

# KAMWENGE DISTRICT WASH MASTERPLAN

2020-2030

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# ACRONYMS AND ABBREVIATIONS

ВН	Borehole
CAO	Chief Administrative Officer
СарЕх	Capital Expenditure
CapManEx	Recurring capital maintenance expenditure
СВО	Community-Based Organization
CDO	Community Development Officer
CLTS	Community Led Total Sanitation
СМР	Catchment Management Plan
CSO	Civil Society Organizations
DDP	District Development Plan
DEA	Directorate for Environmental Affairs
DEC	District Executive Committee
DHO	District Health Officer
DIP	District Investment Plan
DLG	District Local Government
DWD	Directorate for Water Development
DWO	District Water Office
DWRM	Directorate for Water Resources Management
DWSCC	District Water, Sanitation and Coordination Committee
DWSCG	District Water and Sanitation Conditional Grant
ENR	Environment & Natural Resources Sector
FS	Fecal Sludge
HCF	Healthcare Facility
HEWASA	Health Through Water and Sanitation
НН	Household
НРМА	Hand Pump Mechanics Association
(I)WRM	(Integrated) Water Resources Management
JESE	Joint Effort to Save the Environment
LOS	Level of Service
LWF	Lutheran World Federation
МНМ	Menstrual Hygiene Management
MWE	Ministry of Water & Environment

MWUWS	Midwestern Umbrella of Water Supply and Sanitation
NDP	National Development Plan
NEMA	National Environment Management Authority
NFA	National Forestry Authority
NGO	Non-Governmental Organization
NPA	National Planning Authority
NTU	Nephelometric Turbidity Units
NWSC	National Water and Sewerage Corporation
O&M	Operation and Maintenance
OD(F)	Open Defecation (Free)
ОрЕх	Operational and minor maintenance expenditure
PWD	Persons With Disabilities
RWH	Rainwater Harvesting
RWS	Rural Water Supply
S/C, SC, S-C	Sub-county
SDG	Sustainable Development Goal
SFD	Shit Flow Diagram
SMS	Safely Managed Sanitation
SSIP	Sector Strategic Investment Plan
TSU	Technical Support Unit
UBOS	Uganda Bureau of Statistics
UNMA	Uganda National Meteorological Authority
UWASNET	Ugandan Water and Sanitation Network
UWSS	Urban Water Supply & Sewerage
VHA	Village Health Assistant
VHT	Village Health Teams
WASH	Water, Sanitation, & Hygiene
WMZ	Water Management Zone
WP	Water Point
WSC	Water and Sanitation Committees
WSS	Water & Sanitation Sector
WSSB	Water Supply and Sanitation Boards
YY	Yehora Yeguza

# PREFACE ///

There was much to be optimistic about when reviewing and planning for the Kamwenge WASH sector. The Everyone Forever impact model implemented since 2012 in partnership with Water For People is bearing promising results. The model that was designed to ensure every household, community, school, and clinic has access to sustainable safe water, sanitation, and hygiene services, was able to elevate the water service levels in the district from 49.8% in 2015 to 64.3% in 2019.

The Everyone Forever call is to reach 100% of the people in Kamwenge. The concrete and central role of the effective partnership and stakeholder involvement in the WASH sector in achieving the call cannot be over emphasized. The achievement of the 64.3% coverage in 2019 is attributed to joint collaboration and efforts by partners, enhancing this collaboration and increase will make the aims of this Master Plan a reality. The main stakeholders include the District Local Government (DLG), the Ministry of Water and Environment (MWE) and partners - non-governmental organizations (NGOs) (including Water For People, Health Through Water and Sanitation (HEWASA), PROTOS, Joint Effort to Save the Environment (JESE), Lutheran World Federation (LWF), and World Vision, among others), the private sector, and communities in the District. Despite the stakeholder efforts, there still remains some partnership and programmatic challenges. Coverage and status of WASH facilities especially at household levels, existence of unserved communities, inadequate financing, surging numbers of refugees, weak leadership, poor policy implementation, reservations in sharing of stakeholder action plans, to mention a few. The new Master Plan seeks to address these challenges, to ensure continual advancement towards Everyone Forever.

The Kamwenge District WASH Master Plan is an all-encompassing document that provides a framework for coordinating and aligning efforts of all stakeholders towards achieving universal access to WASH services in the District. It is a 10-year (2020-2030) Plan which describes the broad vision, targets and strategies towards achieving the desired universal and sustainable WASH services in Kamwenge District. The document provides details on the Kamwenge District profile, state of WASH, Environment as well as Water, and Natural Resources, financing, projections, strategic actions, communication, advocacy and networking components, monitoring, evaluation and learning, as well as costing and planning.

Plan development was participatory and followed standard strategic planning processes. The Plan was informed by a detailed desk review of all relevant reports to capture progress achievements, remaining and emerging challenges; The baseline studies undertaken by Implementing Partners (IPs) were used to triangulate and concretize data on the status of WASH in the district, the National Development Plan (NDP) II Sector Strategic Investment Plan (SSIP), Sustainable Development Goals (SDGs), and the Kamwenge District Development Plan (2013- 2018) to align aspirations with the national, sectoral and Local government level aims. A visioning workshop (2019) to review and develop a new vision and problem tree analysis (2019) to critically explore the root causes of especially persisting WASH challenges. Excerpts from these documents are captured in the Master plan document. A number of consultants facilitated by Water For People assisted in the different development processes

Medium (2025) and long term (2030) WASH targets and financial projections are based on population growth of up to 359,881 midterm and 435,749 long term, and the implied WASH services demands. The overall main target is to have 100% basic WASH services in Kamwenge by 2030, and is expected to cost up to 72,770 million Uganda shillings. Targets under water and sanitation service for example include: 100% basic **Water services** in the long term in rural, urban and overall district average; safely managed services targets are 29.3% rural, 47.8% urban and 35% for District average; **Sanitation targets** midterm are 99% rural and 82% urban basic services and 49% rural, 60% urban safely managed services. The long-term targets are 100% basic services for both urban and rural, while safely managed are 57% rural, 68% urban and 57% district. Furthermore, stakeholders aim to achieve a pupil toilet stance ratio of 1:40 in schools and Patient toilet stance ratio of 1:25 in health facilities.

The total investment estimates midterm (2020 - 2020) stands at 35,935 million and 36,835 million (2026 - 2030) long term. These fall under the main budget lines of Household sanitation (29,619 million), Water supply (25,627 million), Institutional WASH (9,164 million), Software and source protection costs for Water supply (10% investment cost) (2,563 million), IWRM (4,420 million), and M&E costs (2% of Water, HH sanitation and IWRM costs) (1,288 million).

This document was designed to provide both current and future partners of Kamwenge DLG with the essential information for informed decision on program focus, financial and technical contributions, collaboration and coordination provisions.

# **ACKNOWLEDGEMENT**

The Kamwenge District WASH Master Plan 2020- 2030 was jointly developed by stakeholders, mobilized and facilitated by Water For People. These stakeholders provided invaluable input to ensure consistency, ownership and partnership strengthening throughout the process of developing this Master Plan. The main contributors hereby acknowledged include the District Local Government (DLG), the Ministry of Water and Environment (MWE) and partners - non-governmental organizations (NGOs) (especially Water For People, Health Through Water and Sanitation (HEWASA), Protos, Joint Effort to Save the Environment (JESE), Lutheran World Federation (LWF), and World Vision, among others), the private sector, and communities in the District.

Special recognition goes to the District Water Office Kamwenge and Water For People Staff in Kamwenge, responsible for mobilizing, coordinating, information sharing and keeping all stakeholders updated and involved in WASH activities in Kamwenge District and beyond.

A number of district leaders whose support and participation greatly elevated the levels of commitment during both the design process and subsequent stakeholder consultations include The LC5 Chairperson **Aggrey Natuhamya**, the Chief Administrative Officer Mrs Edith Mutabazi, councilors representing their constituencies and religious leaders.

Lastly, the contribution and support by the drafting team. Their down to earth and respectful approach to engaging stakeholders was a key contribution to the quality of contributions and the final document.

It was an honor to have been part of this noble development process that has potential to change lives and contribute towards social economic transformation in Kamwenge.

# **EXECUTIVE SUMMARY**

Kamwenge District is located in Southwestern Uganda. It consists of nine rural sub-counties and one urban town council. The 2014 Census indicated a population of 275,881, with a population density of 177 persons per square kilometer (km) over a total land area of approximately 2,439.4 km² (Uganda Bureau of Statistics 2014).

Kamwenge District has been implementing the Everyone Forever impact model, in partnership with Water For People, since 2012. The model is designed to ensure that every household, community, school, and clinic has access to sustainable safe water, sanitation, and hygiene services that will last. In 2015, the water service levels in the district were 49.8% rising to 64.3% in 2019 (Water For People annual Akvo Flow monitoring data, 2019). This progress is a result of the good coordination and collaboration between the District Local Government (DLG), the Ministry of Water and Environment (MWE) and partners - non-governmental organizations (NGOs) (including Water For People, Health Through Water and Sanitation (HEWASA), PROTOS, Joint Effort to Save the Environment (JESE), Lutheran World Federation (LWF), and World Vision, among others), the private sector, and communities in the District.

A number of tools and approaches have been used to deliver WASH services in Kamwenge, some of which have been scaled up to other districts in Uganda. The tools include the District Investment Plan (DIP), Asset Analysis, water safety plans, community score cards, and catchment management plans. A DIP task force, which is a subcommittee of the District Water and Sanitation Coordination Committee (DWSCC), was set up in 2016 to monitor the implementation of the DIP. The challenge, however, was the absence of a consolidated plan to utilize these planning instruments to attain the universal coverage goal. A lot of information was scattered in individual reports and some components like financing for direct support costs were not easily accessible. The stakeholders therefore agreed to develop a more comprehensive WASH Master Plan (the Plan) that contains the broad vision, targets and strategies towards achieving the desired universal and sustainable WASH services in Kamwenge District. The Plan covers a period of 10 years and Water For People has taken the lead in developing this document.

The Plan is informed by recent baseline studies undertaken by Implementing Partners (IPs), National Development Plan II, Sector Strategic Investment Plan (SSIP), Sustainable Development Goals (SDGs), and the District Development Plan. It is hoped that this WASH Master Plan will provide a framework for coordinating and aligning efforts of all actors towards achieving universal access to WASH services in the district.

The main contributors to the plan include the DLG and IPs (Water For People, JESE, HEWASA, Protos, UNICEF, World Vision, LWF, sub-county local governments, and town clerks).

The building blocks discussed in this plan include:

WASH Service Delivery Infrastructure: Supports the achievement of universal access
to safely managed WASH services to everyone in Kamwenge District by 2030 or earlier.
It defines the service delivery models, financing mechanisms for cost recovery, and
strategic actions for achieving the objectives and set targets. This includes water supply,

- sanitation and hygiene in rural and urban households, schools, and health care facilities. The sanitation component defines all aspects of the fecal sludge (FS) management chain (improved toilets, service delivery models, and financing for sanitation).
- **2. Finance:** Describes the costs required to achieve WASH services for everyone. The plan describes direct support costs, capital expenditures (CapEx), operational and minor maintenance expenditure (OpEx,) recurring capital maintenance expenditure (CapManEx). A blend of finance taxes, tariffs, and transfers will be discussed here.
- 3. Water Resources and Environment (quantity and quality): Describes how the district will prevent degradation of both water quality and quantity of underground and surface water through enhanced implementation of catchment- based water resources management.
- **4. Institutional Arrangements and Coordination:** Strengthens government systems to deliver safe and sustainable WASH services for everyone, support human resource orientation, capacity building and technical assistance, streamline roles of the district for effective planning, partner coordination, and implementation.
- **5. Regulation and Accountability**: Focuses on transparency, accountability, and participation. A framework for the plan implementation, regulation of the service providers, and accountability between the district and other service providers including Umbrella, National Water and Sewerage Corporation (NWSC), and the Hand Pump Mechanics Association (HPMA).
- **6. Monitoring**: Defines the monitoring processes related to service levels, functionality of water systems, open defecation free (ODF), handwashing with soap, and water resources management (WRM) activities.
- **7. Learning and Adaptation**: Annual reflection to monitor progress using the DWSCC as a learning and accountability platform for all levels including sub-counties, including thematic learning exchanges, communication, advocacy, and network strategy for the plan including key messages, audiences, communication channels and key strategic actions.
- **8. Planning:** Alignment to district development plans and the district planning and budgeting cycle including updated annual plans, bottom-up planning from the subcounty local government.
- **9. Cross-cutting Issues** *Gender, Equity and Inclusion*: Describes the disparities and inequalities in WASH service delivery and how vulnerable populations will be accounted for in service delivery models.

# Introduction

# 1.0 INTRODUCTION

#### 1.1. OVERVIEW

The Kamwenge District WASH Master Plan reaffirms the vision of the stakeholders in the district. This **vision** has been maintained since its conception in 2012 – **that every person in Kamwenge District will have access to safe water, sanitation, and hygiene services where people and nature flourish together**.

The Master Plan provides a 10-year (2020 – 2030) framework for interventions in the water and sanitation sub-sector. The plan will enable the DLG to take the necessary leadership including coordinating stakeholders to ensure that all efforts and investments are aligned towards achieving the same vision for WASH service delivery in the district.

# **1.2. SCOPE:**

The WASH Master Plan is structured along the following areas:

- Water Supply Service Delivery aims to attain universal access to sustainable basic water services for everyone in Kamwenge District by 2030. It defines the service delivery models, financing mechanisms for cost-recovery, and strategic actions for achieving the objectives and set targets.
- **Sanitation and Hygiene** aims to increase access to improved and reliable environmental sanitation services by 2030. It defines the service delivery models, financing mechanisms and cost recovery and strategic actions for achieving the objectives and set targets in rural and urban communities and institutions (schools, health facilities).
- Integrated Water Resources Management (IWRM) aims to increase the pace of implementation of WRM strategies in the district to ensure sustainable water quality and quantities. This also addresses wetland management and water resources monitoring.
- **Equity and Inclusion** describes the disparities and inequalities in WASH service delivery, their effects, and key mitigation measures.
- **District Capacity Development** Focuses on the capacity development needs of the district staff and support structures, to ensure effective plan implementation, monitoring and evaluation.
- Communication, Advocacy and Networks focuses on communication, advocacy, and network strategy for the Master Plan including key messages, audiences, communication channels, and key strategic actions.
- Partnerships and Implementation Arrangements determines the role of various actors and the coordination mechanisms for the plan implementation.
- Monitoring, Evaluation, and Learning defines the monitoring, evaluation, and learning framework for the plan implementation and accountability.

# 1.3. MASTER PLANNING PROCESS

Implementation of the 2013-2018 DIP provided a lot of learning for the Kamwenge DLG and its development partners. It is the foundation for this master plan. The DIP focused more on capital investments for water and sanitation infrastructure in schools, health care facilities, and families. The required software activities for demand creation, community engagement, and sustainability were also included.

The master planning process commenced in January 2019, ending in November 2019, and took a strategic focus on sustainability of WASH service provision including WRM. The scope also included sanitation in urban centers. The process was participatory and involved multiple stakeholders at local, regional, and national levels. The Kamwenge DIP committee was at the forefront of the review. The review process adopted several WASH system analytical tools to identify the challenges in WASH service provision and solutions to address them.

The review process entailed the following steps:

# 1.3.1. Context Analysis

Detailed context and gap analyses were undertaken to take stock of the existing WASH situation in the district and identify the needs and requirements for full WASH coverage. The process, which involved desk review and interviews, focused on key areas of WASH delivery including: district profile, policy environment, capacity for WASH delivery, operational and service delivery issues and key opportunities, success factors and challenges. In addition, a stakeholder analysis was carried out to map all the key stakeholders in the district and outside, and opportunities to build partnerships to leverage support for the Master Plan implementation.

# 1.3.2. Kamwenge WASH Visioning Workshop

A visioning workshop facilitated by Water For People was held from 24<sup>th</sup> to 25<sup>th</sup> April 2019. This drew stakeholders from government (central and local), private sector, service providers, development partners and the community. Participants included IPs (World Vision, JESE and HEWASA), the district leadership and heads of departments and leaders of religious institutions.

The workshop specifically sought to define the vision, objectives, strategic actions and targets for WASH Service delivery in line with the vision as presented in the schematic below

<sup>&</sup>lt;sup>1</sup> Basic service as per SDG definition refer to annex 1 for details

**Vision** 

People and nature flourish together in a transformed healthy and productive society, with sustainable WASH services.

Mission

Reaching every household, school and health facility in Kamwenge with safe and affordable WASH services



- Establish reliable partnerships among government and nongovernment organizations to leverage resources for WASH
- To strengthen sustainable coordination and networking of WASH partners for improved service delivery
- To ensure effective coordination and participation of all WASH stakeholders
- To develop strategies for a comprehensive WASH stakeholder engagement that will result in sustainable WASH culture
- To scale up nature conservation through integrated water management resources management
- To promote co-financing of WASH initiatives

# 1.3.3. Kamwenge Asset Analysis

The Assets Analysis tools developed by Water For People, and now used by all the nine technical support unit (TSU) staff in Uganda as well as over 20 DLGs, were used to collect and analyze data for Kamwenge District. The asset analysis exercise, as detailed in annex 2, was aimed at ascertaining the physical state and service levels of existing systems in the district, as well as determining the cost of Capital repair and replacement.

