



LUAPULA WATER SUPPLY AND SANITATION COMPANY LIMITED

ZAMBIA WATER SUPPLY AND SANITATION SERVICES IN GROWTH CENTERS (ZWSSGC) PROGRAM FOR RESULTS (P509550)

PERFORMANCE IMPROVEMENT ACTION PLAN (PIAP)

TABLE OF CONTENTS

LIST OF TABLES.....	3
ACRONYMS	4
1. GENERAL INFORMATION	6
2. STRATEGIC OBJECTIVE	6
2.1 Strategic Direction	6
2.2 Strategic Focus Areas	7
2.3 Commitment for Pro-Poor.....	7
3. KEY PERFORMANCE INDICATORS	8
3.1 Context for Key Performance Indicators.....	8
3.2 Situational Analysis	8
3.3 Rationale for Selecting the Key Performance Indicators.....	12
3.4 Summary of Key Performance Indicators.....	12
3.5 Assumptions regarding Selected Performance Indicators	14
4. ACTION PLAN COMPONENTS	14
4.1. NON-REVENUE WATER (NRW) MANAGEMENT.....	14
4.2. DIGITALISATION.....	28
4.3. ENERGY EFFICIENCY MANAGEMENT.....	35
4.4. WATER SUPPLY COVERAGE.....	40
4.5. SANITATION SERVICE COVERAGE	44
4.6. GENDER INCLUSION	48
4.7. CLIMATE ADAPTATION AND RESILIENCE	51
4.8. STAFF PRODUCTIVITY.....	56
4.9. CUSTOMER ENGAGEMENT AND FEEDBACK	60
4.10. FINANCIAL MANAGEMENT AND ACCOUNTABILITY.....	63
5. MONITORING & EVALUATION	69
6. COST OF PIAP IMPLEMENTATION	73
7. RISK MANAGEMENT	74
7.1 Risk Management Framework for LpWSC (PforR)	74
8. LEADERSHIP AND GOVERNANCE	81
8.1 Managing Director and Line Management	81
8.2 Board Oversight of Company Performance.....	81
8.3 Ministerial and Regulatory Accountability	81
8.4 Sector Peers, Professional Bodies, and Public Accountability	82
9. DISCLOSURE AND ACCOUNTABILITY MEASURES.....	82
9.1 Recurring Transparency Regime and Reporting	82
9.2 Accountability and Compliance.....	83
9.3 PIAP Disclosure and Public Access	83
9.4 Escrow Account Details and Financial Oversight.....	83
10. APPROVAL & SIGN-OFF	84
APPENDIX.....	85
Annex 1- Schedule of works is attached separately.....	85
Annex 2 - Summary of the budget is attached separately	85

LIST OF TABLES

Table 1: SWOT Analysis	9
Table 2: Summary Table of Key Performance Indicators.....	13
Table 3: Non-Revenue Water - Table of Specific Actions to be Implemented	16
Table 4: Hydraulic Modelling - Specific Actions to be Implemented.....	22
Table 5: Digitalization - Specific Actions to be Implemented	29
Table 6: Energy Efficiency - Specific Actions to be Implemented.....	36
Table 7: Water Service Coverage - Specific Actions to be Implemented	41
Table 8: Sanitation Service Coverage - Specific Actions to be Implemented	45
Table 9: Gender Inclusion - Specific Actions to be Implemented	49
Table 10: Climate Adaptation - Specific Actions to be Implemented.....	52
Table 11: Staff Productivity - Specific Actions to be Implemented	57
Table 12: Customer Engagements - Specific Actions to be Implemented.....	61
Table 13: Financial Management - Specific Actions to be Implemented	64
Table 14: Collection Efficiency - Specific Actions to be Implemented.....	67
Table 15: Monitoring and Evaluation Actions	69
Table 16: Financing Summary for the PIAP	73
Table 17: Summarized Initial Risk Register:.....	76
Table 18: Escrow Bank Account Details.....	84

ACRONYMS

Abbreviation	Full Form
AfDB	African Development Bank
Board	Board of Directors, Luapula Water Supply and Sanitation Company Limited
CU	Commercial Utility
DLI	Disbursement Linked Indicator
E&S	Environmental and Social
EEMP	Energy Efficiency Management Plan
ERP	Enterprise Resource Planning
ESMP	Environmental and Social Management Plan
FSM	Faecal Sludge Management
GBV	Gender-Based Violence
GIZ	German Agency for International Cooperation (<i>Deutsche Gesellschaft für Internationale Zusammenarbeit</i>)
GRZ	Government of the Republic of Zambia
GRM	Grievance Redress Mechanism
HoD	Head of Department
HRA	Human Resource and Administration
ICT	Information and Communication Technology
IPC	Interim Payment Certificate
IVA	Independent Verification Agent
KPI	Key Performance Indicator
LpWSC	Luapula Water Supply and Sanitation Company Limited
M&E	Monitoring and Evaluation
MD	Managing Director
MIS	Management Information Systems
MLGRD	Ministry of Local Government and Rural Development
MoFNP	Ministry of Finance and National Planning
MoE	Ministry of Education
MoH	Ministry of Health
MWDS	Ministry of Water Development and Sanitation
NRW	Non-Revenue Water
NWASCO	National Water Supply and Sanitation Council
O&M	Operation and Maintenance
OCCR	Operation and Maintenance Cost Coverage Ratio
PAP	Program Action Plan
PforR	Program for Results
PIAP	Performance Improvement Action Plan
PIU	Program Implementation Unit
SCADA	Supervisory Control and Data Acquisition

Abbreviation	Full Form
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SLG	Service Level Guidelines / Guarantees
SOPs	Standard Operating Procedures
UNICEF	United Nations Children's Fund
UoF	Utility of the Future
WARMA	Water Resources Management Authority
ZEMA	Zambia Environmental Management Agency
ZiCA	Zambia Institute of Chartered Accountants
ZIHRM	Zambia Institute of Human Resource Management
ZMW	Zambian Kwacha
ZWSSGC	Zambia Water Supply and Sanitation Services in Growth Centres

1. GENERAL INFORMATION

Utility Name	Luapula Water Supply and Sanitation Company Limited
Programme	ZWSSGC – Program for Results
Date of PIAP Preparation	03-11-2025
PIAP Period	2025–2030
Prepared By	Programme Implementation Unit (PIU)
Approved By	Managing Director
Public Disclosure	Approved for public disclosure on 1 st July 2026

2. STRATEGIC OBJECTIVE

2.1 Strategic Direction

Luapula Water Supply and Sanitation Company Limited (LpWSC) has embarked on a comprehensive transformation aimed at strengthening its operational performance, ensuring operational efficiency, financial viability and service sustainability to ensure enhanced quality of life and economic development through provision of safe, reliable, affordable, and sustainable water supply and sanitation services in Luapula.

This transformation is grounded in the findings of three key institutional capacity assessment and diagnostic processes, namely: the Utility of the Future (UoF) diagnosis, the Improved Theory of Change (i-ToC) Analysis, and the Programme Assessments conducted in the run up to the "**Zambia Water Supply and Sanitation Services in Growth Centres (ZWSSGC) - Program for Results**" framework.

The conclusion of the UoF diagnosis revealed that Luapula Water Supply and Sanitation Company Limited did make great improvements in a number of areas including, but not limited to, organisation strategy, commercial management, technical operations, financial management, human resource management, green management, energy efficiency, customer relations, and gender balance. However, through this UoF phase, a number of additional actions required to further strengthen these operational areas were developed. This Performance Improvement Action Plan (PIAP) has been developed to restructure the implementation of further interventions meant to address the identified gaps and transform the company into the desired Utility of the Future (UoF) that is efficient, customer-focused, resilient and financially viable. The Program for Results (PforR) will go a long way to help in achieving this goal.

Further, the i-TOC analysis was conducted on the Utility and provided an objective assessment of all the potential interventions relating to technical, operational and commercial inefficiencies of the Utility. This was done by assessing the costs and benefits which are associated with various interventions and then provided decision points which have the shortest return on investment periods to enable the Utility to acquire economic benefits which can be reinvested into other efficiency-improving actions. The analysis revealed some inefficiencies in areas such as data management, manual processes, technical and commercial losses, energy management, among other factors. This PIAP has included interventions to address these inefficiencies.

The above-mentioned institutional assessments deepened the Company's self-awareness by identifying systemic challenges that hinder operational effectiveness, efficiency and economic viability. Key issues such as high non-revenue water and inadequate water supply and sanitation service coverage were highlighted as priority areas requiring a structured approach for the Company to transform and achieve its vision and live its mandate and mission. These insights have guided the prioritization of initiatives under this PIAP and the Company's current Transformation Program.

2.2 Strategic Focus Areas

LpWSC has set transformational objectives, through this PIAP, focusing on improving key performance areas such as (i) non-revenue water management, (ii) expansion of service coverage, (iii) financial sustainability, (iv) collection efficiency, (v) energy efficiency (vi) digital transformation, (vii) gender inclusion, and (viii) customer relations.

2.3 Commitment for Pro-Poor

With respect to the Pro-Poor water and sanitation service delivery, adaptations and support for the vulnerable communities, LpWSC commits to continue with existing program regarding the needs of the poorest members of our service areas. The Utility will maintain the first tariff band as a social, non-cost-recovery rate to ensure basic water supply needs remains affordable to all consumers. Further, LpWSC reaffirms its continued management and expansion of reliable water services to rural districts and growth centres, where beneficiaries receive water via communal taps and kiosks, to sustain access to water supply for the economically disadvantaged households. This commitment reflects our ongoing responsibility to support social equity and long-term service provision for those who need it most. Water to the vulnerable communities will be supplied affordably through stand taps, kiosks and individual water connections.

3. KEY PERFORMANCE INDICATORS

3.1 Context for Key Performance Indicators

Before presenting the Key Performance Indicators (KPIs) for the Program-for-Results (PforR) financed by the World Bank, it is important to explain what informed their selection. To develop robust, relevant KPIs, the Utility conducted a comprehensive situation analysis that examined the current service delivery performance, financial position, condition of the infrastructure, service access and affordability, institutional capacity, together with the risks associated with the implementation of the Plan. The situation analysis combined quantitative data (service coverage, non-revenue water, billing statistics, collection efficiency, financial statements, project schedules, etc.) with qualitative inputs from field visits, stakeholder consultations, and management reports. The Utility identified the main constraints such as deferred maintenance of assets and infrastructure, human resource skills gaps, various risk exposures, seasonal business interruptions and affordability of services which the program must address.

Using the findings from the internal situation analysis which was also informed by the earlier mentioned three key institutional capacity assessment and diagnostic processes, the KPIs set and monitored were designed to measure the outcomes that directly reflect the program's objectives and the issues identified. Therefore, the KPIs in focus are those which measure operational sustainability, quality of service and customer satisfaction, economic viability and cost optimization, staff efficiency as well as gender mainstreaming and social equity. The KPI Tables in this PIAP are anchored on the baseline values which are contained in the 2025 Sector Report published by NWASCO. Performance Targets are set from the said baselines. Implementation progress shall be tracked and linked to the program's financing disbursements.

