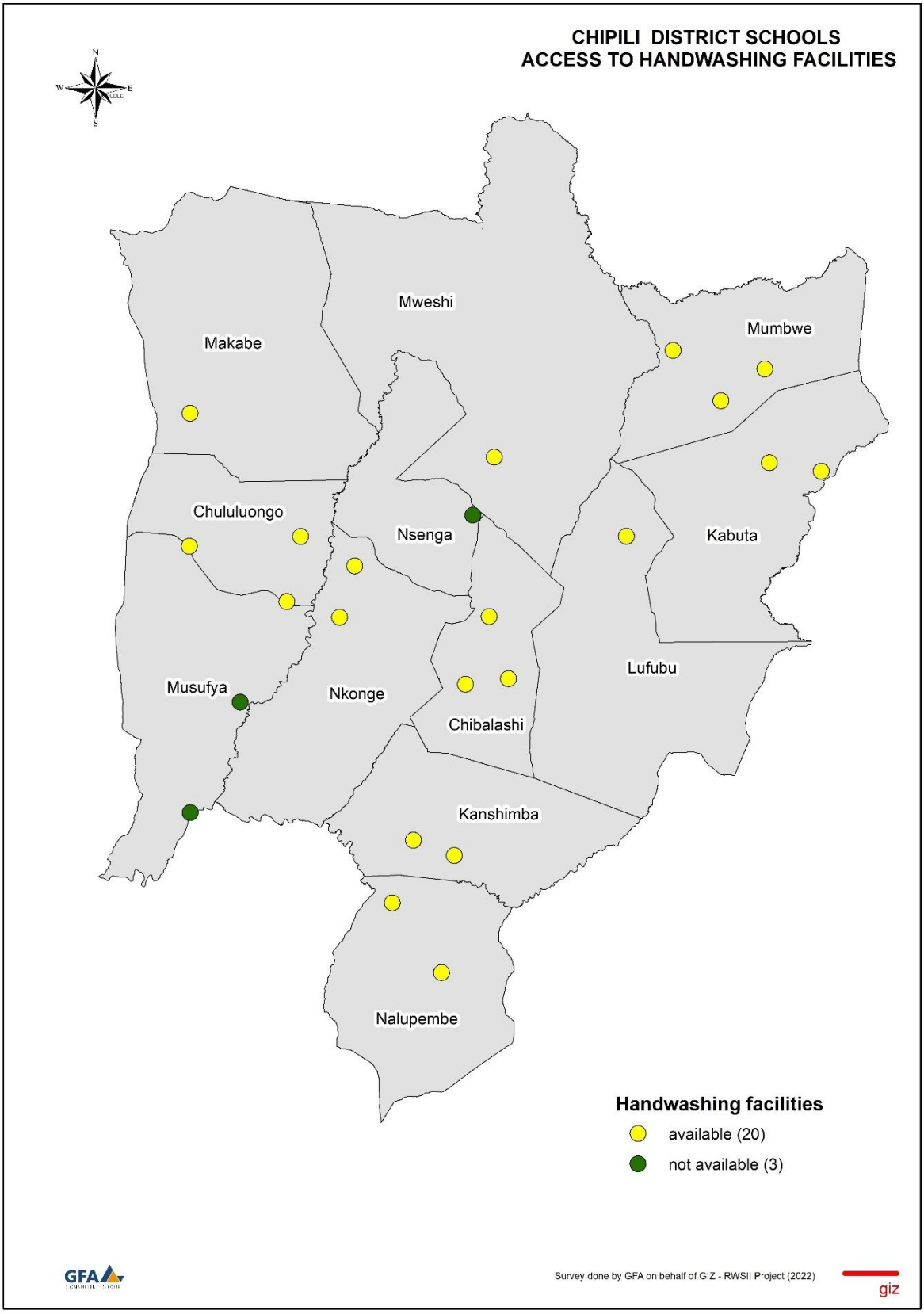
Findings 79 shows JMP indicators at the ward level. Out of the 12 wards, there is only one ward with majority of its schools having advanced service, Nalupembe ward. 2 wards, namely Musufya and Nsenga have majority of there schools that did not have access to hygiene services. The rest of the wards in Chipili District have schools with access to limited hygiene services.



Findings 80: Chipili District JMP for school hygiene services by school type and funder

The secondary schools are the only category that has advanced hygiene but also no service. All primary and basic schools have limited hygiene while combined schools have a mixture (basic, limited and no service). All other schools (community) have no service. By funding type, all under other have basic hygiene while government schools have a mixture of advanced, limited and no service.

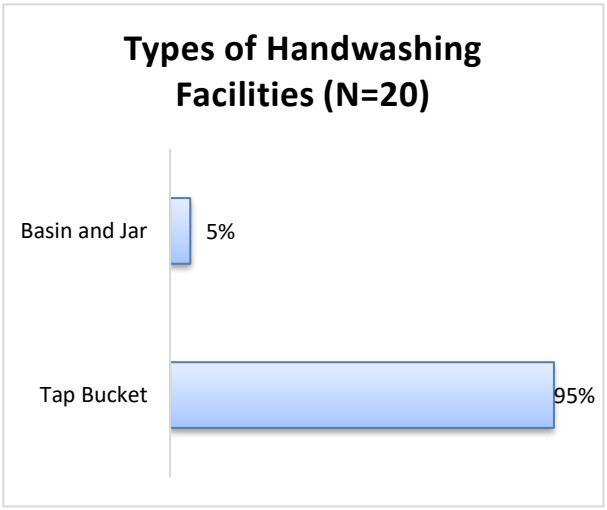
Access to hygiene facilities



Findings 81: Map of Chipili district schools - access to hygiene facilities

From Findings 81**,** it is observed that majority have access to handwashing facilities and only 13% do not.

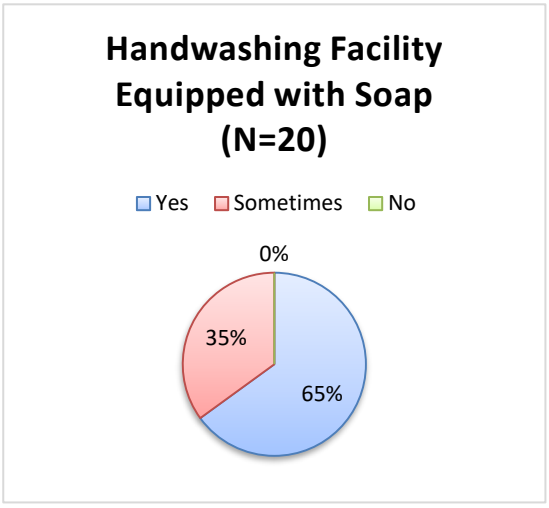
Type of handwashing facilities



Findings 82: Chipili District schools - types of handwashing facilities (N=20)

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

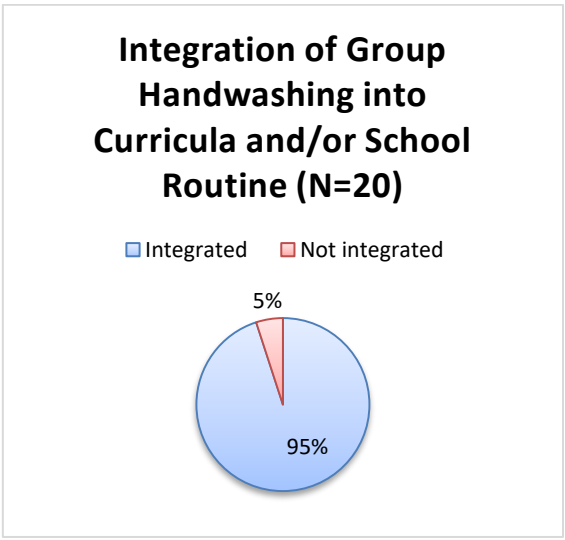
Handwashing with soap

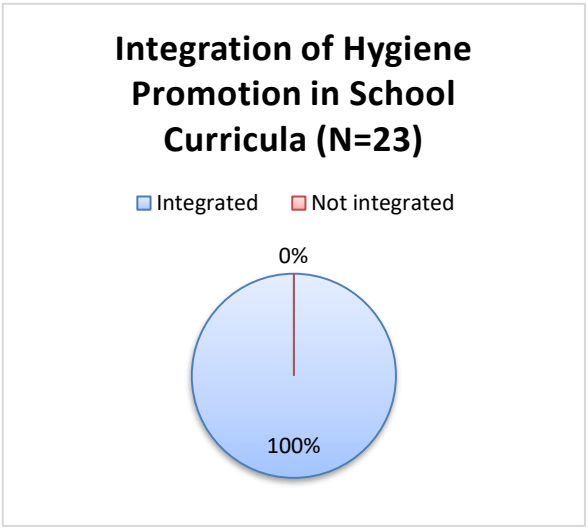


Findings 83: Chipili District - handwashing with soap practices (N=20)

65% of the handwashing facilities were equipped with soap,

Hygiene promotion



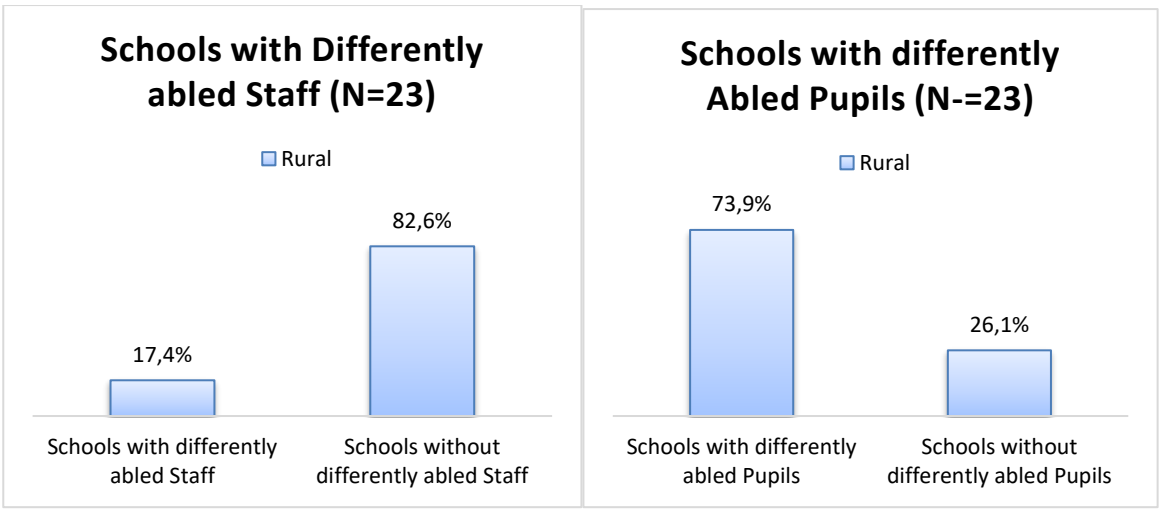


Findings 84: Chipili District schools handwashing and hygiene promotion curricula integration

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

5.2.5 Social Inclusion

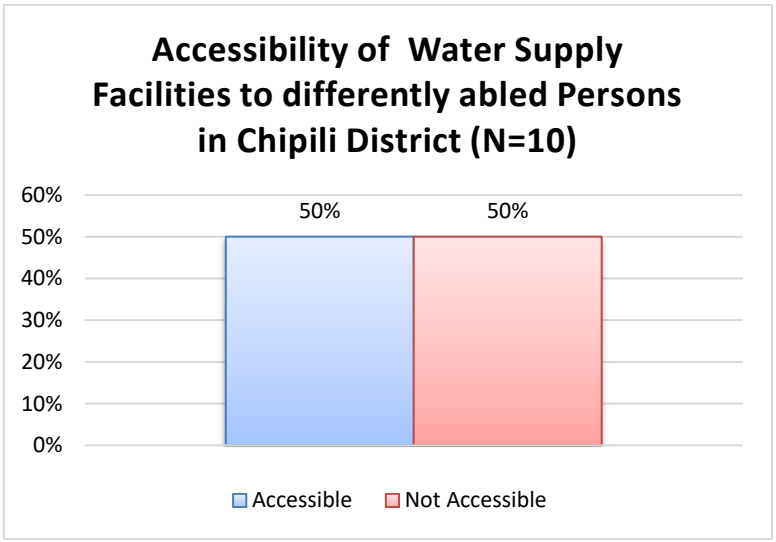
Differently abled staff and pupils



Findings 85: Chipili District schools with differently abled pupils (N=23)

17.4% of the schools in Chipili have differently abled staff while 73.9% of the schools have pupils who are differently abled.

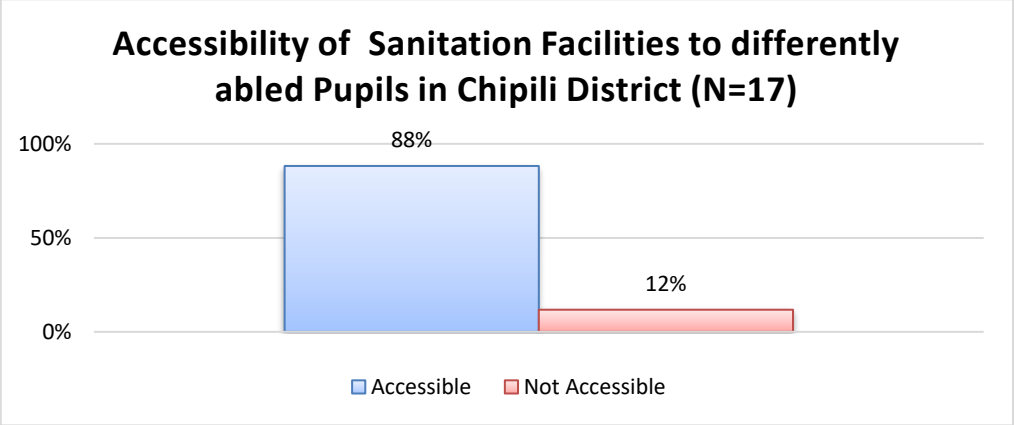
Accessibility to water supply facilities



Findings 86: Chipili District schools - water facility accessibility to differently abled persons(N=10)

50% of the schools in Chipili District have water facilities which are accessible to differently abled persons.

Accessibility to sanitation facilities

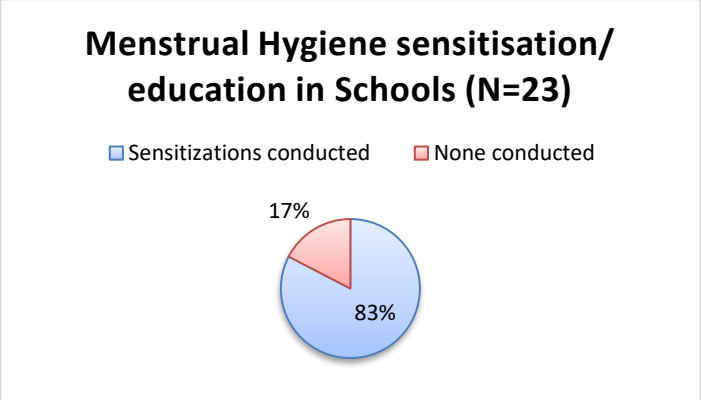


Findings 87: Chipili District schools sanitation facility accessibility to differently abled persons (N=17)

88% of the schools in Chipili District have sanitation facilities which are accessible to differently abled persons.

5.2.6 Menstrual Health Management

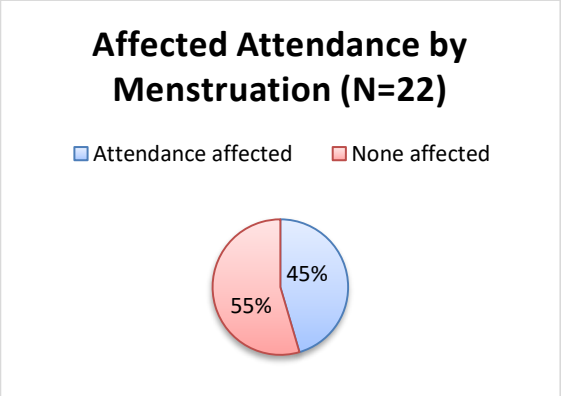
Menstrual hygiene sensitisation and education

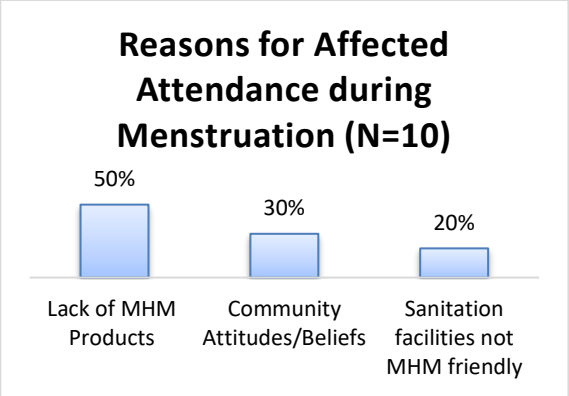


83% of the schools in Chipili District conduct menstrual hygiene sensitisation.

Findings 88: Chipili District schools menstrual hygiene sensitisation (N=23)

Participation in school during menstruation

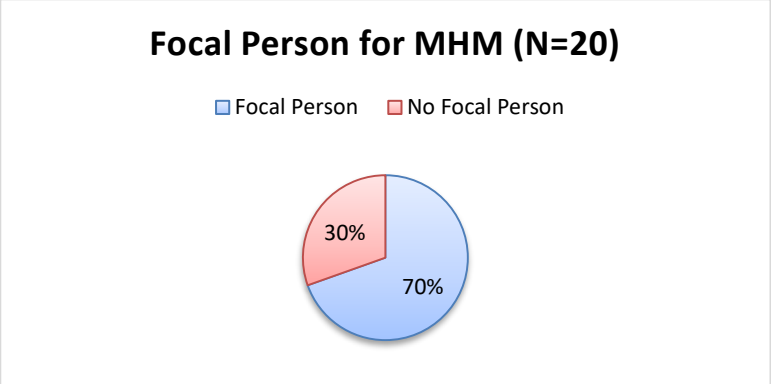




Findings 89: Chipili District schools - participation during menstruation (N=22) and reasons (N=10)

55% of the schools in Chipili have the girl child's school attendance not being affected by menstruation and for the 45% whose school attendance is affected, the reason that stands out the most is due to lack to MHM products (50%) and community attitudes or beliefs (30%).

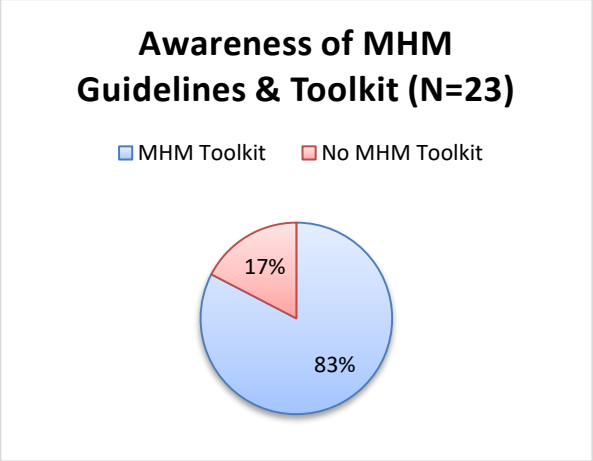
MHM focal point

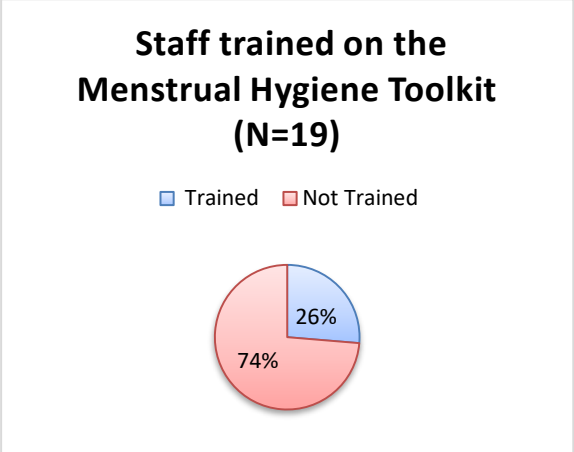


70% of the schools in Chipili District have a MHM focal point person

Findings 90: Chipili District schools - MHM focal points (N=20)

MHM toolkit

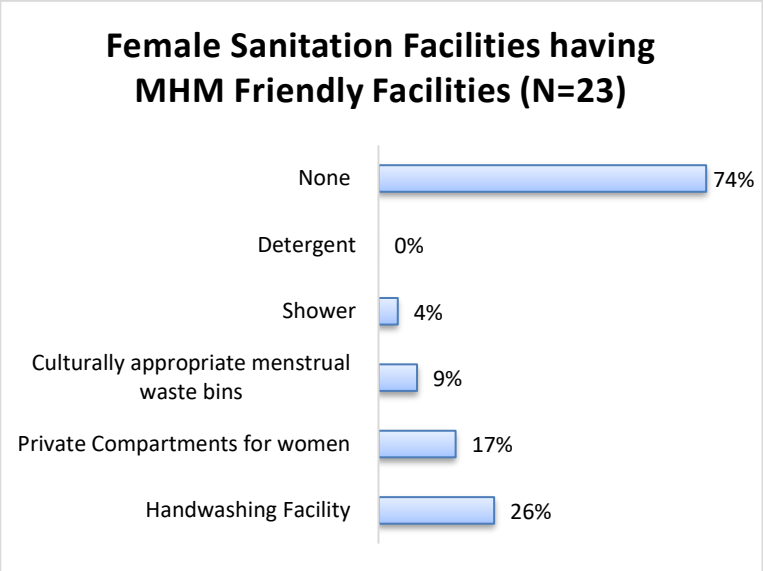




Findings 91: Chipili District schools MHM toolkit (N=23) and training (N=19)

83% of the schools in Chipili are aware of the MHM Guidelines and Toolkit, from these 26% have staff that have been trained on the MHM toolkit

MHM friendly facilities

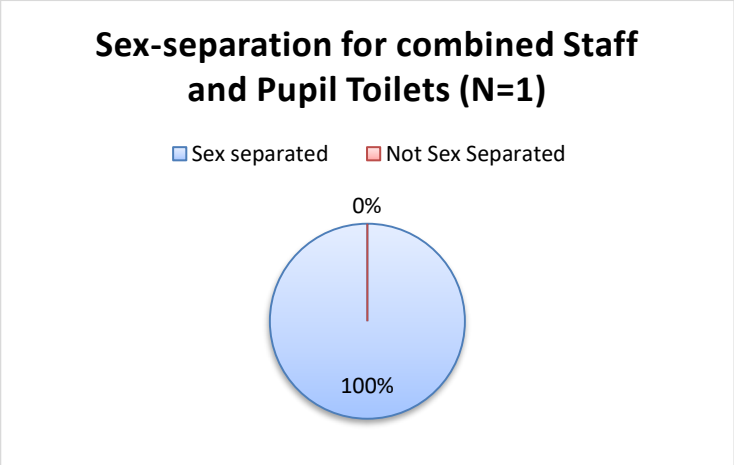


Majority of the schools do not (74%) fulfil any of the indicators for MHM friendly sanitation facilities. For those that, majority fulfil the handwashing indicator (26%) for MHM friendly sanitation services.

Findings 92: Chipili District schools - MHM friendly services in female sanitation facilities (N=23)

5.2.7 Gender Sensitivity Data and Information

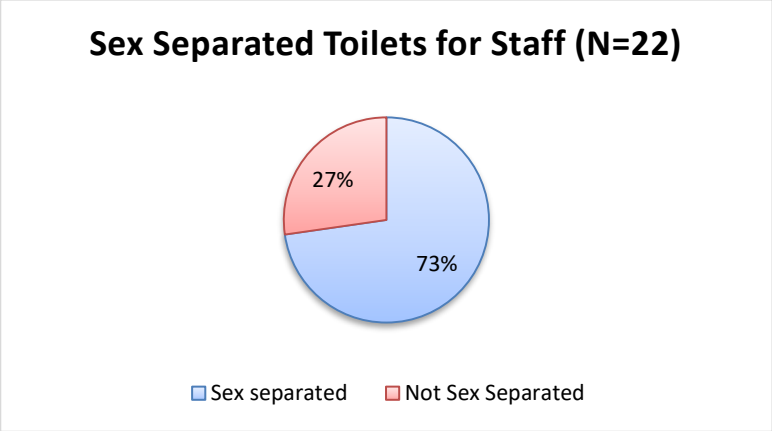
Sanitation facilities for combined staff and pupil



Out of all the schools in Chipili District, 4% do not separate the staff and pupil toilets of which only 100% of these are sex separated.

Findings 93: Chipili District schools sex separated toilets for schools with combined staff and pupil toilets (N=1)

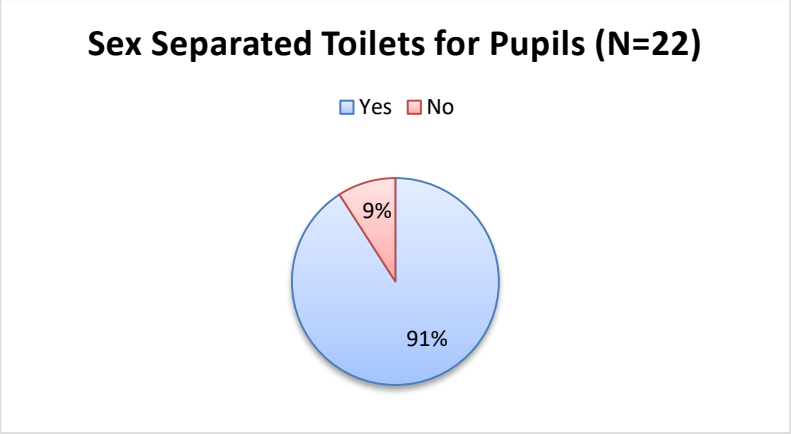
Sanitation facilities for staff only



Out of all the schools in Chipili that have toilets dedicated to staff, 73% are sex separated.

Findings 94: Chipili District schools sex separated toilets for schools with dedicated staff toilets (N=22)

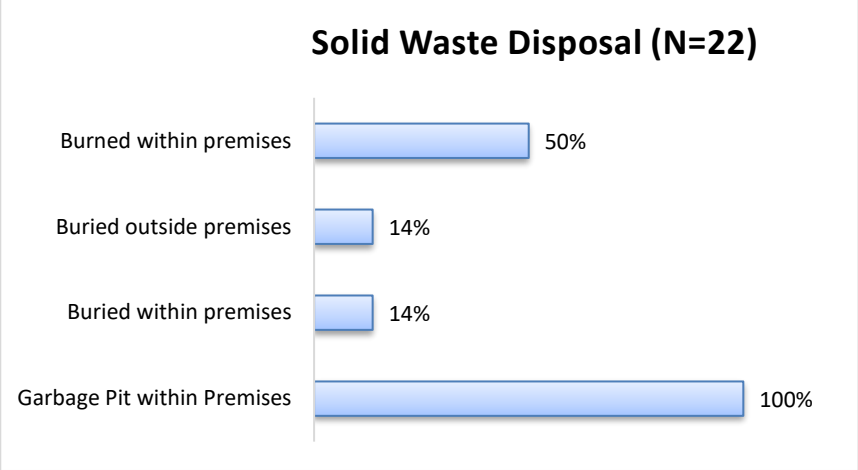
Sanitation facilities for pupils



All the schools in Chipili that have toilets dedicated to pupils, 91% are sex separated.

Findings 95: Chipili District schools sex separated toilets for schools with dedicated pupil toilets (N=22)

5.2.8 Solid Waste Management



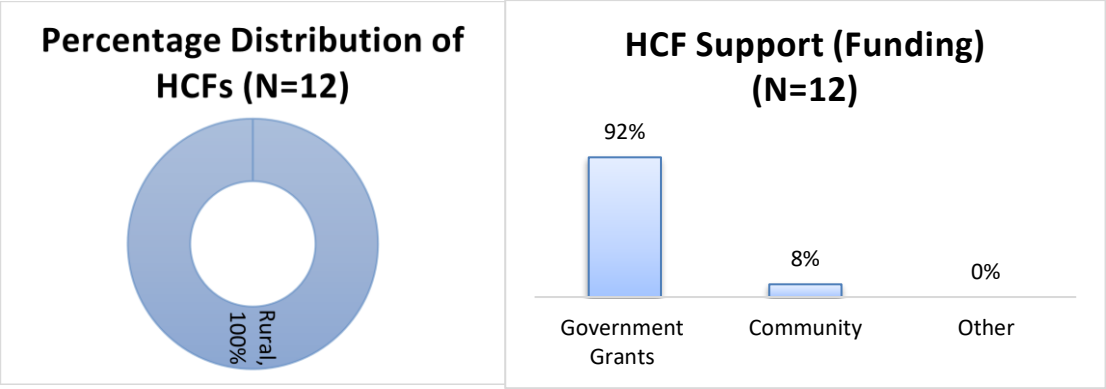
All schools use garbage pits within the premises to dispose of Solid waste but 50% also burn their solid waste within the premises

Findings 96: Chipili District schools solid waste disposal (N=22)

5.3 Healthcare Facilities

5.3.1 Health Care Facility Information & Electricity Connectivity

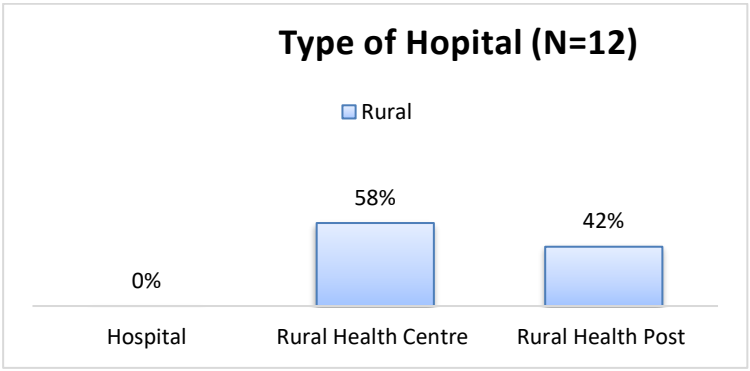
Average Distribution of Health Care Facilities in Chipili



Findings 97: Chipili District distribution of health care facilities and sources of funding (N = 12)

Like the households and schools, all the HCFs interviewed were in the rural areas. This generally represents the distribution of HCFs in Chipili. From the interviewed HCFs, Majority were all supported by Government Grants (92%) and community (8%).

