



REPUBLIC OF ZAMBIA

Ministry of Water Development, Sanitation and
Environmental Protection

National Rural Water Supply and Sanitation Programme (NRWSSP) 2019 – 2030



MINISTERIAL FOREWORD



The provision of clean water supply and adequate sanitation to rural areas is one of the priority interventions by the Government of the Republic of Zambia. The Vision 2030 provides that by the year 2030, the country will attain 100 percent access to clean water supply and 90 percent sanitation coverage for all Zambian citizens. These targets are in line with the United Nations Sustainable Development Goal number 6 (SDG 6) and the 7th National Development Plan 2017-2021. The Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP) was created to spearhead the implementation of water supply and sanitation programmes and activities to reach national targets.

In view of the above developments and the dynamic nature of the Water and Sanitation subsector, it became inevitable for the Government through the Ministry to develop the second phase of the National Rural Water Supply and Sanitation Programme as a roadmap for the subsector. The programme builds on the successes of the first phase of the National Rural Water Supply and Sanitation Programme 2006 to 2015. The programme underscores the Government's commitment to gradually provide water, sanitation and hygiene services to all, giving priority to the most needy people in rural areas, small towns and informal settlements.

The overall objective of NRWSSP 2019 to 2030 is to ensure “sustainable and equitable access to safe water supply and adequate sanitation to meet basic needs for improved health and poverty alleviation among Zambia’s rural population in line with the Vision 2030 and the Sustainable Development Goals.”

Some of the significant challenges faced from the first programme (NRWSSP 1) was the low level of resources provided for sanitation relative to water. The allocation to sanitation in the new programme has been increased from 14 percent to 38 percent of the programme cost. The subsector will also put in place measures for the regulation of rural water supply and sanitation, onsite sanitation and faecal sludge management to ensure progress in achieving universal access to water supply and sanitation services by 2030.

This programme document provides coordination and policy guidance to programme implementers, Cooperating Partners and other key stakeholders. I am confident that this will further government's efforts to ‘leave no one behind’ in its development agenda.

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Hon. Raphael Nakacinda, MP
MINISTER OF WATER DEVELOPMENT, SANITATION AND ENVIRONMENTAL PROTECTION

ACKNOWLEDGEMENTS



The National Rural Water Supply and Sanitation Programme 2019 – 2030 was developed through a consultative and participatory process capturing significant contributions from various stakeholders. The end of term evaluation of the National Rural Water Supply and Sanitation Programme for the period 2006 – 2015 also provided valuable input into the NRWSSP II. The Ministry appreciates the hard work and dedication shown by the Department of Water Supply and Sanitation and the Ministerial Technical Working Group for coordinating the development of the programme.

I wish to extend my gratitude to key line Ministries, Local Authorities, Commercial Water Utilities, Cooperating Partners, Non-Governmental Organisations and representatives from community structures for the valuable input into the end of term evaluation and the development of the NRWSSP II programme document.

Finally, I wish to extend profound gratitudes to GIZ, for the support rendered to the Government of the Republic of Zambia and for jointly financing the Consultancy Services for the end of term evaluation of the NRWSSP 2006 – 2015 and the development of the NRWSSP II for the period 2019 – 2030.

A handwritten signature in blue ink, appearing to be 'MABVUTO SAKALA', written over a horizontal line.

Mr. Mabvuto Sakala
PERMANENT SECRETARY

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LIST OF ABBREVIATIONS AND ACRONYMS

ABBREVIATION	MEANING
A&C	Advocacy and Communication
ABP	Area Based Project
AIDS	Acquired Immune Deficiency Syndrome
APM	Area Pump Mender
BCC	Behavioural Change Communication
CBM	Community-Based Management
CBO	Community-Based Organisations
CD	Capacity Development
CDSS	Community Development and Social Services
CEN	National Census
CLTS	Community Led Total Sanitation
CP	Cooperating Partner
CSO	Central Statistical Office
CU	Commercial Utilities
DEWATS	Decentralised Wastewater Treatment Systems
DHID	Department of Housing and Infrastructure Development
DHIS	District Health Information System
DHMT	District Health Management Teams
DHS	Demographic and Health Survey
DPI	Department of Planning and Information
DQA	Data Quality Assurance
DRA	Demand Responsive Approach
DRR	Disaster Risk Reduction
DWSS	Department of Water Supply and Sanitation
D-WASHE	District Water, Sanitation and Hygiene Education
EHT	Environmental Health Technician
EM-DAT	Emergency Events Database
EPPCA	Environmental Protection and Pollution Control Act
GDP	Gross Domestic Product
GIZ	German International Development Agency (Gesellschaft für Internationale Zusammenarbeit)
GRZ	Government of the Republic of Zambia
HH	Household
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technology
IMS	Information Management System
IT	Information Technology
JICA	Japan International Cooperation Agency
JMP	Joint Monitoring Programme

KfW	German Development Bank (Kreditanstalt für Wiederaufbau)
KPI	Key Performance Indicator
l/c/d	Litre per capita per day
LA	Local Authority
M&E	Monitoring and Evaluation
MCDSS	Ministry of Community Development and Social Services
MCTI	Ministry of Commerce Trade and Industry
MDG	Millennium Development Goal
MER	Monitoring, Evaluation and Reporting
MEWD	Ministry of Energy and Water Development (former)
MEWG	Monitoring and Evaluation Working Group
MFNP	Ministry of Finance and National Planning (former)
MGCD	Ministry of Gender and Community Development (former)
MoG	Ministry of Gender
MGE	Ministry of General Education
MHM	Menstrual Hygiene Management
MIC	Multiple Indicator Cluster
MIS	Management Information System
MLG	Ministry of Local Government (formerly MLGH)
MLGH	Ministry of Local Government & Housing (former)
MNDP	Ministry of National Development Planning
MoCTA	Ministry of Chiefs and Traditional Affairs
MoE	Ministry of Education (former)
MoF	Ministry of Finance
MoH	Ministry of Health
MoJ	Ministry of Justice
MoU	Memorandum of Understanding
MTR	Mid-term Review
MTENR	Ministry of Tourism, Environment and Natural Resources (former)
MWDSEP	Ministry of Water Development, Sanitation and Environmental Protection
NCC	National Council for Construction
NCCRS	National Climate Change Response Strategy
NDP	National Development Plan
NGOs	Non-Governmental Organisation
NIS	National Information System
NRWSSP	National Rural Water Supply and Sanitation Programme
NUWSSP	National Urban Water Supply and Sanitation Programme
NWASCO	National Water Supply and Sanitation Council
NWP	National Water Policy
O&M	Operations and Maintenance
OD	Open Defecation

ODF	Open Defecation Free
PMER	Planning Monitoring Evaluation and Reporting
PSC	Programme Steering Committee
PDWSS	Provincial Water Supply and Sanitation Department
P-WASHE	Provincial Water, Sanitation and Hygiene Education
R&D	Research and Development
RHC	Rural Health Centre
RWM	Repair Work Mechanism
RWSS	Rural Water Supply and Sanitation
RWSSU	Rural Water Supply and Sanitation Unit
SAGs	Sanitation Action Groups
SCM	Supply Chain Management Mechanism
SDA	Social Dimensions of Adjustment Survey
SDG	Sustainable Development Goal
SH	Sanitation and Hygiene
SIGM	Social Inclusion and Gender Mainstreaming
SOMAP	Sustainable Operation and Maintenance Project
SOMAp	Sustainable Operation and Maintenance Approach
SSA	Sustainable Sanitation Approach
SWAp	Sector Wide Approach
SWM	Solid Waste Management
TOR	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
US	United States
V-WASHE	Village Water, Sanitation and Hygiene Education
VIP	Ventilated improved pit (latrine)
WARMA	Water Resources Management Authority
WASH	Water, Sanitation and Hygiene
WASHE	Water, Sanitation and Hygiene Education
WB	World Bank
WDC	Ward Development Committee
WDI	World Development Indicators
WHO	World Health Organisation
WHS	World Health Survey
WRM	Water Resources Management
WRMD	Water Resources Management and Development
WSAG	Water Sector Advisory Group
WS	Water Supply
WSP	Water and Sanitation Programme (of the World Bank)

WSS	Water Supply and Sanitation
DWSS	Water Supply and Sanitation Department
ZABS	Zambia Bureau of Standards
ZEMA	Zambia Environmental Management Agency
ZS	Zambian Standard
ZMW	Zambian Kwacha (Zambian currency after 2013)
7NDP	Seventh National Development Plan

Base Exchange Rate: 1 US \$ = 10 ZMW

KEY DEFINITIONS

Term	Context
Water Supply Definitions	
A basic drinking water service	<p>Drinking water from an improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing.</p> <p>For Schools: Basic service is when water from an improved source is available at the school.</p> <p>For Health Care Facilities: Basic service is when water from an improved source is available on premises</p>
A limited water service	<p>Drinking water from an improved source for which collection time exceeds 30 minutes for a roundtrip including queuing.</p> <p>For Schools: Schools without water available, but with an improved source are classified as having a 'limited' service.</p> <p>Health care facilities with an improved water source without water available or that is off-premises (but within 500 metres) are classified as having limited service. (JMP 2017)</p>
A safely managed drinking water service	<p>In order to meet the criteria for a safely managed drinking water service, people must use an improved source meeting three criteria:</p> <ul style="list-style-type: none"> • It should be accessible on premises, • Water should be available when needed, and • The water supplied should be free from faecal and priority contamination. <p>Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination. (SDG 6.1)</p>
Improved drinking water sources or Improved sources	<p>Improved drinking water sources are those which by nature of their design and construction have the potential to deliver safe water. (JMP 2017)</p> <p>Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water (JMP Ladder for water). (JMP, 2015/ 2017)</p>
Safe Water	<p>Water is considered safe if it has no chemical, physical and biological substances that negatively affect human health.</p>
Water Demand Management	<p>Water Demand Management (WDM) is defined as the efficiency of water utilization among competing needs.</p>
Water service levels	<p>During the SDG period, the population using improved sources will be subdivided into three groups according to the level of service provided. The three levels of service are:</p> <ul style="list-style-type: none"> • safely managed drinking water service • basic drinking water service • limited water service. <p>(JMP 2017)</p>
Water Supply	<p>The abstraction, treatment, storage and distribution of water, for domestic, commercial and industrial use.</p>
Sanitation and Hygiene Promotion Definitions	
<i>Sanitation</i>	
A basic sanitation service	<p>Use of improved facilities which are not shared with other households</p>
A limited sanitation service	<p>Use of improved facilities shared between two or more households. (JMP 2017)</p>

A safely managed sanitation service	Use of improved facilities which are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site (SDG 6.2)
Access to adequate sanitation	<p>Household with access to sanitation facilities which hygienically separates human excreta from contact with human</p> <ul style="list-style-type: none"> • Have hand washing facilities with soap and water; • Have a smooth cleanable floor • Ensure privacy; • Do not pollute drinking water sources; • Do not cause intolerable smells; • Are kept clean. <p>Public institutions are required to have facilities that meet the foregoing criteria in line with the public health and building requirements. Acceptable technologies and systems currently include systems that utilise technologies such as:</p> <ul style="list-style-type: none"> • Off-site <ul style="list-style-type: none"> ○ Sewer networks connected to a treatment plant; ○ Sewer networks connected to a communal septic tank, which has to be emptied when full. • On-Site <ul style="list-style-type: none"> ○ Decentralised Wastewater Treatment Systems (DEWATS) ○ Individual septic tank; Ecosan technologies (such as Bio-digester Septic Tank (BST) and Urine-diversion latrine); ○ Pour flush latrine ○ Compost latrine; ○ Ventilated improved pit latrine (VIP); ○ Pit latrine with a slab / smooth floor surface <p>Acceptability will also be linked to specific service cluster conditions (MLGH, 2015b). For Solid Waste Management (SWM), access is given for the household where waste collection is carried out according to standards and by-laws.</p>
Community Led Total Sanitation (CLTS)	<p>CLTS is an approach to achieve behaviour change in mainly rural people by a process of "triggering", leading to spontaneous and long-term abandonment of open defecation practices. The process of triggering stimulates behaviour change that leads to households constructing latrines and ending open defecation.</p> <p>CLTS is a demand driven participatory approach without hardware subsidies. Through CLTS, communities recognize the problem of open defecation (OD) and take collective action to clean up and become "open defecation free" (ODF).</p>
Dry sanitation	<p>The term "dry sanitation" is somewhat misleading as sanitation includes hand washing and can never be "dry". A more precise term would be "dry excreta management". When people speak of "dry sanitation", they usually mean sanitation systems with dry toilets with urine diversion, in particular the urine-diverting dry toilet (UDDT).</p>
Ecological sanitation	<p>Ecological sanitation, which is commonly abbreviated as ecosan, is an approach, rather than a technology or a device which is characterized by a desire to "close the loop" (mainly for the nutrients and organic matter) between sanitation and agriculture in a safe manner. Put in other words: "Ecosan systems safely recycle excreta resources (plant nutrients and organic matter) to crop production in such a way that the use of non-renewable resources is minimised". When properly designed and operated, ecosan systems provide a hygienically safe, economical, and closed-loop system to convert human excreta into nutrients to be returned to the soil, and water to be returned to the land. Ecosan is also called resource-oriented sanitation.</p>

Effluent	<p>Effluent means waste water or other fluid of domestic, agricultural, trade or industrial origin, treated or untreated, and discharged, directly or indirectly, into the aquatic environment. (Source: MTENR (2011). <i>The Environmental Management Act, 2011</i>)</p> <p>Effluent is the general term for liquid that has undergone some level of treatment and/or separation from solids. It originates at either a collection and storage/treatment or a (Semi-) centralized treatment facility. Depending on the type of treatment, the effluent may be completely sanitized or may require further treatment before it can be used or disposed of. (Tilley, Elizabeth et al, 2008).</p>
Environmental sanitation	Environmental sanitation encompasses the control of environmental factors connected to disease transmission. Subsets of this category are solid waste management (SWM), water and wastewater treatment, industrial waste treatment and noise and pollution control.
Excreta	Excreta consists of urine and faeces that is not mixed with any flushing water. Excreta is small in volume, but concentrated in nutrients and pathogens. Depending on the quality of the faeces, it is solid, soft or runny. (Tilley, Elizabeth et al, 2008).
Faecal sludge	Faecal sludge comes from on-site sanitation technologies that has not been transported through a sewer. It is raw or partially digested, a slurry or semi-solid and results from the collection, storage or treatment of combination of excreta wastewater with or without grey water. (Source: MLGH NUSS Strategy 2015 – 2030)
Faecal sludge management	A system for safe collection, transport, treatment, disposal and/or reuse of faecal sludge. (Source: MLGH NUSS Strategy 2015 – 2030)
Faeces	Faeces refers to (semi-solid) excrement without urine or water. Each person produces approximately 50 L per year of faecal matter. Of the total nutrients excreted, faeces contain about 10% Nitrogen, 30% Phosphorus, 12% Potassium and have 107–109 faecal coliforms /100 ml. (Tilley, Elizabeth et al, 2008)
Improved Sanitation Facilities	<p>Improved sanitation facilities are those designed to hygienically separate excreta from human contact (JMP 2017).</p> <p>Improved facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs (JMP ladder for sanitation). (JMP, 2015 and 2017)</p> <p>The principal difference between improved and unimproved pit latrines is the presence of a 'slab'. Pit latrines with slabs that completely cover the pit, with a small drop hole, and are constructed from materials that are durable and easy to clean (e.g. concrete, bricks, stone, fiberglass, ceramic, metal, wooden planks or durable plastic) should be counted as improved.</p> <p>Slabs made of durable materials that are covered with a smooth layer of mortar, clay or mud should also be counted as improved.</p>
Latrine	A toilet facility (public or private) comprising of a superstructure around it. (MLGH NUSS Strategy 2015 – 2030)
Off-site sanitation	<p>Off-site sanitation refers to sanitation systems in which excreta are collected from individual houses, commerce, institutions, industry and public toilet facilities and carried away for disposal and treatment through pipes. Two main types are used:</p> <ul style="list-style-type: none"> • Sewer networks with a treatment plant • Sewer networks with a communal septic tank, which has to be emptied when full (NUWSSP)
Onsite sanitation	<p>On-site sanitation is also commonly referred to as non-sewered sanitation because the containment facilities are situated within the plot occupied by a dwelling or its immediate surroundings.</p> <p>On-site sanitation, also called decentralised sanitation, is a system where the treatment of excreta or sewage takes place at the same location where it is generated</p>
Open defecation (OD)	Open defecation is the practice of people defecating outside and not into a designated toilet. (The term is widely used in literature on water, sanitation, and hygiene (WASH) issues in developing countries)

Open Defecation Free (ODF) Status	<p>MLGH guidelines stipulate that, in order for a village to be verified ODF, it must meet the following criteria:</p> <ul style="list-style-type: none"> • No evidence of faeces in or around household compounds. • Every household has an 'adequate' toilet, meaning one that effectively separates excreta from human contact and has: <ul style="list-style-type: none"> ○ a smooth, cleanable floor (not necessarily a concrete slab) ○ a cover for the drop hole ○ a superstructure providing privacy • Every household has a hand washing facility near the latrine, with water and soap or ash. <p><i>(Source: MLGH NUSS Strategy 2015 – 2030)</i></p>
Safe sanitation system	<p>The function of a system creating barriers between humans and excreta to reduce the incidence of water and vector- borne diseases and parasitic infestations. A safe sanitation system performs the following functions:</p> <ul style="list-style-type: none"> • effectively prevents human, animal and insect contact with human excreta and wastewater, and • ensures a long term clean and healthy environment (not polluting ground and surface water bodies, soil and air) both at home and in the neighbourhood of users; the concept of safe sanitation comprises treatment/discharge points that are part of the sanitation chain. <p>To be considered "safe" the sanitation facility must also provide a hand washing facility.</p>
Safely Managed Sanitation	<p>Private improved facility where faecal wastes are safely disposed on-site or transported and treated off-site; plus a hand washing facility with soap and water. <i>(Source: JMP, 2015)</i></p>
Sanitation	<p>Sanitation involves interventions to reduce people's exposure to diseases by providing a clean environment in which to live and work, with measures to break the cycle of disease. This usually includes hygienic management of human and animal excreta, refuse and wastewater, the control of disease vectors and the provision of washing facilities for personal and domestic hygiene. It also involves both behaviours and facilities which work together to form a hygienic environment.</p> <p>For the purpose of this programme, sanitation is understood to be the safe collection, transportation, treatment and disposal or reuse of human excreta, domestic liquid waste, industrial effluents and municipal solid waste.</p>
Sanitation chain	<p>Incorporates the various steps required to sanitise excreta and waste water, between the user interface (household or public, industrial and commercial excreta and waste water production sites) and final sites for disposal or reuse of sanitized material. <i>(MLGH NUSS Strategy 2015 – 2030)</i></p>
Sanitation marketing	<p>Sanitation Marketing is neither advertising nor a communications program; it is a systematic and dynamic process to make strategic decisions about four components, or the four P's of the marketing mix: Product, Place, Promotion, and Price. Recently, two more Ps have been added: Policy and Partnership:</p> <ul style="list-style-type: none"> • Product is a tangible item, a service or a practice that commercial marketers are primarily interested in selling for profit while Social marketers also want the customers to use it correctly and behave differently. • Place refers to where the product is always available to the target group; through public or private channels. Place considers how to bring the market close to customers. • Price must cover all costs but the vulnerable should be given special consideration so that they too can benefit • Promotion creates demand for a new products or services. <p><i>(Sanitation Marketing, 2004)</i></p>
Sanitation service area	<p>The area defined in the CUs operator's license approved by NWASCO. <i>(MLGH NUSS Strategy 2015 – 2030)</i></p>

Sanitation service levels	<p>During the SDG period, the population using improved services will be subdivided into three groups according to the level of service provided. The three levels of service are:</p> <ul style="list-style-type: none"> • safely managed sanitation service • basic sanitation service • limited sanitation service. <p>(JMP 2017)</p>
School Led Total Sanitation (SLTS)	<p>SLTS is one of the approaches used in WASH in Schools programming and is an adaptation from CLTS, which is a methodology for mobilising communities to completely eliminate open defecation (OD) and improve sanitation and hygiene at the household level. On the other hand, SLTS focuses on using schoolchildren as agents of change.</p>
Septic tank	<p>A septic tank is an excreta collection device consisting of a watertight settling tank, which is normally located underground, away from the house or toilet. The treated effluent of a septic tank usually seeps into the ground through a leaching pit. It can also be discharged into a sewerage system. (JMP)</p>
Shared Sanitation	<p>Facility shared with other households. (Source: JMP, 2015)</p>
Sustainable sanitation	<p>Sustainable sanitation considers the entire "sanitation value chain", from the experience of the user, excreta and wastewater collection methods, transportation or conveyance of waste, treatment, and reuse or disposal. The term is widely used since about 2009. In 2007 the Sustainable Sanitation Alliance had defined five sustainability criteria to compare the sustainability of sanitation systems. In order to be sustainable, a sanitation system has to be,</p> <ul style="list-style-type: none"> • Economically viable, • Socially acceptable, • Technically appropriate, • Institutionally appropriate and • Protect the environment and the natural resources. <p>(Tilley, Elizabeth et al, 2008; SuSanA, 2008)</p>
Ventilated improved pit latrine (VIP)	<p>Ventilated improved pit latrine (VIP) is a pit latrine ventilated by a pipe that extends above the latrine roof. The open end of the vent pipe is covered with gauze mesh or fly-proof netting and the inside of the superstructure is kept dark. (Source: WHO/UNICEF JMP for Water Supply and Sanitation)</p>
Hygiene Promotion	
A basic hygiene facility	<p>Households that have a hand washing facility with soap and water available on premises will meet the criteria for a basic hygiene facility (SDG 1.4 and 6.2).</p>
A limited hygiene facility	<p>Households that have a facility but lack water or soap will be classified as having a limited facility, and distinguished from households that have no facility at all. (JMP 2017)</p>
Hand washing with soap (HWWS)	<p>Hand Washing with Soap (HWWS) is the most cost-effective intervention against disease according to a recent review¹ of curative and preventative health interventions in developing countries. Prevention of transmission of diarrhoeal diseases (including cholera, dysentery) and intestinal worms are the main benefits from improved hand washing practice. In addition recent evidence suggests that it can also lead to a reduction of respiratory infections. According to a systematic analysis by Curtis and Cairncross² in 2003, the universal practice of HWWS could reduce the risk of diarrhoea in the community by 47%, and an additional review by Aiello et al. in 2008 concluded that HWWS could reduce the risk of lower respiratory tract infections such as pneumonia by 16% to 21%.</p>

¹Intervention Cost-Effectiveness: Overview of Main Messages. Ramanan Laxminarayan, Jeffrey Chow, and Sonbol A. Shahid-Salles. Disease Control Priorities in Developing Countries. 2nd edition. (2006)

²Curtis V & Cairncross S (2003) Effect of washing hands with soap on diarrhoea risk in the community: a systematic review. Lancet Infectious Diseases 3, 275–281.

