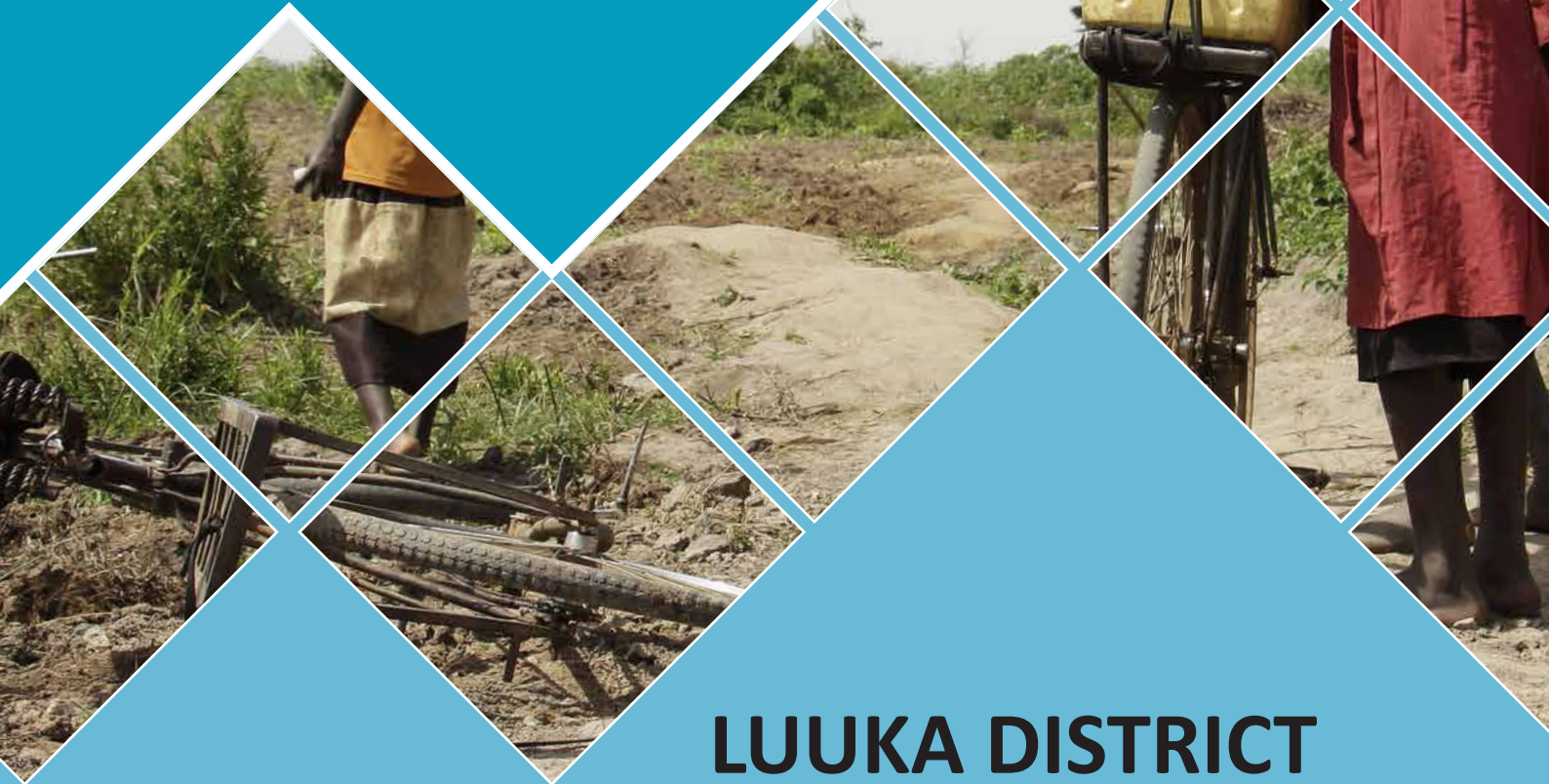




water for people
UGANDA



**LUUKA DISTRICT
WASH MASTERPLAN
2021 - 2030**



**LUUKA DISTRICT
WASH MASTERPLAN
2021 - 2030**

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LIST OF ACRONYMS

AEE	African Evangelistic Enterprise
BT	Busoga trust
CBO	Community Based Organization
CLTS	Community Led Total Sanitation
CMP	Catchment Management Plan
CSO	Civil Society Organization
DIP	District Investment Plan
DLG	District Local Government
DWO	District Water Office
DWSCC	District Water and Sanitation Coordination Committees
DWSCG	District Water and Sanitation Conditional Grant
EUWS	Eastern Umbrella Authority for Water And Sanitation
FLOW	Field Level Operation Watch
HCF	Health Care Facility
IWRM	Integrated Water Resources Management
MHM	Menstrual Hygiene Management
MWE	Ministry of Water And Environment
NGO	Non-Governmental Organization
NWSC	National Water and Sewerage Corporation
ODF	Open Defecation Free
PPP	Public Private Partnership
RWH	Rain Water Harvesting
RWSSC	Regional Water and Sanitation Support Centre
SSIP	Strategic Sector Investment Plan
TSU	Technical Support Unit
WFP	Water for People
WMZ	Water Management Zone
WRM	Water Resources Management
WSDF	Water and Sanitation Development Facility
WUC	Water User Committee

1. INTRODUCTION

1.1. OVERVIEW AND RATIONALE

The Luuka District WASH Master Plan reaffirms the commitment to ensuring universal access to water and sanitation services for all in the district. Luuka District in Eastern Uganda has been implementing interventions aimed at achieving the relevant targets and commitments in the Sustainable Development Goals (SDGs) and thus national targets. This implementation has been guided by several planning and implementation tools, albeit in a semi-structured manner that did not allow for holistic planning and adequate engagement of all stakeholders. The tools include the Ministry of Water and Environment District Implementation manual, Luuka District Development Plan (2016-2020), Luuka District Investment Plan (DIP) 2020, Asset Analysis, the Victoria-Lumbuye Catchment Management Plan (CMP) among others. The Master Plan seeks to provide a structured planning tool to address this.

The Master Plan provides a 10-year framework for interventions in the water and sanitation sub-sector for the period 2020 to 2030. The plan will enable Luuka District Local Government (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. This **vision**, as defined jointly by the key stakeholders, is for ***A healthy and prosperous Luuka community with access to adequate and affordable water and sanitation services for all, where water-related resources are sustainably managed by 2030.***

The Luuka WASH Master Plan is aligned to the Third National Development Plan (NDP III), that seeks to increase household incomes and improve the quality of life of Ugandans. In particular, achieving the requisite human capital development through improved access to water and sanitation services, while managing effects of climate change with proper stewardship of water resources and the environment. The Master Plan also contributes to implementation of the Uganda water and environment sector strategic investment plan (SSIP 2018) that is premised on the SDGs.

1.2. SCOPE:

The WASH Master Plan is structured along the following “building blocks”:

- i. **Water Supply Service Delivery** – towards universal access to sustainable basic¹ water services for everyone in Luuka District by 2030. The section also highlights; service delivery models, financing mechanisms for cost-recovery, and strategic actions for achieving the objectives and set targets are defined.
- ii. **Sanitation and Hygiene** – considers access to improved and reliable environmental sanitation and hygiene services by 2030. The scope includes service delivery models, financing mechanisms

¹ Basic service as per SDG definition refer to annex 1 for details

and cost recovery and strategic actions for achieving the objectives and set targets in rural and urban communities and institutions (schools, health facilities).

- iii. **Integrated Water Resources Management (IWRM)** – IWRM considers the key catchment management issues in Luuka as well as related management strategies to ensure sustainable development and conservation of the water and related resources.
- iv. **Equity and Inclusion** - considers the disparities and inequities in WASH service delivery, their effects, and key mitigation measures.
- v. **District Capacity Development** – focuses on the capacity development needs of the district staff and support structures, to ensure effective implementation and monitoring of the master plan.
- vi. **Communication, Advocacy and Networks** – focuses on the key communication, advocacy, and network aspects and strategies for effective delivery of the master plan.
- vii. **Partnerships and Implementation Arrangements** – determines the role of various actors and the coordination mechanisms for the plan implementation.
- viii. **Monitoring, Evaluation, and Learning** – defines the framework for fostering knowledge management and accountability.

1.3. MASTER PLANNING PROCESS

The master planning process commenced in 2020, under the oversight of the Luuka DIP task force. The process builds on the Luuka district investment plan that provided the initial cost estimates to reach everyone currently unserved with WASH service in the district. The DIP was informed and complemented by asset analysis and baseline assessments, all facilitated by Water for People. Stakeholder engagement was used to refine the context and vision. Secondary information from existing literature, some of which is detailed in the annexed document repository, enhanced the Master Plan content.

1.3.1. WASH baseline assessment

Service delivery assessment

A baseline of the WASH situation in Luuka provided the current level of service delivery with respect to water, sanitation and hygiene. This baseline, supported by Water for People, was a cross-sectional survey design in all the eight administrative units of the district. It involved 2,462 households, 590 water points, 92 government schools and 33 government health centers. The analysis of data utilized the "FLOW" (Field Level Operation Watch) assessment tool. FLOW provides the service based on a five-point metric that scores different parameters that define the level of public service delivery for a particular element - in this case, water supply and sanitation (household and public institutions – schools and Health centers). The baseline also provided the water quality status of all the sampled 590 water points.

Asset Registry

The Assets Analysis tools were developed by Water for People (WFP), and are now used by the five Rural regional Water and Sanitation support centres (previously eight technical support units (TSU)) staff in Uganda as well as over 20 DLGs. They were also used to collect and analyse data for Luuka District. The asset analysis exercise established the baseline on the physical state and service levels

of existing water sources in the district, which was used to determine the required infrastructure (Asset) maintenance (repair and replacement) costs.

1.3.2. District Investment Planning

The Luuka District Investment Plan (2020) aimed at achieving universal WASH coverage was prepared. The DIP provides cost estimates to achieve these targets at household, school and health care facility level. It utilized historical and current infrastructure and service delivery costs. The DIP estimates 13 years (to 2033) to attain universal coverage, at the projected annual investment rate of UGX 3.7 billion.

1.3.3. 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 involved desk review, structured questionnaire interviews and a stakeholder workshop involving Luuka district technical staff and partners. Key relevant documents like the Luuka District Development Plan (2016-2020), Victoria-Lumbuye CMP, Luuka statistical Abstract 2020 and Luuka WASH Service Delivery Assessment (Flow) were used to inform the district profile, policy environment, capacity for WASH delivery, operational and service delivery issues and key opportunities.

1.3.4. Luuka WASH Visioning Workshop

A visioning and context analysis definition workshop was held on 26th – 27th August 2020. The workshop sought to (i) Obtain concurrence on key water and environment sector issues in Luuka Districts, (ii) Draft the vision, mission and key guiding principles for Luuka WASH masterplan, (iii) Set preliminary targets for Luuka wash masterplan and (iv) Contribute to information gap filling.

Participants were drawn from the: Chief Administrative Office (CAO), Planning Unit, District Education Office (DEO), District Water Office (DWO), Health Unit, Natural resources, Community Development Office (CDO), National Water and Sewerage Corporation (NWSC) and civil Society organizations (CSO) – African Evangelistic Enterprises (AEE), Busoga Trust (BT), Family Search, Lutheran World Federation (LWF), Water for People (WFP) and Water Missions (WM)



**Part One:
SITUATIONAL CONTEXT**



2. NATIONAL CONTEXT - WATER AND ENVIRONMENT SECTOR

2.1. OVERVIEW

The water and environment sector is home to the subject of this master plan. This sector comprises nine components, five within the water supply and sanitation (WSS) sub-sectors and four within the environment and natural resources (ENR) sub-sector as below:

WSS sub-sector	ENR sub-sector
1. Water resources management (WRM)	1. Forestry
2. Rural Water Supply (RWS) ²	2. Wetlands and aquatic resources management
3. Sanitation and Hygiene ³	3. Meteorology
4. Urban Water Supply and Sewerage (UWSS) ⁴	4. Climate change
5. Water for Production (WFP) ⁵	

The main focus of the Luuka District WASH Master Plan is the WSS sub-sector excluding water for production, for which the DLG currently has no development mandate and capacity. The ENR components are cross cutting and considered as part of WRM.

2.1. 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).

2.2. SECTOR INSTITUTIONAL FRAMEWORK

The institutional sector framework consists of three-tiered levels, the national, regional and community, as summarized in Figure 2-1:

² RWS covers communities, villages with populations up to 1,500 & Rural Growth Centres (RGCs) with populations between 1,500 and 5,000.

³ Sanitation sub-sector covers household sanitation, school sanitation and public sanitation. Hygiene integration and hand washing are integral parts

⁴ 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.

⁵ WFP covers water for agricultural productive uses that comprise crop production, livestock, aquaculture and rural industries.