# 1.3.4. Level of Service Monitoring

District-wide community and household-level monitoring has been undertaken at least once a year in Kamwenge since 2012. Monitoring empowers the partners and the local government staff to identify strengths of WASH service provision and areas of weakness. To date, data is typically collected by teams consisting of LG extension workers. The 2019 monitoring exercise included a scorecard in the four core areas below:

- Water Service Level Score for water points/systems derived from water point/system data
- **2. Water Service Provider** Score for those responsible for the long-term sustainability of water points/systems in a community.
- 3. Household Sanitation Score for water and sanitation services
- 4. Public Institution WASH Score derived from data from schools and clinics

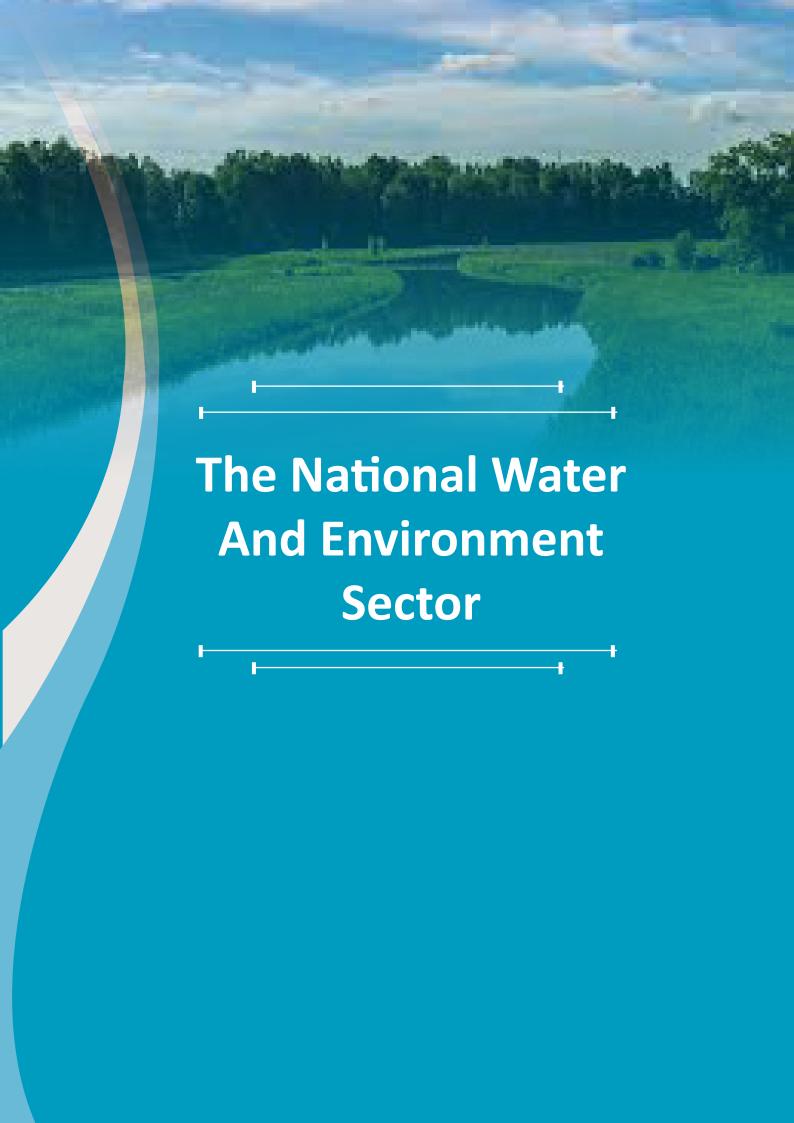
For sustainability, three pillars of sustainable services are evaluated, and these include the following:

- Service Authority Regulation of water and sanitation services
- Service Provider Management of day-to-day operations of specific water systems and sanitation
- WRM Ensuring water quality and source protection

The LOS were determined and defined for each as detailed in section 3.

# 1.3.5. Problem Tree Analysis

Building on the visioning exercise that was undertaken by the Kamwenge DLG, a problem tree analysis was undertaken to clearly define the key issues, problems and in the water services and sanitation sub-sector. The analysis highlighted the key problems and root causes that the DLG should prioritize. This problem tree analysis has been utilized in defining the strategic actions, as defined in section 6



# 2.0 THE NATIONAL WATER AND ENVIRONMENT SECTOR



#### 2.1. OVERVIEW

In 2008, the water and sanitation sector (WSS) was merged with the environment and natural resources (ENR) sector to become the water and environment sector. The sector comprises nine components, five within the WSS sub-sectors and four within the ENR sub-sector.

W	SS SUB-SECTOR	ENR SUB-SECTOR				
1.	WRM	1. Forestry				
2.	Rural Water Supply (RWS) <sup>1</sup>	2. Wetlands and aquatic resources management				
3.	Sanitation and Hygiene <sup>2</sup>	3. Meteorology				
4.	Urban Water Supply and Sewerage (UWSS) <sup>3</sup>	4. Climate change				
5.	Water for Production (WfP) <sup>4</sup>					

The Kamwenge WASH Master Plan focuses mainly on the WSS sub-sector for components where service delivery is decentralized. The ENR components are cross cutting and considered as part of WRM.

# 2.2. SECTOR INSTITUTIONAL FRAMEWORK

The institutional sector framework summarized in Figure 1 consists of:

- The **MWE** with the **Directorates** for Water Development (DWD), Water Resources Management (DWRM) and Directorate of Environmental Affairs (DEA);
- A number of de-concentrated support structures related to MWE, including TSUs, Water Supply Development Facilities (WSDFs), Water Management Zones (WMZs), and Umbrellas for Water and Sanitation Authorities:
- **Local Governments** (Districts and Town Councils), which are legally in charge of service delivery under the Decentralization Act.

<sup>&</sup>lt;sup>1</sup> RWS covers communities, villages with populations up to 1,500 & Rural Growth Centers (RGCs) with populations between 1,500 and 5,000.

<sup>&</sup>lt;sup>2</sup> Sanitation sub-sector covers household sanitation, school sanitation and public sanitation. Hygiene integration and hand washing are integral parts

<sup>&</sup>lt;sup>3</sup> UWSS covers 23 large urban towns and 30 satellite urban areas under the management of NWSC, and 201 small towns gazetted Municipalities, Town Councils and Town Boards outside the jurisdiction of NWSC.

<sup>&</sup>lt;sup>4</sup> WFP covers includes the following sub-sector components; water for crops, water for livestock, water for aquaculture, water for rural industries

- Four semi-autonomous agencies: (i) National Water and Sewerage Corporation (NWSC) for urban water supply and sewerage; (ii) National Environment Management Authority (NEMA) for environment management; (iii) National Forestry Authority (NFA) for forestry management Central Forest Reserves; and (iv) the Uganda National Meteorological Authority (UNMA) for weather and climate services;
- NGOs/community-based organizations (CBOs) these are coordinated through Uganda water and sanitation network (UWASNET) and the ENR-civil society organization Network. CBOs may include Water User Committees/Associations;
- The **private sector** operators/ infrastructure management services, contractors, consultants and suppliers;
- Communities who are the users.
- Other related Ministries (like finance, local government, education, health) provide coordination, oversight and policy support functions as per mandate

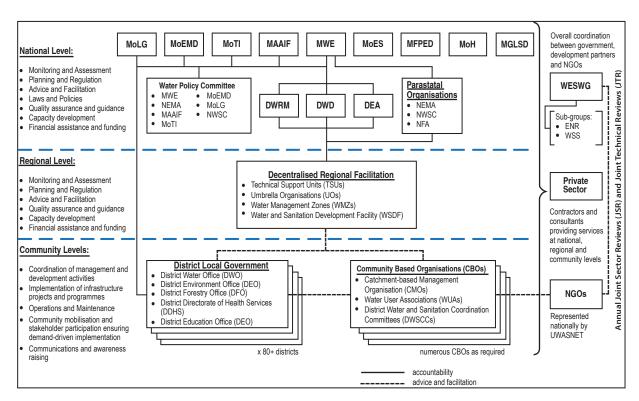


Figure SEQ Figure \\* ARABIC 1: MWE institutional structure

# 2.3. SECTOR VISION AND MISSION

The vision for the water and environment sector is "sound management and sustainable utilization of water and environment resources for the present and future generation" while the mission is "To promote and ensure the rational and sustainable utilization, development and effective management of water and environment resources for socio-economic development of the country" (MWE, 2017).

# 2.4. STRATEGIC OBJECTIVES

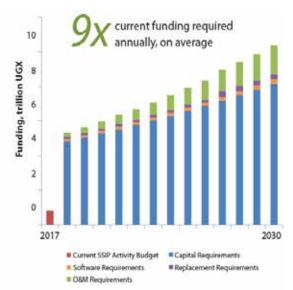
The Sector Strategic Plan for the Ministry of Water and Environment (2018) lists below the strategic objectives for the sector:

- i. To increase provision of water for production through development of multi-purpose bulk water storage and supply systems with the involvement of all stakeholders as appropriate.
- ii. To increase water supply coverage in rural areas while ensuring equity through providing at least each village with one safe and clean water source and where technically feasible piped water options (gravity flow systems, solar pumped boreholes and surface treated systems) will be considered.
- iii. To promote improved sanitation services in rural and urban areas including the promotion of handwashing with soap.
- iv. To increase water supplies and sewerage services in small towns, large towns, municipalities and cities focusing on the areas earmarked for industrial parks.
- v. To improve WRM to ensure adequate quantity and quality for the various uses focusing on compliance to existing laws and regulations on the use of the resources at all levels.
- vi. To increase the sustainable use of the ENR through restoration and to maintain the hitherto degraded ecosystems and undertake massive nationwide tree planting.
- vii. To promote the wise use of wetlands through implementation of approved management plans developed in a participatory manner.
- vii. To increase the functionality and usage of meteorological information to support sector specific early warning to combat the effects of climate change and disaster risks.
- ix. To develop sector capacity throughout all the institutions and support other stakeholders in the sector.
- x. To review, develop and reform institutional frameworks, laws, policies and regulations to ensure fast and effective delivery of services.
- xi. To promote gender and equity considerations and increase the fight against HIV/ AIDS through the sector programs.

The objectives are well defined and aligned with the global commitments including the SDGs.

#### 2.5. FINANCING FOR THE SECTOR

The SSIP (2018) outlined the sector investment requirements for attainment of the SDG targets estimated as UGX 5.10 trillion annually and increasing to UGX10 trillion by 2030.



The current funding levels for the water and environment sector are at UGX 800 billion, implying a huge funding gap to realize the SSIP targets. Figure 2 aside, reiterates the funding requirements, up to nine times the current funding is required if the sustainable service requirements for the sector are to be achieved. This is amidst the ever-growing population (now at a rate of 3.1% annually) and increasing service delivery demands.

Figure 2: Annual sector funding requirements to reach 2030 targets (SSIP, 2018)

### 2.6. SECTOR PERFORMANCE

# Water supply and sanitation

According to the MWE Sector performance report, 2019; as of June 2019, the percentage of the rural population using an improved water source was estimated at 69% (compared to 70% in FY2017/18). Access to safe drinking water in the urban water increased to 79.1% (up from 74%). The functionality for rural water supplies remained the same (85%) as in FY 2017/18. The government of Uganda has aligned itself to the SDGs and has agreed to achieve the related targets which include water resources and environmental management. Given the current funding, increasing marginal costs and a rapidly growing population, reaching these targets will be a challenge (SSIP, 2018). This is further exacerbated by the low coverage figures for the SDG indicators.

The Joint Monitoring Report (2017) report for Uganda summarized in Figure 3 for example, puts the access levels for safely managed water at 7% basic sanitation coverage is 18%. Similarly, the school WASH statistics in Figure 4 indicate that 69% of the school population have access to basic drinking water, 79% with access to basic sanitation and 37% access to basic hygiene in Uganda (Figure 4).

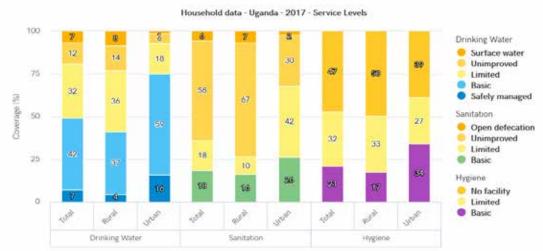


Figure 3: Household service levels (source JMP data 2017)

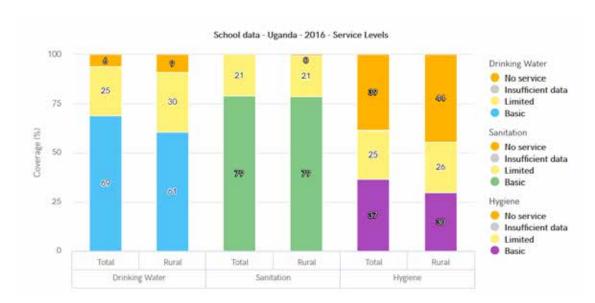


Figure 4: Schools service levels

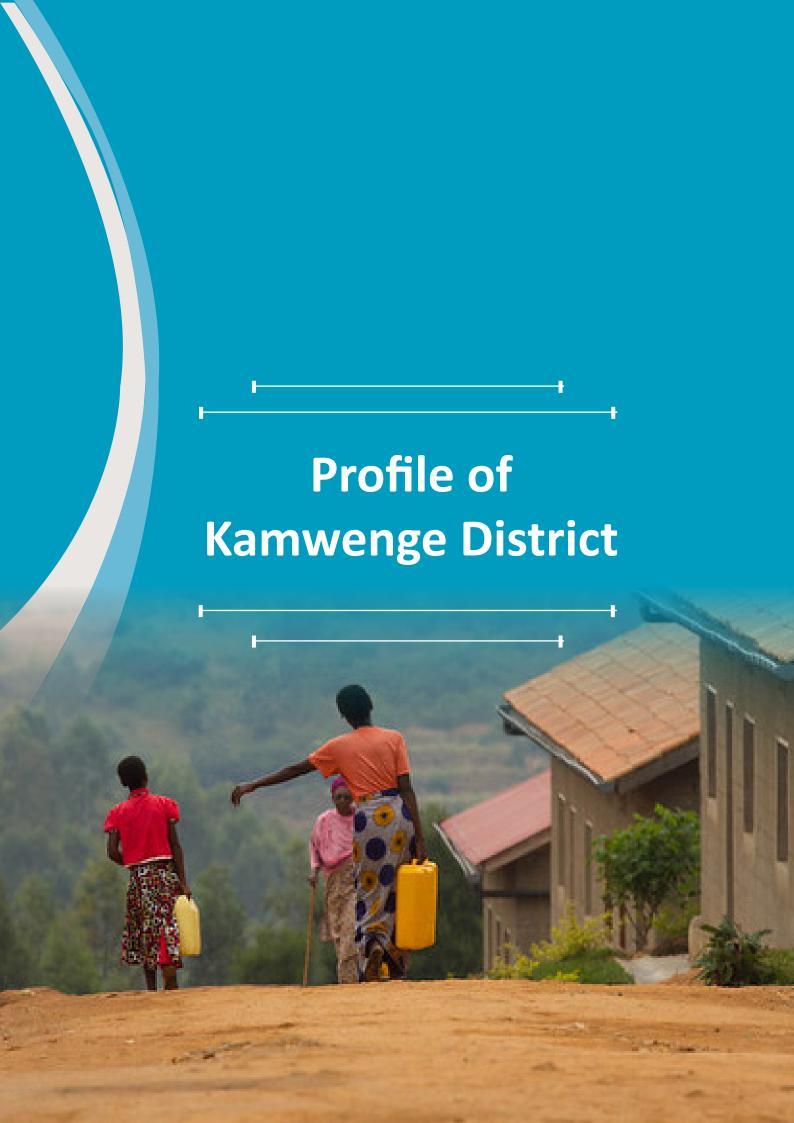


The situation in health care facilities, as presented in Figure 5, indicates very low levels of service. Access to water and sanitation services in both rural and urban facilities is largely a limited service.

Figure 5: Health care facilities service levels

# Water Resources Management (WRM)

The sector has registered some successes in WRM according to relevant key performance indicators. The compliance levels in 2019 with respect to E. coli for small towns was 93% while compliance level for large towns was 96%. Issuance of water permits and monitoring compliance for groundwater and surface water abstraction, wastewater discharge, construction and dredging licenses are some of the targets the sector has set and monitors.

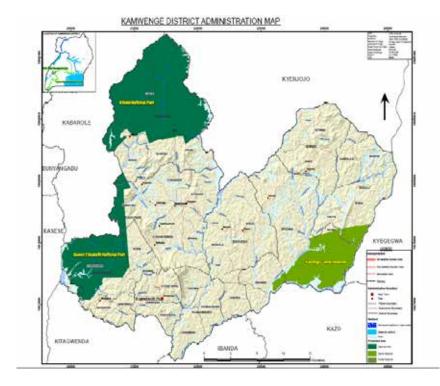


# 3.0 PROFILE OF KAMWENGE DISTRICT



#### 3.1. LOCATION

Kamwenge was gazetted as a Districts of Uganda in November 2000 by an Act of Parliament and became operational in July 2001. In 2019, the district was split into two; Kitagwenda and Kamwenge Districts. Kamwenge District is bordered by Kyenjojo District to the north, Kyegegwa District and Kazo District to the northeast, Ibanda and Kitagwenda District to the east and southeast, Rubirizi District to the southwest, Kasese, Bunyagabu District to the West and Kabarole District to the northwest.



Kamwenge District can be accessed by road from the country's capital city Kampala or by helicopter. The railwayline through the district is no longer functional but is part of the development considerations in Uganda Vision 2040. Water transport is available on Lake George connecting to Rubirizi and Kasese Districts.