Hygiene	Hygiene encompasses the conditions and practices that help maintain health and prevent spread of disease including hand washing, menstrual hygiene management and food hygiene.
Solid Waste Management	
Hazardous Waste	Waste which is poisonous, corrosive, irritant, explosive, inflammable, toxic or other substance or thing that is harmful to human beings, animals, plants or the environment.
Integrated Solid Waste Management.	Frame of reference for designing and implementing new solid waste management (SWM) systems and for analysing and optimising existing systems. It is based on the concept that all aspects of an SWM system (technical and non-technical) should be analysed together, since they are in fact interrelated and developments in one area frequently affect practices or activities in another area.
Municipal Waste	Waste generated from domestic, trade and commercial activities. <i>(Source: Statutory Instrument No. 112 of 2013 of the EM Act No. 12 of 2011)</i>
Solid Waste	Means domestic waste, trade and commercial waste, construction waste, garden waste, waste that does not pose an immediate hazard or threat to human health, plant, animal life or the environment.
Solid Waste Management	The supervised handling of waste material from generation at the source through the recovery processes to disposal.
Operation and Maintenance Definitions	
Asset management	The combination of management, financial, socio-economic, engineering, and other practices and considerations taken into account and applied to physical assets with the objective of providing the required level of service in the most cost-effective manner. It includes the management of the whole asset life cycle (design, construction, commissioning, operating, maintaining, repairing, modifying, replacing and decommissioning/disposal) of physical infrastructure assets. Operating and sustaining assets in an environment with budget limitations requires some sort of prioritization scheme to ensure maximum use of resources.
Maintenance	Maintenance refers to the activities required to sustain the water supply facilities in a proper working condition. It includes preventive maintenance, corrective maintenance and crisis maintenance. <i>(National Guidelines for sustainable O&M of hand pumps)</i>
Operation	Operation refers to the day-to-day running and handling of water supply facilities in a manner that optimises their use and contributes to a reduction in breakdown and maintenance needs. <i>(National Guidelines for sustainable O&M of hand pumps)</i>
Preventive maintenance	Preventive maintenance refers to an activity that includes checking the status and repairing of water supply and sanitation machinery at regular intervals intended to prevent problems from arising
Rehabilitation	Rehabilitation is the correction of major defects and the replacement of equipment to enable a facility to function as originally intended. <i>(National Guidelines for sustainable O&M of hand pumps)</i>
Repair	Repair is the restoration of a defective component to return the facility to acceptable working condition. <i>(National Guidelines for sustainable O&M of hand pumps)</i>
Sustainable supply chain	Sustainable supply chain is a system of procuring and supplying spare parts that guarantees a continuous supply of spare parts. <i>(National Guidelines for sustainable O&M of hand pump)</i>

Sector Development Definitions	
Capacity development	Capacity development is aimed at developing the capacity for development (CfD), which is “the availability of resources and the efficiency and effectiveness with which societies deploy those resources to identify and pursue their development goals on a sustainable basis”. In that context capacity development is “the process through which societies, organisations and individuals acquire, strengthen, maintain and renew the capabilities to set and achieve their own development objectives over time”. (<i>CD Water supply and sanitation strategy, 2015 – 2020</i>)
Full Cost Recovery	Where recurrent income is sufficient to cover “operating, maintenance and administration (OM&A) expenditures, land, financial and capital investments to repair, rehabilitate, replace, expand and upgrade facilities; and, in some cases, decommissioning and disposing of infrastructure.
Gender Equality	Gender equality denotes women having the same opportunities in life as men, including the ability to participate in the public sphere. (<i>MoGCD, 2014</i>)
Gender Equity	Gender equity is the equivalence in life outcomes for women and men, recognising their different needs and interests, and requiring a redistribution of power and resources. (<i>MoGCD, 2014</i>)
Gender Mainstreaming	Gender mainstreaming ensures women, men, girls and boys benefit equally from the development process by highlighting the impacts of policies, programmes and laws on the real situation of women, men, girls and boys. (<i>MoGCD, 2014</i>)
Governance	“The exercise of economic, political and administrative authority to manage a country’s affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences” (<i>UNDP, 1997</i>) and (<i>UN, 2015</i>) Characteristics of good governance include Transparency, Accountability, Responsibility, Rule of law, Equity and inclusivity, Participatory, Effectiveness and efficiency. With respect to Corporate Governance, this has been defined to be the system by which companies and organisations are governed, controlled and managed.
Planning, Monitoring, Evaluations and Reporting Definitions	
Rural	The National Environment Sanitation Strategy for Rural and Peri-Urban Areas in Zambia (1998) defines rural as “Areas of population outside urban or peri-urban using point or surface water sources for which the community is responsible for the operation and routine maintenance and sanitation primarily through pit latrines for which the community is responsible for operation and maintenance”. In addition, low population densities characterise rural areas (usually less than 20 persons per square kilometre), with small houses isolated from each other. (<i>National Guidelines for sustainable O&M of hand pumps</i>)
Coverage	The percentage or proportion of the population with household access safe water or adequate sanitation.
Evaluation	Evaluation is the periodic and systematic review and analysis of a practice to determine the relevance, effectiveness, efficiency and impact of programmes/projects compared to set objectives. (<i>National Guidelines for sustainable O&M of hand pumps</i>) Evaluation is a process that attempts to determine as systematically and objectively as possible the relevance, effectiveness, efficiency and impact of activities in the light of specified objectives. It is a learning and action-oriented management tool and organizational process for improving current activities and future planning, programming and decision-making. (<i>Monitoring & Evaluation Framework for the National Water Supply And Sanitation Programme, 2017</i>)
Integrated development	Includes integrated social, economic, environmental, spatial, infrastructural, institutional and organisational development and the provision of amenities and services aimed at alleviating poverty and improving the quality of life of members of a community. (<i>The Urban and Regional Planning Act, 2015</i>)

Monitoring	<p>Monitoring is the regular and continuous checking of whether plans, activities and situations are being implemented as planned, and includes the provision of feedback to facilitate the taking of corrective measures by relevant stakeholders. <i>(National Guidelines for sustainable O&M of hand pumps)</i></p> <p>Monitoring is the periodic oversight of the implementation of an activity which seeks to establish the extent to which input deliveries, work schedules, other required actions and targeted outputs are proceeding according to plan, so that timely action can be taken to correct deficiencies detected. "Monitoring" is also useful for the systematic checking on a condition or set of conditions, such as the number of water points functioning, quantities and quality of water, etc. <i>(Monitoring & Evaluation Framework for the National Water Supply And Sanitation Programme, 2017)</i></p>
Plan	<p>Includes reports, drawings, maps and models. <i>(The Urban and Regional Planning Act, 2015)</i></p>
Planning	<p>The initiation and management of change in the built, socioeconomic and natural environment in, and across, a spectrum of sectors and urban and rural areas. <i>(The Urban and Regional Planning Act, 2015)</i></p>
Service Clusters	<p>These are comprised of;</p> <ul style="list-style-type: none"> • Rural <ul style="list-style-type: none"> ○ Rural settlement with populations of 50 (10 households) to 500 (100 households); and ○ Rural Growth Centres with populations of 501 (101 households) to 5,000 (1,000 households). • Urban <ul style="list-style-type: none"> ○ Small Towns with populations 5,001 (1,001 households) 50,000 (10,000 households). ○ Towns with populations in excess of 50,000 (more than 10,001 households). ○ Peri-urban areas that started as unplanned and informal settlements. • Public Places and Institutions such as: schools, markets (including shopping malls) and health centres, are required to have facilities that meet the foregoing criteria in line with the public health and building requirements.

EXECUTIVE SUMMARY

The NRWSSP II will be implemented by GRZ with support from cooperating development partners, Local Authorities, National and international NGOs, as well as the beneficiary communities. It is essentially a continuation of NRWSSP I and builds on the achievements and lessons learnt from the programme.

During its implementation from 2006 through 2015, NRWSSP I was subjected to a Mid-Term Review (November 2012), an Annual Joint Water Sector Review (October 2014) and an End of Term Review (November 2015). In NRWSSP II it is important to maintain the gains made to-date, correct any shortcomings and build on the lessons learned from NRWSSP I. The NRWSSP II is expected to continue providing improved access to water supply and sanitation services in rural areas during its implementation period. NRWSSP II will also ensure continuity of Government engagement in RWSS service delivery.

The strategic approach of NRWSSP II is informed also by the 7NDP and its emphasis on the Theory of Change which is a model that articulates, in a systematic way, how programmes and strategies contribute to a set of specific outcomes through a series of intermediate results. It describes the pathway through which change will come about. This is in the context of how NRWSSP II is going to achieve its vision, mission and objectives; what results need to be attained to contribute to this achievement and what interventions/activities will bring about these results. It also describes the underlying assumptions and conditions necessary to bring about this change.

Vision, Mission and Overall Objective

Vision: *All of Zambia's rural population have sustainable and equitable access to safe water supply and adequate sanitation to meet basic needs for improved health and alleviating poverty.*

Mission: *Promoting sustainable provision and usage of affordable and socially acceptable safe water supply and adequate sanitation facilities to the rural population in Zambia.*

Overall Objective: The overall objective of the 2019-2030 NRWSSP is:

“Sustainable and equitable access to safe water supply and adequate sanitation to meet basic needs for improved health and poverty alleviation for all of Zambia's rural population in line with the Vision 2030 and the Sustainable Development Goals.”

The Programme has four specific objectives:

1. To Increase and improve the number of functioning Water Supply facilities in rural areas from 72% to 100% by 2030, through systematic investments in new Water Supply facilities, rehabilitation, proper operations and maintenance of existing facilities;
2. To Increase access to adequate and appropriate, environmentally friendly sanitation facilities to 90% by the year 2030 at household level and public institutions in rural areas through hygiene promotion, sanitation marketing, construction of facilities and legal enforcement;
3. To strengthen systems for enhanced service delivery in the water and sanitation sub sector and
4. To improve performance of the RWSS sub-sector in planning, implementation and management of RWSS services through effective monitoring, evaluation and reporting.

Programme Outcomes and Estimated Budget

The Programme sets out a holistic and adaptive framework for achieving provision of “sustainable and equitable access to safe water supply and adequate sanitation”. Therefore, community and local level participation in defining technologies to be used, priorities, location of services, operation and maintenance of the facilities will be the bedrock of the Programme. NRWSSP II has five (5) main components each with sub components;

1. Water Supply
2. Sanitation and Hygiene Promotion
3. Sustainable Operations and Maintenance (O&M)
4. Sector Development
5. Planning, Monitoring, Evaluation and Reporting (PMER).

The outcome / results of NRWSSP II and its five (5) components are listed in the Table O-1

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Table O.1 Programme Outcomes / Results

Outcome Indicators	Baseline	Year of Baseline Estimate	Target 2021	Target 2030
Percent of households with access to improved drinking Water (<i>Rural</i>)	46.6	2013-14	67.0	100
Percent of households with access to improved sanitation (<i>Rural</i>)	18.5	2013-14	37.0	90
Percentage of water samples from a representative sample of water points that meet ZBS/WHO standards	64	2017	100	100

The total projected programme cost is ZMW **1,768,743.27 million** to the year 2030. The breakdown by component is given in Table O-2:

Table O.2: Projected Programme Costs by Component (USD)

Year	2016 - 2021	2022 - 2026	2027 - 2030	Total (USD)	Percentage
Component 1: Water Supply	US\$ 170,848.90	US\$ 243,711.00	US\$ 301,188.40	715,748.30	40%
Component 2: Sanitation and Hygiene Promotion	US\$ 167,042.60	US\$ 228,932.40	US\$ 275,191.70	671,166.70	37.9%
Component 3: O&M	US\$ 16,878.90	US\$ 26,685.10	US\$ 42,177.10	85,741.10	4.8%
Component 4: Sector Development	US\$ 17,131.50	US\$ 29,903.90	US\$ 32,057.90	79,093.30	4.5%
Component 5: PMER	US\$ 5,666.00	US\$ 8,729.80	US\$ 9,129.70	23,525.50	1.3%
Sub-Total Component Costs	US\$ 377,567.90	US\$ 537,962.20	US\$ 659,744.80	1,575,274.90	89.1%
Capital Costs	US\$ 28,245.80	US\$ 38,548.20	US\$ 42,448.50	109,242.50	6.2%
Total	US\$ 405,813.70	US\$ 576,510.40	US\$ 702,193.30	1,684,517.40	95.2%
Contingency @	0.05				
Contingency	US\$ 20,290.69	US\$ 28,825.52	US\$ 35,109.67	84,225.87	4.8%
Grand Total	US\$ 426,104.39	US\$ 605,335.92	US\$ 737,302.97	1,768,743.27	100.0%

Base Exchange Rate: 1 US \$ = 10 ZMW

Assumptions and Risks

This programme was designed based on several assumptions and risks.

Assumptions

- The water supply and sanitation policy is in place and the supporting legal and institutional frameworks are established
- The decentralisation policy is fully implemented
- The finance mechanism is established
- Government and CPs will remain committed and actualize allocation of adequate resources to the sub-sector.
- Adequate technical and human resources for large scale implementation can be mobilised
- A phase by phase regulation of rural water supply and sanitation
- Domestic Borehole registration system by WARMA developed and in place.

Risks

- CPs due to their particular policies are not willing to align to the NRWSSP approach and principles
- Higher level delegated decisions that are not well defined and communicated can pose a risk at various levels of programme implementation. Therefore, well-defined communication channels and thresholds are necessary for management of delegated strategic risks. The design of the programme can give rise to a range of risk types (technical, management, commercial and external risks). This can be as a result of the interface from the programme components, implementation and management of the programme itself.
- CP's not willing to allocate adequate resources to the subsector.

1. BACKGROUND AND CONTEXT

1.1 Introduction

In 2006, the Government of the Republic of Zambia (GRZ) developed a National Rural Water Supply and Sanitation Programme (NRWSSP) to increase and improve access to water supply and sanitation in rural areas of Zambia. The NRWSSP I was aligned to the Millennium Development Goals and targeted their contribution to meet the National Vision for universal coverage by 2030. Both the NRWSSP I and the MDGs ended in 2015. The Sustainable Development Goals (2019-2030), were developed, focusing on building upon the successes and lessons learnt to achieve development goals for 2030. Zambia emulates this approach in developing the new NRWSSP II (2019-2030).

The NRWSSP I ended with gains in coverage for water supply and sanitation. However, disparities still exist between urban and rural areas, with low coverage in rural areas. According to CSO DHS report of 2014, 89% of urban population had access to safe water and 39% had access to sanitation, compared to 63% of rural population having access to safe water and 19% having access to sanitation. The NRWSSP aims to address the disparities between urban and rural areas.

The NRWSSP II builds on the lessons learnt during the NRWSSP I, and the achievements attained. It consists of a coherent set of investment, institutional and support activities aimed at providing sustainable water supply and sanitation services to the rural population in Zambia. The NRWSSP II is aligned to the National Vision 2030 and the Seventh National Development Plan (7NDP) (2017 - 2021) and the SDGs.

1.2 Location, Water Characteristics and Administration

Zambia is a land-locked country with the Democratic Republic of Congo (DRC) to the North and Northwest, Tanzania to the Northeast, Malawi to the East, Zimbabwe to the South, Mozambique to the Southeast, Botswana and Namibia to the Southwest and Angola to the West. It has an area of 752, 620 km² of which 9,220 km² is water. The country lies between the latitudes 10° and 18° South and longitudes 22° and 33° East.

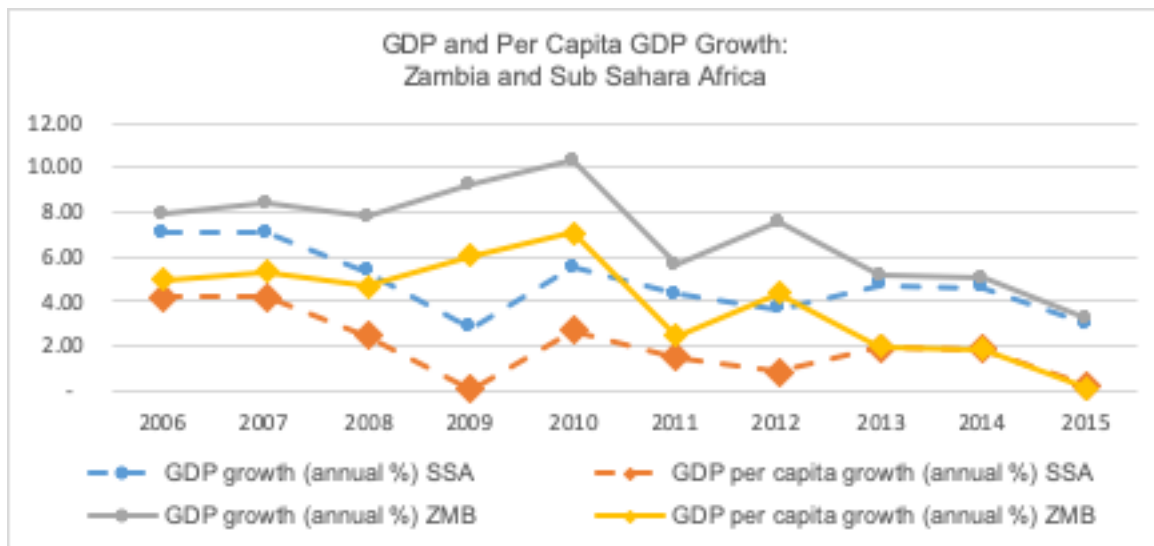
Zambia has renewable surface water potential of just over 100 km³ per year. The main source of the renewable surface water is rainfall, which contributes to the runoff to the country's major rivers - the Zambezi, Kafue, Luangwa, Luapula and the Chambeshi. The Zambezi River contributes over 60% of the runoff at its confluence with Luangwa River. The main river catchments are: Tanganyika, Kafue, Chambeshi, Luangwa, Luapula and Zambezi. The water resources are not evenly distributed within the country, with some areas experiencing periodic droughts.

Groundwater is a major source of rural water supply in Zambia. Groundwater is associated with various aquifers throughout the country that include: (1) aquifers where groundwater flow is mainly in fissures, channels or discontinuities, (2) aquifers where inter granular groundwater flow is dominant and (3) low yielding aquifers with limited potential. The renewable groundwater potential in Zambia is estimated at 49.6 km³ (Department of Water Affairs/JICA, 1995, Water Master Plan)

Zambia is a multi-party democracy and follows a representative form of Government consisting of central government and local government with jurisdiction over each district. Through the National Decentralisation Policy, developed in 2002 and launched in August 2004, Government aims to strengthen local government structures and decentralise government responsibilities and functions to the local authorities through "devolution". Provision of basic services including water supply and sanitation (WSS) will be implemented through Local Authorities at district level. The full council, which is the highest decision making body of the Local Authority (LA's) consists of civic leaders. The local Authority is described as a City, or Municipality headed by a Town Clerk or a Town Council headed by a Council Secretary

1.2.1 Economic Development

According to World Bank's World Development Indicators (WDI), Zambia's Gross Domestic Product (GDP) grew at an average of 7% per year between 2006 and 2015 and its GDP Per Capita grew at an average of 3.88% per year during the same period. However, both measures showed downward trends to 3.22% and 0.1% respectively by 2015. Zambia's economic trajectory during that period followed similar trends, but with mostly better performance against, the Sub-Sahara region as shown in the figure overleaf.



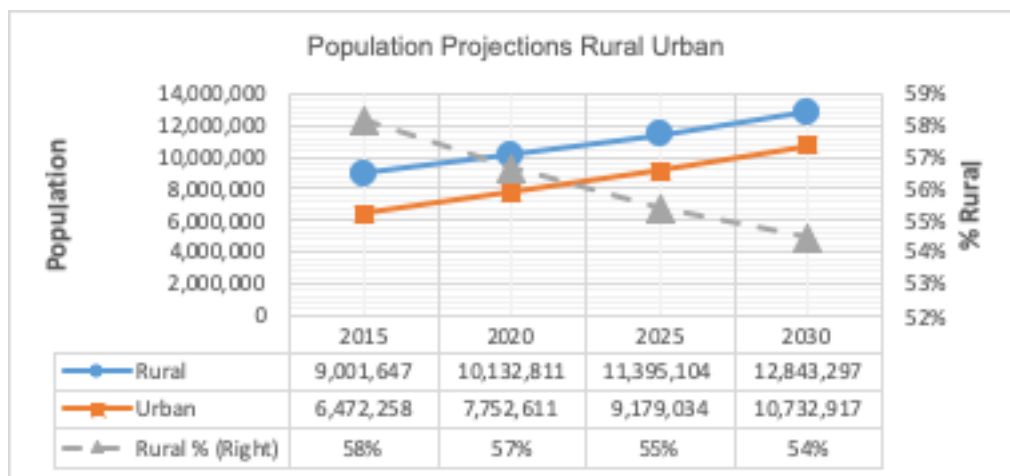
Source: World Bank – World Development Indicators (WDI, 2016)¹

Figure 1.1: GDP and GDP Per Capita Growth 2006 - 2015

1.2.2 Demographic and Socio-Economic Conditions

1.2.2.1 Rural Population Projections

Between 2015 and 2030, the rural population is projected to increase from 9.0 million to over 12.8 million, an increase of more than 40%. The CSO Rural Population Projections to 2030 are given in Appendix 1 and shown in Figure 1.2 below.



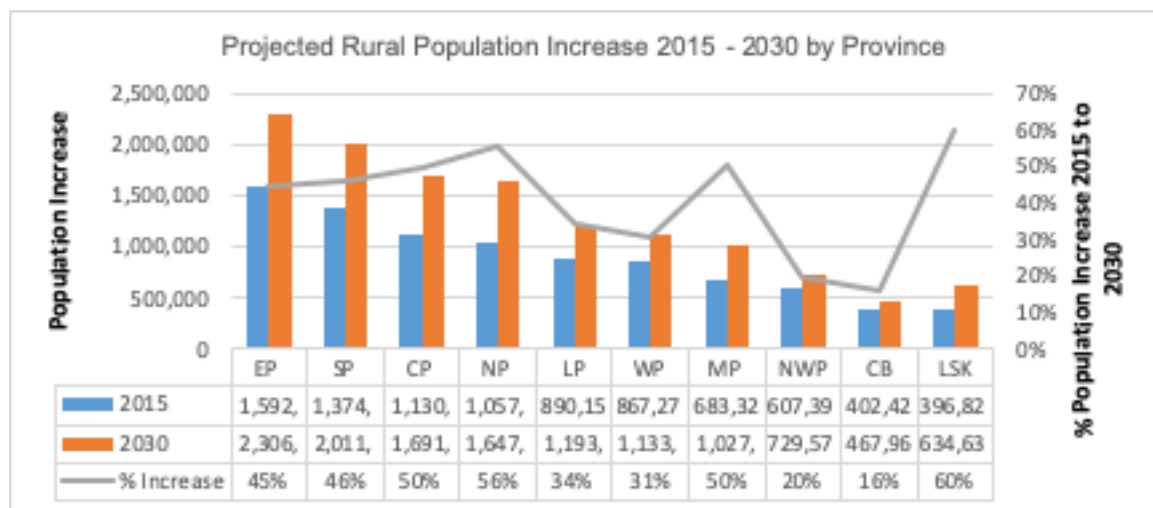
Source: Summarised from CSO population projections (CSO, 2013)²

Figure 1.2: 2015 to 2030 Urban and Rural Population Projections

The projected rural population increase by province during the 2019-2030 NRWSSP implementation period is given in Figure 1.3.

¹ World Development Indicators (WDI). Retrieved from: http://databank.worldbank.org/data/download/WDI_excel.zip (August, 2016) World Bank.

² Ibid.



Source: Summarised from CSO population projections (CSO, 2013)³

Figure 1.3: 2015 to 2030 Rural Population Projections by Province

It is projected that by the end of the 2019-2030 NRWSSP period, 60% of the rural population will be in four Provinces; Eastern, Southern, Central and Luapula.

1.2.2.2 Rural Poverty

The percentage of the population of Zambians living below the national poverty line has been steadily declining since the nineteen nineties from around 85% in 1993 to about 60% in 2010. Source: (Indexmundi, 2016)⁴Percentage of the Zambian Population Living Below the Poverty line.

As of 2010 there were almost 80% of people in the rural areas living in poverty (overall % below the poverty line) compared to about 28% in the urban areas, see Table 1.1 below.

Table 1.1: Overall and Extreme Poverty by Province and Rural Urban

Province / Region	2006		2010		
	Overall Percent	Extreme Percent	Overall Percent	Extreme Percent	Overall Deviation
Zambia	62.8	42.7	60.5	42.3	0.0
Rural	80.3	58.5	77.9	57.7	-17.4
Urban	29.7	13.0	27.5	13.1	33.0
Central	70.7	48.8	60.9	36.7	-0.4
Copperbelt	37.3	19.5	34.3	18.3	26.2
Eastern	78.5	56.4	77.9	58.7	-17.4
Luapula	73.9	53.6	80.5	64.9	-20.0
Lusaka	24.7	10.3	24.4	11.5	36.1
Northern	78.5	57.5	75.0	55.8	-14.5
North Western	70.8	44.6	67.0	46.1	-6.5
Southern	73.1	50.9	67.9	47.3	-7.4
Western	83.3	64.6	80.4	64.0	-19.9

Source: Adapted from (CSO, 2012, p. 2)⁵⁷

³ Ibid.

⁴ Population Below Poverty Line - Zambia. Retrieved from Index Mundi:<http://www.indexmundi.com/g/g.aspx?v=69&c=za&l=en>. (December 2016). Indexmundi

⁵ Ibid.