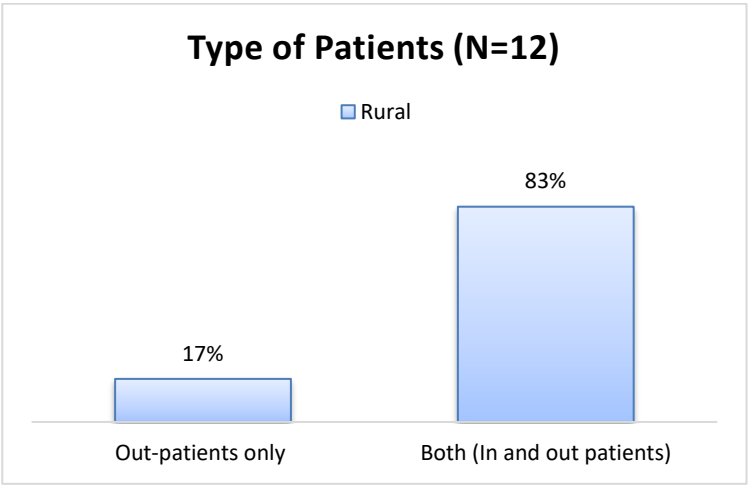
Types of HCFs



Majority of HCF interviewed in Chipili District were 58% rural health centres (RHCs) and 42% rural health posts (RHPs).

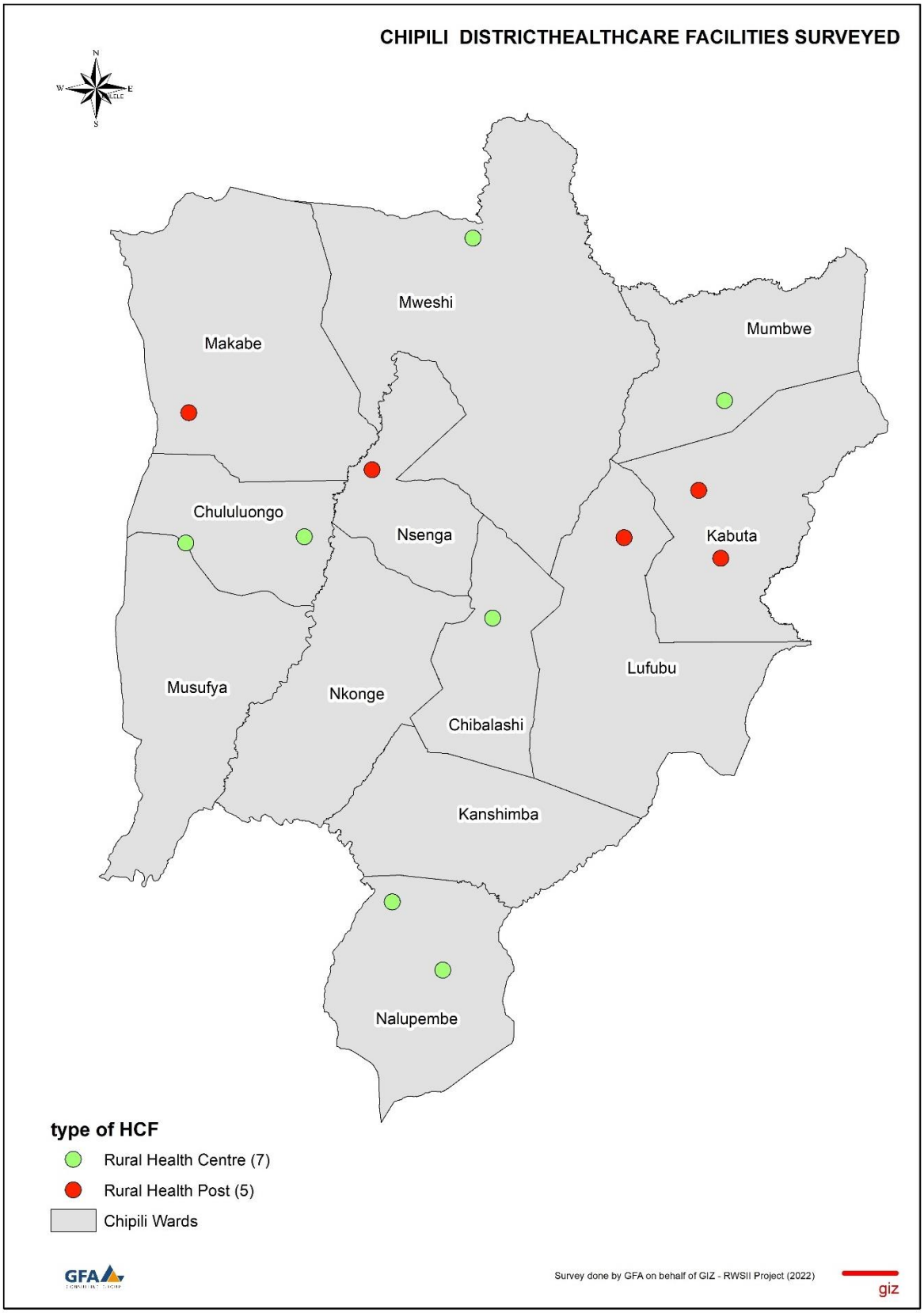
Findings 98: Chipili District type of health care facility (N = 12)

Type of patients



83% of the HCFs in Chipili cater for both in and out patients and 17% in patient only.

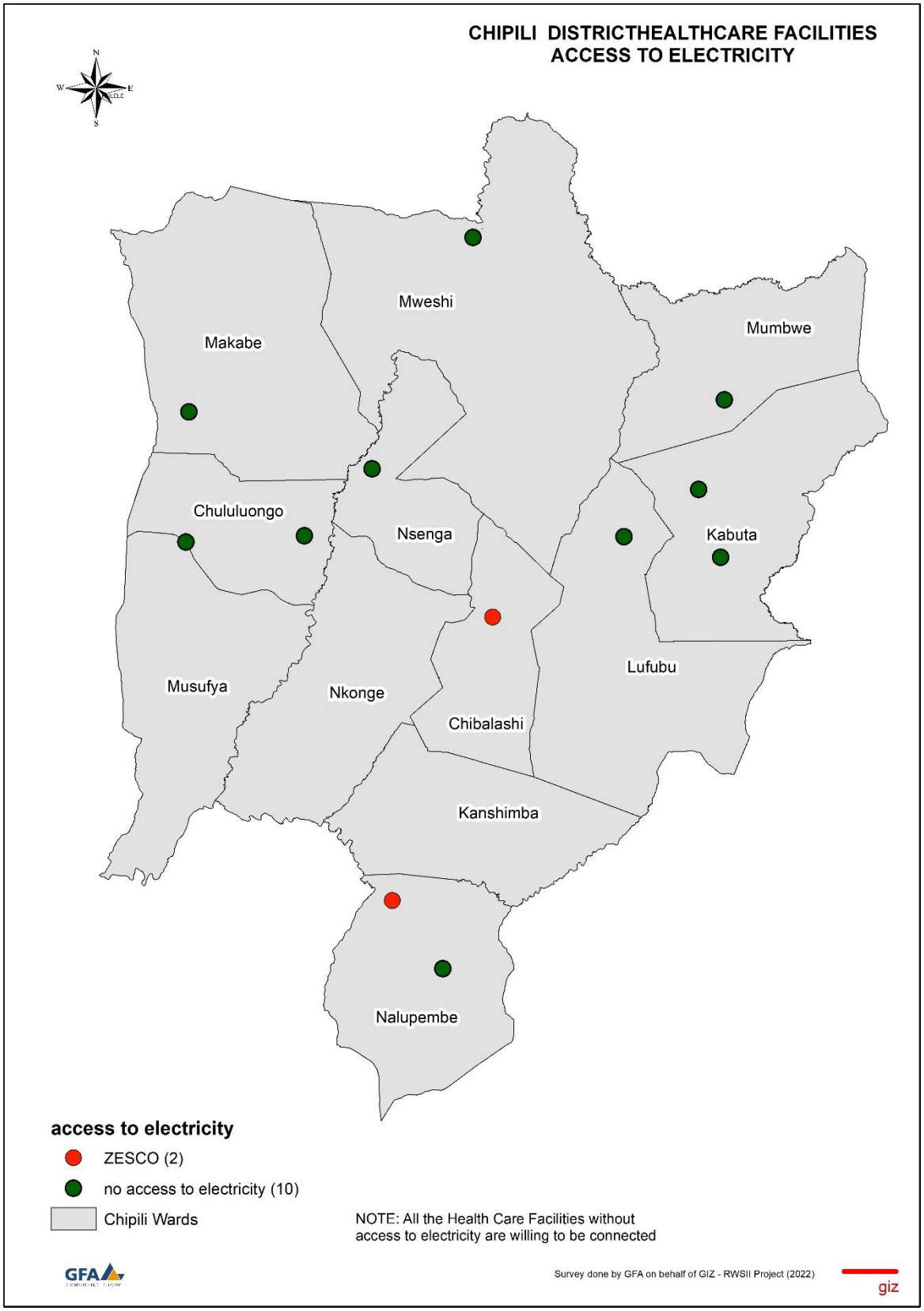
Findings 99: Chipili District health care facility catering for in- and out-patients (N = 12)



Findings 100: Chipili District Distribution of health care facilities

There were a total of 12 Health Care Facilities surveyed. Most of the Health Care Facilities surveyed were Rural Health Posts and Rural Health Centres.

Connection to Electricity

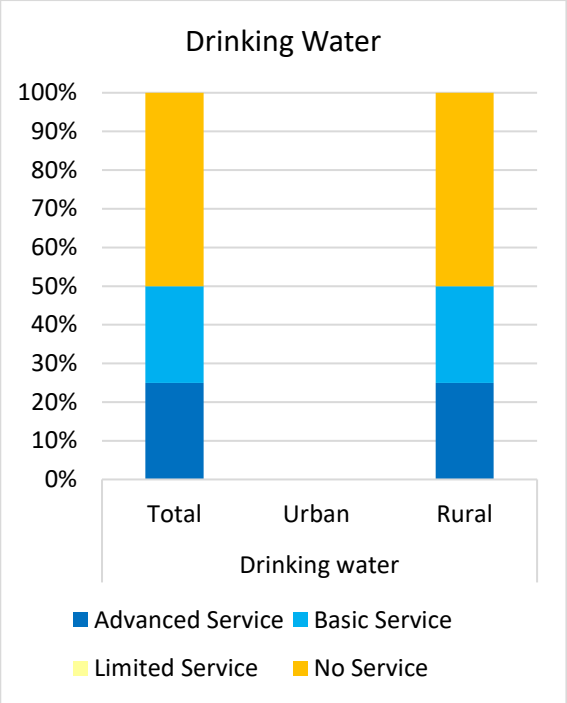


Findings 101: Chipili District health care facilities - connection to electricity

Only 17% of the health care facilities have access to electricity i.e. ZESCO. For the HCFs that are not connected to electricity, they are all willing to connect given the opportunity.

5.3.2 Water Supply Services

Chipili JMP ladder for drinking water services



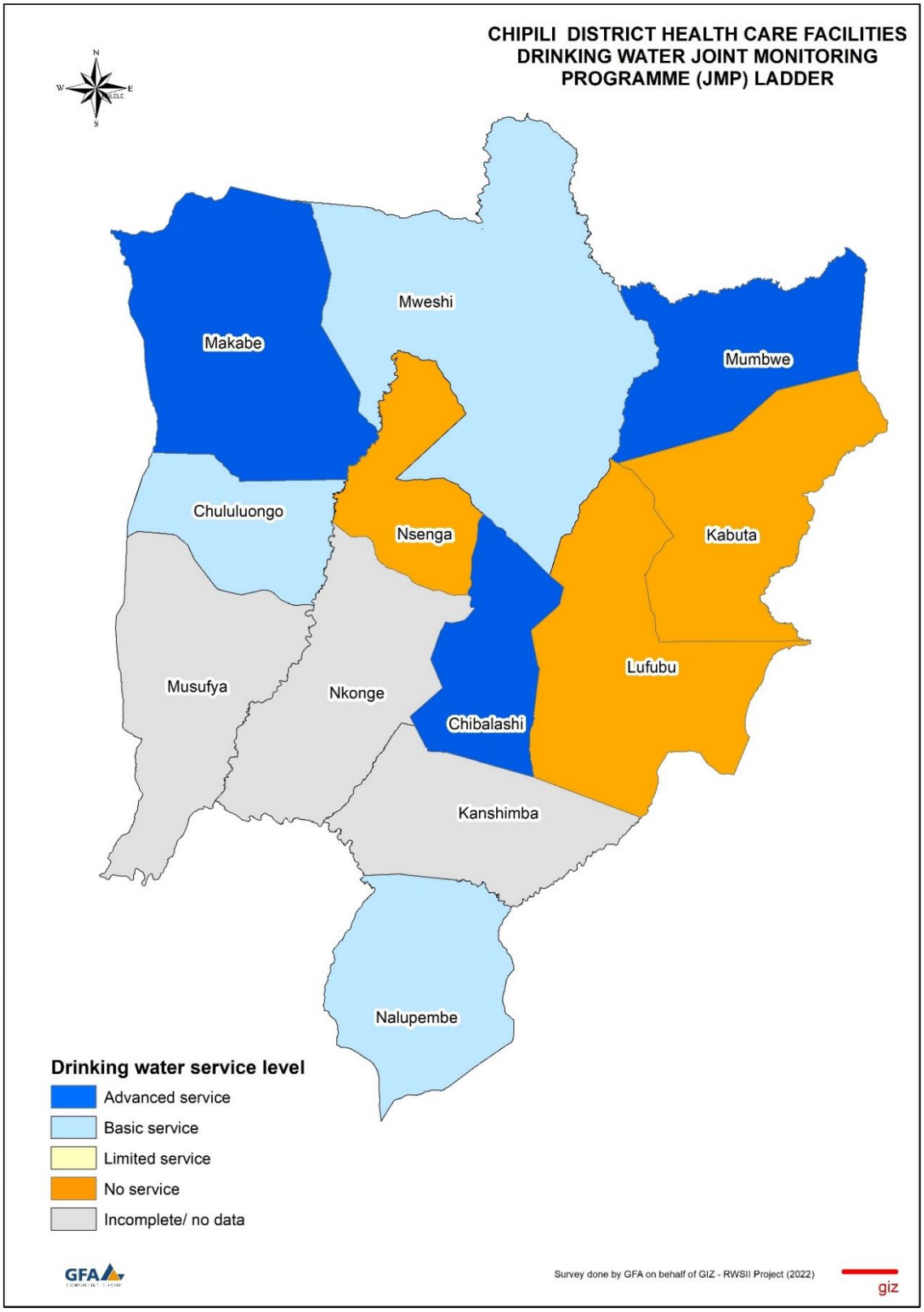
Findings 102: Chipili district health care facilities-JMP for drinking water services

Chipili	Drinking water		
	Total	Urban	Rural
Advanced Service	25.00%	-	25.00%
Basic Service	25.00%	-	25.00%
Limited Service	0.00%	-	0.00%
No Service	50.00%	-	50.00%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of HCFs in Chipili District using advanced services is 25%.

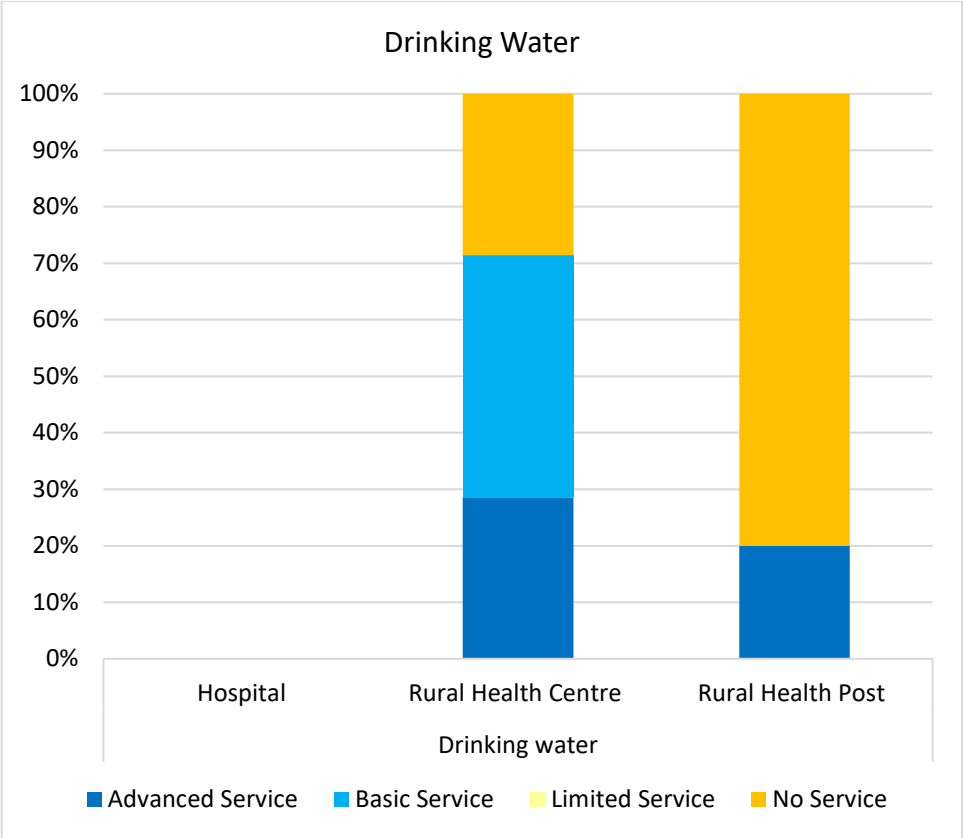
In 2022, out of 20 HCFs in Chipili District, 15 HCFs lacked advanced services including 5 HCFs with basic services, 0 HCFs with limited services, 10 HCFs having no water source or having access to an unimproved water source.

Please refer to Table 8 for the definition and clarifications on some of the drinking water terms.



Findings 103: Chipili District ward level - JMP for HCF drinking water services

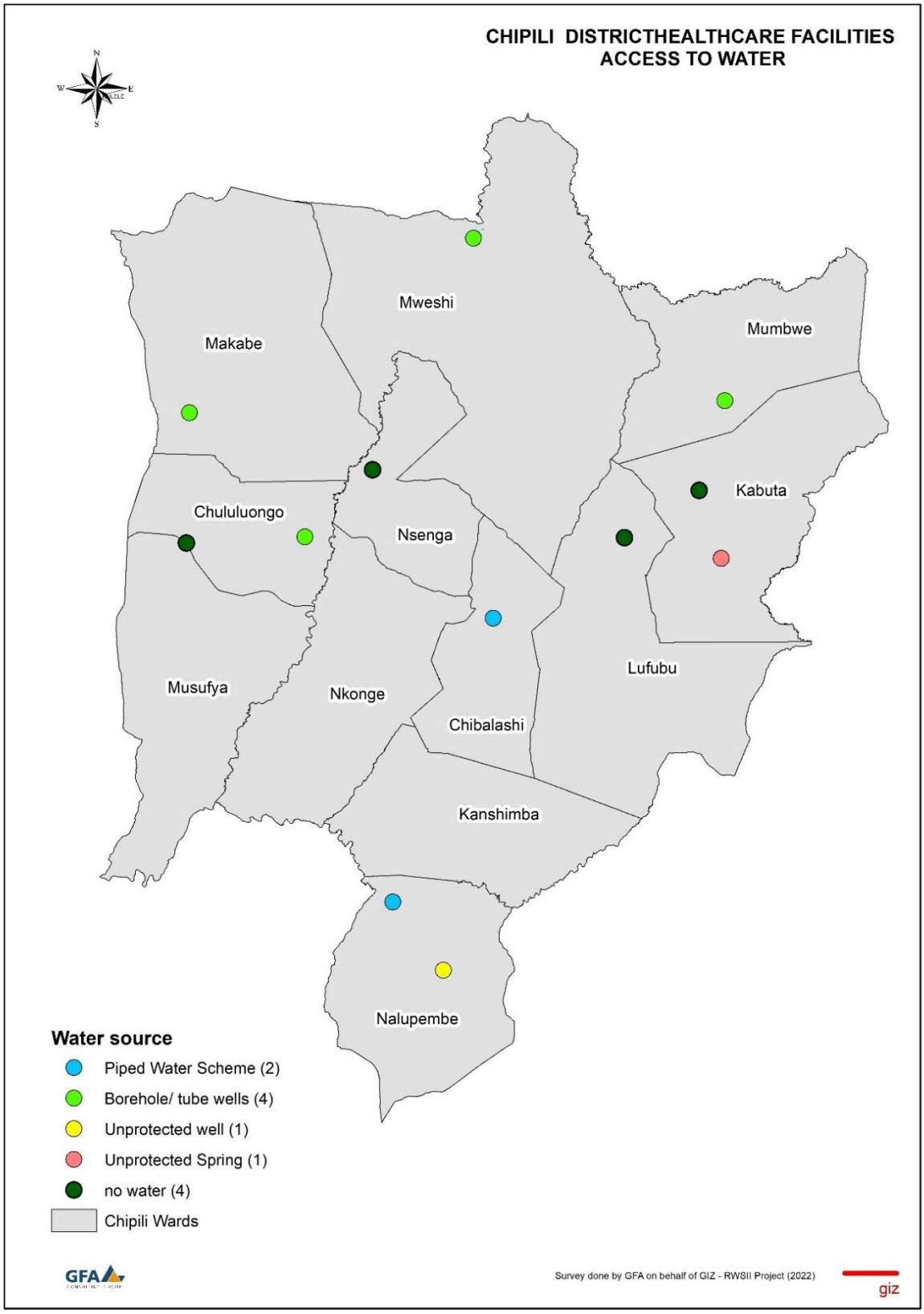
Findings 103 shows JMP indicators at the ward level. Out of the 9 wards that were represented in Chipili District, 3 wards, namely Chibalashi, Makabe and Mumbwe have majority of their HCFs having access to advanced service. 3 other wards, namely Mweshi, Nalupembe and Chululuongo have majority of their HCFs having access to basic service**.** And the last 3 wards namely, Nsenga, Lufubu and Kabuta have majority of their HCFs with no service.



Findings 104: Chipili District - JMP for HCF drinking water services by HCF type

Rural health centres have a mixture of advanced, basic and no drinking water services. Rural health posts have a mixture of advanced and no drinking water service.

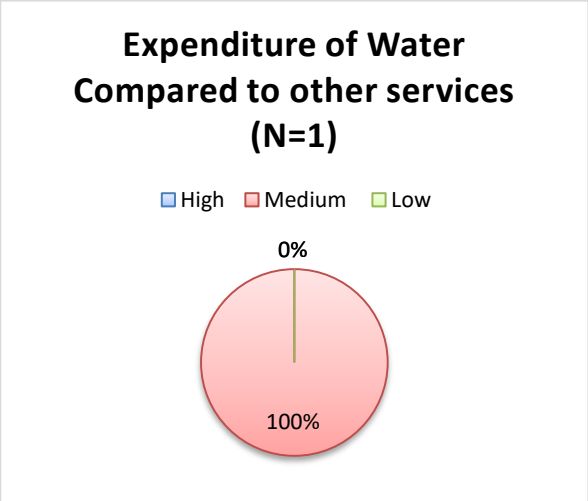
Type of water source



Findings 105: Chipili District HCFs - type of water sources / access

From Findings 105, it can be observed, that in general for the HCFs that have water sources, the main source of water for HCFs was boreholes/tube wells (50%), Piped Water Schemes (25%), Unprotected wells and Unprotected springs/ wells (12.5%).

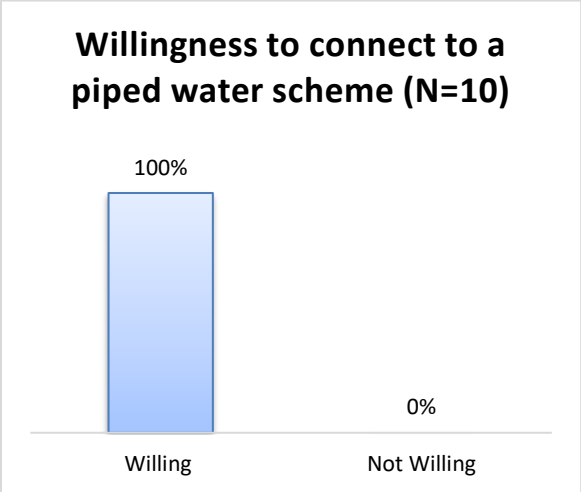
Affordability of the water service



Findings 106: Chipili District HCFs - expenditure of water compared to other services (N=1)

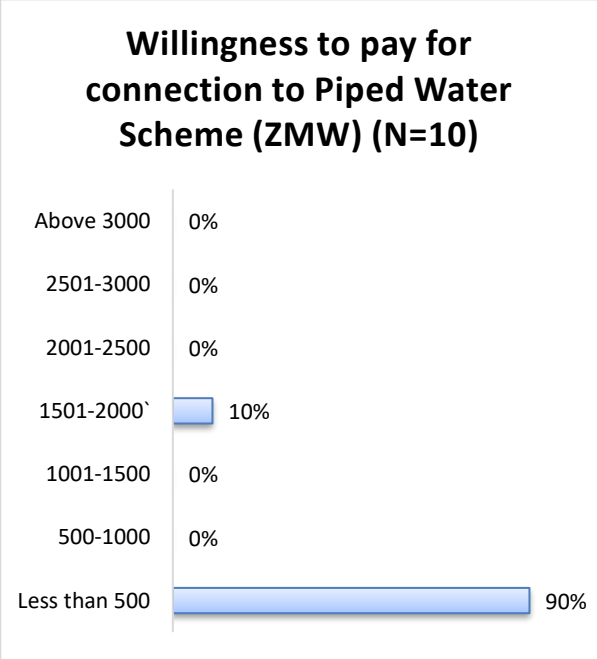
The water services were perceived to be fairly expensive.

Willingness to connect to a piped water scheme



Findings 107: Chipili District HCFs - willingness to connect to a piped water scheme (N=10)

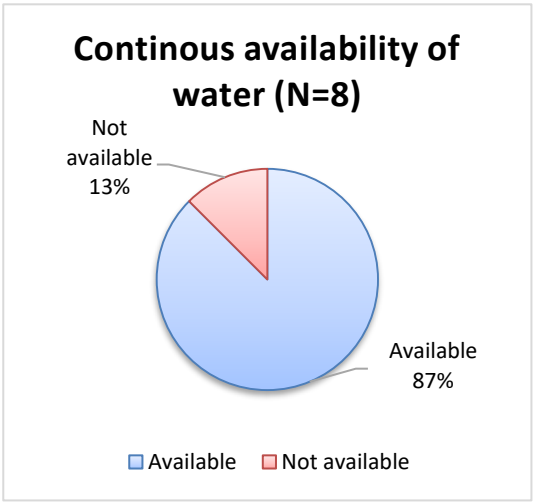
All of the HCFs not connected to a piped water scheme were willing to connect to a piped water scheme.

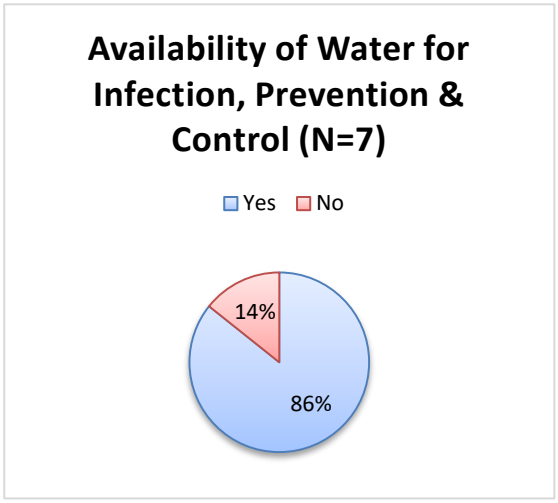


Findings 108: Chipili District HCFs - willingness to pay for connection to a piped water scheme (N=4)

However, majority (90%) of the HCFs are willing to pay less than 500 ZMW or less in connection fees for a piped water scheme.