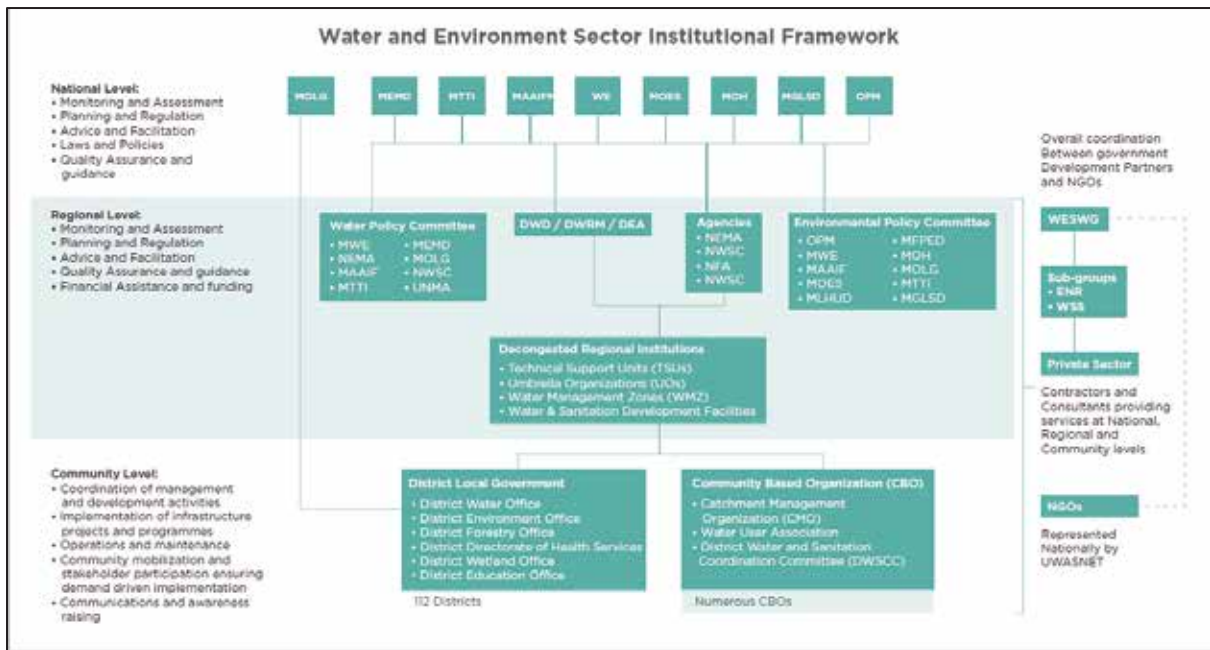


Figure STYLEREf 1 | s 2 SEQ Figure | * ARABIC | s 1 1 - Water and Environment sector institutional structure

2.3. Sector planning

The water and environment sector planning framework is prescribed in existing policy and legal instruments which contain a well-defined government planning process within the public expenditure framework. This framework includes the annual development expenditure work plans based on Sector Development plans, that are aligned with the National Development plan (NDP). The NDPIII calls for a shift towards a programmatic approach to planning, budgeting, service delivery and reporting under 18 programs. The sector content for this master plan is under the ambit of two programs; the natural resources, environment, climate change, land and water development program and the human capital development (where the water and sanitation sub-sector is categorized). This shift will have implications on financing this masterplan and reiterates the need for integrated planning and enhanced resource mobilization efforts.

2.4. Sector Financing

According to the Uganda water and environment strategic sector investment plan - SSIP (2018), an annual investment of UGX 5.1 trillion to UGX10 trillion is required to attain the SDG

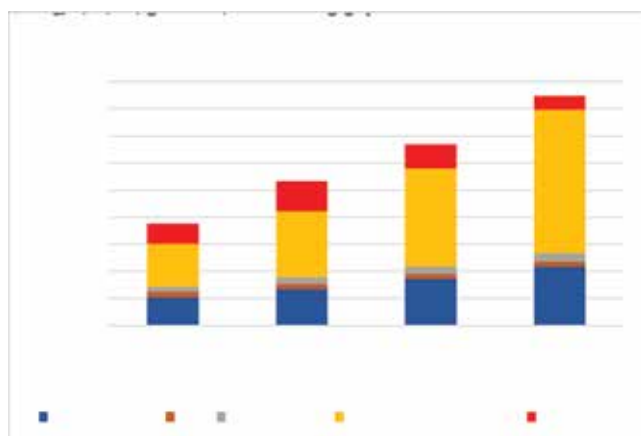


Figure STYLEREF 1 \s 2 SEQ Figure * ARABIC \s 1 2: Sector funding Gap (SSIP, 2018)

targets.

At the current funding levels for the water and environment sector, there is a huge funding gap of about 4.2 trillion from FY 2008/09. Figure 2-2 aside, reiterates this situation, in the short term (2021-25) there is an average annual funding deficit of 227 billion to be filled. This coincides with the period of this masterplan and calls for innovative financing solutions and “business unusual” in order to achieve sector targets and objectives.

Sector Performance

1.4.1. Uganda sector performance report (SPR) 2020

The total financing to the Sector including on-budget and off-budget resources was approximately UGX 1.82 trillion. The 2020 SPR, as summarized in Table 2-1 below indicates a general decline in sector performance on WASH indicators related to access and water resources management, with inequity in water service coverage also registered.

Table 2-1: FY2019/20 performance on sector indicators

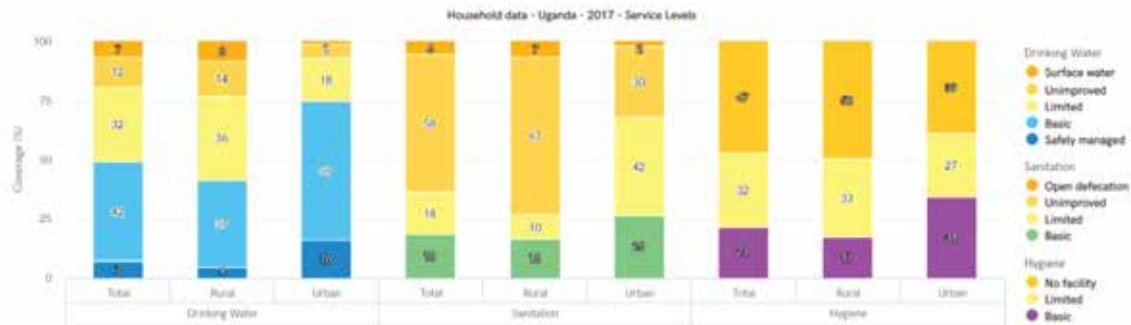
Water Supply		Score	Hygiene and Sanitation	
Basic water supply	Rural	68.0%	Basic Sanitation	18.0%
	Urban	70.5%	Safely managed sanitation	7.0%
Safely managed water	Rural	ND	ODF population	22.0%
	Urban	57.1%	Household Handwashing coverage	38.0%
Villages with a source of safe water supply	Rural	68.0%	School hand washing coverage	58.0%
	Urban	ND	School sanitation (Pupil stance ration)	40:1
Functionality			Sanitation in HCF (Patient stance ration)	25:1
Water source functionality at spot check	Rural	85.0%	Water resources management	
Piped water supply availability	Small Towns	81.0%	% compliance with permit conditions	77.6%
Service provider performance – water			Water quality – compliance with national standards (E.coli)- Rural	59.0%
Performance contract compliance	Small Towns	37.8%	Water quality – Compliance with national standards (E.coli)- Small towns	91.6%
	NWSC	33.5%	Water quality – Compliance with national standards (E.coli)- NWSC	98.0%
Customer satisfaction index	NWSC	77.0%	Cross Cutting	
Per Capita Investment Cost (USD)	Rural	55-99	Gender planning and Coordination	86.0%
	Small Towns	72.6%		
	NWSC	58.0%		

Capacity gaps in the sector further constrain the realization of SDG 6 targets on water supply, sanitation improvement and water resources. These gaps are more apparent in newly created local governments, umbrella authorities managing water supply systems and generally in the environment and natural resources sector.

2.4.2. UNICEF_WHO Joint monitoring report

The UNICEF-WHO Joint Monitoring framework expounds the WASH situation in Uganda. The latest statistics as presented in the graphs in the frame below indicate that Household level basic water

sanitation and hygiene coverage was at 42%, 18% and 21% respectively in 2017 – largely skewed to urban areas. School water and sanitation service delivery was fairly good, at over 60% in 2019, albeit the low hygiene levels (30%). Data gaps do not allow for full appreciation of the situation in WASH in health care facilities. Initial indications are that basic water supply coverage is at 44%.



3. LUUKA DISTRICT PROFILE

This section briefly describes the key geographical and socio-economic characteristics of Luuka district.

3.1. Location

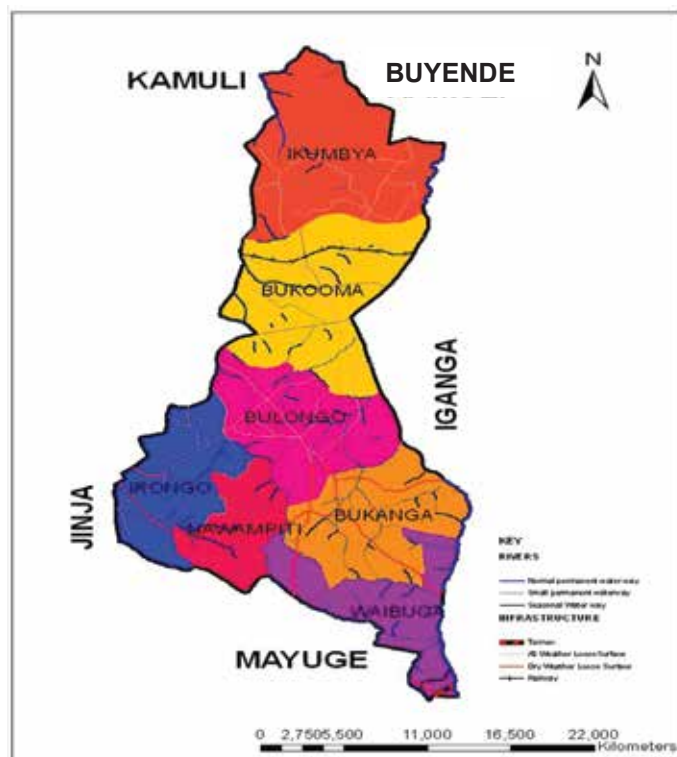


Figure 3-1: Luuka District sub-county map

Luuka District, with a land area of 650.1 square kms is bordered by Buyende district to the north, Kaliro to the northeast, Iganga to the southeast, Mayuge to the south, Jinja to the southwest and Kamuli to the northwest. The map in Figure 3-1 (aside) presents the location and key administrative units of Luuka district. Luuka town, where the district headquarters are located, is approximately 33kms by road, northwest of Iganga, the nearest large town. The coordinates of the district are: 00 42N, 33 18E.

3.2. Administrative Structure and demographic characteristics

Luuka District was created by Act of Parliament and became functional on 1 July 2010. Prior to that, it was Luuka County in Iganga District. Luuka town, formerly known as "Kiyunga", is the principal political, administrative and commercial center of the district. Luuka District comprises one county (Luuka), eight rural sub-counties, one town council and 44 parishes, as further detailed in Table 3-1. The Luuka District Council is the planning authority for the district. The 2020 population is estimated at 267,100, based on projections from 2014 Census statistics, at a growth rate of 2.2%.

Table 3-1 Administrative units and key demographics of Luuka District

Sub-County	Parishes	Villages	Population (July 2020)	Population density/kmsq
Bukanga	6	47	46,800	443
Bukooma	6	42	44,000	291
Bulongo	6	38	31,700	366
Ikumbya	5	29	38,400	258
Irongo	5	36	29,600	358
Luuka TC	5	14	11,600	630
Nawampiti	5	30	23,900	435
Waibuga	5	43	41,100	512
Total (District)	43	279	267,100	366

Source: Luuka 2020 district statistical abstract

The population distribution in the district shows some variation across sub-counties, with Bukanga, Bukooma and Ikumbya having the highest population. Luuka town council with population density of 630 persons/Km² presents both service delivery opportunities and potential for straining available resources. Generally, the population density is very high in Luuka district compared with the national average of 174 persons/Km²

3.3. Topography

The land surface is characterized by gentle undulating hills with a few isolated higher residual features. The higher residuals can be found in Mawembe, Bulongo Sub-County, Iziru hill, Nawampiti sub-county and Busiuro hills, Waibuga sub-county. This makes Luuka district generally flat at an average elevation of 1132m above sea level with a gentle slope towards the northern part of the district, where elevation is about 1100m above sea level. The narrow and generally higher accentuated relief to the south forms a watershed between Lake Victoria drainage and the northern drainage.

3.4. Climate

Luuka district lies in a tropical climate zone, with a limited seasonal variation. It experiences a bimodal rainfall distribution pattern with two peak seasons - April to June and August to November receiving a mean annual rainfall of 1,200mm. Unpredictable weather patterns have been witnessed with rainfall failures in the peak months and heavy rains with hailstones in the dry months. The annual temperatures range from 18-27.5°C, with a daily mean temperature of 21.5 °C. The hottest season is from January to March and the coolest period is from April to October.

3.5. Vegetation and Land Use

Luuka's vegetation is predominantly savannah, a mixture of woodlands and grasslands. Its high population density places a lot of pressure on resources to meet socio-economic needs of the population, including biomass. Sustainable land management practices are thus required, to reduce and manage this pressure.