# 3.2. ADMINISTRATIVE STRUCTURE

Kamwenge District comprises one county (Kibale), nine rural sub-counties, two town councils and 43 parishes, as further detailed in Table 1. Efforts to operationalize the town boards and gazette town councils have been overtaken by events including the impending policy changes to curtail creation of new administrative units. The Kamwenge District Council is the planning authority for the District. The council prepares comprehensive and integrated development plans incorporating plans of lower local governments for submission to the National Planning Authority (Kamwenge District Development Plan (DDP), 2015)

Table 1 Administrative units of Kamwenge District

NO.	SUB-COUNTY	NUMBER OF PARISHES	NUMBER OF VILLAGES
1	Bwizi	3	40
2	Biguli	4	40
3	Kahunge	4	49
4	Kahunge T/C	2	22
5	Nkoma	5	46
6	Bihanga	3	31
7	Busiriba	7	47
8	Kamwenge	6	34
9	Kabambiro	4	30
10	Kamwenge T/C	5	26
	TOTAL	43	365

# 3.3. DEMOGRAPHIC CHARACTERISTICS

The 2019 population is estimated at 286,065, based on projections from 2014 Census statistics. The population distribution in the district varies across sub counties, as shown in Table 2. The variations are attributable to several factors including environmental (level of soil fertility), migration, historical factors and the level of economic activities. Migration is particularly evidenced by the Rwamwanja refugee settlement.

Table 2: 2014 Population and households characteristics in Kamwenge

No.	Sub County	No. Of HH	Avg HH Size	Male	Female	Total	Land Area	Population Density
1	Biguli	7,056	4.9	17,000	17,231	34321	167.9	204
2.	Bihanga	2,987	4.8	6,967	7,341	14,308	157.5	91
3.	Busiriba	5,998	4.7	13,489	14,555	28,044	319.2	88
4.	Bwizi	6,097	4.9	14,044	14,720	28,764	127.9	225
5.	Kabambiro	3,639	4.5	7,327	8,157	15,484	65.2	237
6.	Kahunge	7,640	4.8	17,590	18,810	36,400	243.1	150
7.	Kamwenge	4,947	4.6	10,604	11,406	22,010	231.9	95
8.	Kamwenge TC	4,655	4	9,578	9,708	19,286	68.1	283
9.	Nkoma	6,851	4.7	16,113	15,841	31,954	314.2	102
10.	Rwamwanja Refugee Camp	8,913	4.4	19,825	20,362	40,187		
	TOTAL/AVE	58,783	4.63	135,244	140,637	275,881	1,695	177

Source: National population and housing census 2014 final report by Uganda Bureau of Statistics (UBOS)

Kamwenge has a very young population, almost 55% of the population is below the age of 17 years, just like the rest of Uganda.

#### 3.4. TOPOGRAPHY

Kamwenge District has an undulating landscape that includes the flat Great Western Rift Valley that hosts the Queen Elizabeth National Park. The topography within two miles of Kamwenge District contains significant variations in elevation, with a maximum elevation change of 545 feet and an average elevation of 4,145 feet above sea level. This area is covered by cropland (93%), within 10 miles by cropland (75%) and grassland (10%), and within 50 miles by cropland (36%) and trees (34%).

# 3.5. CLIMATE

Kamwenge receives bimodal rainfall (March-May and August-November) estimated at 700-1,400mm annually, with temperatures ranging from 20-25 degrees Celsius. August to November is the main production season for agricultural activities.

# 3.6. VEGETATION AND LAND USE

The district is endowed with numerous wetlands, tropical forests in the Kasyoha/Kitomi region, and Kibale National Park, which it shares with Kabarole and Kyenjojo districts. In Bwizi sub-county, there are pockets of highland tropical forest, on the mountain ranges. There are numerous natural resources (DDP, 2015) in the district including:

- i. National Parks/Reserves such as Katonga Game Reserve, Kibale National Park and Queen Elizabeth National Park.
- ii. Sanctuaries such as Bigodi Wetland Sanctuary, and Lake George Ramsar site
- iii. Lakes and rivers such as River Mpanga from Kabarole through Kyenjojo to Kamwenge into Lake George, River Dura which forms the Kamwenge and Kabarole border, River Rushango which forms the border between Kamwenge and Ibanda/Rushango Town Council.
- iv. Minerals such as limestone in Dura, gold in Kitaka, tin, marble sand and clay, and quarry stone.

# 3.7. GEOLOGY AND GEOMORPHOLOGY

The general Geological Map of Uganda shows that the district consists of Mica Schist with quartzite interbeds in the central region and Orthoquartzite, Conglomerate rocks in the north. The geomorphology of the area appears to be mainly determined by the geology. Bedrock outcrops are common in the hillier areas but tend to be isolated. Much of the district is covered by varying thickness of infill deposits and swamp alluvium in the valley bottoms and by variably weathered bedrock elsewhere.

# 3.8. SOCIO-ECONOMIC SITUATION

According to a number of surveys undertaken by Water For People (2019) during the design of piped water systems, subsistence farming is the main economic activity – about 85% of the household heads in project areas. About 27% are engaged in retail trading/business and only 4% are in formal employment. Majority of the sampled households' monthly income fell between UGX 100,000 and UGX 200,000 represented by 28% while 25% earned less than UGX 100,000. Those that earn between UGX 200,000 – UGX 500,000 are 33% and only 4% earn above UGX 500,000. The mean walking distance to fetch water for households is about 0.72 km. This especially affects the women and children because a lot of productive time is spent on collecting water.

According to the DIP 2019, the district has 87 educational institutions: 79 primary and eight secondary schools. The district also has one vocational institute (Ave Maria Technical) in Kamwenge town. The district has 18 health care facilities including 10 health centers (HC) II, 6 HCIII, and 2 HC IV. Out of the four top diseases in the district in 2015, three are WASH-related diseases. These include: malaria (leading cause of morbidity), diarrhea and onchocerciasis.

According to the District Development Plan 2015 – 2020, Kamwenge DLG has four principal sources of funds (i) locally generated revenue for example from royalties, payment for services including tourism like park fees, (ii) funds from government (unconditional and conditional grants and other transfers) (iii) community contributions and development partner investments. The largest portion (85%) of the budget is financed by/ through the central government.





# 4.0 ANALYSIS OF WASH AND IWRM ISSUES

#### 4.1. WATER SERVICES

The status of water services in Kamwenge district is presented in this section. The coverage, key service levels and service delivery models are described, as well as analysis of the key sector challenges that require attention.

# 4.1.1. Coverage Statistics

Kamwenge District water supply status as at 2019 is 61%, implying an estimated unserved population of 111,509. There are 51 villages with no access to an improved water source. The spatial distribution of coverage presented in Figure 6 shows varied coverage across the different sub-counties and parishes. Overall, the majority of the sub-counties seem to have good coverage, although with limited equity of access. There are some pockets, with parishes in the orange (50-60%) and red (below 50%) zones, in Bwizi, Kahunge and Kamwenge sub-counties.

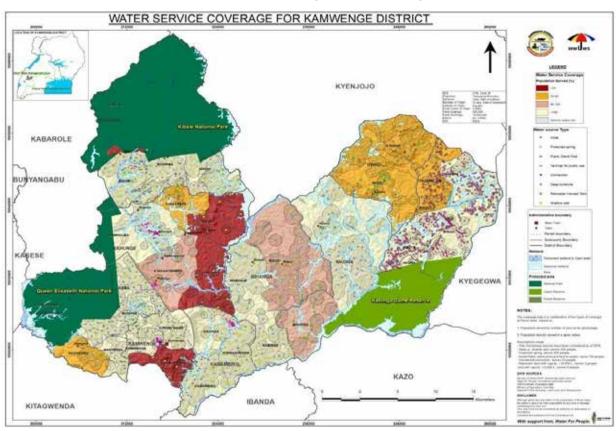


Figure 6: Water service coverage map - Kamwenge District. Source: Water For People (2019)

Table 3 further elaborates the coverage situation. Busiriba, Kabambiro, Kamwenge and Kahunge sub-counties and Kamwenge Town Council have coverage figures above the district average of 61%. However, the parishes of Kiwagara, Mpanga, Kaburasoke, although within the well performing sub-counties, are underserved and appear in the red coverage zone (less than 50%). Bwizi sub-county has the lowest coverage at 38%.

Table 3 Water services status - Kamwenge sub-counties

						Kahunge	Kamwenge	Kamwenge		
Sub County	Biguli	Bihanga	Busiriba	Bwizi	Kabambiro	SC & TC	SC	TC	Nkoma	District
Water Access	54%	59%	74%	38%	69%	68%	68%	74%	54%	61%
Functionality	95%	82%	72%	69%	75%	82%	68%	95%	73%	80%

Source: Reviewed Kamwenge district investment plan (Oct 2019)

# 4.1.2. Service Levels/Technological Options

Kamwenge district has invested in infrastructure using the technological options presented in Table 4 which contribute to the above coverage statistics. Water supply is mainly by ground water based with shallow wells and protected springs as predominant technologies. Tab presents the distribution of functional infrastructure by sub-county. As of October 2019, a total of 126 functional boreholes and 354 functional taps within piped water systems existed in the district. 70% of the taps are in Kamwenge TC and Buguli sub-counties.

Table 4 Water supply infrastructure in Kamwenge sub-counties

Technological option	Kamwenge TC	Kamwenge SC	Kahunge SC & TC	Kabambiro	Busiriba	Bihanga	Biguli	Nkoma	Bwizi	Total
Borehole	3	10	28	12	7	14	3	41	8	126
Rainwater	-	-	1	-	-	-	-	4	5	10
Piped system - Taps	133	24	24	19	1	2	123	28	-	354
Shallow well	10	45	67	41	69	24	23	33	23	335
Protected springs	32	20	14	7	53	1	13	11	25	176

source: Reviewed Kamwenge district investment plan (Oct 2019)

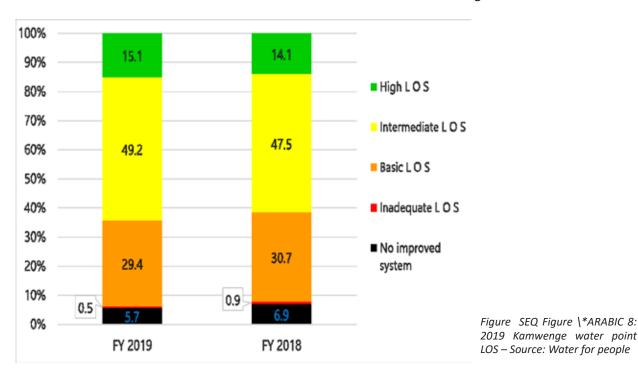
Although Busiriba,
Kamwenge and Kahunge
sub-counties recorded
high water service
coverage, this is mainly
through shallow wells
and protected springs
which provide only a
limited water supply
service. The real coverage
figures, considering basic
and adequate supply,
are thus considerably
lower.



Figure SEQ Figure \\* ARABIC 7 Map of spatial distribution of water sources in Kamwenge

Figure 7 on the spatial distribution of these water source points, generally indicates inequity of access within the sub-counties. Biguli has the most evenly distributed water sources, which are also the highest LOS (yard taps). Boreholes are mainly in Nkoma sub-county with the majority concentrated in the central parishes. Shallow wells and protected springs are spread across the district, but dominant in Kabimbiro, Bihanga, Busiriba and Bwiizi sub-counties. Rainwater harvesting is also practiced across the district.

The Level of service (LOS) for water points (557 water points, 187 public institutions and 1,890 households) as of March 2019 presented in the Figure 8 below. The year 2019 saw improvements in the water point LOS, from results in 2018 - 93.7% registered at least a basic level of service, up from 92.3%. The current assessment also indicates that 15.1% have a high LOS.



# 4.1.3. Service Delivery Models

Kamwenge District water service delivery models for management of water supply systems are detailed in Table 5. Infrastructure development/construction services are mainly provided by the private sector.

<sup>&</sup>lt;sup>6</sup> Water supply service is considered adequate when supplied on-plot and basic when collection trip is within 30 minutes

Table 5 Water service delivery models

MODEL	DESCRIPTION	SERVICE COVERAGE
Utility management – National water and Sewerage corporation (NWSC). NWSC is a public corporation established by Act	Piped water systems are gazetted by the MWE for management by NWSC under a performance contract. Water is supplied to customers on pay per use basis, through Household connections, yard taps, public stand posts and kiosks. A uniform volumetric tariff is charged, currently per M3 and a monthly bill is sent out to each customer	A number of rural and Urban areas in Kamwenge have been gazetted Schemes NWSC has 4 main service areas; Kamwenge TC, Kabuga, Kahungye and Katalyeba. Recently it has added Kabambiro Sub- County  The utility has 3359 connections
Umbrella model – Midwestern umbrella for water and sanitation (MWUWS). MWUWS is a company Limited by guarantee, with schemes as shareholders	Similar to the NWSC model with some variants under a performance contract. Water is supplied to customers on pay per use basis, through Household connections, yard taps, public stand posts and kiosks. A varying volumetric tariff is charged, currently per M³ and a monthly bill is sent out to each customers; (i) MWE through its urban water and sewerage department employs and supervises umbrella staff at the secretariat in Kyenjojo. (ii) Secretariat contracts and supervises scheme operators who are paid umbrella staff, (iii) Operators are responsible for day-to-day scheme operation, commercial operations (meter reading, customer care and billing) and basic maintenance (leakage repair). All other functions centralized at the secretariat, (iv) the volumetric tariff charged is scheme specific, based on user ability to pay routine O&M costs, (v) scheme major capital investments are subsidized by the MWE.  The governance structure for MWUWS includes an executive committee derived from the general assembly and key sector stakeholders. The general assembly comprises representatives from scheme water and sanitation committees (WSCs). WSC are consumer representatives on the different schemes.	Urban and rural areas in Biguli S/C. 10 systems under this model including: Biguli, Bwera-Kigoto, Kabale, Kanyanseko, Kayinja, Mahyoro, Nganiko, Nyabitooma, and Rwentuha  The MWUWS has approximately 5000 consumer connections

Community management	An elected committee of community volunteers to oversee management of Water points. Different tariff models are used including pay-as-you-fetch, monthly fees.  The Yehora Yeguza (YY) strategy is a local initiative that was started in the village of Rukooko parish and Mukono village in Kabambiro sub-county in Kamwenge District. The strategy is a community led initiative aiming at ensuring proper O&M of water facilities. It responds to the usual challenge of non-functionality of water source committees which are always formed and trained but are only active for a short period of time.	Boreholes KPIs
Water Supply and Sanitation Boards (WSB)	A form of community management that involves a WSSB, that provides oversight to operation of consumer supply points (Taps).  The WSB comprises seven community representatives and operates mainly on a voluntary basis. An operator is engaged under some form of "management contract" for the day-to-day operations. These include collection of bills.	Rural piped water systems. Kamwenge has four boards (Kabambiro, Busiriba, Kahunge and Kamwenge)
Self-supply	Infrastructure is provided and managed by households and institutions with no external subsidy.  Financing and technical support is sometimes provided. Financial products/unsecured WASH loans are provided by institutions like Post bank and HOFOKAM	Both rural and urban areas  Includes rainwater harvesting, shallow wells and boreholes

# 4.1.4. Service Delivery Challenges and Gaps

The key water service delivery challenges as reiterated during the problem analysis and visioning exercise include:

- Over 110,000 still do not have access to any reliable water source and 6% of the villages
  have no improved system. The majority of the 61% reported coverage is through
  shallow wells and springs, which provide only limited water supply services. Shallow
  wells in particular, have been disallowed by the water sector in Uganda. Kamwenge
  District therefore needs to invest a lot more to provide improved water supply through
  upgrades and new infrastructure.
- The water resource is at threat, with reported seasonality of springs and shallow wells sources, particularly during the dry period (December to February and June to August)

- Over 40% of the population served by piped water systems complain about the high water tariffs, which compromises continued access to safe water supply and thus attainment of the SDGs 6.1 targets.
- Poor water quality at water supply points. Of the over 500 samples tested from different water points in 2019, 53% and 56% were not compliant with the national drinking water standard requirements for E-Coli (0) and Turbidity levels (5NTU) respectively.
- Poor water point physical condition and functionality, especially in Kicheche, Kanara, Busiriba and Nkoma sub-counties. These sub-counties also have no designated hand pump mechanic (HPM), to support maintenance requirements.

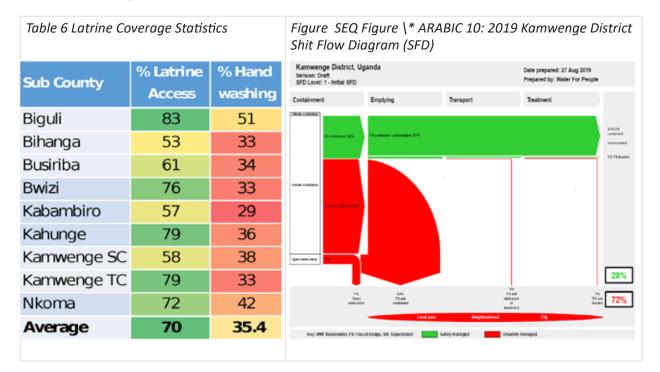
# 4.2. SANITATION AND HYGIENE

The status of sanitation and hygiene service delivery across the sanitation value chain (capture, containment, emptying, transport, treatment, and safe reuse or disposal) is presented in this section.