Water availability

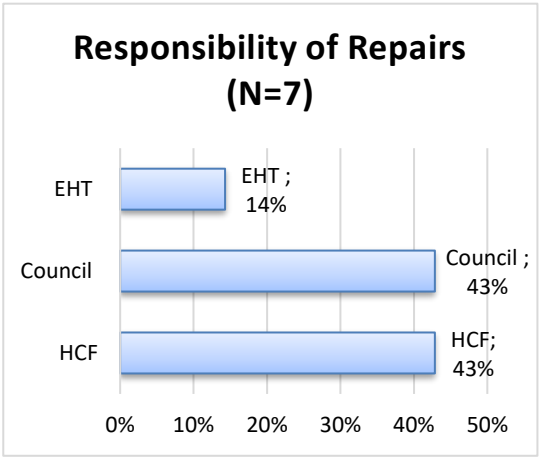




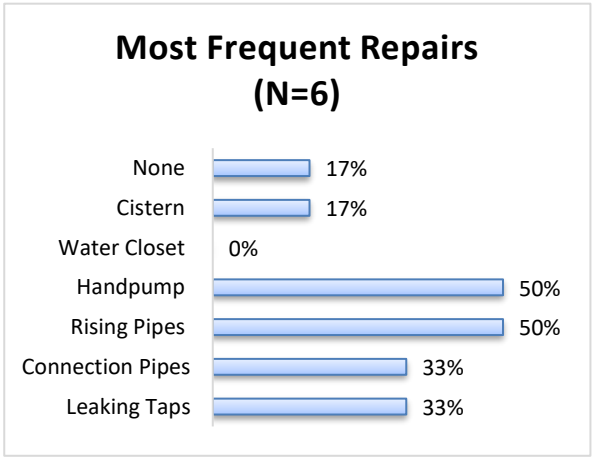
Findings 109: Chipili District - availability of water for HCFs

87% of the HCFs had water continuously available while 86% had water available for Infection, Prevention & Control.

Maintenance of water services



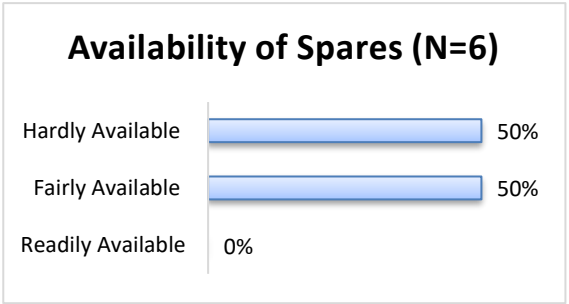
Findings 110: Chipili responsibility for maintenance / repair works of the water source for HCFs (N = 7)



Findings 111: Chipili District HCF water service frequent repairs (N = 6)

The responsibility for conducting maintenance/ repair works is council (43%) and the HCF (43%) that is having access to the water source.

The most frequent repairs are the handpump/ rising pipes (50%), seconded by connection pipes/ leaking taps (33%).

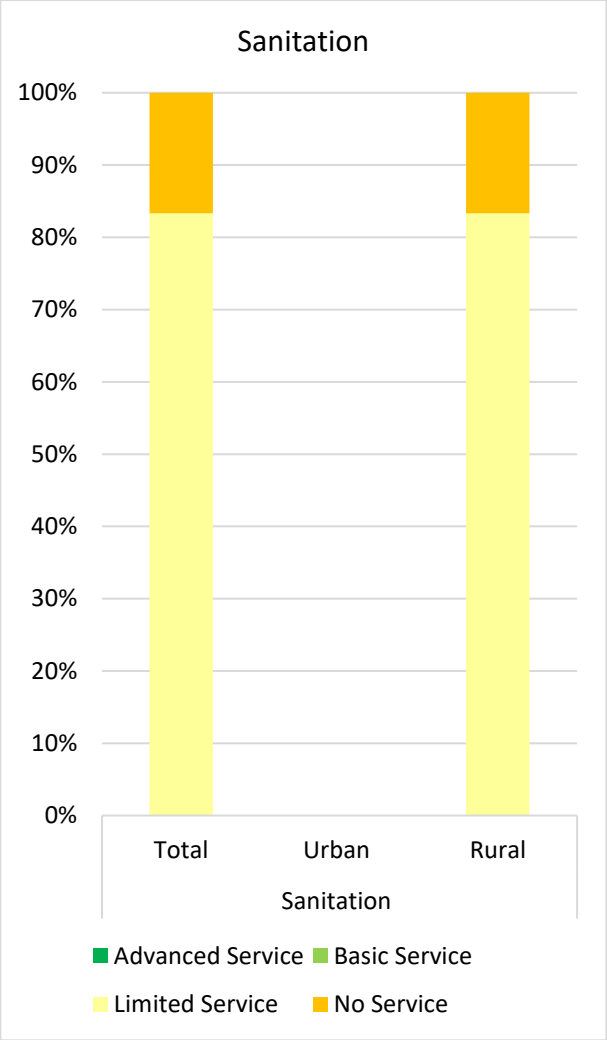


Findings 112: Chipili District HCF availability of spare parts (N = 6)

50% of the HCFs noted that spare parts were fairly or hardly available.

5.3.3 Sanitation Services

Chipili JMP ladder for sanitation services



Findings 113: Chipili HCF JMP ladder for sanitation

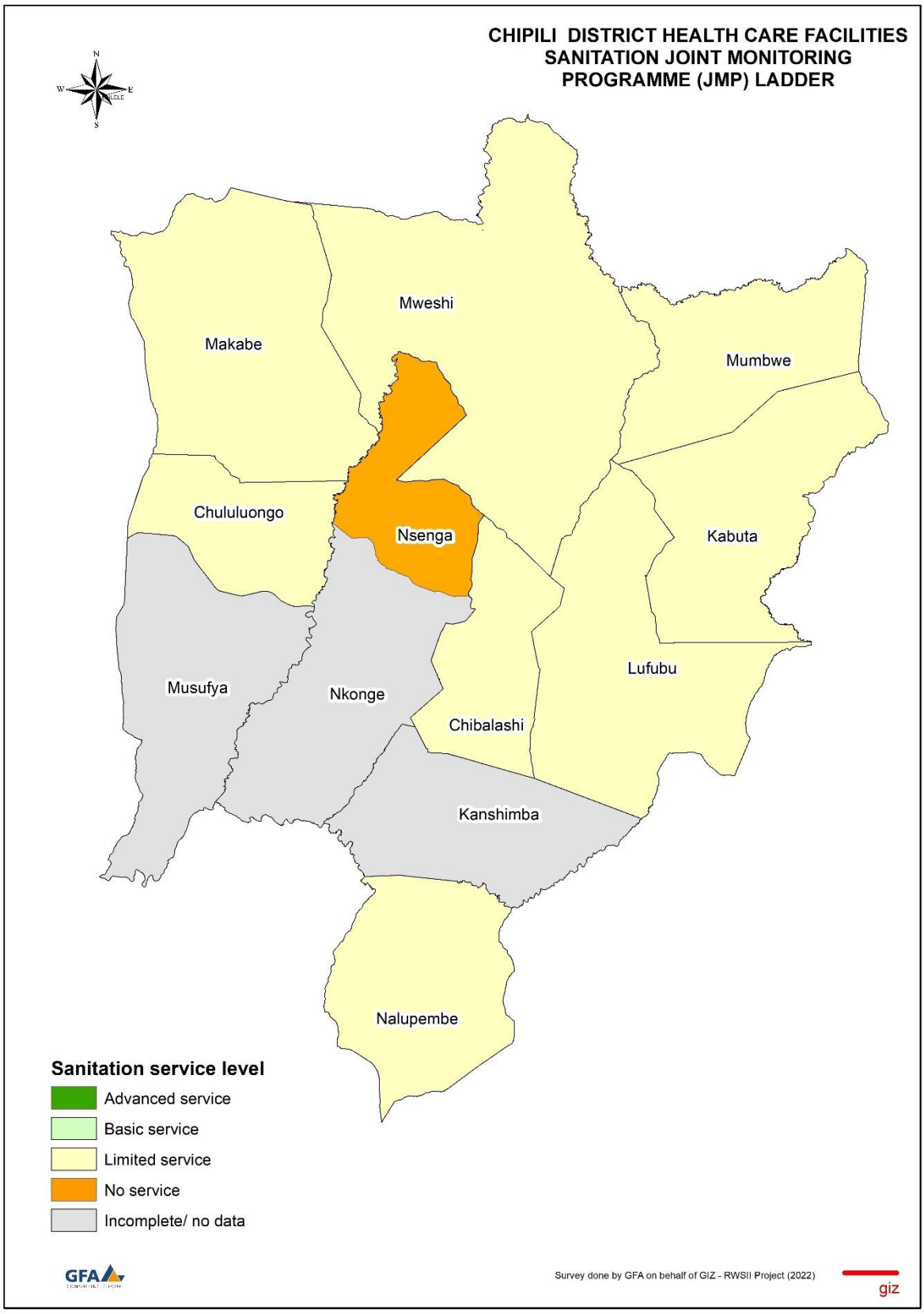
Chipili	Sanitation		
	Total	Urban	Rural
Advanced Service	0.00%	-	0.00%
Basic Service	0.00%	-	0.00%
Limited Service	83.33%	-	83.33%
No Service	16.67%	-	16.67%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of HCFs in Chipili District using advanced services is 0%.

In 2022, out of an estimated 20 HCFs in Chipili District, 20 HCFs lacked advanced services including 0 HCFs with basic services, 17 HCFs with limited services and 3 HCFs with no sanitation services.

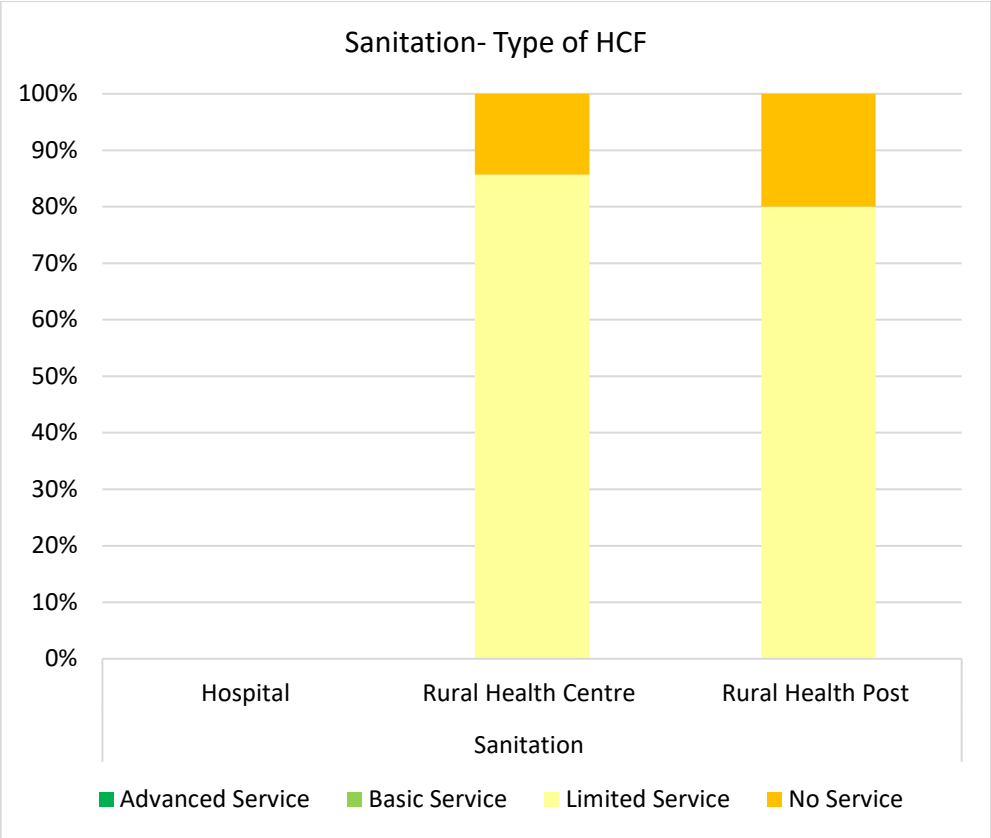
There was no HCF having access to advanced service or no service. Majority of the HCFs in Chipili District have access to limited service because they did not have at least one facility dedicated to staff and did not qualitfy for advanced due to MHM friendly sanitation facilities.

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



Findings 114: Chipili District ward level JMP for HCF sanitation services

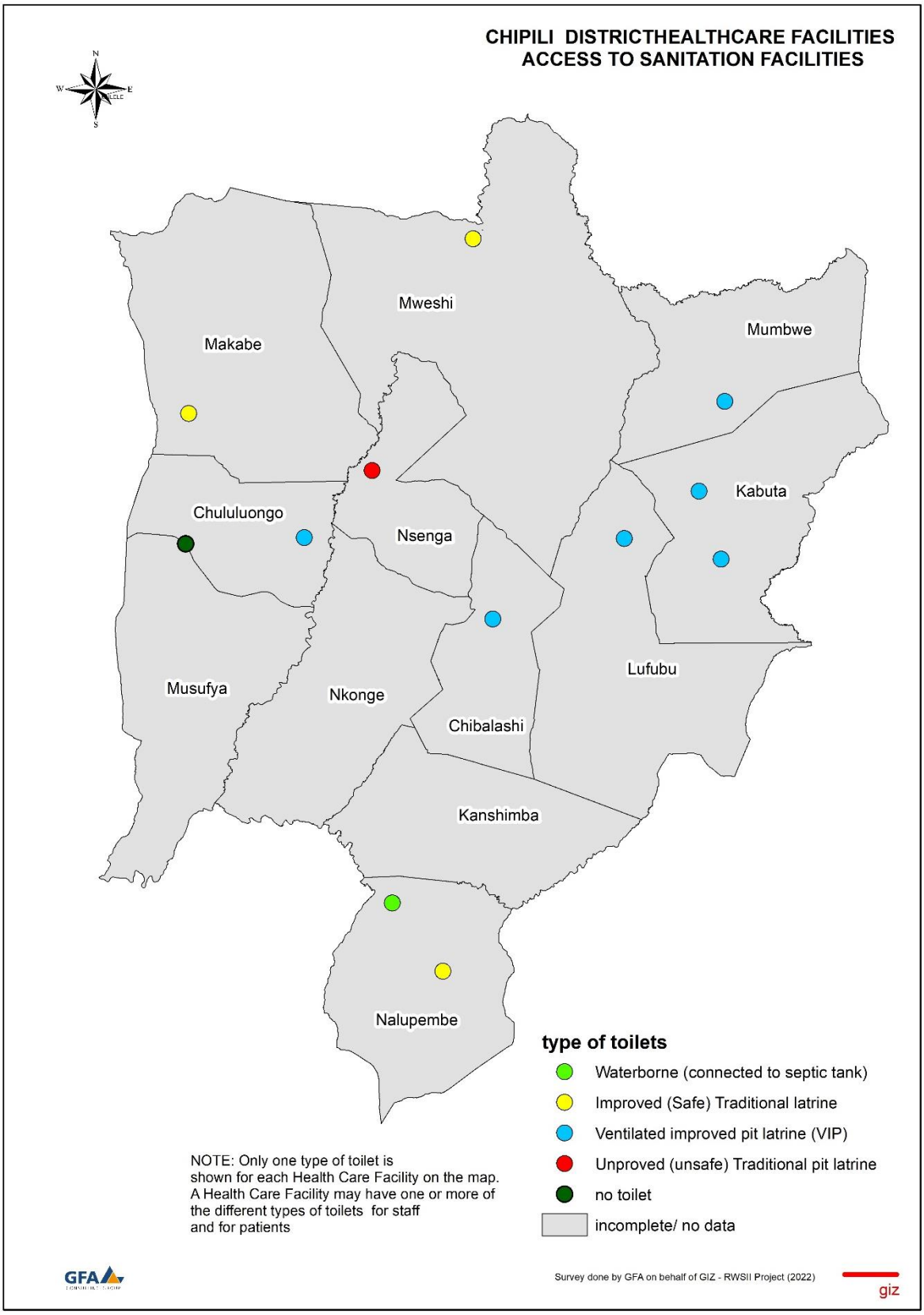
Findings 114 shows JMP indicators at ward level. Out of the 9 wards that were represented in Chipili District, All the wards have majority of HCFs with access to limited service except Nsenga ward whose HCFs have no service.



Findings 115: Chipili District JMP for HCF sanitation services by HCF type

Both the Rural Health Centres and Health posts have a mixture of limited and no sanitation service levels.

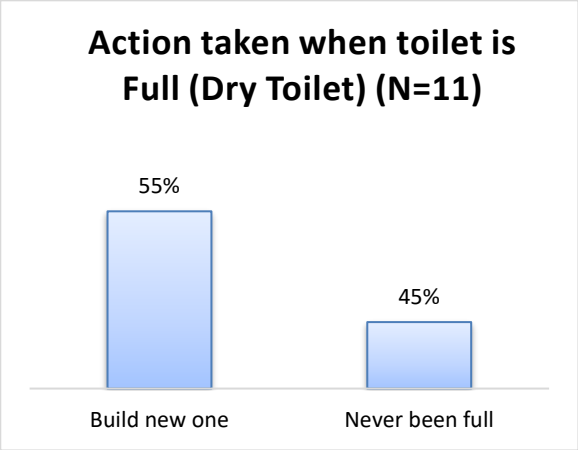
Access to sanitation facilities



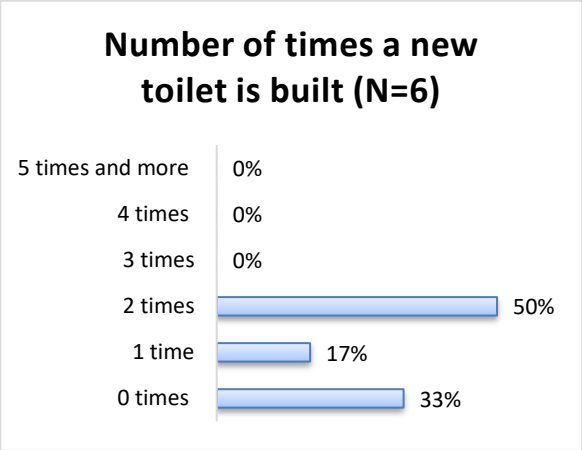
Findings 116: Map of Chipili District HCFs - access to sanitation facilities

From Findings 116 in general, the main type of sanitation for HCFs were ventilated improved pit latrines, seconded by improved safe traditional latrines.

Emptying practices



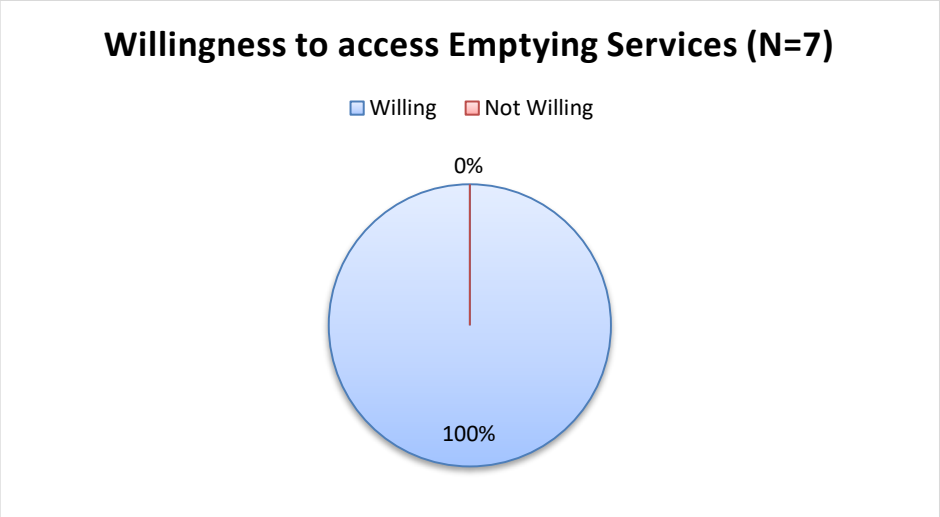
Findings 117: Chipili District HCFs toilet emptying practices (N =11)



Findings 118: Chipili District HCF - number of times a new toilet is built (N=6)

Like the households and schools, HCF toilet emptying practices are mainly building a new one once it is full (55%) while for the other HCFs their toilets haven't been full (45%). This information is cardinal in FSM planning.

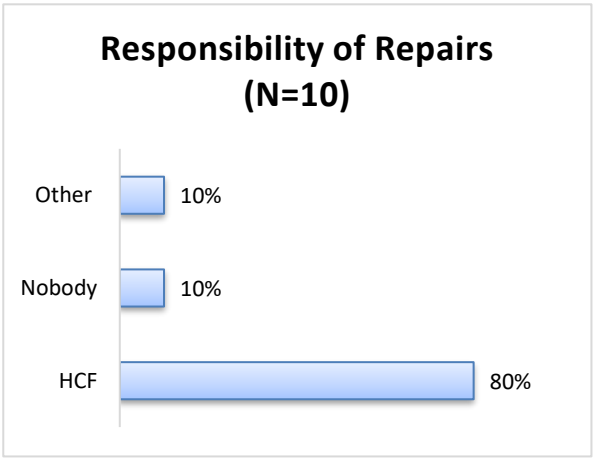
Most of the HCFs which had built a new toilet before, did this two times (50%).



Findings 119: Chipili District HCFs willingness to access emptying services (N=7)

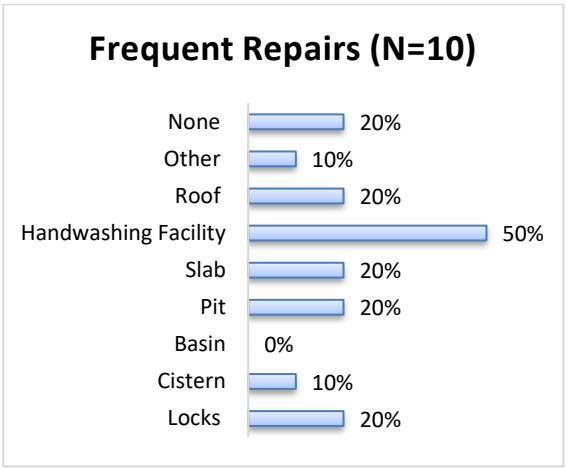
All the HCFs are willing to access emptying services.

Maintenance of sanitation facilities



Findings 120: Chipili District HCFs -responsibility for repair of toilet (N = 10)

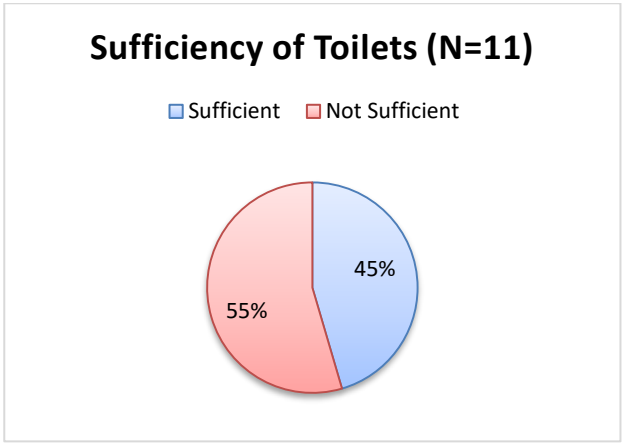
In general, the HCF take responsibility of repairing the toilets (80%).



Findings 121: Chipili District HCFs - frequent repairs on the toilets (N = 10)

The most frequent repairs done are on the handwashing facility (50%)

Sufficiency of toilets

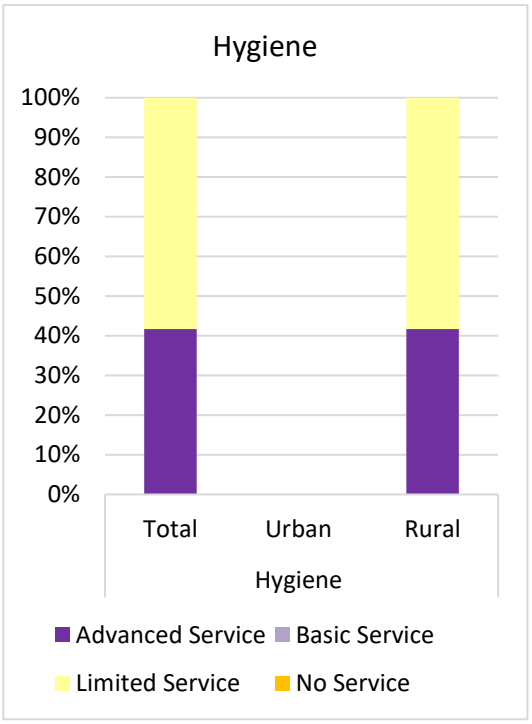


Findings 122: Chipili District HCFs-sufficiency and usability of sanitation facilities (N = 11)

55% of the HCFs in Chipili have insufficient toilets this is because the number of toilets does not match the population and no toilets dedicated for staff.

5.3.4 Hygiene Services

Chipili JMP ladder for hygiene services



Findings 123: Chipili District health care facilities JMP ladder for hygiene services

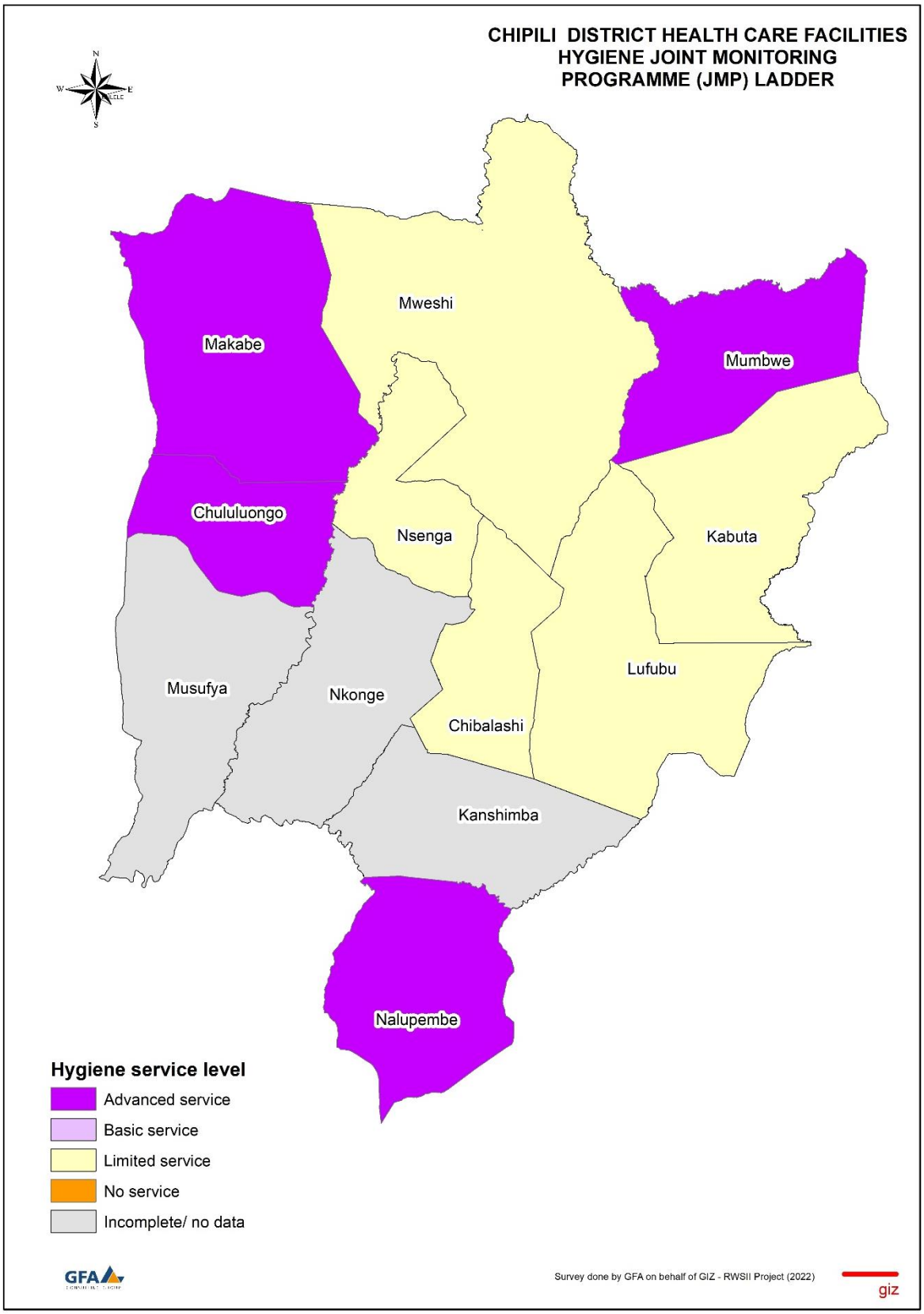
Chipili	Hygiene		
	Total	Urban	Rural
Advanced Service	41.67%	-	41.67%
Basic Service	0.00%	-	0.00%
Limited Service	58.33%	-	58.33%
No Service	0.00%	-	0.00%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of HCFs in Chipili District using advanced service is 41.65%.

In 2022, out of 20 HCFs in Chipili District, 12 HCFs lacked advanced services including 0 with basic services and 12 with limited service. There were no HCFs with no service.