Wetlands

Luuka district hosts two permanent and 14 seasonal wetlands, which are part of the Lumbuye catchment and cover 30% of the total land area. The permanent wetlands are Kamirantumbu, and Lumbuye. Seasonal wetlands are found in Bukanga (06), Ikumbya (06), Irongo (01) and Nawampiti (01) sub-counties. All the wetlands have greatly been encroached upon by farmers for cultivation of rice, maize and sugarcane, and grazing purposes. This is mainly attributed to loss of soil fertility on the uplands and scarcity of water due to long droughts. A map of the status of degradation is provided in Annex IV

Land use



1 \s 3 SEQ Figure * ARABIC \s 1 2: Sugar cane plantation

Over 50% of the land is reported to be arable, of which 30% is under permanent crops like sugar cane, cocoa and coffee. Sugar cane growing is predominant and has contributed to the majority of the land clearing. Livestock farming using natural pastures particularly in cattle corridor of Ikumbya and Bukooma sub-counties and zero grazing is practiced.

Forest cover

There are two forest reserves of Iziru (central forest reserve 103 hectares) and Bunafu (local forest reserve 28 hectares) in Nawampiti and Ikumbya sub-counties. Forest mosaics (private plantations) also exist and account for 5% of the total land cover. The forest reserves are heavily degraded due to encroachment by farmers, particularly for commercial sugarcane growing. There is extensive and indiscriminate tree cutting on private plantations, for charcoal trade and timber

3.6. Socio- Economic Situation

2.6.1. Economic Activities

The dominant economic activities contributing to employment, income and nutrition in Luuka are small scale agriculture, animal husbandry, and produce trade. Over 85% of the farmers are engaged in crop production as their main activity. 38% are engaged in mixed farming and a negligible percentage in livestock keeping and fishing. Sugarcane farming is fast growing, driven by proximity to sugar factories in Kaliro, Kamuli and Mayuge. Although few households are engaged in sugarcane growing, many hire out their land to sugarcane out growers. Cattle grazing is mostly in the corridors of Ikumbya and Bukooma sub-counties while zero grazing of improved breeds of cattle is taking root throughout the district.



Figure 3-3: Truck carrying sugarcane from smallholder farms

The industrial economy of Luuka consists mostly of small scale agro-processing mills for maize, rice and cassava, cooking oil and coffee processing. The transport economy is dominated by the motorcycle taxis (“boda-bodas”), which has attracted many youth away from agriculture.

The “boda-boda” industry, over cultivation of sugarcanes by small landholders at the expense of food crop production, and hiring out of land to sugarcane out-growers raises the risk of famine.

3.6.2. Health and Education

According to the Luuka district statistics including from the statistical abstract 2019/20, the district has 42 healthcare facilities and 99 education facilities classified as below.

Sub-County	Total No. of health units	No. of health units by category			
		HC II	HC III	HC IV	Private HCFs
Bukanga	6	2	1	0	3
Bukooma	10	3	1	0	6
Bulongo	2	1	1	0	0
Ikumbya	7	5	1	0	1
Irongo	7	1	4	0	2
Luuka TC	1	0	0	1	0
Nawampiti	4	2	1	0	1
Waibuga	6	3	1	0	1
Total	42	17	10	1	14

Schools	Primary	89
	Secondary	11

WASH-related diseases including diarrhea and onchocerciasis are the main contributors to the disease burden in the district.

4. ANALYSIS OF WASH AND IWRM ISSUES

4.1. Water Services

The status of water services in Luuka 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. Water supply solutions are mainly ground water-based point sources as detailed in the sections that follow

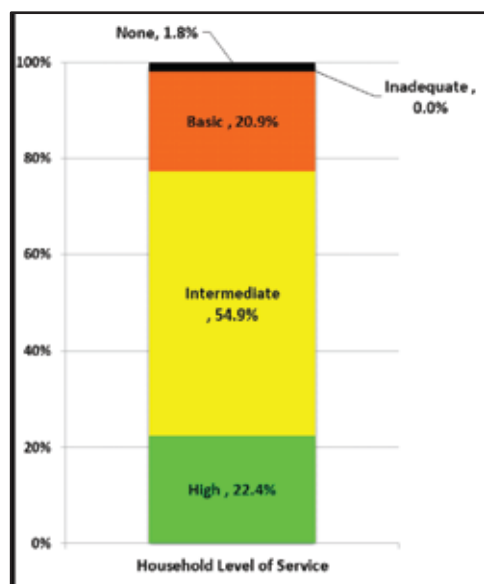


Figure 4-1: LOS for Luuka 2020

3.1.1. Service Levels and Technological Options
According to the 2020 Luuka FLOW data, water supply is through improved water sources. The FLOW assessment, with metrics for level of service (defined in annex I), showed a largely intermediate level of service enjoyed by residents of Luuka district through different technological options for household water supply. Up to 98% of the surveyed households reported access to at least a basic level of service.

4.1.2. Water coverage statistics

The Luuka DIP estimates the 2019 district water coverage at 51.5%, with significant variations across the sub-counties, shown in Table 4-1 below. Waibuga sub-county is reported as having the lowest coverage at 32.8%, and Bulongo sub-county the highest at 63.8%. Access rates in Luuka town council, the main commercial hub of the district at 40.5% is very low.

Table 4-1: Luuka district water access rates (2019)

Sub County	Bukanga	Bukooma	Bulongo	Ikumbya	Irongo	Waibuga	Nawampiti	Luuka TC	District
Access %	60.3	47.0	63.8	54.2	44.9	32.8	56.8	40.5	51.5

4.1.3. Service Delivery Models

Luuka district water service delivery models for management of water supply systems are detailed in Table 4-2. Infrastructure development/construction services are mainly provided by the private sector.

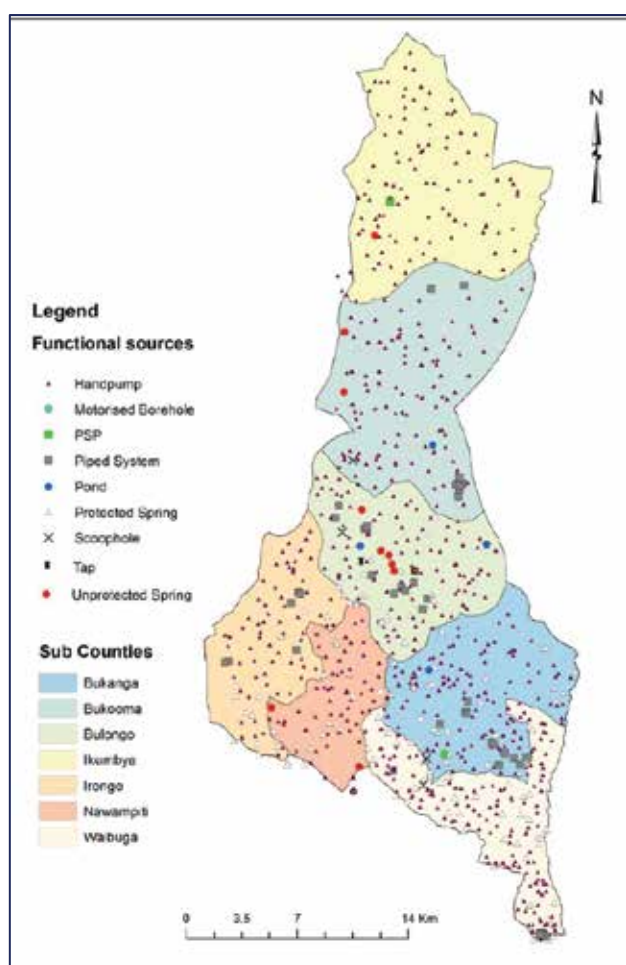


Figure STYLEREF 1 \s 4 SEQ Figure * ARABIC \s 1 2: Luuka district water source spatial distribution

Water supply is predominantly through boreholes, with a total of 663 boreholes, the largest numbers in Bukooma (140) and Ikumbya (123) sub-counties.

Piped water systems are noted in Bulongo, Bukanaga, Irongo and Waibuga. Luuka town council has the highest coverage of piped water supply. Shallow and hand dug wells, although discouraged by the sector, exist in the district. Shallow wells are predominant in Waibuga (83), Bukanga (56) and Nawampiti (40) and Bulongo (39) sub-counties.

Rainwater harvesting is practiced to a limited scale mainly in Luuka town council and Waibuga sub-county. Protected springs are a solution in all sub-counties apart from Ikumbya. The spatial distribution of water sources in Figure 4-2 aside shows an apparent equity of access.

Table 4-2 Water service delivery models

Model	Description	Service coverage
Utility management – National Water and Sewerage Corporation (NWSC) is a public corporation established by Act	Piped water systems are gazetted by the MWE f 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 M ³ (equivalent to about 50 jerricans) and monthly bill is sent out to each customer	No. of schemes managed – 1 scheme currently managed. Tariffs (incl. VAT) – Public stand pipes UGX 1,060 per m ³ – Domestic UGX 3,516 per m ³ – Institutional UGX 3,558 per m ³ – Commercial UGX 4,200 per m ³ No. of Connections – 50 Public standpipes – 354 Domestic – 56 Institutional – 10 Commercial

Community management	An elected committee of community volunteers oversees management and functionality - water and sanitation committee (WSC) for point sources and water boards (WBs) for small piped systems. Major repairs are reported by WSC/WB to the district Water office for addressing The tariff charged is usually a monthly lump sum per household for boreholes, to cater for operation & maintenance costs. For piped systems it is per unit used	<ul style="list-style-type: none"> - Hand pump boreholes in the district - 7 piped water supply systems managed by WBs.
Self-supply	Infrastructure like rain water harvesting tanks is provided and managed by households and institutions, with no external subsidy.	Predominant with rural households

4.1.4. Service Delivery context

There is uneven distribution of water resources in Luuka district. In some sub-counties like Ikumbya, the available sources have poor yields and cannot adequately meet the demand. This is contributing to the low water coverage in the district. Some villages like Bupokino in Ikumbya sub-county don't have a single water source. Long walking distances to fetch water and congestion at the boreholes is common, resulting in use of unsafe sources.

Several partners are supporting the district with water development interventions. These include (i) rain water harvesting tanks at schools in Bukoma and Bulongo sub-counties by African Evangelistic Enterprise (AEE), (ii) borehole rehabilitation and strengthening Operation and Maintenance (O&M) structures in all sub-counties by Busoga Trust and Water for People (Uganda), and (iii) construction of solar powered water supply systems in Nawampiti and Bukanga by Water Missions.

The challenging terrain in some areas increases per capita investment costs resulting from higher drilling costs from deeper groundwater levels.

The frequent breakdowns of point water sources are an indication of challenges in operation and maintenance. While this is partly attributable to poor quality materials and poor workmanship, there are limitations in the community-based management systems (CBMS), especially relating to functionality of water user committees (WUC). Political interference and lack of community ownership limits follow-up and support to WUCs rendering them weak and non-functional. Thus, there is a lax attitude towards payment and collection of water user fees.

Water quality surveillance is not regular as the district lacks a water quality testing lab, bacteriological testing kits, and cold storage for keeping of samples.

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. Household Coverage Statistics

Sanitation coverage in the district averages 47.09% and is fairly uniform across the different sub-counties, from a low of 43.1% in Bukanga sub-county to 61.8% in Luuka TC. The 2020

Sub-County	Access to Latrine (%)
Bukanga	43.10%
Bukooma	47.00%
Bulongo	46.10%
Ikumbya	42.20%
Irongo	51.60%
Luuka TC	61.80%
Nawampiti	44.30%
Waibuga	51.70%
District	47.09%

service delivery assessment indicates a 37.3% open defecation rate in the district and 65.2% existing toilets have super structures in poor physical condition. Sanitation practices are, however, promising; 96% of households have access to some form of toilet facility and 75% practice safe sludge Management.

Hygiene practices in the district are generally below desirable levels as summarized by the results of the 2020 FLOW assessments in Table 4-3. A good coverage of handwashing facilities (HWF) exists. However, use and availability of the

accompanying resources like water and soap is very low, as indicated in the same table.

Table 4-3: Hygiene status - 2020 FLOW metric assessment results

Indicator/ metric	Performance
Access to handwashing facility (HWF)	61.6%
Water availability at the handwashing facility	34.9%
Availability of soap or other cleansing agent at HWF	17.7%
Household has knowledge of at least 3 key times to wash hands	49.1%
Presence of WASH-related diseases within the last 6 months	62.5%
Safe Water storage practices used	61.9%
No stagnant water in or near the household	96.7%



4.2.2 Level of service

The 2020 Sanitation service delivery assessment indicates a 19.1% high level and 7.4% with no service in Luuka district. Up to 90% of the surveyed households were noted to have at least a basic level of service. This provides a good foundation for progression along the sanitation ladder.