Taking the 2010 Rural/Urban populations into account the figures indicate that out of the nearly 13 million Zambians, 7.6 million are living below the poverty line. Of these, more than 6 million were in the rural areas compared to 1.5 million in the urban areas. The 2019-2030 NRWSSP will operate in the areas where poverty is a key issue; WSS solutions must take this into consideration.

Table 1.2 summarises this data.

Table 1.2: Zambian Population below the Poverty Line – (Rural v Urban)

Poverty Count	2010 Ratio	2010 Population	2010 Below Poverty Line
Poverty headcount ratio at national poverty lines (% of population)	60.5	13,092,666	7,579,487
Rural poverty headcount ratio at national poverty lines (% of rural pop)	77.9	7,894,850	6,150,088
Urban poverty headcount ratio at national poverty lines (% of urban pop)	27.5	5,197,816	1,429,399

Source: Adapted from (CSO, 2012)¹

1.3 The National Rural Water Supply and Sanitation Programme I (2006 -2015)

In 2005, Government initiated the process of preparing the Vision 2030 to become a prosperous middle-income nation; Zambia's rural population was estimated at 7.7 million people (about 65% of the total population of 11.6 million). The lack of access to safe water supply and sanitation in Zambia's rural areas was seen as a major contributing factor to poverty. Based on the CSO Census of 2000, as well as the Living Conditions Monitoring Survey 2002/2003, the estimated access to safe water supply in rural areas in 2005 was only 37% of the population; for sanitation the access was much smaller, at 13%.

In order to address these issues and to achieve the National Vision 2030 and MDGs, the Government decided to develop the NRWSSP I. Clear priorities and a common approach were set forth to work toward universal coverage by 2030. The NRWSSP I consisted of a coherent set of investment, institutional and sector support activities aimed at providing and sustaining water supply and sanitation services to the rural population in Zambia. The NRWSSP I encompassed the periods of the 5th and 6th National Development Plans.

The Programme was intended to achieve the water and sanitation related MDGs by increasing the access rate for water supply and sanitation from the 37% and 13% respectively in 2005, to 55% and 33% by 2010 and finally to 75% and 60% by 2015 respectively. Additionally, the capacity of the LAs and other key actors (private sector contractors, consultants, and artisans) was to be developed and strengthened. The aim was to leave communities better organized to manage their own water and sanitation services in a more sustainable way. Though improvements were realized, the targets were not met.

1.3.1 NRWSSP I Lessons Learnt

The NRWSSP I End of Term Evaluation (ETE) concluded that “Even though NRWSSP I had not achieved the first part of its overall objective “to increase and improve access to water supply and sanitation, to achieve the MDGs for water supply and sanitation” it achieved some major successes. It was also concluded that NRWSSP I provided lessons that could enable its successor programme, NRWSSP II, to achieve the second part of its overall objective to “meet the national vision for universal coverage by 2030”, provided that these lessons learnt are actually applied during the Programme period up to 2030.

Recommendations based on the lessons learnt during the implementation of the NRWSSP I are outlined as follows:

1.3.1.1 Overall Recommendations

1. In formulating the NRWSSP II consideration should be given to rationalising the components and identifying key (golden) indicators to ensure focus, given the human and M&E capacity constraints.
2. The Steering and Coordination Committee should formalise their programme of meetings. They should track progress regarding achievement of the key indicators throughout the programme, rather than only focusing on reporting by component.
3. Since Traditional Leaders have such a critical role to play in all aspects of rural development, the NRWSSP II should identify and establish both the role of the Chiefs and that of the Ministry of Chiefs Affairs (MoCTA) in formulation and implementation of the NRWSSP II.
4. A central resource centre should be developed to document and disseminate best practices developed in the various operational areas of the NRWSSP II (i.e. SOMAP and Mobile to Web systems) in order to leverage the lessons already learned.
5. Consideration should be given to the implementation of the NRWSSP II in a decentralised manner with Provincial Water Supply and Sanitation (PWSS) officers reviewing district plans; monitoring their implementation and consolidating

¹ Ibid.

their performance in terms of periodic as well as cumulative programme results and outcomes; financial receipts and applications by project, source and component and supporting the district's capacity development.

6. Consideration should be given in the development and implementation of the NRWSSP II to the development of service delivery options based on a demand responsive approach (DRA) within agreed criteria for equitable allocation of services between and within districts.
7. In designing the NRWSSP II, consideration should be given to:
 - a. anchoring the local sub-district data acquisition to the Ward Development Committees (WDCs) being constituted under the Decentralisation programme; and
 - b. exploring the possibility of managing the system (databases) by an existing institution with capacity to do so, such as NWASCO.

1.3.1.2 Water Supply Recommendations

1. A comprehensive, geo-tagged MIS system that can pinpoint the location and functionality of each water point should be developed.
2. A more demand responsive and participative approach might improve programme performance.
3. During sensitisation programmes, emphasis should be given on encouraging the communities to move up the water ladder.

1.3.1.3 Sanitation and Hygiene Recommendations

1. Local Authorities to take the lead in the implementation of the component in accordance with the decentralisation policy.
2. During sensitisation programmes, emphasis should be given on encouraging the communities to move up the sanitation and hygiene ladders.
3. Policy direction should stipulate the collaboration on rural school sanitation
4. Different latrine designs for different geographical conditions should be developed and deployed.

1.4 The National and Global Context

1.4.1 National Development Plans

The NRWSSP II is a planning instrument that is linked into the overall planning framework through the National Development Plan (NDP) and the National Long-Term Vision.

The formulation of the NRWSSP II has been drawn from the 7NDP. The main goal of the 7NDP is to create a diversified and resilient economy for sustained growth and socio-economic transformation driven by agriculture, mining and tourism. The 7NDP departs from sectoral-based planning to an integrated (multi-sectoral) development approach under the theme "Accelerating development efforts towards the Vision 2030 without leaving anyone behind". Realisation of the overall goal of the 7NDP will be achieved through the following strategic objectives:

1. To diversify and make economic growth inclusive
2. To reduce poverty and vulnerability
3. To reduce developmental inequalities
4. To enhance human development and
5. To create a conducive governance environment for a diversified and inclusive economy.

Water Supply and Sanitation is linked to 7NDP Pillar 4: Enhanced Human Development, with the Development Outcome 3: Improved Access to Water Supply and Sanitation. To achieve this outcome, the following strategies will be undertaken to address water and sanitation challenges:

1. Enhance provision of adequate safe water and sanitation
2. Improve availability of water and sanitation infrastructure
3. Enhance research in water supply and sanitation services
4. Promote alternate financing for water and sanitation.

1.4.2 Vision 2030

The Vision 2030 aspiration for Zambia is to become “A Prosperous Middle-Income Nation by 2030” (GRZ, 2006, p. 6)². With regard to Water Supply and Sanitation, to achieve middle-income status Zambia’s socio-economic development objectives are:

1. To attain and sustain annual real economic growth rates of between 6 and 10 percent
2. To attain and maintain a moderate inflation rate of 5 percent
3. To decelerate the annual population growth rate from its 2005 rate of 2.9 percent to a rate of less than 1.0 percent over the next 25 years
4. To reduce national poverty head count to less than 20 percent of the population and
5. To reduce income inequalities measured by a Gini coefficient to less than 40

To provide secure access to safe potable water sources and improved sanitation facilities to 100 percent of the population in both urban and rural areas. (GRZ, 2006, p. 11)³

The Vision 2030 sets the following targets regarding water, sanitation and the environment:

Table 1.3: Sector Vision, Targets and Goals

Sector	Sector Vision	Targets/Goals
Water and sanitation	Clean and safe water supply and sanitation for all by 2030	<ol style="list-style-type: none"> i. Improve access to appropriate, environmental friendly sanitation by all Zambians; ii. Attainment of 80 percent access to clean water supply to all by 2015 and 100 percent by 2030; iii. Attainment of 68 percent access to sanitation to all by 2015 and 90 percent by 2030; and iv. Fully integrated and sustainable water resource
Water and sanitation Environment and natural resources	A productive environment and well conserved natural resources for sustainable socio-economic development by 2030	<ol style="list-style-type: none"> i. Rehabilitation, re-construction of sewage treatment facilities in all major towns and cities; ii. 80 percent of waste collected and transported; iii. Develop Integrated Licensing System; iv. 90 percent polluting industrial facilities comply with environmental legislation; and v. 80 percent of unplanned settlements upgraded and the residents have access to clean drinking water and sanitation facilities.

Source: Vision 2030 (GRZ, 2006, pp. 38 - 41)⁴

1.4.2 From MDGs to SDGs

The NRWSSP I was designed and implemented within the global development context framed by the MDGs. For RWSS the relevant goal was Goal 7: “ensure environmental sustainability” and within that, target 7C, “By 2015, halve the proportion of people without sustainable access to safe drinking water and basic sanitation”. Its objective was “to increase and improve access to water supply and sanitation, to achieve the MDG for WSS, and meet the national vision for universal coverage by 2030”.

The successor global development agenda, the SDGs, has the overarching objective of “eradicating poverty by 2030”. The SDG 6 “to ensure availability and sustainable management of water and sanitation for all” has targets for universal access to drinking water, sanitation and hygiene by 2030. This is part of a wider effort to end poverty by 2030. SDG targets on water and sanitation focus on universal access, availability of safe and affordable drinking water for all, adequate and equitable sanitation and hygiene for all, with special emphasis on ending open defecation, addressing the needs of women and girls and those in vulnerable situations.

² Vision 2030 “A Prosperous Middle Income Country by 2030”. (2006) GRZ.

³ Ibid.

⁴ Ibid.

SDG Service Ladders

Sanitation

Service ladder	Definition
Safely managed sanitation	Use of improved facilities which are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site
Basic sanitation	Use of improved facilities which are not shared with other households
Limited sanitation	Use of improved facilities shared between two or more households
Unimproved sanitation	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines
Open defecation	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches and other open spaces or with solid waste
<i>Note: Note improved facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs</i>	

Figure 1.4: JMP sanitation ladder for delivering the SDGs

Water Supply

Service ladder	Definition
Safely Managed Drinking Water	Drinking water from an improved water source which is located on premises, available when needed and free from faecal and priority chemical contamination
Basic Water	Drinking water from an improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing
Limited	Drinking water from an improved source for which collection time exceeds 30 minutes for a roundtrip including queuing
Unimproved	Drinking water from an unprotected dug well or unprotected spring
Surface Water	Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal
<i>Note: Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rain water, and packaged or delivered water</i>	

Source: JMP 2017 Report. WHO/UNICEF.⁵

Figure 1.5: JMP drinking water ladder for delivering the SDGs.

The JMP ladder for hygiene associated with handwashing facilities at or near to sanitation facilities is illustrated in the Figure below.

SERVICE LEVEL	DEFINITION
BASIC	Availability of a handwashing facility on premises with soap and water
LIMITED	Availability of a handwashing facility on premises with soap and water
NO FACILITY	No handwashing facility on premises
<i>Note: Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents</i>	

Source: JMP 2017 Report.⁶

Figure 1.4: JMP hygiene ladder for delivering the SDGs.

The NRWSSP II will adopt the water, sanitation and hygiene ladders as an integral part of its approach to RWSS.

5 Ibid

6 Ibid.

1.5 RWSS Sector Frameworks

The Policy, Legal, Regulatory and Institutional Frameworks for water supply and sanitation have undergone, and continue to undergo, improvements during and after NRWSSP I. The major frameworks (policy, legal, regulatory and institutional) as they currently stand are outlined below and they form the backbone of NRWSSP II.

1.5.1 Policy Framework

Water supply and sanitation services operate within the provisions of several interlinked policies and these include:

- The Revised Decentralisation Policy (2013)
- The National Water Policy (2010)
- The National Gender Policy (2014)
- National Policy on Climate Change (2016).

A brief explanation of the above policies is presented in the following sub-sections.

1.5.1.1 The Revised Decentralisation Policy

After the launch of National Decentralisation Policy in August 2004, a revised edition was launched in 2013. The National Decentralisation Policy – Revised Edition 2013 (Cabinet Office, 2013)¹ states that “Zambia’s effort to decentralise its structures can be traced as far back as independence”. The policy states that the “objective of Decentralisation in Zambia stems from the need for the citizenry to exercise control over its local affairs and foster meaningful development which requires that some degree of authority is decentralised to provincial, district and sub-district levels. In order to remove the absolute control by the centre, it is necessary to transfer the authority, functions and responsibilities, with matching resources to lower levels”. The policy includes a measure to “ensure improved access to quality water supplies and sanitation services”. Furthermore, the Constitution states that ‘...the management and administration of political, social, legal and economic affairs of the State shall be devolved from national government level to the local government level’. Recently, the implementation of the policy has accelerated both on the administrative and fiscal sides.

On the fiscal side, a comprehensive Intergovernmental Fiscal Architecture has been developed; parts of it, such as the Local Government Equalisation Fund, have already been put into law. Furthermore, Article 163 of the Constitution and the Local Government Amendment Act Number 12 of 2014, and are being implemented. These key provisions have put the decentralisation process on a very firm policy and legal framework.

On the administrative side, more than 30 new districts have been created in the past six years, bringing the total number of Local Authorities to 116, it is anticipated that in the upcoming years more districts will be created. This is intended to bring local governance closer to the people. The reviewed structure of district councils to handle additional roles are in place and devolution plans for various ministries have been developed and approved. All Ministries and institutions scheduled to devolve functions in Phases II and III as prescribed through Circular No. 10 of 2014 with a directive to accelerate and finalise devolution plans in readiness for implementation by 2017.

Given that RWSS services are mainly provided through LAs as implementing agents, strengthening the operational ability of LAs is required to have a positive impact on service delivery in general and RWSS in particular. Thus the NRWSSP II is set to operate within a more conducive environment if the Decentralisation Policy is implemented as intended.

1.5.1.2 The National Water Policy 2010

In order to take account of intervening developments in the management of the water sector, a new NWP (GRZ MEWD, 2010)² was developed in 2010 and the Water Resources Management Act No 21 of 2011 was enacted to provide the legal framework for the revised policy. In line with the first sector principle as described in NWP 1994, the NWP 2010 focus is more on Water Resource Management and Development (WRMD). The seven sector principles of the NWP were:

1. Separation of water resources functions from water supply and sanitation;
2. Separation of regulatory and executive functions within the water supply and sanitation sector;
3. Devolution of Authority to Local Authority and Private Enterprises;
4. Achievement of full cost recovery for the water supply and sanitation services through the user charges in the long run;
5. Human Resources development, leading to, more effective institutions;
6. Technology appropriate to local conditions; and

1 The National Decentralisation Policy – Revised Edition. (2013) GRZ Cabinet Office - Office of the President.

2 National Water Policy. (2010) GRZ MEWD.

7. Increased GRZ spending priority and budget spending to the sector.

These principles still guide the sector and provide the framework in which the NRWSSP II is to operate.

1.5.1.3 The National Gender Policy 2014

The policy supports the objective on water and sanitation: “To increase equitable access to affordable renewable energy, clean and safe water as well as sanitation services”.

The ultimate objective of this policy is to create a Zambian society which has achieved the Vision of “A nation where there is gender equity and equality for sustainable development”

1.5.1.4 The National Policy on Climate Change 2016

The policy has more emphasis on WRM and climate change, however it covers some aspects of water supply. It states that both floods and drought conditions worsen access to safe and clean drinking water for households. The policy further states that the situation increases the prevalence of water borne diseases and the labour burden on women and girls who are the main drawers of water for their households in the rural and peri-urban areas.

1.5.1.5 The National Water Supply and Sanitation Policy

The policy takes into account the progress made since the 1994 policy and provides the operating framework of the NRWSSP II.

1.5.2 Legal Framework

The key pieces of legislation for water supply and sanitation are as follows:

1. The Constitutions; which places WSS, including waste management under Local Authorities exclusive functions.
2. Local Government Act, the Local Government Act, Cap 281, stipulates functions of Local Authorities in its provision of municipal services, including water supply and sanitation.
3. Water Supply and Sanitation Act No 28 of 1997, supports the implementation of the NWP of 1994 focusing on the function water supply and sanitation service provision. It also provides the mandate for the creation of regulatory framework and formation of commercial utilities among other aspects relation to water supply and sanitation service provision.
4. The Companies Act Cap 388, which stipulates formation of companies, and commercial utilities are formed under this Act.
5. The Public Health Act Cap 296 of 1995 focuses on public health protection and provision of water supply and sanitation services is subject to this act. LAs are mandated by this Act to enforce public health measures.
6. Environmental Management Act No. 12 of 2011, which provides framework “for integrated environmental management and the protection and conservation, sustainable management and use of natural resources”.
7. Water Resources Management Act of 2011, which creates the framework for Water Resources Management and Development and establishes domestic non-commercial use of water as priority number one.
8. Gazette Notice No. 836 of (18th November 2016) - The Statutory Functions, Portfolios and Composition of Government, which assigns statutory functions of government to various ministries.
9. The Urban and Regional Planning Act No. 3 of 2015. Provides for the integrated planning urban and regional areas. The National Planning Authority and LAs under MLG follows this Act in development planning.

1.5.2.1 The Constitution

Article 147(2) of the new constitution provides for “The concurrent and exclusive functions of the national, provincial and local government levels”. The annex supporting this article places “Water Resources Management” under “Exclusive National Functions”. “Water and sanitation services limited to potable water supply systems and domestic waste-water and sewage disposal systems” as well as “Refuse removal, refuse dumps and solid waste disposal” are placed under “Local Authorities exclusive functions”. This forms the overarching legal framework for this programme.

The above provisions in the Constitution are in line with the implementation of the Decentralisation Process through devolution and the concept of “subsidiarity” in that context which holds that social and political issues should be dealt with at the most immediate (or local) level that is consistent with their resolution.

1.5.2.2 The Urban and Regional Planning Act

The Act provides for the development of integrated development plans. The plans must include integrated: social amenities, economic, environmental, spatial, infrastructural, institutional and organisational development and the provision of amenities and services aimed at alleviating poverty and improving the quality of life of members of the community.

1.5.2.3 Local Government Act

The section 61 and the second schedule of the Local Government Act Cap 281 provides various discretionary functions that Local Authorities can undertake. An extract of these, relating to WSS are listed in Box 1.

The functions relating to WSS are also in line with the devolution concept espoused in the Constitution; and LAs in the urban areas use CUs to undertake this mandate, while in rural areas the LAs undertake the mandate directly.

While it is expected that the Local Government Act is likely to be amended to support the effective decentralisation of functions, responsibilities and services, it is also expected that the WSS functions will continue to be undertaken by the LAs. In this regard the LAs can expand the license area for the CUs to include RWSS.

1.5.3 Gazette Notice No. 836 of (18th November) 2016

According to the gazette notice No. 836 of 2016, the Ministry of Water Development, Sanitation and Environmental Protection is responsible for the following portfolio function bodies;

No	Subjects / Mandates
1	Environmental Policy
2	Environmental Protection and Pollution Control
3	Environmental Research and Training
4	Water Policy
5	Water Supply and Sanitation
6	Water Resources Management and Development
No	Mandates of the Ministry of Water Development, Sanitation and Environmental Protection and Statutory Bodies
1	Environmental Protection Fund
2	National Water Supply and Sanitation Council
3	Water Resources Management Authority
4	Water Utility Companies
5	Zambia Environmental Management Authority

Table 1.4: Ministry of Water Development, Sanitation and Environmental Protection – Mandates and Statutory Bodies

Source: Gazette Notice No. 836 of 2016.¹

¹ Gazette Notice No. 836. (November, 2016) GRZ Cabinet Office.

Box 1: Extract Second Schedule Functions

50. To establish and maintain sanitary convenience and ablution facilities, and to require, whenever necessary, the establishment and maintenance of such facilities.

51 To establish and maintain sanitary services for the removal and destruction of, or otherwise dealing with, all kinds of refuse and effluent, and compel the use of such services.

52. To establish and maintain drains, sewers and works for the disposal of sewerage and refuse.

53. To take and require the taking of measures for the drainage of water.

54. To require and control the provision of drains and sewers and to compel the connection of any drains and sewers established by the council.

60 To provide and maintain supplies of water and. for that purpose, to establish and maintain waterworks and water mains

61. To take and require the taking of measures for the conservation and the prevention of the pollution of supplies of water.

The Local Government Act

1.5.4 Regulatory Framework

The regulatory bodies that have a role in the Zambian water sector are:

1. National Water Supply and Sanitation Council (NWASCO)
2. Water Resources Management Authority (WARMA).
3. Zambia Environmental Management Agency (ZEMA).
4. Zambia Bureau of Standards (ZABS).
5. The National Council for Construction (NCC)
6. The National Planning Authority (NPA)

INSTITUTION	FUNCTIONS
1. National Water Supply and Sanitation Council (NWASCO).	The Water Supply and Sanitation Act No. 28 of 1997 provided for the establishment of NWASCO as a regulator for WSS services in Zambia. NWASCO regulates water supply and sanitation service providers to ensure effectiveness, efficiency and sustainability of service provision, whilst protecting consumers. It is mandated to balance social and commercial interests, protect consumers from exploitation and providers from undue political interference. The regulator links water and sanitation prices to sustainability of systems and performance of providers. At the same time NWASCO ensures that social interests are taken into account as well as preventing consumers from paying for the inefficiencies of the service providers. As the sector evolves, NWASCO will be regulating RWSS during the implementation of the NRWSSP II by licensing the CUs and issuing permits for other service providers such as the LAs and private operators. This development will ensure quality of service in the rural areas through the development of regulatory instruments.
2. Water Resources Management Authority (WARMA)	The Water Resources Management Act No. 21 of 2011 was passed to control and regulate the use of water resources, both surface and underground. Under this Act, the Water Resources Management Authority (WARMA) was established. Its mandate is to promote and adopt a dynamic, gender-sensitive, integrated, interactive, participatory and multi-sectoral approach to water resources management and development that includes human, land, environmental and socio-economic considerations, especially poverty reduction and the elimination of water borne diseases, including malaria. Furthermore, WARMA has developed statutory instrument No. 20 of 2018 for the regulation of ground water and boreholes.
3. Zambia Environmental Management Agency (ZEMA)	The Environmental Management Act No. 12 of 2011 was enacted to promote environmental protection. Under this Act ZEMA was created to ensure the sustainable management of natural resources, the protection of the environment, and the prevention and control of pollution. Its mandate overlaps with NWASCO and WARMA in a number of areas, e.g. solid waste management.
4. Zambia Bureau of Standards (ZABS)	ZABS is the Statutory National Standards body for Zambia established by an Act of Parliament. It implements the Standards Act, Cap 416 of 1994 of the Laws of Zambia. ZABS is concerned with the water sector including commercial bottled water suppliers, ZS 190 of 2010 drinking water quality specifications, prescribes requirements for potable drinking water suitable for human consumption and ensures that all water supplies to communities in Zambia comply with this standard, ZS 361 of 2009 prescribes minimum water quantity requirements according to type of accommodation, institution, etc. With this in mind, NRWSSP will address issues of water quality and quantity in the design of water schemes and conduct continuous monitoring for quality at most water points.
5. The National Council for Construction (NCC)	The NCC is responsible for the regulation of the construction industry to ensure capacity in construction industry and quality of construction. All contractors in Zambia must be registered with NCC who grades them according to capacity to undertake construction works. This becomes relevant in procurement of contractors for water supply and sanitation construction projects to ensure that the works are done according to design specifications to guarantee operational performance of water supply and sanitation facilities
6. The National Planning Authority (NPA)	The NPA is responsible for the coordination and preparation of regional development plans to ensure compliance with the National Planning Framework
7. The Zambia Public Procurement Authority (ZPPA)	Procurement in Government Organisations and parastatals national, provincial and district levels setting procurement guidelines that must be followed. CUs and LAs are subject to ZPPA oversight

1.5.5 Institutional Framework

The Zambian governmental institutions that have mandates, roles or responsibilities that are related to the RWSS sub-sector are described in the table below.