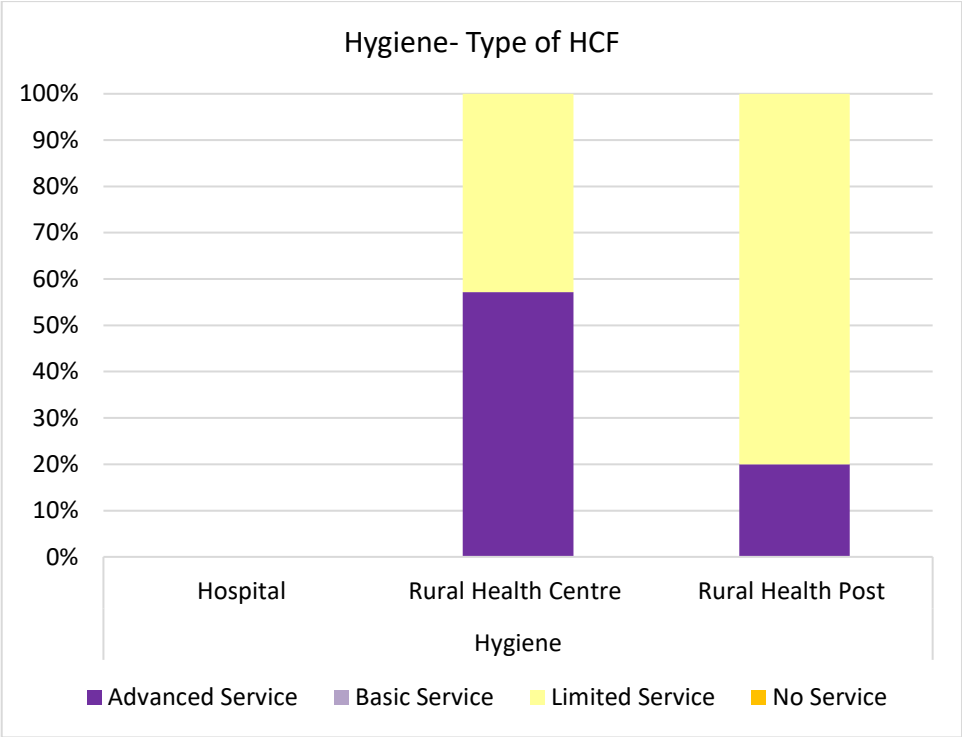
Most of the HCFs had limited service as a result of the handwashing facility being located either at points of care or toilet but not both.

Please refer to Table 9 for the definition and clarifications on some of the hygiene terms.



Findings 124: Chipili District ward level JMP for HCFs hygiene services

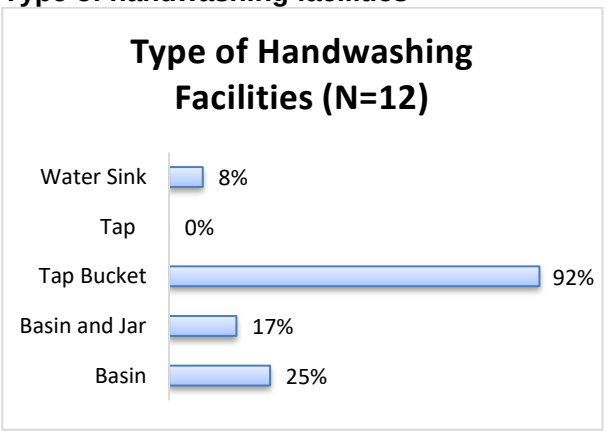
Findings 124 shows JMP indicators at the ward level. Out of the 9 wards that were represented in Chipili District, 4 wards, Nalupembe, Mumbwe, Makabe and Chululuongo have majority of HCFs with access to advanced hygiene services. The rest of the wards have majority of HCFs with access to limited hygiene services.



Findings 125 Chipili District JMP for HCF hygiene services by HCF type

Both rural health centres and posts have a mixture of advanced and limited hygiene services.

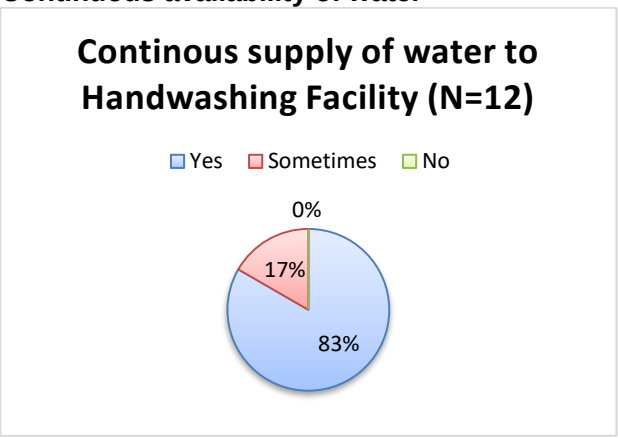
Type of handwashing facilities



Findings 126: Chipili District HCFs-types of handwashing facilities (N = 12)

Majority (92%) of the HCFs use tap bucket.

Continuous availability of water

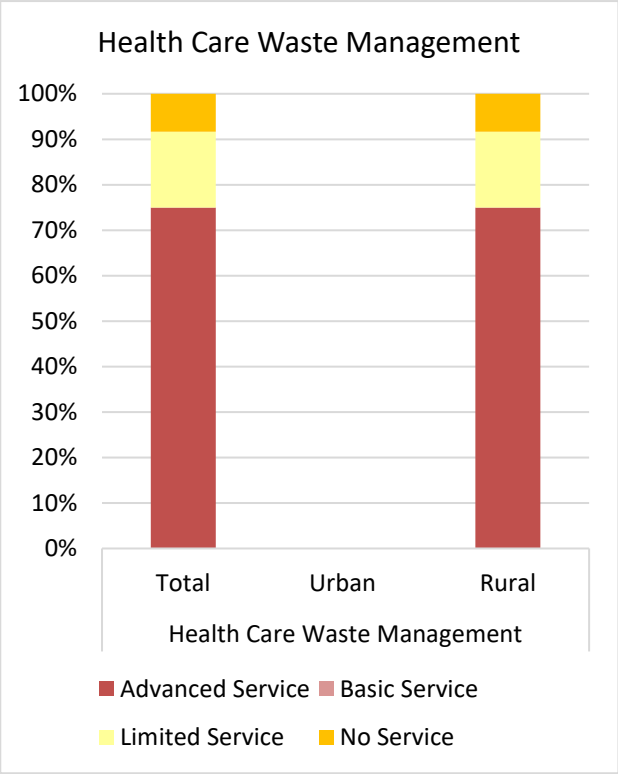


Findings 127: Chipili District HCF handwashing facility supplied with water continually (N = 12)

83% of the HCFs have continuous supply of water to their handwashing facilities while intermittent water supply to the handwashing facilities.

5.3.5 Health Care Waste Management

Chipili JMP ladder for health care waste management services



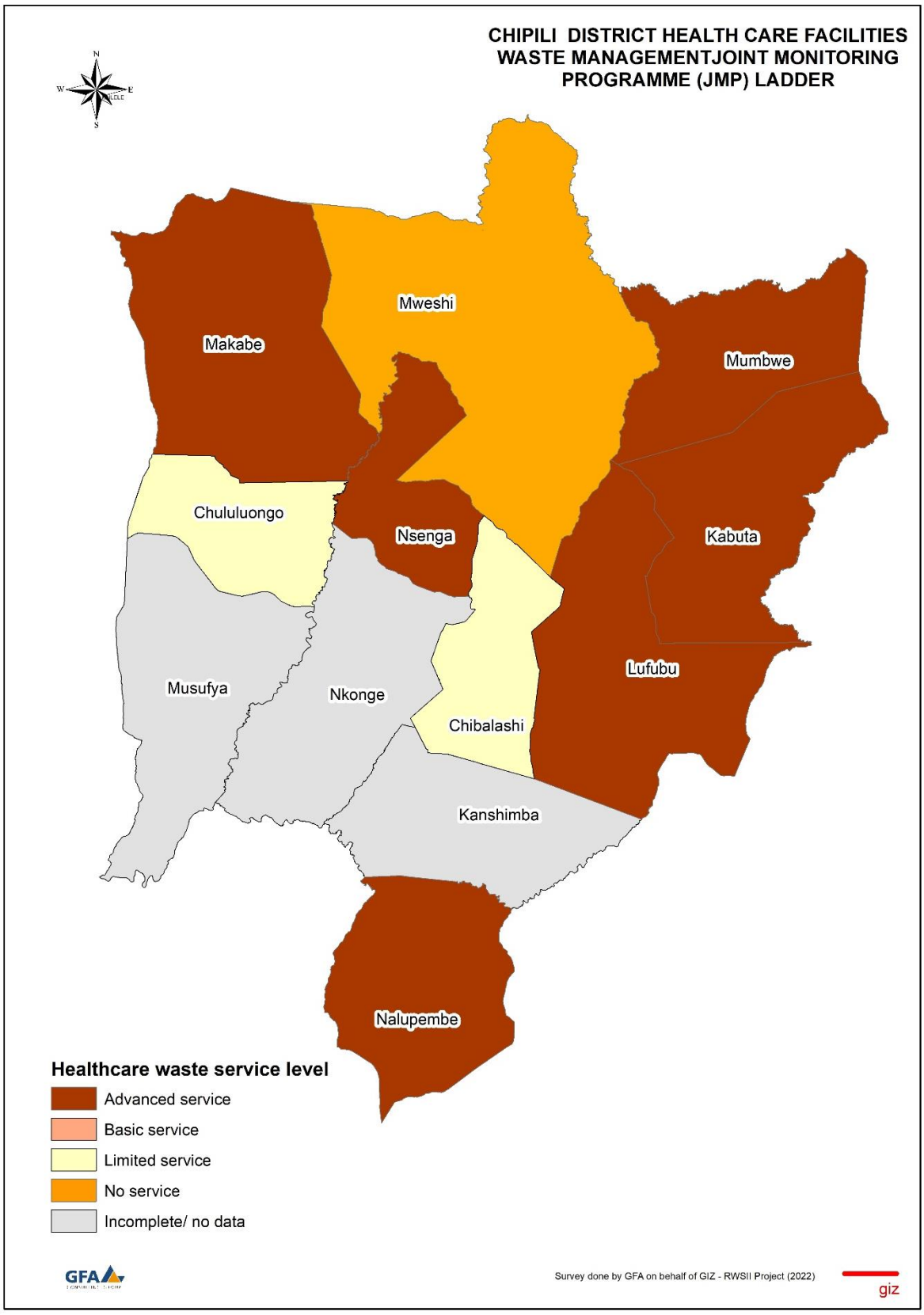
Findings 128: Chipili District JMP ladder for health care waste management services

Chipili	Health Care Waste Management		
	Total	Urban	Rural
Advanced Service	75.00%	-	75.00%
Basic Service	0.00%	-	0.00%
Limited Service	16.67%	-	16.67%
No Service	8.33%	-	8.33%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of HCFs in Chipili District using advanced service is 75%.

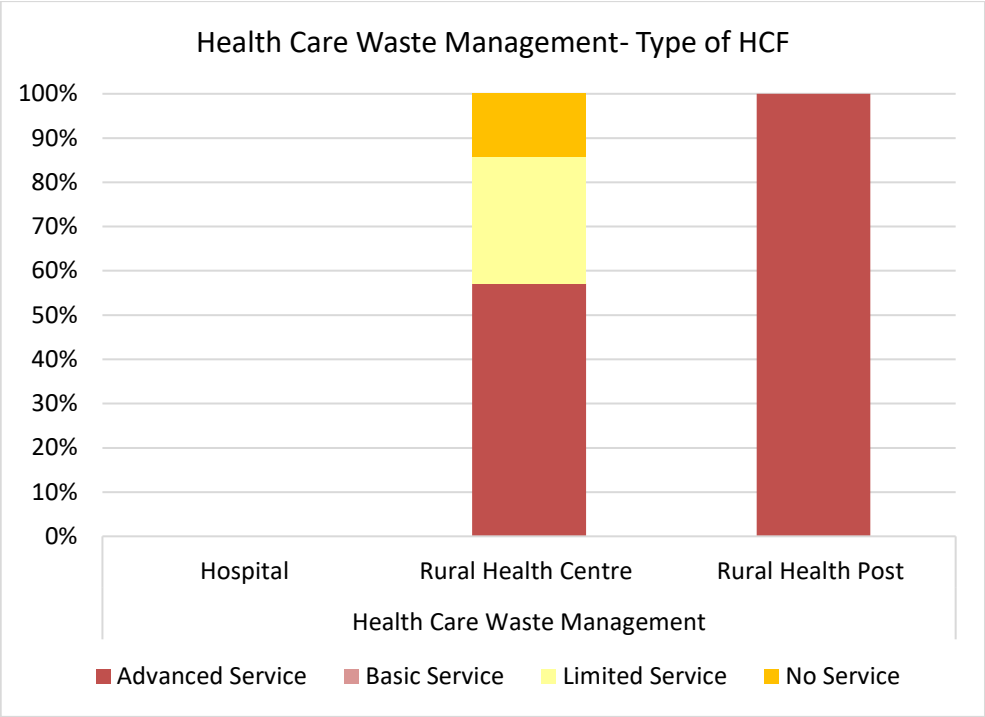
In 2022, out of 20 HCFs in Chipili District, 5 HCFs lacked advanced services including 0 with basic services, 3 with limited service and 2 HCFs without separation bins for sharps or infectious waste and/or the sharp and infectious waste is not treated.

Please refer to Table 11 for the definition and clarifications on some of the health care waste management terms.



Findings 129: Chipili District ward level JMP for HCFs waste management services

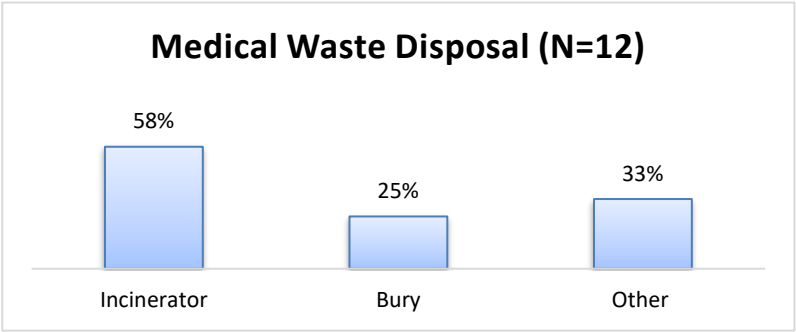
Findings 129 shows JMP indicators at the ward level. Out of the 9 wards that were represented in Chipili District, Majority of the wards (Nalupembe, Lufubu, Kabuta, Mumbwe, Nsenga and Makabe) that have majority HCFs with waste management at advanced level. 1 ward (Mweshi) has no service and the rest of the 2 wards (Chululuongo and Chibalashi) have limited service.



Findings 130: Chipili District JMP for HCF health care waste management services by HCF type

100% of the rural health posts (RHP) have access to advanced service while rural health centres (RHC) has a mixture of service levels (Advanced, Limited and No service).

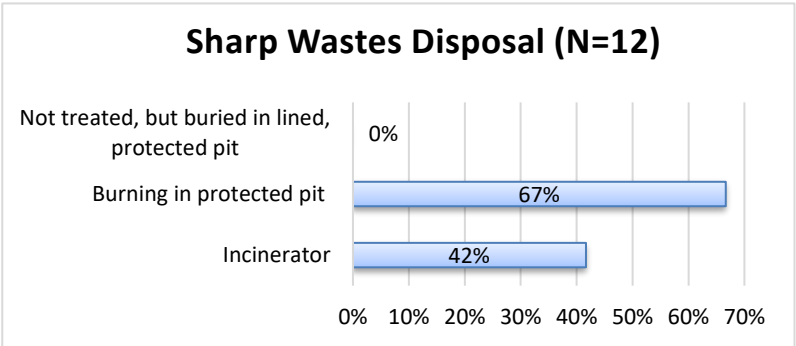
Medical waste disposal



Majority of the HCFs (58%) in Chipili District use the incinerator to dispose of medical waste. While other forms of disposal are also used i.e. pit latrine and other means (transporting to District and burying in pit).

Findings 131: Chipili District HCFs-medical wastes disposal (N = 12)

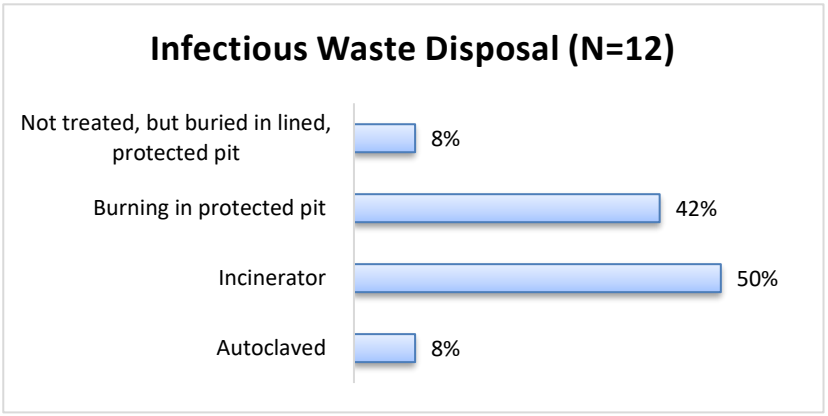
Sharp wastes disposal



Majority of the HCFs (67%) in Chipili District burn sharp wastes in protected pits to dispose of them. While 42% use the incinerator

Findings 132: Chipili District HCFs-sharp wastes disposal (N = 12)

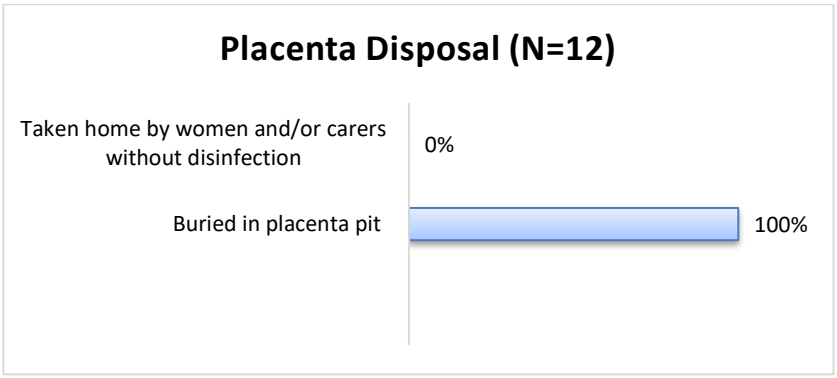
Infectious Waste Disposal



Majority of the HCFs (50%) in Chipili District dispose of infectious waste using the incinerator while 42% by burning in protected pit.

Findings 133: Chipili District HCFs-infectious wastes disposal (N = 12)

Placenta Disposal

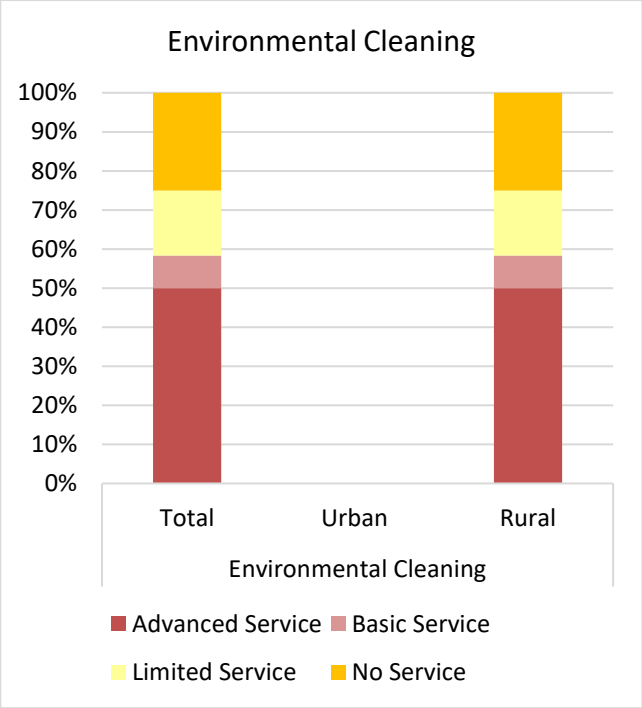


All the HCFs (100%) in Chipili District bury in placenta pit as a disposal method for placentas.

Findings 134: Chipili District HCFs- placenta disposal (N = 12)

5.3.6 Environmental Cleaning

Chipili JMP ladder for environmental cleaning services



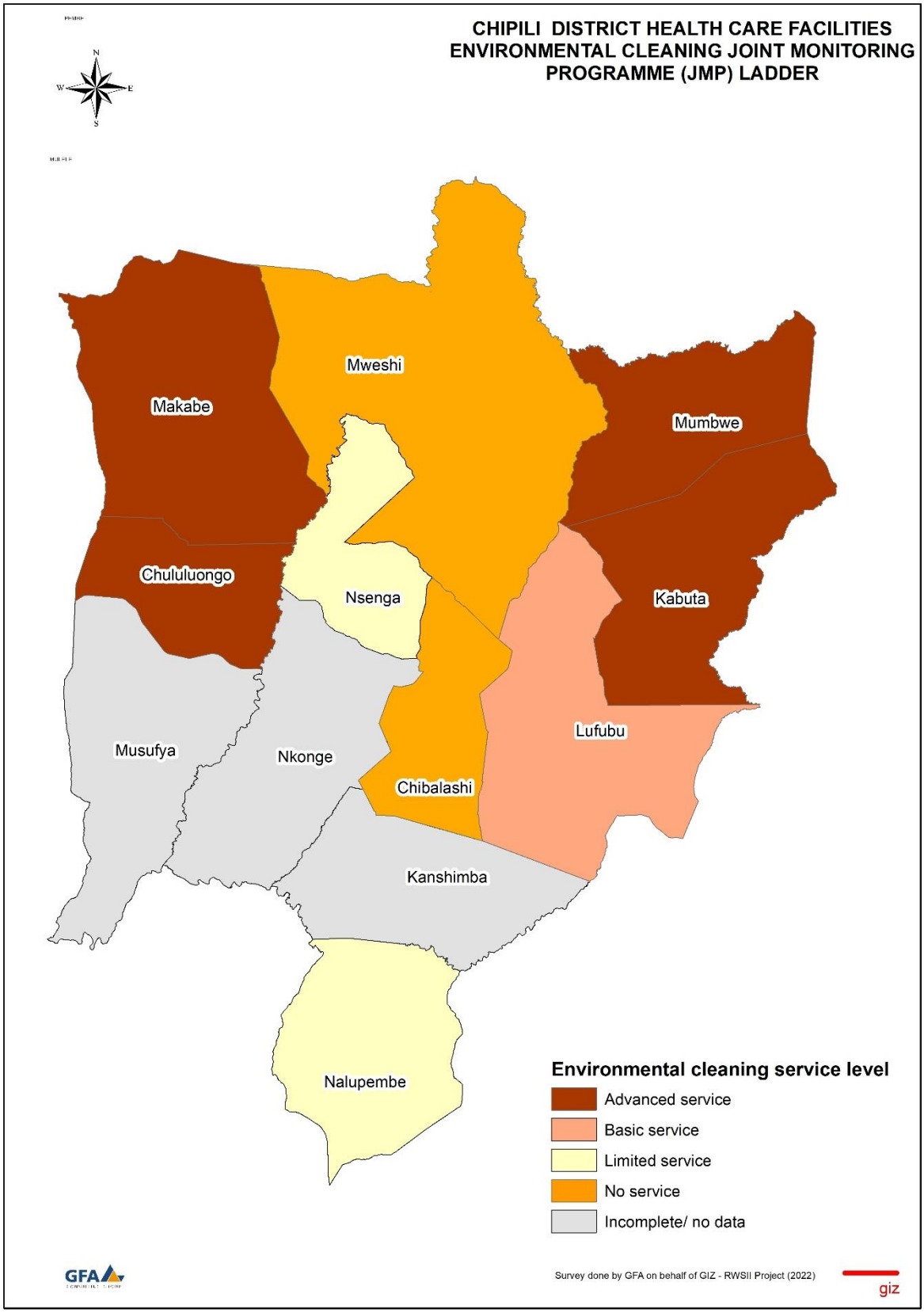
Findings 135: Chipili District JMP ladder for environmental cleaning services

Chipili	Environmental Cleaning		
	Total	Urban	Rural
Advanced Service	50.00%	-	50.00%
Basic Service	8.33%	-	8.33%
Limited Service	16.67%	-	16.67%
No Service	25.00%	-	25.00%
No Data	0.00%	-	0.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of HCFs in Chipili District using advanced service is 12.5%.

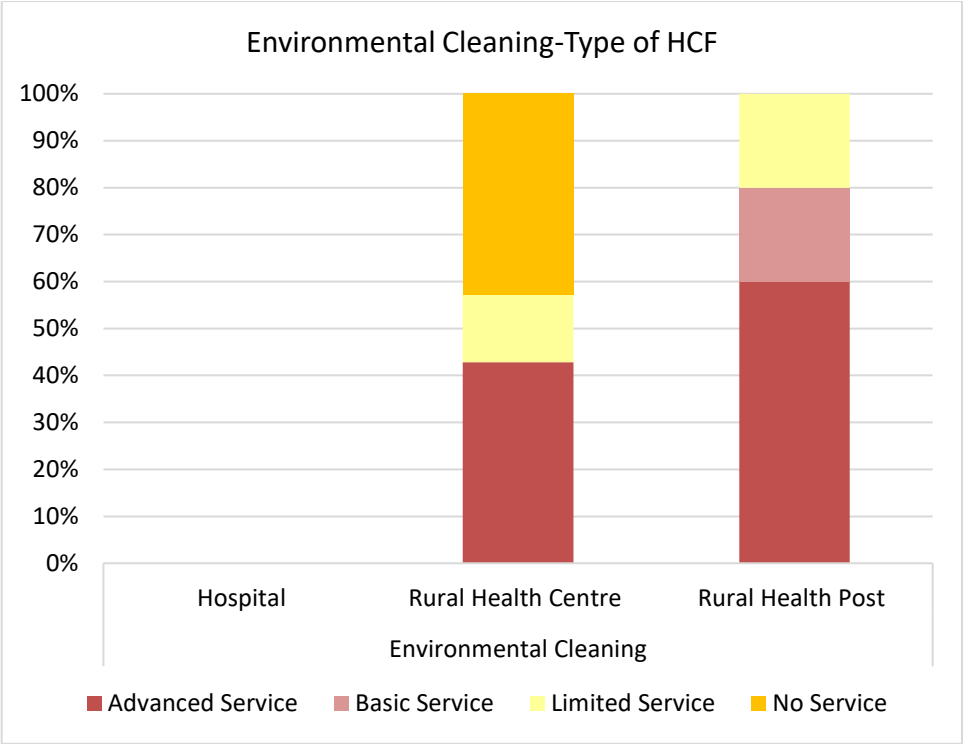
In 2022, out of 20 HCFs in Chipili District, 10 HCFs lacked advanced services including 2 with basic service, 3 with limited service and 5 with no cleaning protocols available and no staff having received training on cleaning.

Please refer to Table 12 for the definition and clarifications on some of the environmental cleaning terms.



Findings 136: Chipili District ward level JMP for HCFs environmental cleaning services

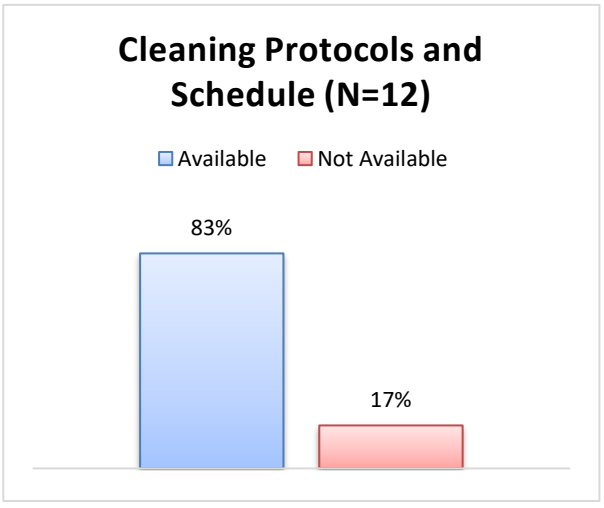
Findings 136 shows JMP indicators at the ward level. Out of the 9 wards that were represented in Chipili District, there were 4 wards (Kabuta, Mumbwe, Makabe and Chululuongo) that have majority of their HCFs with waste management at advanced level.1 ward (Lufubu) has majority with basic service. 2 wards (Nalupembe and Nsenga) have majority of their HCFs having limited service. The rest of the wards (Mweshi and Chibalashi) have HCF that lack access environmental cleaning.



Findings 137: Chipili District JMP for HCF environmental cleaning services by HCF type

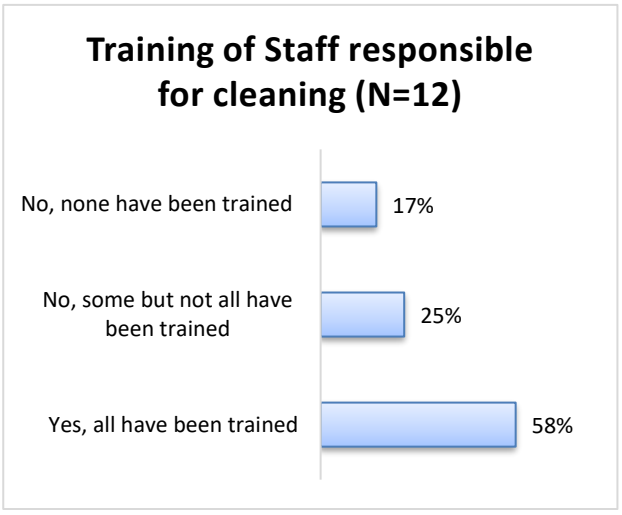
RHCs have a mixture of advanced, limited and no service levels while RHPs have a mixture of services levels of advanced, basic and limited.

Cleaning Protocol



Findings 138: Chipili District HCFs-cleaning protocols (N = 12)

83% of the HCFs have cleaning protocols and schedules available while17% do not.