3.2 Situational Analysis

Situational analysis of the Company was conducted using the SWOT, PESTEL, Market Analyses, Stakeholder Mapping and Power Analysis. These have been extracted from Company's Strategic Plan (2026-2030). Further insights have been provided by the assessments done through Utility of the Future (UoF), Improved Theory of Change (i-TOC) Analysis, and the Programme Assessments under the ZWSSGC – PforR Framework

3.2.1 SWOT Analysis

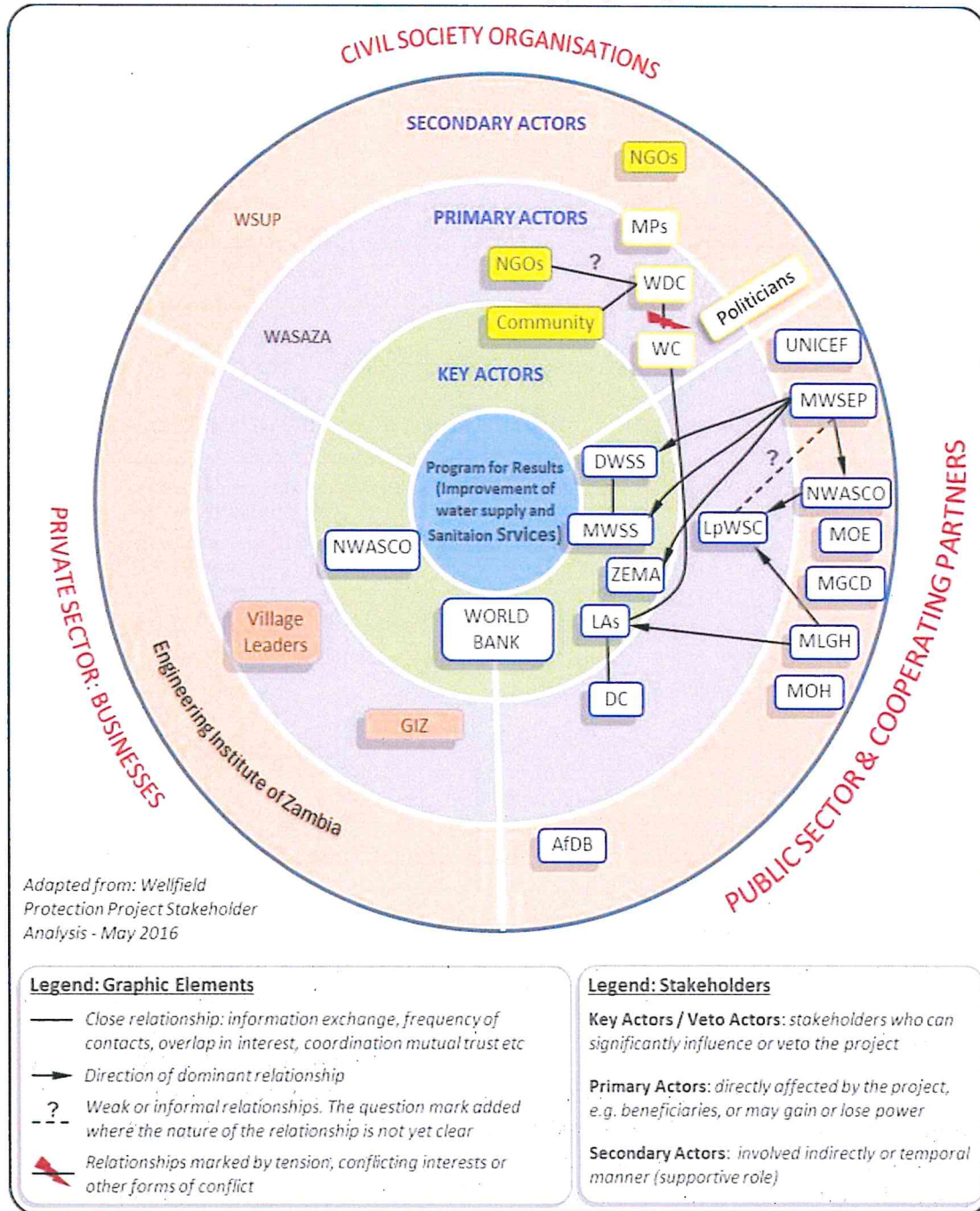
LpWSC has several strengths and opportunities, but also faces significant threats and internal weaknesses which have been presented in Figure 1 below. In order to realize its 2026 – 2030 Corporate Strategic Goals, LpWSC needs to leverage on political will, financing opportunities, and make positive change in strategic focus areas stated under Item 2.2 above. Special focus needs to be placed on external risks factors too.

Table 1: SWOT Analysis

INTERNAL FACTORS	
Strengths	Weaknesses
i. Skilled labour ii. Business monopoly in piped water supply and sanitation iii. Newly constructed infrastructure iv. Availability of institutional data from inception v. Availability of feasibility studies for the un-serviced districts vi. Strategic oversight of the Board of Directors vii. High metering ratio viii. Available ICT infrastructure ix. Availability of in-house knowledge exchange x. Availability of institutional memory. xi. Prepaid Metering xii. E-payment platforms xiii. Digital platforms	i. High non-revenue water ii. Low network coverage for both water supply and sanitation in the operational districts iii. Under-utilized ICT infrastructure (e.g. ERP System) iv. Inadequate support staff v. Supplying for not more than 18 hours vi. Low water supply and sanitation coverage as the CU is operational in 5 out of 12 districts vii. High labour turnover
EXTERNAL FACTORS	
Threats	Opportunities
i. Non-cost recovery tariffs ii. Poor quality of power supply arising from voltage fluctuations iii. Load management effects of power supplied iv. Climate change variability v. Lack of enforcement of legislation (e.g. Use of shallow wells) vi. Competition from alternative sources of water, e.g. borehole drillers vii. Encroachments around water sources and recharge zones xiv. Vandalism of infrastructure.	i. Abundant water bodies ii. Political will iii. Availability of CDF for possible utilization iv. Benchmarking within the Sector v. Expansion of services to the remaining districts vi. Availability of alternative sources of energy vii. Support from cooperating partners viii. Possibilities of offering external laboratory services viii. Leveraging digital solutions, such as e-payment platforms and automated operational systems

3.2.2 Stakeholder Mapping

Figure 1: Stakeholder mapping diagram



I. Core and key actors:

At the centre of the Stakeholder Mapping are the key institutions directly impacting the operations of LpWSC as it executes its mandate of providing water supply and sanitation services (e.g., MWDS, Regulators, and the Financier of the PforR). These actors have the highest interest in project outcomes as well as the authority and mandate to make decisions, allocate resources, and trigger compliance actions. These Institutions must be managed closely: they need frequent detailed reporting, review of aligned operational institutional plans, clear role definitions in relation to the ZWSSGC PforR is concerned, and rapid dispute-resolution channels so that implementation of the ZWSSGC PforR and related institutional plans does not stall and Financier conditions are met.

II. Primary actors and frontline stakeholders:

Surrounding the core are primary actors and frontline stakeholders such as the Local Authorities, Community Water Committees, Traditional Leaders and the direct water supply and sanitation consumer groups. These stakeholders are highly affected by service changes, such as tariffs and service interruptions, and often control local consent and access to assets and sites. Engagement with this group of stakeholders requires participatory communication, social safeguards and a functioning grievance redress mechanism. Collaboration with this group is critical for smooth programme implementation and success.

III. Secondary and supporting actors:

The outer layer contains secondary actors and technical partners such as NGOs, Development Partners (e.g., GIZ, UNICEF, AfDB), the professional bodies, and specified Government Ministries (e.g., MoH, MLGRD, MoFNP, MoE). These Stakeholders may provide essential technical assistance which may affect the day-to-day operations of project, complementary finance, capacity building and policy support. They need to be kept satisfied and coordinated through formal information sharing and partnership agreements so that their input reinforces the programme objectives rather than duplicate or contradict the core programme implementation strategy or operations of the Utility at large.

IV. External influencers and relationships:

The Stakeholders outside the ring, but influential to operations, are the broader civil society, media, unions, private sector, etcetera, whose influence can occasionally be decisive, examples include supplier payment disputes or potential union friction which may lead to industrial harmony, and in cases where political actors might exert pressure. These stakeholders require tailored engagement such as proactive communications to manage expectations, clear procurement/payment process to avoid supplier complaint escalations, and union/legal pathways for conflict resolution. Monitoring these external stakeholders and relationships as well as addressing emerging tensions quickly will reduce delays, reputational risk and safeguard breaches.

3.3 Rationale for Selecting the Key Performance Indicators

The KPIs presented in the Service-Delivery Table were selected to align directly with the company's strategic aspirations, the diagnostic findings from our situation analysis, and the prioritised interventions set out in the Utility of the Future (UoF), and the improvement Theory of Change (i-TOC). Three main linkages informed choice of KPI:

i. Alignment with the Company's Strategic Plan (2026–2030)

Each KPI is mapped to one or more strategic objectives in the Strategic Plan (2026-2030), such as expanding access, improving reliability, strengthening financial sustainability, and enhancing customer satisfaction. This ensures that programme implementation supports the overall corporate targets, both in the long-term and short-term. KPIs were chosen to be measurable against the strategic targets and timeframes so progress can be tracked and used to guide management decisions and resource allocations.

ii. Evidence from the Situation Analysis

The situation analysis identified the principal operational, service and economic constraints (deferred maintenance, high non-revenue water, skills gaps, low hours of supply, etcetera). KPIs were, therefore, selected to track changes in those identified specific problem areas. The KPIs have been tied to diagnosed root causes to measures both outputs (works completed) and outcomes (overall improvements) of the Programme.

iii. Prioritised Interventions from the Utility of the Future Study

The Utility of the Future (UoF) Study recommended targeted investments and institutional reforms necessary to improve operational efficiencies and service delivery. The selected KPIs, under this PIAP, capture the expected results of those interventions: operational efficiency, service satisfaction, financial sustainability, expansion of service access, as well as gender inclusion and social protection. These KPIs allows the program to monitor whether investments translate into operational impact and social inclusion.