# 4.2.1. Coverage Statistics

The 2019 latrine coverage for Kamwenge District is 70% with wide variations across the subcounties – ranging from 53% in Bihanga to 83% in Biguli, as presented in Table 6. Overall, fecal sludge in Kamwenge District, is to a large extent not safely managed. The 2019 district shit flow diagram, illustrated in Figure 10, indicates that only 28% of FS is safely managed. According to the latrine coverage statistics, a total of 86,106 people still lack basic sanitation services. There are no established monitoring mechanisms to ensure safe disposal and treatment.

Hygiene coverage is generally very low in all sub-counties, with the highest in Biguli at 51% and the district average is 35.4%.



# 4.2.2. Urban Sanitation Coverage

Safely managed sanitation coverage in the six town councils of Kamwenge, as presented in Table 7 closely matches the district statistics. Kabuga Town Council has the highest coverage at 44%, albeit with the least population and Kamwenge Town Council, that hosts the district headquarters, has the lowest at 22% with a related coverage of unlined pit latrine toilets, of 90%. Generally, unlined pit latrines are the predominant urban FS containment technological option, with a coverage of 74% and above. Open defecation (OD) is also practiced in these urban centers, with OD status of up to 15%, reported in Kahunge Town Council. The public health risk population is very high, for example, Nkoma-Katalyebwa Town Council alone, has an estimated population of 9,000 practicing OD.

Table 7: Key 2019 Town council sanitation statistics – Kamwenge<sup>1</sup>

		KEY COVERAGE STATISTICS		
TOWN COUNCIL	POPULATION (2019)	SAFELY MANAGED SANITATION	OPEN DEFE- CATION	UNLINED PITS
Bigodi	12,000	21%	5%	93%
Biguli	40,000	23%	4%	93%
Kabuga	5,200	44%	2%	74%
Kahunge	20,000	28%	15%	77%
Kamwenge	26,000	22%	7%	90%
Nkoma- Katalyebwa	75,000	32%	12%	75%

# 4.2.3. Status of the Sanitation Value Chain

# 4.2.3.1. Kamwenge District Sanitation Service

Kamwenge District is 100% non-sewered. The current status of FS management sanitation services in the district is skewed towards the capture and containment stages of the sanitation value chain, as presented in Table 8. This is particularly so in the rural areas where the main toilet technological options are of the drop and store type. The level of sanitation service can be categorized as predominantly unimproved to limited.

Emptying, through to treatment, is mainly in the urban areas/town councils. The current costs for emptying services are relatively high, at about UGX 500,000 per pit emptying trip for a cesspool truck and as low as UGX 180,000 for Gulpers – attributable to few service providers and the long haulage distance to the nearest designated treatment plant in Ishongororo 40km away).

<sup>&</sup>lt;sup>7</sup> Data from the report on Assessment of Sanitation Service Delivery and Priority Strategic Actions for Town Councils in Kamwenge District. Water for People – Uganda (2019).

Table 8: Status of FS management service delivery in Kamwenge

Capture and Containment	Emptying and Transport	Disposal and Treatment	Reuse
Mainly through drop	Emptying mostly done for	Disposal methods	
and store toilet	septic tanks and Lined pit	used:	
options. Existing	latrines especially for	<ul> <li>Safe on-site burial</li> </ul>	Not a
containment options	institutions, offices and	<ul> <li>Cover and abandon</li> </ul>	common
are:	business premises	pits when full	practice in the
<ul> <li>Lined Ventilated</li> </ul>		Waste water	district.
improved pit latrines	Emptying methods used	treatment lagoons in	Limited cases
(VIP) - 3%	include: manual, semi-	Fort portal.	of FS resource
<ul> <li>Unlined traditional</li> </ul>	mechanised (gulpers) and		recovery and
pit latrines (TPLs) -	mechanized (cesspool	<b>Treatment</b> is done at	reuse from
84%	trucks/ emptiers)	the Lagoons in Fort	Ecosan toilets
• Septic tanks - 2%		portal. There is no	reported.
• Ecosan toilets - 4%	Transportation is by both	designated FS	
• Open defecation -	Manual and Motorized	treatment facility in	
7%	(trucks) means	Kamwenge	

Source: Water For People - Assessment of Town Sanitation Service Delivery in Kamwenge (2019)

# 4.2.3.2. Town Sanitation Service Delivery

An assessment of the sanitation service delivery situation in the town councils indicates that overall, a lot still needs to be done to achieve sustainable sanitation services. Results derived from city wide service delivery assessment (CSDA<sup>2</sup>) tool scores most parameters in the red zone (poor).

Enabling	There is a good enabling environment, provided for by a rich policy and regulations and institutional framework, however operationalization is weak. In addition, there is no targeted planning for areas of the FS management chain and funding is inadequate.
Developing	FS management service development capacity is very low; safely managed sanitation coverage is very low, albeit with several capacity limitations in all town councils to achieve improved proper FS management. Emptying, treatment and disposal are almost non-existent.
Sustaining	Prevailing commitment to FS management service sustainability is considered low. Demand creation activities are evident. However, town sanitation/FS management specific standards and plans are non-existent to support improvements. Service coverage using unimproved toilet options unlined pits) is very high. Emptying services are largely unaffordable to the majority of the population.

<sup>&</sup>lt;sup>8</sup> CSDA uses standard key parameters to assess FSM service delivery against three thematic areas of enabling environment, development capacity and sustainability. scoring is in 3 bands that simulate the traffic signal - red = 0 (poor), yellow = 0.2 (developing) and green = 1 (good)

#### 4.2.4. Sanitation Service Delivery Models

Containment at household level is predominantly through self-supply, in line with national policy, notably, the Public Health Act. Subsidy by development partners is also provided especially as part of targeting vulnerable populations. The infrastructure is mainly constructed by the local private sector and management of household toilet facilities is a household responsibility. Provision of public and school toilets is the responsibility of the government. O&M of public toilets is usually delegated to the private sector and in schools, the school administration is responsible for this function.

Emptying and transportation is only by the private sector. A total of 01 cesspool emptier and 02 gulpers operate in Kamwenge District. These charge on pay per service basis for every emptying operation. Funds for maintenance of public infrastructure (including pit emptying) are part of the district conditional grant from the government of Uganda.

The WWTP in Ishongorora is managed by NWSC and the emptiers pay a tipping fee of UGX 15,000 for every disposal.

#### 4.2.5. Service Delivery Challenges and Gaps

Generally, the analytics on shit flow in Kamwenge indicate that 72% of the FS generated is not safely contained and/or disposed of, contributing to environmental pollution, the poor quality of water sources and thus disease burden. More investment is required in all stages of the FS management chain, from containment to safe disposal/reuse.

Over the last decade, Uganda has been on a dedicated drive to create OD free environments, through Community Led Total Sanitation (CLTS) promotion campaigns, however, OD still persists in Kamwenge including in the affluent urban centers.

The predominant toilet technological option is on the lower rungs of the sanitation ladder, calling for investments in technologies that facilitate safe management of fecal sludge

Inadequate planning for sanitation improvements in the district, in terms of resource mobilization and allocation, targeting the poor and vulnerable, appropriate approaches and technologies.

The district does not have proper FS or wastewater treatment disposal and treatment facilities. The available options for example the WWTP in Kabarole, present for long haulage distances. This also contributes to the high and unaffordable emptying costs.

Limited availability of quality data on access statistics, in particular, disaggregated data on sanitation facilities and users

#### 4.3. INSTITUTIONAL WATER, SANITATION, AND HYGIENE

Kamwenge District has several institutions including (i) 87 schools (primary and secondary), with a total enrollment of over 50,000 (ii) 18 health facilities from level II to IV with a total bed capacity of 932. The state of water supply and sanitation services to these institutions is detailed below.

#### 4.3.1. Institutional WASH LOS

The 2019 level of WASH services at public institutions in Kamwenge District, as assessed using the Water For People Akvo Flow metric, is presented in Figure 11 below. Results indicate that 40.4% of the institutions provide an intermediate service to users and a large majority (95.2%) provide at least a basic WASH service.

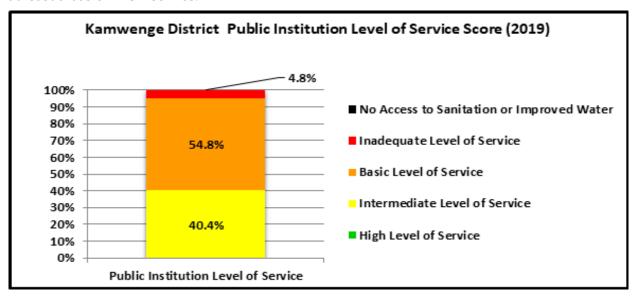


Figure 11: Kamwenge public institution WASH Level of service

#### 4.3.2. Institutional Sanitation

Kamwenge District has made significant investment in institutional sanitation as elaborated in this section. The existing toilet stance status is summarized in Table 9 below.

Table 9 Institutional sanitation status - existing toilet stances

SCHOOL TOILET STANCES									
CATEGORY/ GENDER	GIRLS	GIRLS BOYS		UNISEX		WASHROOMS			
Toilet stances (No.)	425	293		47		14			
HEALTH CENTRE TOILET STANCES									
CATEGORY	NO OF FAC	NO OF FACILITIES		CAPACITY		ET STANCES			
Health Centre II	10		37	1	40				
Health Centre III	6		24	8	45				
Health Centre IV	2		31	3	39				
TOTAL	18		932		124				

For schools in particular, the pupil stance ratio has improved over the years, although there is still a deficit in several schools, to meet the 1:40 national minimum standard. The average district pupil stance ratio is about 1:60, although schools like Busiriba Primary School and Kikiri Primary

School have ratios of over 1:150. Health centers have additional facilities for waste management, including placenta pits and incinerators, as detailed in.

Table 10 Infrastructure for medical/solid waste management

CATEGORY	LINED WASTE PITS	PLACENTA PIT	INCINERATOR
Health Centre II		5	
Health Centre III	3	4	1
Health Centre IV		2	2
TOTAL	3	11	3

#### 4.3.3. Service Delivery Challenges and Gaps

- Limited funding and prioritization of institutional WASH
- Limited capacity in management and coordination of institutional WASH activities

#### 4.4. RWAMWANJA REFUGEE SETTLEMENT WASH STATUS

Kamwenge district is a refugee hosting district in Uganda in which Rwamwanja Refugee settlement is located. UNHCR demographic statistics for Rwamwanja as at October 2019, indicate a total of 18,647 Households, with a population of 70,493, mainly Congolese nationals. About 52% of the population is female and the youth account for 15% of the population.

Uganda's has a favorable refugee protection regulatory framework which allows for settlement without encampment, freedom of movement and provision of basic services for refugees. WASH service delivery is under the management of UNHCR and the Prime Minister's office supported by implementation partners notably, African Initiative for Relief Development (AIRD), African Humanitarian Action, AVSI, the Hungarian government, the Lutheran World Federation (LWF), NWSC, OXFAM and the Windle Charitable Trust.

#### **Sanitation**

Sanitation coverage in Rwamwanja Refugee settlement is estimated at 39% latrine access and 23% handwashing status. The Kamwenge ODF road map indicates the need for full scale CLTS activities from triggering to ODF certification, in all the 44 villages in Rwamwanja. It estimates about UGX 75.2 million to achieve ODF status

#### Water Supply

The settlement has 91 water sources (72 are hand pumps, 6 motorized boreholes providing piped supply, 7 shallow wells and 6 protected springs) serving 14,960 people. This is about 21% coverage by population, and it is estimated that the average supply is 16 liters per person per day against the Basic target of 20 liters per person per day. UNHCR contracted a third-party service provider, RUSCO Water Technologies who is charged with ensuring continuous performance of all schemes including the necessary system maintenance. UNHCR on average spends UGX 50,000,000 (Fifty million shillings) on operation and maintenance costs. The community contributes UGX 1,000

per month towards maintenance of the supply network. These funds are managed at community level through water user committees, without the involvement of UNHCR.

#### **0&M**

Management of the piped systems was handed over to NWSC, which began operations in February 2020. UNHCR and partners remain responsible for the software-aspects of the water and sanitation service delivery sanitation including the required community engagement and monitoring of the service levels. A uniform volumetric tariff of UGX25 per 20Ljerrycan was agreed for the public stand posts (PSPs). In the Memorandum of Understanding between NWSC and UNHCR, the cost of the first 20 liters per person per day will be paid directly to NWSC by UNHCR. Payment for additional water consumption over this basic amount will be the responsibility of the water user. However, the payment modalities to operationalize this subsidy arrangement are still under development. A pre-paid token system is proposed for this.

#### **Existing Community Governance Structures**

The governance structure comprises Refugee welfare councils (RWC) at village level (RWC1), zonal level (RWC2) and settlement level (RWC3), Water user committees (WUCs) and Water and sanitation board/ Committee (WSB/C). The WUC is a representation of end-users, responsible for the day-to-day running of a given water point on a voluntary basis. According to a 2019 study by Oxfam, WUCs are either elected by the community or selected by the WASH agency in a settlement based on a set of criteria such as proximity to the water point and knowledge on health matters. The number of members in a WUC varies from two to seven, usually dependent on the coverage of the water source. The WSB was formed in early 2019 comprising 14 refugee representatives, elected from existing WUCs with representation from each zone. The WSB collects cash from WUCs, however, the continued WSB role with the take-over of NWSC is yet to be defined

#### 4.5. **IWRM**

At the Water and Environment Joint sector review of 2006, the sector agreed on a catchment-based approach to WRM in Uganda. The country was then delineated into four Water Management Zones (WMZs): Upper Nile, Albert WMZ, Kyoga and the Victoria WMZ. Kamwenge District falls in Albert and the Victoria WMZs. Biguli sub-county in Kamwenge is upstream of the Katonga Catchment in the Victoria WMZ, while the remaining sub-counties are downstream of the Mpanga Catchment in the Albert WMZ. Within these two catchments are different micro-catchments, as shown in the map in annex 3.

There is steady progress in WRM in Kamwenge, especially with respect to water quality and quantity. Compliance on water quality indicators is at 89%, compared to levels registered in previous years, of about 60%. The district has embraced the catchment-based IWRM approach, catchment management committees have been established and held meetings to discuss issues such as pollution, degradation of wetlands many of which are transboundary in nature. The district has a groundwater monitoring system and levels are continuously being monitored in Biguli and Kamwenge TC. In addition, Water Resources Assessments were carried out in the district through which key hotspots have been identified with particular focus on Biguli sub-county and key wetlands. Catchment management activities

The extent of decline in wetland coverage in the two basins that overlay Kamwenge District is 53.8% in the Lake Victoria Basin and 14.7% in the Lake Albert Basin. The decline in wetland area has been attributed to inadequate enforcement of existing laws and inadequate coordination amongst line government institutions and sectors. Consequently, the natural resources department of the district has embarked on several management measures including (i) mapping and delineated wetlands for 22 wetlands including five priority ones (ii) improving regulation - a bylaw on wetland degradation was passed, and (iii) enforcement and restoration/regeneration activities in partnership with environmental police and NGOs like PROTOS, JESE and Water For People. Compliance monitoring and enforcement of regulation regarding water development and discharge including licensing e.g. construction and dredging licenses still need strengthening. Overall, the key threats to water resources in Kamwenge include:

- Weak governance of the natural resources
- Many point water sources are shallow wells making them prone to pollution
- Poor waste management especially in the small trading center affects the water quality thus reducing further the water resources availability
- Kamwenge water resources are under pressure from growing population leading to potential over-exploitation of groundwater
- Climate change impacts to the water resources in form of high erosion/direct runoff especially from the bare hills
- Destruction of crucial ecosystems due to inappropriate activities like sand mining and charcoal burning in the wetlands
- Limited data, information especially on rainfall patterns

#### 4.6. EQUITY AND INCLUSION

The DIP (2019) shows that 51 of the 365 villages in Kamwenge do not have access to any improved water services. The spatial distribution of water points, presented in Figure 6 above indicates uneven spread especially for the technological options that provide adequate water supply (piped systems). The coverage statistics further indicate that despite the uneven spatial distribution, Kamwenge District has made attempts to provide at least basic WASH services in all sub-counties. Additionally, the service level scorecard indicates that at least 95% of the institutions provide a basic WASH service.

School sanitation statistics indicate provisions for persons with disability (PWDs) and gender disaggregation of toilets including a total of 71 toilet stances that suit the needs of PWDs (both teachers and pupils) as well as 293 and 425 toilets for boys and girls respectively. The menstrual hygiene needs of girls are also provided for through the 108 washroom stances at schools.

The problem analysis exercise outlined key deficiencies in supply to the marginalized and vulnerable community members including the elderly, persons with disability and children.

Below is a table that shows the distribution of respondents by vulnerability across the sub-counties in Kamwenge.

Table:11 Vulnerability across sub counties in Kamwenge

VULNER- ABILITY	BWIZI	BUGULI	BIHANGA	KAHUNGE	KABAMBIRO	BUSIRIBA	KAMWENGE	NKOMA	TOTAL
Physical disability	17.5	13.6	30.8	25.3	19.7	16.3	15.9	13.6	18.3
Elderly (65+)	28.1	18.2	20.5	14.7	19.7	20.7	18.8	21.2	19.9
Chronic health problems	12.3	18.2	7.7	13.3	7	6.5	10.1	10.6	11
Widow	8.8	19.3	10.3	17.3	12.7	16.3	13	9.1	14
Single mother (> 18)	7	3.4	12.8	6.7	7	7.6	10.1	7.6	7.4
Orphans	5.3	5.7	5.1	2.7	5.6	4.3	8.7	7.6	5.6
Child mothers (< 18)	1.8	0	0	2.7	2.8		1.4	4.5	1.6
Extremely poor	7	6.8	5.1	5.3	5.6	15.2	10.1	18.2	9.5
School dropout children	5.3	12.5	5.1	10.7	14.1	12	10.1	4.5	9.9
Refugee	0	0	0	0	0	0		1.5	0.2
Ethnic minority	7	2.3	2.6	1.3	5.6	1.1	1.4	1.5	2.7
TOTAL	100	100	100	100	100	100	100	100	100

This WASH Master Plan will thus seek to maintain inclusiveness of service delivery, to reach the vision of sustainable WASH services for everyone.