4.2.3 Institutional Sanitation

4.2.3.1 Primary School sanitation

Table 4-4 presents the status of sanitation infrastructure in primary schools in Luuka district

Table 4-4: Sanitation status of public primary schools in Luuka District

Sub-county	No. of Schools	Population		Existing Toilet Stances		Average of Stance ratio		Existing Toilet Stances for MHM
		Girls	Boys	for Girls	for Boys	Boys	Girls	
Bukanga	15	6,221	5,771	68	63	134	101	6
Bukooma	16	6,698	5,649	87	71	83	86	2
Bulongo	10	3,413	3,339	52	50	96	86	1
Ikumbya	12	4,293	3,891	34	31	126	144	4
Irongo	11	4,994	4,434	53	57	88	101	2
Luuka T/C	3	1,723	1,485	11	12	126	183	0
Nawampiti	10	4,345	3,560	29	36	104	154	1
Waibuga	12	4,656	4,510	35	45	147	146	1
Total	89	36,343	32,639	369	365	112	117	17

School sanitation levels still fall short of the national service delivery standards. The high pupil-to-stance ratios reported in the 2019/20 statistics of more than 200-1 in several schools places school sanitation as a key priority for the district. The 2020 service delivery assessment further reiterates this, the average pupil-to-stance ratio for Girls and Boys is 108:1 and 91:1 respectively with over 70 of the schools not meeting national standards. Inclusiveness provisions are also a key concern; the existing 983 students with disabilities hardly have access to sanitation facilities that suit their requirements.

4.2.3.2. Sanitation in Health care facilities (HCFs)

The status of WASH in HCFs is presented in Table 4-5 below

Table 4-5: WASH status of all HCFs in Luuka District

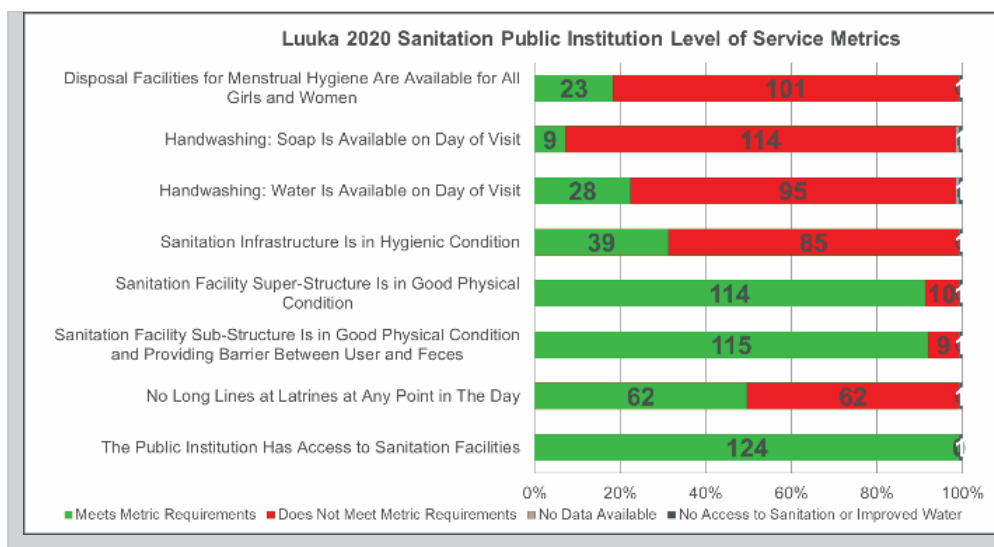
Sub-County	Total # of Health Units	Patient Latrine Stances		Bath Shelter	Waste Pits	Placenta Pit	Incinerator	# of HWF	# of MHM toilet stances	Water access (%)
		Female	Male							
Bukanga	6	2	3	1	1	1	0	12	0	60
Bukooma	10	6	9	1	0	1	0	20	1	50
Bulongo	2	3	2	0	0	1	0	4	0	50
Ikumbya	7	6	7	3	0	2	0	14	0	86
Irongo	7	6	7	0	0	0	0	14	2	47
Luuka TC	1	1	1	1	1	0	1	4	0	100
Nawampiti	4	6	3	0	0	1	0	8	2	75
Waibuga	6	3	4	2	0	2	0	12	1	85
Total	42	33	36	8	2	8	1	88	6	

Source: Luuka DIP 2020

Sanitation in HCFs in Luuka district is generally poor. Provisions for medical waste management like incinerators and waste pits are almost non-existent. The district has made some strides in providing basic services; however, a lot still needs to be done. The Covid-19 pandemic reiterated the need to improve WASH in HCFs and thus reduce the disease burden presented by critical inflection points.

4.2.3.3. Public Institution WASH Level of Service

Figure 4-3 presents the level of service of QASH services in public institutions in Luuka District. The 125 Public institutions (33 health centers and 92 schools including 5 secondary) visited as part of the 2020 service level assessment had no high level of service. The best level was intermediate, at 48% of the public institutions, followed by basic at 48%. These low levels of service are largely attributable to the poor quality - not meeting government standards, absence of any sanitation facility at one public Health Centre and absence of menstrual Hygiene management facilities at more than 80% of the institutions. Many of the sanitation facilities were in poor hygienic condition. Handwashing practice is also poor, characterized by lack of hand washing facilities with soap/detergent and unavailability of water supply.



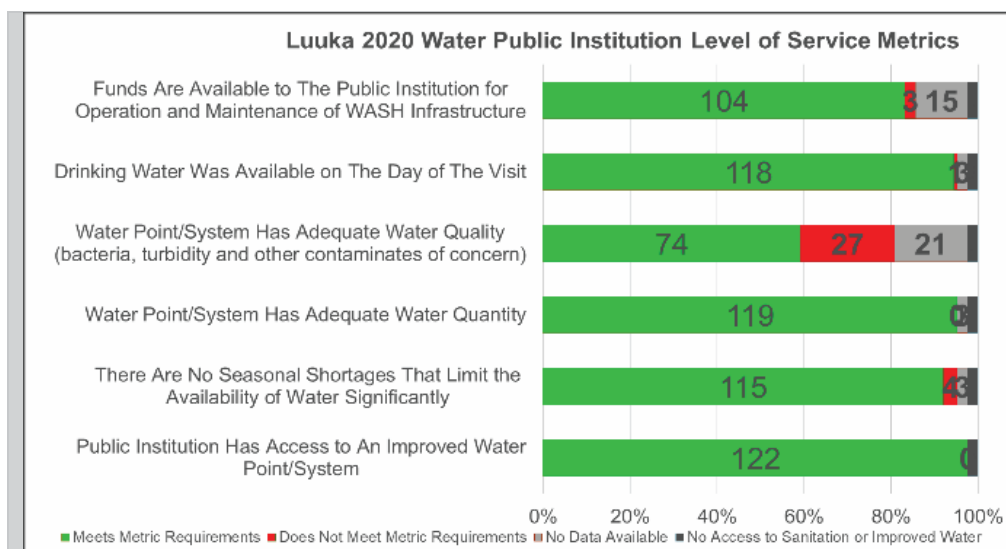


Figure 4-3: Public Institutions Water and sanitation Service Metrics

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. Anecdotal information from the stakeholders engaged as part of the visioning workshop indicates that the capacity of local service providers is limited; latrine diggers are few with limited knowledge of standard designs/ dimensions.

The Uganda sanitation for health Activity (USHA) is developing models to accelerate and catalyze household sanitation self-supply. Starting with Bulongo and Nawampiti sub-counties, USHA working with Water Missions is supporting institutional and Community WASH using a market-based business approach to sanitation promotion where sanitation actors are empowered and equipped to take on roles in the value chain. School toilet models promoting inclusive school sanitation have also been developed. Other partners like IDI, PECA Foundation and LWF also support advocacy activities and community engagement aimed at improving household sanitation

The BRAC Sanitation Model

BRAC promotes SATO products through a network of Community Health Promoters (CHPs) working from BRAC branch office. CHPs are female community resource persons who are recruited, trained, and supported to provide basic health care services and undertake product sales through door-to-door marketing. CHPs are paired with USHA-trained local masons who undertake the installations following a CHP referral. Each CHP earns a commission of 15% –20% per SATO product sold. The cost of installation is negotiated with masons directly with the household. SATO products sales with been considerable with are the highest performing CHPs reported to have sold well over 500 products each. The benefits to sanitation and household income improvements cannot be over emphasized. To sustain and boost the sales, BRAC organizes 'community storming' events, targeted marketing events, and more localized community and targeted sales events. In addition, an incentive-based system for all its staff supporting CHP product sales. The latter in particular is attributable to the significant increase in the monthly product sales for example from the highest recorded (nearly 10,000) by Dec 2019 to nearly 13000 in 3 months (March 2020)

Part of USHA's catalyst model involves working with partners to increase access to toilet products through technical support on supply chain management including marketing and costing aspects. These partners include hardware stores, Savings and Credit Cooperative Organizations and CSO partners, as with the BRAC model described in the frame below

The BRAC Sanitation Model

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Provision of public and school toilets is the responsibility of the government. Partners like AEE, Water missions and Water for people are supporting school WASH. The support includes construction of school toilets and establishing school O&M structures. O&M of public toilets is usually delegated to the private sector and in schools, the school administration is responsible for this function.

Emptying is predominantly by manual methods using the informal private sector. Cesspool emptiers using mechanized trucks are available in the nearby Iganga town. These are rarely used due to the high cost of services – at UGX 2million for mechanical emptying compared to UGX 350,000 for manual emptying of a 5-stance latrine.

4.3. Integrated Water resources management (IWRM)

Most of Luuka district is part of the Kyoga Water Management Zone (WMZ) and lies within the Lumbuye catchment, with small portions of it falling in neighboring Victoria Nile catchment. According to the Victoria- Lumbuye catchment management plan (CMP), the catchment experiences pressure on water and land resources due to the existing tenure systems of Local Council agreements, land use practices like sugarcane growing, rice growing and cattle keeping especially in Ikumbya and Bukooma sub-counties, growing of pines in upland areas and eucalyptus, resulting in increased exploitation and destruction of ecosystem resources, and in environmental degradation.

The CMP estimates the water demand in Lumbuye catchment at 11.16mm³/year. This demand is majorly for irrigation (largely informal) and water supply needs. The comparison of the water resources versus water demand, in the table below, shows that the water resources are sufficient to meet the annual demand of the sub-catchment. However, analysis of the intra-seasonal flow variability reveals periodic deficits especially in the period from January to March.

Sub-catchment	Water availability			Water Demand (mm ³ / year)				
	Ground Water	Surface water	Surface water resources at sub-catchment outlet	Irrigation	Water supply	Livestock	Industry	Total
Lumbuye 1	18.3	111	111	5.14	4.26	1.69	07	11.16

Available analyses also allude to climate change effects on the availability of water resources. Seasonal variability of water resources presents uncertainty on demand satisfaction, when climate change impacts are considered.

Recognizing that wetlands are a finite resource which serve the needs of the local population, various projects and approaches are ongoing to manage and mitigate the pressure on wetlands so as not to diminish their capacity to meet the local needs. The major intervention is the National Wetland Management Project funded by the Japan International Cooperation Agency (JICA), whose main objective is to establish a model of conservation and wise use of wetlands in Uganda. Demarcation with live boundary markers and introduction of micro irrigation schemes to relieve stress on wetlands are additional measures being undertaken by the Luuka district local government.

The Directorate of Water Resources Management (DWRM) in the Ministry of Water and Environment (MWE) is implementing Flood Risk Management in the Kyoga WMZ Project. The project supports the development and implementation of flood risk management activities to improve the resilience and adaptive capacities of affected communities and local institutions towards extreme weather events like floods, knowing that such events may result in disasters.

4.4. Equity and Inclusion

The DIP (2019) shows that 95 of the 271 villages in Luuka do not have access to improved water services. Figure 4-3 above shows that hand pumped boreholes are spread fairly evenly across the district. Protected springs are prevalent in the upstream of the Lumbuye catchment while piped systems are mainly in the three sub-counties of Bukanga, Bulongo and Irongo. The spatial distribution of water points, follows the incidence of availability of water resources which is uneven across the district, with the northern sub counties having a scarcity of water sources. Despite the uneven spatial distribution, the map shows that efforts have been made to provide at least basic water supply services in all sub-counties. Additionally, the service level assessment indicates at least 90% provision of basic WASH services at household and institutional levels.

School sanitation statistics indicate provisions for persons with disability (PWDs) and gender disaggregation of toilets including a total of 217 toilet stances that suit the needs of PWDs (both teachers and pupils) as well as 365 and 369 toilets for boys and girls respectively.

The context analysis exercise outlined key deficiencies in service delivery to the marginalized population segments, particularly menstrual hygiene management for school children. This WASH Master Plan will thus seek to maintain inclusiveness of service delivery, to reach the vision of sustainable WASH services for everyone.

4.5. Governance: Capacity and Performance of Service Providers

4.5.1 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; these include the water and sanitation development facilities (WSDFs) and regional support centers (RSC).

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 deconcentrated structures that have well-staffed water management zonal offices – Kyoga for the case of Luuka. 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 2020 water and environment sector performance report registered good performance of the national service providers.

4.5.2 District Level

The Local Government Act Cap 243 mandates the district 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 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 Busoga trust, Lutheran World Federation, Water For People, and water Missions.