MINISTRY	ROLES AND RESPONSIBILITIES
1.Ministry of Water Development Sanitation and Environmental Protection	<ul style="list-style-type: none"> • Water Resources Development, • Water Supply and Sanitation, • Environmental Protection • Guidance and support to. NWASCO and WARMA • Steering, policy and strategy development and guidance, resource mobilisation, consolidation of monitoring and evaluation and reporting for the water sector as a whole.
2.Ministry of Local Government	<ul style="list-style-type: none"> • Government administrative functions at provincial and sub district levels. • Planning, implementing, monitoring ,evaluation and reviewing at District and sub district level
3.Ministry of Health	<ul style="list-style-type: none"> • Disease surveillance • Drinking water quality monitoring, • Sanitary inspections and sanitation and hygiene promotion.
4.Ministry of General Education	<ul style="list-style-type: none"> • WASH in schools and nutritional aspects. • Construction and O&M of the WSS facilities at their schools. • WSS curriculum in schools
5.Ministry of Finance	<ul style="list-style-type: none"> • Financial and economic affairs • National budgeting. • Public finance management.
6.Ministry of National Development Planning	<ul style="list-style-type: none"> • National visioning, development coordination. • M&E systems. • Public investment planning. • Socio-economic. . • Modelling and forecasting. • Coordination of climate change issues.
7.Ministry of Community Development and Social Services	<ul style="list-style-type: none"> • Child Welfare Services. • Community Development Policy. • Community Development Training, (NGO) Policy. • Persons with Disabilities and rehabilitation of Persons with Disabilities. • Social Welfare Policy.
8.Ministry of Gender	<ul style="list-style-type: none"> • Gender equity. • Gender equality. • Gender-based violence. • Women empowerment.
9.Ministry of Commerce Trade and Industry	Standards formulation, quality control, quality assurance, import and export quality inspections, certification and removal of technical barriers to trade. It aims to provide efficient and effective standardization, quality assurance and metrology services to industry and consumers in order to contribute to the improvement of the quality of products and services and promote sustainable socio-economic development in Zambia
10.Ministry of Infrastructure Development and Housing	Government Infrastructure in sectors such as roads, education, health, etc. It is also responsible for the National Housing Policy.
11.Ministry of Chiefs and Traditional Affairs	<ul style="list-style-type: none"> • Oversee activities relating the traditional leaders • Promote community engagement and participation

1.6 Key Considerations for the RWSS Sector and NRWSSP II

Having considered the global and national context, the sectoral frameworks and related issues, and issues and lessons learned arising from NRWSSP I, it is pertinent to take note of the challenges that the sector faces. As of 2015 those which have been given a priority by MWDSEP for NRWSSP II are as follows:

1. There is still a substantial proportion of Zambians in rural areas without access to 'basic' water supply services **(54%)**.
2. There is a high proportion of the rural population lacking access to basic sanitation **(81%)**. **CSO DHS**
3. Improvements in technical, financial and institutional capacities in LAs to support planning, implementation and maintenance of rural WSS facilities. .
4. The sector still has challenges with operating and using effectively sustainable management information systems.
5. Funding and timely disbursement of funds to the sector is still a challenge.

2. NRWSSP II VISION, MISSION AND STRATEGIC APPROACH

2.1 Introduction

The NRWSSP II will be implemented by GRZ with support from its cooperating development partners, Local Authorities, National and international NGOs, as well as the beneficiary communities. It is essentially a continuation of NRWSSP I and builds on the achievements and lessons learnt from the programme.

During its implementation from 2006 through 2015, NRWSSP I was subjected to a Mid-Term Review (November 2012), an Annual Joint Water Sector Review (October 2014) and an End of Term Review (November 2015). The Programme was implemented from 2007 and came to an end in December 2015. In NRWSSP II it is important to maintain the gains made to-date, correct any shortcomings and build on the lessons learned from NRWSSP I. In this way the Programme will continue providing improved access to water supply and sanitation services in rural areas during its implementation to 2030. NRWSSP II will also ensure continuity of Government engagement in RWSS service delivery.

The strategic approach of NRWSSP II is informed also by the 7NDP and its emphasis on the Theory of Change which is a model that articulates, in a systematic way, how programmes and strategies contribute to a set of specific outcomes through a series of intermediate results. It describes the pathway through which change will come about. This is in the context of how NRWSSP II is going to achieve its vision, mission and objectives; what results need to be attained to contribute to this achievement and what interventions/activities will bring about these results. It also describes the underlying assumptions and conditions necessary to bring about this change. The Theory of Change also provides a clear framework for stakeholder consultations.

The 7NDP was elaborated with a view to translate the Vision 2030 into strategic objectives, including the vision for clean and safe water supply and sanitation for all. These strategic national objectives related to the water sector have informed the vision, mission and objectives of NRWSSP II as one of the pathways for achieving the desired long-term national outcomes and targets.

2.2 Vision, Mission and Overall Objective

Vision: *All of Zambia's rural population have sustainable and equitable access to safe water supply and adequate and equitable sanitation to meet basic needs for improved health and alleviating poverty.*

Mission: *Promoting sustainable provision and usage of affordable and socially acceptable safe water supply and adequate sanitation facilities to the rural population in Zambia.*

Overall Objective: The overall objective of the 2019-2030 NRWSSP is:

"Sustainable and equitable access to safe water supply and adequate sanitation to meet basic needs for improved health and poverty alleviation for all of Zambia's rural population in line with the Vision 2030 and the Sustainable Development Goals."

The Programme has four specific objectives:

1. To Increase and improve the number of functioning Water Supply facilities in rural areas through systematic investments in new Water Supply facilities, rehabilitation, proper operations and maintenance of existing facilities;
2. To Increase access to adequate and appropriate, environmentally friendly sanitation facilities to 90% by the year 2030 at household level and public institutions in rural areas through hygiene promotion, sanitation marketing, construction of facilities and legal enforcement;
3. To strengthen systems for enhanced service delivery in the water and sanitation sub sector and
4. To improve performance of the RWSS sub-sector in planning, implementation and management of RWSS services through effective monitoring, evaluation and reporting.

2.3 Strategic Approach

The programme is based on a holistic and adaptive approach to achieve "*sustainable and equitable access to safe water supply and adequate and equitable sanitation*". The bedrock of the programme's approach is local level and community participation in defining *inter alia*, WSS technologies to be used, priorities, location of services and sustainable O&M of the facilities.

NRWSSP II builds upon NRWSSP I by providing guidance for RWSS activities based on the following principles:

1. Community-based
2. Community ownership
3. Cost recovery
4. Investment choice evaluation

5. Technology development and knowledge management
6. Water security
7. Adaptability
8. Capacity development.

These are explained in the following sections.

2.3.1 Community-based

Ensures that RWSS interventions are community-based through the:

- Formation of inclusive and gender balanced water and sanitation committees for effective co-ordination, management, operation and mobilisation of resources as well as in technology choices;
- Integration of community education, motivation, health, hygiene, water and sanitation awareness activities in the development and O&M of RWSS interventions that are socially inclusive with gender mainstreamed; and
- Development of standardised educational materials and training of trainers.

In making the technology choices, Demand Responsive Approach (DRA) will be used to inform the communities about the pros and cons of the different technologies available. This includes the full assets life cycle costs involved so that they can choose the options they are willing to sustain and able to pay for. This will ensure that there is a solution for every community regardless of their socio-economic status. Further, regardless of the starting point, each community will then have an idea of available water supply and sanitation solutions further up the ladder and therefore can upgrade when they deem fit.

2.3.2 Community Ownership

In recognising that the infrastructure developed will have to be maintained, and in line with community choices implicit in the DRA espoused by this programme, the infrastructure will be managed by the communities and institutions for whom they are developed. Where appropriate the management and / or maintenance of such infrastructure may be outsourced to third parties and / or become the responsibility of the CU. Management instruments will be developed to ensure sustainable operations. For further description of DRA see Chapter 3.3 and Figure 3.1.

2.3.3 Cost Recovery

For purposes of sustainability, and in line with the seven sector principles outlined in the National Water Policy, cost recovery considerations will be an integral part of the programme. In this regard, the programme will develop and deploy strategies for:

1. User communities to contribute part of the investment cost of RWSS schemes up front, (generally 5%) of the infrastructure development. The community is expected to meet 100% of the O & M costs. When a major part of the system needs rehabilitation or replacement the LA or CU will be responsible.
2. User communities in the assessment of costs, establishment of revenue (fee and charges) collection mechanisms and determination of contributions towards O&M of RWSS schemes.
3. Due to social responsibility and equity obligations, an innovative support mechanism for sanitation can be developed and deployed for vulnerable groups.

2.3.4 Investment Choice Evaluation

In view of changing rural demographic profiles, technology choices will be informed by situation specific considerations, which take into account location-specific hydrogeological, socio-economic and population conditions, among others. This process will be reviewed and kept up-to-date as technologies and demographics change. This will form part of the basis for appraisal and financing of projects. Others will include equity, as well as per capita cost considerations. The choice between new infrastructure and rehabilitation of existing infrastructure will also be informed by investment appraisal of those choices.

The full range of application methods, technology and appraisal procedures will be made available to all prospective communities as updated.

2.3.5 Technology Development and Knowledge Management

Due to technology developments, the programme will coordinate and cooperate with research institutions to adapt new technologies to local conditions and local manufacturers to produce the required locally adaptable and appropriate technologies. This will be particularly important as the RWSS regulatory framework and standards are implemented, and as GRZ strives to move up the water and sanitation ladders to Safely Managed Water and Sanitation Services.

Knowledge on such technologies, and other vital data and information, will continue to be collected, secured and disseminated regularly. Web-Based document storage and sharing platforms are being continually improved and developed as necessary. These will leverage the available Information Communication Technology (ICT) capacities, and will be at the centre of information and knowledge management.

The Resource Toolbox contains comprehensive information relevant to the implementation and sustainability of the programme. It is a document storage and sharing platform that has been developed by the GRZ in association with Smart Zambia and will be available on the MWDSEP's Web site.

2.3.6 Water Security

The United Nations (UN) defines water security as the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability (United Nations University, 2013).

With increasing variability in climatic trends (mostly droughts) and increased anthropological activities (settlements and industrialisation) in watershed and recharge sites, water security considerations will be critical in the programme implementation. Water source availability and level of pollution have direct impact on water supply and sanitation investments which leads to poor hygiene and well-being of rural communities (domestic and institutional). The NRWSSP II will contribute to creating platforms for holistically developing and mitigating location specific water security issues.

2.3.7 Adaptability

During the NRWSSP II period up to 2030 there are likely to be changes in the operating environment of the programme. These may include global, regional, national and subnational social and economic changes, climatic conditions, population dynamics, and technological advancements among others. In order to achieve programme goals and targets in a changing environment, innovation and adaptability is required.

2.3.8 Capacity Development

Capacity development efforts will focus on strengthening institutional and individual capabilities at National, Provincial, District, Ward and Community levels. Activities will be undertaken in line with the capacity development strategy.

2.4 Programme Components

The evaluation of NRWSSP I found that one of the weakness of the Programme was that it had too many components (8 in total) which increased the complexity of the Programme. The evaluation highlighted as a lesson learned that "the effort to track and monitor them all was beyond the capacity of the Programme and may not have been cost effective".¹ Given the objectives of NRWSSP II, the Programme has been designed with 5 components which addresses the priorities of GRZ, the stated strategic approaches and the linkages between water supply, sanitation, health/hygiene, and poverty reduction/improved livelihoods.

The programme components are as follows:

Component 1: Water Supply

Component 2: Sanitation and Hygiene Promotion

Component 3: Sustainable O&M (related to both 1 and 2 above).

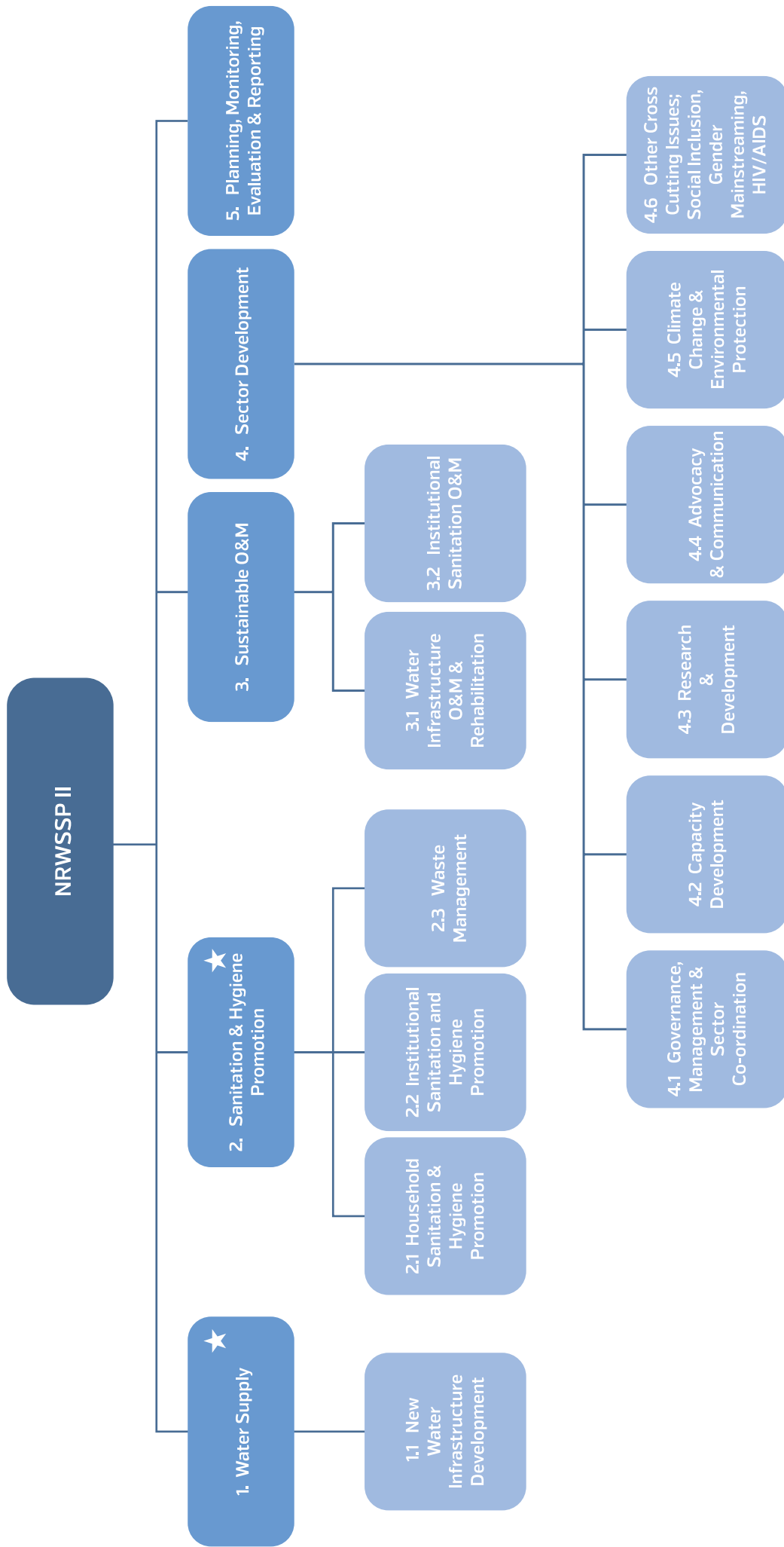
Component 4: Sector Development (includes sub-components and other cross-cutting issues)

Component 5: Planning, Monitoring, Evaluation and Reporting (PMER)

The components and sub-components are shown in the following Figure 2.1. The design of the NRWSSP II shown in this figure illustrates the supportive building blocks for the overall Programme to optimise its management and attainment of outcomes/ results and objectives. The Programme design is also reflected in the logical framework for NRWSSP II.

All the Components are detailed in chapters under the same titles given above. The logical framework is given in Appendix 3.

¹ End of Term Evaluation of the NRWSSP 2006 – 2015 (November 2015) (pp. 13-16, 114)



★ Sources for Golden Indicators.

Figure 2.1: The NRWSSP II Structure and Components

Strategies for the provision of rural water supply and sanitation are drawn and consolidated from existing policy documents and strategies. They are summarised below;

- (i.) Demand-driven investments at district level based on single district investment plans developed with effective participation of communities led by the local authorities.
- (ii.) Promote rural water supply and sanitation technologies appropriate to the specific local areas.
- (iii.) Promote integrated development and management of water supply, sanitation and hygiene education based on the WASHE (Water, Sanitation and Hygiene Education) strategy. The WASHE strategy places emphasis on participation of beneficiaries, particularly women, integrated development of water, sanitation and hygiene education and broad inter-sectoral cooperation.
- (iv.) Community contributions that not only promote sustainability of services but also take into account social equity.
- (v.) Strengthen and promote the role of the private sector participation in the provision of water supply and sanitation services.
- (vi.) Strengthen the capacity of various stakeholders (at national, district and community levels) through appropriate training and education programmes.
- (vii.) Promote sector-wide financing of water supply, sanitation and hygiene education.
- (viii.) Improve sector coordination.
- (ix.) Mainstream gender, disability, environment and HIV in all WSS programmes
- (x.) Improve information management and monitoring and evaluation to support planning and decision making.

The overall implementation strategy is the WASHE which is based on integrated development of water supply, sanitation and hygiene education so as to:

- Improve the health impact of water and sanitation interventions
- Promote community management, with emphasis on involvement of women (who hold critical responsibility for provision of water in Zambia's rural areas) and
- Improve financial support, operation and maintenance in order to ensure sustainability of services.

WASHE is implemented through LAs which are controlled by democratically elected representatives of the district population.

2.4.1 Component 1: Water Supply

Water Supply investments in all districts will be delivered as an integrated package with sanitation, consisting of the following but not limited to:

- Small scale piped water supplies schemes
- Boreholes and hand dug wells equipped with hand pumps and proper drainage facilities
- Spring protection and improved traditional water points.

The choice of technological options to be adopted will be based on informed community preferences and will take into account location specific assessments of the prevailing conditions. These will include, but will not be limited to demographic, socio-economic and hydrological, water quality and any other pertinent issues.

Component 1 - Water Supply is presented in detail in Chapter 3.

2.4.2 Component 2: Sanitation and Hygiene

Component 2 will focus on improving access to adequate and equitable sanitation through promotion of sanitation and hygiene practices. The key physical investment under this component is expected to cover the following:

- Sanitation and hygiene promotion
- Engagement of traditional leaders and civic leaders in sanitation and hygiene promotion
- Sanitation marketing
- Improving access to adequate and equitable sanitation in schools and other public institutions
- Legal enforcement, advocacy and publicity and monitoring and evaluation

Given the 2030 Vision of Zambia becoming a prosperous middle-income country and the need to reduce possibilities of underground and surface water contamination, the programme will aim to facilitate communities in moving up the sanitation ladder.

2.4.3 Component 3: Sustainable O&M

The continuation of SOMAP and continuous improvement of concepts will be a key part of keeping the water supply systems operational at optimum levels. The applications of the principles of SOMAP will be aimed at ensuring that between 90% - 100% of rural water supply facilities are operational all the time. However, it is expected that the application of the SOMAP principles may need to be updated to take into account the expected increased diversity of water supply systems.

O&M advocacy, communication and acceptance will be part of the pre-installation community buy-in processes. LAs will take an active role in ensuring adherence to set out rules across government and non-governmental actors. This applies to both water supply O&M and to sanitation O&M.

2.4.4 Component 4: Sector Development

In order to improve programme implementation efficiency, effectiveness, sustainability, transparency and accountability, various system support issues have to be addressed as outlined below:

- Governance, Management and Sector Coordination
- Capacity Development
- Research and Development
- Advocacy and Communication
- Cross cutting issues such as social inclusion and gender mainstreaming, HIV/AIDS, Climate Change and Environmental Protection

These are presented in more detail in Chapter 6.2.

2.4.5 Component 5: Planning, Monitoring Evaluation & Reporting

The component will focus on roll-out, implementation and institutionalising of the RWSS Information Management System (IMS) as well as raising the profile of the WSS sector in national planning and allocation of resources.

2.5 Key Outcomes of the NRWSSP II By 2030

The outcomes/results that the Programme's components are expected to incrementally achieve by 2030 are listed in the following table.

Table 2.1 Outcome indicators: Improved access to water supply and sanitation

Outcome Indicators	Baseline	Year of Baseline Estimate	Target 2021	Target 2030
Percent of households with access to improved drinking Water (<i>Rural</i>)	46.6	2013-14	67.0	100
Percent of households with access to improved sanitation (<i>Rural</i>)	18.5	2013-14	37.0	90
Percentage of water samples from a representative sample of water points that meet ZBS/WHO standards	64	2017	100	100

3. COMPONENT 1: WATER SUPPLY

3.1 Introduction

The majority of Zambia's rural population lack access to safe water supplies. New water points, to extend access to the presently un-served rural population in all provinces, with priority being given to those areas with lowest coverage, will be constructed. Recognising that a significant number of water points are not functional, the component will also include a rehabilitation programme to ensure continuous operation of existing facilities, as well as to safeguard the investments already made.

The population to be covered under NRWSSP II by 2030 is 12.84 million and the total amount of water required to service this population is 2.4 billion cubic metres. Table 6.1 below shows the population to be served and the required volume of water for the period until 2030;

Table 3.1 Rural Population Against Water Demand up to 2030

Year	2015	2021	2026	2030	Total
Rural Population	8,973,715	10,357,477	11,672,272	12,843,297	12,843,297
Total Water Demand in Cubic Metres by 2030	131,016,236	855,399,748	812,766,423	723,892,370	2,392,058,540

3.2 Objectives and Targets

3.2.1 Objectives

The overall objective of water supply is to achieve sustainable access to adequate and equitable safe and clean water supply to meet basic needs for improved health and poverty alleviation for all of Zambia's rural population in line with the Vision 2030 and the SDGs. The specific objectives of the water supply component are:

1. To increase and improve the number of functioning water supply facilities in rural areas through systematic investments in new water supply facilities, rehabilitation, proper operations and maintenance of existing facilities.
2. To increase and improve the number of functioning institutional WASH facilities in rural areas.

The objectives of this component are aligned with the achievement of both the SDG and Vision 2030 goals/targets for water supply:

SDG 6: "Ensure availability and sustainable management of water and sanitation for all."

Targets:

- By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
- Support and strengthen the participation of local communities for improving water management.
- Vision 2030: Universal Coverage for water supply by 2030

Target:

- Attainment of 80 percent access to clean water supply to all by 2015 and 100 percent by 2030.

3.2.2 Targets

In order to achieve the Vision 2030 goals, intermediate targets aligned to the 7NDP time lines have been created to help track progress to 2030. It is expected that as part of the implementation approach, detailed moving 5-year plans by district and province will be developed and consolidated at a regular and annual basis for reviewing progress and conducting mid-course corrections, especially as regards the key indicators, where necessary. In line with the decentralisation process, the districts will have the primary responsibility of developing detailed implementation plans for consolidation at provincial and national levels.

The following are the rural water targets;

- 70% of the rural population with access to basic drinking water by 2021
- 40% of the rural population with access to safely managed drinking water by 2021
- 100% of the rural population with access to basic drinking water by 2030
- 100% of the rural population with access to safely managed drinking water by 2030
- 70% of health care facilities with basic WASH services by 2021
- 40% of schools with basic WASH facilities by 2021
- 100% of health care facilities with basic WASH services by 2030
- 100% of schools with basic WASH facilities by 2030

The CSO baseline for improved drinking water in rural areas is 47% (7NDP Implementation Plan). Based on the current coverage of 47%, achieving 100% by 2030 requires more than 8 million additional people gaining access to water supply in the rural areas. The water required by the rural population by 2030 will be 889 Million Cubic Metres. This has been translated into a series of interim water supply targets as shown in the following table.

Table 3.2: Water Supply Coverage Targets and Population Implications

Year	2015	2021	2026	2030	Total
Coverage	47%	67%	85%	100%	
Rural Population	8,973,715	10,357,477	11,672,272	12,843,297	12,843,297
Period		2016 - 2021	2022 - 2026	2027 - 2030	
Total Population Covered by end of period	4,217,646	6,960,224	9,905,868	12,843,297	12,843,297
Additional Population To Be Covered During Period		2,742,578	2,945,644	2,937,429	8,625,651
Amount of Water Required in m³ (Assumption ;40 liters per person per day)		200.2 Million	215.032 Million	214.4 Million	889 Million

Sources: Rural Population (CSO, 2013)¹; Target Coverage pro-rated between 2015 base and 2030 target of universal coverage; Population covered and to be covered computed by Consultant.