3.4 Summary of Key Performance Indicators

The selected Key Performance Indicators (KPIs) are relevant, measurable, and actionable. The KPIs are relevant because they directly impact the Company's strategic goals and address its most critical constraints; measurable because each KPI is based on data points established in the situation analysis baseline and other credible sources; and actionable because they align directly with interventions planned under the Program-

for-Results financing. This ensures that the KPI framework reliably tracks program implementation and performance progress, guides corrective action, and provides a transparent basis for reporting to stakeholders and financiers. Below is the Summary Table of the Key Performance Indicators:

Table 2: Summary Table of Key Performance Indicators

KPI	Baseline (2025)	Target (Year 1) 2026	Target (Year 2) 2027	Target (Year 3) 2028	Target (Year 4) 2029	Target (Year 5) 2030	Source For Verification
Non-Revenue Water (%)	60.1	58	53	48	43	38	LpWSC Technical Reports / Sector Reports (NIS)
Energy Use (kWh/m³)	0.42	0.42	0.41	0.40	0.39	0.38	LpWSC Technical Reports, Sector Reports/ (NIS)
Collection Efficiency (%)	100	≥95	≥95	≥95	≥95	≥95	LpWSC Commercial Reports, Sector Reports / (NIS)
Water Service Coverage (%)	48.2	49	50	52	54	56	LpWSC Commercial Reports, sector reports / (NIS)
Sanitation Service Coverage %	22.8	36	39	44	49	54	LpWSC Commercial Reports sector reports / (NIS)
Gender Inclusion (% female staff)	16.6	19	21	23	25	27	LpWSC Human Resource Reports, sector reports / (NIS)
Customer Complaint Resolution Rate (%)	92	92	93	94	95	96	LpWSC Commercial Reports, sector reports/ (NIS)
Cost Coverage by Collections capped at 100 (%) with Tariff adjustment	49	55	65	75	80	85	LpWSC Financial Management Reports, sector reports/ (NIS)
Cost Coverage by Collections capped at 100 (without Tariff adjustments)	49	52	57	63	69	74	LpWSC Financial Management Reports, sector reports/ (NIS)

3.5 Assumptions regarding Selected Performance Indicators

1. LpWSC anticipate that there will be no tariff adjustments in the Year 2025 and 2026 but tariff adjustments are expected to be effective in the year 2027. The One-Off Jump Tariff is expected to bring about cost-coverage tariff to cover the cost-of-service provision for the 5 Years as a financial hedging strategy.
2. The second scenario is that the Utility will operate without any approved tariff adjustment. However, LpWSC anticipates a growth in cost-of-service provision by at least 5% per year (tied to anticipated inflation) and this hike in the cost-of-service provision will be managed by implementing deliberate operational performance improvements interventions and growth in the customer base.

4. ACTION PLAN COMPONENTS

4.1. NON-REVENUE WATER (NRW) MANAGEMENT

With a baseline of 60.1% in 2025 against the national benchmark of 25%, Non-Revenue Water continues to be an area of serious concern for the Utility. This negative performance variance underscores the urgent need for strategic and coordinated interventions. The population continues to grow and the impacts of climate change are intensifying thus, the need for effective and sustainable water resource utilisation.

Recognising the importance of reducing NRW, this Performance Improvement Action Plan provides a structured roadmap for identifying, quantifying and systematically reducing water losses. It reaffirms LpWSCs commitment to efficient and sustainable water management, improved operational performance, better service delivery and enhanced customer satisfaction. Through targeted technical, operational and institutional measures, the company aims to restore system efficiency, strengthen financial sustainability and ensure the long-term resilience of its water supply services.

NRW will be approached from two main dimensions, namely (a) the implementation of the general non-revenue water management plans, and (b) Hydraulic modelling.

Summary of Interventions:

Some of the key interventions to be undertaken to achieve NRW reduction target of 38% by 2030 include (i) Hydraulic modelling & GIS digitization, (ii) DMA creation and pressure management, (iii) Leak detection and network maintenance programme, (iv) Meter calibration and replacement, and (v) SCADA/MIS integration. The activities to be undertaken under each intervention are outlined in the table further below.

4.1.1. NON-REVENUE WATER ACTION PLAN

Non-Revenue Water (NRW) is one of the major challenges confronting the water and sanitation sector and LpWSC is no exception. NRW is water which is produced and distributed but not billed. It comprises of physical losses such as leaks and commercial losses which include water theft and meter inaccuracy. In order to manage NRW, this PIAP has outlined a number of strategies that focus on both physical and commercial loss reduction using data from the hydraulic modelling and staff capacity building.

Overall Objective of Non-Revenue Water Reduction Strategies:

Objective: To Reduce NRW from 60.1% to 38% by 2030.

To systematically reduce Non-Revenue Water, the interventions in the following Table will be implemented. The key areas of focus include the following:

1. Physical water loss management;
2. System pressure management;
3. DMA management;
4. Commercial water loss management;
5. Metering management (efficiencies);
6. Data handling management;
7. Unauthorized water use / water theft management;
8. Staff capacity building in NRW management; and
9. Stakeholder engagement.

Table 3: Non-Revenue Water - Table of Specific Actions to be Implemented

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/ IMPACTED KPI	BUDGET - ZMW	SOURCE OF FUNDING
A1. Conduct NRW Baseline Needs Assessment and Water Balance Study	- Analyse and Quantify current Physical and Commercial Losses; identify Priority Areas for intervention. - Manage Production Losses and document Metering Data: Meter Sizes, Numbers, Installation, Age, Efficiency, accessories, etcetera.	Mansa, Samfya, Kawambwa, Mwense & Nchelenge	2026	Technical Services Department	Produce 1no of a report with separation of Technical and commercial report with priority interventions	100,000	World Bank

A2. Creation of (DMAs	- Installation of at least 10no Bulk water meters in the DMAs - Review the performance of DMAs	Mansa, Samfya, Kawambwa, Mwense & Nchelenge Chiengi	2027	Technical Services Department	Develop DMA strategy to improve NRW Management	250,000	LpWSC
A3. Pipeline Leak Detection and Repair Program	Implement systematic leak detection program by using hydraulic model parameters, prioritising aging and high-pressure networks and implement Telemetry system.	Mansa, Samfya, Kawambwa, Mwense & Nchelenge	2026	Technical Services Department	Early leak detection and reduction in the number of unplanned maintenance s to 90%. Improved monitoring and implementation of planned maintenance to 95%	140,000	World Bank

A4. Customer Meter testing and replacement Program	Implement a structured customer meter testing programme	Mansa, Samfya, Kawambwa, Mwense & Nchelenge	2026-2030	Technical Services Department	Improved billing accuracy and consumption tracking which will improve billed volumes by 2%.	200,000	LpWSC
A5. Production Meter Verification and Calibration	Calibrate 5no of water meters.	Nchelenge and Chiengi	2026 - 2030	Technical Services Department	Calibrate production meters to ensure accurate readings.	200,000	World Bank
A6. Pressure Management	Install at least 6no of pressure-reducing valves (PRVs) and optimise pumping operations to minimize bursts.	Mansa, Samfya, Kawambwa, Mwense & Nchelenge	2026 - 2030	Technical Services Department	Reduction of Pressure by at least 2%	250,000	World Bank

A7. Data Management and MIS Integration	Integrate NRW data with MIS and SCADA systems for real-time monitoring and analytics.	Mansa, Samfya, Kawambwa, Mwense & Nchelenge	2028 - 2030	Information Communication Department	System generated reports for NRW for improved management decision.	423,200.00	World Bank
A8. Staff Capacity Building and Awareness	Train staff on NRW principles, data handling, leak detection, hydraulic modelling and community engagement	All Staff in the technical and commercial departments	2026-2030	Technical Services Department	Enhanced institutional capacity and accountability.	1,161,448.00	World Bank
A9. Community Awareness and Customer Engagement	Hold bi-annual meetings to educate customers on leak reporting,	Local Community Members in Mansa, Samfya, Kawambwa,	2026 - 2030	Head Public Relationship	Strengthened collaboration and customer responsibility through	1,000,000	World Bank

	metering, and illegal connection impacts.	Mwense & Nchelenge							
	Implement Incentive Schemes								

4.1.2. HYDRAULIC MODELLING ACTION PLAN:

Hydraulic modelling is one of the critical and essential interventions emphasised under the i-TOC analysis. This will be complimented by a more complete GIS information and production measurements to enable better understanding of the existing network. In this way, identification of network deficiencies and design improvements, including defining an effective leakage control system based on the DMA approach to support data-driven decision-making process will be enhanced. LpWSC has set out a comprehensive plan to implement hydraulic models for its service networks by 2030.

Overall Objective of Hydraulic Modelling:

The overall objective is to implement hydraulic modelling by 2030 to improve non-revenue water management, focusing on:

1. **Establishing** accurate baseline data for existing water supply and sanitation networks through system mapping and surveys;
2. **Developing** hydraulic models for water and sanitation systems using specialised modelling software;
3. **Building** internal capacity for continuous model updating, calibration, and use;
4. **Integrating** model outputs into current and future system operations, design, and planning; and
5. **Enhancing** decision-making and service delivery efficiency through digital, data-driven network management.

Table 4: Hydraulic Modelling - Specific Actions to be Implemented

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/ IMPACTED KPI	BUDGET/ FUNDING- ZMW	SOURCE OF FUNDING
B.1. Procurement of Hydraulic Modelling Software & Hardware	- Acquire water distribution modelling software (Water GEMS/InfoWater or EPANET), Wastewater Modelling Software (Sewer GEMS/SWMM), and supporting tools (GIS, CAD). - Procure workstations (3 Units with i7 processor, 32GB RAM, dedicated GPU) and necessary field equipment.	Mansa, Samfya, Mwense, Kawambwa Nchelenge	2026-2027	Technical Services Department	Reduction of NRW by 5% in each DMAs	720,000	World Bank
B.2. Network Data	Engage a contractor to conduct the following works:	Mansa, Samfya, Mwense,	2026-2028	Technical Services Department	Improved real time access to pressure (24	2,048,000	World bank

Collection & Digitization	▪ Compile and digitize existing network in 5no. districts including pipe networks, valve locations, pump stations, storage tanks and PRVs. ▪ Collect elevation data (DEM), demand patterns, and operating pressures in 5 districts. ▪ Design and Build comprehensive of hydraulic models of existing water distribution network covering all growth centres. Include all pipes, nodes, pumps, tanks, valves, and demand allocations.	Kawambwa Nchelenge			hours access) and flow resulting in informed decision-making regarding network planning and NRW management		
--------------------------------------	--	-----------------------	--	--	--	--	--

	- Develop Hydraulic Model for existing gravity sewer systems, pumping stations, and treatment works. Include storm water drainage systems where applicable - Develop hydraulic models for emergency scenarios (pipe bursts, pump failures, contamination events). Create operational response protocols based on model simulations								
B.3. Model Calibration & Validation	Conduct field measurements (pressure monitoring, flow measurements, pump	Mansa, Samfya, Mwense, Kawambwa Nchelenge	2027	Technical Services Department	Enhanced network monitoring management systems for 24 hours per day	360,000	LpWSC		

	performance testing) to calibrate models. Validate against actual operating conditions and SCADA data where available.							
B.4. Pressure Management Zone Analysis	- Use calibrated models to identify optimal pressure zones, valve locations, and PRV settings. - Develop pressure management strategy to reduce NRW and improve service	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2027	Technical Services Department	Display the pressure in all nodes and links pipes and valve 1no pressure management developed	240,000	LpWSC	
B.5. NRW Reduction Scenario Modelling	Use Hydraulic Models to prioritize NRW intervention areas, simulate impact of leak detection campaigns,	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2027 – 2030	Technical Services Department	Develop 3no of scenarios per district	120,000	World Bank	

	pressure management, and infrastructure rehabilitation.								
B.6. Water Network Extension Planning	Carry out survey of water extension requirement with complete BoQ and Designs from the district we are providing services	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2027 - 2030	Technical Services Department	Develop 5no detailed water network extension plans (one in each district)	15,000	LpWSC		
B.7. SCADA/MIS Integration	Integrate Hydraulic Models with the procured SCADA and Management Information Systems for real-time operational decision support and automated data exchange.	Mansa & Samfya	2027 - 2028	Information Communication Technology	Integrated hydraulic modelling, MIS and SCADA	360,000	LpWSC		
B.8. Model Maintenance & Updating Protocol	Establish standard operating procedures for regular model updates, data	Mansa, Samfya, Mwense, Kawambwa	2026 - 2030	Technical Services Department	Develop 1no SoP including emergency protocol	50,000	World Bank		

	quality control, and documentation. Schedule quarterly model reviews and annual major updates.	& Nchelenge					
B.9. Climate Resilience Scenario Analysis	- Model impact of climate change scenarios on water sources (e.g., drought, floods, etc.) on system capacity and performance. - Develop and implement adaptive management strategies.	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2028 - 2030	Technical Services Department	1 no. of adaptive climate resilient management strategy developed	252,000	World Bank

4.2. DIGITALISATION

Digital transformation is a key enabler of operational efficiency, productivity and sustainability in modern Utility management. Currently, only 40% of the company's processes are digitalised. The Company's Strategic Plan (2026-2030) envisions to upscale digitalisation and automation of key operational areas and processes to 85% by 2030. This will be attained through selected investments in advanced ICT infrastructure, automation tools and integrated information management systems.