The performance of Luuka district as contained in the 2018/19 local government assessment is generally average with good scores in health and water related metrics as shown in the table aside. The aggregated overall score for water and sanitation services was 72%. The constituent average scores were (i) planning, budgeting and execution at 50%, (ii) monitoring and supervision at 75%, (iii) procurement and contract management at 50%, (iv) financial management and reporting at 80%, (v) governance, oversight, transparency and accountability at 89%, and (vi) social and environment safeguards at 83%. The performance reiterates the need for this masterplan given the low scoring on the planning metric.

Assessment metric	Score
Accountability	50%
Cross cutting issues	48%
Education	57%
Health	76%
Water	72%

The USHA is providing technical assistance (TA) in institutional strengthening for monitoring and evidenced based advocacy to departments of health and water. This TA, includes training on improved governance and effective data use for planning, tooling to undertake the monitoring function and supporting the operationalization of effective Partner coordination

through improved functionality of DWSCCs. The latter includes establishing effective DWSCC meeting norms and cultures with prescribed and KPIs in areas of participation, attendance, reporting, knowledge management (learning and adoption of best operational practice) and results from deliberations / impact. This TA seeks to ensure an operational and effective DWSCC and thus adequate capacity of district service providers to perform their roles.

4.5.3 Service Provider Level

The level performance of WASH service providers in Luuka leaves room for improvement. The 2020 assessment indicated dismal performance of less than 30% for the majority of the assessment metrics, as shown in table below.

Assessment metric	Score
Metric 5.1: Service provider existence	88%
Metric 5.2: Service provider with legal status	79%
Metric 6.1: Use of Lifecycle Costing Tool for Tariffs setting.	23%
Metric 6.2: O&M cost recovery Tariff set	31%
Metric 6.3: Availability of revenue for at least 30% of Capital Maintenance and Replacement (CapManEx) Costs for the Systems/Point Sources Managed by Local Government.	2%
Metric 6.4: Piped water supply systems fully metered	84%
Metric 6.5: Service Providers for Water Point/Systems Not Managed By NWSC/EUWS Banking funds for CapManEx	12%
Metric 6.6: Access to Funds by NWSC/ERUWS for 100% CapManEx Needs for Piped Water Systems	0%
Metric 7.1: Service Providers with easy availability of required Spare Parts and materials for O&M including for water treatment	20%
Metric 7.2: Availability of Trained personnel for Operations and Maintenance	21%

4.5.3.1 NWSC

Luuka district has eight piped water systems, of which two are managed by NWSC. Performance on operations is governed by key performance indicators under the overall framework of the NWSC performance contract with the Ministry of Water and Environment, for whom it operates the systems and holds the assets in trust

No	Key Result Areas	Main key achievements / deliverables in the past three years
1	Water Sales in cremate	Water sales have improved from 1936m ³ in 2017 to 2910m ³ 2020 with an improvement of 86% on average per year
2	Annual Billing – VAT Incl. (million UGX)	Annual billing has improved by 27% from 7.44 million (2017) to 9.43 million (2020)
3	Collection efficiency (Annual)	<ul style="list-style-type: none"> • 2017 - 106%, • 2018 - 104% • 2019 - 100%
4	Infrastructure Service Delivery	44.9km network coverage in 2020 from 19.6km in 2017
5	Service coverage	13 villages in 2020 from 6 villages at takeover in 2017
6	Effective Stakeholder Engagement & Liaison	Key member of the District Water committee with regular attendance of meetings
7	Total connections	Total connections have increased from 372 in 2017 April to 561 as at April 16, 2020
8	Non-revenue water reduction	Reduction of non-revenue water to 7% from 14% in 2017.

4.5.3.2. Hand pump mechanics

- The district has seven (07) formally recognized hand pump mechanics (HPMs), also known as borehole technicians. These HPMs are responsible for providing maintenance services to all the sub-counties. Bulongo sub-county has one, Luuka town council has one, Ikumbya has one and Bukooma and Bukanga have two each and the rest of the sub-counties have one each. These HPMs are trained in borehole maintenance (major and minor repairs) and are registered with the district as Luuka Hand Pump Water And Sanitation Association (LHPWASA). The HPMs also assist in collecting borehole service level data, however, with the irregular operating environment with limited financial returns, business continuity of the association is uncertain

4.5.4 Asset Management

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

their delegated management role, are also responsible for asset management. Asset registers (2020) exist for all the systems in Luuka.

Water for people facilitated the Asset registry exercise, in which service providers participated in the field data collection and will remain responsible for keeping the registers updated. Tools exist to facilitate future updates and planning exercises. Asset analysis was undertaken on 770 water sources (3 piped and 767 points including 473 boreholes) to identify, catalog and classify the systems, and thus prioritize intervention measures as contained in the developed Luuka district Asset registers and asset analysis reports. The Capital Maintenance Expenditure (asset renewal, replacement and rehabilitation costs) calculated using an Excel-based tool indicates high financing requirements over and above the current budget provisions by Luuka DLG, as illustrated in Figure 4-4 below

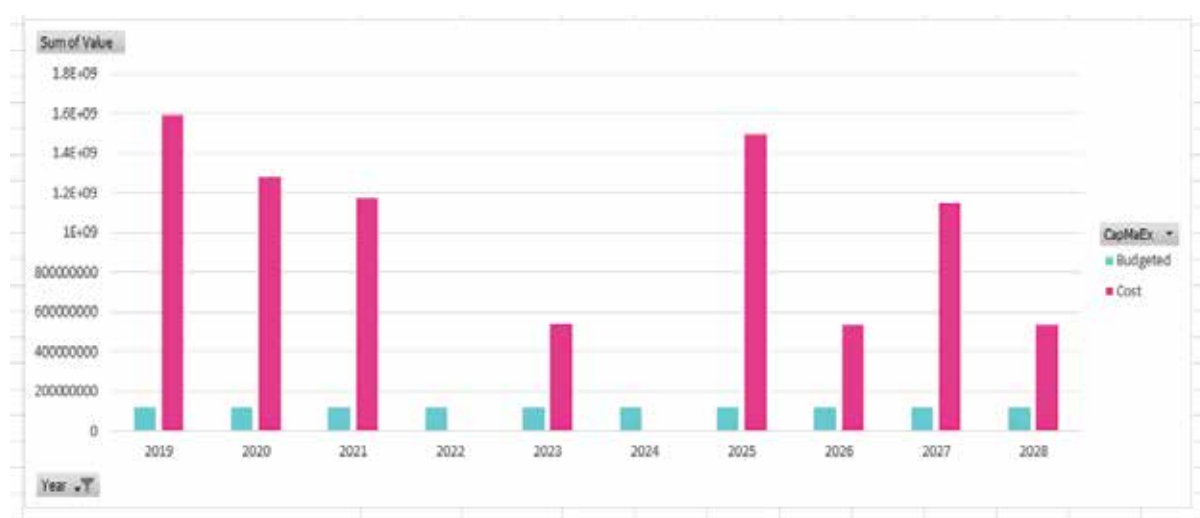


Figure 4-4: Luuka District CapManEx projections – 2019 Asset registry exercise

4.5.5 Water Quality management

Water quality in the country is managed under a three-tier system. Luuka district is responsible for undertaking water quality surveillance of all water sources in the district. This function is however constrained by the lack of testing kits and consumable especially for the bacteriological testing. The service providers, notably NWSC and the EUWS 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 Luuka district.

During 2020, a water quality assessment (bacteriological and physico-chemical) for Luuka district was undertaken. This assessment considered the drinking water quality parameters of E.Coli, turbidity, Nitrates and Nitrites, Electrical conductivity (EC), Hardness (calcium and Magnesium), Fluorides and PH. Results generally indicate good compliance levels to national drinking water quality standards. Bacteriological quality is of major concern, assessment results indicate an 85% average compliance level for improved water sources, with 100% non-compliance for unimproved sources. This implies unsanitary fecal management practice,

particularly in the sub-counties of Bukoma and Bukanga, where less than 60% compliance was obtained for improved sources. For an agrarian community using fertilizers, the nitrates and nitrites compliance levels are generally very good, at 89% and 99% respectively, albeit with localized highs of 50mg/l nitrate in one borehole in Nawasenga B, Bukoma sub-county.

5. DISTRICT WASH FINANCING

5.1. Context

Funding for the WASH sector in Luuka 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 flows to Luuka district over the last couple of years is summarised in Table 5-1 Below. There is a general increase in funding levels from FY 2016/17 albeit with no consistent trend across the years. The conditional grant from central government (DWSCG) has grown to more than double the financing levels in 2016/17 for both the WASH and Environment sub-sectors. In the recent years, the district has attracted significant development partner (CSOs) funding in the water supply and hygiene with investment levels of up to UGX 3.7 billion.

Table 5-1: Annual financial flows to Luuka District (Uganda shillings – UGX)

Financial year	Funding Source	Water supply and Sanitation	Environment and Natural resources
FY 2016/17	DWSCG	387,747,330	4,838,000
FY 2017/18	DWSCG	486,791,262	6,084,000
FY 2018/19	DWSCG	488,038,680	6,084,000
FY 2019/20	DWSCG	474,252,834	6,084,000
	Development partners	3,699,704,234	
FY 2020/21	DWSCG	820,049,488	22,980,486
	Development partners	3,279,687,089	

A graphic consisting of four stylized human figures in shades of orange, grey, blue, and green, arranged in a row. Each figure is composed of a vertical bar for the torso and a circle for the head. The figures are slightly offset from each other, creating a sense of depth.

Part Two THE MASTER PLAN



6. STRATEGIC ALIGNMENT

Shared Vision

'A healthy and prosperous Luuka community with access to adequate and affordable water and sanitation services for all, where water related resources are sustainably managed by 2030'

Mission Statement

'To promote cost effective, quality and sustainable water and sanitation service delivery for socio-economic development, through coordinated planning and innovation, while conserving the environment'

Guiding principles and Core values:

- Inclusiveness
- Innovation
- Accountability
- Transparency
- Time Management
- Equity in service provision
- Partnerships and coordination
- Sustainability of services

7. TARGET AND COSTS

7.1. POPULATION PROJECTIONS

The projections in Table 7-1 are based on the Luuka district 2020 population abstract. An annual population growth rate of 2.2% was considered for the projections. The urban population is that for Luuka TC

Table 7-1: Luuka District population projections

Year	Rural	Urban	Total
2020	250,921	16,179	267,100
2021	256,442	16,535	272,977
2026	285,919	18,436	304,354
2030	318,785	20,554	339,339

7.2. Medium (2025) And Long Term (2030) WASH Targets

6.2.1. Key Definitions

The targets towards achieving access for everyone by 2030 are 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 data from the Luuka district local government (DLG) and the 2020 Luuka DIP. The targets were provided by the DLG and aligned with the masterplan objectives and SSIP targets for the Victoria- Lumbuye catchments (#14) in which Luuka district lies. This, in order to make a realistic and best fit scenario for development as well as alignment with national requirements.

This Masterplan adopts the WASH indicator definitions in the SSIP, as detailed in Annex III

7.2.2. Water supply service targets

Indicator	2020			2021			2026			2030		
	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District
Safely managed	0%	24%	24%	2%	25.5%	25%	7%	31.5%	30%	15%	35%	35%
Basic	75%	63%	75%	77.1%	68%	78%	84.3%	75.2%	84%	100%	100%	100%
Village water supply	79%	75%	79%	80%	76%	80%	90%	86%	90%	100%	100%	100%
Functional Sources	97%	100%	97%	98%	100%	98%	99%	100%	99%	100%	100%	100%

7.2.3. Sanitation targets

Indicator	2020			2021			2026			2030		
	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District
Population using improved sanitation facility (not shared)	69%	67%	68%	72%	70%	71%	83%	80%	82%	97%	94%	96%
Population using safely managed sanitation	40%	50%	45%	45%	50%	47.5%	50%	60%	55%	60%	70%	65%
Villages practicing open defecation	31%	33%	32%	28%	30%	29%	17%	20%	18.5%	3%	6%	4.5%
Population with functional hand washing facility	40%	40%	40%	45%	45%	45%	50%	50%	50%	65%	75%	70%
School sanitation (Pupil Stance Ratio)	1:113	1:83	1:98	1:93	1:94	1:95.5	1:63	1:57	1:60	1:45	1:35	1:40
Sanitation in HCF (Patient Stance Ratio)	1:100	1:80	1:90	1:80	1:60	1:70	1:60	1:40	1:50	1:30	1:20	1:25

7.2.4. 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 below. These standards are benchmarked against the WASH in Schools National Standards in Uganda, JMP monitoring indicators for HCFs and WHO standards on water, sanitation and hygiene in health care facilities

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 toilet, equipped with soap/ash or other detergent	
Gender disaggregated toilets with provision for MHM as well as bath shelters at H/Cs	

7.2.5. WRM

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

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 Victoria-Lumbuye CMP will serve as the guiding document to inform the cascaded catchment planning as well as catchment management measures.

8. COSTING THE PLAN

8.1. 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 Luuka district investment plan and the 2018 Victoria -Lumbuye catchment management plan (CMP).