3.3 Implementation Strategy

To increase efficiency, effectiveness and sustainability and to leverage existing resources, (and according to UNDP - World Bank, 1998)²², the provision of water supply systems will be based on the DRA four overarching principles namely:

1. Water should increasingly be managed as an economic as well as a social good;
2. Management should be focused at the lowest appropriate level;
3. A holistic approach to the use of water resources should be employed; and
4. Women should play a key role in the management of water

The main characteristics of DRA are illustrated as in Figure 3.1 on the next page, adapted from (Breslin, 2003)²³

1 Ibid.



Figure 3.1: Characteristics of DRA.

As a result of this approach the technologies used will be reflective of user choice and therefore will be situation specific within a range of available choices. Generically these will range from Hand Dug Wells with hand pumps in which the communities can contribute labour in developing, through boreholes with hand pumps to small piped networks. In all cases rehabilitation or upgrading of existing systems will be the preferred recommendation, subject to community approval, as this may have optimal per capita cost implications.

3.3.1 Water Supply Development Approach

On the basis that the 51% coverage for 2015 already discounts the non-functional water supply systems, the projected 8.0 million additional people to be covered to 2030 would therefore include those that were not covered in 2015 due to non-functional water supply systems. Therefore, there is need to plan for the population that was not covered due to the non-functional water supply systems to be included in the 8.2 million targeted by 2030.

3.3.2 Water Supply Investments

Water Supply investments in all districts will be delivered as an integrated package with sanitation and hygiene promotion, consisting of rehabilitation of existing non-functional water supply systems and construction of new water supply systems at community level, rural growth centres, health centres, schools, markets, bus stations and other public places. These will include, but will not be limited to: piped water supplies, small network systems, boreholes and protected hand dug wells equipped with hand pumps and proper drainage facilities and spring protection. The choice of technological options will be based on informed community preferences and will take into account location specific assessments of the prevailing conditions. These will include, but will not be limited to demographic, socio-economic and hydrological, water quality and any other pertinent criteria.

3.3.3 New Water Supply Systems

New water supply systems aimed at expanding coverage to the unserved will be constructed in all the districts. The choice of technology and service levels shall be commensurate with what the community is willing to pay for and able to maintain with some training being provided to enhance skills at appropriate levels. The investment will be based on district plans that reflect community priorities and commitments, so as to ensure continued operation of facilities in all provinces.

In providing choice to the communities, in line with DRA approaches, the full life cycle costs of the technologies and the cost sharing options will be explained to the communities to enable them make informed choices. In considering the up scaling of technologies, the community contribution will include the unused water funds held by each LA for each community.

Strict guidance and compliance to new water supply systems Standard Construction Procedures will form the core requirements for procurement of service providers (contractors). LAs will be required to take an active role in supervising and signing-off acceptable delivery certification.

3.3.4 Upgrading to Small Piped Systems

The trend in the first programme was that of drilling new boreholes in the community at the rate of one facility for every 250 people. To a lesser extent a few schemes were developed by either the government or NGOs for communities with more than 500 people. These schemes will be increased in the new programme, with high possibility of these being handed over to be run by the CUs and the LAs.

In order to cater for increasing population at growth centres, the NRWSSP will upgrade some of the existing water supply facilities to small piped systems to ensure adequate supply of water for growth centres.

3.3.5 Rehabilitation and Repair of Old Systems

In addition to the above approaches, other measures targeting the rehabilitation and repairs of upgraded systems will have to be established especially involving the CUs, LA's and the private sector. These have been included under O&M.

3.3.6 Operations and Maintenance

As found during the evaluation of NRWSSP I¹, in the sector as a whole, the O&M of assets have not been up to the required standards. This has resulted in dilapidation of assets and thereby compromising service delivery at all levels. In addressing the situation, NRWSSP I rolled out SOMAP in rural water supply and designed an asset management strategy for the sector. This approach will be continued and strengthened under NRWSSP II. Sustainable O&M, is presented separately in Chapter 5.

¹ End of Term Evaluation of NRWSSP II (November 2015) (p.88).

4. COMPONENT 2: SANITATION AND HYGIENE PROMOTION

4.1 Introduction

The majority of Zambia's rural population lack access to safe, adequate and equitable sanitation facilities. The Rural communities need access to improved sanitation and hygiene practices in order to survive and thrive. The sanitation target of 60% for the NRWSSP I was not met by a wide margin (only 19% coverage) and as a result there were almost many people without access to improved sanitation at the end of 2015.

In addressing this matter, the Programme aims to accelerate the implementation of sanitation and hygiene related issues in the rural areas and to reduce the adverse impacts of poor sanitation.

The programme will continue to target and engage communities and institutions to raise the required awareness to foster behaviour change through clear advocacy messages aimed at creating linkages between good sanitation and hygiene promotion and improved health and livelihoods. This will help create sustainable demand for adequate sanitation facilities and the practice of good hygiene behaviour.

4.2 Objectives and Targets

4.2.1 Household Sanitation and Hygiene

Household sanitation facilities vary from ventilated improved pit latrines, simple ordinary pit latrines, sanplat latrines and flush/pour flush. To improve and increase access to household sanitation there will be a combination of investments in offsite and onsite sanitation solutions that are affordable, appropriate and environmentally friendly, a concerted hygiene education campaign and sanitation marketing.

The Community Led Total Sanitation (CLTS) approach was employed in the 2006-2015 Programme to trigger communities towards taking action to address issues of open defecation (OD) and improve access to sanitation. This approach creates awareness and understanding of the dangers of faecal contamination, the importance of access to sanitation and the need for communities to become ODF. Properly implemented, the CLTS approach has a proven track record of bringing about behaviour change and the adoption of improved sanitation and hygiene practices. It has now become the predominant methodology used for sanitation and hygiene promotion in Zambia. Nevertheless, the NRWSSP II will not be limited to the CLTS approach, but will use other community approaches to sanitation.

Furthermore, traditional leadership plays an important role in influencing sanitation improvements and this is evident from the first programme where Chiefs and Headmen were engaged through MoCTA. Under 2019-2030 NRWSSP traditional and Civic leaders will continue to be engaged to accelerate and improve access to sanitation and hygiene.

4.2.2 Objective

In order to support the component objective of achieving **sustainable access to adequate and equitable sanitation** to meet basic needs for improved health and poverty alleviation for all of Zambia's rural population in line with the Vision 2030, the **specific objectives** of the sanitation and hygiene promotion component are:

To Increase access to adequate and appropriate, environmentally friendly sanitation facilities to 90% by the year 2030 at household level and public institutions in rural areas through hygiene promotion, sanitation marketing, construction of facilities and legal enforcement. The objectives of this component are aligned with the achievement of both the SDG and Vision 2030 goals/targets for sanitation and hygiene.

SDG 6: "Attainment of universal access to adequate and equitable sanitation and hygiene by 2030."

Target:

- By 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
- Support and strengthen the participation of local communities for improving sanitation management.

Vision 2030: "Improve access to appropriate, environmental friendly sanitation by all Zambians"

Target:

- Attainment of 68 percent access to sanitation to all by 2015 and 90 percent by 2030.

4.2.3 Implementation Strategy

Under this component, NRWSSP II aims to:

1. Eliminate open defecation by 2030 and increase the number of people in rural areas using improved sanitation

facilities through the integration of Community Approaches to Sanitation (CATS) and Sanitation marketing. CATS will aim at creating demand for sanitation whereas sanitation marketing will inform the communities on the appropriate toilet technologies that are durable and hygienic.

2. Improve the quality of sanitation and hygiene programming in all districts to ensure communities are investing in improved facilities and move up the sanitation ladder. Districts will promote behavioural change in sanitation and hygiene practices using mass media campaigns through the use of local radio stations, designing of local campaigns to disseminate information on hand washing, food hygiene, menstrual hygiene management (MHM), and safe disposal of faeces and safe handling of water.
3. Engagement of the traditional and Civic leadership in accelerating and improving access to sanitation and hygiene in chiefdoms.
4. Strengthen capacities at district and sub-district level for sanitation and hygiene promotion in communities and schools, and ensure that sanitation and hygiene promotion is part of the school curricula.
5. Support sanitation marketing innovations and approaches that will help improved sanitation and hygiene in rural communities and schools.
6. Promote improved management of sanitation and hygiene information in districts for planning purposes. The programme will also stress on effective monitoring and verification processes of sanitation and hygiene.
7. Develop and implement an innovative sanitation support mechanism for vulnerable groups in communities.

4.2.4 Targets

The late launch of the NRWSSP I Sanitation Component resulted in failure to achieve the 2015 target although considerable progress was recorded during the Programme period. Therefore, to achieve the Vision 2030 targets for sanitation, five-year intermediate targets have been formulated to help track progress to 2030. The following are the rural sanitation targets:

- 55% of the rural population with access to Basic Sanitation by 2021
- 50% of the rural population with access to Safely managed Sanitation by 2021
- 90% of the rural population with access to Basic Sanitation by 2030
- 90% of the rural population with access to Safely Managed Sanitation by 2030
- Reduce Open Defecation to 10% by 2021
- End Open Defecation by 2030
- 40% of the population having a hand washing facility with soap and water by 2021
- 90% of the population having a hand washing facility with soap and water by 2030

Just the same as for water supply, intermediate targets aligned to the 7NDP time lines have been created to help track progress to 2030. It is expected that, as part of the implementation approach, detailed 5-year plans by province will be developed and consolidated as a regular, annual basis for reviewing progress and conducting mid-course corrections especially as regards the key indicators, where necessary. Table 7.1 shows the population implications of those targets indicating over 9million additional people will have to gain access to sanitation coverage by 2030.

Table 4.1: Sanitation Coverage Targets and Population Implications

Year	2015	2021	2026	2030	Total
Coverage	19%	37%	67%	90%	
Rural Population	8,973,715	10,357,477	11,672,272	12,843,297	
Total Population Covered	1,705,006	3,873,696	7,828,204	11,558,967	
Additional Population Covered for the period		2,168,690	3,954,508	3,730,763	9,853,961

Sources: Rural Population (CSO, 2013); Target Coverage prorated between 2015 base and 2030 target of 85% coverage; Population covered and to be covered computed by Consultant.¹

4.3 Institutional Sanitation and Hygiene Promotion

Sanitation and hygiene promotion in public institutions is a fundamental means for preventing hygiene related diseases and improving health. This subcomponent aims at contributing to improving access to clean sanitation facilities and promote improved hygiene behaviours in public institutions (schools, health centres, bus stations and market places), which is a critical ingredient for a healthy and safe environment.

A strong school sanitation and hygiene promotion program has the potential to significantly reduce hygiene-related diseases; increase school attendance and improve learning achievement and consequently contribute to dignity, inclusion and equity. However, even with the benefits of sanitation and hygiene promotion in schools clearly pointed out, the majority of rural schools still lack access to improved sanitation and hygiene promotion.

In addition, the availability of Sanitation and Hygiene (SH) facilities at health centres and other public institutions is fundamental to create a hygienic environment, prevention of infections, essential for outbreak prevention, preparedness and control.

4.3.1 Implementation Strategy

Targets

The 2019-2030 NRWSSP major focus will be to contribute to the MGE, MLG and MoH efforts in addressing gaps in SH in schools and remote rural health centres respectively, through the strategies listed below:

1. Monitor progress made towards achieving sanitation and hygiene targets for schools and rural health centers.
2. Development of Behavioural Change Communication (BCC) strategy for RHCs, markets, bus stations and schools to target poor hygiene behaviours that require change and develop appropriate messages for the target audience.
3. Integrate SH in the national education curricula.
4. Develop capacities for LA's to effectively plan and implement Sanitation and hygiene programmes in public institutions.
5. Promote collaboration amongst sector players in the sanitation and hygiene programme delivery.
6. Promote the development and implementation of an innovative framework for resource mobilisation to address institutional sanitation and hygiene gaps.
7. Revise guide lines for construction, management and maintenance of sanitation and hygiene facilities by the host institutions.

Targets

- The following are the targets for Institutional Sanitation and Hygiene promotion: 70% of healthcare facilities with basic WASH services by 2021
- 90% of health care facilities with basic WASH services by 2030
- 40% of schools with basic WASH facilities by 2021
- 90% of schools with basic WASH facilities by 2030

4.3.2 Solid Waste Management

SWM is now gazetted under the MLG, nevertheless it cannot be separated from sanitation, particularly as most of the rural sanitation is on-site with few septic tanks and primarily latrines. SWM is aimed at ensuring the safe use, treatment, reuse, recycling and disposal of solid waste materials. The MDGs did not highlight waste as a standalone issue. However, the follow up SDGs contain two targets related to solid waste. This highlights the growing global concern for SWM.

While most waste is normally primarily associated with urban and industrial growth, the mobility of people between urban and rural areas means that urban waste, such as plastic bottles, is also creating rural problems such as blocked and contaminated rivers. However, the characteristics of solid waste and therefore the approaches to SWM in rural areas are different from that of the urban areas. Interventions on solid waste management in rural areas will be implemented in collaboration with the Ministry of Local Government within the community approaches to sanitation such as CLTS.

¹ 2010 Census of Population and Housing: Population and Demographic Projections 2011 - 2035. (2013) CSO.

5. COMPONENT 3: SUSTAINABLE OPERATION & MAINTENANCE

5.1 Introduction

One of the major problems encountered in the provision of services in the RWSS sub-sector is the frequent breakdown of supply facilities. The frequent breakdown of water lifting devices such as hand pumps is due to high user to facility utilisation ratio, inappropriate construction and poor O&M schedule of the facilities. The poor O&M of facilities results into shorter period of working time than the expected life span.

In order to address frequent breakdowns, O&M guidelines were formulated as a major component of the NRWSSP I support activities. In 2007, MLGH, in consultation and collaboration with key stakeholders, formulated the National Guidelines for Sustainable Operation and Maintenance of Hand Pumps in Rural Areas to enhance the utilisation of water resources on a sustainable basis. This was part of the SOMAP which was a major component of the NRWSSP I support activities.

The poor O&M of constructed RWSS facilities in communities curtails coverage and reduces access to safe water facilities during the down time of the facility. In addition, it forces the users to revert to traditional unsafe sources, especially in those areas with plentiful surface water sources or puts pressure on the nearby facilities due to increased usage. This increases the risk of contamination which may result in water borne diseases. Regular maintenance as well as proper operation of facilities are key to keeping the facilities functioning and providing an acceptable service.

5.2 Objectives and Targets

5.2.1 Objectives

This component shares the same overall objectives as Component 1 (Water Supply) and Component 2 (Sanitation and Hygiene Promotion) which address the issue of low coverage, arising from continuous breakdown of water and sanitation facilities. This component aims to address through appropriate mechanisms the low coverage due to breakdowns.

The specific objectives are:

- To increase and improve the number of functioning Water Supply facilities in rural areas through systematic investments in new Water Supply facilities, rehabilitation, proper operations and maintenance of existing facilities.
- To increase and improve the number of functioning institutional WASH facilities in rural areas.
- To Increase access to adequate and appropriate, environmentally friendly sanitation facilities to 90% by the year 2030 at household level and public institutions in rural areas through hygiene promotion, sanitation marketing, construction of facilities and legal enforcement.

Achievement of these objectives, will result in the following:

- Increased number of functional water points
- Increased number of functioning domestic and institutional sanitation facilities
- Reduced down time for institutional WASH facilities
- Sustained and functioning water and sanitation facilities.

Similar to Components 1 and 2, the objectives of this component are aligned with the achievement of both the SDG and Vision 2030 goals/targets for water supply and sanitation.

5.2.2 Targets

In Sections 5.5.3 and 5.5.4 below, the SOMAP principles and mechanisms are outlined. SOMAP aims at ensuring that between 90% - 100% of rural water supply facilities are operational all times. As mentioned in Chapter 3.5.4, this assumes a failure rate of 2.5% per year for pre-NRWSSP II (2019-2030) water supply systems, and a 2015 coverage of 51%. This is nearly 4.6 million of the 9 million rural population. The annual failure rate would therefore affect a population of about 115,000 per year. These failed systems would have to be rehabilitated and brought to functional state.

The following targets for up scaling SOMAP activities will be adopted and achieved by the NRWSSP II (2019-2030):

1. Establish spare parts shops in rural districts
2. Rehabilitate and re-construct sanitation facilities in rural towns, including growth centres
3. 90% of functional water facilities by 2021
4. 100% of functional water facilities by 2030

5. Develop the guideline for management of piped water schemes by 2019

5.2.3 Implementation Strategy

To increase sustainability of infrastructure, specific capacity building related to the management and maintenance of infrastructure will be undertaken. This will ensure continued capacity of the local communities to technically and financially manage the operations of this infrastructure. In order to meet the objectives and targets above, water supply O&M will take a three-pronged approach:

1. SOMAP (for repairs)
2. Major rehabilitation (of water and sanitation facilities)
3. Implement guidelines for the management of small piped water schemes.

5.2.4 Sustainable O&M approach

O&M in all districts shall be made recognising the principles and mechanisms of SOMAP. To increase sustainability of infrastructure, specific capacity building related to the maintenance of new infrastructure will be undertaken using the SOMAP principles. This will ensure continued capacity of the local communities to technically and financially manage the operations of this infrastructure.

5.2.5 Principles and Mechanisms for Operation and Maintenance

The following are the SOMAP principles;

- Cost sharing by communities,
- Sustainable supply chain,
- O&M mechanism,
- Choice of appropriate technology and
- Capacity building to ensure sustainability.

Cost sharing by communities, entails that communities bear 100% cost for O&M, 5% capital costs and 5% of rehabilitation and replacement costs.

There are three O&M mechanisms that are required to be established by various stakeholders in order to maintain water facilities in a sustainable manner. These are:

- Community-Based Management Mechanism (CBM).
- Repair Work Mechanism (RWM).
- Supply Chain Management (SCM).

5.2.5.1 Community-Based Management Mechanism

CBM implies the management and improvement of water supply and sanitation facilities and conditions in the community with the active and collective participation and financial support of the user community.

5.2.5.2 Repair Work Mechanism

RWM aims at mobilising the communities and Area Pump Minders (APM) to repair broken down facilities smoothly by technical service and spare parts procurement with the appropriate tool kit management. The main purpose of the repair work system is to monitor and reduce downtime, which is the time between breakdown of the facility and completion of repair, through a smooth provision of repair service by APMs at communities.

5.2.5.3 Supply Chain Management

The concept of SCM consists of the following:

1. Establishment of a spare parts shop at district level which will be managed by the Local Authority (LA) directly or in cooperation with a Commercial Utility (CU) to which daily operation of the shop is entrusted by the LA
2. Operation of the spare parts shop with a revolving fund raised from sales of spare parts
3. Affordability of spare parts to a level that ensures supplies are continually available and accessible to the community for repairs.

5.2.5.4 Rehabilitation of Water Supply Infrastructure

This will be aimed at bringing the non-operational or partially operational water supply infrastructure to optimal operational

levels. LAs will prepare inventories of functional and non-functional water supply facilities to guide the planning and rehabilitation of the infrastructure.

5.3 Sanitation Operation and Maintenance

5.3.1 Household Sanitation Facilities

The cost of providing O&M, repair and rehabilitation for household facilities will be borne by the households. This is similar to the provision of a new facility where the households equally bear the cost. However, the programme will create an enabling environment for small entrepreneurs to design affordable and long lasting sanitation facilities which can be accessed by the households.

5.3.2 Institutional Sanitation Facilities

Sanitation facilities in public institutions will be managed by the respective institutions. However, the programme will create an enabling environment for medium and small entrepreneurs to design affordable and long lasting sanitation facilities which can be accessed by the institutions.

5.3.3 Private Sector

The private sector in RWSS will be essential in providing services, support, materials and expertise. Entrepreneurs such as masons and plumbers will participate in the construction and repairs of sanitation facilities. Equally key are community-based outlets and shops to enhance steady access to materials, tool and accessories.

Overall, the intention is that the private sector will need to be involved, encouraged and supported in NRWSSP II in order to assist in Programme implementation and in sustaining the quality and level of service. Such support includes but not limited to media publicity and protection from undue monopoly.

6. COMPONENT 4: SECTOR DEVELOPMENT

6.1 Introduction

This component seeks to improve performance of the RWSS through policy review and development, capacity development, governance, research and development, advocacy and communication, climate change and environmental protection, social inclusion, mainstreaming gender and HIV/AIDS.

6.2 Objective and Targets

6.2.1 Objective

The objective is to strengthen systems for enhanced service delivery in the water and sanitation sub sector.

6.2.2 Component Targets

The targets of the component will be:

1. Develop a Behaviour Change Communication and Advocacy strategy by 2019
2. Develop a WASH gender guideline by 2019
3. Review and develop capacity development strategy by 2026.

Due to anticipated changes in the operating environments during the 2019-2030 NRWSSP lifespan, it is expected that the number and focus areas of the sub-components might change. There will be need to develop strategies for each component and sub-components, where these are not already available. These would need to be updated regularly for any mid-course adjustments that might be needed arising out of changing operating circumstances.

6.3 The Sub-Components

6.3.1 Good Governance

In the water supply and sanitation sub-sector, water governance aims to cover a broad range of socio-economic, environmental, political, cultural and administrative systems to regulate the provision and management of water supply and sanitation services to the people of Zambia. Central to water Governance are principles such as integrity, accountability and transparency which are in line with Government code of ethics.

These principles will be emphasised through various capacity development activities that will be undertaken along with the development and implementation of governance policies and regulations.

Amongst these regulations and policies, will be the need for the service providers to have some of the following governance instruments:

- Code of Ethics
- Whistle-blower Policy
- Disciplinary Code and Grievance Procedure
- Gift policy
- Integrity Committee
- Any other Government governance instruments that may come into force during the implementation of the programme.

It is imperative that the Governance structures are strengthened and regularly reviewed in line with the Decentralisation Policy. This includes the P-WASHE, D-WASHE, WDCs and V-WASHE committees. The elements of good governance also resonate with key aspects of SIGM initiatives, (such as the participatory and consultative processes of the DRA), the underlying theme of Decentralisation, local participation, and the SDGs theme of no one left behind. The programme aims at ensuring that women are adequately represented on the WSS governance bodies such as the WDCs, CU Boards and other Governance structures which must be actively functioning and regularly evaluated.

6.3.2 Capacity Development

This sub component aims at strengthening systems to effectively plan, mobilize resources, implement, monitor, report and evaluate progress and adapt to any changes in the environment in a proactive and timely manner.

The NRWSSP II will not be sustainable if capacity development (i.e. programmes, training, knowledge management, reporting systems and organisational development) is not considered when planning for solutions (CD activities are often not adequately planned or budgeted for). Capacity of the implementing structures must be taken into consideration when planning and budgeting for the NRWSSP at all levels.

NRWSSP II will fully operationalize the Capacity Development strategy with respect to RWSS, taking into considerations the lessons learned and recommendations from the first Programme.

Some of the activities that should be undertaken under this sub-component are already outlined in the WSS capacity development strategy. However, directly as a result of this programme other capacity development activities will be undertaken in:

1. Implementing the DRA approaches to water point development, in line with the decentralization process, at national, provincial district and sub-district levels;
2. Resource mobilization at sub-district, district, provincial and national levels for rural water and activities;
3. Clarifying the complementary roles, mandates and responsibilities of the national, provincial, district and sub-district structures of government.

NRWSSP II will review and update the strategy to reflect the change in the WSS sector since 2015. The Programme will also develop tools for tracking the implementation and impact of CD efforts based on the WSS CD strategy.

6.4 Research and Development

The sub component for research and development will focus on strengthening collaboration with national, regional and international centres of research and learning in order to leverage existing capacities, knowledge and resources in these centres for developing customised solutions to the NRWSSP II operations. The sub component will also focus on research on technical design standards, affordability, socially and culturally appropriate options, as well as financial viability to be evaluated before wide scale adoption of a particular technical solution in any given setting. Some of the activities that would benefit from research and development activities would include research into:

1. Water efficiency and water security measures, water harvesting and capture systems, Sanitation systems, water quality
2. Climate friendly technologies, including but not limited water efficiency and water security measures;
3. Alternative water point technology options.