These planned digitalization initiatives are expected to enforce the Company's vision and align it to the National Digital Transformation Strategy thereby, positioning LpWSC as a smart, data-driven, eco-friendly and customer-centric Utility. It is anticipated that digitalisation will enable real-time monitoring, enhance transparency, reduce operational costs and foster innovation in water supply and sanitation service delivery.

Overall objective of digitisation:

Objective: To increase digitalisation from **40%** to **85% by 2030**

To achieve this objective, the following initiatives will be implemented:

1. **Develop and operationalize the Luapula Water Management Information System (LpMIS)** to collect, consolidate, and store all key organizational data.
2. **Digitalize core business processes** to enable paperless workflows, improve customer experience through digital tools, and turn data into actionable insights.
3. **Deploy SCADA systems** to enable real-time process monitoring and control, improve operational reliability, support predictive maintenance, and ensure safety, compliance, and efficiency.

The table below shows the specific actions which will be implemented:

Table 5: Digitalization - Specific Actions to be Implemented

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / KPI IMPACT	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
C1. Develop a digitalisation strategy supported by an implementation plan	Collect, catalogue, and organize all existing departmental and district data sources for digitisation	HQ & Mansa, Samfya, Mwense, Kawambwa and Nchelenge Districts	2026	ICT / All Departments	Comprehensive data inventory and mapping report, clarified data ownership and information flows.	0	LpWSC
	Design, develop, and deploy the Luapula Water Management Information System (LpMIS) to digitise operational, technical, and management reporting and replace manual and Excel-based processes.	HQ & Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026-2027	ICT / Consultancy	LpMIS designed, developed and implemented and in active use for operational and management reporting.	5,000,000	World Bank
	Procure and implement an enterprise-wide ERP	HQ & Mansa, Samfya,	2026-2028	ICT/Consultancy (Vendor)	One New modern ERP System	4,500,000	World Bank

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / KPI IMPACT	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
	- Alternative Internet Services - Networking Equipment – 3 - Servers –1				server system for data processing • Improved network accessibility points.	500,000	World Bank
	Procure, renew, and manage valid software licenses for ERP, Endpoint protection.	HQ	2026–2030	ICT	Improved business continuity	500,000	World Bank
	Procure and deploy one physical firewall device (network security appliances)	HQ	2026	ICT	All business-critical systems protected by the new firewalls	200,000	World Bank
	Design, Develop and operationalise an ICT and Data Management Framework, aligned	HQ & Mansa, Samfya, Mwense, Kawambwa	2027	ICT	ICT and Data Management framework developed, cyber security	200	World Bank

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / KPI IMPACT	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
	to the existing ICT Policy supported by cyber security strategy, SoPs and Contingency plan to guide data governance, system integration, security and digital performance reporting across all digitised systems.	and Nchelenge			strategy, SoPs and contingency plans implemented.		
	- Procure and Implement SCADA with Telemetry systems at priority water treatment plants and pumping stations to enable real-time monitoring. - Establish a centralised Digital Operations Centre to monitor SCADA, telemetry and	Mansa and Samfya	2027	Technical Services / ICT	SCADA system will help with real time informed decision making	The cost of this activity was covered under the SCADA digitisation PIAP no. B1 (ZMW 4,500,000)	World Bank
	Establish a centralised Digital Operations Centre to monitor SCADA, telemetry and	Mansa WTP	2026	Technical Services / ICT	Real-time data access, report and decision making	160,000	LpWSC

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / KPI IMPACT	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
	system performance. Provide comprehensive training and ongoing awareness to staff on ERP, MIS, CRM, SCADA, and other digital systems, including data protection and cybersecurity practices.	HQ & Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026-2030	HR/ Technical Services /ICT	At least 50% of staff trained on digital systems and cybersecurity practices.	199,023	World Bank
	Cybersecurity Risk Assessment: Commission an independent cybersecurity risk assessment before any major system procurement or deployment. Scope: threat landscape, asset inventory	HQ & Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	ICU and all Departments	Reduce risk levels to below 25% of severity and availability of contingency plan for business continuity	50,000	LpWSC

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / KPI IMPACT	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
	Data Governance Policy: Establish a data governance policy that defines data ownership, classification (public, internal, confidential, personal), retention, access controls, encryption requirements, backup/restore responsibilities and privacy protections in line with national law and donor requirements.	CU	2026	ICT	Well design procedures, enforcement and controls	50,000	LpWSC

4.3. ENERGY EFFICIENCY MANAGEMENT

Electricity is one of the critical operational inputs in water and sanitation operations. The cost component of this resource accounts for approximately 9.0% of the total operations and maintenance cost for Luapula Water Supply and Sanitation Company (LpWSC). To monitor and manage this cost driver, the Utility Company tracks the specific energy consumption, a key performance indicator that measures energy used per cubic meter of water produced. While LpWSC is within the acceptable range for the sub-sector (i.e., benchmark of between 0.39 kWh/m³ and 1.03 kWh/m³) the CU continues to strive to reduce the energy cost further from its current level of 0.42 kWh/m³ to 0.38 kWh/m³ by 2030. This will be achieved through the implementation of energy-efficient technologies, system optimisation and adoption of best practices.

This Performance Improvement Action Plan (PIAP) highlights the Utility's main objective on Energy Efficiency Management as well as the strategies and actions necessary to optimise energy use through initiatives such as reducing losses across the production, transmission and distribution systems. LpWSC will also be optimising energy use by ensuring that all new developments and network extensions are energy-efficient by design.

Overall Objective of Energy Efficiency:

Objective: Reduce energy consumption from **0.42 kWh/m³** to **0.38 kWh/m³** by 2030.

To lower energy consumption to 0.38 kWh/m³ by 2030, the following interventions will systematically be implemented:

1. Energy audits and monitoring;
2. Pumping system optimisation;
3. Equipment upgrading and maintenance;
4. Capacity building and awareness; and
5. Integration of renewable energy solutions.

Table 6: Energy Efficiency - Specific Actions to be Implemented

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/ IMPACT KPI	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
D.1 Conduct Comprehensive Energy Audit	Undertake baseline energy audits for all pumping stations to identify inefficiencies and energy-saving opportunities.	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026	Technical Services Department	Establishes Data for informing decision-making on energy efficiency interventions	600,000	LpWSC
D.2. Energy Efficiency Analysis	Model pump operations, optimize pumping schedules, and identify energy-saving opportunities.	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2027	Technical Services Department	Carryout pump energy audit and produce 1no energy saving report	1,250,000	World Bank
D.3 Replace Inefficient Pumps and Motors	Gradual replacement of Five (5) old, energy-intensive	Mansa, Samfya, Mwense, Kawambwa	2026 - 2030	Technical Services Department	Reduction of energy consumption by 2%. This will help reduce	8,750,000	World Bank

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/ IMPACT KPI	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
	pumps and motors with energy-efficient models and accessories with minimum grade of IE3 Motors, Procure and Install 5 VFDs and Power factor correction in all the water Treatment Plants	& Nchelenge			the energy cost	3,080,000	World Bank
D.4 Optimise Pumping Operations	Implement operational optimisation adjusting pumping schedules to off-peak hours, balancing flows, and	Mansa, Samfya, Mwenese, Kawambwa & Nchelenge	2026 - 2030	Technical Services Department	Reduces breakdown frequency by 5% and enhances service reliability.	1,250,000	World Bank

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/ IMPACT KPI	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
	improving pressure management.						
D.5 Preventive Maintenance Program	Develop and implement a preventive maintenance program for pumps, motors, and electrical systems. CMMS	Mansa, Samfya, Kawambwa, Mwense & Nchelenge	2026 - 2030	Technical Services Department	Increased life span of Electrical Machinery and Systems with PMM record of 95%.	0	LpWSC
D.6 Staff Capacity Building & Awareness Campaigns (Training Plan)	Conduct regular training for operators and other staff on energy management best practices through inhouse training and consultancy services.	Mansa, Samfya, Kawambwa, Mwense & Nchelenge	2026 - 2027	Technical Services Department	Institutional capacity and staff performance enhanced. Improved O&M cost coverage; increased service provision through reliable and cost-effective	0	LpWSC

ACTION	DESCRIPTION	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/ IMPACT KPI	BUDGET/ FUNDING-ZMW	SOURCE OF FUNDING
D.7 Integrate Renewable Energy (Solar Power)	Design and install solar systems at 8 Borehole Sites, Offices, and Treatment Facilities to reduce reliability on the national grid power usage in all the districts.	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2027 - 2030	Technical Services Department	Improved financial sustainability, reduced O&M cost by about 1% and improved reliability of operations	8,400,000	World Bank
D.8 Update the Energy Efficiency Policy and Monitoring Framework	Review Energy Management Policy to align with national climate and energy policies.	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026	Technical Services Department	Enhanced Energy compliance levels by 95%.	0	LpWSC

4.4. WATER SUPPLY COVERAGE

Access to safe and reliable water is a fundamental driver of public health, economic growth and social well-being. In 2025, water service coverage stood at 48.2% leaving a significant portion of the population without adequate access to clean and safe drinking water within the serviced areas (Mansa, Samfya, Mwense, Kawambwa and Nchelenge). This PIAP outlines measures to expand water coverage to at least 56% by 2030. This will be achieved via infrastructure development and network extensions.

Overall Objective of Water Service Expansion:

Objective: Increase water service coverage from **48.2%** to **56% by 2030**

To achieve this objective, the Utility will implement the following key areas of focus:

1. Design, construct, expand and/or upgrade water systems in serviced areas;
2. Design and construct new water systems in unserved areas inclusive of growth centres;
3. Strengthen institutional capacity and stakeholder engagements such as third-party water service providers; and
4. Mobilise financial and technical resources to support expansion and maintenance of water systems.