# 4.7. GOVERNANCE: CAPACITY AND PERFORMANCE OF SERVICE PROVIDERS

#### 4.7.1. National Level

There is a well-established institutional and regulatory framework for provision of water and sanitation services. The MWE is mandated to set policies and standards, manage and regulate water resources planning and development. This includes monitoring of performance of service providers. Ongoing reforms are redefining the institutional arrangements for water and sanitation services delivery. Regional deconcentrated structures support infrastructure development and improved service delivery by local governments; the water and sanitation development facilities (WSDFs) and TSUS.

Urban water service providers now comprise the utility type service providers, NWSC and Umbrellas. Rural water services are provided by households (self-supply), community level entities including Water User Committees (WUC), private sector through public private partnership (PPP) O&M arrangements and Umbrellas for management of rural piped water systems. WRM is the responsibility of the Directorate of Water Resources Management (DWRM) of the MWE supported by decentralized structures that have well-staffed water management zonal offices – Albert for the case of Kamwenge. Sanitation service delivery in households have primary responsibility for their sanitation service delivery with the DLG and lower administrative units. The roles for institutional sanitation service delivery are still evolving, with a multiplicity of actors. Infrastructure provision is premised on where the MWE is mandated for public places, Ministry of Health – health centers and Ministry of Education –Education institutions. O&M of constructed facilities is the role of the Local governments.

The 2109 water and environment sector report registered good performance of the national service providers.

#### 4.7.2. District Level

The Local Government Act cap 243 mandates district local governments to protect the environment and manage natural resources within their jurisdiction, as well as, provide and maintain services including those for water, education and health, in liaison with the line ministries. The mandate also includes regulating and administering public service providers.

The main sectoral offices and structures include the (i) District Water Office (DWO) responsible for WASH infrastructure development as well as oversight over the operation and maintenance (ii) the District Water and Sanitation Coordination Committees (DWSCCs) comprised of administrative and political leaders, technocrats and NGO/CBO representatives at district level. The DWSCC coordinates planning and implementation of water and sanitation activities, reviews all district work plans and budgets for water and sanitation and advises the district council through the Sectoral Committee. At a lower administrative level, the DWO is supported by devolved structures as well as support staff responsible for health promotion (health assistants and village health teams). Hand pump mechanics also support the O&M function of rural water sources. The above mentioned TSUs, provide support towards implementation of the District Water and Sanitation Conditional Grant (DWSCG). This includes technical assistance and capacity development of DWO staff in planning, procurement, contract management, monitoring and reporting. The CSO partners working in the District include JESE, HEWASA, Water For People, PROTOS, Lutheran World Federation, and World Vision.

Kamwenge District had an aggregated overall score of 65% for water and sanitation services, in the 2018/19 local government performance assessment. The constituent average scores were (i) planning, budgeting and execution – 0%, (ii) monitoring and supervision –100%, (iii) procurement and contract management – 58%, (iv) financial management and reporting

Kamwenge DLG FY 2019
Score Card

– 50%, (v) governance, oversight, transparency and accountability – 100%, and (vi) social and environment safeguards – 92%. The challenges to service delivery by the DLG, as outlined in the 2019 visioning workshop, are below.

CHALLENGES	CAUSES
Inadequate implementation of existing policies due changes in funding priorities	<ul><li>Weak government structures not able to enforce the laws</li><li>WASH given low priority</li></ul>
<ul> <li>Lack of integration of plans, budgets and reports</li> </ul>	Weak institutional set up that lacks coordination

#### 4.7.3. Service Provider Level

Generally, the LOS of WASH service providers in Kamwenge leaves room for improvement. The 2019 LOS assessment ranked most of the parameters low, as summarized below. Particularly, performance on the finance related parameters is dismal.

Service Provider (Manage day-to-	Structure: Intermediate Sustainable Services			
lay operations of specific water	Finance: Inadequate Sustainable Services			
systems)	O&M: Basic Sustainable Services			

#### 4.7.3.1. NWSC

The NWSC Kamwenge Area has five (5) branches including; Kamwenge Main, Ishongororo, Kabuga, Kahunge and Katalyeba. Management of water supply in the Rwamwanja settlement was also taken on 1st February, 2020. NWSC charges a uniform tariff of UGX 3,516/m3 for private connections and UGX 1,060/m3 or 25 shillings per jerrican for PSPs. Performance is summarized in

KPIs	2017	2018	2019	2020
Ave. Collection Efficiency	96%	93%	99%	92%
Ave. Water Sold (m3)	13,870	16,459	21,656	27,688
Ave. Revenue Collected (Million UGX)	46.19	57.76	78.85	94.67
Ave. monthly New Connections (No.)	59	36	76	82

NWSC is implementing several performance improvement measures in Kamwenge including (i) non-revenue water (NRW) management through metering of connections, consumer meter audits as well as proactive leak and burst detection and resolution (ii) the SCAP100 project aimed at ensuring 100% coverage in all villages. Under the SCAP100, a total of 127 Kms of pipe network extension were laid in FY2018/19 and in FY2019/20 150 Kms are planned, of which 86 Kms were laid by March 2020. It is estimated that as of April 2020, 437Km are needed to achieve the SCAP100 target.

For Rwamwanja settlement and the host community, the service level improvements have included network extension of 20Kms of pipeline, connection of 60 customers including 10 institutions, setup of an operational office in the host community, metering of the existing 17 PSPs. Construction of 50 additional PSPs is also planned.

#### 4.7.3.2. Midwestern Umbrella for Water and Sanitation (MWUWS)

The MWUWS manages 10 systems in Kamwenge and the performance on key service delivery performance indicators since 2017 is presented in Table 11 below:

Table 12: MWUWS KPI performance - FY2017/18 to FY2019/20

PERIOD	Ave. NRW (%)	Total connections (No.)	% metered connections	O&M cost recovery ratio (%)	Collec- tion effic iency (%)	Total Water supplied (M³)	Average billed tariff (UGX)
FY 17/18	22	1,502	87	218	74	99,157	2,796
FY 18/19	44	1,661	50	354	81	133,455	2,342
FY 19/20	40	1,175	96	425	90	87,812	2,232
Ave	35	1,446	77	332	82	106,808	2,457

Source UPMIS

#### 4.7.3.3. Hand Pump Mechanics (HPMs)

Kamwenge District has a HPMA comprising 30 HPMs (masons, plumbers and mechanics). There are at least two HPMs per sub-county in this association and these play an active role in supporting O&M of WASH infrastructure in the district. The Association ensures functionality of water sources through the provision of reliable, cost effective and timely maintenance, repair and rehabilitation of water sources. Additionally, the association is active in the sanitation sector through construction, management and emptying of sanitation facilities for households and institutions.

#### 4.7.3.4. Water and Sanitation Committees

A number of wells in the district still have WSCs despite the challenges associated with their performance. The WSCs are local governing bodies of water sources formed within the community by and from the people around those water sources. These committees are responsible for management and planning of the water sources and giving regular updates on the performance of the water sources, including funds collected. Majority of the committees have seven to nine members depending on whether they were formed by an NGO or District Local Government.

The WSC registers and records the number of users for the water sources, including households, institutions, and commercial users. This list helps identify the water users, their water usage capacities, and their contributions to the water source. The WSC verifies and confirms the actual number of water users to the communities which aid in the formation of by- laws that govern the communities. The by-laws govern the group or association. They are approved by

the local authorities and chairperson of the WSC and signed by the water users to confirm their commitment. The by-laws are also assented to by all users and are used to guide the WSC in addressing the needs of the water users, determining approaches to future maintenance, and the guidelines/procedures on borrowing and lending.

Kamwenge District is one of the districts that pioneered the save and borrow approach (YY) described in the frame below. A number of WSCs were turned into savings schemes. The District Local government still promotes the approach for water system sustainability in villages that still have the community-based management system (CBMS).

In 2007, after beneficiaries realizing the need to sustain their water supply, water users benefiting from Rukooko GFS in Rukooko village (Kamwenge sub-county) initiated the "YY Strategy" which is locally known as "Yehora Yeguza" ("Save and Borrow") with a "Enshaho yei ziba" ("the bag of the water source"). The whole strategy can be translated as "Save and Borrow with the bag of the Water Source". The water user groups hold monthly meetings in which water users bring in their user fees, borrow money if they need, reward or punish (non)compliance with the set bye-laws. The user fee is between Ug. Shs. 2,000= (two thousand shillings) per month

#### 4.7.4 Asset Management

The MWE is the owner of water supply assets and these are held in trust by the local government. Kamwenge DLG thus has an asset management function particularly for rural water supply infrastructure. Service providers for piped water systems (NWSC and MWUWS), as part of their delegated management role, are also responsible for asset management.

Asset registers (2019) exist for all the systems in Kamwenge. Water for people facilitated the asset registry exercise, in which service providers participated in the field data collection and are responsible for keeping the registers updated.

#### 4.7.5. Water Quality Management

Water quality in the country is managed under a three-tier system. Kamwenge district undertakes water quality surveillance of all water sources in the district. The service providers, notably NWSC and the MWUWS also have a mandate to ensure supply of potable water and thus undertake a water quality management function for all their supplies. The WMZ office also undertakes periodic water quality monitoring of all surface water sources in the catchments covered by Kamwenge district.

#### 4.7.6. Sanitation service providers

According to national policy, household sanitation is the responsibility of the household. The MOU places responsibility for service provision for institutional sanitation as; MWE – Ministry of health. Private sector provides most toilet construction and emptying services. CSOs like HEWASA and Water for People support service delivery mainly through facilitating access to financing and in a few cases constructing toilets.

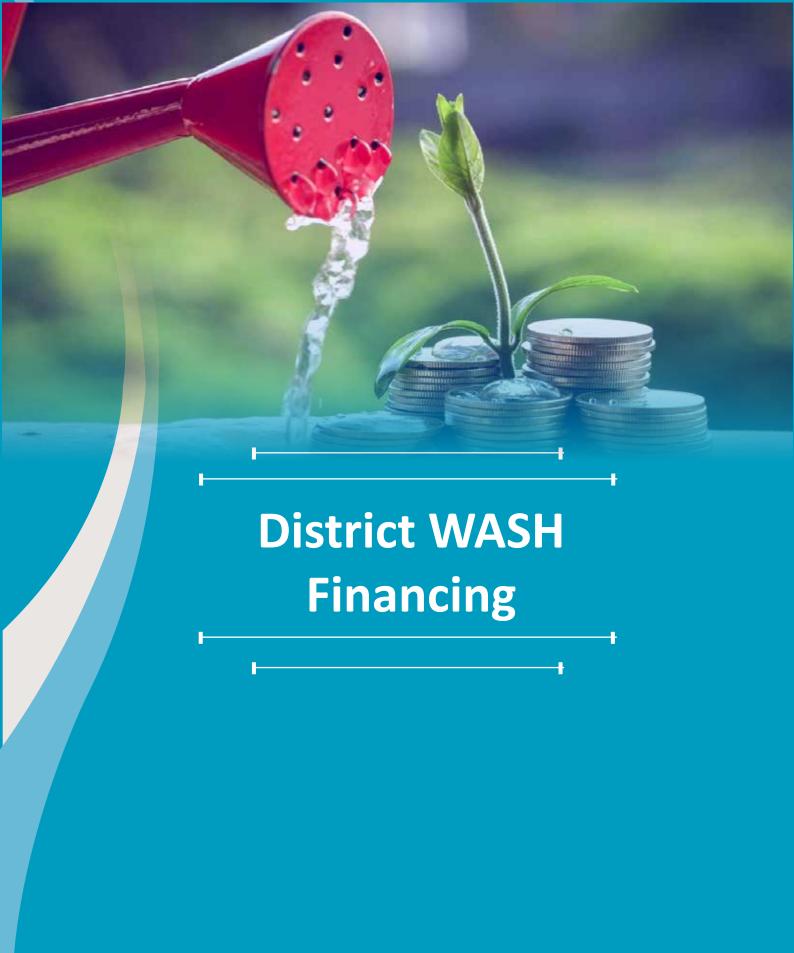
The SAAB (Sanitation As A Business) strategy is used for sanitation service delivery in Kamwenge, it encompasses pit emptying, latrine construction, and SaTo pan installation. The pit emptying business is done by Hand Pump Mechanics Associations (KADWAMA and RWASHO), and a private Entrepreneur (BOGERE PHARUK). The HPMAs are registered with KDLG and present quarterly performance reports. The private operator services the Districts of Ibanda,

Kirihura, Kamwenge and Mbarara. These service providers use semi-mechanized emptying through gulpers. The customer base includes public institutions like schools, and private households. Service charges range between UGX 150,000 to 300,000 per emptying job - the price depends on the number of stances emptied and the complexity of work, rated by the number of workdays.

The Kabarole treatment facility is operated by NWSC.

#### 4.7.7. Summary of Service provider challenges

- Inadequate implementation of existing policies due changes in funding priorities and inadequate financing.
- Treatment / disposal facility for fecal sludge requires a long haulage distance limiting consumer affordability



#### 5.0 DISTRICT WASH FINANCING

#### 5.1. CONTEXT

Funding for the WASH sector in Kamwenge district is obtained through different sources including central government, through the water and sanitation development facilities of the MWE, local government including the district water and sanitation conditional grant and civil society organizations.

#### 5.2. FUNDING LEVELS

The financial flow to Kamwenge district over the last couple of years is summarized in Table 12 Below. There is a general increase in funding levels from FY 2015/16 albeit with no consistent trend across the years. Water for People is the highest contributor to investments in the sector. Some partners like Protos have investments in Kitagwenda district, which was split from Kamwenge district.

**Table 13: Annual financial flows to Kamwenge District** 

ENTITY	FY 2015/2016	FY 2018/2019	FY 2019/2020
Central gov't (WSDF)	373,390,039	1,747,000,000	500,000,000
Local gov't (DWO)	431,789,368	593,555,982	479,821,271
Water For People	2,000,000,000	4,463,262,495	4,267,371,771
World Vision		590,637,800	554,087,354
Lutheran World Federation	4,500,000,000	626,936,317	235,000,000
Protos	300,000,000	225,855,000	Working in Kitagwenda



### 6.0 PROJECTIONS AND STRATEGIC ACTIONS

#### 6.1. POPULATION PROJECTIONS

The projections in Table 13 are based on the 2014 Uganda census results. An annual population growth rate of 3.9% was considered for the projections.

**Table 14: Kamwenge District population projections** 

SN	SUB COUNTY NAME	2019	2020	2025	2030
1	Biguli	41,866	43,499	52,669	63,772
2	Bihanga	17,249	17,922	21,700	26,275
3	Busiriba	34,641	35,992	43,580	52,767
4	Bwizi	36,926	38,366	46,454	56,247
5	Kabambiro	19,938	20,716	25,083	30,371
6	Kahunge SC & TC	44,581	46,319	56,084	67,907
7	Kamwenge SC	27,810	28,895	34,986	42,362
8	Kamwenge TC	23,307	24,216	29,321	35,503
9	Nkoma	39,747	41,297	50,003	60,545
Total	for the District	288,084	297,222	359,881	435,749

#### 6.2. MEDIUM (2025) AND LONG TERM (2030) WASH TARGETS

The targets towards achieving access for everyone by 2030 as set out in the sections below. Targets are set to ensure a gradual increase from lower levels of service is planned so that everyone has at least a basic service by the long-term horizon. Baseline figures are based on the 2019 WASH service delivery assessments that consider five evaluation metrics 3, from which the district baseline statistics have been assumed as below:

ASSESSMENT METRIC	Service delivery indicator (Water and Sanitation)
No Sanitation/ Water Service	Unimproved service
Inadequate Level of Service	Limited Service
Basic Level of Service	Basic service
Intermediate Level of Service	Basic service
High Level of Service	Safely managed services

The **village water supply** and **ODF baselines** were obtained from the DIP and ODF road map respectively. The targets were derived from the SSIP targets for the catchments (#08 and #13) in which Kamwenge district lies. The baseline values were compared against the indicator values for each funding scenario (refer to Table 14 below) and the relevant projections made based on the closely matching SSIP baseline value.