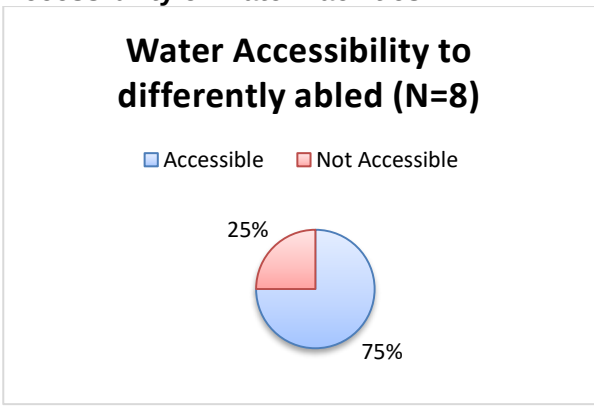


Findings 139: Chipili District HCFs- Training of Staff responsible for cleaning (N=12)

Majority (58%) of the HCFs have all staff responsible for cleaning trained while 25% and 17% of the HCFs have had some staff trained but not all and not trained any of their staff respectively.

5.3.7 Social Inclusion

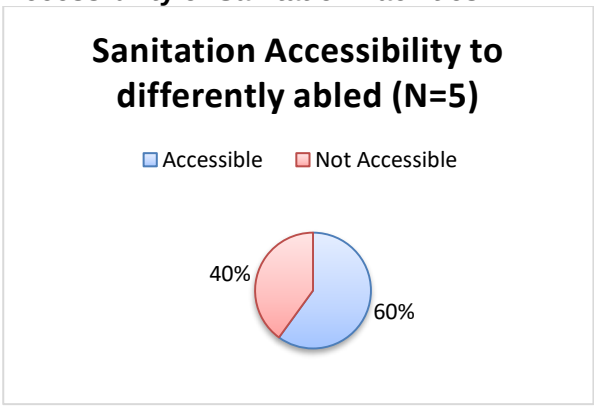
Accessibility of Water Facilities



Findings 140: Chipili District HCFs - water accessible for people with disabilities (N = 8)

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

Accessibility of Sanitation Facilities

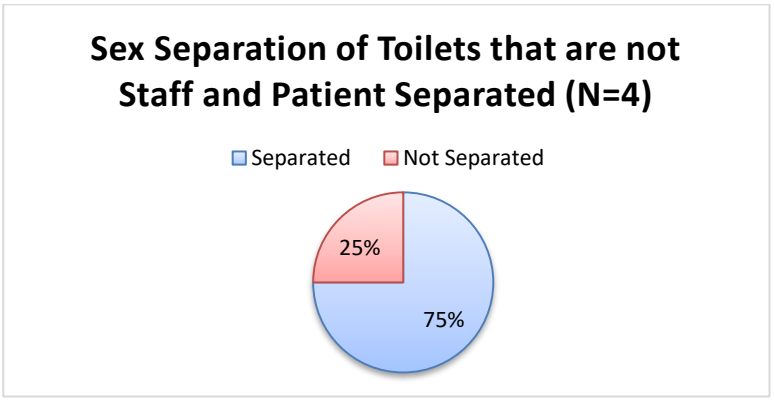


Findings 141: Chipili District HCFs – sanitation facilities accessible for people with disabilities (N = 5)

60% of the sanitation facilities are accessible to differently abled persons.

5.3.8 Gender Sensitivity Data and Information

Sanitation facilities for combined staff and patients



Findings 142: Chipili District HCFs- sex separated toilets for HCFs with combined staff and patients' toilets (N=4)

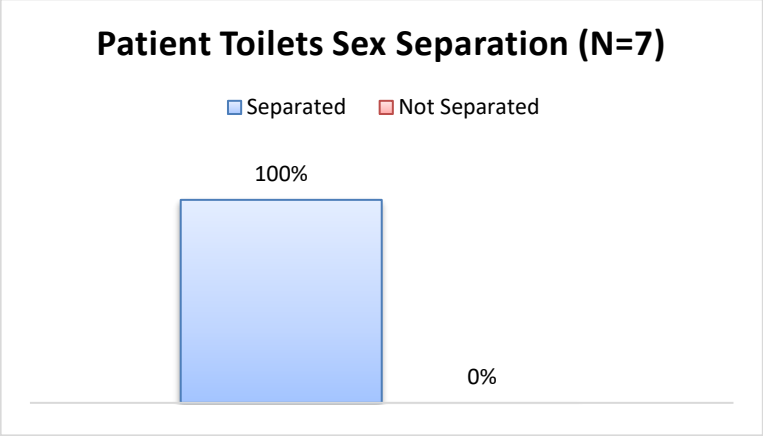
Out of all the HCFs in Chipili District, 36% do not separate the staff and pupil toilets of which 75% of these are sex separated.

Sanitation facilities for staff only

Findings 143: Chipili District HCFs sex separated toilets for HCFs with dedicated staff toilets (N=7)

Out of all the HCFs in Chipili that have toilets dedicated to staff, 100% are sex separated.

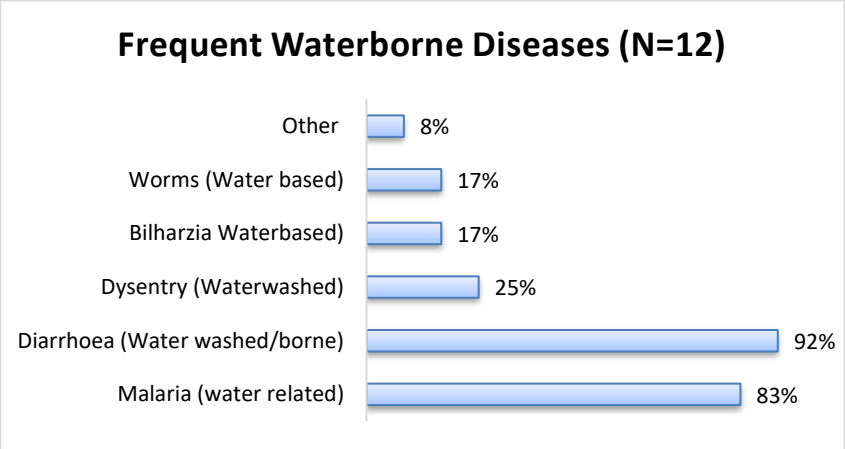
Sanitation facilities for patients



Out of all the HCFs in Chipili that have toilets dedicated to patients, 100% are sex separated.

Findings 144: Chipili District HCFs sex separated toilets for HCFs with dedicated patient toilets (N=7)

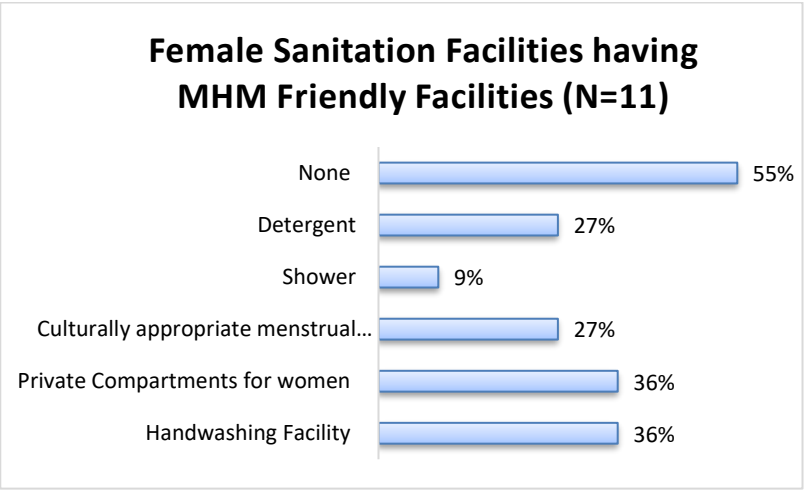
5.3.9 Waterborne Diseases



The most frequent cases attended to at the HCFs are diarrhoea (92%) and malaria (83%).

Findings 145: Chipili District HCF - most frequent water borne disease in the health care facility (N = 12)

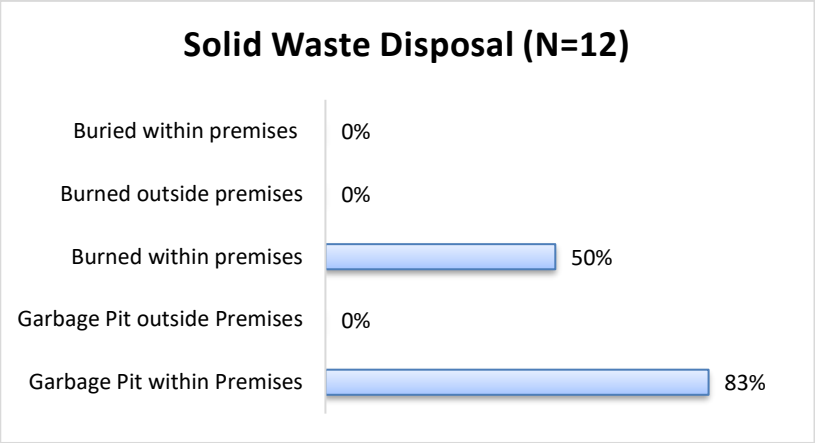
5.3.10 Menstrual Hygiene Management



Majority of the HCFs with sanitation facilities lack the MHM friendly sanitation indicators 55% while those that have, majority have handwashing facilities and private compartments for women (36%).

Findings 146: Chipili District HCF - Female sanitation facilities MHM friendly (N = 7)

5.3.11 Solid Waste Management



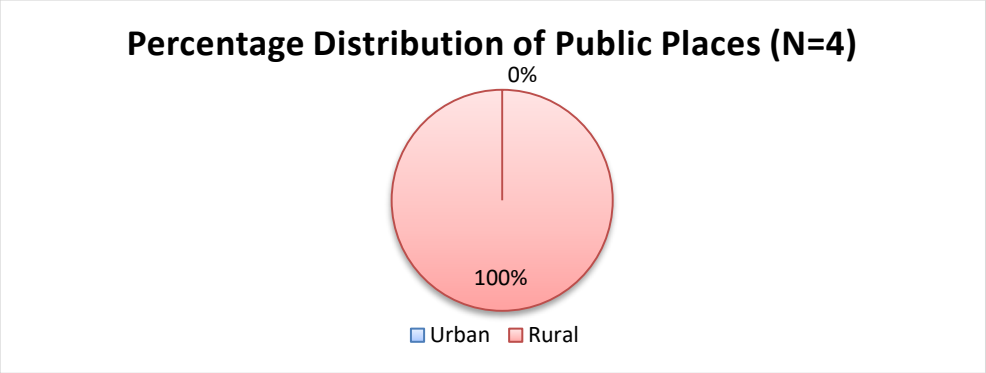
Majority of the HCFs use garbage pits within the premises to dispose of Solid waste.

Findings 147: Chipili District HCFs Solid Waste Disposal (N = 12)

5.4 Public Places

5.4.1 Overview of Public Places & Electricity Connectivity

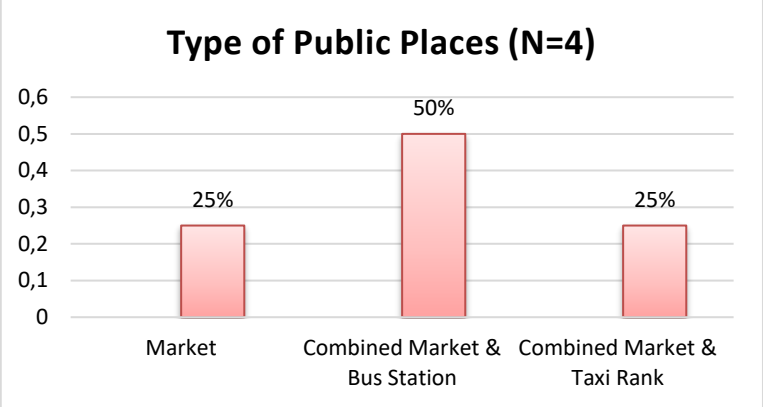
Average distribution of public places in Chipili



Findings 148: Chipili District distribution of public places (N = 4)

All public places interviewed were in the rural areas. This represents the distribution of public places in Chipili.

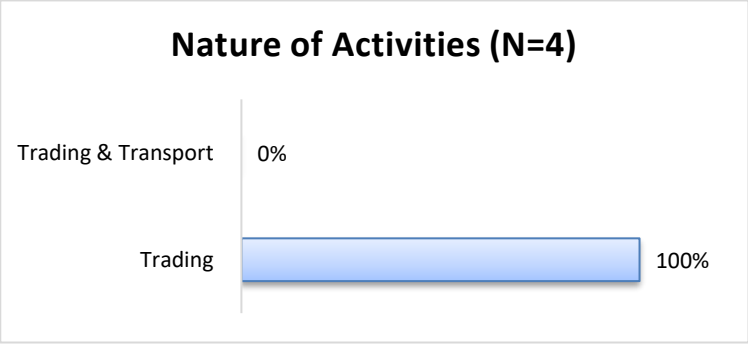
Types of public places



Findings 149: Chipili District - types of public places (N = 4)

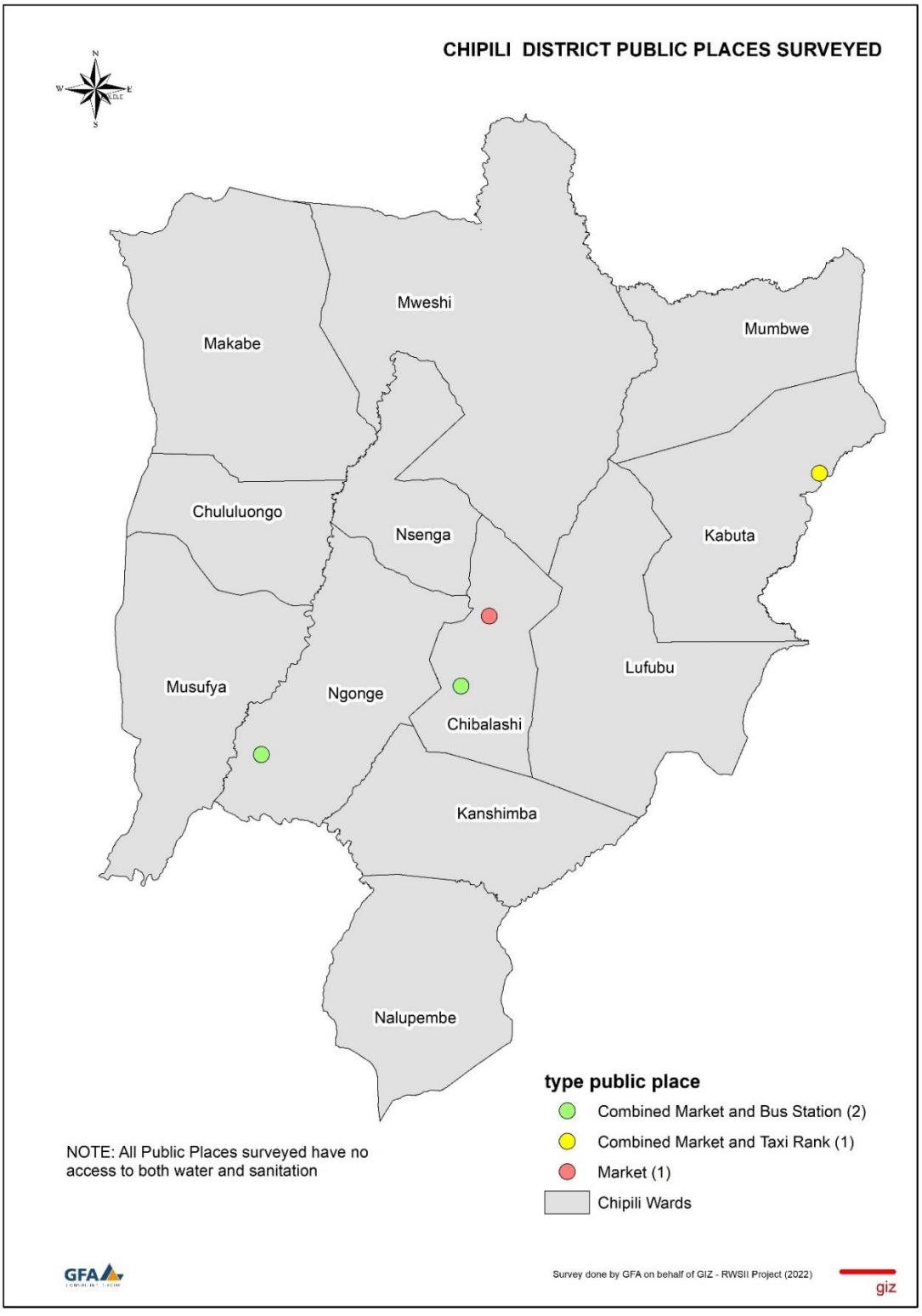
Majority of the public places in Chipili District are combined markets & bus station (50%).

Nature of activities



Findings 150: Chipili District - public places nature of activities (N = 4)

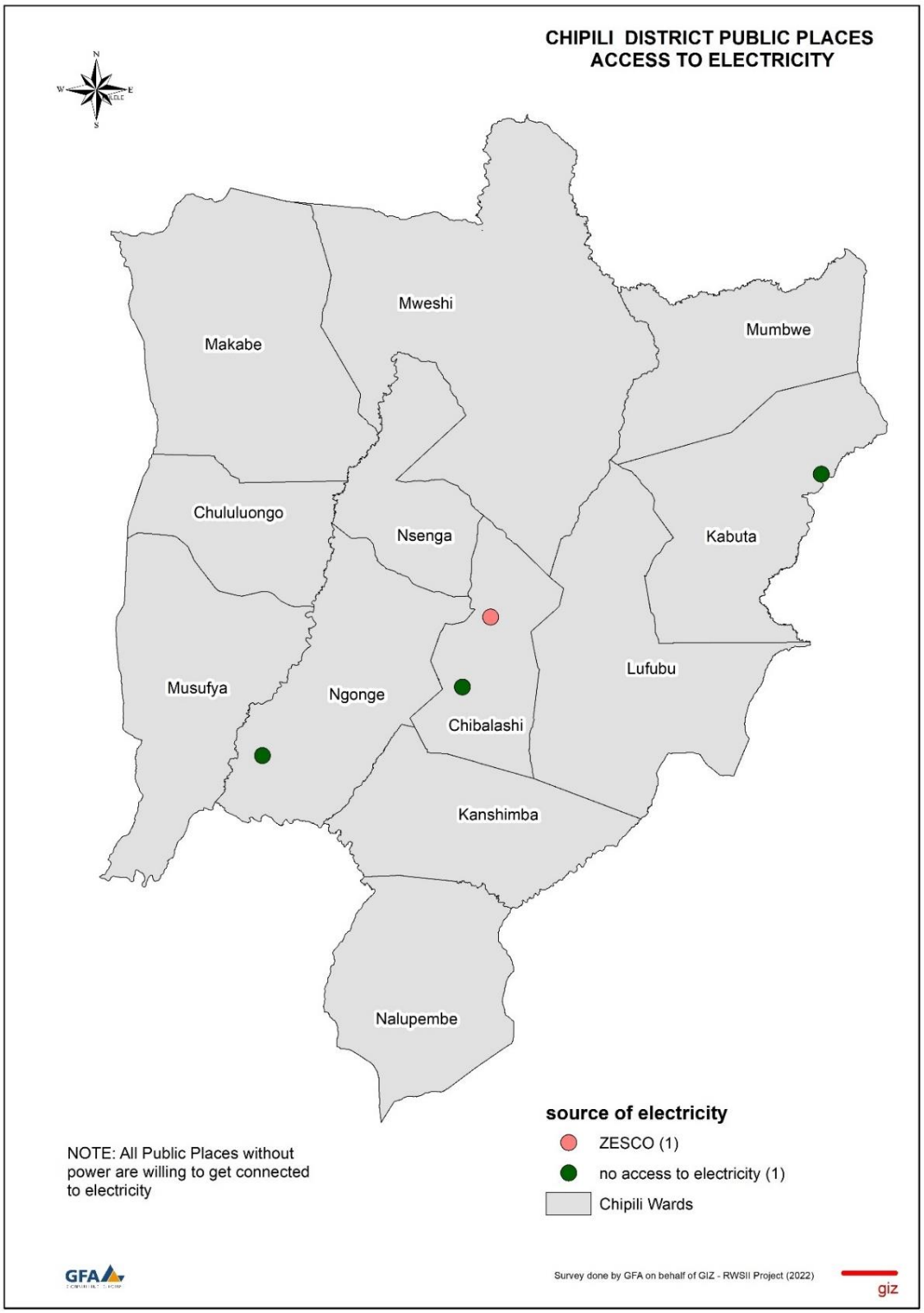
The nature of activities of the public places in Chipili is trading.



Findings 151: Chipili District public places

The public places that were covered in the survey included 1 market, 2 combined market and bus station and 1 combined market and taxi rank. The public places where in Kabuta, Nkonge and Chibalashi wards.

Connection to electricity

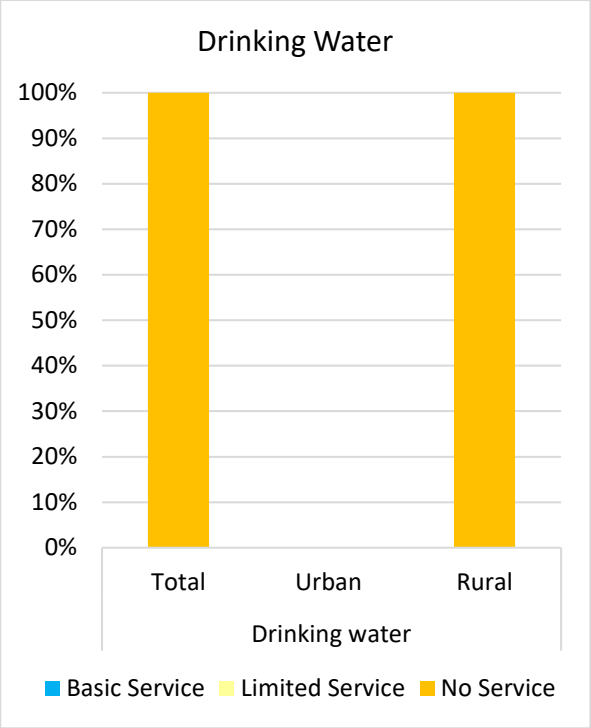


Findings 152: Chipili District - electricity connection of public places (N = 4)

Only 1 out of the 4 public places surveyed has access to electricity. All of those that are not connected are willing to connect to electricity.

5.4.2 Water Supply Services

Chipili JMP ladder for drinking water services



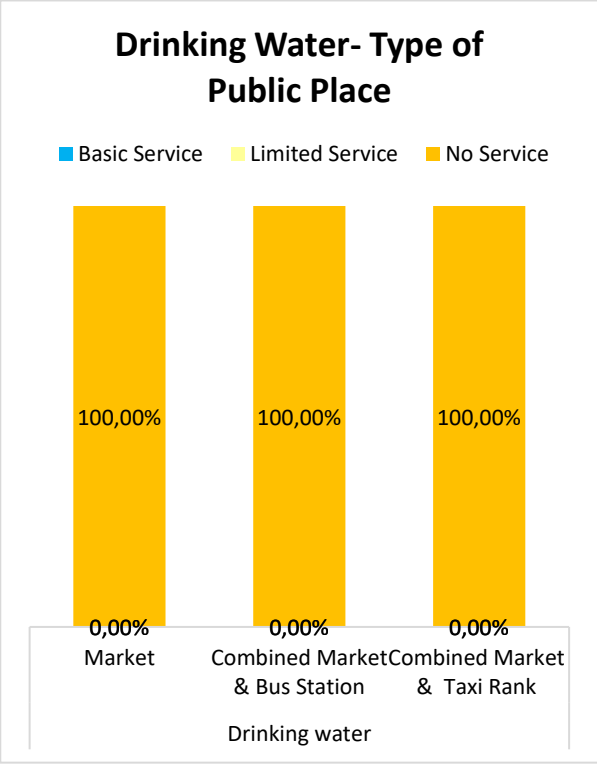
Findings 153: Chipili District ward level JMP for public places drinking water services

Chipili	Drinking water		
	Total	Urban	Rural
Basic Service	0.00%	-	0.00%
Limited Service	0.00%	-	0.00%
No Service	100.00%	-	100.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of public places in Chipili District using basic services is 0%

In 2022, out of the 4 public places in Chipili District, All public places lacked basic services by either having no source or having access to an unimproved water source.

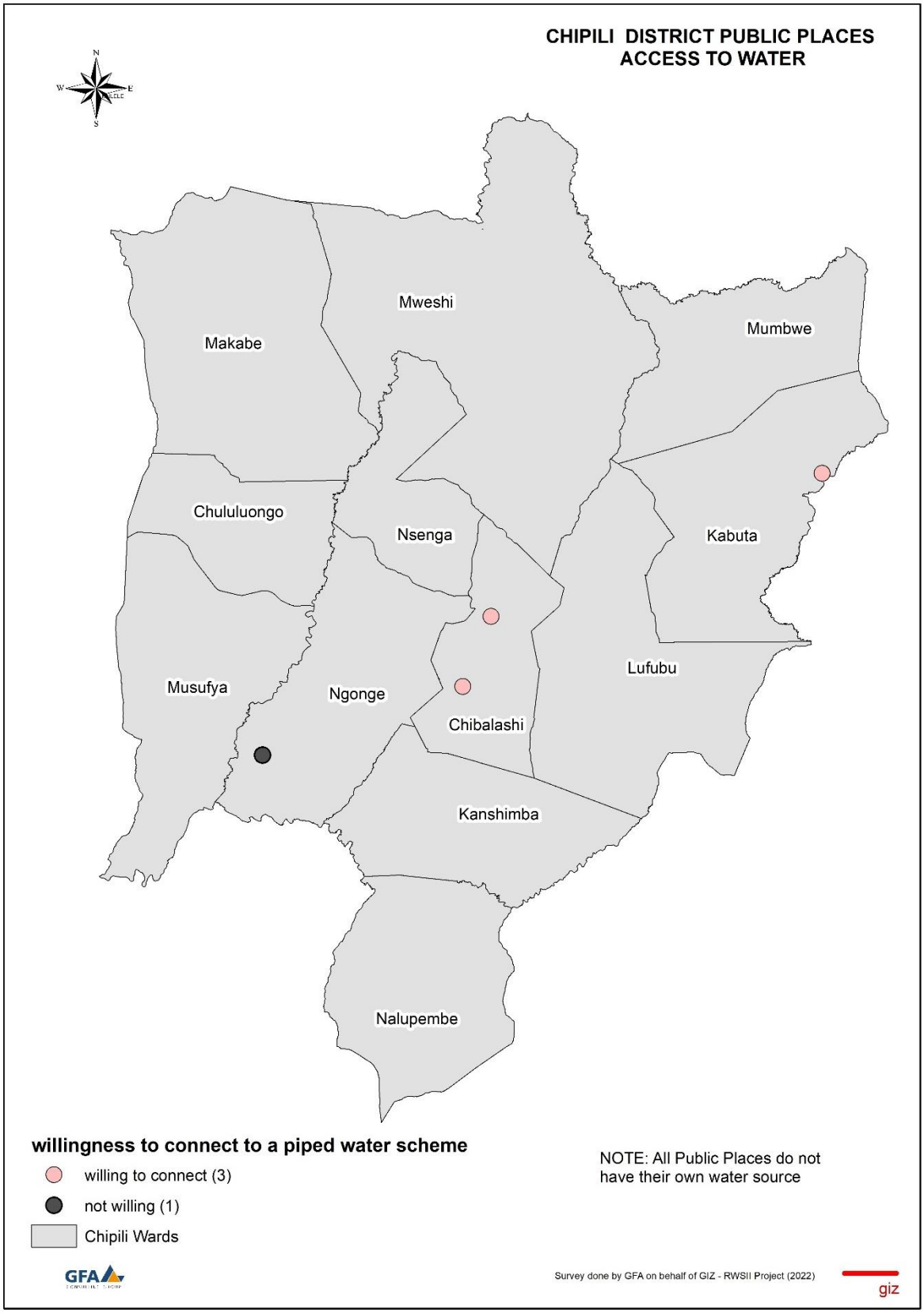
Please refer to Table 13 for the definition and clarifications on some of the drinking water terms.



Findings 154: Chipili District JMP for public places drinking water services by public places type

All the public places lack access to drinking water services.

Access to water

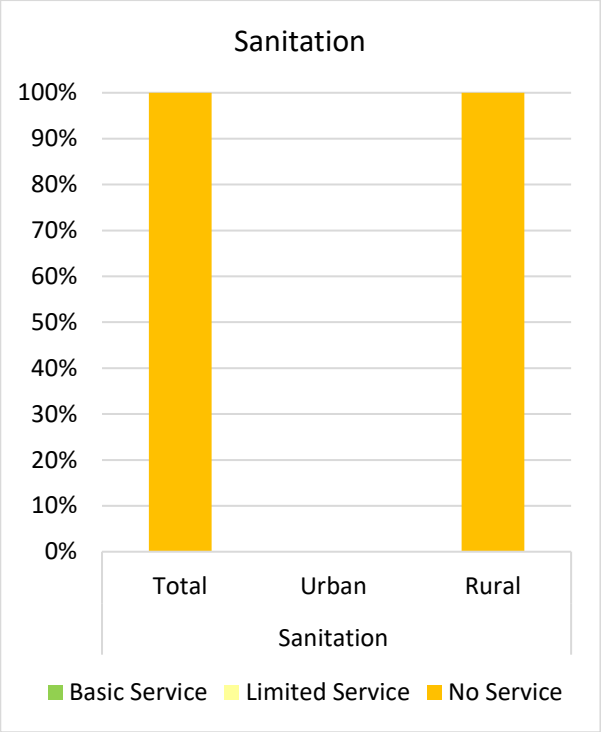


Findings 155: Chipili District – Access to water

All the public places surveyed don't have access to water and are willing to connect to piped water scheme except for 1 public place which is not willing to connect.