Table 7: Water Service Coverage - Specific Actions to be Implemented

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACT KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
E1. Conduct Baseline Survey, GIS Mapping, and Develop a 5-Year Water Supply Expansion Master Plan	- Undertake a baseline survey and GIS mapping to identify un-serviced and serviced areas, prioritising low-income and high-growth communities - Develop Water Supply Expansion Master Plan by identifying priority project, target areas, and investment requirements to reach 100% water coverage.	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026 – 2028	Technical Services Department	Increased Service Coverage to 56% Approved Water Supply Expansion Master Plan for future planning	To be incorporated under Hydraulic modelling	World Bank
E2. Design New Network, Costing and Upgrading of Existing Water Systems	- Prepare engineering designs, cost estimates, and layouts for new water distribution network and connections. - Rehabilitate 18km of aging pipelines 10 pumps, and Construction 3 storage tanks to restore functionality and increase water storage capacity	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026 – 2029	Technical Services Department	Improved water supply reliability to 18 hours. Increased water service coverage to 56%.	16,380,000	World Bank

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACT KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
E3. Extension of water supply network to urban and rural growth centres	- Design and construct new water intake, treatment, and distribution systems in rural and urban areas. - Lay new water mains and distribution network lines in identified areas, focusing on peri-urban and rural settlements. - Drill and equip 12 new boreholes to enhance water supply in Mansa; Namwandwa Luka Kapasha Kaole Spark	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026 – 2030	Technical Services Department	Increased number of households connected by piped water systems by 2030 New water pipelines installed and connected to existing networks to increase water service coverage to 56%.	65,471,000	World Bank/ CU/ GIZ
E4. Strengthen institutional capacity and stakeholder engagements such as third-	Conduct awareness campaigns on water use, bill payment, and system care in new service areas.	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026 - 2030	Technical Services Department / Commercial Services	Improved customer cooperation and responsible water use behaviour. This	50,000	LpWSC

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACT KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
party water service providers	Continued engagement and formalisation of third-party service providers.				in turn will improve customer satisfaction to 95%		
E5. Repair storage infrastructure to stabilize supply and improve pressure in extended service zones.	Repair Elevated Storage Tanks and Reservoirs	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026 – 2029	Technical Services Department	Increased hours of supply to 18 hours	900,000	World Bank
E6. Feasibility Studies for unserved districts	Undertake feasibility studies in unserved areas in unserved districts of Chifunabuli and Lunga.	Lunga & Chifunabuli	2026 – 2027	Technical Services Department	Availability of at least 5 bankable development documents to attract investment	1,800,000	LpWSC

4.5. SANITATION SERVICE COVERAGE

Adequate sanitation is essential for safeguarding public health, the environment, and human dignity. Current sanitation coverage within the utility's service area is **22.8%**, leaving a significant portion of the population exposed to sanitation-related diseases.

The Utility operates a reticulated sewer system only in Mansa District. Other districts, in Luapula province, are served through faecal sludge management systems using vacuum tanker services for collection and disposal of sewer. The planned expansion of sanitation services is guided by a completed Faecal Sludge Management (FSM) feasibility study and implementation framework which provides a clear roadmap on the sanitation service coverage expansion into the underserved areas. The 22.8% baseline was derived from recent sanitation studies and the latest official statistics.

This Performance Improvement Action Plan (PIAP) sets out a structured approach to increasing sanitation service coverage through targeted infrastructure development, innovations and stakeholder engagement. Improving sanitation service coverage will help mitigate health risks, lower disease burden, and improve living standards. The PIAP aligns with Sustainable Development Goal 6 and national sanitation standards.

Overall Objective:

- **To increase sanitation service coverage from 22.8% to 54% by 2030.**

Summary of Key Actions to be undertaken:

- Sewer network expansion
- Faecal sludge management systems
- Vacuum tanker procurement
- Public hygiene campaigns

Table 8: Sanitation Service Coverage - Specific Actions to be Implemented

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / IMPACT OF KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
F1. Conduct Sanitation Coverage Baseline Survey	Assess current sanitation coverage, infrastructure gaps, and community sanitation practices.	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2027	Technical Services Department	Baseline report on sanitation status and priority intervention areas.	300,000	World Bank
F2. Develop a Sanitation Improvement and Investment Plan	Prepare a strategic plan outlining intervention, financing mechanisms and implementation timelines.	Mansa	2027	Technical Services Department	Clear sanitation road map and efficient allocation of resources.	500,000	World Bank
	Promote Onsite Sanitation Systems in Rural and Peri-Urban Areas based on already available feasibility studies for the FSM, and the implementation framework.	Mansa	2027-2030	Technical Services Department	Increased household access to improved sanitation facilities.	200,000	World Bank

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / IMPACT OF KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
	Implement Hygiene Promotion and Behaviour Change Campaigns	Mansa, Samfya, Mwenze, Kawambwa and Nchelenge	2027-2030	Human Resources Department	Improved hygiene practices and reduced disease burden.	1,000,000	World Bank
	- Engage third party service providers through MoUs - Capacity building of various stakeholder in the sanitation supply service chains	Mansa and Samfya	2027-2030	Technical Services Department	Improved safe management of faecal sludge and improved environmental protection	300,000	LpWSC
F3. Extension of sanitation network to urban and rural growth centres	Construction of 1km of sewer pipeline for Mansa College of Education	Mansa	2026-2028	Technical Services Department	Increase in Sanitation access by 1,500 people	2,000,000	Ministry of Education through Mansa College of Education
	Extension of safely management Sanitation services to Mansa Garden	Mansa	2026-2030	Technical Services Department	Increase in Sanitation access	20,000,000	Zambia National Building Society

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT / IMPACT OF KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
	Procurement of a Vacuum Tanker for On-Site Sanitation	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2027-2028	Technical Services Department	Increase in Sanitation Coverage	3,000,000	World Bank
	Construction of Five (5) Faecal Sludge Treatment Plants	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2027-2029	Technical Services Department	Increase in the volume of sludge by 50m3 per annum	8,000,000	World Bank
	Conduct the sanitation survey	Samfya, Mwense, Kawambwa and Nchelenge	2027-2028	Technical Services Department	Established baseline data	300,000	LpWSC
	Sewer system extension by 5km	Mansa	2027-2030	Technical Services Department	Increased Access to Sanitation	6,200,000	World Bank

4.6. GENDER INCLUSION

The Commercial Utility aims to increase female employee representation through deliberate, structured in-house initiatives and recruitments. This will be achieved by developing and implementing a Gender Action Plan as a core component of the Utility's Performance Improvement Action Plan (PIAP). The PIAP (Gender Action Plan) establishes a framework for balanced gender participation across the organization.

The Gender Action Plan will mainstream gender inclusion at all organizational levels, ensure equity in recruitment and career progression, strengthen capacity building, and promote an inclusive workplace culture and recruitments that values diversity.

Overall Objective of Gender Inclusion:

- **To increase female representation from a baseline of 16.6% to 27% by 2030.**

Summary of Key Actions to be undertaken:

- Conduct Gender Diagnosis
- Development of Gender Action Plan
- Dedicated Budget Allocation
- Workforce Capacity Building

Table 9: Gender Inclusion - Specific Actions to be Implemented

ACTION	DESCRIPTION/ ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFITS/ IMPACT KPI	BUDGET - ZMW	SOURCE OF FUNDING
G1. Conduct Gender Diagnosis	Assess gaps in workforce participation and decision-making.	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Human Resource and Administration	Establish baseline for female workforce participation in decision making. Evidence based gender mainstreaming, planning and clear understanding of gaps.	67,715	World Bank
G2. Develop gender Action Plan	Formulate corporate policy for inclusion and Provide guidelines for all activities and budget allocations	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Human Resource and Administration	Institutionalize gender-inclusive practices. Influence female workforce participation.	0	LpWSC

ACTION	DESCRIPTION/ ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFITS/ IMPACT KPI	BUDGET - ZMW	SOURCE OF FUNDING
G3 Dedicated annual budget for Gender Action Plan implementation	Approved dedicated budget line on implementation of the Gender Action Plan	CU	2026-2030	Human Resource and Administration	Enhanced levels and commitment to achieve gender mainstreaming	100,000	LpWSC
G4 Implement the Gender Action Plan	Ensure at least 75% of the Gender Action Plan are Implemented	Cooperate	2027 – 2030		Enhanced gender inclusivity.	153,000	World Bank

4.7. CLIMATE ADAPTATION AND RESILIENCE

This focus area aims to strengthen LpWSC's capacity to adapt and manage climate change impacts in line with the Zambia's National Adaptation Plan (NAP).

In developing this Performance Improvement Action Plan (PIAP), the Utility prioritized use of renewable energy, adoption of climate-resilient facilities, stronger institutional capacity, integration of climate risk management into corporate planning, protecting water resources, enhancing disaster preparedness, and developing mechanisms to monitor, evaluate, and report progress on climate adaptation and resilience actions.

Overall Objectives:

- **The strategy aims to reduce emissions by 2030.**

Summary of Key Actions to be undertaken:

To implement the climate adaptation and resilience strategy, the Utility will focus on:

- **Strengthen climate resilient water and sanitation system** by systematically assessing climate risks and adapting to climate-resilient service delivery infrastructure.
- **Enhance operational continuity and sustainability** through disaster risk reduction, emergency response mechanisms, and adoption of renewable energy solutions.
- **Institutionalize climate adaptation** by building capacity, mainstreaming climate risk into corporate planning, and establishing effective monitoring, evaluation, reporting and awareness systems.

Table 10: Climate Adaptation - Specific Actions to be Implemented

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACT KPI	BUDGET/ FUNDING- ZMW	SOURCE OF FUNDING
H1. Conduct and Develop Climate Risk and Vulnerability Assessment	Assess the vulnerability of LpWSC infrastructure, water sources, and operations to floods, droughts, and temperature extremes	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Technical Services Department	Improved understanding of climate risks, evidence-based decision making	252,000	LpWSC
H2 Develop climate adaptations plans	Develop and approve Climate adaptation policy and strategy	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Technical Services Department		0.00	
H3. Develop Climate-Resilient Infrastructure Designs	Integrate climate adaptation measures (e.g., emergency pump, flood barriers equipment, drought-resilient boreholes)	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026-2027	Technical Services Department	Reduced infrastructure damage, longer asset lifespan and lower maintenance costs by 5%.	90,000	World Bank

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACT KPI	BUDGET/ FUNDING- ZMW	SOURCE OF FUNDING
	- Design of Sunken and Pontoon Intakes. - Designs of earth dams - Reduction in the usage of the Genset operation time with the alternative use Solar PV System	All pump stations Mansa, Mwense and Kawambwa HQ, Nchelenge and Chiengi			Availability of Raw water Availability of water for pumping Reduction of GHG footprint		
H4. Implement sustainable water resource management and protection	Implement watershed protection activities (tree planting, buffer zone creation, pollution control) around major water sources.	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026 – 2028	Technical Services Department	Improved water security and reduced climate related water crisis.	0.00	

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACT KPI	BUDGET/ FUNDING- ZMW	SOURCE OF FUNDING
H5. Enhance preparedness to emerging Disasters and risks and NRW	- Create a contingency plan for emergency water supply and service continuity during extreme events. - Develop a risk register	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026 – 2030	Technical Services Department	Reduced disaster impacts, faster response and recovery	3,000,000	World Bank
H6. Establish Climate-Resilient Sanitation Facilities	- Develop climate-proof sanitation systems that can withstand flooding and prevent contamination. - Integration of climate risk assessment in planning and operations in sanitation	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026 – 2030	Technical Services Department	Improved public health and environmental protection. Reduced sanitation facilities disruptions.	200,000	World Bank
H7. Determine the baseline of Carbon Emission	Conduct an assessment of different sources	Mansa and Kawambwa	2027-2028	Engineering	Engineering	0.00	LpWSC

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACT KPI	BUDGET/ FUNDING- ZMW	SOURCE OF FUNDING
	and measure the Carbon Emission to create a baseline						
H8. Develop and implement the action plan for Carbon Emissions	Implement interventions in the Carbon Emission action plan		Mansa and Kawambwa	2027	Engineering	0.00	LpWSC

4.8. STAFF PRODUCTIVITY

A productive workforce is key to achieving desired institutional efficiency, operational effectiveness, and high-quality service delivery. An engaged, skilled, and motivated workforce directly contributes to the realisation of organizational goals and national development priorities. This Performance Improvement Action Plan (PIAP) provides a structured approach to improving staff productivity through targeted interventions in capacity development, performance management, and working conditions.