<sup>&</sup>lt;sup>9</sup> Water for people flow data - metric for evaluation of service levels

Table 15: Indicator projections - SSIP (2018)

SSIP funding scenario	Year/ Indicator	HH Hand Washing	SM Sanitation	School Hand Washing	Basic Sanitation	SM Water	Village WS	Basic Water - 8	Basic Water -13
	2019	35.6%	10.4%	34.6%	31.2%	7.4%	78.8%	66.5%	74.7%
BAU	2025	35.7%	12.4%	44.8%	49.2%	9.5%	91.6%	71.9%	75.5%
	2030	38.2%	12.7%	53.4%	50.4%	10.1%	89.9%	68.5%	70.9%
	2019	36.2%	11.5%	36.1%	40.8%	8.4%	89.3%	73.6%	79.8%
LOW	2025	41.6%	17.0%	55.7%	66.3%	13.7%	100.0%	83.2%	83.8%
	2030	48.9%	19.0%	66.4%	68.2%	15.8%	100.0%	79.6%	80.4%
	2019	38.4%	15.4%	40.9%	65.3%	11.9%	100.0%	89.1%	91.0%
HIGH	2025	57.5%	31.8%	73.7%	93.0%	27.5%	100.0%	98.3%	98.3%
	2030	70.0%	39.2%	81.2%	95.5%	35.2%	100.0%	97.2%	97.2%
Kamwenge DLG Baseline (2019)		<b>37</b> %	<b>33</b> %	N/A	67%	10%	86%	82%	
Adopted S	SIP scenario	High	High	N/A	High	High	Low	High - 8	

The masterplan estimates were thus derived from the difference in units for the given year for each SSIP scenario adopted, as shown in the frame below. In addition, in line with the commitments in this masterplan, targets for basic sanitation and water supply for the year 2030, were set to 100%.

#### 6.2.1. Water service targets

#### **Target calculation formula:**

2025 target = (SSIP indicator value 2025) - (SSIP indicator value 2019) + baseline value 2030 target = (SSIP indicator value 2030) - (SSIP indicator value 2025) + 2025 target or 100%

Year/ Indicator		2019			2025			2030	
Tolly marcato.	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District
Safely managed	3.7%	22.2%	9.7%	19.3%	37.8%	25%	29.3%	47.8%	35%
Basic	88.4%	69.8%	82.1%	97.6%	79.0%	91%	100%	100%	100%
Limited	0.8%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unimproved	7.0%	7.9%	7.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Village water supply	n/a	n/a	86.0%	n/a	n/a	96.7%	n/a	n/a	100.0%

#### 6.2.2. Sanitation targets

Year/ Indicator		2019			2025			2030	
	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District
Safely managed	32.8%	44.0%	32.8%	49%	60%	49%	57%	68%	57%
Basic	71.2%	54.5%	66.6%	99%	82%	94%	100%	100%	100%
Limited	0.4%	1.6%	0.7%	0%	1%	0%	0%	0%	0%
Unimproved	0.0%	0.0%	0.0%	0%	0%	0%	0%	0%	0%
Hand Washing	37.0%	33.0%	36.6%	56%	52%	56%	69%	65%	68%
ODF	32.8%	9.5%	17.2%	100%	100%	100%	100%	100%	100%

#### 6.2.3. Sanitation and hygiene services in schools and health facilities targets

The district aims to have at least a basic sanitation service for all schools and health centers by 2030. The minimum infrastructure requirements for this basic service are:

SCHOOLS	HEALTH CENTRES			
Pupil toilet stance ratio of 1:40	Patient toilet stance ratio of 1:25			
	Waste separation, placenta pits and incinerators			
Year-round improved water supply on	premises			
At least one toilet stance for persons with reduced mobility/ disability				
Hand washing facility at/ near the toile	et, equipped with soap/ash or other detergent			
Gender disaggregated toilets with pro	vision for MHM as well as bath shelters at H/Cs			

The existing WASH situation is summarized in Table 15 below, that gives the baseline indicator values

Table 16: Baseline values for Institutional WASH

	SCHOOLS & PUBLIC	н	IEALTH CARE FA	CILITIES
INDICATOR	PLACES WASH	WATER	SANITATION	WASTE MANAGEMENT
Safely managed	0.0%	48.0%	29.0%	N/A
Basic	95.2%	67.0%	96.0%	4%
Limited	4.8%	0.0%	0.0%	N/A
Unimproved	0.0%	8.0%	26.0%	N/A

Source: WASH assessment in 27 HCF in Kamwenge (2019) and WASH assessment in public institutions (2019)

#### 6.2.4. WRM

- i. All water sources have abstraction permits with 90% compliance levels to the conditions.
- ii. Catchment management plans

  The district will enhance efforts in catchment-based water resources through development and implementation of catchment management plans (CMPs) for all sub-catchments in the district. The Mpanga CMP will be a key focus given its strategic importance, hosting several environmental hotspots in the district. The Victoria CMP which is under review will be completed.
- iii. Wetland coverage. By 2025, all wetlands will be mapped and demarcated.

#### 6.3. STRATEGIC DIRECTIONS AND ACTIONS

This section outlines the strategic direction and priority actions that are expected to ensure realization of the objectives of this masterplan. These will be implemented in line with existing national policy and institutional framework

#### **OBJECTIVE**

#### **STRATEGIC ACTIONS**

#### **WATER SERVICES**

- 1-1: Provide access to basic water services to all residents in every village of Kamwenge district by 2030
  - Promotion of sustainable management models like "YY" and "pay as you fetch" to facilitate improved access to water supply services
  - Water source protection plans developed and implemented for all water supply systems, to improve their resilience and sustainability
  - Promote appropriate and resilient water supply options including multi-village water supply systems, rainwater harvesting and water for multi-use including income generation, especially in water stressed areas
- 1-2: Increase access to safely managed water services to residents of Kamwenge district from 15.1% to 40% by 2030
  - Promote affordable tariff by the mid-western umbrella
  - Regular monitoring of service providers and implementation partners to ensure adequate levels of service, based on clear performance targets
  - Support hand pump mechanics to provide O&M support for point water sources
  - Explore public private partnerships for water supply infrastructure development and management

#### **SANITATION SERVICES**

- 2-1: Provide access to basic water services to all residents in every village of Kamwenge district by 2030
  - Targeted implementation and monitoring of the district ODF road map
  - Explore partnerships with private sector in fecal sludge management service provision
- 2-2: Attain 100% open defecation free status in all villages by 2021
- Develop and implement sanitation plans in all town councils. This
  will include annual town council sanitation action plans with key
  performance targets, indicators and budgets integrated in the
  Physical Development Plan
  - Promote innovation in fecal sludge management (toilet options, emptying and treatment methods)
  - Identify and facilitate availability of financing products for household sanitation infrastructure
  - Adopt sanitation social marketing as a strategy for increased access to basic sanitation. A holistic hygiene and sanitation promotion package including toilets and hand washing will be prioritized.
  - Promote the market for private emptying services in urban and rural growth centres including adequate regulation and providing enabling business environment
- 2-3: Increase access to improved safely management sanitation service
- Collaboration with the district education services department to ensure a pupil stance ratio of at least 1:40
- Enforcement of existing guidelines and policies on institutional and household sanitation including developing and actively enforcing local bye-laws and sanitation standards to ensure sustained public health and environment protection
- Equip the local government structures with sufficient tools and capacity to implement commitments in the masterplan
- Develop and implement a monitoring system for sanitation including protocol for public health inspection at all levels (Household, public and institutional premises) and annual sanitation service delivery assessment

#### WASH IN SCHOOLS AND HEALTH FACILITIES

Attain 100% coverage for water, sanitation, hygiene, and waste management in healthcare facilities (HCFs) by 2030.

A district wide

coordinated plan

care facilities

for improving waste

management in health

- Identify strategic partners for investment in WASH in HCFs
- Develop and disseminate guidelines on basic WASH service standards
- Adopt appropriate options for waste management in HCF including low-cost incinerators and hybrid co-management systems
- Collaboration with the district education services department to ensure a pupil stance ratio of at least 1:40
- Enforcement of existing guidelines and policies on institutional and household sanitation

#### **INTEGRATED WATER RESOURCES MANAGEMENT (IWRM)**

Starting FY2021/22, all water sources developed in the district will have abstraction permits with 90% compliance levels to the conditions

A framework for Water security and quality in Kamwenge district is developed and under implementation starting FY2021/22

A catchment management approach is adopted for all Water resources planning and development in the district by 2030

Restore and maintain the integrity and functionality of fragile ecosystems with catchments in Kamwenge district including wetlands, Kibale forest

- Adopt catchment-based water resources planning and development for all WASH investments
- Promotion of appropriate and sustainable land use management including through innovative farming methods and appropriate livestock management practices, adoption of resistant and high yielding crops and livestock, household income diversification, water for production enhancement
- Protection of key natural resources including forests, river banks and wetlands through demarcation and strategic partnerships with community, civil society and private sector for conservation efforts and sustainable use. Promotion of sustainable community tourism initiatives will be explored.
- Enhanced enforcement and monitoring of environmental and water resources management regulation requirements to reduce pollution and contribute to availability of sustainable resources (quality and quantity)
- Promotion of water use efficiency including through rainwater harvesting for multi-use
- Adopt water safety planning for all water supply systems
- Develop and implement a district wide water quality surveillance plan, in partnership with the Albert water management zone office
- Promotion of sustainable solid waste management including recycling, supporting community enterprise in recycling and reuse
- Implementation of catchment restoration measures to reduce degradation and increase water security
- Wetland demarcation and promoting sustainable use

#### **CROSS-CUTTING ISSUES**

Improve the capacity within Kamwenge DLG to ensure sustainable WASH service delivery and attainment of master plan targets

Establish systems and workable approaches within Kamwenge DLG to support realization of masterplan targets and ensure social accountability in WASH service delivery

Establish a practical monitoring, evaluation and learning framework within Kamwenge DLG towards service delivery that will provide at least a basic WASH service for all residents by 2030.

- Develop and implement consolidated Annual work plans for the masterplan implementation. These will be coordinated with all WASH actors in the district and MoUs with all implementation partners will be enforced
- Quarterly District water and sanitation coordination committee (DWSCC) meetings for planning, reflection as well as learning and social accountability promotion
- Prioritize resource mobilization and partnerships with development partners including CSOs
- Strengthen catchment level management structures and extension services, to support realization of WASH targets and IWRM efforts in Kamwenge
- Adopt a rights-based and participatory approach to service delivery that allows for inclusiveness and reaching everyone by 2030
- Promote knowledge management learning and information sharing - as a means of improved service delivery
- Strengthen monitoring and performance reporting in line with sector performance framework
- Develop and strengthen partnerships for coordinated implementation of the water and sanitation services masterplan
- Implementation and regular review of the district investment plan, and advocacy and communication strategy
- Annual Masterplan implementation review reflections

#### 6.4 RISKS AND KEY MITIGATION MEASURES

THEMATIC AREA	CHALLENGES OR RISKS	PROBABILITY	MITIGATION MEASURES
	Low coverage of WASH services characterized by: high rate of urbanization and dispersed rural communities, limited technological options, weak tariff regime and poor accountability	Medium	Targeted and coordinated implementation of the Master plan, including prioritization of resource mobilization.  Participatory tariff setting
Drinking Water	Low willingness to pay for maintenance that limits local private sector involvement and affects reliability of services.	High	Explore flexible payment methods for user fees such as 'pay as you fetch' or other pre-payment methods Adopt incentive-based payment systems, for management and maintenance services of water supply systems, to prompt timely response by technicians and ensure reliability of services
	Aging water supply systems that are approaching the end of their life-span.	Medium	Update the asset inventory and develop an asset management plan to ensure gradual replacement of systems
	High per capita investment costs for reaching the unserved communities that are mostly in hard-to-reach areas.	Medium	Promote alternative service delivery models appropriate for specific contexts such as self-supply.

	Low affordability levels for the cost of constructing improved toilets	Medium	Social marketing campaigns including development of affordable toilet options and facilitating access to favorable finances
Sanitation and Hygiene	Inadequate capacity to support emptying, transportation and safe disposal of faecal sludge.	High	Encourage private sector participation in the provision of services especially for pit emptying Promote waste recycling and re-use at community level Develop and implement town sanitation plans.
	Poor application of water, sanitation and hygienic practices	Medium	Partnerships with traditional authorities, CSOs, and media to heighten awareness and understanding of WASH issues Implementation of the District ODF road map
Local government capacity	Weak capacity and systems for WASH implementation, management and coordination	Medium	Strengthen the local government capacity and systems to manage the delivery of WASH services (resource mobilization and prioritization optimization, coordination and alignment of interventions, monitoring and evaluation, asset management)
Integrated Water Resource Management	Chemical pollution of water sources and environmental degradation	Medium	Collaborate with relevant government agencies to enforce laws on protection of water resources
	Contamination of catchment areas and ground water sources. Degradation of water resources.	Average	To support Water Management Zone and District Water Office implement catchment management and Water Safety Plans.

Equity and inclusion	Low coverage of WASH services in remote communities and vulnerable populations	Medium	Employ innovative mix of technologies to reach unserved communities Provide subsidies to vulnerable populations to access WASH services
Finance	Inadequate financing for delivery of WASH services at the district level	High	Operationalize the District Task Force Resource Mobilization Committee to solicit financing from development partners and private sector.

#### 6.5. PARTNERSHIPS FOR IMPLEMENTATION

Successful implementation of this Master plan will require the input and coordination of the stakeholders and duty bearers. This section outlines the anticipated roles of different actors in implementation of the master plan.

#### a) DISTRICT ACTORS

The strategic actions in this master plan will be integrated into five-year District Development Plans (DDP) for implementation, starting with the planned 2020-2024 DDP. WASH Annual work plans will be developed and extracted from the cost estimates in this masterplan and harmonized with the district annual plan. Due consideration will be made of the expected financial inflows to the district in the particular financial year including investment from CSOs and other planned projects/initiatives by the MWE.

**The District Executive Committee (DEC)** will be the top political organ in the district for the overall oversight and implementation of the master plan. The Chief Administrative Officer (CAO) will be the head of the technical team which consists of; District Environment Office, Health Department, District Community Development Office, Planning Unit and District Water Office. The office of the CAO and Planning Unit will ensure that the master plan is well aligned with district and sectoral plans and adequately financed.

b) Civil Society Organizations (CSOs include; NGOs, CBOs and their respective networks). CSOs will be responsible for mobilizing off-budget resources to directly support implementation, monitoring and learning interventions. It is anticipated that CSOs, in particular Water for people that has facilitated preparation of this masterplan, will play a key role in its dissemination and resource mobilization efforts. Kamwenge has a functional coordination platform (District Water and Sanitation Coordination Committee - DWSCC) that will be responsible for coordinating activities of these CSOs and ensure alignment with the master plan.

- c) Private sector will be a key player in implementing and financing the master plan. This includes Hand Pump Mechanic Associations and artisans involved in operation and maintenance of water and sanitation services, commercial banks (like Post Bank, HOFKAM) with WASH loan products, contractors and consultants.
- d) Regional And National Government Actors

The following regional level institutions will be involved in implementation of the plan:

- MWE Technical Support Unit 6: Provide direct support to the District Water Office
- MWE Albert Water Management Zone: Technical support in catchment planning and protection as well as water quality surveillance
- Catchment Management Organization Coordinate implementation of Water Resource Management interventions
- Mid-Western Umbrella for Water and Sanitation: Provide technical support on operation and maintenance for piped water supply systems in small towns
- Rwenzori Regional Learning Forum Promote learning and information exchange on emerging lessons from implementation of the plan

A multi-stakeholder resource mobilization team will be established to coordinate and provide oversight over resource mobilization for implementation of the master plan.

# Communication, Advocacy & Networks



# 7.0 COMMUNICATION, ADVOCACY AND NETWORKS

#### 7.1. INTRODUCTION

This section sets out a communication, advocacy and networking strategy for the District WASH master plan. Communication, advocacy and networking are pivotal to actualization of the plan. The strategy aims at (i) Obtaining buy-in from all stakeholders to ensure implementation of plan and (ii) influencing adoption of knowledge, attitudes, practices, and behaviors necessary to realize the set targets

**Communication** will focus on building awareness on the content of the masterplan as well as effective delivery of the key messages to realize the intended changes towards improved WASH-related behavior and attitudes. Community/ customer satisfaction will also be a key objective of the communication strategies. A 2018 survey by Twaweza East Africa on "Ugandans' experiences and opinions on affordable access to clean and safe water" indicated declining access rates and up to 50% dissatisfaction levels with water service delivery by Local Governments. This plan includes strategies to improve this perception.

The resource requirements to implement this masterplan are huge, Kamwenge DLG thus needs to prepare a business case for resource mobilization. The district is well positioned as a tourism hotspot with a lot of potential to attract tourism related local revenues and investment in WASH service delivery and environment management / protection. The plan will thus portray it as a tourist destination and also incentivize(i) conservation efforts to preserve the water resources and (ii) improve WASH service delivery to attract more tourists.

**Advocacy** efforts will seek to promote social accountability and coordinated service delivery in the district. This ensures that the national policies are adhered to but also prioritizes best practice and learning. The advocacy strategy will include generating knowledge and evidenced-based engagements for policy influence and implementation.

**Networking** will focus on strengthening partnerships for knowledge management and targeted profiling of the Kamwenge WASH status. This will also include leveraging opportunities for establishment of a community of practice and resource mobilization. It is anticipated that the networking activities will also provide an opportunity to develop and promote best practice in WASH service delivery based on experiences in Kamwenge district.