5.4.3 Sanitation Services

Chipili JMP ladder for sanitation services



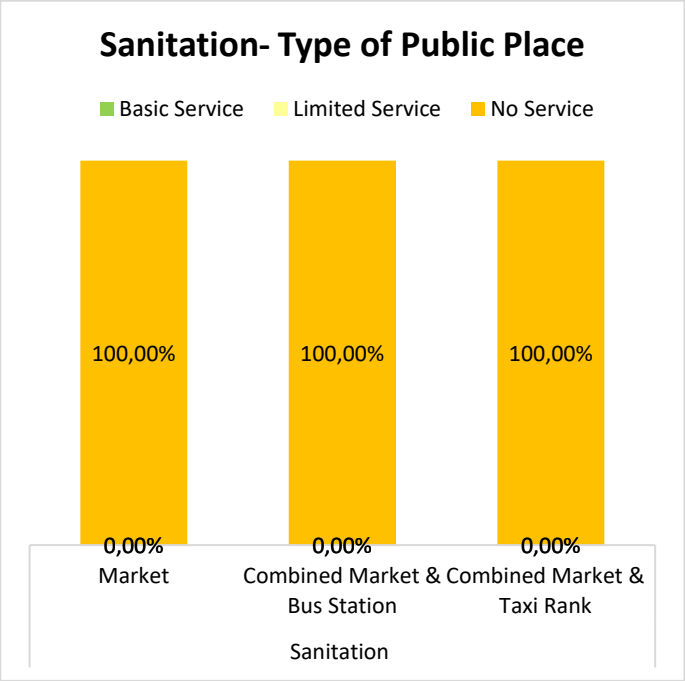
Findings 155: Chipili public places JMP ladder for sanitation

Chipili	Sanitation		
	Total	Urban	Rural
Basic Service	0.00%	-	0.00%
Limited Service	0.00%	-	0.00%
No Service	100.00%	-	100.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of public places in Chipili District using basic services is 0%

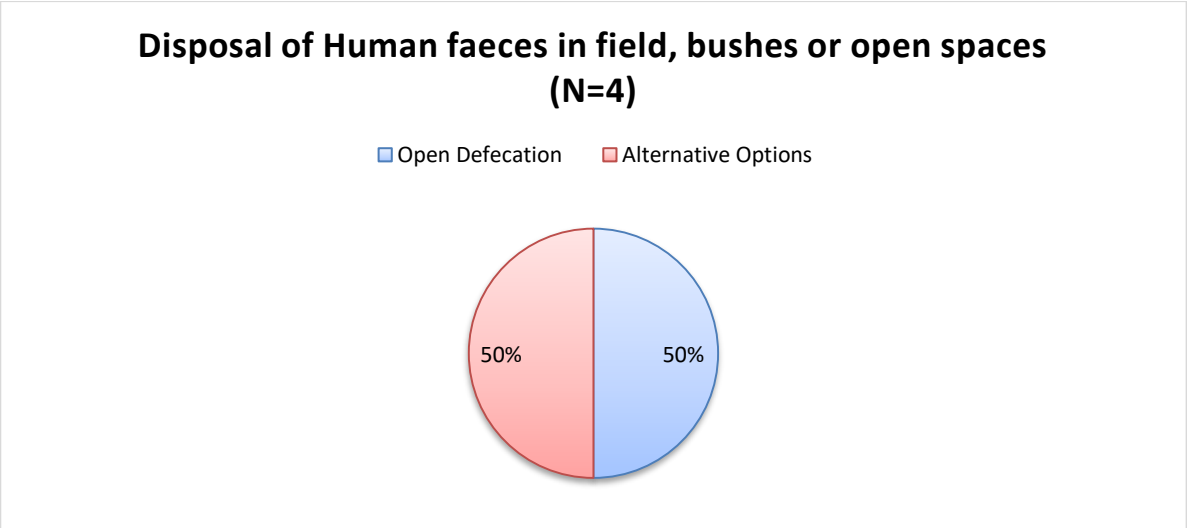
In 2022, out of the of 4 public places in Chipili District, All public places lacked basic services.

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



Findings 156: Chipili District JMP for public places sanitation services by public place type

All public places had no access to sanitation services.

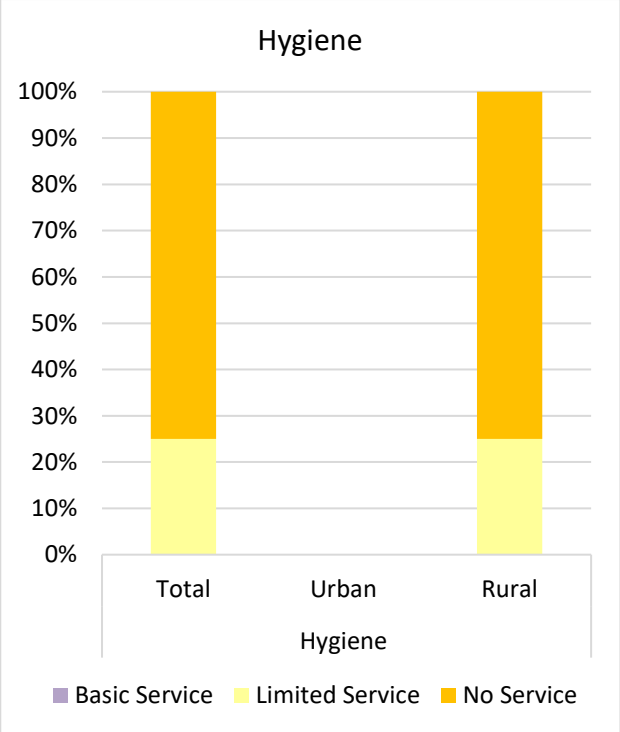


Findings 157: Chipili District open defecation in public places (N = 4)

50% of the public places still practice open defecation.

5.4.4 Hygiene Services

Chipili JMP ladder for hygiene services



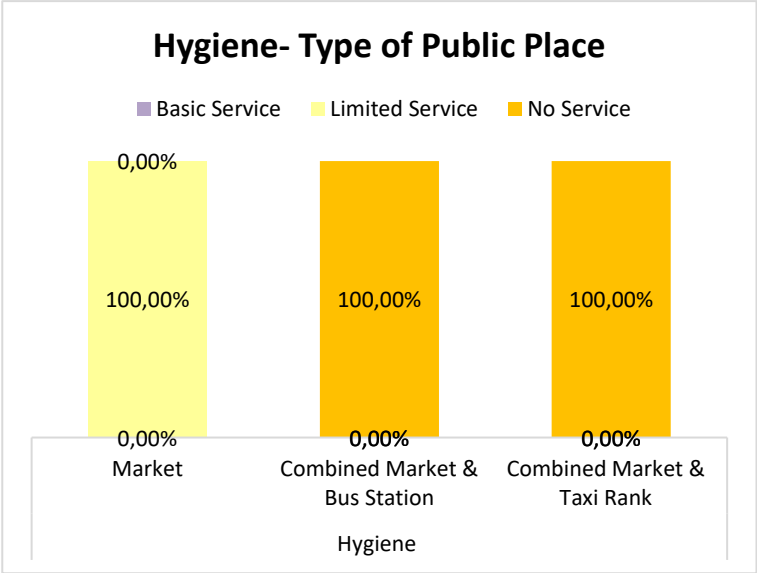
Findings 158: Chipili District JMP ladder for hygiene services

Chipili	Hygiene		
	Total	Urban	Rural
Basic Service	0.00%	-	0.00%
Limited Service	25.00%	-	25.00%
No Service	75.00%	-	75.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of public places in Chipili District using basic service is 0%.

In 2022, out of 4 public places in Chipili District, All public places lacked basic services including 1 public place with limited access and 3 public places with no service.

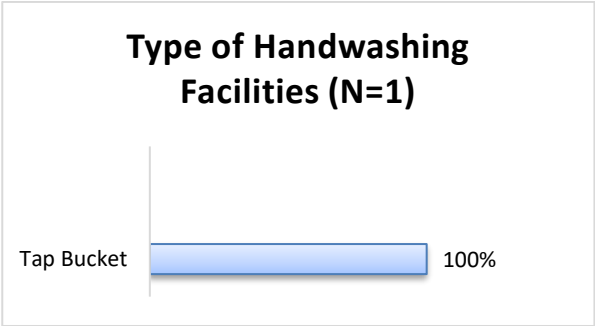
Please refer to Table 15 for the definition and clarifications on some of the hygiene terms.



100% of the market only have access to limited hygiene services. The rest of the public places categories do not have access to hygiene services.

Findings 159: Chipili District JMP for public places hygiene services by public place type

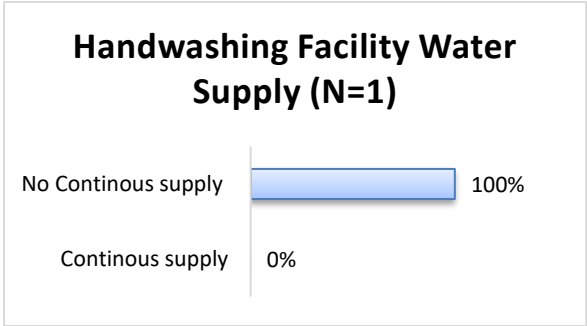
Type of handwashing facilities



Findings 160: Chipili District public places-types of handwashing facilities (N=1)

100% of the public places use the tap bucket.

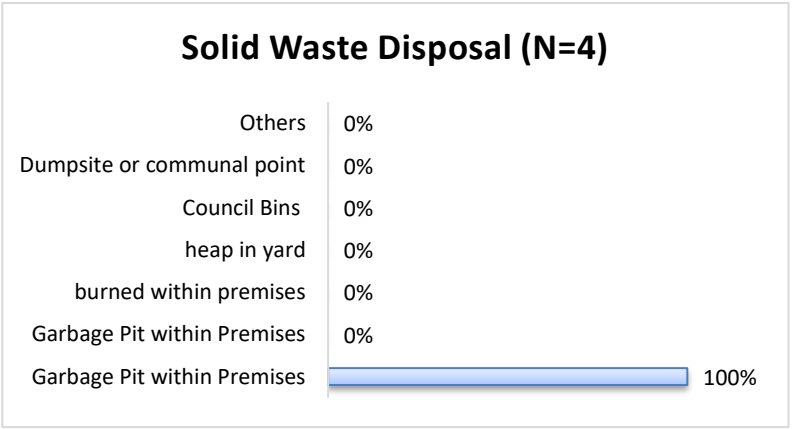
Continuous availability of water supply



Findings 161: Chipili District Public Places- Water Supply to Handwashing Facility (N=1)

All the public places with handwashing facilities do have continuous supply of water to them.

5.4.5 Solid Waste Management



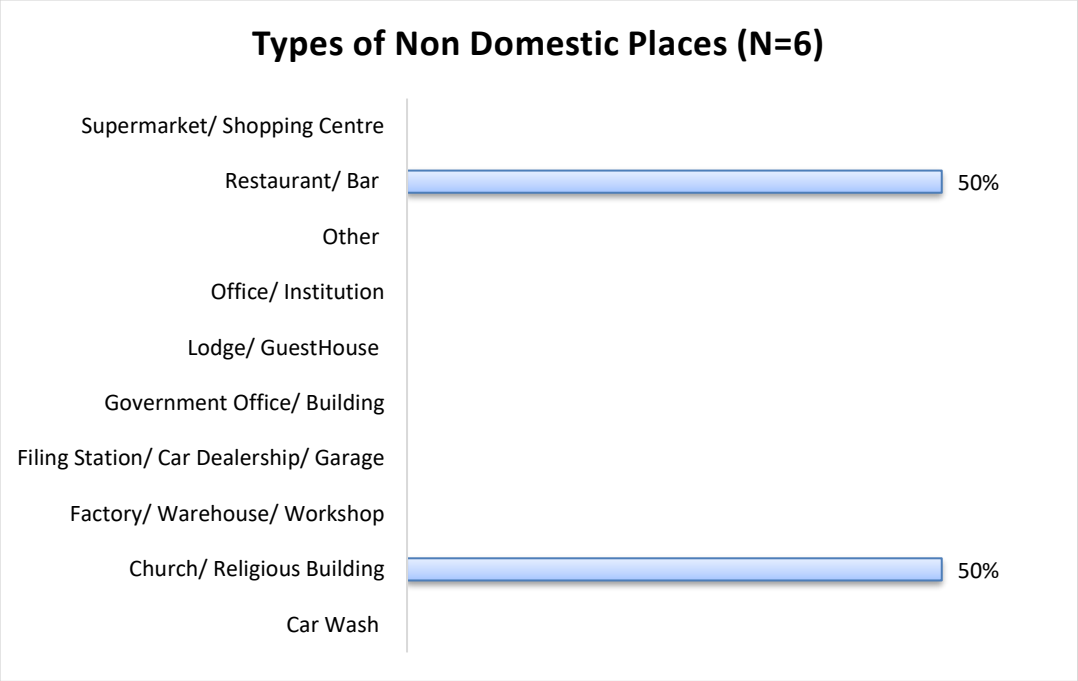
All the public places use the garbage pit within premises to dispose of solid waste.

Findings 162: Chipili District Solid Waste Disposal in Public Places (N =4)

5.5 Non-Domestic Premises

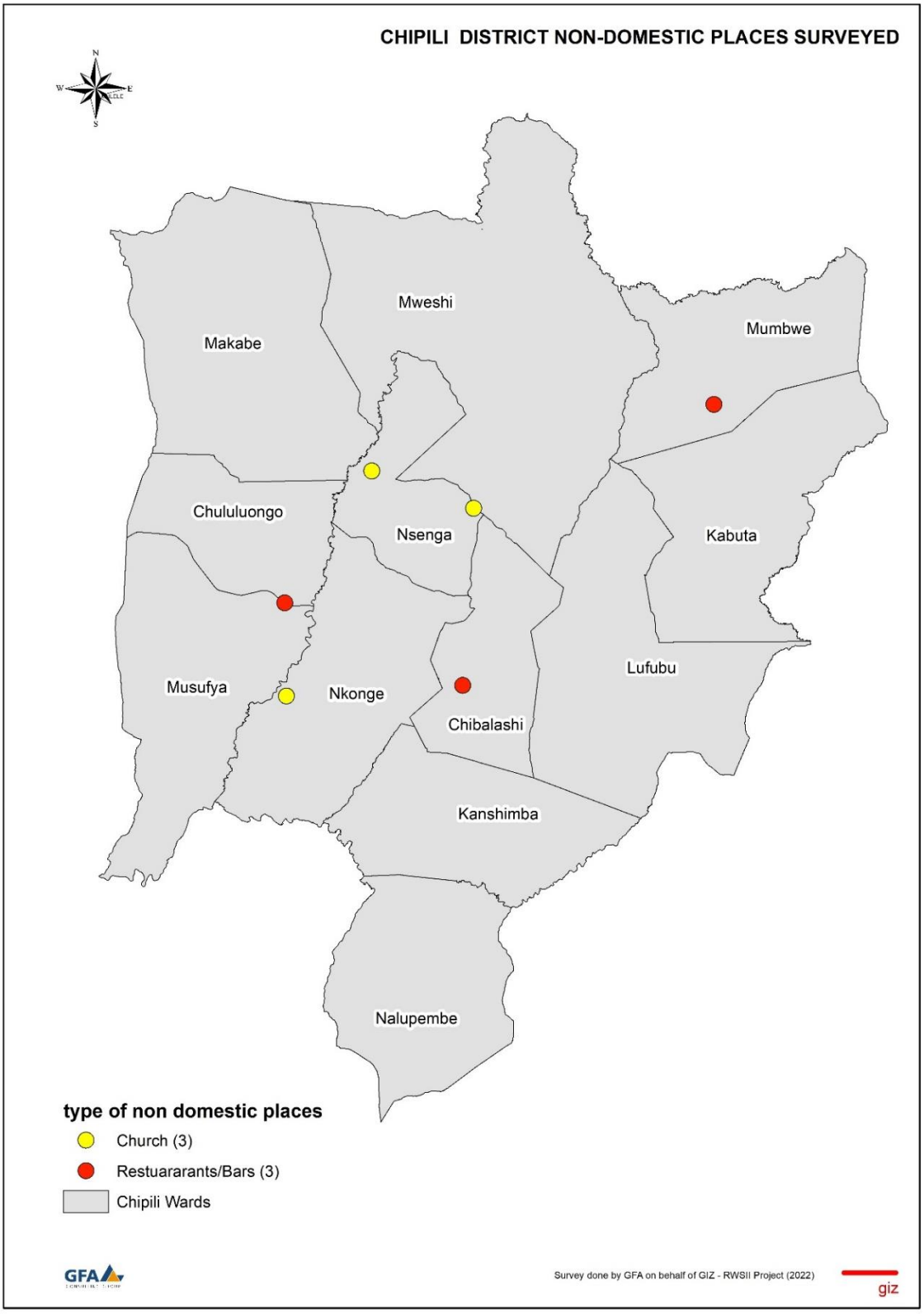
5.5.1 Overview of Non-Domestic Premises & Electricity Connectivity

Types of non-domestic places in Chipili



Findings 163: Chipili District types of non-domestic places (N=6)

Majority of the non-domestic places in Chipili District are restaurants & bars (50%) and churches / religious buildings (32%). There was sample to represent the churches or religious buildings.



Findings 164: Chipili District Non-domestic Places

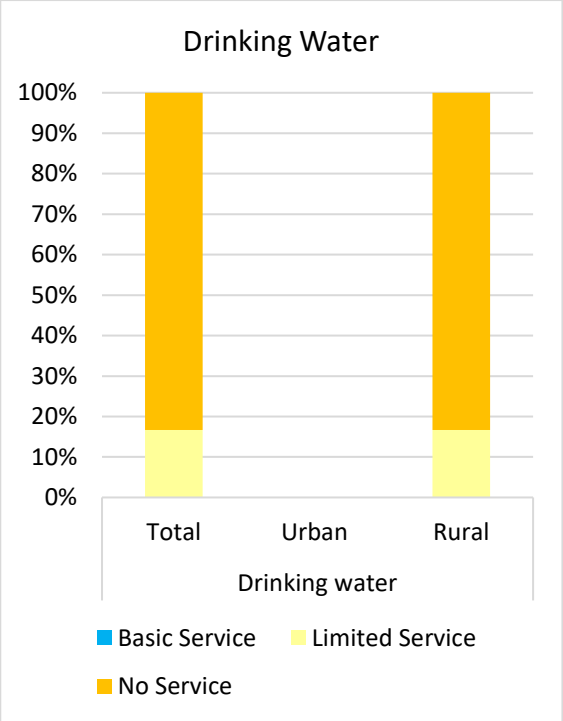
From the Findings 164, a total of 6 non-domestic places were surveyed. The non-domestic places surveyed included bars/ restaurants and churches.

Connection to electricity

All the Non-Domestic Places surveyed in Chipili District have no access to electricity and all are willing to connected to ZESCO.

5.5.2 Water Supply Services

Chipili JMP ladder for drinking water services



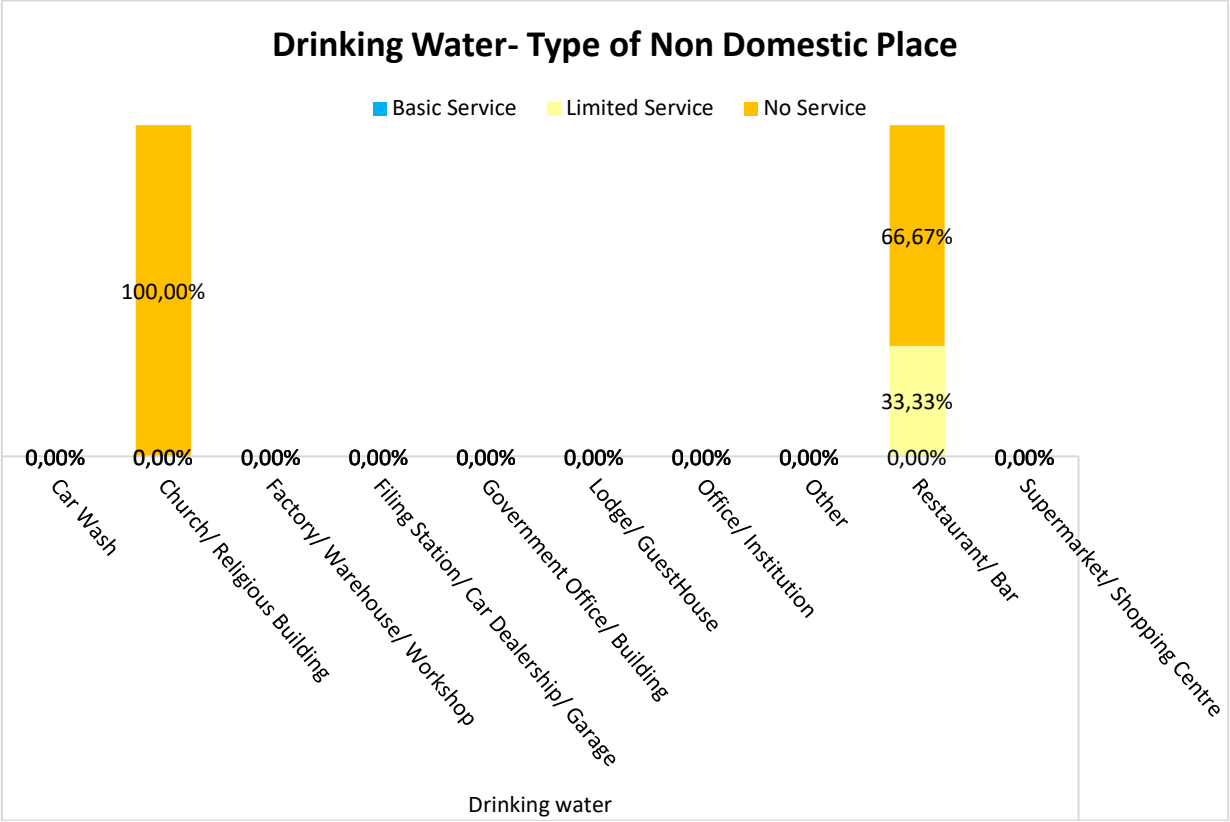
Findings 165: Chipili non-domestic JMP ladder for drinking water

Chipili	Drinking water		
	Total	Urban	Rural
Basic Service	0.00%	-	0.00%
Limited Service	16.67%	-	16.67%
No Service	83.33%	-	83.33%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of non-domestic places in Chipili District using basic services is 0%.

In 2022, out an estimated total of the 19 non-domestic places in Chipili District, All non-domestic places lacked basic services including 3 non-domestic places with limited services, and 16 non-domestic places having no water source or having access to an unimproved water source.

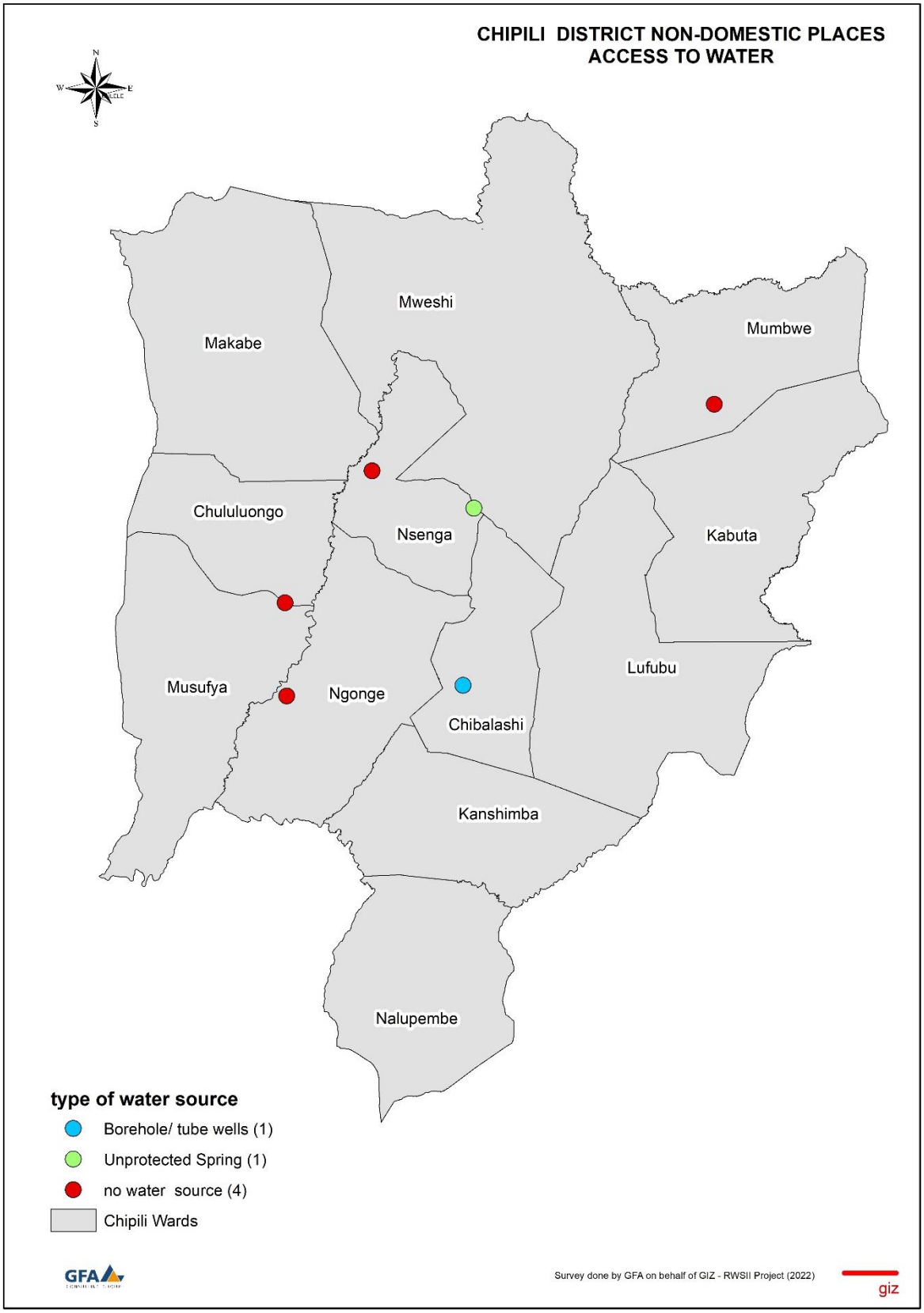
Please refer to Table 13 for the definition and clarifications on some of the drinking water terms



Findings 166: Chipili District JMP for non-domestic places - drinking water services by type

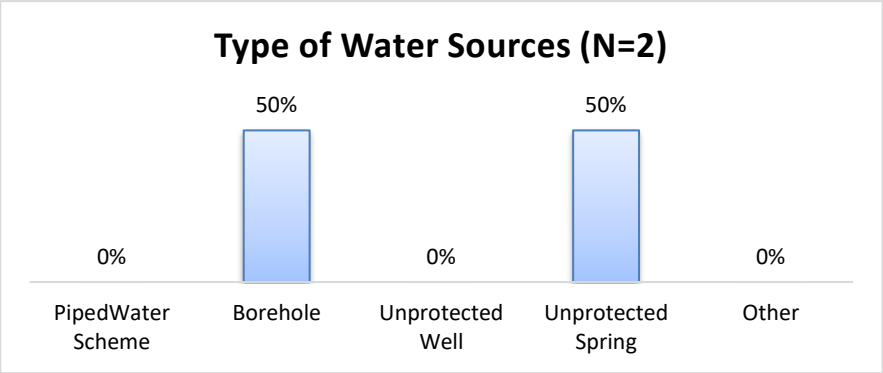
The church/religious building lack drinking water service while restaurant/ bars have a mixture of limited and no service.

Access to water and type of water source



Findings 167: Chipili District non-domestic water access (N=6)

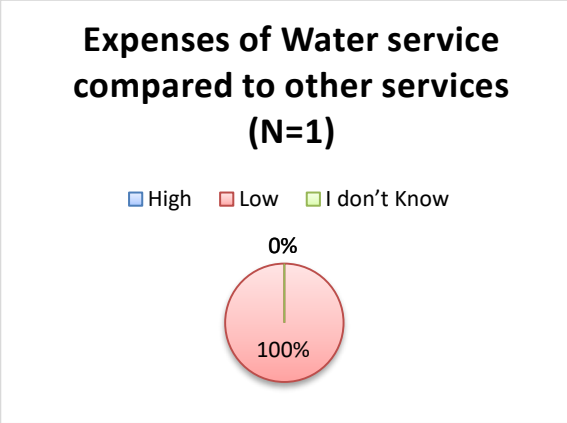
50% of the non-domestic places surveyed in Chipili do not have access to water. The rest use borehole and unprotected spring.



All the non-domestic places in Chipili District have an equal distribution of boreholes and unprotected springs as sources of water.

Findings 168: Chipili District non-domestic places - type of water source (N =2)

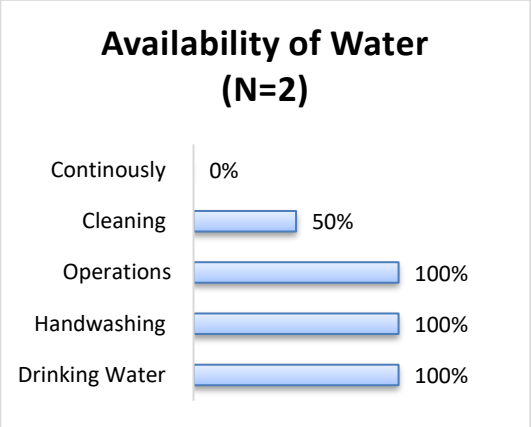
Affordability of Water Service



Findings 169: Chipili District non-domestic water expenses compared to other services (N=1)

100% of non-domestic places categorise water expenses to be cheap.