The plan aims at building a high-performing, accountable, and innovative workforce that adapts to emerging challenges and opportunities. It is aligned with institutional performance improvement strategies and national human resource development priorities, and aims to embed a culture of excellence, productivity, and continuous improvement across all levels of the organization by end of the year 2030.

Overall Objectives: Staff Productivity Improvement by 2030

Summary of Key Actions to be undertaken:

- **Enhance staff competencies and efficiency** through targeted training, mentorship, and professional development programs.
- **Strengthen performance management systems** to promote accountability, recognition of performance levels, and continuous improvement.
- **Improve staff motivation and the work environment** by implementing incentive programs, providing adequate tools and resources, and implementing a value system that fosters a culture anchored on established corporate values.

Table 11: Staff Productivity - Specific Actions to be Implemented

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACTED KPI	BUDGET/-ZMW	SOURCE OF FUNDING
I1. Conduct Staff Productivity Baseline Assessment	Undertake a comprehensive assessment to identify factors affecting staff productivity such as skill gaps, workload distribution, and motivation.	HQ, Mansa, Samfya, Mwense, Kawambwa, Nchelenge	2026	Human Resource and Administration	Baseline productivity report with identified at least 1 no. performance gap annually.	60,000	LpWSC
I2. Develop a Staff Performance Improvement Strategy supported by an Implementation Plan	- Formulate a strategy outlining interventions for training, supervision, and performance monitoring. - Develop and implement a plan to actualise strategy	HQ	2026	Human Resource and Administration	Approved performance improvement strategy and implementation plan	6,820,000	World Bank

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACTED KPI	BUDGET/-ZMW	SOURCE OF FUNDING
	- Implement Capacity Building and Skills Development Programs - Strengthen Performance Appraisal System	HQ, Mansa, Samfya, Mwense, Kawambwa, Nchelenge HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026–2027 2026	Human Resource and Administration Human Resource and Administration	Staff equipped with improved knowledge and skills annually Fair and transparent evaluations, improved accountability and clear performance expectations		
	Introduce Staff Motivation and Incentive Program	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Human Resource and Administration	Increased staff motivation and reduced turnover by	0	LpWSC
	Improve Work Environment and Tools	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Human Resource and Administration	Reduced work bottlenecks, healthier work force and faster task completion	0	LpWSC

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFIT/IMPACTED KPI	BUDGET/-ZMW	SOURCE OF FUNDING
	Strengthen Internal Communication and Teamwork	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026–2030	Human Resource and Administration	Improved collaboration and strong organizational culture	0	LpWSC
	Introduce Continuous Monitoring and Evaluation of Staff Performance	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026–2030	Human Resource and Administration	Early identification of gaps and continuous performance improvement	0	LpWSC
	Institutionalise Continuous Improvement and Innovation Practices	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2028–2030	Human Resource and Administration	Culture of innovation, efficiency gains and adaptability to change annually	0	LpWSC
	Monitor and Evaluate Productivity Progress	HQ, Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026–2030	Human Resource and Administration	Evidence based decision making and sustained productivity growth bi-annually	0	LpWSC

4.9. CUSTOMER ENGAGEMENT AND FEEDBACK

Customer engagement and feedback is central to the Utility's core business. It is envisaged that a robust customer engagement and feedback mechanism contributes to increased customer satisfaction. This is key for the Utility if it is to attain its strategic objectives.

Customer engagement and feedback are central to the Utility's core business. A robust engagement and feedback mechanism is essential for improving customer satisfaction and achieving the Utility's strategic objectives.

Overall Objective:

- **To strengthen customer relationships and responsiveness through structured engagement and feedback systems by 2030.**

Summary of Priority Actions to be undertaken:

- **Conduct a baseline survey** to establish the customer satisfaction levels
- **Strengthen stakeholder and customer engagement** to build awareness, trust, and participation.
- **Enhance feedback and complaint resolution systems** to improve customer satisfaction and responsiveness.

The table below shows the specific actions which will be implemented:

Table 12: Customer Engagements - Specific Actions to be Implemented

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFITS/ IMPACT KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
J1. Conduct a baseline Customer Satisfaction Survey	Undertake a customer satisfaction survey Develop a comprehensive Customer Engagement, and Feedback Framework	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026-2027	Public Relations and Marketing	Establish baseline customer satisfaction Approved Customer Engagement and Feedback Framework guiding consistent, structured, and accountable customer interaction.	125,000	World Bank
J2. Implement Customer Education and Awareness Campaigns	Implement targeted and continuous customer education campaigns on water use efficiency, bill payment, sanitation practices, leak reporting, and protection of infrastructure through community outreach, radio	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2027 - 2030	Public Relations and Marketing	Improved customer compliance, responsible water use behaviour, improved bill payment culture, and reduced illegal connections.	84,000	World Bank

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIBLE UNIT	BENEFITS/ IMPACT KPI	BUDGET/ - ZMW	SOURCE OF FUNDING
	programmes, print materials, social media, and other appropriate platforms.						
J3. Conduct Customer Satisfaction Surveys	Conduct periodic customer satisfaction surveys using physical, digital, or mixed approaches to assess customer perceptions on water supply, billing accuracy, sanitation services, and responsiveness. Document findings and use results to inform service improvement actions.	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2027 - 2030	Public Relations and Marketing	Appreciate improvements being made in customer satisfaction Improved understanding of customer needs and evidence-based service improvement.	10,000	World bank

4.10. FINANCIAL MANAGEMENT AND ACCOUNTABILITY

Operational Cost Coverage by Collections, capped at 100%, is a key performance indicator of financial sustainability for the Commercial Utility. The current ratio is **49%**, reflecting a significant gap between the cost of service and the billed revenue collected. This gap has widened over time because the cost of water supply and sanitation services has continued to rise while the average tariff has remained unchanged since 2019. As of 2025, the cost of service for Luapula WSC was **ZMW 29.67 per cubic meter**, compared to an average tariff of **ZMW 7.38**. The primary constraint on cost recovery is the persistent difference between service costs and customer tariffs.

To achieve long-term financial viability, the Utility targets **85% Operational Cost Coverage by 2030**, assuming tariff adjustments during the plan period. Without tariff adjustments during the implementation period of this plan, the Utility will target **75% Operational Cost Coverage** through improved cost control, increased billing and collections. Accountability will be strengthened through enhanced internal controls.

Overall Objective on Cost Coverage:

- To increase cost coverage by collections from 49% in 2025 to 85% by 2030.

Summary of Priority Focus Areas:

- Increase billed revenue to at least ZMW 3 million per month by 2030.
- Strengthen financial management and cost control across all operations.
- Establish a monitoring and evaluation framework for cost control and cost coverage, as well as financial performance.
- Improve revenue collection and debt recovery by achieving ≥95% collection efficiency and recovering 15% of outstanding debt.

4.10.1 COST CONTROL AND BILLING MANAGEMENT

Table 13: Financial Management - Specific Actions to be Implemented

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIVE UNIT	BENEFIT/IMPACTED KPI	BUDGET/FUNDING-ZMW	SOURCE OF FUNDING
K1. Increase billing money	Digital meter reading through 20 number of mobile phones	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026-2030	Commercial Services	- Improvement of billing efficiency - Improvement of data and meter management	100,000	World Bank / GIZ
K2. Strengthen Financial Management and Cost Control	- Review Financial Policy and SoPs - Financial Audits (External Auditors) and regulatory compliance	Mansa, Samfya, Mwense, Kawambwa & Nchelenge	2026 - 2030	Finance	Improved financial management and Maintain budget cost variance within 10%	2,300,000	World Bank
K3. Establish Monitoring and Evaluation Framework for	Timely analysis of budget performance: Set up monthly	Headquarters, Mansa, Samfya, Mwense,	2026 -2030	Finance	Monthly monitoring reports showing progressive	724,000	World Bank

ACTION	DESCRIPTION/ACTIVITIES	TARGET AREA	TIMELINE	RESPONSIVE UNIT	BENEFIT/IMPACTED KPI	BUDGET/FUNDING-ZMW	SOURCE OF FUNDING
Cost Coverage	and quarterly review meetings and develop performance dashboards to track performance. - Link financial performance to departmental targets and staff performance appraisals to promote accountability. - Identify and mitigate key financial risks that may affect KPI (liquidity, credit, fraud) through proactive monitoring.	Kawambwa & Nchelenge			improvement in O&M cost coverage. Development and implementation of a Performance-linked accountability framework by 2027. Financial risk management framework developed and implemented by 2028		

4.10.2 COLLECTION EFFICIENCY

Billing collection efficiency is a key driver of financial sustainability and operational performance. It measures the utility's liquidity, which is critical for meeting both current and long-term obligations. This PIAP outlines strategic interventions to improve revenue collections through improved billing accuracy, enhanced customer engagement, digital payment systems, and stronger debt recovery mechanisms. Improvement in revenue collections directly improves cost coverage ratios for the Utility.