6.4.1 Advocacy and Communication

This sub component aims at raising the profile of the WSS sub sector in national planning and allocation of resources as well as to increase stake holder participation into the RWSS programme. During this period the WASH communication strategy would be developed and operationalized in order to guide communication and advocacy activities in WSS sub sector.

6.4.2 Climate Change and Environmental Protection

This sub-component will focus on developing approaches to mitigate the impact of climate change on vulnerable rural communities with respect to water supply and sanitation. The impacts of climate change on Zambia's water resources can be summarised as either too much or too little rain. This translates into either floods or droughts, with the former being the more frequent and more devastating in Zambia.

Issues of the environment and climate change are interlinked, and climate change has become a major concern of GRZ, especially in view of its impact on water security.

The National Climate Change Response Strategy (MTENR, 2010)¹ provides guidance and supports a coordinated response to climate change issues in the country.

The National Climate Change Response Strategy (NCCRS)² observes that *“Zambia has little influence over the direct causes of climate change and therefore more emphasis must be placed on how to respond and adapt to this looming crisis”*. The NCCRS objective regarding water is *“To ensure sustainable management and resiliency of water resources under the changing climate”*.

Among the key recommendations for climate proofing interventions for water, the NCCRS recommends, *“Enhanced investments in water capture and storage/abstraction infrastructure such as dams, strategic boreholes, and tanks to ensure availability of water during dry seasons”*.

The NRWSSP II will focus on the following activities:

1. Research into regional and area specific climate impact assessments and adaptation approaches, since the impact of climate change is different from place to place;
2. Support appropriate climate-resilient technologies for WASH activities;

1 National Climate Change Response Strategy. (2010) MTENR.

2 Ibid.

3. Integrate climate adaptation measures in programme implementation;
4. Integrate disaster preparedness in planning;
5. Leverage available climate funds; and
6. Exploration of synergies with other climate-related activities nationally and regionally.

6.5 Other Cross-Cutting Issues

The issues of SIGM and HIV/Aids, together with the SDGs theme of 'leaving no one behind', are a high priority of GRZ throughout all sectors. These are reflected in the NRWSSP II design and are elaborated further below.

6.5.1 Social Inclusion and Gender Mainstreaming

6.5.6.1 Social Inclusion

The NRWSSP II aims at ensuring equity in the provision of water supply and sanitation by promoting social inclusion for people living with HIV/AIDS, other chronic illnesses, the poor, people with disabilities and the hard to reach.

Participation in, and access to development activities, has to be assured for all people including but not limited to women and girls who bear most of the responsibility for domestic water supply and sanitation needs. Prioritising social inclusion and equity considerations is also important to ensure that vulnerable and hard-to-reach groups in the communities including the elderly, people with disabilities and the poor do not miss out on the benefits of WASHE interventions of NRWSSP II. The LA's will ensure social inclusion and accountability and therefore systems will have to be strengthened for local sub-district level participation, in line with the DRA approaches.

6.5.6.2 Gender Mainstreaming and Gender Equality

The programme will through the components and the activities actively work on mainstreaming gender, meaning recognising and enhancing the different roles, needs and contributions of women and men. The focus will be on ensuring that the gender guidelines information and training materials are consistently used and regularly monitored. It will also focus on making women and men's concerns an integral dimension of the design, implementation, monitoring, and evaluation of policies and programmes in all political, economic and societal spheres.

The RWSS sub-sector can contribute to this target in a number of ways including:

- Ensure gender balance in the selection of water committees and training participants on various management and technical skills
- Ensure women's participation in site selection, technology choice and institution.
- promotion of gender responsive WSS facility designs
- Integrate menstrual hygiene management in school WASH.

6.5.6.3 HIV and AIDS

Access to safe water and sanitation is indispensable for people living with HIV/AIDS and for the provision of home based care.

A nearby and reliable supply of safe clean water, including for small-scale production and sanitary latrines, allows those living with HIV/AIDS to continue productive activities and reduces the workload for caregivers.

Furthermore, while HIV and AIDS pose enormous problems for all sectors of society. The pandemic has some important implications for the water sector in particular. Specific groups associated with the water sector, such as mobile teams of workers involved in water infrastructure projects and communities living close to water projects, are particularly vulnerable to HIV and AIDS; and this vulnerability must be taken into account when appraising and implementing projects under this programme. HIV awareness activities should therefore be part of programme implementation.

7. COMPONENT 5: PLANNING, MONITORING, EVALUATION AND REPORTING

7.1 Introduction

Information plays a key role in enhancing evidence based planning and policy making, hence the need to have a strengthened M&E system. Under this component the RWSS information management system will be institutionalised to ensure uniform monitoring, evaluation and reporting of WSS activities. Monitoring and evaluation framework will be operationalized to guide sector activities.

7.2 Objective and Targets

7.2.1 Objective

The objective of the Component is improved performance of the RWSS sub-sector in planning, implementation and management of RWSS services through effective monitoring, evaluation and reporting.

7.2.2 Targets

The main outcome indicators for the Programme's PMER component are outlined below:

- A Functional WASH MIS developed by 2020
- Operationalize WASH M&E framework by 2019
- Standardize a National WASH sector report by 2019
- Conduct WASH performance survey by 2022
- Conduct a Mid-Term Programme Evaluation by 2024
- Conduct an End-Term Evaluation by 2030

7.3 Implementation Strategy

A monitoring and evaluation framework has been developed to guide implementation of the programme. The M&E framework has been aligned to the 7NDP Key activities, and the following will be undertaken:

1. A national inventory of rural water points
2. Upgrade the MIS to incorporate the 7NDP indicators for WASH
3. Development of a reporting format and the data collection tools and processes to track performance of the NRWSSP
4. Advocate for creation of an M&E structure at provincial and district level
5. Strengthen inter-ministerial collaboration through MOUs
6. Standardisation of indicator definitions for reporting compatibility and consistency
7. Development and implementation of ICT policies including disaster recovery and continuity procedures to safeguard key data
8. ICT infrastructure to support MIS
9. Develop annual WASH statistical bulletin
10. Conduct joint sector reviews
11. Data and information sharing procedures and protocols.

7.4 Organisation of Monitoring System

This section provides an over view of roles and responsibilities for the Departments of Planning and Information;

- DPI managing the M&E system for the entire Ministry to:
 - Coordinate the formulation and review of the strategies to guide the implementation of NRWSSP II
 - Monitor and evaluate the implementation of the program to ensure attainment of set goals
 - Management of information system
 - Provide performance assessment and technical support at sub national level

7.5 Data Management, Monitoring and Reporting

7.5.1 Data Flow Mechanisms

Effective data collection and management in both rural and urban areas should ensure quality and consolidated data at district level by the CU/LAs. There should be regular reporting and consolidation at district level before data is passed onwards to the province and later national level.

The rural water and sanitation reporting channels starts with the use of standard forms to collect data at the village/household level. These forms shall be used to collect the data on WASHE. Community structures such as the Sanitation Action Group (SAG), Village WASH Committee, or the Neighbourhood Health Committees will collect the WASHE data at the village level and pass it to the Community Champion (who is often the APM as well) or the Community Health Assistants. This information is also shared with the WDC (if they are established) and/or the local EHT through the WASH MIS; they are responsible for validating the data. The District RWSSU is able to access, read and develop queries regarding the WASHE situation and should put together a report and submit it to the LA on a monthly basis. He/she will also send a monthly report to the PWSSO of all the activities ongoing in the district. The PWSSO will submit a quarterly report of all WSS activities in the district, including the Coverage data to the Director DWSS.

7.5.2 Data Management Systems

Given distinctions between the urban and rural water supply and sanitation sub-sectors, management information systems, will be integrated in the sub-sector of the Ministry in the medium term. WASH MIS shall be scaled up to all rural districts in Zambia and shall be customized to include all relevant data elements on both water and sanitation.

At national, and even provincial level, the Ministry's M&E Section and Unit shall have access to both systems for an aggregate picture of both subsectors. This entails having a central database system which will pull reports on Key Performance Indicators from both the rural and urban data management systems into one national or provincial report. The Ministry has the ICT Section under DPI to undertake this assignment.

The Ministry shall collaborate with CSO for their survey to ensure harmonised reporting for the water sector. Overall, NRWSSP M&E systems will ensure that quality data is collected, analysed, stored and can easily be retrieved for use at any level. The role of ICT in data management is unquestionable, therefore, impeccable digital data processing, analysis and storages will be paramount for the future.

For clarity on Data Quality Assurance (DQA) processes, the Ministry through the M&E Unit, shall develop standard guidelines on how to ensure data quality throughout the data collection and reporting chain. The DQA guidelines will be useful for all data users as it will spell out specific responsibilities at each level. For example, user rights in WASH MIS should be defined, thereby providing clarity on who can make changes in the system in the event where an error is noticed. DQA guidelines will embrace all DQA criteria of validity, reliability, completeness, timeliness and integrity.

8. PROJECTED 2019-2030 NRWSSP COSTS AND FINANCING

8.1 Programme Design Logic and Cost Assumptions

The programme design is based on a results framework aimed at achieving outcomes that are linked to the major target results of the SDGs, Vision 2030, 7NDP, Policies, Ministerial strategic plan and other sector strategies. This scenario is depicted in the Programme logical framework attached as Appendix 3.

The activity costing for each programme component is projected and based on the underlying assumptions presented in Appendix 4

8.2 Projected Programme Costs

To fully implement the NRWSSP II the Ministry requires USD 1,768,743.27 million and this is explained as follows:

8.2.1 Component 1: Water Supply

On the basis of the assumptions given in Appendix 4, and the target of universal supply by 2030, it is expected that during the programme period 8.6 million people will gain access to water from new water supply systems as shown in Table 11.1 below. The baseline for access to improved drinking water in rural areas as indicated in the 7NDP is at 47%. The rural population projected figures are based on the population growth rate provided by CSO in the 2010 National census.

Table 8.1: Population Implications of Desired Targets

Year	2015	2021	2026	2030	Total
Coverage	47%	67%	85%	100%	
Rural Population	8,973,715	10,357,477	11,672,272	12,843,297	12,843,297
Period		2016 - 2021	2022 - 2026	2027 - 2030	
Total Population Covered by end of period	4,217,646	6,960,224	9,905,868	12,843,297	12,843,297
Additional Population To Be Covered During Period		2,742,578	2,945,644	2,937,429	8,625,651

In addition to those, a further ZMW 3.2 million is projected to re-gain access through the rehabilitation of existing non-functional water supply systems. The summary of supply status for the programme is shown in Table 8.2.

Table 8.2: Summary of People Gaining Access

Year	2016 - 2021	2022 - 2026	2027 - 2030	Total
New Water Supply Systems	2,846,000	2,959,000	2,821,000	8,626,000
Rehabilitated Water Supply Systems	1,042,214	1,084,300	1,034,242	3,160,756
Total	3,888,214	4,043,300	3,855,242	11,786,756

On the basis of the average per capita cost of water supply given in Appendix 4, the projected infrastructure and related CD costs for operations and maintenance training to the year 2030 is projected at ZMW 7.1 billion. The composition of water supply costs is shown in Figure 8.1 while the programming of those costs to 2030 is given in Table 8.3.

Figure 8.1 Water Supply Cost Components

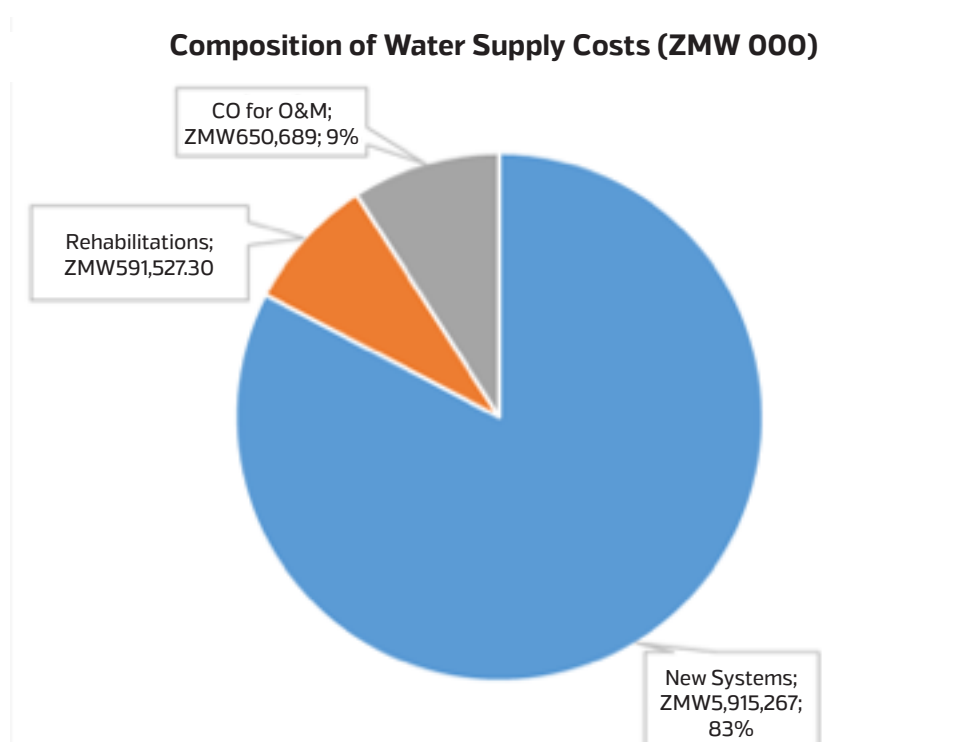


Table 8.3: Projected Cost of Water Supply Infrastructure (ZMW, 000)

Year	2016 - 2021	2022 - 2026	2027 - 2030	Total
New Supply Systems	ZMW1,411,972	ZMW2,014,137	ZMW2,489,158	ZMW5,915,267
Rehabilitated Systems	ZMW141,197	ZMW201,414	ZMW248,916	ZMW591,527
Sub Total	ZMW1,553,169	ZMW2,215,551	ZMW2,738,074	ZMW6,506,794
CD for O&M of Systems	ZMW155,320	ZMW221,559	ZMW273,810	ZMW650,689
Total Cost Water Supply	ZMW1,708,489	ZMW2,437,110	ZMW3,011,884	ZMW7,157,483

The underlying annual population, targets and cost implications for water supply are given in Appendix 5.

8.2.2 Component 2: Sanitation and Hygiene Promotion

The projected number of people gaining access to adequate household sanitation during the programme period is expected to be 9.8 million as shown in Table 8.4. The baseline for improved sanitation in rural areas as indicated in the 7NDP is at 19%.

Table 8.4: Projected Population Coverage

Year	2015	2021	2026	2030	Total
Coverage	19%	37%	67%	90%	
Rural Population	8,973,715	10,357,477	11,672,272	12,843,297	
Total Population Covered	1,705,006	3,873,696	7,828,204	11,558,967	
Additional Population Covered for the period		2,168,690	3,954,508	3,730,763	9,853,961

The projected household sanitation infrastructure cost to the year 2030 to achieve the required access target of 90% coverage is ZMW 6.7 billion. The composition of the sanitation costs is shown in Figure 8.2, while the programming of those costs to 2030 is given in Table 8.5.

Figure 8.2 Sanitation Cost Components (ZMW 000)

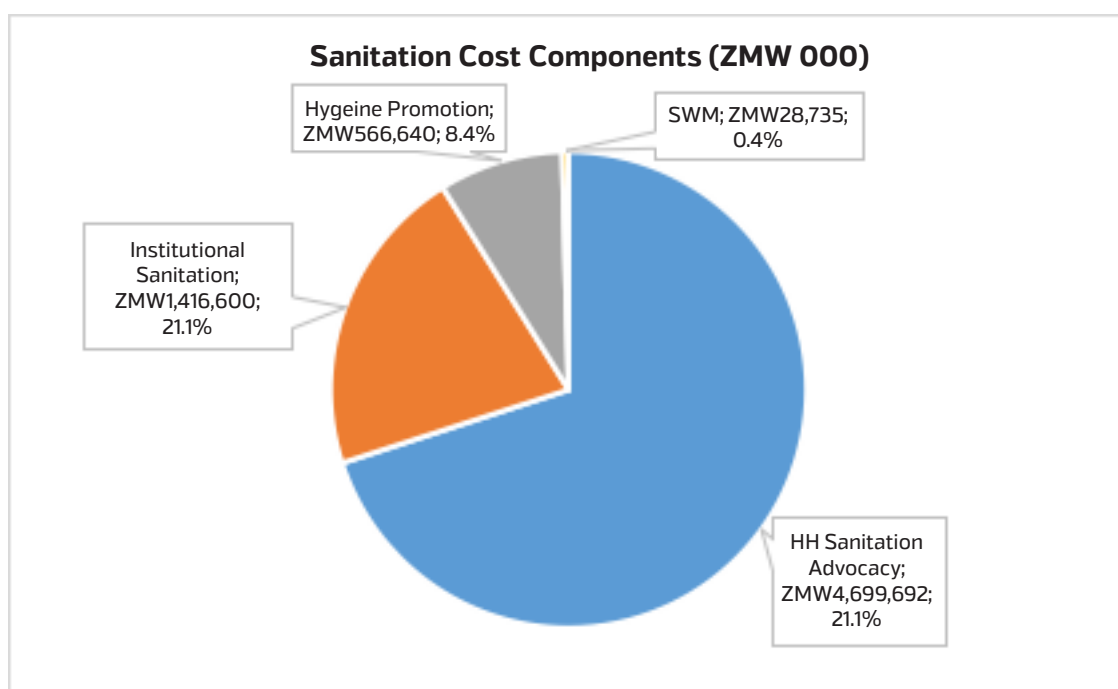


Table 8.5: Projected Sanitation and Hygiene Promotion Costs (Household (HH), Institutional and Solid Waste Management) (ZMW 000)

Year	2016 - 2021	2022 - 2026	2027 - 2030	Total
Additional Population Covered	3,211,982	3,375,166	3,266,813	9,853,961
House Hold Infrastructure Cost (by Households)	ZMW2,687,092	ZMW3,990,607	ZMW5,071,530	ZMW11,749,229
Related HH Sanitation Promotion Costs (NRWSSP II)	ZMW1,074,837	ZMW1,596,243	ZMW2,028,612	ZMW4,699,692
Total Cost of Sub Component	ZMW1,074,837	ZMW1,596,243	ZMW2,028,612	ZMW4,699,692
Contribution to construction of Institutional & Communal Sanitation facilities	ZMW420,000	ZMW487,500	ZMW509,100	ZMW1,416,600
Institutional and HH Hygiene Promotion	ZMW168,000	ZMW195,000	ZMW203,640	ZMW566,640
Total Cost of Sub Component	ZMW588,000	ZMW682,500	ZMW712,740	ZMW1,983,240
Solid Waste Management	ZMW7,589	ZMW10,581	ZMW10,565	ZMW28,735
Total Sanitation Component	ZMW1,670,426	ZMW2,289,324	ZMW2,751,917	ZMW6,711,667

The underlying annual population, targets and cost implications for sanitation and hygiene promotion are provided in Appendix 6

8.2.3 Component 3: Sustainable Operation and Maintenance

This component covers both water supply and sanitation; however, for sanitation, it covers only institutional facilities as households are responsible for their facilities. The projected cost of implementing the O&M activities is about ZMW 857 million as shown in Table 8-6. The composition of the O&M costs is provided in Figure 8.3.

Figure 8.3: O&M Cost Components

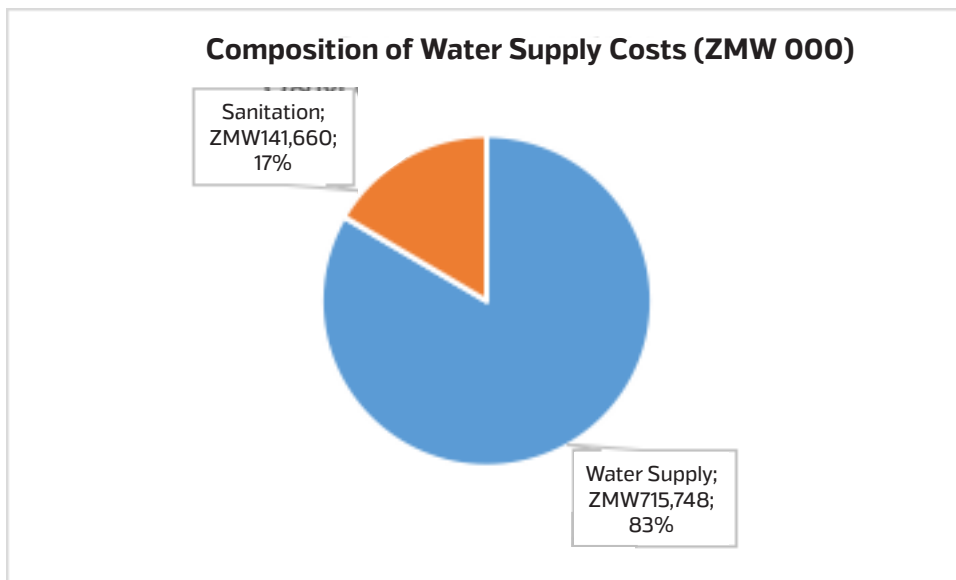


Table 8.6: Projected O&M Costs (ZMW 000)

Year	2016 - 2020	2022 - 2026	2027 - 2030	Total
Water	ZMW132,489	ZMW209,453	ZMW331,050	ZMW672,987
Sanitation	ZMW36,300	ZMW57,398	ZMW90,721	ZMW184,424
Total	ZMW168,789	ZMW266,851	ZMW421,771	ZMW857,411

The annual operation and maintenance cost projections are provided in Appendix 7

8.2.4 Component 4: Sector Development

The projected cost of implementing the sector Improvement activities is about ZMW 790 million. The composition of the sector development costs is provided in Figure 8.4, while the programming of those costs to 2030 is given in Table 8.7.

Figure 8.4: Sector Development Cost Components (ZMW000)

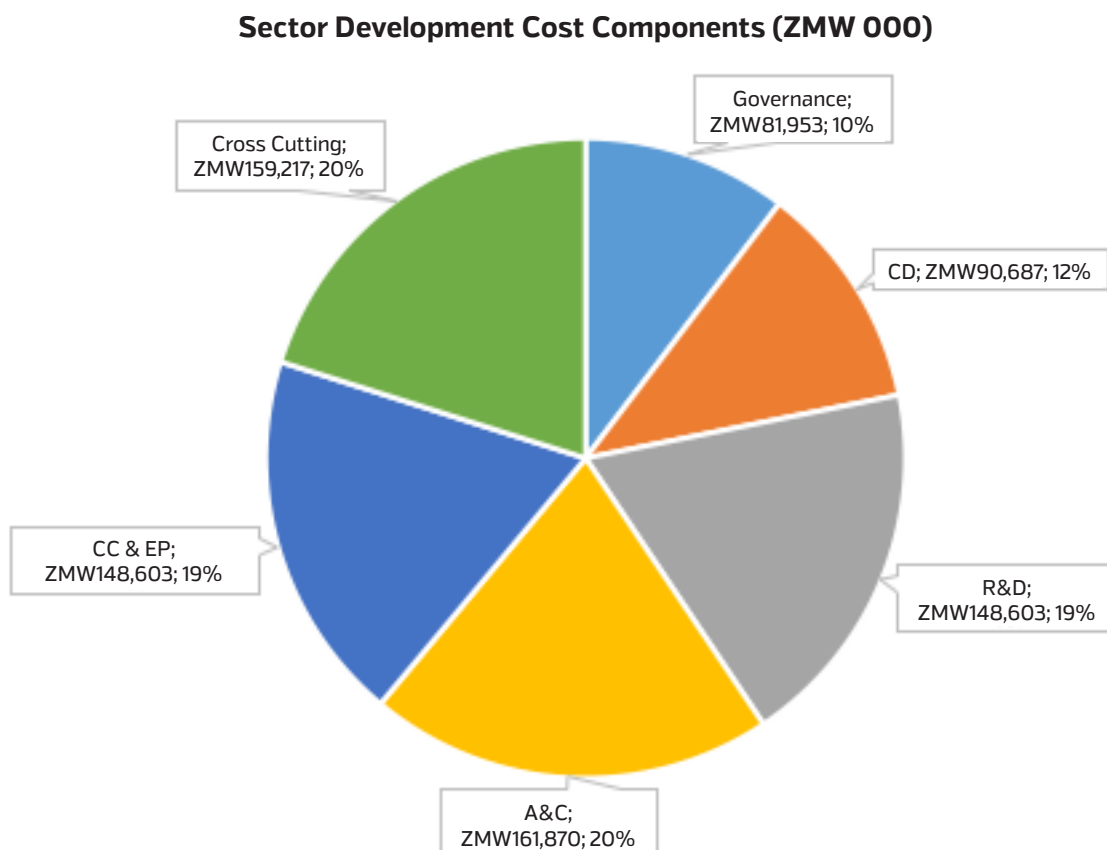


Table 8.7: Projected Performance Improvement and Sustainability Measures (ZMW 000)

Year	2016 - 2021	2022 - 2026	2027 - 2030	Total
6.1 Governance, Management & Sector Coordination	ZMW20,114	ZMW30,035	ZMW31,804	ZMW81,953
6.2 Capacity Development	ZMW20,941	ZMW33,117	ZMW36,629	ZMW90,687
6.3 Research and Development	ZMW32,388	ZMW56,366	ZMW59,849	ZMW148,603
6.4 Advocacy and Communication	ZMW32,388	ZMW62,040	ZMW67,442	ZMW161,870
6.5 Climate Change & Environmental Protection	ZMW32,388	ZMW56,366	ZMW59,849	ZMW148,603
6.6 Cross Cutting Issues (SIGM and HIV AIDS)	ZMW33,096	ZMW61,115	ZMW65,006	ZMW159,217
Total Component Cost	ZMW171,315	ZMW299,039	ZMW320,579	ZMW790,933

The annual projections for Sector Development costs are provided in Appendix 8.