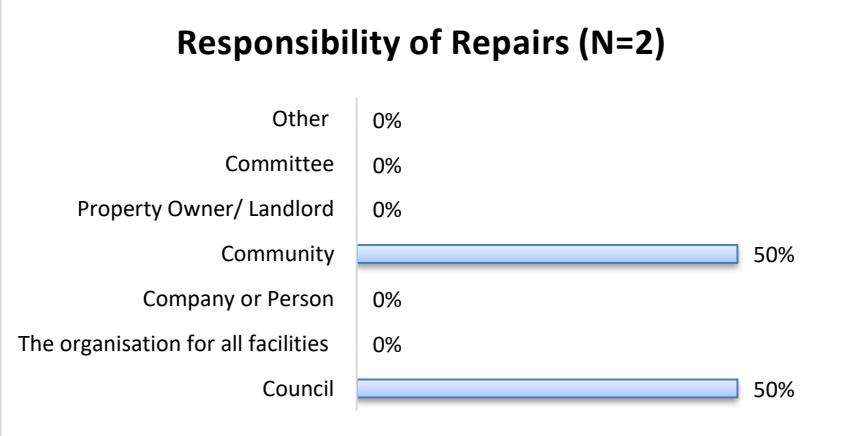
Availability of Water



Findings 170: Chipili District non-domestic availability of water (n=2)

None of the non-domestic places have water which is continuously available. Water was mostly available for drinking, handwashing and operations (100%).

Maintenance

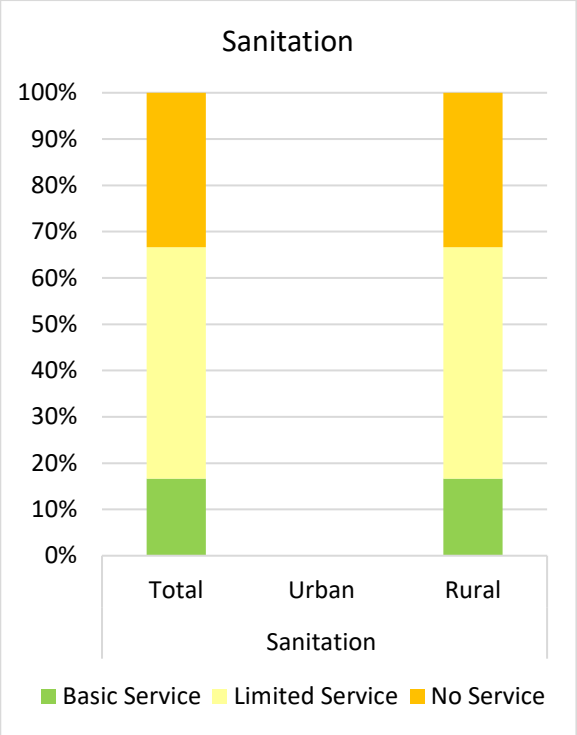


Findings 171: Chipili District non-domestic places - responsibility of repairs (N=2)

The responsibility of conducting repairs is mainly the council and community (50%).

5.5.3 Sanitation Services

Chipili JMP ladder for sanitation services



Chipili	Sanitation		
	Total	Urban	Rural
Basic Service	16.67%	-	16.67%
Limited Service	50.00%	-	50.00%
No Service	33.33%	-	33.33%
Total	**100.00%**	**0.00%**	**100.00%**

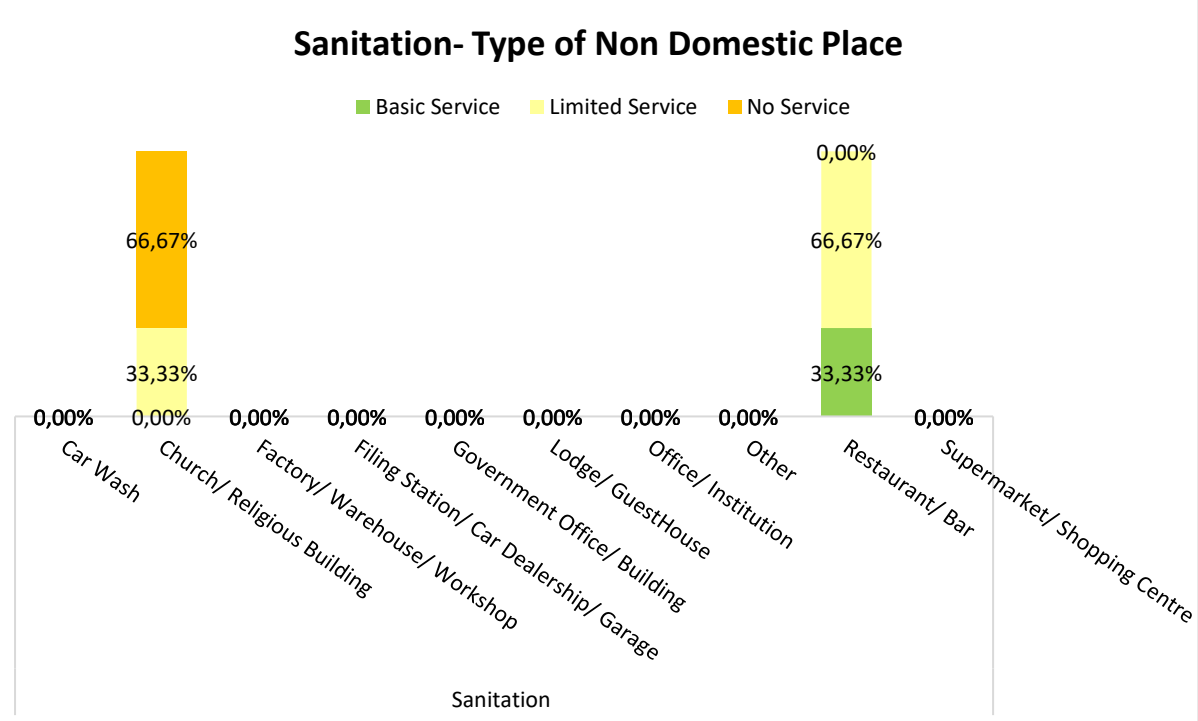
The proportion of non-domestic places in Chipili District using basic services is 16.67%.

In 2022, out of the estimated total of 19 non-domestic places in Chipili District, 16 non-domestic places lacked basic services including 10 non-domestic places with limited services and 6 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 172: Chipili non-domestic places JMP ladder for sanitation

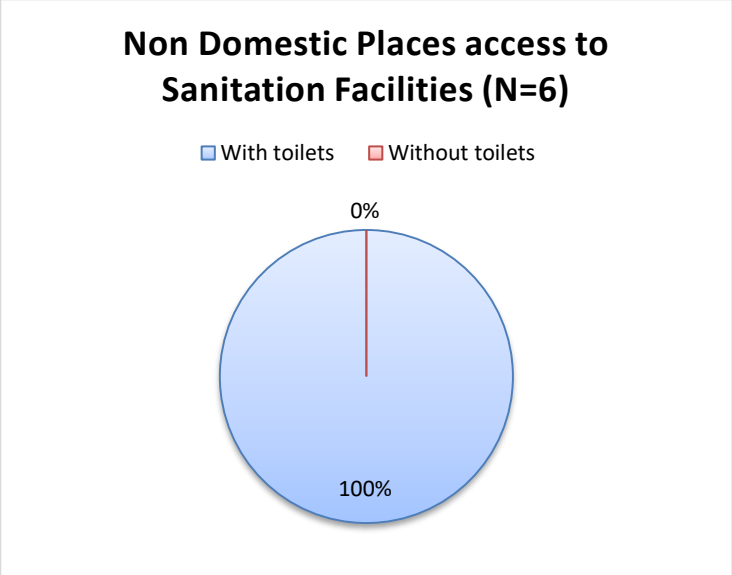
Access to sanitation facilities



Findings 173: Chipili District JMP for non-domestic places - sanitation services by type

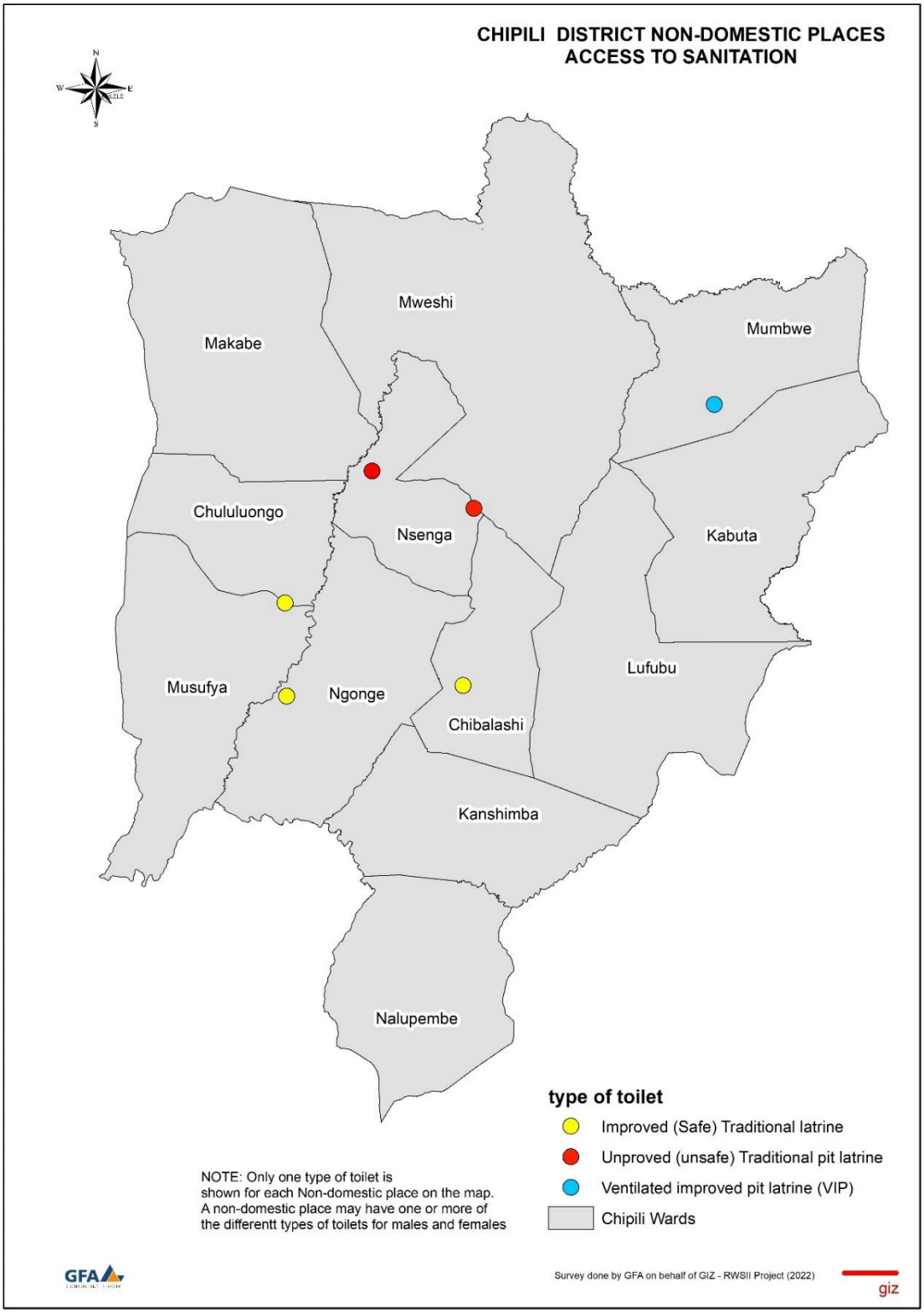
The church/religious building have a mixture of limited and no service. Restaurant/ bars have a mixture of basic and limited service.

Access to sanitation facilities



All the non-domestic places have access to sanitation facilities.

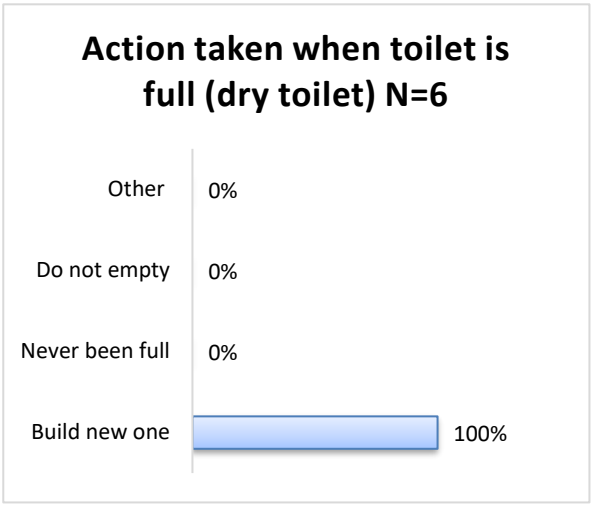
Findings 174: Chipili District non-domestic places - access to sanitation facilities (N =6)



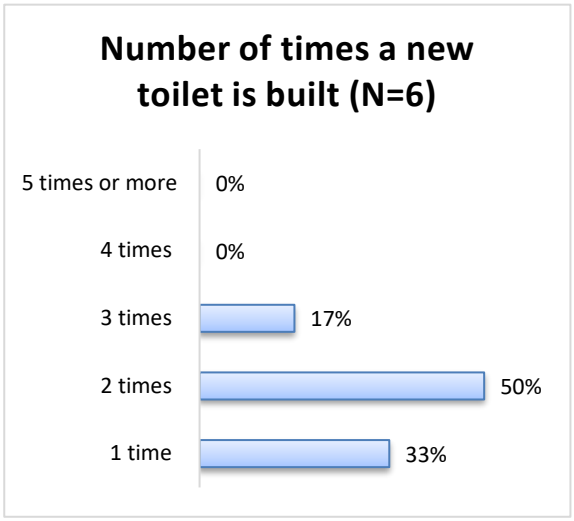
Findings 175: Map of Chipili District non-domestic access to sanitation facilities

From Findings 175, in general, the main type of sanitation for non-domestic places is the improved safe traditional latrine seconded by unimproved (unsafe) latrine.

Emptying practices



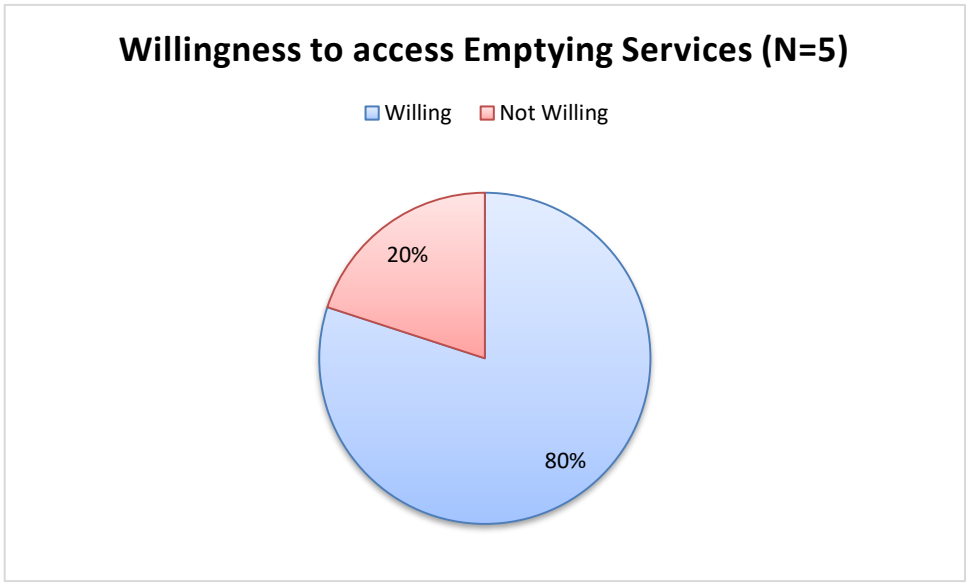
Findings 176: Chipili District non-domestic places toilet emptying practices (N =6)



Findings 177: Chipili District Non-Domestic Places - number of times a new toilet is built (N=6)

Like the other categories, non-domestic place toilet emptying practices are mainly building a new one once it is full.

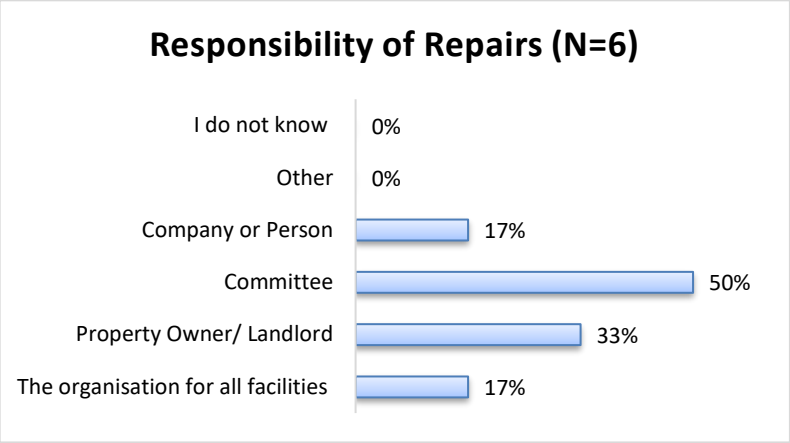
Most of the non-domestic places which had built a new toilet before, did this two time (50%).



Findings 178: Chipili District Non -Domestic Places- willingness to access emptying services (N=5)

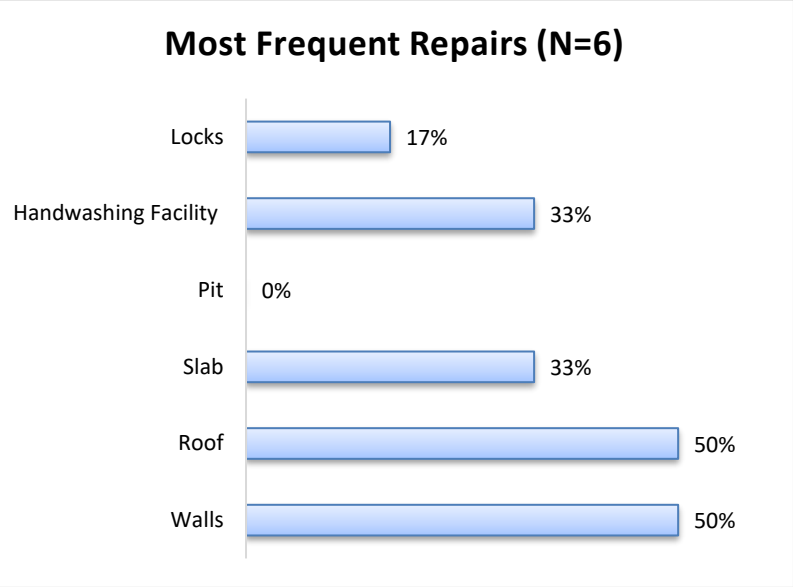
Majority (75%) of the non-domestic places are willing to access emptying services while there is still a reputable proportion of non-domestic places not willing to access this service.

Maintenance of sanitation facilities



For majority of the non domestic places, the committee (50%) and property owner (33%) takes responsibility of repairing the toilets.

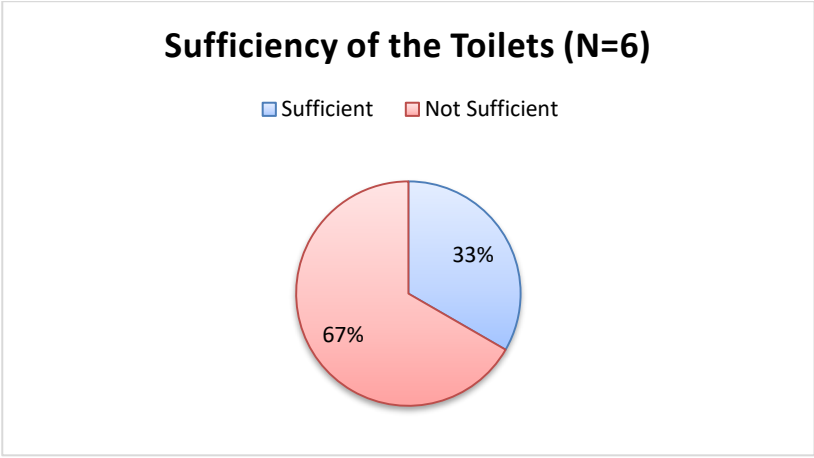
Findings 179: Chipili District – non-domestic places-responsibility for repair of toilet (N = 6)



Of all repairs conducted, it was found that majority done were on the roof and walls (50%).

Findings 180: Chipili District non-domestic places -most frequent repairs for toilets (N=6)

Sufficiency of toilets

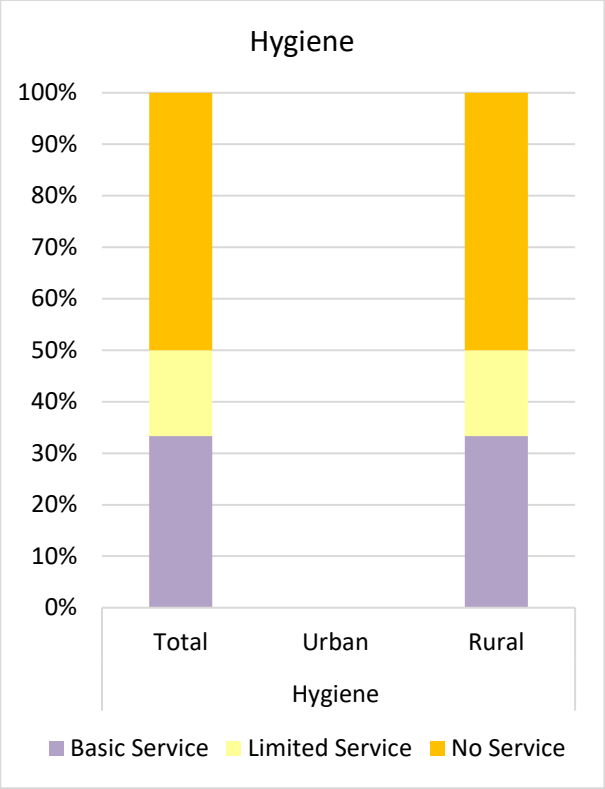


33% of the non-domestic places in Chipili have sufficient toilets.

Findings 181: Chipili District non-domestic places - sufficiency of sanitation facilities (N=6)

5.5.4 Hygiene Services

Chipili JMP ladder for hygiene services



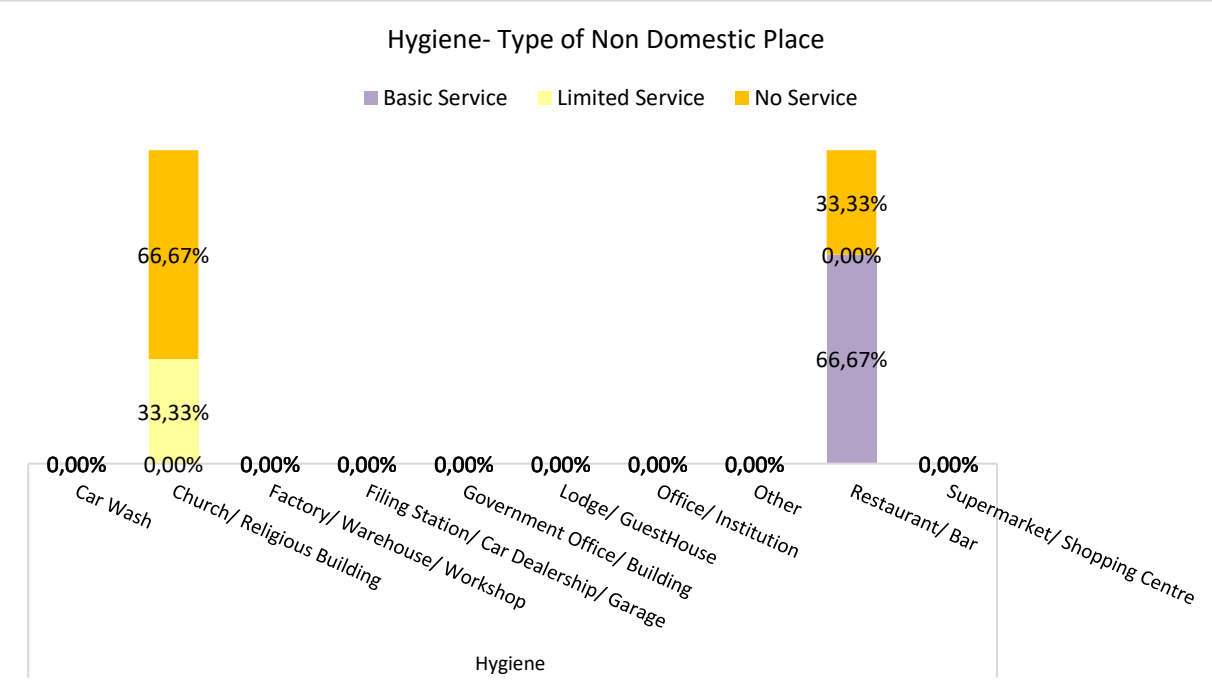
Findings 182: Chipili District non-domestic places JMP ladder for hygiene services

Chipili	Hygiene		
	Total	Urban	Rural
Basic Service	33.33%	-	33.33%
Limited Service	16.67%	-	16.67%
No Service	50.00%	-	50.00%
Total	**100.00%**	**0.00%**	**100.00%**

The proportion of non-domestic places in Chipili District using basic service is 33.33%.

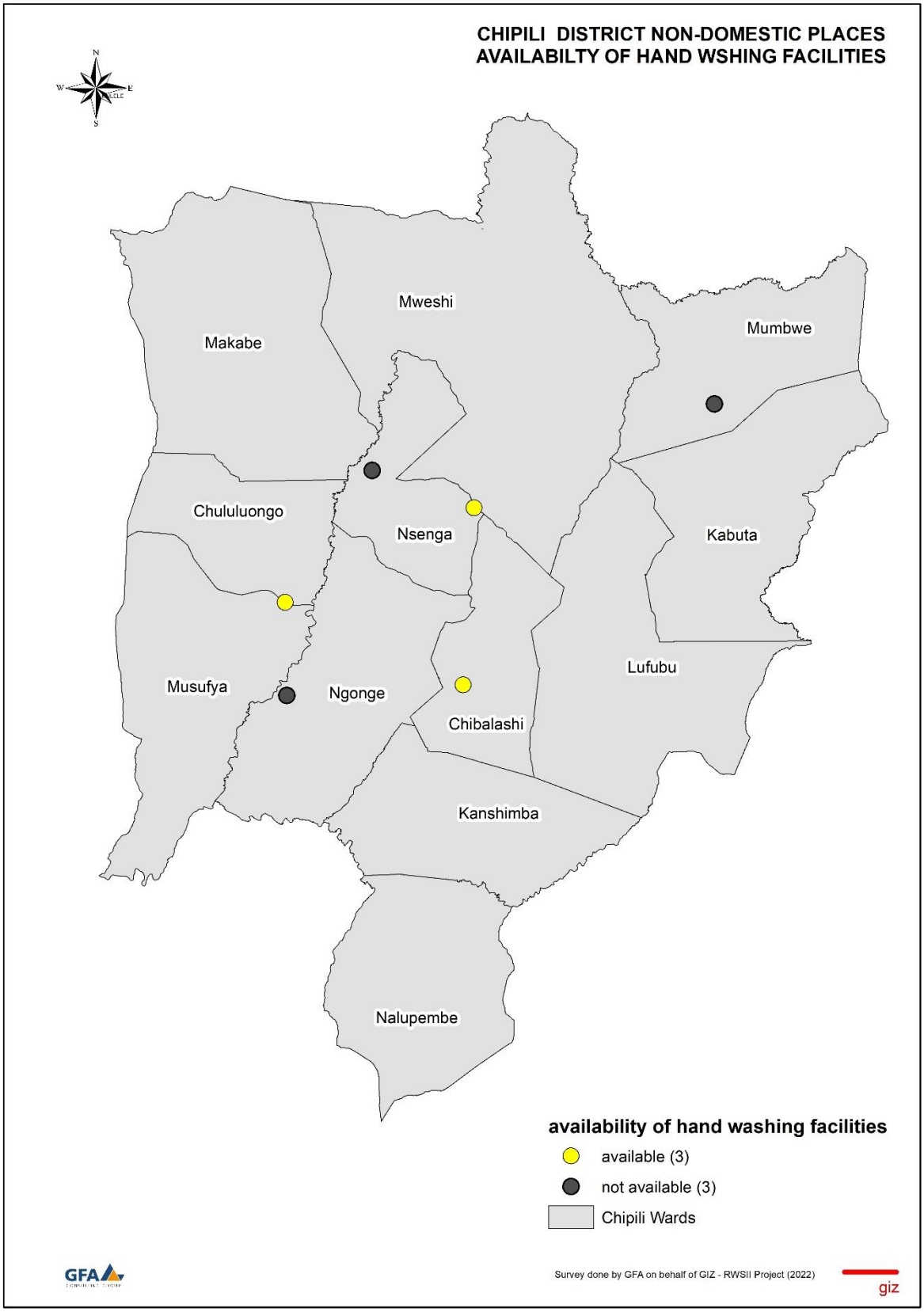
In 2022, out of estimated total of 19 non-domestic places in Chipili District, 13 non-domestic places lacked basic services including 3 with limited service and 10 with no service.