Overall Objective: Collection Efficiency

- **Maintain billing collection efficiency at $\geq 95\%$ on average throughout the period up to 2030.**

Summary of Priority Focus Areas:

1) Billing and Customer Data Management

- Clean and update the customer database and remove uncollectible debt
- Enhance billing accuracy and timeliness to reduce disputed bills and enhance collectability

2) Revenue Collection and Recovery

- Expand and modernize payment channels
- Strengthen debt recovery mechanisms
- Introduce incentive schemes for timely payments
- Enhance customer engagement and communication
- Build staff capacity in revenue management and collections

3) Metering and Infrastructure Upgrade

- Roll out prepaid metering systems
- Improve meter management

The table below shows the specific actions which will be implemented:

Table 14: Collection Efficiency - Specific Actions to be Implemented

ACTIVITY	DESCRIPTION/ ACTIVITIES	TARGET AREA	TIMEL INE	RESPONSIBLE UNIT	BENEFIT/ IMPACT KPI	BUDGET (ZMW)	SOURCE OF FUNDING
K4. Develop and implement billing collection strategy and improvement Plan	Conduct Customer Database Clean up	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Commercial Department	Updated database, improved accuracy in billing and increase in monthly billing.	1,000,000	World Bank
	Expand and Modernize Payment Channels	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026	Commercial Department	Increased payment options leading to improved payment turnaround.	500,000	World Bank
	Enhance Billing Accuracy and Timeliness	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026 - 2030	Commercial Department	Reduced billing errors and improved customer trust in billing processes.		
	Improved Meter Management	Mansa, Samfya, Mwense, Kawambwa and Nchelenge	2026 - 2030	Commercial Department	Reduced billing errors and customer disputes.	500,000	World bank

5. MONITORING & EVALUATION

The Monitoring and Evaluation [M&E] framework will track implementation of the Performance Improvement Action Plans (PIAPs) over a five-year period. It defines key performance indicators, tools, responsibilities, and reporting frequencies for all thematic areas to ensure accountability, transparency, and continuous improvement. The M&E process will provide feedback to inform improvements in PIAP outcomes, goals, outputs, and objectives. All PIAPs in this document will be monitored and evaluated by the Company on a monthly and quarterly basis. Progress reports will be shared with relevant stakeholders according to agreed timelines.

Table 15: Monitoring and Evaluation Actions

THEMATIC AREA MATCH THE WORDINGS AS IN ACTUAL TABLES	MONITORING/ EVALUATION TOOL	FREQUENCY	RESPONSIBLE UNIT	KEY PERFORMANCE INDICATORS (KPIs)	EXPECTED 5-YEAR OUTPUT	BUDGET (ZMW)	SOURCE OF FUNDING
L1 Progress Reports	Logical Framework	Quarterly	M&E	Completed /Approved M&E logical Framework	Fully updated and progress indicator logical framework	380,000	World Bank
L2 Internal PIAP Review	Logical Framework	Quarterly	PIU	Updated /Approved (Board) PIAP	Updated /Approved PIAP by the Board	380,000	World Bank

THEMATIC AREA MATCH THE WORDINGS AS IN ACTUAL TABLES	MONITORING/ EVALUATION TOOL	FREQUENCY	RESPONSIBLE UNIT	KEY PERFORMANCE INDICATORS (KPIs)	EXPECTED 5-YEAR OUTPUT	BUDGET (ZMW)	SOURCE OF FUNDING
L3 Hydraulic Modelling	Model reports, network and performance simulations	Quarterly	Technical Services	- Model updated annually - Used for investment and network optimization	Data-driven planning and improved network performance	380,000	World Bank
L4 Non-Revenue Water (NRW) Reduction	Water balance, leakage reports, metering data	Quarterly	Technical Services	NRW reduced to ≤38%	Improved water loss control and system efficiency	380,000	World Bank
L5 Energy Efficiency Management Plan (EEMP)	Energy audit, power consumption reports	Quarterly	Technical Services	≥15% energy cost reduction	Optimized energy use and reduced operational costs	380,000	World Bank
L6 Digitalization	ICT and System reports	Quarterly	ICT Unit	Systems digitized and Functional.	Enhanced operational efficiency and digital monitoring	380,000	World Bank
L7 Water Service Extension	Project progress reports	Quarterly	Technical Services	increased service coverage	Improved access to safe water supply	380,000	World Bank

THEMATIC AREA MATCH THE WORDINGS AS IN ACTUAL TABLES	MONITORING/ EVALUATION TOOL	FREQUENCY	RESPONSIBLE UNIT	KEY PERFORMANCE INDICATORS (KPIs)	EXPECTED 5-YEAR OUTPUT	BUDGET (ZMW)	SOURCE OF FUNDING
L8 Financial Management & Accountability	Audit reports, expenditure tracking tools	Quarterly	Finance Department	- Clean audit reports - Improved budget utilization $\geq 90\%$	Transparent and accountable financial system	380,000	World Bank
L9 Climate Adaptation & Resilience	Climate risk assessment and environmental audits	Quarterly	Technical Services	Climate-resilient infrastructure	Increased resilience of infrastructure and communities	380,000	World Bank
L10 Gender Mainstreaming	Gender mainstreaming reports, HR data.	Quarterly	Human Resource and Administration /Internal Audit	27% women participation	Gender equity and inclusive participation mainstreamed	380,000	World Bank
5.11 Customer Engagement & Feedback	Satisfaction surveys and call centre reports	Quarterly	Public relations and Marketing	90% customer satisfaction 96% complaints resolved within SLGs timelines	Strengthened customer trust and transparency	380,000	World Bank

THEMATIC AREA MATCH THE WORDINGS AS IN ACTUAL TABLES	MONITORING/ EVALUATION TOOL	FREQUENCY	RESPONSIBLE UNIT	KEY PERFORMANCE INDICATORS (KPIs)	EXPECTED 5-YEAR OUTPUT	BUDGET (ZMW)	SOURCE OF FUNDING
5.12 Billing Collection Efficiency	Billing and Collection reports	Quarterly	Commercial Services	- Collection efficiency $\geq$ 95% - Reduced arrears	Sustainable revenue base and improved cost recovery	380,000	World Bank

6. COST OF PIAP IMPLEMENTATION

The total cost of the Programme Implementation Action Plan is estimated at **ZMW 194,418,048.33**. Financing is structured as follows: the World Bank will provide **ZMW 168,533,048.33** (or 86.7%); Luapula Water Supply and Sanitation Company Limited will provide **ZMW 3,885,000.00** (or 2.0%) as counterpart funding; and other stakeholders, including GIZ, the Ministry of Education, and Zambia National Building Society, will contribute **ZMW 22,000,000.00** (11.3%). Detailed financing arrangements are presented in **Annex 2**.

Table 16: Financing Summary for the PIAP

FUNDING SOURCE	ESTIMATED CONTRIBUTION (ZMW)	PERCENTAGE CONTRIBUTION
World Bank	168,533,048.33	87%
Luapula Water Supply and Sanitation Company Limited	3,885,000.00	2%
Other Stakeholders*	22,000,000.00	11%
TOTAL PROGRAMME COST	194,418,048.33	100%

7. RISK MANAGEMENT

7.1 Risk Management Framework for LpWSC (PforR)

1) Purpose:

- To provide a practical system to identify, assess, mitigate, monitor, and escalate risks that could affect programme implementation, financial integrity, safeguards compliance and service continuity under the Program for Results.

2) Core Elements

- **Risk Register:** A centralized database used to identify, analyse, and manage potential risks within the project and for each component of the PIAP.
- **Key Risk Register fields will include:** risk description, risk triggers, risk category (Risk type), likelihood (probability of risk occurring), impact (severity of the consequences if the risk occurs), risk score [impact × likelihood], risk owner, risk mitigation plan, risk status (before mitigation and after); risk review frequency, last review date, and notes or any other relevant information relating to risks.
- **Ownership:** Each risk is assigned a Risk Owner from the organisation and the person shall have sufficient authority and budget to act on the risks identified.
- **Scoring and Review:** Risks shall be scored, ranked and updated. Review cadence: weekly for high/operational risks; fortnightly or monthly for other risks.

3) Mitigation and controls

- **Preventive Controls:** Actions to reduce likelihood (include developing Standard Operating Procedures, training, procurement planning, ESMP implementation, asset mapping, meter replacement, and use of dashboards).
- **Corrective Actions:** Measures to reduce impact once a risk materializes, and these include such actions as bridging finance, emergency leakage response teams, contractor sanctions, remedial procurement, and data audits.
- **Triggers and Early Warnings:** Measurable indicators that prompt action, such as Non-Revenue Water exceeding agreed thresholds, Unpaid Invoices beyond agreed timeframes, KPI variances, union notices, or grievances logged.

4) Reporting & escalation

- **Project Risk Committee:** Meets monthly to monitor open risks and track risk mitigation progress.

- **Escalation Rules:** Any risk rated "High" is escalated to the Managing Director, Board, and World Bank focal point within 48 Hours of being noticed and the escalation shall be accompanied by a documented mitigation action plan.
- **Reporting Lines:** Monthly operational summaries to the Managing Director; quarterly consolidated risk report to the Board and World Bank; ad hoc alerts shall be issued to relevant offices when triggers occur.

5) Integration and Documentation

- **System Integration:** Link the PIAP Risk Register to the project plan, procurement tracker, and financial dashboard so triggers automatically flag issues.
- **Evidence Management:** Maintain an evidence folder for all controls, including training records, ESMP sign-offs, and audit reports, to support donor verification.
- **Accountability:** Use performance contracts, dashboards, and routine inspections to operationalize accountability for risk mitigation delivery.

The summarized Risk Management Plan is presented in the table below. This format can be copied into Excel or Word for updates to Mitigation Actions and Timelines.

Table 17: Summarized Initial Risk Register:

Risk ID	Risk Description	Impact	Likelihood	Risk Owner	Mitigation Actions (Preventive / Corrective)	Residual Risk	Timeline / Next Review
R1	High Non-Revenue Water (NRW): continued physical and commercial losses reducing billable volumes and revenue	High	High	Operations & Engineering; District Managers	Preventive: Implement NRW reduction program (leak detection, pressure management, district metering), replace faulty meters, roll out active leakage control. Corrective: Mobilise emergency leakage teams, temporary pressure reduction, zonal isolation.	Medium	Immediate start; critical repairs 0–3 months; weekly review
R2	Insufficient technical skills and capacity (hydraulic modelling, NRW diagnostics, GIS, maintenance)	High	High	HRA Manager	Preventive: Fast-track targeted training (NRW, hydraulics, GIS, maintenance planning, tariff calculation); create competency register. Corrective: Engage Short-Term Specialist Consultants.	Medium	Start within 6 months; phased 0–36 months; monthly review
R3	Supplier credit & cashflow constraints; delayed IPCs, foreign	High	High	Finance; Procurement; Project Manager	Preventive: Expedite submission of IPCs; invoice tracking dashboard; negotiate payment	Medium	Immediate (0–4 weeks); weekly review

Risk ID	Risk Description	Impact	Likelihood	Risk Owner	Mitigation Actions (Preventive / Corrective)	Residual Risk	Timeline / Next Review
	exchange exposure on hardware procurement and supplier pressure				schedules. Corrective: Short-term bridging finance or emergency payments; renegotiate supplier deliverables.		
R4	Delays in project disbursements, implementation and works completion	High	Medium-High	Project Manager; District Managers	Preventive: Detailed workplan with critical path, resource schedule, mobilisation of experienced staff; weekly progress reviews. Corrective: Reprioritise tasks, bring in qualified staff/contractors, authorised overtime in accordance with Policy.	Medium	Immediate and ongoing; weekly review
R5	Labour relations and union issues (redeployment, overtime disputes)	Medium-High	Medium	HR; Legal; MD; Project Manager	Preventive: Formal HR routing for redeployment; obtain staff consent and document DSA/Overtime; engage union proactively. Corrective: Rapid dispute resolution protocol and mediation.	Low-Medium	Immediate before redeployment; continuous monitoring