(i) The Luuka WASH DIP

The district investment planning process is a participatory process that involves establishing the baseline WASH situation, determining the unserved population and unit investment costs, (see Table 8-1 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 Luuka 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 Luuka, 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 two 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)

S N	Description	Total Investment Required	
		UGX	USD
1	Sanitation Promotion in Communities (CLTS)	435,230,546	114,534
2	Hardware Schools	1,222,750,000	2,953,355
3	Hardware Health Centres	3,566,780,055	938,626
4	Water Infrastructure Communities	31,682,478,092	8,337,494
5	Software (sensitisation, mobilisation, setting up management structures) – 10%	4,647,200,814	1,222,948
6	Monitoring and Evaluation – 2%	929,440,162	244,590
	Total Amount	52,483,879,670	13,811,547

The DIP estimated a 14-year time frame based on current and anticipated funding levels. This timeframe is beyond and thus this masterplan is based on updated the costing that utilizes the SSIP and considers a 10-year implementation horizon to achieve the services for everyone target.

Table 8-1: Unit costs used in the Luuka 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	5,000,000	Toilet
Placenta pit or Waste pit infrastructure	15,000,000	Placenta/waste pit
Incinerator	45,000,000	Incinerator

The cost estimates used for school sanitation considers WASH inclusive schools. UGX 30,000,000 was the cost estimate provided for a 5-stance inclusive VIP with provisions for MHM, handwashing and PWDs. Thus, the adopted unit cost per stance is UGX 6,000,000

(ii) SSIP cost estimates

The MWE developed a SSIP that considered the investment requirements to attain the targets for each sector performance indicator. The SSIP derived national and catchment level unit cost estimates for each indicator. This masterplan has utilized the Lumbuye catchment cost estimates summarized below in Table 8-2 below:

Table 8-2: SSIP unit cost estimates for sector indicators

Indicator	Unit cost (UGX)	Unit
Village water supply	38,820,863	villages
Improved drinking water	258,806	people
Safely managed drinking water	470,686	people
Improved sanitation	22,70	people
Safely managed sanitation	151,260	people

(iii) 2018 Lumbuye catchment CMP (1USD=3,700UGX)

The Lumbuye-Victoria CMP includes cost estimates for the proposed measures. An extract of relevant activity centers is presented in Table 8-3 at an exchange rate of UGX3,700 to 1USD

Table 8-3: Unit cost estimates for IWRM activities in Lumbuye- Victoria CMP

Activity	Unit rate	Unit
Public awareness campaigns	1,076,700	Campaign
Farmer trainings	74,000	Training event
Training CMOs or government officials	148,000	Training event
Training one operator	88,800	Training event
Radio advocacy	366,300	Radio talk show
Baseline survey and boundary marking	36,015,800	
Reforestation of degraded forest	7,573,900	Per Ha
Rehabilitation / management of gully	1,309,800	Per Ha
Terrace construction on farm	884,300	Per Ha
Tree nursery establishment	6,412,100	Per Ha
Wetland restoration	4,295,700	Per Ha
Demarcation of protected area	1,887,000	Per Ha

8.2. Investment requirements

8.2.1. Household water supply and sanitation services

The relevant cost estimates (in UGX billion) to attain the WASH targets defined in section 7.2, using the SSIP unit costs, are presented in Table 8-4 and Table 8-5 below.

Table 8-4: Water supply investment requirements by SSIP indicator (UGX billion)

Indicator	2020			2021			2026			Total		
	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District
Safely managed	2.46	0.11	1.95	6.93	0.49	9.93	13.53	0.51	13.85	22.92	1.12	25.73
Basic	2.51	0.20	3.26	10.05	0.43	9.64	21.86	1.30	23.08	34.42	1.92	35.98
Village water supply	0.10	0.01	0.11	1.03	0.05	1.08	1.03	0.08	1.08	2.16	0.14	2.27

Sanitation

Table 8-5: Sanitation investment requirements by SSIP indicator (UGX billion)

Indicator	2020			2021			2026			Total		
	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District	Rural	Urban	District
Basic	0.27	0.01	0.28	1.10	0.05	1.11	1.78	0.08	1.85	3.15	0.14	3.23
Safely managed	2.31	0.02	1.43	3.77	0.28	5.16	7.91	0.39	8.59	14.00	0.68	19.07
ODF	0.28	-	0.28	0.70	0.03	0.73	0.88	0.08	0.96	1.86	0.10	15.18
Hand washing	0.05	0.00	0.05	0.09	0.00	0.09	0.23	0.02	0.30	0.37	0.02	0.45

8.2.2. Institutional WASH services

The estimates for WASH in health care facilities and School Basic sanitation, presented in Table 8-6 and Table 8-7, are based on the DIP (2019) and utilize the updated unit costs provided by the Luuka DLG. The school sanitation estimates consider an inclusive WASH school.

Table 8-6: School sanitation investment requirements by sub-county (UGX billion)

Bukanga	Bukooma	Bulongo	Ikumbya	Irongo	Waibuga	Nawampiti	Luuka TC	Total - District
2.309	2.332	1.353	1.636	1.788	1.783	1.520	0.571	13.291

Table 8-7: Sanitation investment requirements for Health Care facilities (HCF) by sub-county (UGX billion)

Health centre investment requirements (UGX Billion) - DIP 2020							
Sub-county	Latrines	RWH tanks	Bath Shelter	Waste Pit	Placenta Pit	Incinerator	Total
Bukanga	-	0.064	0.060	0.045	0.030	0.180	0.379
Bukooma	-	0.128	0.090	0.105	0.060	0.360	0.743
Bulongo	0.007	0.016	0.030	0.015	-	0.045	0.113
Ikumbya	-	0.096	0.090	0.090	0.060	0.270	0.606
Irongo	0.022	0.096	0.180	0.090	0.090	0.270	0.748
Luuka T/C	0.016	-	0.030	0.015	0.015	-	0.076
Nawampiti	0.080	0.048	0.090	0.045	0.030	0.135	0.428
Waibuga	0.003	0.080	0.060	0.075	0.030	0.225	0.473
Grand Total	0.129	0.528	0.630	0.480	0.315	1.485	3.567

8.2.3. Water resources management

The water resources management cost estimates consider the water quality and catchment management priorities as defined by district LG and stakeholders, and the Lumbuye CMP. Cost estimates are derived from rates provided by the district

Water Quality Management

Item	Unit / Frequency	Unit rate	AMOUNT
Bacteriological testing kit	1	25,000,000	25,000,000
Fridge	1	2,500,000	2,500,000
Cooler Box	1	200,000	200,000
Reagents	10	20,000	200,000
Water quality surveillance	1	480,000	480,000
TOTAL			28,380,000

Natural resources/ Catchment management and source protection

Activity / thematic area	Budget	Comment
Water Source protection (5% of water supply capital costs)	1,290,000,000	Considers indicator on safely managed water supply
Forestry management and agroforestry practices (Training and community practice)	57,000,000	Annual trainings and support to plantation development
Wetland restoration and boundary marking, starting with Kamirantumbu wetland (Bukooma sub county)	57,000,000	Community sensitization on wise use and boundary marking with live markers
Sensitization and enforcement activities on encroachers	57,000,000	
Establishment and operationalization of lower environment committees (31 members) at sub county level	80,000,000	Estimated cost of 1,000,000/= per sub-county per year for the next 10 years.
Environment screening of approved development projects in the district	20,000,000	Field work by the district environment office, DCDO, Project Manager, District Planner.
Total	1,561,000,000	

8.2.4. Monitoring, coordination and support costs

Activity / thematic area	Budget	Comment
Data collection (Quarterly)	24,000,000	600,000/= per quarter
DWSCC meetings (quarterly)	47,840,000	DIP estimates – direct support
Quarterly learning and advocacy platforms	80,000,000	2,000,000 per Quarter
Annual Survey Monitoring	18,000,000	1,800,000 per year (DIP estimate)
Equipment	24,300,000	4 Motor bikes, generator
Salaries (DWO and NRM)	1,101,007,680	DIP estimates & NRM workplan
Office running - (utilities, O&M and supplies)	202,363,360	DIP estimates

Extension staff meetings	26,532,000	2 per year at the district
Supervision costs (construction and natural resources)	26,520,000	DIP estimates
Total	1,550,563,040	

8.2.5. Summary total Masterplan Budget

Component	Total Budget requirement (UGX)
Water supply	63,980,000,000
Hygiene and Sanitation	23,830,000,000
Institutional WASH	16,858,000,000
Water resources management	1,589,380,000
Operational costs	1,550,563,040
Grand total	107,807,943,040

9. IMPLEMENTING THE PLAN

9.1. STRATEGIC DIRECTION 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

Thematic Area	Strategic Objective	Strategic Action
Water Supply	1. Provide access to basic water services for each household in every village of Luuka district by 2030	<ul style="list-style-type: none"> Utilize appropriate technologies that target the most vulnerable communities to improve access to water supply Promote use of innovative financing models for rural water supply Institute Water safety plans as a component of design of water supply systems Roll out of the 2020 operation and maintenance framework for rural water supply infrastructure in Uganda Adoption of the “No Shallow well development policy” Establishment of a groundwater monitoring system for the district
	2. Grow access to safely managed water services in Luuka district from 0% to 35% households by 2030	
	3. To enhance water safety planning as key to sustainable water development in Luuka district by 2025	
Sanitation	1. Access to improved sanitation for 95% of all households in Luuka district by 2030; providing 65% access to basic sanitation and 30% access to safely managed sanitation.	<ul style="list-style-type: none"> Develop and implement comprehensive sanitation plans for Luuka town and all RGCs Use the DIP as an annual planning tool Adopt sanitation social marketing and sub-county sanitation planning as strategies for increased access to basic sanitation, including implementing the national sanitation marketing strategy Utilise the community led total sanitation (CLTS) approach to achieve an open defecation free Luuka Partnerships and collaboration with USHA and CSOs in the district to adopt and promote the inclusive WASH Promote innovation in fecal sludge management (toilet options, emptying and treatment methods) Equip district health teams at all administrative levels to support the planning and enforcement function Develop and implement a monitoring system for sanitation with clear procedures/protocol for public health inspection at all levels (Household, public and institutional premises)
	2. Attain 100% open defecation free status in all villages by 2030	
	3. Attain a minimum pupils stance ratio of 40:1 in all schools in the district by 2030.	
	4. Attain 100% coverage for water, sanitation, hygiene, and waste management in healthcare facilities (HCFS) by 2030.	

		<ul style="list-style-type: none"> ● Adopt appropriate options for waste management in HCF including low-cost incinerators and hybrid of co-management systems
IWRM	1. Implement a catchment-based water resources management for all Water resources planning and development in the district by 2030, while complying with provisions of the water act.	<ul style="list-style-type: none"> ● Develop and implement sub-catchment plans for at least 70% of the sub-catchments in Luuka district by 2023. ● Build Partnerships with civil society and community on ecosystem restoration and conservation ● Maintain an inventory of all water systems developed in the district. ● Enhanced enforcement and monitoring of environmental and water resources management regulation requirements to reduce pollution and contribute to availability of sustainable water resources, in partnership with the Kyoga water management zone office ● source protection plans for all piped water supply systems prepared and implemented before the systems are commissioned, to improve their resilience and sustainability ● Prepare and update operation and maintenance plans for all piped water systems
	2. Restore and maintain the integrity and functionality of fragile ecosystems through community based environmental conservation from 2023	
	3. Starting 2023, all water sources developed in the district should have abstraction permits and achieve 90% compliance levels to the permit conditions	
	4. Ensure source protection plans are in place and are implemented for all developed water sources by 2025	
Cross cutting issues		
Planning, Institutional arrangements & Coordination	1. Coordinated, transparent and inclusive planning, monitoring & evaluation, and sharing of information in water and sanitation service delivery	<ul style="list-style-type: none"> ● Functional and Active District Water and Sanitation coordination Committee (DWSCC) meeting with quarterly thematic meetings ● Building capacity and strengthening of management structures at all levels to ensure effective revenue collection in communities and increase the district resource basket by year 2030 ● Quarterly reporting and annual work plan submission by all district partners based on a standard reporting format ● Annual joint WASH work plan development with all district stakeholders
	2. 95% of the district partner plans are reflected in the annual district budget	
	3. 100% dissemination of the WASH activity plans of to all villages/parishes/sub counties	
Regulation and	1. Established structures in place providing adequate capacity to ensure equitable distribution, functionality, and social accountability for WASH service delivery	<ul style="list-style-type: none"> ● 100% functionality of water services committees meeting set minimum targets

accountability	2. Ensure all water and sanitation services providers and management structures have 100% functionality by year 2030	<ul style="list-style-type: none"> ● Utilization of innovative social accountability mechanisms like Bimeeza, citizen's action (planning & monitoring) ● Partnerships with politicians as key change agents and advocates for proper resources allocation ● Improve the institutional capacity within Luuka DLG to facilitate 100% achievement of the WASH Master Plan targets and commitments
	3. To ensure adequate capacity and establishment of structures that foster 100% social accountability for sustainable WASH services	
Equity and Inclusion	1. All WASH interventions in the district will ensure access for and participation by disadvantaged groups in service delivery by 2025	<ul style="list-style-type: none"> ● Annual district work plans based on the Luuka district WASH masterplan ● Adopt inclusive design of all WASH facilities in the district ● Maintain an updated database on district WASH status for use in planning and targeting interventions ● Conduct annual WASH service delivery assessments ● Use of the DIM as a service delivery guide by Luuka district and its partners ● All community engagement activities will include equity and inclusion topics
	2. 100% compliance to the district planning tools like the WASH master plan and District implementation manual to allow proper resource allocation, prioritisation and quality service delivery by year 2030	
Monitoring & Evaluation	Lobbying for human resource, infrastructure and financial support to achieve 100% field data collection and management, and learning platforms by year 2030	<ul style="list-style-type: none"> ● Establish a practical monitoring, evaluation and learning framework ● Promote practical knowledge management - learning and information sharing - as a means of improved service delivery ● Annual reporting on all indicators, in line with Water and Environment sector performance framework ● Active DWSCC meetings that have a standard reporting format that will feed into the annual sector report and district work plan ● Annual review and reflections on masterplan implementation