8.2.5 Component 5: Planning, Monitoring, Evaluation and Reporting

The projected cost of implementing the planning, monitoring, evaluation and reporting (PMER) activities is about ZMW 235.3 million. The composition of the PMER costs is provided in Figure 8.5, while the programming of those costs to 2030 is given in Table 8.7.

Figure 8.5: Composition of Planning, Monitoring, Evaluation and Reporting

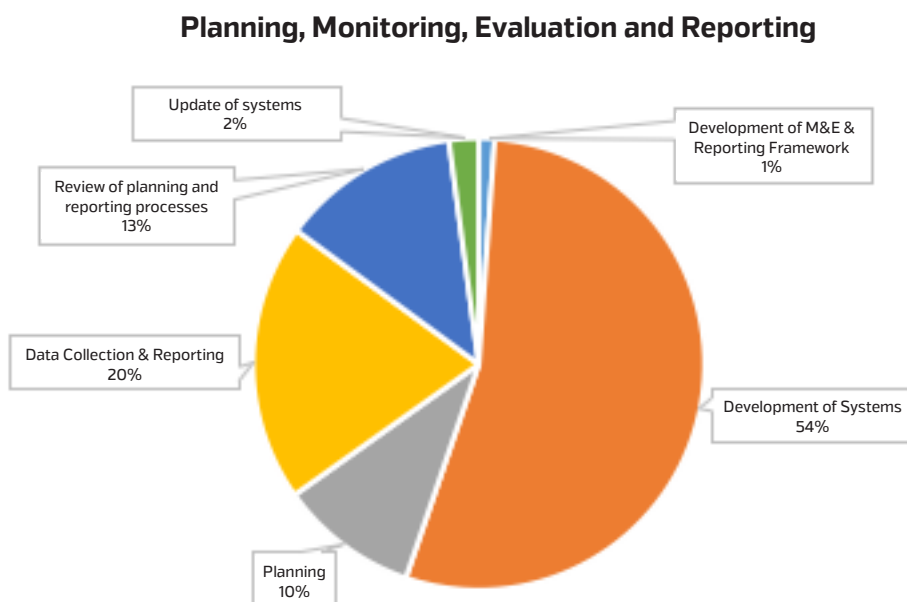
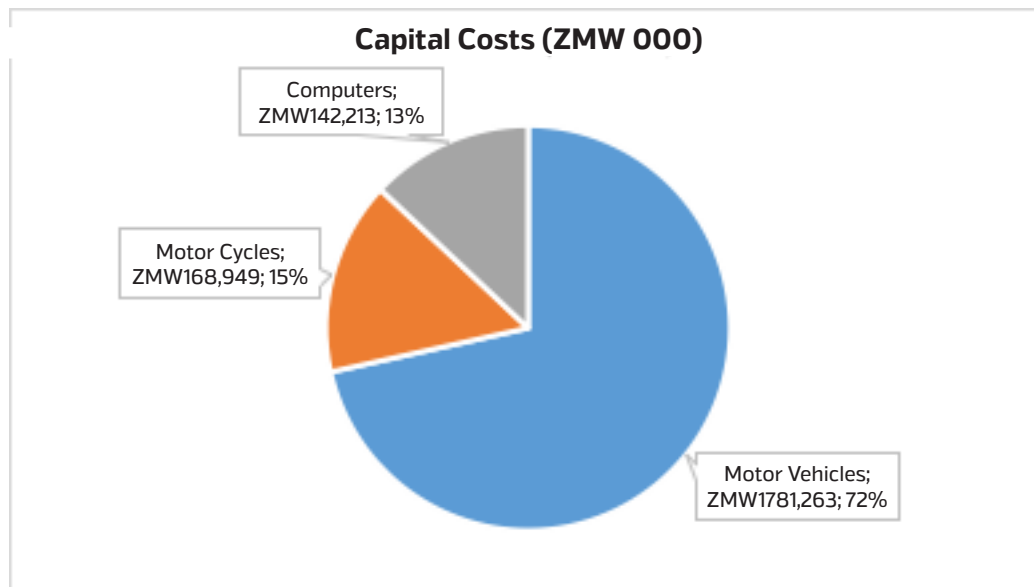


Table 8.8: Planning, Monitoring, Evaluation and Reporting Costs (ZMW 000)

Year	2016 - 2021	2022 - 2026	2027 - 2030	Total
Development of M&E & Reporting Framework	ZMW2 650	ZMW0	ZMW0	ZMW2 650
Deployment of Systems	ZMW29 494	ZMW47 981	ZMW49 828	ZMW127 303
Planning	ZMW6 276	ZMW8 398	ZMW8 721	ZMW23 395
Data Collection & Reporting	ZMW12 551	ZMW16 794	ZMW17 441	ZMW46 786
Review of planning and reporting processes	ZMW5 689	ZMW11 997	ZMW12 459	ZMW30 145
Update of systems	ZMW0	ZMW2 128	ZMW2 848	ZMW4 976
Planning, Monitoring, Evaluation and Reporting	ZMW56 660	ZMW87 298	ZMW91 297	ZMW235 255

8.3 Programme Logistical Capital Costs

The breakdown and timing of the logistical capital costs included in the programme, such as motor vehicles, motor cycles and ICT hardware and software in the sum of nearly ZMW 1.1 billion is given in Figure 8.6: Composition of Capital Costs (ZMW) Table 8.9

Figure 8.6: Composition of Capital Costs (ZMW)**Table 8.9: Programme Capital Costs**

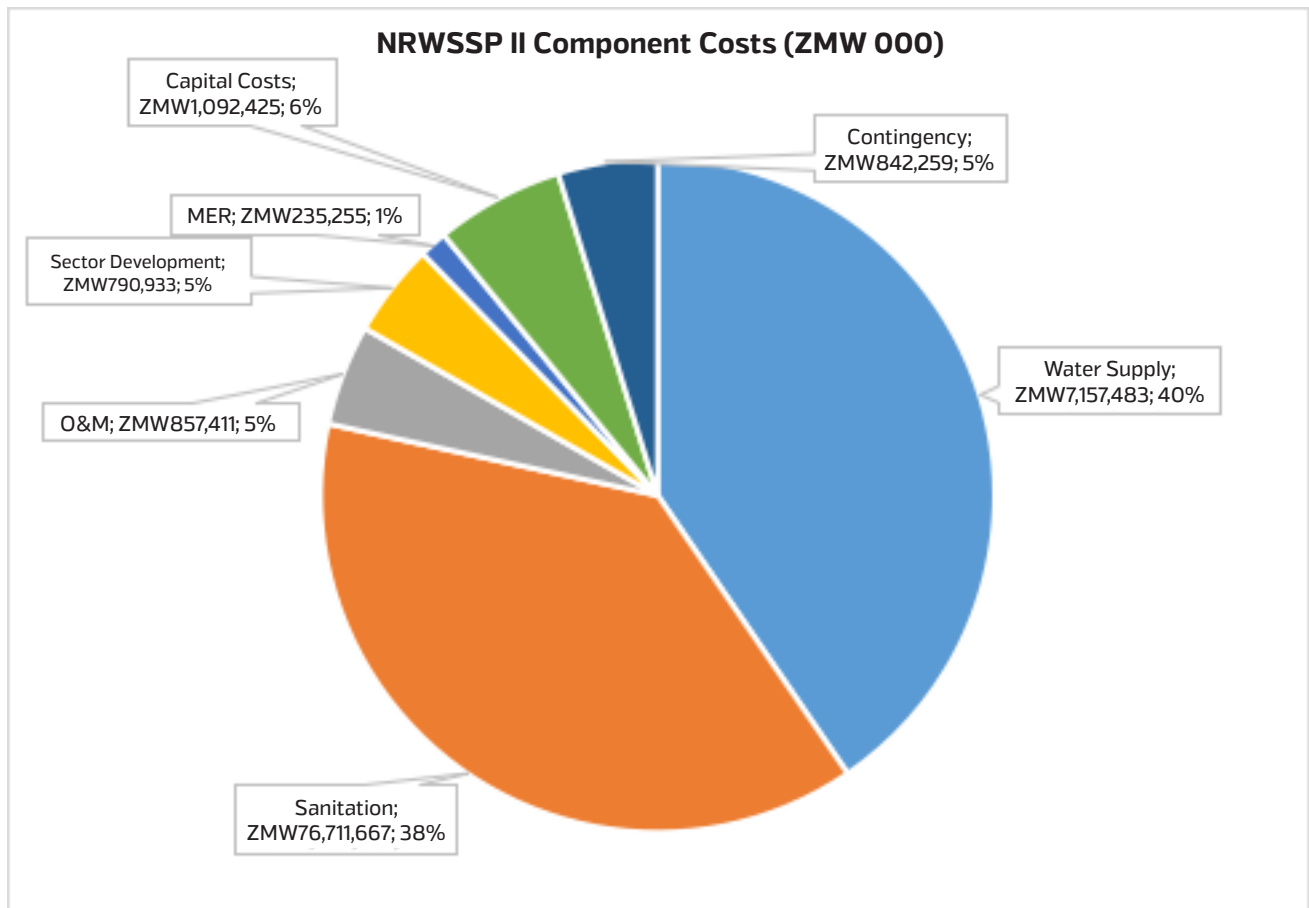
Year	2016 – 2021	2022 - 2026	2027 - 2030	Total
Motor Vehicles	ZMW189 210 000	ZMW253 206 000	ZMW338 847 000	ZMW781 263 000
Motor Cycles	ZMW50 630 000	ZMW71 821 000	ZMW46 498 000	ZMW168 949 000
Computers	ZMW42 618 000	ZMW60 455 000	ZMW39 140 000	ZMW142 213 000
Total Capital Costs	ZMW282 458 000	ZMW385 482 000	ZMW424 485 000	ZMW1 092 425 000

Annual logistical capital costs are in Appendix 9

8.4 Summary of Projected Programme Costs

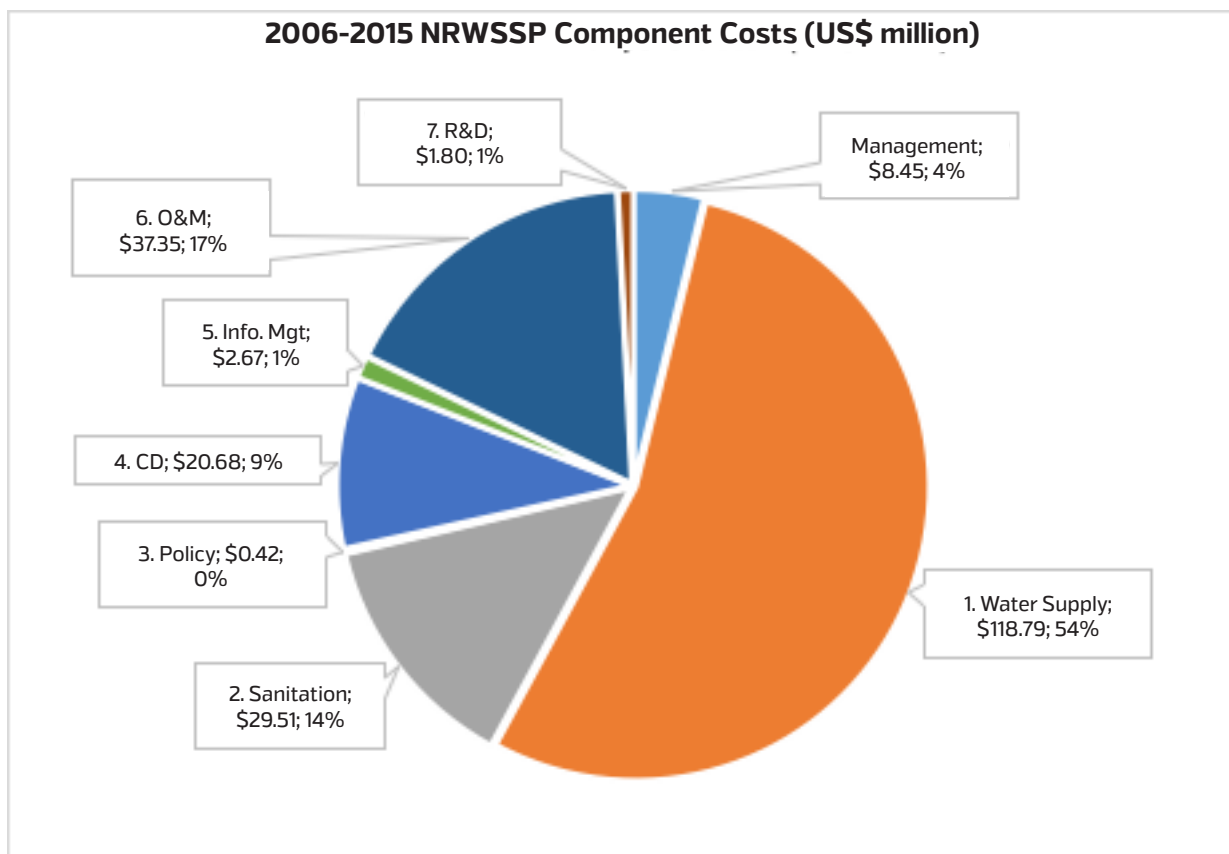
The total projected programme cost is just over ZMW 17.6 billion to the year 2030. The composition of that cost is provided in Figure 8.7. The detailed annual programme costs by component projections are provided in Appendix 10.

Figure 8.7: Programme Component Cost Composition



For purposes of comparison, the projected cost of water supply has fallen from 54% in the NRWSSP I to 41% in the NRWSSP II, while that of sanitation has more than doubled from 14% to 37%. This is a reflection of a key lesson learned from the NRWSSP I with respect to the correlation between water supply and sanitation and the high economic cost of bad sanitation. The NRWSSP I cost composition is provided in Figure 8.8. However, O&M has fallen from 17% to 5%.

Figure 8.8: NRWSSP (2006 – 2015) Projected Cost Composition



The programming of costs for the NRWSSP II to the year 2030 by component is provided in Table 8.10.

Table 8.10: Programme Cost and Phasing (ZMW 000)

Year	2016 - 2021	2022 - 2026	2027 - 2030	Total	Percentage
Component 1: Water Supply	ZMW1,708,489	ZMW2,437,110	ZMW3,011,884	ZMW7,157,483	40.5%
Component 2: Sanitation and Hygiene Promotion	ZMW1,670,426	ZMW2,289,324	ZMW2,751,917	ZMW6,711,667	37.9%
Component 3: O&M	ZMW168,789	ZMW266,851	ZMW421,771	ZMW857,411	4.8%
Component 4: Sector Development	ZMW171,315	ZMW299,039	ZMW320,579	ZMW790,933	4.5%
Component 5: PMER	ZMW56,660	ZMW87,298	ZMW91,297	ZMW235,255	1.3%
Total Component Costs	ZMW3,775,679	ZMW5,379,622	ZMW6,597,448	ZMW15,752,749	89.1%
Capital Costs	ZMW282,458	ZMW385,482	ZMW424,485	ZMW1,092,425	6.2%
Total	ZMW4,058,137	ZMW5,765,104	ZMW7,021,933	ZMW16,845,174	95.2%
Contingency @	5%				
Contingency	ZMW202,907	ZMW288,255	ZMW351,097	ZMW842,259	4.8%
Grand Total	ZMW4,261,044	ZMW6,053,359	ZMW7,373,030	ZMW17,687,433	100.0%

8.5 Programme Financing

The approach to funding the programme is based on two fundamental principles:

- A Sector Wide Approach (SWAp) where the contributions from GRZ and CPs are combined into a single account and disbursed in a nationally consistent manner.
- Decentralisation of responsibility to local government (local authorities in this case). GRZ, with the assistance of CPs, is currently designing a Water Sector Financing Mechanism. The programme financing, is split as follows: GRZ (30%), the CPs, including international NGOs (55% including climate funds), the LAs as the mandated implementers (10%) and the community as users of the service (5% mostly capital contributions for water point development and O&M costs). Using that assumption, Figure 8-9 and table 8-11 shows the proposed financing by source.

Figure 8.9: Programme Financing

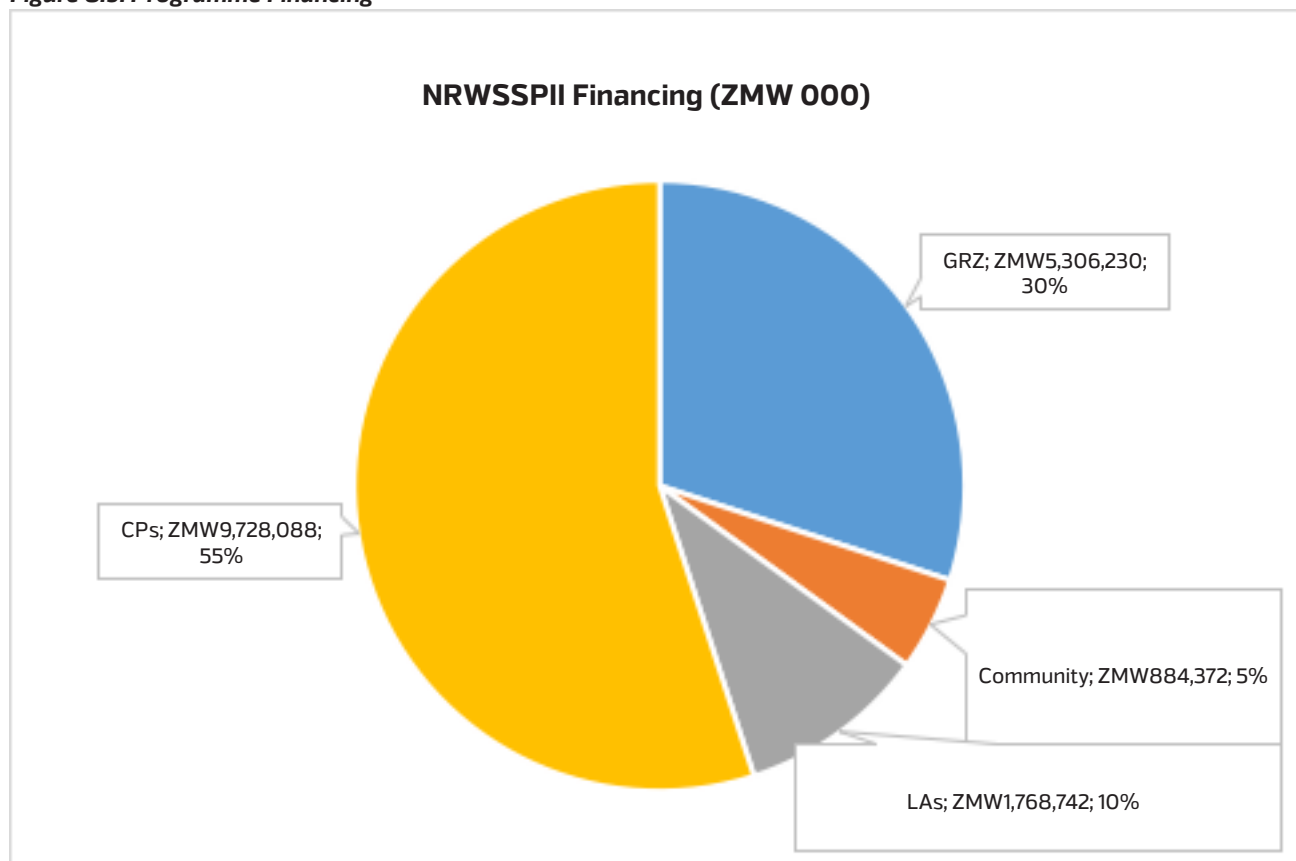


Table 8.11 shows programme cost and contributions

Source	Amount ('000)	Percentage
GRZ	ZMW5,306,230	30%
Community	ZMW884,372	5%
LAs	ZMW1,768,743	10%
CPs	ZMW9,728,088	55%
Total	ZMW17,687,433	100%
	ZMW17,687,433	100%

8.5.1 Community Contributions for WSS O&M

The user communities through regular contributions that will be determined by each user community, assisted by the WDC and the LA., will meet the costs for operations and maintenance of water points. The user communities' contributions could either be deposited in the community bank account, or deposited with the LA. Furthermore, the community can find a better system of storing the funds for O&M with the approval of the WDC and the LA.

Rehabilitation works will be financed by GRZ through the LAs. The criteria for determining whether the works to be undertaken are ordinary O&M or its rehabilitation is as provided in the previous section of this programme document.

The operation and maintenance of sanitation facilities including rehabilitations will be borne by the users/owners.

8.6 Programme Procurement

The Procurement of goods and services under this programme will be guided by Zambia Public Procurement Act No.12 of 2008.

9. ASSUMPTIONS, RISKS AND MITIGATION STRATEGIES

9.1 Introduction

This section highlights the external conditions needed to be able to reach specified achievements, whether at the input, output or outcome level. The assumptions for the successful implementation of the NRWSSP II, broken down by Programme Component, are provided in the logical framework (see Appendix 3)

It further discusses the variability of expected future (uncertain) outcomes arising from implementation of the programme as well risk mitigation strategies. The risks and mitigation strategies are grouped in terms of costs and their underlying assumptions and programme implementation risks.

9.2 Assumptions

The overall assumptions for the NRWSSP II are summarised in the following table.

Table 9.1: Summary of Overall Assumptions for NRWSSP II and its components.

Overall Assumptions for NRWSSP II and its components.
1. Government and CPs will remain committed and actualize allocation of adequate resources to the sub-sector.
2. The policy environment will be supportive of the sector.
3. Decentralization will be fully implemented.
4. There will be adequate sector coordination.
5. There will be adequate enforcement of regulations.
6. All sector stakeholders and CPs will be willing to support and abide by set standards.
7. There will be adequate good governance systems in place.
8. Communities will be willing to support RWSS initiatives.
9. WDCs will be fully established and operational.
10. Appropriate and effective water supply technologies will be promoted.
11. There will be readily available spare parts in all districts through LA and private shops.
12. Research will produce relevant evidence and technologies that will lead to improved water and sanitation sector.
13. Government will deliberately engage training institutions and students in higher learning institutions to undertake R&D on water and sanitation.
14. Higher education institutions will develop appropriate curricula that will be responsive to the needs of the sector.
15. Budget allocated to the sector will be adequate and timely released.
16. Government will take a lead and coordinate the Climate Change adaptation initiatives.
17. There will be a robust Framework & Actions on DRR implementation.
18. Communities will be willing to adopt Climate Smart Knowledge, Attitudes and Practices.
19. The Draft M&E Framework is approved and fully implemented.
20. By 2020 all districts are reporting to WASH MIS.
21. WASH MIS captures all necessary water and sanitation data, also covering institutional facilities.
22. There will be a robust monitoring system that will inform and trigger early preventative rehabilitation processes.
23. Government will support a robust management information and dissemination system.
24. Coherent and easier to use sector information systems at national, provincial, district and sub-district levels
25. Sector information will be disseminated and will be easy to access by intended users (CPs and public).
26. Government institutions at all levels have the human resources for the data collection requirements of the improved MIS.
27. A phase by phase regulation of rural water supply and sanitation.
28. Efficient and effective domestic Borehole registering system by WARMA.