# 7.2. OBJECTIVES AND ACTIVITIES

THEMATIC AREA	KEY	KEY OBJECTIVES	KEY ACTIVITIES
	<del>-</del>	Ensure sustained understanding, approval, and adoption of the master plan	<ul> <li>Awareness raising campaigns on the WASH master plan to create the needed critical mass for support, as well as build rapport and synergies with key stakeholders. The district will utilize existing platforms like media, community/village meetings as key communication channels</li> <li>Publicity events and activities to showcase activities, impact and targets of the masterplan. This will include documenting and sharing information briefs</li> </ul>
Communication	5	Raise the visibility, profile, and perception of Kamwenge District and its partners as champions for efficient delivery of WASH services;	<ul> <li>Create a stakeholder forum to facilitate feedback on service delivery status knowledge and information sharing in the District. Communication on key sector issues and developments will be a focus area</li> <li>Strengthening the capacity of the district civil society partners to advance all aspects of WASH master plan.</li> </ul>
	m <sup>i</sup>	profile the impact, results, and benefits of the interventions reflected in the WASH master plan targets for 2030.	<ul> <li>Identify, package, and disseminate key WASH data and evidence that will influence decision making on financing and policy</li> <li>Showcase the results, outcomes, and impacts of the Kabarole District WASH master plan and the local government's efforts to achieve universal access to WASH by 2030.</li> <li>Monitor the implementation of the master plan and regularly disseminate information about progress towards the set targets.</li> </ul>

		•
<ul> <li>2. To promote the conservation and protection of water and related natural resources in Kamwenge district</li> <li>3. To showcase Kamwenge District as a leader in the delivery of WASH services; through developing and promoting workable and replicable models workable and replicable models and / or stakeholder forum that will leverage efforts in policy influence, mobilization and optimal utilization of WASH financing, as well as promoting best operational practice in Kamwenge District.</li> <li>2. Strengthen partnership with key</li> </ul>	service delivery	development, management and maintenance  • Develop policy briefs and issue papers to demonstrate the economic benefits
as a leader in the delivery of WASH services; through developing and promoting workable and replicable models and / or stakeholder forum that will leverage efforts in policy influence, mobilization and optimal utilization of WASH financing, as well as promoting best operational practice in Kamwenge District.	promote the conservation a otection of water and related	
<ul> <li>3. To showcase Kamwenge District as a leader in the delivery of WASH services; through developing and promoting workable and replicable models and / or stakeholder forum that will leverage efforts in policy influence, mobilization and optimal utilization of WASH financing, as well as promoting best operational practice in Kamwenge District.</li> <li>2. Strengthen partnership with key</li> </ul>	tural resources in Kamwenge strict	Mobilize WASH champions to support and drive the resource mobilization campaign for the master plan
developing and promoting workable and replicable models and / or stakeholder forum that will leverage efforts in policy influence, mobilization and optimal utilization of WASH financing, as well as promoting best operational practice in Kamwenge District.	showcase Kamwenge Distric a leader in the delivery	<ul> <li>Undertake quarterly advocacy meetings using existing platforms like the DWSCC and inter-district meetings</li> </ul>
<ol> <li>To establish a community of practice and / or stakeholder forum that will leverage efforts in policy influence, mobilization and optimal utilization of WASH financing, as well as promoting best operational practice in Kamwenge District.</li> <li>Strengthen partnership with key</li> </ol>	WASH services; through veloping and promoting orkable and replicable model	Showcase the state and impacts land use practices, to motivate conservation and catchment management activities
and / or stakeholder forum that will leverage efforts in policy influence, mobilization and optimal utilization of WASH financing, as well as promoting best operational practice in Kamwenge District.	stablish a community of prac	• Attend key sector events like the annual joint sector review
of WASH financing, as well as promoting best operational practice in Kamwenge District.  2. Strengthen partnership with key	/ or stakeholder forum that age efforts in policy influer ilization and optimal utilizat	vill ce, developed to improve WASH service delivery
2. Strengthen partnership with key	MASH financing, as well noting best operational practimwenge District.	as ice • Convene periodic multi-stakeholder platforms for district WASH actors to share research, practice and experiences in WASH service deliver in order to
	gthen partnership with	
allies like Media and development partners to better profile WASH • Partn service delivery and attract resources organ	ilike Media and developm ners to better profile WA ce delivery and attract resour	SH • Partnerships with Media and development partners including civil society ces organizations, to promote reporting and profiling of Kamwenge WASH situation

- evidence based and up to date delivery through improved, information
- in order to develop appropriate solutions for sustainable WASH documentation and reflection Promote a culture of learning, service delivery
- delivery in the Uganda water and knowledge to improve service Contribute to the wealth of environment sector

service delivery in Kamwenge and relevant contribution to sector improvements Develop and disseminate knowledge and information products profiling WASH

To promote improved service

- Facilitate learning and application of WASH knowledge by providing guidance and opportunities to share information, data, and evidence from implementation of the master plan.
- Generate and package information into knowledge products such as policy briefs, technical briefing notes, factsheets, impact/human interest stories, project profiles, best practice summaries, and lessons learnt.
- Develop robust and functional web-based information management and monitoring platforms and tools. The district will ensure regular update of its web-portal with a specific dashboard on the Masterplan.
- Create opportunities to share and learn from the best practices and create incentives for knowledge sharing

#### 7.3. TARGET AUDIENCES

The primary audience of this strategy are the WASH actors in the district, as defined in section, development partners and beneficiaries of WASH services. Other stakeholders for who are targeted include training institutions, media, Ministries of Finance, Local government, Education and Health. The country is currently developing the third national development plan (NDP) in which water and sanitation services are a key priority; the National Planning Authority (NPA) will thus be a key stakeholder in ensuring that this masterplan is well implemented.



# 8.0 MONITORING, EVALUATION AND LEARNING

## 8.1. MONITORING FRAMEWORK

Monitoring of the Masterplan will be mainstreamed within the existing institutional framework of the district. Work Plans and monitoring mechanisms will use existing district structures. Table 14 presents the monitoring framework that will guide implementation and realization of the targets set in this plan. The district will develop annual monitoring plans aligned to this framework and a baseline will be established in the first year (2021).

#### 8.2. REPORTING

The District Water and Sanitation Coordination Committee will be the main entity responsible for monitoring and coordinating activities related to the master plan. Quarterly progress reporting based on the monitoring framework will be submitted to the District Executive Committee. Progress reports from each of the implementation partners will provide input to this aggregated report. Partners will be expected to submit monthly reports to the DWO.

#### 8.3. EVALUATION

Three evaluations will be conducted during implementation of the master plan. The first evaluation will be conducted in 2021 to take stock of performance on targets, review implementation strategies and identify emerging lessons and improvement measures. This will be followed by another review (mid-term) in 2025 to concretize lessons learnt, and adapt strategies to ensure proper implementation of the plan and realization of targets. The mid-term review exercise will also be used to update the masterplan as required. A summative evaluation will then be conducted in 2030 to review overall progress against the targets.

#### 8.4. LEARNING SHARING AND ADAPTIVE CAPACITY

Learning and knowledge management will be mainstreamed during the implementation of the master plan. District WASH stakeholders will have the opportunity to share lessons, undertake action research in delivering and managing WASH services, and adapt implementation strategies. The annual service level monitoring exercises will be used to generate evidence on the level of services provided, and lessons from the different strategies employed. Key learning events will include:

- Targeted knowledge management platforms to facilitate learning and information exchange will be explored. These include;
- The District Water and Sanitation Coordination Committee will coordinate district stakeholders, take stock of emerging lessons, challenges, and opportunities on quarterly basis.
- Rwenzori Regional Learning Forum will be used to share experiences at regional level with actors from 12 districts under the jurisdiction of the Technical Support Unit 6.
- Joint Water and Environment Sector Review Meeting will be used to share experiences with WASH stakeholders at national level.
- CSO learning events including the annual UWASNET CSO event

Table 17: Monitoring framework for Kamwenge district water and sanitation services masterplan

FOCUS AREA LONG-TERM OBJECTIVE	DISTRICT LONG-TERM OBJECTIVE	TARGET 2030	KEY INDICATORS	METHODS OF MEASUREMENT	MEANS OF VERIFICATION
Water Services	Ensure access to basic water services to everyone and safely managed water to 35% of the district population by 2030	<ul> <li>Increase access to safely managed water on premises from 9.7% to 35%by 2030</li> <li>Increase access to basic water services 82.1% to 100% by 2030</li> <li>Increase proportion of villages with access to improved water supply from 86% to 100%.</li> </ul>	<ul> <li>Proportion of population using safely managed drinking water services</li> <li>Proportion of population using basic drinking water services</li> </ul>	Water service monitoring	Annual Progress Report Annual service monitoring report UPMIS records
Sanitation Services	Increase access to improved and reliable Fecal sludge management services by 2030 with 100% access to basic services and 57% safely managed sanitation	<ul> <li>Increase access to basic sanitation facilities/toilets for rural households from 71.2% to 100%. and for urban households from 54.5% to 100%.</li> <li>Increase safely managed sanitation services from 44% 68% in urban areas and from 32.8% to 57% in rural areas</li> </ul>	<ul> <li>Proportion of population using safely managed sanitation services, including a handwashing facility with soap and water.</li> <li>Proportion of population with access to basic sanitation.</li> <li>Proportion of ODF certified villages in the district</li> </ul>	Sanitation service monitoring ODF Protocols	Annual service monitoring report VHT household monitoring reports

Water resources monitoring system DWSCC and CMO meeting minutes Annual reports UPMIS District, CSO and service provider progress reports	<ul> <li>Annual DLG assessment report for Kamwenge</li> </ul>
Water resources assessments Catchment management organization meetings Water quality monitoring by district and service providers DWSCC meetings	Annual District local government performance assessment
<ul> <li>Number of catchment and sub-catchment management plan developed and under implementation</li> <li>Number of functional catchment management committees</li> <li>Percentage of water samples complying with E-coli standards in the district with abstraction permits</li> <li>Percentage compliance of district water supply systems to abstraction permit conditions</li> <li>Number of reports generated and used from the district water resources monitoring system</li> </ul>	<ul> <li>Types and sources of technical support for WASH master plan implementation</li> <li>Level of coordination by heads of departments for plan implementation</li> </ul>
<ul> <li>Water resources are managed sustainably to guarantee water availability of acceptable quality for productive and domestic uses</li> <li>No pollution of surface and groundwater</li> <li>100% of the wetlands are demarcated and up to 80% of the wetland area protected</li> <li>Functional water resources monitoring system for the district including ground water monitoring and water quality surveillance components</li> </ul>	DLG with the requisite skilled staff and adequate logistics to manage the delivery of WASH services
Catchment management is well coordinated and plans implemented to ensure sustainable water quality. Water-related ecosystems especially wetlands, forests and rivers are restored and protected	Improve human and logistical capacity of District for managing WASH Services
Integrated Water Resource Management	<b>District</b> <b>Capacity</b>

UPMIS CSO and development partner reports Meeting minutes/ reports	District Annual Progress Report WASH master plan annual progress report
Local government WASH systems assessment Budget tracking and other multistakeholder platforms Annual masterplan review and reflection meetings	Surveys Progress reporting
<ul> <li>Proportion of District budget allocated to WASH activities</li> <li>Proportion of annual master plan budget realized</li> <li>Percentage contribution to Annual WASH budget by development partners including CSOs</li> <li>Coordination and Partnership</li> <li>Proportion of partners' efforts aligned with the objectives of the WASH master plan</li> <li>Number and type of cooperation agreements signed with partners for the master plan implementation</li> <li>Number of private sector and CSO partners involved in the plan implementation</li> <li>Number of SDG 6 indicators tracked and data provided from the district level</li> <li>Proportion of monitoring indicators for which data is available</li> </ul>	<ul> <li>Proportion of villages and health facilities with access to basic water services</li> <li>Proportion of villages and health facilities with access to basic sanitation services</li> </ul>
Strengthened mechanisms and frameworks for planning, coordination, financial tracking, monitoring progress, and social accountability for SDG 6 in Kamwenge district Approved annual action plans and budgets with clear budgetary allocations for WASH	Every village and health facility has access to at least basic water services
Improve systems for WASH delivery	Ensure inclusive WASH service delivery for all residents of Kamwenge
WASH	Inclusion

# **Costing the** Plan

## 9.0. COSTING THE PLAN

### 9.1. Methodology

The cost estimates were largely based on existing planning documents, notably the 2018 Uganda water and environment strategic sector investment plan (SSIP), the 2019 Kamwenge district investment plan, the ODF roadmap and the 2019 catchment management plan (CMP) for lower Mpanga catchment.

### (i) The Kamwenge WASH DIP

The district investment planning process is a participatory process that involved establishing the baseline WASH situation, determining the unserved population and unit investment costs, (see Table 17 below) from which the total investment requirements were obtained. The DIP details the WASH investment requirements to attain the everyone, based on baseline assessments and UBOS population data as well as provisions in the District Development Plan. The 2019 Kamwenge DIP used the life cycle costing approach to defining costs and has six cost elements determined as below:

- a) Water supply Baseline statistics were obtained through a comprehensive Asset Analysis for all existing water supply systems. The asset register was used to determine coverage levels and service gap at household and institutional level. The investment costs to bridge the service gap were calculated from estimated per-capita investment costs derived from existing construction and operational costs. The per-capita investment cost elements include new development (CapEx), replacement / asset renewal costs (CapManEx) and routine O&M (OpEx)
- **b) Household Sanitation** The baseline situation was established from the service level assessments described in section 3.4. Unit costs for attaining basic sanitation were derived from the existing costs of achieving ODF villages in Kamwenge, using the CLTS approach. The sanitation estimates were taken as the cost of reaching the population without at least an intermediate level of sanitation service through sanitation promotion.
- c) School WASH The DIP only considers public schools, which are the responsibility of the DLG. The service gap was based on the WASH service level assessment. Investment requirements to reach every school with basic WASH service were computed using unit investment costs based on existing development costs. A basic service is defined as (i)a rain water harvesting station of at least 20,000 litres, (ii)washrooms with incinerators for menstrual hygiene management and (iii)fully lined inclusive toilets for teachers, girls and boys for a minimum pupil stance ratio of 1:40 and at least 2 stances for teachers.
- d) Health Facility WASH Used similar methodology for school WASH and in this case, a basic service is defined as (i)a rain water harvesting (RWH) station of at least 20,000 liters, (ii)washrooms and urinals, (iii) inclusive toilets with provisions for the physically disabled and Waste management infrastructure like incinerators, placenta pits, and waste separation bins

- **e) Software** this includes all the supporting activities like community sensitization, mobilization and setting up management structures. The estimate for this element was taken as 10% of the total infrastructure development costs above (i to iv)
- **f) Monitoring and Evaluation costs** were estimated at 2% of the total infrastructure development costs above (sub-sections a to d)

Table 18: Unit costs used in the Kamwenge DIP

COST ELEMENT	UNIT COST (UGX)	UNIT
Water supply infrastructure	285,000	Person
Institutional RWH station (20,000L) – with tank	16,000,000	RWH station
School / Health center Bath Shelter	30,000,000	Bath Shelter
Lined school/ health center inclusive toilet	7,000,000	Toilet
Placenta pit or Waste pit infrastructure	15,000,000	Placenta/waste pit
Incinerator	45,000,000	Incinerator

### (ii) ODF road map (2019)

The Kamwenge district ODF road map process involved an assessment of the triggered and certified villages, to identify the requirements for all villages in Kamwenge to be declared ODF certified. The villages were divided into 2 categories viz (i) Villages to trigger, follow Up, verify, Certify and (ii) Villages to follow up, verify, certify. The resource requirements were then estimated based on the below unit costs in

Table 19: Unit costs used in Kamwenge district ODF roadmap

COST ELEMENT	UNIT COST (UGX)	UNIT
Category 1 Villages (to trigger, follow Up, verify & Certify)	1,708,850	Village
Category 2 Villages (to follow Up, verify & Certify)	1,482,600	Village
Training in CLTS - (approx. 37 people)	1,260,000	Training event
Progress Review meetings (approx. 70 people)	8,000,000	Meeting

### (iii) SSIP cost estimates

The MWE developed a SSIP that considered the investment requirements to attain the targets for each sector performance indicator. Unit costs were derived as presented in table below for the relevant masterplan indicators. The constituent cost elements considered for the unit costs of each indicator are provided in annex 1. These costs were used to derive the estimates provided in section 9.2 under Table 19 and Table 20.

Indicator	Unit Cost (Ugx)	Unit
Village water supply	25,136	villages
Functional rural water sources	5,546	rural water sources
Improved drinking water	85,000	people
Safely managed drinking water	387,000	people
Urban water service functionality	8,298	sources
Improved sanitation	20,000	people
Safely managed sanitation	190,000	people
Handwashing at home	20,000	people
Handwashing at school	20,000	students
Compliance with water standards	495,881	samples

### (iv) 2015 Mpanga catchment CMP

This CMP defines the key activities required to ensure proper management of the resources in this catchment including restoration of key hotspots in priority ecosystems. Kamwenge district as earlier noted, lies largely within the Mpanga catchment and as such, the defined water resources management priorities in the CMP will be the focus of this masterplan. The investment activities are thus derived from this costed CMP. The estimates in the CMP were annualized and only activities relevant to Kamwenge (lower Mpanga catchment) for a 10-year period 2020 to 2030 considered as detailed in Table 23. It is assumed that the CMP considered the period 2015 to 2030.

### 9.2.1. Water supply and sanitation services

The relevant cost estimates to attain the WASH targets defined in section, using SSIP unit costs, are presented below. The estimates for WASH in health care facilities and School Basic sanitation are based on the DIP (2019) provisions using updated unit costs provided by the Kamwenge DLG.