9.2. RISKS AND KEY MITIGATION MEASURES

Thematic Area	Challenges or Risks	Probability	Mitigation Measures
Drinking Water	High rate of urbanization and dispersed rural communities that do not match the infrastructure and financing levels	Medium	Targeted and coordinated implementation of the Masterplan
	Low willingness to pay for maintenance that limits local private sector involvement and affects reliability of services.	High	Explore management options for models presented in the national framework for O&M of Rural Water Infrastructure in Uganda, like incentivized performance contracts for maintenance support
	Limited technological options to address the water supply requirements	Medium	Promote innovation and self-supply for rain water harvesting
Sanitation and Hygiene	Low affordability levels for construction of improved toilets	Medium	Adopt social marketing and facilitate access to favorable WASH financing for households
	Inadequate capacity to support emptying, transportation and safe disposal of fecal sludge.	High	Encourage private sector participation in the provision of services especially for pit emptying Promote waste recycling and re-use at community level
	Poor adoption proper sanitation and hygienic practices	Medium	Partnerships with opinion and cultural leaders, CSOs, and media for behavior change campaigns
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 and optimization, coordination and alignment of interventions, monitoring and evaluation, asset management)
Integrated Water Resource Management	Sustainability concerns of catchment restoration initiatives e.g., low survival rates of trees	Low	Establishment of tree nurseries with good species and field support teams

	Wetland encroachment and degradation for sugarcane cultivation	Low	Sensitization and introduction of alternative livelihood options
Equity and inclusion	Low coverage of WASH services in remote communities and vulnerable populations	Medium	Employ innovative mix of technologies to reach unserved communities
	Political interference in resource allocation and targeted areas for service delivery	High	Alliances with politicians for planning and advocacy initiatives Community action planning
Finance	Inadequate financing for delivery of WASH services at the district level	High	Utilize the Luuka DIP Task Force for resource Mobilization

9.3. PARTNERSHIPS FOR IMPLEMENTATION

Successful implementation of this Masterplan 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. Currently there are several partners supporting implementation of sector activities towards the realization of the targets set in this masterplan. These partners, whose participation during the year 2020 is summarized below, are anticipated to be key contributors to the Luuka WASH masterplan implementation.

Sub-county	Water Supply	Sanitation	MHM	School WASH	WQM	Planning , M&E
Bukoma	AEE, BT, WFP	AEE, EE			WFP	WFP
Bulongo	AEE, BT, NWSC, WFP	AEE, EE, WM		WM	WFP	WFP
Bukanga	BT, WFP, WM	EE	BT		WFP	WFP
Nawampiti	WFP, WM	EE, WM	BT		WFP	WFP
Waibuga		EE	BT		WFP	WFP
Irongo		EE		WM	WFP	WFP
Ikumbya		EE		WFP	WFP	WFP

*EE – Earth Enable, WQM – Water quality Management, MHM – Menstrual Hygiene Management

b) DISTRICT ACTORS

The strategic actions in this master plan will be integrated into the next five-year District Development Plans (DDP) for implementation, starting with the planned 2021- 2025 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.

Community – Community members are key duty bearers in ensuring the commitments and targets set in this masterplan are achieved. Their roles include participation in planning to ensure it is well targeted and sustainability concerns are properly addressed behavior change for hygiene and sanitation improvements, O&M of WASH infrastructure including payment for water services, proper land management practices that will ensure environmental conservation and sustainability of water resources (quality and quantity)

- c) Civil Society Organizations (CSOs include; NGOs, CBOs and their respective networks). The district has existing CSO partners including African Evangelist Enterprises-Uganda, Busoga Trust, Earth Enable Uganda, Water for People and Water Missions. These 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. Luuka 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.
- d) 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, contractors and consultants.
- e) Regional and National Government Actors

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

- MWE – RWSSC - 3: Provide direct support to the District Water Office
- MWE – Kyoga 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
- Eastern Umbrella for Water and Sanitation: Provide technical support on operation and maintenance for piped water supply systems in small towns
- Advocacy and Learning Forum – Promote learning and information exchange on emerging lessons from implementation of the plan

A multi-stakeholder team was established to develop the DIP, this team will take on the resource mobilization role, to coordinate and provide oversight over resource mobilization for implementation of this master plan.

9.4. COMMUNICATION, ADVOCACY AND NETWORKS

9.4.1. 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 behaviours 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 behaviour and attitudes. Community/ customer satisfaction will also be a key objective of the communication strategies. The district will cascade the 2019 MWE Communication, Education, Participation and Awareness (CEPA) strategy.

The resource requirements to implement this masterplan are huge and higher than the normal budget inflows to the district. Luuka DLG will thus adopt a business centred resource mobilization strategy. This will require extensive communication efforts to attract the participation of development partners including building on existing partnerships.

Advocacy efforts will seek to promote social accountability and coordinated service delivery in the district. The advocacy strategy will include generating knowledge and evidenced-based engagements for policy influence and implementation. CSOs will be key allies in the advocacy agenda.

Networking will focus on strengthening partnerships for knowledge management and improved service delivery in Luuka district. This will also include leveraging opportunities for establishment of a community of practice and resource mobilisation. 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 Luuka district.

9.4.2. OBJECTIVES AND ACTIVITIES

Thematic areas	Key Objectives	Key activities
Communication	<ol style="list-style-type: none"> 1. Ensure sustained understanding, approval, and adoption of the master plan 2. Raise the visibility, profile, and perception of Luuka District and its partners as champions for efficient delivery of WASH services; 	<ul style="list-style-type: none"> • 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 • Publicity events and activities to showcase activities, progress and impact of the masterplan. This will include documenting and sharing information briefs at least on the quarterly basis • 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

	<p>3. profile the impact, results, and benefits of the interventions reflected in the WASH master plan targets for 2030.</p>	<ul style="list-style-type: none"> ● Identify, package, and disseminate key WASH data and evidence that will influence decision making on financing and policy
Advocacy	<p>1. To promote equitable and sustainable service delivery within Luuka</p> <p>2. To promote the conservation and protection of water and related natural resources in Luuka district</p> <p>3. To showcase Luuka District as a leader in the delivery of WASH services; through developing and promoting workable and replicable models</p>	<ul style="list-style-type: none"> ● Develop and profile successful WASH approaches and options for infrastructure development, management and maintenance ● Develop policy briefs and issue papers to demonstrate the economic benefits of and gains from improvements in WASH service delivery and investments in WASH infrastructure ● Mobilize WASH champions to support and drive the resource mobilization campaign for the master plan ● Undertake quarterly advocacy meetings using existing platforms like the DWSCC and inter-district meetings ● Showcase the state and impacts land use practices, to motivate conservation and catchment management activities
Networking	<p>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 Luuka District.</p> <p>Strengthen partnership with key allies like Media and development partners to better profile WASH service delivery and attract resources</p>	<ul style="list-style-type: none"> ● Attend key sector events like the annual joint sector review ● Identify opportunities to profile results of the Masterplan and approaches developed to improve WASH service delivery ● Convene periodic multi-stakeholder platforms for district WASH actors to share research, practice and experiences in WASH service delivery in order to build capacity of actors, identify areas of policy support and promote best operational practice ● Partnerships with Media and development partners including civil society organisations, to promote reporting and profiling of Luuka WASH situation
Knowledge management	<p>To promote improved service delivery</p>	<ul style="list-style-type: none"> ● Develop and disseminate knowledge and information products profiling WASH service

	<p>through improved, evidence based and up to date information</p> <p>Promote a culture of learning, documentation and reflection in order to develop appropriate solutions for sustainable WASH service delivery</p> <p>Contribute to the wealth of knowledge to improve service delivery in the Uganda water and environment sector</p>	<p>delivery in Luuka and relevant contribution to sector improvements</p> <ul style="list-style-type: none"> • Facilitate learning and application of WASH knowledge by providing incentives for knowledge sharing, 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.
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9.4.3. 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 targeted include training institutions, media, Ministries of Finance, Local government, Education and Health.

9.5. MONITORING, EVALUATION AND LEARNING

9.5.1. MONITORING FRAMEWORK

The existing institutional framework within the district will be used to monitor the implementation of this masterplan. This is intended to ensure that the work plans and monitoring mechanisms are well mainstreamed and aligned to the masterplan.

The monitoring and evaluation framework that will guide implementation and realization of the targets in the masterplan is set-out in Table 9-1. The district will develop annual monitoring plans aligned to this framework starting with a baseline established in 2021 (the first year of implementation).

9.5.2. REPORTING

The District Water and Sanitation Coordination Committee (DWSCC) is the primary entity responsible for coordinating and monitoring the activities in this master plan. Implementation partners are expected to submit monthly progress reports to the DWO, that will be aggregated into the quarterly report for submission to the District Executive Committee.

9.5.3. EVALUATION

Three evaluations are planned to review the implementation of the masterplan, these include the baseline, mid-term and final evaluation. The first/baseline 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 the mid-term review in 2025 to evaluate progress and re-align strategies towards realization of set targets based on lessons

learnt. The mid-term review exercise will also be used to update the masterplan as necessary. A summative evaluation will then be conducted in 2030 to review overall progress against the targets.

9.5.4. LEARNING SHARING AND ADAPTIVE CAPACITY

Learning and knowledge management is key to success of implementation of the masterplan and will be mainstreamed so that District WASH stakeholders have the opportunity to leverage on each other's experience to improve service delivery and adapt best operating practice. Annual service level monitoring exercises will be used to generate evidence on the level of services provided, and lessons from the different strategies employed. Targeted knowledge management platforms to facilitate learning and information exchange will be explored. These include:

- i. The DWSCC meetings - to coordinate district stakeholders, take stock of emerging lessons, challenges, and opportunities on a quarterly basis.
- ii. Regional Learning and advocacy Forum - to share experiences at regional level with actors from the districts under the jurisdiction of the Technical Support Unit.
- iii. Joint Water and Environment Sector Review Meeting - to share experiences with WASH stakeholders at national level.
- iv. CSO learning events like the annual UWASNET CSO forum that brings together sector actors to deliberate on key sector issues.

Table 9-1: Monitoring framework for Luuka district water and sanitation services master plan

Focus Area	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 style="list-style-type: none"> • Increase access to safely managed water on premises from 24% to 35% by 2030 • Increase access to basic water services 75% to 100% by 2030 • Increase proportion of villages with access to improved water supply from 79% to 100%. 	<ul style="list-style-type: none"> • Proportion of population using safely managed drinking water services • Proportion of population using basic drinking water services 	Water service monitoring	<ul style="list-style-type: none"> • Annual Progress Reports • Annual service monitoring report • Water Atlas • MWE MIS
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 style="list-style-type: none"> • Increase access to basic sanitation facilities/toilets for rural households from 67% to 97%. and for urban households from 68% to 94%. • Increase safely managed sanitation services from 40% to 60% in urban areas and from 50% to 70% in rural areas 	<ul style="list-style-type: none"> • Proportion of population using safely managed sanitation services, including a handwashing facility with soap and water • Proportion of population with access to basic sanitation • Proportion of ODF certified villages in the district 	<ul style="list-style-type: none"> • Sanitation service monitoring • ODF Protocols 	<ul style="list-style-type: none"> • Annual service monitoring report • VHT household monitoring reports