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



Findings 183: Chipili District JMP for non-domestic places - hygiene services by type

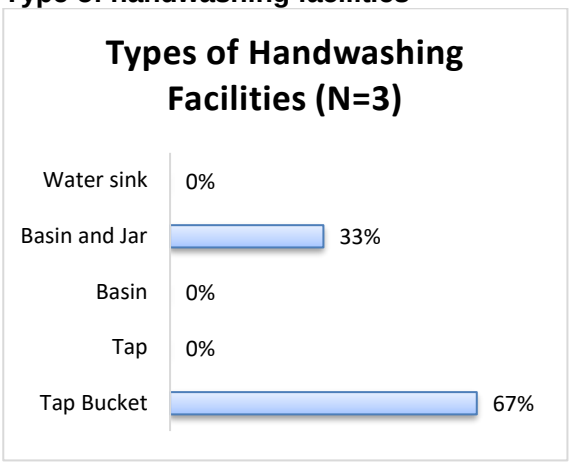
The church/religious buildings have a mixture of limited and no service. Restaurant/bars have a mixture of basic and no service levels.



Findings 184: Chipili District non-domestic places access to handwashing facilities

50% of the non-domestic places in Chipili District have access to handwashing facilities and the other 50% have no handwashing facilities.

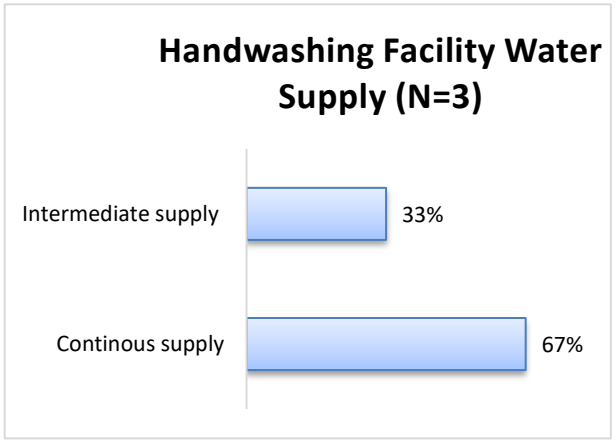
Type of handwashing facilities



Findings 185: Chipili District non-domestic places - types of handwashing Facilities (N =3)

Majority (67%) of the non-domestic places use the tap bucket.

Continuous availability of water

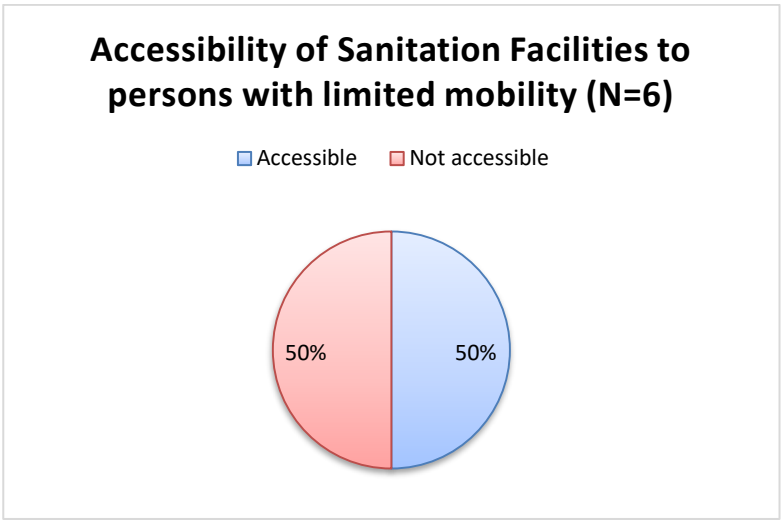


Findings 186: Chipili District non-domestic places- water supply to handwashing facility (N=3)

Majority (67%) of the non-domestic places have hand washing facilities with continuous supply of water to them.

5.5.5 Social Inclusion

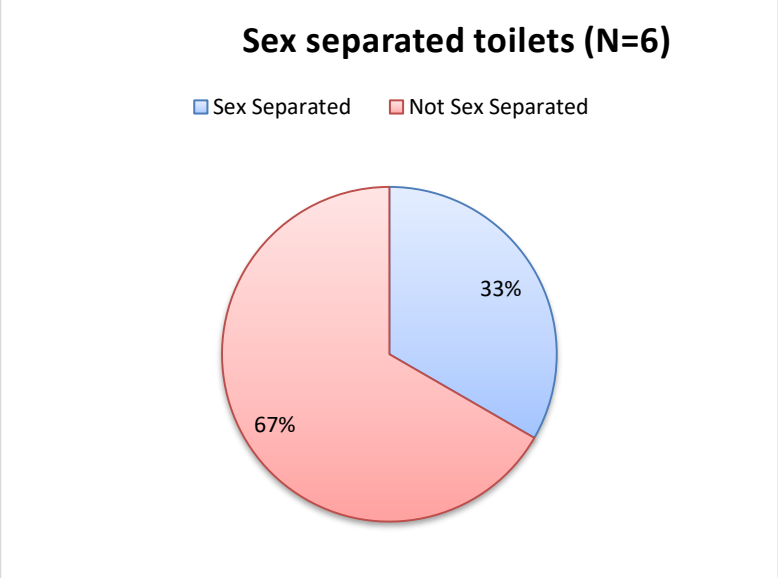
Accessibility of sanitation facilities



Findings 187: Chipili District non-domestic places - sanitation facility accessibility to persons with limited mobility (N=6)

50% of the sanitation facilities are accessible to differently abled persons

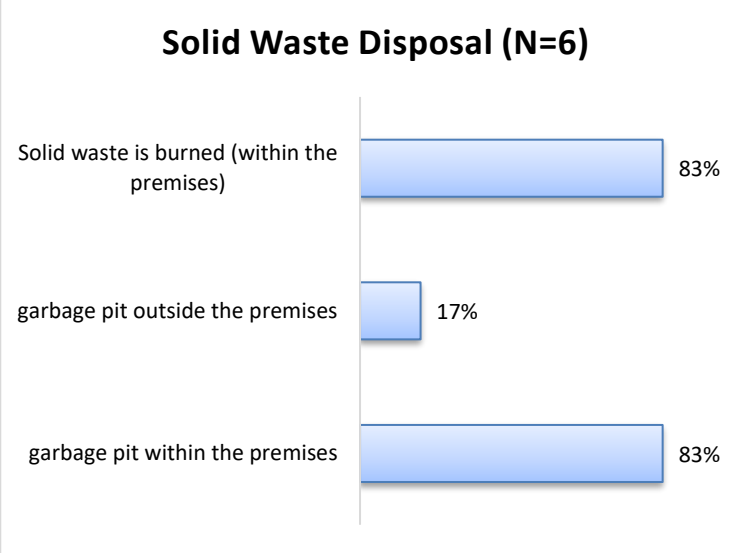
5.5.6 Gender Sensitivity Data and Information



Majority (67%) of the non-domestic places do not have sex separated toilets while 33% of the non-domestic places with toilets have sex separated toilets.

Findings 188: Chipili District non-domestic places sex separated toilets (N=6)

5.5.7 Solid Waste Management



Majority (83%) of the non-domestic places burn their solid waste within the premises and use the garbage pit within the premises.

Findings 189: Chipili District non-domestic places solid waste disposal (N-=6)

5.6 Key Informant Interviews

5.6.1 Luapula Water Supply and Sanitation

Luapula Water Supply and Sanitation has no physical presence in Chipili District.

5.6.2 Chipili Town Council

The Council has the core mandate to provide services to the community. It is the main focal point to address issues in the district working in collaboration with the other departments present in the district. The planning section is responsible for development planning, forward planning, and socio-economic planning. Under the WASH section which falls under the department of works, there is a WASH coordinator who works hand in hand with the District Planning Officer (DPO), and they report to the Director of Works, a Senior Officer in the council who in the end reports to the Council Secretary.

Water Supply and Sanitation service provision

The council ensures that the community has access to clean and adequate water. Majority of the water sources in Chipili District are wells or boreholes and there only exists 2 schemes which are yet to be handed over. The council does not have the capacity or tools to conduct water quality monitoring of the water sources. It implements a programme on chlorination of wells which is highly dependent on availability of funds to ensure the community has access to good quality water. The physical quality of water supplied in the district is fair while the chemical quality is unknown. The district has an abundance of manganese minerals which may influence the water sources.

There is consistent supply of water through the communal taps at the schemes in Mutipula and Chipili which provide 12 hours of supply (from 8hrs to 20hrs). The district experiences a shortage of water during the dry season as a result of boreholes or wells drying up. The communal taps have few beneficiaries and there is a need for expansion to reach more communities. Overall, the community is satisfied with the quality of the water provided but as for the quantity, it would be appreciated if the hours of supply increased. The satisfaction of the community is monitored through the WDCs and Civic leaders.

Operation and Maintenance

The WASH coordinator is responsible for O&M of water facilities. Committees are formed for the water points and the community are expected to pay a user fee of K5 which contributes O&M activities. If the maintenance requires more money than there is, the council steps in to offer the required support.

O&M of sanitation facilities in public places is the responsibility of the council through the works department while household toilets remain the responsibility of the households.

The council is also responsible for operating the schemes through the works department. The schemes are strategically located in areas that has officers to play the part of the operator i.e. the EHTs in the area or near the barrier that has officers from the council tasked to support the schemes.

Currently there is no Sustainable Operations and Maintenance Programme (SOMAP) shop in the district. The spare parts are purchased from Mansa Municipal Council SOMAP shop or from Lusaka.

Planning and Coordination

The Planning department in the council provides planning services i.e., effective and efficient planning. They ensure physical, socio economic planning and other departments are harmonised. The council through the department of planning, plans for service provision but the lack of resources is a barrier to their implementation.

The council acts as like a linkage between the community and the other departments providing services in the district. There is a District Development Coordinating Committee (DDCC) which meets every quarter with different stakeholder integrating efforts to address the agenda of leaving no one behind.

Planning and coordination in the district are fair but there is need for it to be enhanced to ensure the development of the district in all aspects. The challenges experienced in planning and coordination are political interference in programmes and constraints in resources which affects the level of attendance from different stakeholders due to the geological location of the different administrative offices in the district.

The community plays a role in decision making on the type of technology that they receive through the community committees and WDCs where they suggested what the community prefers or needs. Community engagement is the one of the strategies in place to address political interference. Ownership of the programmes or infrastructure by the community depends on the approach used to sensitize or engage the community by the involvement of the WDCs. Decentralisation prevents the council from imposing any projects on the community. It emphasises on the bottom-up approach to project identification which fosters ownership. The evidence of ownership by the community can be seen through the willingness to contribute fee for maintenance of infrastructure. Before infrastructure development takes place, there is sensitization that is conducted, and the community are required to provide 25% commitment material before they receive the facilities to foster ownership.

Cross Cutting Issues

Solid Waste Management: The dumpsite in in the district is not functional due to not having an accessible road and machinery for its operation. The disposal methods used are refuse pits, incinerators, or pit latrines. The impact of disposing of solid waste in latrines is diseases which can be called by flies which promote faecal oral contamination. The method of disposing waste in toilets in unhealthy and unsustainable as it also leads to land degradation. There are no organisations or individuals that collect and dispose solid waste in Chipili as there is no standard solid waste management system yet in place. The role the council play is implementing the keep Zambia clean campaign and provision of waste bins to the markets. The district currently has no by-laws/regulations in place.

Gender: It is perceived that women are responsible for cleaning the environment and managing solid waste in the household/ community. On a professional level, both men and women are involved in decision making as there are many women in high decision-making positions now. Roles do not differ by gender but according to the position, level of qualification or credentials.

Social Inclusion: There is no differently abled staff at the council. There was one but he was transferred to Chembe District. Cooperatives are formed for the differently abled or marginalised people to ensure representation at decision making platforms.

Recommendations

1. To have enhanced solid waste management service to the communities.
2. To provide proper toilets at market and household level.
3. To have tool kits for testing the quality of water with the aim of providing clean, safe water to the communities.
4. Resource mobilization for the provision of WASH services to address the lack of funding in the district.
5. Provision of transportation to sensitize people about the importance of safe drinking water, sanitation and gender issues.
6. Capacity building in WASH topics to effectively provide the service the community.

5.6.3 District Health Office

The District Health Office is responsible for WASH service provision in the health care facilities and also conduct WASH preventive and promotive activities as well as curative as a result of poor WASH service provision. There is no specific department that looks at WASH because this falls under public health. The institutional arrangement is such the DHO is at District level overseeing the Health Care in the District.

There are 10 Rural Health centres (RHCs), 9 Rural Health Posts (RHPs) and 95 Neighbourhood Health Committees (NHCs) in the district. The NHCs are scattered all over the district and include the community members. Each HCF has several NHCs that it is responsible for. The main difference between RHCs and RHPs is not only structure but also population served. The RHPs serves an approximate population of less than 500 people and RHCs serves an approximate population of more than 500 people. The facilities do not differ depending on the ward they are in as the MoH works through catchment areas. Each HCF is designed with a designated population, and this is used to set targets. They are yet to migrate to wards as per directive and best utilisation of Constituency Development Fund (CDF) but for administration purposes the DHO has continued working through catchment areas which are 19 in total according to the number of facilities.

The DHO works hand in hand with the EHTs which are directly supervised by the Senior Environmental Health Officer (SEHO). Currently there are 7 EHTs i.e.,5 EHTs in the HCFs and 2 at the DHO. Sometimes the SEHO works as an EHT if need arises. There is a total of 7 to 10 Public Health Nurses in the District who compliment the EHTs in HCFs where they are absent. The district also has CHAs who work hand in hand with the EHTs as junior officers. The CHAs are one of the reliable staff in the district especially in areas where EHTs are missing. They perform the functions of the EHTs except enforcement which is left to the EHTs. Currently there is a total of 14 CHAs operating in the district, their job involves working closely with the community.

Water Supply and Sanitation

The mandate of WASH provision in the district lies with the council. DHO is responsible for the hygienic aspects of WASH and ensuring that the people in the community are protected from water borne diseases. They disinfect water sources and conduct various inspections to ensure aspects of WASH are protected. They conduct inspection of WASH facilities; they have inspection targets for various areas I.e., public places as well as private places including schools and HCFs.

There is a programme working with communities called village inspections which include sanitation and water inspections. If anomalies are discovered during inspection, there are 3 ways to deal with them namely.

Option 1: Have a sit down with the village leadership to ascertain how best the community can implement the recommendations made

Option 2: If the recommendations (in option 1) are not implemented, the affected parties are taken to the Mutipula local court.

Option 3: If option 3 doesn't work, they affected parties are taken to the Chief to ensure that the recommendations are implemented.

They implement Community Led Total Sanitation (CLTS) which ensures all households in the villages have sanitation facilities, handwashing facilities and that all the facilities in place are used. Having the facilities is one thing but seeing that these facilities are being used is another. The primary goal is to prevent Open Defecation (OD) by ensuring all villages have attained Open Defecation Free (ODF) status. To achieve this goal, all the villages are to be provided with water facilities. This is by ensuring where wells are present, they are disinfected and monitored according to bacteriological factors.

In Infection, Prevention and Control (IPC), water quality is monitored in the HCFs in terms of the bacteriological factors.

Planning, Implementation and Coordination

The DHO works with the HCFs to plan for WASH services in the facilities. The HCFs do not have the expertise to plan for themselves without the support of the DHO. Through the District WASH Investment Plan (DWASH IP), the HCFs have been planned for improvement of service provision. The DHO is planning from 2022 to 2030 and pending finalisation of these plans.

The challenges faced with planning is lack of resources to implement the planned activities. Planning for is one thing but implementation is another. The DHO can plan for service improvement, but funding of the plans can be a challenge.

Nutrition and Health

The prevalence of water borne diseases has been scaling down since 2019 which recorded the highest level at 74 per 1000 cases, 2020 had 64 per 1000 cases while 2021 had 54 per 1000 cases and this been attributed to the 5 COVID 19 prevention golden rules.

There are programs that are taught at health care facilities every day to the communities but when there are major programs, the ministry through DHO gets involved. The communities are taught how to prevent and treat waterborne diseases. The DHO also trains the Village Water, Sanitation and Hygiene Education (VWASHE) Committees who in turn teach their fellow communities on hygiene practices.

Each HCF is mandated to provide school health services in their catchment areas working hand in hand with zonal coordinator. School Health Services include.

- Teaching children about diseases and hygiene
- Inspection of the WASH facilities at the schools
- Deworming children who haven't been in a year
- Screening children for bilharzia, elephantiasis
- Oral health education.

Programs that teach nutrition are implemented by herbal nutritionist but there is no external support in the implementation of SUN. Health messages are very effective as they are done with MoH and zonal coordinators. Periodically, a follow up is made to ascertain whether the recommendations have been implemented or not.

The most affected population by waterborne diseases (non-blood diarrhoea) are children under 5 from the records received and this is mainly due to their behaviour i.e.: eating or drinking anything and planning in unsanitary conditions which makes them vulnerable. The female parent is usually the primary care giver, it is rare that the man takes the children to the clinic. Mothers are the primary care taker according to culture.

Cross Cutting Issues

COVID 19: Since the outbreak of COVID 19, a tremendous improvement in hygiene has been witnessed in the community. The 5 golden rules have preached to the community for them to understand that they do not only work for COVID 19 but also for other diseases like diarrhoea. This has resulted in a decrease in diarrhoea cases. It is safe to conclude that COVID 19 has helped the community grasp hygiene practices.

Gender: There is recently opened one stop centre by a youth group to promote gender activities and fight for the protection of girls and children. This is supervised by a representative of the Nursing department. At the DHO, there is sex- separation of toilets which include a shower. As for the HCFs, All the 19 HCFs in the district have toilets i.e., VIPs or traditional pit latrines except for Chipili which has waterborne for both male and female. All the HCFs have sex-separated toilets and most of them have staff and patient toilet separation.

Differently abled people: There are no special toilets for limited mobility except for Chipili RHCs.

Recommendations

1. Ensure that all Health Care Facilities have waterborne toilets and hand washing facilities in the next 5 years.
2. Ensure all HCFs have functional handwashing facilities at all points.
3. Ensure HCF waste management is improved in the next 1-2years i.e., HCFs have proper waste segregation and treatment
4. Ensure all HCFs have been trained in IPC (Only 2 out of 19 HCFs have been trained).
5. Ensure all HCFs have access to water supply by ensuring all non-functional boreholes are repaired or new ones drilled. (Only 10 out of 19 HCFs have functional water facilities)

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 Chipili District. The main roles are to ensure policies with regards to education are implemented, monitor, and supervise schools. Under the planning section, the Planning Officer is responsible for planning programs under the district in terms of monitoring and supervision. There is a School Health Nutrition (SHN) Component with the planning officer as the coordinator of the programme.

Water Supply and Sanitation

Apart from advocacy & education, they partner with other stakeholders to provide minimum requirements for a good learning environment. The role of DEBS is to ensure that schools have access to good WASH facilities and ensure the implementation of the government plans especially CDF. Monitoring of infrastructure development through the buildings inspector and reports schools that lack facilities. The buildings inspector also conducts an annual census periodically to ascertain the status of the infrastructure. The standard section monitors and supervises the cleanliness of schools and ensures that required facilities are available in the schools.

Very few schools have water facilities, and these have poor quality as determined by the building officer inspects them. It was discovered that the water has a lot of iron.

Planning and Coordination

There is constant contact with schools which result from monitoring. Reports are generated and verified before submission. The major challenge with monitoring and evaluation of the schools is logistics i.e., vehicles and fuel costs.

DHO and DEBS are under the human and social development sub-committee where DHO is chair and DEBS secretariat. DHO coordinates with DEBS when they have a monitoring and inspection plan for the schools. They also incorporate DEBS in the planned activities that involve schools.

The schools are involved in planning and budgeting which is done every year in the month of December. The plans are they consolidated into a District Plan by DEBS. After planning and budgeting, expenditure reports are generated. Each school identifies its own priorities.

The role of DEBS in funding is resource mobilisation from donors in collaboration with the council to utilise CDF. They encourage schools to collaborate with the WDCs to tap into the CDF. Some reports are also submitted to the National level to lobby for more funding in schools.

Operations and Maintenance

The schools through the school administration fund the maintenance on the WASH facilities that service the school through contracting someone from the community.

Nutrition and Health

Water is used for several health-related preventive measures. Without water, it is difficult to prevent diseases. Availability of water facilitates cleanliness which leads to health. Due to the absence of water, water borne diseases have been unavoidable and pupils are prone to get sick especially in the hot season. In trying to reduce the prevalence of water bone diseases, schools are reminded now and again on the importance of keeping the surroundings clean.

There have been no cases of water bone diseases so far, but the risk is still there.

COVID 19

COVID 19 posed a challenge of monitoring schools and because of the lack of transportation, mobility became difficult. DHO provided masks for the schools but there was a lack of handwashing facilities. Unavailability of water sources, no wash basins and hand washing points were available. In addition, most in some schools posed a challenge on facilitating hygiene practices or cleanliness. Most schools could not afford cleaning materials such as disinfectants due to unavailability of resources.

Mainstreaming Menstrual Health Management (MHM) in Schools and Focal Point Persons

This responsibility lies with the School Health and Nutrition (SHN) Coordinator who is always female. For the schools that only have male teachers, the SHN coordinator is male and the Community Action Group (CAG) is involved when there is need. Some of the school toilets are sex separated but the majority are not. It is a common practice for the girl child to miss school when they are menstruating, and this is mainly due to a lack of MHM friendly facilities.

Cross Cutting Issues

Solid waste management: There are two methods used in schools to dispose of solid waste namely burning and burying in pits. It is unknown how the girls manage their solid wastes i.e. sanitary towels.

Gender: There is no segregation of duties for the pupils in relation to gender. All pupils are treated equally and have a 50/50 opportunity for leadership roles and any other opportunity.

Differently abled people: There isn't always a 50/50 case as it is all dependant on the type of role that needs to be played and the disability at hand. As for leadership or decision making, there is a 50/50 chance for everyone.

Recommendations

1. Ensure availability of water and sanitation facilities in schools especially for the sake of the girl child.
2. Ensure availability of boreholes as many of schools have no water supply or access.
3. Ensure availability of funding to meet the needs of the schools and facilitate implementation of activities in their plans.
4. Ensure availability of MHM friendly facilities to cater for girls from hard-to-reach communities and reduce the number of girls missing schools during menstruation due to distance from school to home to access these facilities.

6 LESSONS LEARNED

6.1 Field Data Collection

6.1.1 Logistics

The enumerators who participated in the survey are local health care workers coming from their respective wards. They had prior knowledge of how the households, schools, health care facilities, public places and non-domestic places are distributed in the wards. The enumerators were given money equivalent to the fuel expected to be spent while using a motor bike. They were also given their lunch allowances, all consent forms, notebooks and pens in advance before commencement of the survey. This proved handy as it reduced on the follow-ups by the management team on accounting relating to transport, food, and other logistics which each enumerator was able to deal with on their own.

The GFA management team was supervising the team remotely but the presence of the WASH coordinator in the district eased off some logistical complications. The involvement of the District WASH coordinator in the survey greatly helped in the supervision of the team whenever there was an issue that needed onsite solutions.

6.1.2 Covid-19 Restrictions

In relation to COVID 19, the survey took place at time when the cases had died down and no new cases recorded in the district. Masks however were procured for the enumerators and social distance was encouraged. With regards to transportation, none of the EHT's/CHAs shared a motor bike and so each one had their own mode of transport.

6.1.3 Data Sources and Data Verification

There is always need to verify and check data and verify data by comparing with other sources because not all data is of sufficient quality. This helps in better planning and ensuring better accuracy of the desk study the field work commences.

6.1.4 Combination of Different Tools and Techniques

The process involved using of different set of tools and techniques, which included desk study, field survey, data processing and presentation as well data storage and sharing for future use. The use of mWater in combination with google Earth Application proved very useful in guiding enumerators as well helped in clarifying location-based errors.

GRID3 datasets in combination with Google Earth was used to compare other data sources in validating population data, settlements built up and hamlets. Mobile android Google Earth was largely used for navigation once boundaries and sample points were uploaded from ArcGIS. SPSS and other statistical packages were used for data processing and analysis.

The mWater platform was used for designing the survey questionnaire, data collection, data analysis, presentation as well as storage. The platform allowed for data storage, sharing, and various presentations in terms of maps, tables, charts, etc. This ensures for scalability of the approach for all districts in the province.

6.1.5 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 identify 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.

6.1.6 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 15 outlines the different steps and interlinking components that must 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). It will be critical to ensure that partners are not only made aware of but also oriented in developed questionnaires, tools, and data analysis strategies for meeting the data requirements of WASH indicators presented in Chapter 3[1].

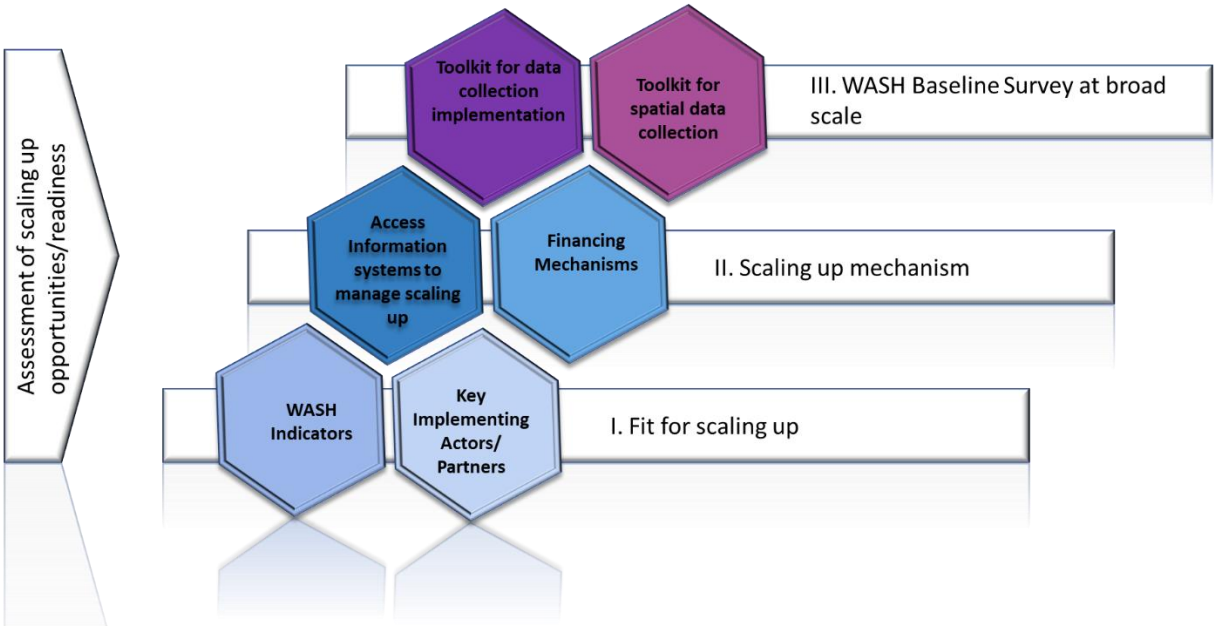


Figure 15: Components for up-scaling WASH baseline survey approach

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

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

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 platform. There is also need for modes of collected data storage to ensure usability by other stakeholders in the years to come.

4. **Mode of Financing:** Financing in Zambia for WASH projects is normally by GRZ, the Cooperating 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.

6.1.7 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 **200,000 ZMW** will be needed just for logistics for training, stakeholder engagements, transportation and allowances.

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 Chipili 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 Chipili 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).
   - ✓ 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 Chipili 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 MTC, 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 MTC, 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 established. 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 measures 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	Chipili Council, LpWSC	Zambia Statistical Agency (ZAMSTATS)	Any organization interested in the data
Schools	DEBs, LpWSC	Chipili Council	Any organization interested in the data
Health Care Facilities	DHO, LpWSC	Chipili Council and other planning authorities	Any organization interested in the data
Non-Domestic Places	Chipili Council, LpWSC		Any organization interested in the data
Public Places	Chipili 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. It will also allow users to be able to design their own questionnaires, train their enumerators and be able to analyse and present their 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 **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 **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. **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).	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). 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. 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'. 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. **Soap**: includes bar soap, liquid soap, powder detergent and soapy water.	1. **Handwashing facilities** include sinks with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. 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 Work Programme Planned for Period 05th May to 09th May, 2022

Date	Time of Day	Activity Session	Purpose	Tools
Day 1 (Thu 06.09.22)	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.	
Day 2 (Fri 07.09.22)	Morning	Key Informant Interview with Chipili Town Council	Interview with Rural Water Sanitation Coordinator at CTC Planning Department to discuss 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 or Environmental 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.	

Annex 3: Preliminary Estimated Resources required for the Up-Scaling Process for WASH Baseline Survey

Activity	Output	Resources	Budget [2](ZMW)
Enumerator Allowances	• Out of station modalities • Communication Modalities	• Lunch allowances • Communication allowances	13,000
Workshops	• Stakeholder consultation meetings • Results interpretation Validation meeting Enumerator trained • Enumerator Transport refund	• Meeting rooms • Lunches • Transportation	20,000
Equipment and Stationery	• Implementation modalities	• 9 Tablets • 9 GPS Gadgets • Voice recorders • Stationary (books, pens, ink pads etc)	150,000
Transportation Costs	• Transportation Modalities available	• Fuel Costs for 9 Motorbikes	7,000
Focus Group Discussions and Key Informant Interviews	• FGDs and KII conducted	• Transportation • Refreshments	13,000
TOTAL			203,000

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