Table 20: WASH services cost estimates using SSIP (2018) and Kamwenge DIP (2019)

Thematic	Year / Indicator	Indicator	Target (	(%)	Cost Estin mill	nate (UGX ion)
Area		2025	2030	2025	2030	
	Safely managed	49%		50%	15,814	13,219
Household	Basic	94%		100%	2,977	1,928
Hygiene & Sanitation	Hand Washing	56%		68%	1,914	1,934
	Total Investment requirem	ent HH Hy	san		20,705	17,080
Institu-	Basic -School	ND		100%	ND	8,160
tional WASH	Basic - Health facility	ND		100%	ND	1,005
WASII	Total Investment requirem	ent institut	tional W	ASH	ND	9,165
	Safely managed	25%	35%		13,537.6	8,677.9
Commu-	Basic	91%	100%		1,753.5	1,658.2
nity Water supply	Village water supply	96.7%	100%		981.7	302.8
	Total Investment requirem	ent Water	supply		16,272.8	10,638.9

The estimated investment requirements to reach the targets for the urban and rural populations, as defined in section are shown in Table 20 below.

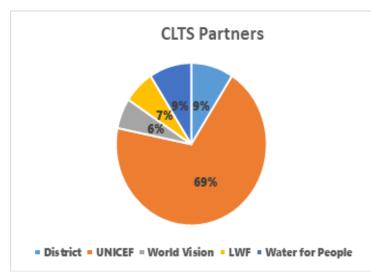
Table 21: Investment estimates for Urban and rural populations (UGX millions)

YEAR / INDICATOR	2025		2030	
TEAR / INDICATOR	RURAL	URBAN	RURAL	URBAN
Safely managed water	2,664.3	309.1	1,707.9	198.1
Basic water supply	7,153.9	829.8	1,875.9	1,889.7
Safely managed sanitation	11,108	1,416	9,285	1,208
Basic sanitation	2,138	228	1,123	228
Hand Washing	1,349	152	1,363	153

The indicative costs for creation of ODF villages are provided below. The ODF road map is a key strategy towards achieving 100% basic sanitation coverage in the entire district.

Table 22:District ODF road map (2019) Estimates

SUB COUNTY	TOTAL NO. VILLAGES	NO. TO TRIGGER, FOLLOW UP, VERIFY, CERTIFY	NO. TO FOLLOW UP, VERIFY, CERTIFY	NO. TO VERIFY AND CERTIFY	TOTAL COST TO REACH 100% ODF VILLAGES (UGX)
Biguli	40	0	31	0	45,960,600
Bihanga	24	10	2	5	23,274,200
Busiriba	34	22	10	0	52,420,700
Bwizi	38	0	9	11	20,428,500
Kabambiro	30	26	2	0	47,395,300
Kahunge	49	48	0	0	82,024,800
Kahunge TC	22	19	1	0	33,950,750
Kamwenge	34	30	3	0	55,713,300
Kamwenge TC	26	22	4	0	43,525,100
Nkoma	31	0	16	2	25,009,800
Nkoma-Katalyeba TC	15	0	10	1	15,470,100
Total	343	177	88	19	445,173,150
<b>Total CLTS Cost</b>					445,173,150
Progress Review - 4 M	eetings of 70	people at rate	e of 8,000,000	)	32,000,000
Training in CLTS - 37 p	eople traine	d at rate of 1,2	60,000		46,620,000
Total					523,793,150



The total funding requirement to achieve 100% ODF villages in Kamwenge by 2030 is estimated at UGX 523.8 million excluding the requirement in Rwamwanja refugee settlement. This road map has registered commitments from different partners with UNICEF 69% financial indicating а commitment and the district 9% as shown in the chart in Figure 10 aside.

Additionally, key strategic actions have been outlined for sanitation and estimates to undertake these actions are summarized in Table 22 below

Table 23: Indicative costs for key sanitation activities⁴

ST	RATEGIC ACTIVITY	INDICATIVE COSTS
1.	Targeted implementation and monitoring of the district ODF road map	District ODF road map estimates
2.	Identify and facilitate availability of financing products for household sanitation infrastructure	• 500,000,000 for incentive-based town sanitation financing mechanism
3.	Adopt sanitation social marketing as a strategy for increased access to basic sanitation. A holistic hygiene and sanitation promotion package including toilets and hand washing will be prioritized.	<ul> <li>500million for mason training,</li> <li>155million for BCC campaign development and implementation</li> </ul>
4.	Develop and actively enforce local bye- laws and sanitation standards in line with existing guidelines and policies on institutional and household sanitation to ensure sustained public health and environment protection	550million for popularization of standards
5.	Equip the local government structures with sufficient tools and capacity to implement commitments in the masterplan	• 510million for capacity building including town sanitation plan development, peer to peer learning; benchmarks; planning and training workshops
6.	Develop and implement a monitoring system for sanitation including protocol for public health inspection at all levels (Household, public and institutional premises) and annual sanitation service delivery assessments	<ul> <li>60 million for system development and annual sanitation service delivery assessments</li> <li>50 million for school and public sanitation inspections</li> </ul>
7.	Explore partnerships with private sector in fecal sludge management service provision; Promote the market for private emptying services in urban and rural growth centers including adequate regulation and providing enabling business environment	<ul> <li>1.48 billion for incentives to private sector, behavior change campaigns, licensing and developing standard operating procedures</li> </ul>

<sup>10</sup> Assessment of Sanitation Service Delivery and Priority Strategic Actions for Town Councils in Kamwenge District

### 9.2.2. Integrated water resources management (IWRM)

The summary of IWRM activities anticipated out of the Mpanga CMP is presented in Table 23 below. A total of Uganda shillings 4.42 billion is required, as per the costing methodology defined in section 9.1 above

Table 24: Costed IWRM activities

KEY ACTIVITY FROM THE LOWER MPANGA CATCHMENT	COST (UGX MILLION)
1. Catchment conservation	
1-1: Forest conservation and protection activities	367
1-2: promotion of sustainable agricultural practices	253
1-3: River Bank protection and conservation	221
1-4: Wetland protection and conservation	347
1-5: Promotion of Eco-friendly and efficient use of energy sources	475
2. Source protection	0
2-1: Household waste management campaigns	373
2-2 Support to Waste RRR initiatives	432
3. Enforcement and compliance management	0
3-1: Water use efficiency promotion	663
3-2: promotion of development and implementation of effluent discharge control plans	447
4. Institutional development and capacity building	0
4-1: CMC creation and operationalisation	842
TOTAL INVESTMENT REQUIREMENT	4,420

### 9.2.3. Total Master plan estimates

The master plan estimates are based on the above estimates is summarized in Table 24

Table 25: Total Water and sanitation services master plan estimates

CATEGORY	TOTAL INV ESTIMATE (U	
	2020 - 2025	2026 - 2030
Household sanitation	16,230	13,389
Water supply	15,291	10,336
Institutional WASH	ND	9,164
Software and source protection costs for Water supply (10% investment cost)	1,529	1,034
IWRM	2,210.07	2,210.07
M&E costs (2% of Water, HH sanitation and IWRM costs)	630.43	657.78
Total investment requirements	35,935	36,835

# **ANNEX 1: KEY TERMS AND ASSUMPTIONS**

### 1. WATER SUPPLY SERVICES

### a. Kamwenge coverage estimates protocol

WATER SOURCE TYPE	POPULATION SERVED PER SOURCE	WATER SUPPLY COVERAGE FORMULA
Deep or Shallow Well (W)	300	
Protected Spring (PS)	200	
Kiosk/ Yard Tap for public use (T)	1	
Household connection (HH)	23	$((W\times300)+(PS\times200)+(T\times1)+(HH\times23)+(RT))/(2019)$
Rainwater Tank (RT)	6000-10000M3 - 3 people, >10,000 M3 - 6 people	population)×100%

### b. Sustainable Development Goals (SDG) definition

The SDG define improved water services to be accessible on premises, available when needed, and free from contamination. Three levels of service are considered viz: Safely managed - when supply of drinking water from an improved source is on premises, Basic services are when supply of drinking water from an improved source is within a 30- minute round collection trip, if this collection time is exceeded then it is considered a limited service. The coverage delimitations considered SDG definitions.

### 2. SANITATION SERVICES

### a. Kamwenge coverage estimates protocol

Coverage statistics considered access to improved toilet facilities. The statistics did not disaggregate data for shared facilities

### b. Sustainable Development Goals (SDG) definition

- Safely-managed Use of improved facilities which are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site
- Basic Use of improved facilities which are not shared with other households
- Limited Use of improved facilities shared between two or more households
- Unimproved Use of pit latrines without a slab or platform, hanging latrines or bucket latrines
- Open defecation Disposal of human feces in fields, forests, bushes, open bodies of water, beaches and other open spaces or with solid waste.

### 3. TARGET SETTING AND ESTIMATION

Water supply and sanitation coverage targets were derived from the service delivery metric with linkage to the estimates in the water and environment SSIP (2018) as below:

- Baseline values (2019) obtained from the 2019 Kamwenge service delivery assessment according to the methodology in table.
- Service delivery targets for the year 2025 and 2030 were derived from the benchmark value in the SSIP as defined in section
- The unit costs used for household sanitation and water supply indicators were derived from the SSIP
- Estimates for the institutional WASH considered the costs for school sanitation and WASH
  in health care facilities as defined in the Kamwenge DIP (2019). The costs relate to as per
  the methodology and unit costs defined in section 9.i (i)
- The total estimates included provisions for:
  - (i) Software for water supply community mobilization and source protection activities. A 10% estimate of the total cost of water infrastructure was provided. This cost is intended to cater for related activities for establishing community management structures and demand creation for water services. Sanitation software costs are already included in the SSIP as indicated in Table 21 below. Unit costs for water indicators only include infrastructure deve lopment thus the need for inclusion of this software component. Additional source protection activities are included in the IWRM scope.
  - (ii) M&E costs for the district which include the facilitation for supervision and monitoring activities. A 2% proportion of the Water, HH sanitation and IWRM investment costs was considered, using the DIP (2019) as a benchmark for the percentage estimate used.
- ODF road assumes 100% ODF villages so, the 2025 ODF target is assumed as 100%.
- The SSIP indicator unit cost estimates were adopted and the detailed definitions as adopted in the SSIP are provided in Table 21

Table 26: SSIP indicator and investment cost definitions used in masterplan cost estimation

_	INDICATOR	INDICATOR DES	INDICATOR DESCRIPTION / DEFINITION	INVESTMENT COST CONSIDERATIONS
	VILLAGE WATER SUPPLY	<ul> <li>One water source per village</li> <li>Sources include deep boreh and to some extent protects these are being phased out)</li> <li>Each improved source (i.e. n cover 300 people</li> <li>Each piped system is assumant</li> </ul>	Sources include deep borehole, rainwater tank, piped system, and to some extent protected springs Shallow well—although these are being phased out)  Each improved source (i.e. not a piped scheme) is assumed to cover 300 people  Each piped system is assumed to cover 500 people	i. Capital costs ii. O&M costs - Water Supply iii. Replacement costs - Water Supply
WATER	Improved drinking water supply	•	Provision of improved drinking water source including: protected springs, shallow wells, deep boreholes, rainwater harvesting tasks, kiosks, as well as the tap stands and household connections  Piped water is not required to meet this target but it does contribute to overall water coverage.	<ul> <li>i. Capital costs - New investment focuses on shallow wells, boreholes, and rainwater harvesting tanks</li> <li>ii. O&amp;M costs - Water Supply</li> <li>iii. Replacement costs - Water Supply</li> </ul>
	Safely managed drinking water	Defined as piped water supply	water supply	<ul><li>i. Capital costs</li><li>ii. O&amp;M costs - Water Supply</li><li>iii. Replacement costs - Water Supply</li></ul>
	Investment cost descriptions	lescriptions		
	Capital cost	Average cost of water source/dollars). For Basic provision, a levels of service incrementally	Average cost of water source/ water supply system (based on per capita costs from SSIP 2009 inflated to 2017 dollars). For Basic provision, a change of technology mix / mix of sources over time is assumed to have higher levels of service incrementally	apita costs from SSIP 2009 inflated to 2017 ources over time is assumed to have higher
	O&M: Water Si	Supply 2% of capital cost annually	t annually	
	Replacement: W	Water Replacement of e	Replacement of existing infrastructure assumed lifespan of 25 years. Replacement cost is equal to capital cost.	. Replacement cost is equal to capital cost.

2	INDICATOR	DESCRIPTION / DEFINITION	INVESTMENT COST CONSIDERATIONS
	Improved sanitation	Access to sanitation facilities not shared with other households	Household education campaigns, although coverage with a faecal sludge management system contributes to the indicator
	Safely managed sanitation (SMS)	SMS refers to proper maintenance and treatment of sanitation facilities and waste, either in situ or offsite.	i. Capital Cost ii. O&M cost iii. Software (Training)
	Handwashing at home	The resultant handwashing with soap and water practiced at household level	Software (HH Handwashing)
	Handwashing at school	The resultant handwashing with soap and water practiced at primary and secondary schools	Only school hand washing education campaigns. The Ministry of Education and Sports is assumed to be responsible for providing soap and handwashing facilities.
SANITA-	SANITA- Investment cost descriptions	iptions	
NO D	Capital: Fecal Sludge Management	Per capita investment costs adop to Finance Uganda Small Towns software components.	Per capita investment costs adopted from the MWE's 2015 draft report, "Concept Note of Uganda's Proposal to Finance Uganda Small Towns and Rural Growth Centers Fecal Sludge and Sanitation Project". Includes software components.
	O&M: Fecal Sludge Management	2% of capital costs	
	Software: Household education campaigns for basic sanitation	Assumes a ten-day intervention members). Effectiveness of the ir	Assumes a ten-day intervention reaching 100 people (both directly and through training community members). Effectiveness of the intervention is assumed to be 85%.
	Software: Household education campaigns for SMS	Assumes a 21-day intervention r members). Effectiveness of the ir	Assumes a 21-day intervention reaching 100 people (both directly and through training community members). Effectiveness of the intervention is assumed to be 85%.
	Software: Household/ School Hand washing education campaigns	Assumes a 14-day intervention r members). Effectiveness of the in	Assumes a 14-day intervention reaching 100 people (both directly and through training community members). Effectiveness of the intervention is assumed to be 85%.

# **ANNEX 2: ASSET ANALYSIS OVERVIEW**

During the asset analysis exercise, detailed data on the specifications and status of the different water system components summarized in the table below is collected. This data is used to identify, catalogue, and classify all water systems within a district, based on current needs, level of water service provision, and general timeline for eventual repair and/or replacement of significant components.

Key components in Point Water Sources and Piped System

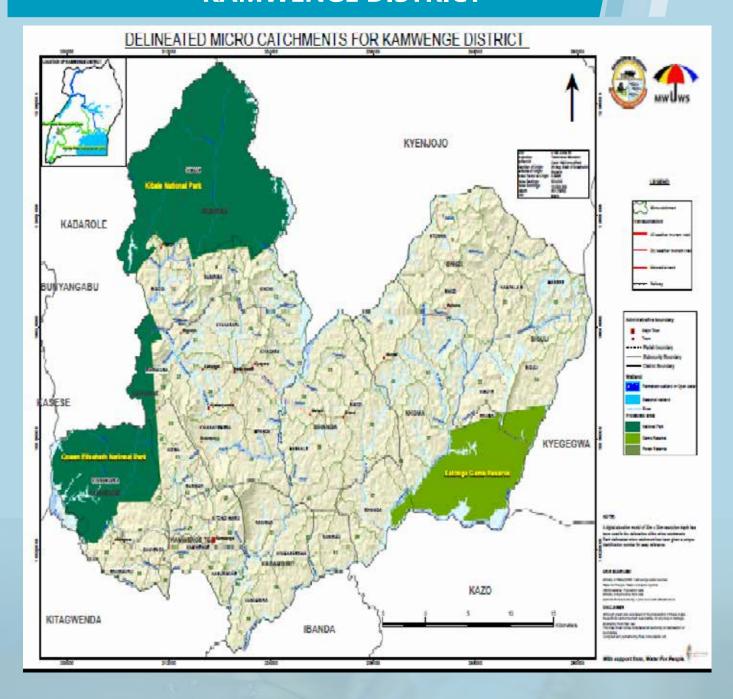
PIPED SYSTEMS	POINT WATER SOURCES
Reservoir tanks	Well
Pumps	Pump (Cylinder, head assembly, pedestal)
Transmission mains (pipes, fittings)	Apron/Seal
Distribution mains (pipes, fittings)	Spring Protection (this includes all masonry work)
Intake structures	Spouts
Generators	GI Pipe and Rod
Solar systems	PVC Pipes and Rod
Other Concrete structures (sedimentation tanks, BP tanks, chambers, sumps)	SS Pipes and Rod
Treatment Equipment	
Pump house	

In order to prioritize which water systems or components thereof will require intervention, the Asset Analysis tool assesses the three different risk areas below.

- **1. Age of Water System Components**: The analysis considers the current age against the projected lifespan, or "useful life," of key water system components.
- **2. Overall Functionality and Level of Service (LOS) Provided by Water System**: The overall LOS the water system provides is assessed, including an evaluation of water quantity, quality, consistency, and comprehensiveness of water services.
- **3. Physical State of Water System Components**: Finally, an evaluation of each key water system component's physical state to assess where certain components would be at risk of failure or limited functionality.

Overall, using the above three risk areas, the Asset Analysis helps to flag, prioritize, and classify different water systems within a district/branch based on the risk level and need for repair, and helps provide a foundation for a long-term plan to maintain, repair, augment, or replace a water system when necessary. Results of the Asset Analysis provide a clearer picture of the requirements for CapManEx costs, and can be used as a planning and a resource mobilization tool for the districts. The information from asset analysis, also assists Operators plan for Operation and Maintenance (O&M) of the systems. They are able to identify risk areas with respect to piped water systems in their areas of operation and plan for rectification.

# ANNEX 3: MICROCATCHMENT MAP – KAMWENGE DISTRICT





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