<p>Institutional WASH (Schools and Health care Facilities- HCFs)</p>	<p>To achieve 100% access to basic water, sanitation, and hygiene services in all schools and HCFs by 2030</p>	<ul style="list-style-type: none"> ● Pupil toilet stance ratio of at least 1:40 in all schools ● Patient toilet stance ratio of at least 1:25 in all HCFs ● 100% WASH inclusive schools in Luuka district ● 100% access to basic WASH services at HCFs ● Year-round improved water supply on school and HCF premises 	<ul style="list-style-type: none"> ● Number of pupils using improved toilet stance at school ● Number of patients per improved toilet stance provided at a HCF ● Percentage of HCFs with access to basic sanitation services. ● Percentage of WASH inclusive schools in the district 	<ul style="list-style-type: none"> ● Water service monitoring ● Sanitation service monitoring ● School inspections 	<ul style="list-style-type: none"> ● Annual progress reports (Health, Education and Water) ● HMIS database ● Annual service monitoring report
<p>Integrated Water Resource Management</p>	<p>Catchment management is well coordinated and plans implemented to ensure sustainable water quality and quantity. Water-related ecosystems especially wetlands and forests are restored and protected</p>	<ul style="list-style-type: none"> ● Water resources are managed sustainably to guarantee water availability of acceptable quality for productive and domestic uses ● No pollution of surface and groundwater ● 100% of the wetlands are demarcated and at least 80% of wetland area restored ● 90% compliance to abstraction permit conditions 	<ul style="list-style-type: none"> ● Number of sub-catchment management plans developed and under implementation ● Percentage of water samples complying with E-coli standards ● Percentage of wetland area demarcated ● Wetland Area under restoration ● Percentage of water systems in the district with abstraction permits 	<ul style="list-style-type: none"> ● Water resources assessments ● Catchment management organization meetings ● Water quality monitoring by district and service providers ● DWSCC meetings 	<ul style="list-style-type: none"> ● Water resources monitoring system ● DWSCC and CMO meeting minutes ● Annual reports (Water, Natural resources) ● UPMIS records ● District, CSO and service provider progress reports

			<ul style="list-style-type: none"> Percentage compliance of district water supply systems to abstraction permit conditions 		
District Capacity	Improve human and logistical capacity of District for managing WASH services	<ul style="list-style-type: none"> Fully staffed departments for water, health and natural resources DLG with the requisite skilled staff and adequate logistics to manage the delivery of WASH services 	<ul style="list-style-type: none"> Types and sources of technical support for WASH master plan implementation Level of coordination by heads of departments for plan implementation 	<ul style="list-style-type: none"> Annual District local government performance assessment DWSCC meetings 	<ul style="list-style-type: none"> Annual DLC assessment report for Luuka DWSCC meeting minutes
Systems -Planning, financial management and coordination	Improve systems for WASH delivery	<ul style="list-style-type: none"> Strengthened mechanisms and frameworks for planning, coordination, financial tracking, monitoring progress, and social accountability for SDG 6 in Luuka district Approved annual action plans and budgets with clear budgetary allocations for WASH 	<p>Finance:</p> <ul style="list-style-type: none"> Proportion of District budget allocated to WASH activities Proportion of annual master plan budget realized Percentage contribution to Annual WASH budget by development partners including CSOs <p>Coordination and Partnership</p> <ul style="list-style-type: none"> % of partner plans and budgets 	<ul style="list-style-type: none"> Local government WASH systems assessment Budget tracking DWSCC meetings and other multi-stakeholder platforms Annual masterplan review and reflection meetings 	<ul style="list-style-type: none"> Annual report on master plan implementation DWSCC meeting minutes CSO and development partner reports Meeting minutes/ reports

			<p>reflected in the district work plan</p> <ul style="list-style-type: none"> • Number and type of cooperation agreements signed with partners for the master plan implementation • Number of private sector and CSO partners involved in the master plan implementation <p>Monitoring:</p> <ul style="list-style-type: none"> • Number of SDG 6 indicators tracked and data provided from the district level • Proportion of monitoring indicators for which data is available 		
Inclusion	Ensure inclusive WASH service delivery for all residents of Luuka	Every village and health facility has access to at least basic water services	<ul style="list-style-type: none"> • Proportion of villages and health facilities with access to basic water services • Proportion of villages and health facilities with access to basic sanitation services 	Surveys Progress reporting	<ul style="list-style-type: none"> • District Annual Progress Report • WASH master plan annual progress report

A graphic consisting of several stylized human figures of varying heights and colors (orange, grey, blue, green) arranged in a cluster, positioned behind the title.

ANNEXES



FLOW Water level of service metrics.

- Households use drinking water from improved source
- Water is available from improved system on the day of the visit
- There are no seasonal shortages that limit the availability of water significantly
- The water point/system was not broken or out of service for more than one day per month in the last year
- Water tariff meets affordability criteria
- Distance to water point/system meets government standards

FLOW Sanitation and hygiene level of service metrics.

- Household has access to a sanitation facility
- No household members openly defecate
- Sanitation facility sub-structure (slab and pit/tank) in good physical condition and performing function of providing barrier between user and feces
- Sanitation facility superstructure (walls, door, roof) in good physical condition
- Sanitation infrastructure in hygienic condition
- Households practice safe sludge management
- Household has access to handwashing facility
- There is water available at the handwashing facility
- There is soap or other cleansing agent available at the handwashing facility
- Household has knowledge of at least 3 key times to wash hands
- There is no presence of WASH-related diseases in the household within the last 6 months
- Water storage practices are safe
- There is no stagnant water in or near the household

ANNEX II - WATER SUPPLY STATISTICS

Improved Water supply infrastructure in Luuka sub - counties

Point water sources			
Sub-County	Deep Boreholes	Protected Springs	Shallow Wells
Bukanga	85	29	56
Bukooma	140	2	12
Bulongo	102	11	39
Ikumbya	123	0	1
Irongo	79	5	31
Luuka TC	13	5	5
Nawampiti	60	15	40
Waibuga	74	7	83
Total	663	74	267

Piped water systems					
S/N	Subcounty	Water source name	Funder	Construction status	Management option
1	Bukanga	Bumana Water Scheme	Water Missions Uganda	Under construction	
2		Busalamu Pipe Water Scheme	Water Missions Uganda	complete & in use	Water Board
3		Kiroba Pipe Water Scheme	Water Missions and Rotary International	complete & in use	Water Board
4	Irongo	Lambala Piped Water Scheme	JICA	complete & in use	Water Board
5		Kyanvuma Piped Water Scheme	JICA	complete & in use	Water Board
6		Ikonia Piped Water Scheme	Water Missions Uganda	Under construction	
7	Nawampiti	Nawampiti Piped Water Scheme	Water Missions Uganda	Under construction	
8	Bukooma	Naigobya Piped Water Scheme	JICA	complete & in use	Water Board
9		Bukoova Piped Water Scheme	District Water Office	complete & in use (but not yet commissioned)	Water Board
10	Luuka Town Council	Luuka TC Piped Water Scheme	MWE	complete & in use	NWSC
11	Waibuga	Busiro piped Water Scheme	MWE	complete & in use	Water Board

Source: Luuka district water office (April 2021)

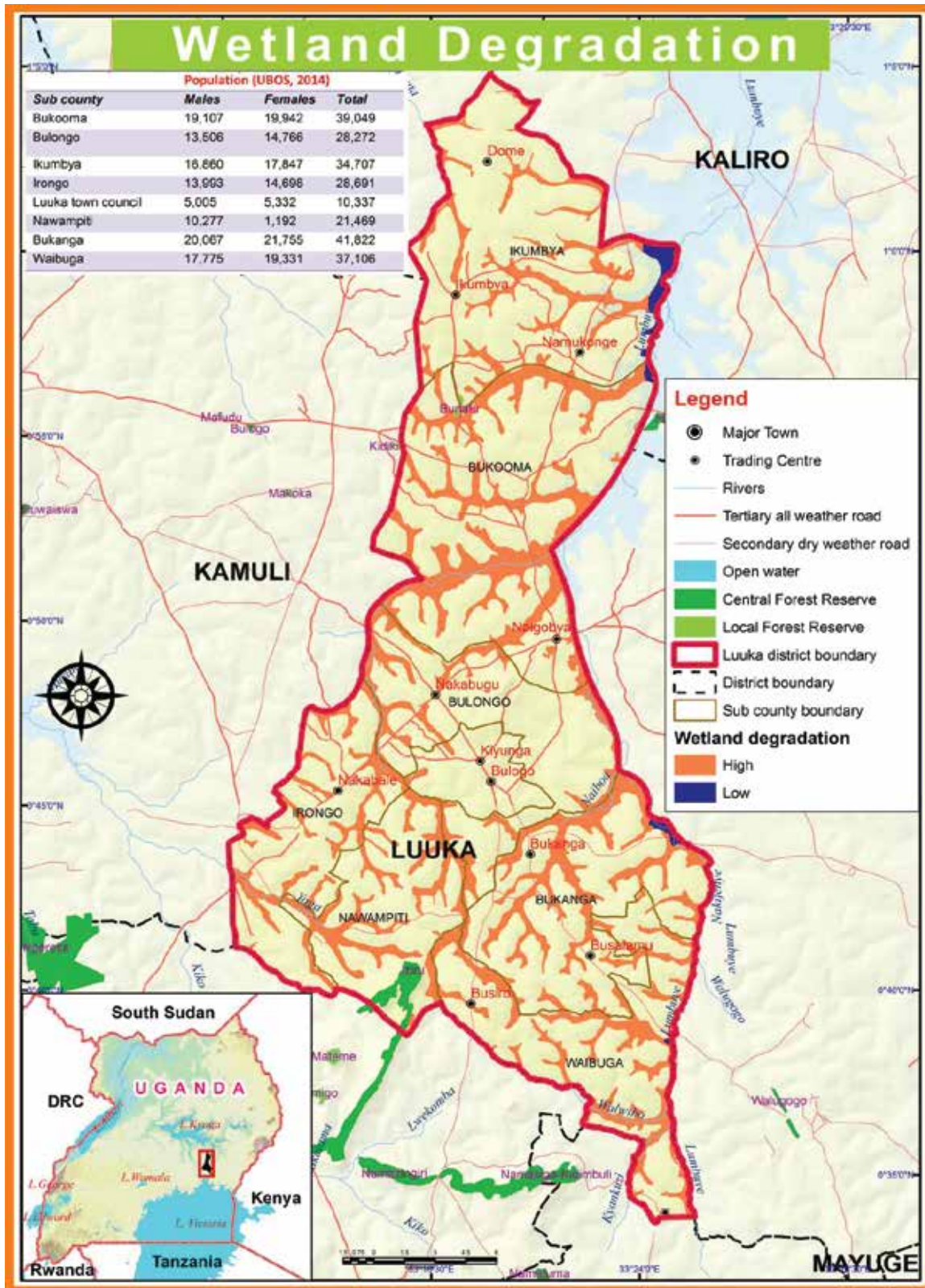
ANNEX III - SSIP DEFINITIONS

SSIP indicator and investment cost definitions and assumptions

1	Indicator	Indicator description / Definition	Investment cost elements
W A T E R S U P P L Y	VILLAGE WATER SUPPLY	<p>One water source per village</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Infrastructure Capital costs O&M costs - Water Supply Replacement costs - Water Supply
	Improved drinking water supply	<p>Provision of improved drinking water source including: protected springs, shallow wells, deep boreholes, rainwater harvesting tanks, kiosks, as well as the tap stands and household connections</p> <ul style="list-style-type: none"> Piped water is not required to meet this target but it does contribute to overall water coverage. 	<ul style="list-style-type: none"> Capital costs - For point water sources and rainwater harvesting tanks O&M costs Replacement costs
	Safely managed drinking water	defined as piped water supply	<ul style="list-style-type: none"> Capital costs O&M costs Replacement costs Education campaigns
	Investment cost descriptions		
	Capital cost	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	
	O&M: Water Supply	2% of capital cost annually	
	Replacement: Water Supply	Replacement of existing infrastructure assumed lifespan of 25 years. Replacement cost is equal to capital cost.	
2	Indicator	Description / Definition	Investment cost considerations
S A N I T A T I O N	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.	<ul style="list-style-type: none"> Capital Cost O&M cost 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.
	Investment cost descriptions		
	Capital: Faecal Sludge Management	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 Centres Faecal Sludge and Sanitation Project". Includes software components.	

O&M: Faecal Sludge Management	2% of capital costs
Software: Household education campaigns for basic sanitation	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 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 reaching 100 people (both directly and through training community members). Effectiveness of the intervention is assumed to be 85%.

ANNEX IV - MAP OF WETLAND DEGRADATION STATUS IN LUUKA DISTRICT




DOCUMENT TITLE	DETAIL/ DOCUMENT
LUUKA DIP (2020)	 Luuka DIP_2020.xlsx
Luuka Statistical abstract 2019/10	 Luuka District Population Abstract 2019/10
VICTORIA - LUMBUYE CATCHMENT MANAGEMENT PLAN (CMP)	 Victoria Nile - Lumbuye CMP.pdf
Luuka DISTRICT DEVELOPMENT PLAN (2006-2020)	 Luuka 5 yr DDP.doc
LUUKA WASH SERVICE DELIVERY ASSESSMENT (2020)	 Luuka FLOW Report 2020.doc
LUUKA forest and Wetland register (2020)	 Luuka District Forest and Wetland register_2020.pdf
MWE Communication, Education, Participation and Education (CEPA) strategy 2019-2023	 CEPA FINAL DOCUMENT.pdf
Natural resources management department workplan and Budget 2021-2022	 WKP AND BUDGET 2021-2022 for Natural Resources Management Department
Luuka DIP – Direct support costs	 2019-2020 Direct Support Costs Luuka.xlsx




water for people

UGANDA

everyone forever

 Plot 15 Lugogo Bypass, Mviri Lane

 P. O. Box 1420, Kampala

 Tel: +256 393 216 521

 sanihubwaterforpeople.wordpress.com

 www.waterforpeople.org

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 @water4people UG