Risk ID	Risk Description	Impact	Likelihood	Risk Owner	Mitigation Actions (Preventive / Corrective)	Residual Risk	Timeline / Next Review
R6	Staff turn over in critical technical position	Medium	Medium Low	HR	Increase the salaries and incentive schemes	Medium	3 months
R7	Poor asset records and GIS/CMMS gaps	Medium-High	High	Engineering/GIS Officer; IT; District Managers	Preventive: Rapid asset-mapping campaign using mobile GIS; train district teams on asset tagging and database updates. Corrective: Contract temporary GIS capture teams.	Medium	Start in 2-4 weeks; baseline 3-6 months; monthly review
R8	Weak financial management and tariff design skills at district level	High	Medium-High	Finance; HR (training)	Preventive: Workshops on financial statements, cost-of-service and tariff calculation; standardise tariff tools/templates. Corrective: Deploy finance advisors to districts for initial calculations.	Medium	0-3 months; monthly review
R9	Procurement and compliance risk (World Bank & company procedures)	High	Medium	Procurement; Legal; Project Manager	Preventive: Maintain procurement plan and compliance checklist; early Procurement engagement for fast-track purchases. Corrective: Remedial procurement	Medium	Ongoing; fortnightly review

Risk ID	Risk Description	Impact	Likelihood	Risk Owner	Mitigation Actions (Preventive / Corrective)	Residual Risk	Timeline / Next Review
					actions and documentation.		
R10	Environmental & social safeguards risks (community impacts, grievances)	Medium	Medium	Environment & Social Safeguards Officer; Project Manager; District Managers	Preventive: Implement ESMP and grievance redress mechanism (GRM); contractor mitigation measures. Corrective: Rapid grievance response and remedial actions; reporting to WB.	Low-Medium	ESMP before major works; GRM active immediately; monthly review
R11	Health & Safety Incidents at Sites	Medium	Medium	H&S Officer; Project Manager; Contractors	Preventive: Enforce H&S policy, PPE, toolbox talks, H&S plans from contractors. Corrective: Incident investigation, corrective actions, HR liaison for medical/insurance.	Low-Medium	Immediate and ongoing; weekly H&S checks
R12	Political/external stakeholder interference or creditor pressure	Medium	Medium	Project Manager; Communications; MD	Preventive: Proactive stakeholder engagement and transparent communication. Corrective: Escalate to MD/government; use mediation channels.	Medium	Ongoing; ad-hoc review as needed

Risk ID	Risk Description	Impact	Likelihood	Risk Owner	Mitigation Actions (Preventive / Corrective)	Residual Risk	Timeline / Next Review
R13	Data quality and monitoring risks affecting KPI reporting and PforR verification	High	Medium-High	M&E Officer; IT; District Managers	Preventive: Standardise KPI definitions, improve data collection routines, validate district data, build central dashboard. Corrective: Data audits, r	Medium	Ongoing; ad-hoc review as needed
R14	Cyber security Vulnerability from rapid digitalisation	High	Medium	M&E Officer; IT; operations, technical, District Managers	Develop and implement the Cyber security policy and strategies	Medium	Ongoing; ad-hoc review as needed

8. LEADERSHIP AND GOVERNANCE

8.1 Managing Director and Line Management

The Managing Director [MD] is accountable for implementing the Performance Improvement Action Plan (PIAP). MD provides management leadership at LpWSC and is accountable for translating Strategies, Plans and Ministerial Directives into day-to-day operational performance. The MD holds Management and all employees accountable through formal performance contracts and consistent enforcement. Line Management and Staff are responsible for meeting agreed performance targets and established standards, within agreed timelines. The MD and Line Management monitor performance through regular management meetings, performance reviews, monthly operational dashboards, and targeted follow-ups on identified shortfalls. Where necessary, the MD shall apply corrective measures defined in performance contracts, such as coaching, formal warnings, reassignment of duties, or, for persistent non-performance, disciplinary processes. The MD also allocates resources and support, such as financing and training, to address any identified capability gaps.

8.2 Board Oversight of Company Performance

The Board is responsible for providing strategic oversight over the development, approval and implementation of this Performance Improvement Action Plan (PIAP). Implementation of the PIAP will be tracked through management performance reviews. The Board approves and issues policy direction to guide the operations of the Utility. The Board continues to review Company performance through consolidated monthly and quarterly performance reports from the Managing Director who runs the day-to-day operations of the Company. Through these governance mechanisms, the Board ensures that Management is focused on set Institutional goals, implementation of approved PIAPS and other Plans, compliance with funding conditions – including the World Bank PforR requirements – as well as long-term financial sustainability.

8.3 Ministerial and Regulatory Accountability

The Ministry of Water Development and Sanitation [MWDS] provided National Policy Direction. The Minister sets performance expectations of the Company through Board performance contracts and other periodic guidelines and directives. The National Water Supply and Sanitation Council (NWASCO) is responsible for regulatory supervision of Luapula Water Supply and Sanitation Company Limited (LpWSC). Other Regulatory Bodies also exercise oversight within their respective mandates: NWASCO for tariff approval and sector standards; ZEMA for environmental compliance; WARMA for water abstraction and use. Regulators and other Oversight Bodies conduct multiple inspections and audits, and enforce compliance to standards and statutory requirements. Findings from these statutory reviews can trigger remedial actions, sanctions, or directives which LpWSC must then implement and report on.

8.4 Sector Peers, Professional Bodies, and Public Accountability

Multiple other stakeholders reinforce accountability through setting and enforcing of professional and regulatory standards. Professional Bodies, such as the Engineering Institution of Zambia [EIZ], Zambia Institute of Chartered Accountants [ZICA], and the Zambia Institute of Human Resource Management [ZIHRM], issue various mandatory and non-compulsory standards and guidelines which the Utility is subjected to. These standards impose compliance and accountability duties. Other organizations, civil society groups, consumer protection associations, and the media influence company conduct through public reporting, accountability and advocacy. External auditors, donors, and financiers, including the World Bank, also require regular financial and performance reporting and they conduct independent supervision missions.

Collectively, these external actors create multiple layers of accountability which may be in form of dashboards, management reviews, periodic reports, compliance returns, and specific public disclosures. Effective accountability, therefore, depends on transparent reporting systems, clear performance contracts, routine inspections and audits, and timely corrective action when performance gaps are identified.

9. DISCLOSURE AND ACCOUNTABILITY MEASURES

Luapula Water Supply and Sanitation Company Limited (LpWSC) is committed to a structured, recurring transparency regime that ensures that all stakeholders, (such as customers, regulators, the Ministry of Water Development and Sanitation (MWDS), the Board, and the World Bank), can access key project, financial, and operational information. This commitment extends beyond initial PIAP disclosure to ongoing reporting on performance and financial management.

9.1 Recurring Transparency Regime and Reporting

LpWSC will publish performance information according to the following schedule:

- (a) **Annual Key Performance Indicators Reports:** A report on performance against agreed **Key Performance Indicators (KPIs)** – which shall include service delivery indicators, NRW, and financial metrics – will be compiled, approved by the Board, and published on the **LpWSC website** within **six months** of financial year-end. The report will also be submitted to **NWASCO** and the **World Bank**.
- (b) **Audited Financial Statements:** Annual Audited Financial Statements, including the audit opinion on project expenditures together with the management letter thereof, will be disclosed on the **LpWSC website** and the **World Bank project page** within **six months** of financial year-end, following Board approval.

- (c) **Grievance Redress Mechanism (GRM) Reports:** A summary of Grievance Redress Mechanism activities – for example, number of complaints received, resolution rates, and common issues – will be included in quarterly performance reports published on the **LpWSC website** and appropriate **bulletin boards**.

9.2 Accountability and Compliance

All disclosed documents and information will be archived for the project duration plus two years. This transparency commitment is reinforced by external accountability to the Ministry of Water Development and Sanitation, and to National Water Supply and Sanitation Council through routine performance monitoring and review mechanisms.

9.3 PIAP Disclosure and Public Access

- a. **PIAP Disclosure Date:** 1 July 2026
- b. **Public Access Points:** Information will be made available through multiple channels, including the following, to maximum public reach:
 - o **Utility Website:** LpWSC website (<https://www.lpwsc.co.zm>) will host the full PIAP, executive summary, and the annual performance reports.
 - o **World Bank Website:** The PIAP and related appropriate project materials will be published on the World Bank project page.
 - o **Regulator Website:** The National Water Supply and Sanitation Council (NWASCO) website (<https://www.nwasco.org.zm>) will receive and disclose key performance data on this project and tariff justifications.
 - o **Physical Access:** Hard copies of Grievance Redress Mechanism (GRM) contact details will be posted on public bulletin boards at selected Company Offices and work stations such as LpWSC Treatment Plants.
- c. **Accessibility Commitment:** Published documents may include plain-language executive summaries in English and relevant local languages. A designated LpWSC Communications Officer will handle public information requests.

9.4 Escrow Account Details and Financial Oversight

9.4.1 Escrow Account Details:

A dedicated account (i.e., escrow) has been established to ensure monitoring and traceability of specific ZWSSSGC Program-for-Results funds and some expenditures:

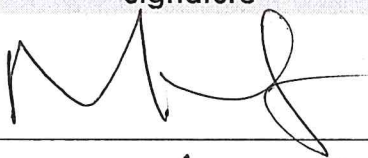
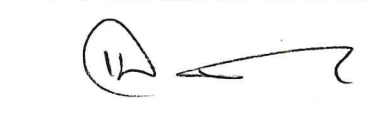
Table 18: Escrow Bank Account Details

Item	Details
Account Name:	Luapula Water Supply and Sanitation Company Limited – Zambia Water Supply and Sanitation Services in Growth Centres
Bank Name:	Indo Zambia Bank
Branch	Mansa
Account Number:	0242020000115
Sort Code	091924

9.4.2 Oversight Arrangements

- Dual Signature Mandate:** All transactions from this dedicated bank account (i.e., escrow account) require dual authorization from two designated officials, e.g., Finance Manager and MD representative, to prevent unilateral access.
- Bank Reconciliations:** Monthly bank reconciliations will be prepared by LpWSC Finance Officers, and reviewed and approved by different Company Officers to observe standard segregation of duties. Further, the Bank Reconciliations will be subjected to scrutiny by the Board Finance Committee, and submitted to the Board of Directors and to appropriate Officials of the World Bank for review.
- Internal Audit:** The Utility's internal audit function will conduct quarterly reviews on transactions from this account and report findings directly to the Audit & Risk Committee of the Board which will, in turn, report to the Board of Directors.

10. APPROVAL & SIGN-OFF

Name	Title	Signature	Date
Moses Silanda	Board Chairperson		07/07/2026
Mukela Simbuwa	Managing Director		07/07/2026
Kelvin Chitumbo	NWASCO Director		07/07/2026

APPENDICES

Annex 1- Schedule of works is attached separately

Annex 2 - Summary of the budget is attached separately