9.3 Implementation Risks

The programme will have the following anticipated implementation risks:

9.3.1 Delegated Risks

Higher level delegated decisions that are not well defined and communicated can pose a risk at various levels of programme implementation. Therefore, well-defined communication channels and thresholds are necessary for management of delegated strategic risks.

9.3.2 Programme Mix Risks

The design of the programme can give rise to a range of risks types (technical, management, commercial and external risks). This can be as a result of the interface from the programme components, implementation and management of the programme itself.

9.3.3 Project Risks Escalated

As a programme is an aggregate of individual projects, risks from an individual project or a collection of projects can have an impact at programme level. Therefore, a predefined escalation criteria, scope and suitable risk categorization is a critical success factor.

9.4 Mitigation Strategies

The NRWSSP II will promote robust risk planning, management and reviews at all levels of structures and activities to ensure success of objectives delivery.

Table 9.2 lists, not exhaustively, some of the possible risk categories and mitigation strategies the programme of this nature and duration might have to deal with.

Table 9.2: Possible risk categories and mitigation strategies

Risk Domain	Risk Event	Mitigation Strategy
Institutional	<p>Institutional set-up does not support effective Programme management.</p> <p>Ownership of the Programme objectives and results delivery becomes isolated or not fully integrated in the relevant structures.</p>	<ul style="list-style-type: none"> Engage with the key decision makers on setting the right support structures for the achievement of the national WSS objectives. Alignment of the programme implementation to relevant structures at all levels.
Policy/Legal	<p>Policy direction and Legal framework affects implementation of some programme elements. Lack of local government and stakeholder buy in.</p>	<ul style="list-style-type: none"> Design flexible Programme activities that will accommodate dynamism in policy and legal framework. Strengthen coordination mechanism and promote dialogue
Social	<p>Social conflicts prevent consensus on Demand Responsive Approach implementation.</p> <p>Lack of community participation and commitment to improve sanitation</p> <p>High turnover of trained sanitation champions and Area Pump Menders within rural communities.</p>	<ul style="list-style-type: none"> Community buy –in processes and procedures will be developed in context. Use of civic and traditional leadership will be promoted. Community Participation, Monitoring & Evaluation and Learning techniques will be promoted in all activities LA and sub-structures. LA shall ensure capacity is retained at all levels through refresher trainings and will use available government personnel at sub district level.

Risk Domain	Risk Event	Mitigation Strategy
Economic	<p>Financial commitments and budgetary allocation fall below critical level.</p> <p>CP financial pledges and actual support fall below expectations.</p> <p>Private sector fails to uptake and drive commercial side of goods and services.</p> <p>Communities unable to support the infrastructure investments and O&M due to poverty levels.</p>	<ul style="list-style-type: none"> • Increase the communication and advocacy activities to raise the financial needs for the rural WSS on the agenda. • To Engage the CPs effectively to increase financial support to WSS. • Undertake sensitization and support market promotion of new products/services by focusing on local supply chain establishment for fast moving spares and services. • Use the Demand Response Approach for appropriate technology selection that the community can sustain and support.
Technological	<p>WSS technologies and practices may not be well accepted by key stakeholders and end users.</p> <p>Appropriate technical equipment and expertise may not be readily available at local structures.</p>	<ul style="list-style-type: none"> • Communication and advocacy activities will be part of the standard procedures for buy-in. • Community Water and sanitation structures will be selected carefully to introduce and promote the concepts through a participatory process. • R&D focus will be on developing context based solutions and technologies dissemination. • Training of local expertise will be enhanced. • Private sector participation will be enhanced and encouraged. • Local knowledge and practices will be assessed and included where appropriate.
Environmental	<p>Weather extremes, natural disaster could affect water resources security and or public sanitation facilities.</p>	<ul style="list-style-type: none"> • Ensure Disaster Risk Reduction mechanisms and climate mitigation measures are included at all levels of planning and implementation.

The risks and mitigation measures presented in the table above are not conclusive. It is therefore, incumbent upon the programme implementers to continually scan the programme environment, identify risks and develop strategies to minimise the impact of the risks identified on the programme.

10. NRWSSP IMPLEMENTATION

10.1 Introduction

The NRWSSP II implementation plan has been developed to align with the SDGs, National Vision 2030, and the 7NDP.

10.2 Implementation Framework

10.2.1 General

To foster integrated planning and realize better outcomes and goals, the Seventh National Development Plan (7NDP) has been developed based on five pillars (clusters) namely: Economic diversification and job creation, Poverty and vulnerability reduction, reducing development inequalities, enhancing human development as well as creating a conducive governance environment for a diversified environment. The MWDSEP belongs to pillars one

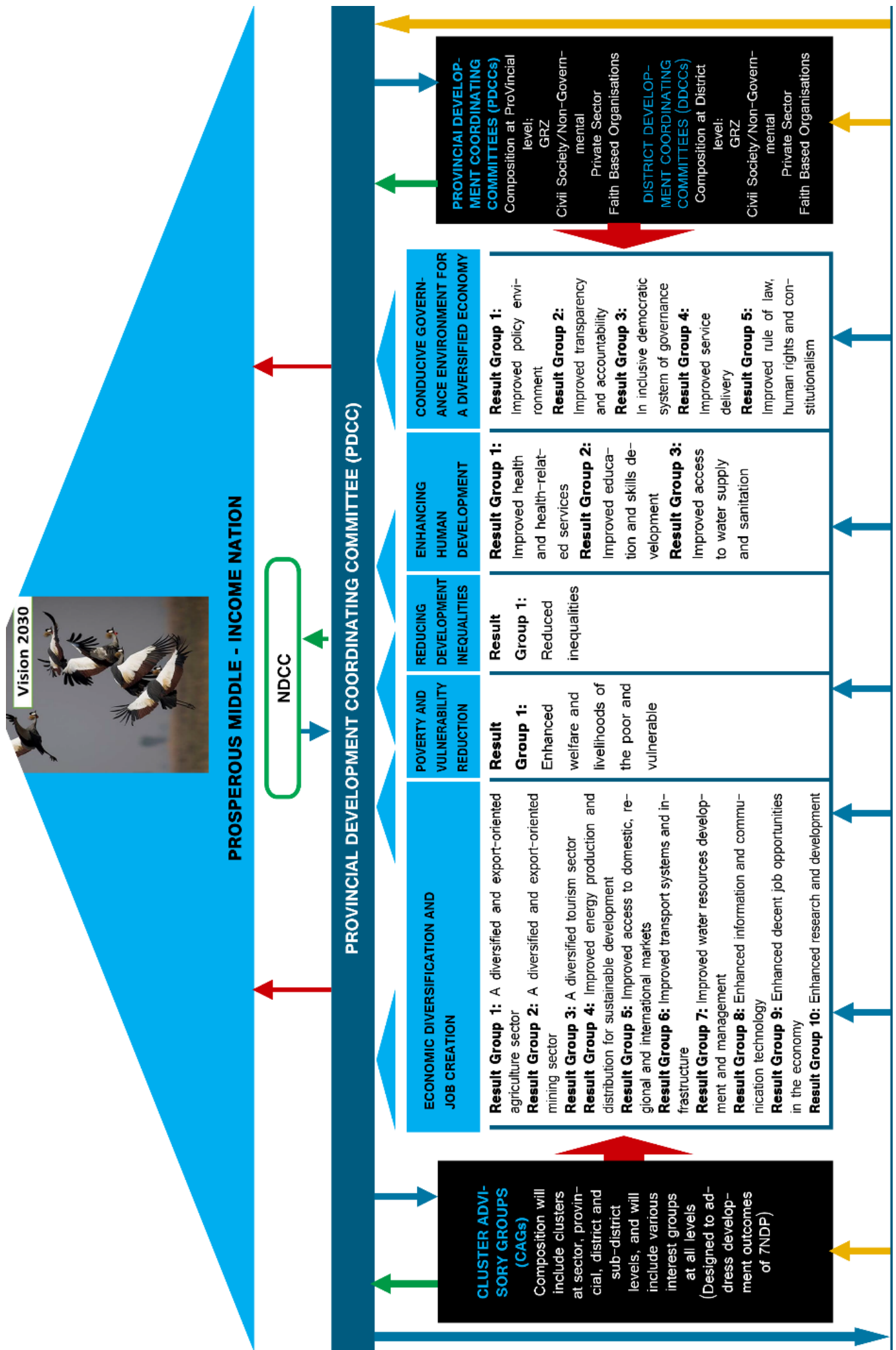
and four (Economic diversification and job creation and enhancing human development). Under the 7NDP, RWSS belongs to pillar four (enhancing human development). The implementation of the NRWSSP II will be in line with the Seventh National Development Plan (7NDP) structures such as Technical Working Groups (TWG), Cluster Advisory Groups (CAGs) and National Development Coordinating Committee (NDCC). See figure 10-1

The monitoring and evaluation of the NRWSSP will be based on the 7NDP implementation plan and successive NDP implementation plans.

The MWDSEP through the DWSS shall implement the NRWSSP II through the LAs and to some extent with CUs as the main Implementing Agents. In the rural areas, the CUs shall assume responsibilities for rehabilitation at growth centres that have piped schemes. While at public institutions such as schools and health facilities, water supply and sanitation shall be the responsibility of the respective institutions. LAs shall continue to be responsible for construction and rehabilitation of WSS facilities in rural settlements for point sources, such as boreholes, protected shallow wells as well as improved sanitation facilities in public institutions.

The MWDSEP shall work in close collaboration with MLG during data management and reporting mechanisms that take into account their specific roles and responsibilities. This shall be in form of technical working groups at national, provincial and district levels. At provincial and district levels, water related committees exist in the form of the **P-WASHE** and **D-WASHE** respectively, which will have to be strengthened in terms of content of reporting to reflect current realities of integrated approach to development. The P-WASHE and D-WASHE, besides coordination roles for the water sector, shall also report to the PDCC and DDCC respectively. The PDCC and DDCC are coordinating committees for integrated and multisectoral activities, whereas the P-WASHE and D-WASHE focus on coordination for the water sector feed into the PDCC and DDCC reporting. At national level, a Technical Working Committee/Group that ensures collaboration mainly with MWDSEP, and other line Ministries (MLG, MoH, MoCTA, MoGE), CPs and NGOs will have to be considered. The committee, shall also provide basis for reporting into Result 3: improved access to water supply and sanitation services.

Figure 10.1: Institutional Arrangements for coordinating CAGs at Sectoral/ Ministerial level



10.2.2 Programme Steering and Management

10.2.3 Programme Steering

The government established a steering committee for Water Supply and Sanitation (WSS) in November 2006 to take care of these issues and to function as a steering committee for all CP assisted projects, components and programmes.

This Steering Committee will be reconstituted in 2018 and its functions are to provide overall guidance and monitor the implementation of the programme. The PSC will mainly concern itself with matters related to policy and overall implementation of the NRWSSP II.

- (i) The committee will be chaired by the Permanent Secretary for the Ministry responsible for WSS and it will comprise other Permanent Secretaries from key line Ministries and all Provincial Permanent Secretaries, lead donor for Water Supply and Sanitation and the Directors of departments of WSS and Planning and Information. The directors from line Ministries will be alternate members to the steering committee.

A sub Technical Committees (TC) on water supply and sanitation will be appointed to promote a coordinated approach to implementation of the NRWSSP II. It will further provide technical advice to the programme steering committee on specific issues and functions related to implementation of the five components, sub-components and existing strategies. The technical committee will include technocrats from MWDSEP, other key line Ministries, CPs, NGOs and other key stakeholders. The TC meeting will be chaired by the MWDSEP.

10.2.4 Implementation Structures

All Provincial positions shall be filled with suitably qualified personnel, with specific job descriptions. The fully established Provincial Structure (Provincial Department of Water Supply and Sanitation, the P-WASHE Committee and the PDCC) comprises the critical units over the 2019-2030 life of the NRWSSP II. Under the mandate provided by the Decentralisation Act and Decentralisation Policy, their main role will be to provide a communication and planning platform and technical assistance to the districts on demand basis, facilitate building of capacity of the Local Authorities (LAs) to efficiently plan and implement rural water supply and sanitation projects.

The LAs have a RWSS Unit to implement water supply and sanitation activities in the districts. This Programme proposes an institutionalized and legalised WASHE framework with the decentralised structures at provincial and district levels. It is proposed that the D-WASHE should continue assisting the Council in the management of the RWSS sub-sector. Recruitment of suitably qualified staff and implementation consistency is critical for the success of the Programme.

The MWDSEP has the key responsibility for RWSS implementation. MWDSEP will provide policy guidance, technical and financial control over the implementation of the 2019-2030 NRWSSP II. Coordination with other key line Ministries is required for planning health/hygiene activities and in connection with institutional WSS facilities (schools and health centres) and MER.

The WDCs, which are now formal entities backed by legislation for effective implementation of projects, shall be responsible for coordination of development of community plans for socio-economic development, including WSS at the sub District level. Communities through their locally based committees (such as V-WASHE, neighbourhood health committees, farmers group etc.) will be responsible for preparing community profiles, planning with the help of WDCs and LAs, executing activities, and for the sustainable O&M of the RWSS facilities.

Additionally, there are key stakeholder groups supporting the process at national level such as the cooperating partners (CPs) group that meets monthly in support of reforms to the water sector and dialogue regarding policy issues. Also, the NGOs in the sector have established a formal forum aimed at enhancing cooperation and coordination in support of WSS development.

10.3 Implementation Planning Overview

10.3.1 Preliminary Activities

In order to implement the NRWSSP II, the following preliminary activities have been carried out or are anticipated at programme level

1. Programme Management

Setup management structures for the NRWSSP which shall comprise

- National Water Supply and Sanitation Steering Committee (NWSSSC)
- The WSS Sub Technical Committee and relevant working modalities
- Determine MoU requirements between Ministries or Agencies and MWDSEP for implementation of the programme
- Launch the NRWSSP II at all levels (National, Provincial, District and Sub-district covering all stakeholders) - commence advocacy for the NRWSSP II
- Establish M&E Framework and System for effective and efficient programme monitoring, evaluation and reporting.
- Knowledge management resource tool box was established under ICT of DPI. Component managers will be identified for the purpose of keeping the tool box up to date.

2. Investment Programme

- Establish financing mechanism to finance investment plans

3. Sector Development and Support

- Prioritise Sector development support components for implementation.
- Facilitate implementation of prioritised components.
- Strengthen P-WASHEs and D-WASHE linked to PDCC and DDCC respectively to ensure integrated approach
- Implement National Strategies, (i.e. Capacity Development, Urban and Peri-urban Sanitation, ODF, Communication, etc.)

4. Annual Plan

- Result based planning and budgeting anticipated during implementation of NRWSSP II.

10.3.2 Phase 1 (2018)

This shall be the preparatory phase in which policy and institutional arrangements have to be strengthened. The M&E system with data management and reporting made fully functional.

The MWDSEP/MLG and CUs/LAs will:

- implement the framework for provision and regulation of RWSS
- agree on and produce **common** standards of performance for RWSS service provision
- specify criteria to monitor those standards
- develop monitoring tools which use these criteria
- begin to make annual assessments of Local Authority performance in RWSS, through regulation.

At district level the RWSS sector shall, in alignment with the new programme:

- support and strengthen the D-WASHE committees
- review and develop their own Action Plans
- review and develop their own Investment Plans
- district Sanitation Plans need to be established
- Ensure plans are in line with MWDSEP's National Plans and policies
- Ensure the plans are in line with the district's Strategic Plans.

By the end of 2018, a detailed implementation plan shall be developed.

10.3.3 Phase 2 (2019 and beyond)

This shall be a fully-fledged implementation of the NRWSSP II

NRWSSP I generated many useful lessons, procedures and practices, which should be fully deployed nationally during the implementation of NRWSSP II. To this end, the Programme will develop Implementation plans based on the logical framework for the Programme (see Appendix 3). These implementation plans will need to be regularly reported on and updated.

The Programme will develop a suite of implementation tools to improve the efficiency and effectiveness of component activities implementation and the achievement of component results. In addition to the relevant policy documents discussed in Chapter 10.4, practical guidance for NRWSSP II implementation is provided by the various component strategies described in this Programme document and further elaborated in the key strategy documents, (both currently available and pending approval).

10.4 Implementation Mechanisms and Institutional Roles and Linkage

10.4.1 Ministerial Level

The MWDSEP, through the DWSS under the RWSS unit has overall responsibility for implementation of the Programme. The NRWSSP II will accelerate efforts with respect to devolution of roles and responsibilities from the Ministerial Level to Provinces and Districts and strengthening the human resources available at all three levels through recruitment of qualified staff for all approved positions and comprehensive capacity development.

10.4.2 Provincial Level

The WSS departments have been created at provincial level.

The core functions of the Provincial Structure will include:

- *Provide Technical Assistance and complement the MWDSEP efforts to provide guidance and support to districts on a demand responsive driven basis so as to facilitate the building of local capacity to develop and provide rural water supply and sanitation on a day to day basis.*
- *Provide support in Infrastructure Development, Sanitation and Hygiene Education, and Institutional Support and Capacity Building and in line with the policies, principles and strategies of the NRWSSP II.*

- *Coordinate and steer the P-WASHE structure with a clearly defined TOR so as to give guidance for different sector challenges and opportunities, hence bring in all the partners to act as a 'think tank' and advisory.*

10.4.3 District Level

The LAs through the RWSSUs are responsible for the programme implementation at district level in coordination with key line Ministries and other stakeholders who constitute the D-WASHE, Sub-District and Community Level.

At the community level, WDC shall be the centre of activity and provide the forum for planning and co-ordination of activities of the different sectors. Other administrative committees such as the Sanitation Action Group (SAGs), the neighbourhood health committees and V-WASHE Committees exist to promote sanitation and water point management respectively.

10.4.4 Commercial Utilities

In view of the Programme's adaptive approach and the alternative technologies that might be available for use in implementing water supply and sanitation services options, the institutional and technical capacities of the CUs shall be an important element of the implementation strategy of the programme. Different modalities for the CUs' engagement with the LAs and communities will be developed, documented and shared to accelerate Implementation of these modalities in different situation specific conditions. The CUs, which are currently primarily urban, pipe-systems oriented, will increasingly take up responsibilities for WSS facilities in the rural areas during the Programme period.

10.4.5 Regulatory Bodies

The four main regulators in the water sector are:

1. NWASCO for water supply and sanitation
2. WARMA for water resources management
3. ZEMA for environmental protection
4. ZABS for water quality standards.

NWASCO's functions include:

- Licensing service providers
- Developing sector guidelines
- Establishing and enforcing standards
- Advising government on WSS
- Advising LAs on institutional arrangements
- Disseminating information to consumers.

The regulatory mandate of NWASCO includes RWSS service provision. Specific guidelines for regulation of the RWSS sub-sector will be implemented during the period of NRWSSP II.

10.4.6 Traditional and Civic Leaders

Traditional and Civic leaders will continue to play their critical roles in creating awareness and enforcing agreed procedures and behaviour change among community members. NRWSSP II will, through the MoCTA, engage with traditional leaders in the provinces where appropriate for the implementation of RWSS activities in their areas.

10.5 Other Implementing Partners

10.5.1 Non-Governmental Organisations

The NGOs will be key implementing partners for the provision of WASH services as they have considerable experience from implementing community-based RWSS and Area-Based Projects (ABP). The NGOs in the WSS sector have an NGO Forum where they meet and share experiences. Through their Secretariat, the NGOs will raise their profile and visibility in the sector and further enhance harmonisation and reporting.

10.5.2 Cooperating Partners

GRZ and NRWSSP II are supported by a number of CPs, development Banks and donor agencies that provide funding and technical assistance to MWDSEP for Programme and related projects implementation. These were present and participated throughout the period of NRWSSP I and will continue to support Zambia during the period of the second phase of the Programme.

10.5.3 Community-Based Organisations

Community based organization (CBOs) are present in many communities and take the form of local NGOs and/or Community

Management Committees (e.g. traditional, political or specialised).

In NRWSSP I CBOs helped the communities to raise and upgrade their WSS facilities, alongside other civic issues. In NRWSSP II their experiences and expertise will be tapped to drive the Programme forward.

10.5.4 Private Sector

The private sector will continue providing services, supplies, expertise and support. Private sector participation plays a cardinal role in designing structures, construction, quality control and provision of services. Private sector actors include consultants, vendors, drillers, Area Pump Minders (APM), masons, etc.

10.6 Key Reference Documents for NRWSSP II Implementation

The main reference documents to guide the implementation of NRWSSP II are provided in the following table with details of their sources.

Table 10.1: Key reference documents to guide the implementation of NRWSSP II.

#	Title	Date	Source
National/global context:			
1	Zambia Vision 2030	12/2006	MFNP
2	Revised Sixth National Development Plan, 2013-2016	2014	MFNP
3	Seventh National Development Plan, 2017-2021	2017	MNDP
4	UN Sustainable Development Goals	2017	WHO/UNDP
5	The SDG Global Indicators	2017	JMP/UNICEF
6	WASH in the 2030 Agenda: New global indicators for drinking water, sanitation and hygiene	2017	WHO/JMP/UNICEF
7	The Step-by-step Monitoring Methodology for Indicator 6.2.1	10/2016	WHO/UNICEF
8	UN-Water Global Analysis and Assessment of Sanitation and drinking water	2017	GLAAS
Legal framework:			
9	Water Supply and Sanitation Act No. 28 of 1997	1997	NWASCO
10	The Environmental Management Act No. 12	2011	ZEMA
11	Water Resources Management Act No. 21 of 2011	2011	WARMA
12	The Public Health Act Cap 295	1995	MoH
13	The Local Government Act Cap 281	1995	MLGH
14	The Finance Act – 2004	2004	MFNP
15	The Public Procurement Act – 2008	2008	MFNP
16	The Anti-Corruption Act	2010	MoJ
17	The Urban and Regional Planning Act No. 3 of 2015	2015	MLGH
18	The Companies Act, Cap 388	2011	MCTI
19	Audit Committee Handbook – Ministry of Finance – 2016	2016	MoF
20	The Republican Constitution	2016	MoJ
21	Gazette Notice No. 836 of November 18, 2016	11/2016	Cabinet Office
22	The Zambian Standard, Water Supply Systems Demand Figures for Design – Guidelines - (ZS 361: 2009)	2009	ZABS
23	The Zambian Standard, Drinking Water Quality – Specification (First Revision)(ZS 190:2010)	2010	ZABS
24	Central Statistics Office 2010 Census Report	2010	MFNP
Policy/strategy framework:			
25	National Water Policy of 2010	02/2010	MEWD

#	Title	Date	Source
26	National Water Policy of 1994	11/1994	MEWD
27	Water Supply and Sanitation Policy	2019	MWDSEP
28	Zambia National Policy on Climate Change – 2016	2016	MoL
29	National Planning and Budgeting Policy – 2014	2014	MNDP
30	The National Anti-Corruption Policy	2009	MoJ
31	National Gender Policy (2014)	10/2014	MGCD
32	Revised Decentralisation Policy – 2013	2013	MLGH
33	Decentralisation Implementation Plan, 2009 – 2013	12/2009	MLGH
34	Framework for Provision and Regulation of RWSS	03/2018	NWASCO
NRWSSP documents:			
34	National Rural Water Supply Programme I, 2006-2015	11/2007	MLGH
35	National Urban Water Supply and Sanitation Programme, 2011 – 2030	02/2011	MLGH
36	Rural Water Supply and Sanitation Operation and Maintenance Implementation Manual & User Guide	12/2016	MWDSEP
37	Sanitation and Hygiene Component of the NRWSSP (2006 -2015)	2006	MLGH
38	National Water Supply and Sanitation Capacity Development Strategy (2015-2020)	11/2015	MLGH
39	National Urban and Peri Urban Sanitation Strategy (2015 -2030)	11/2015	MLGH
40	ODF Zambia Strategy 2018-2030	2018	MWDSEP
41	National Climate Change Response Strategy	12/2010	MTNR
42	The National Solid Waste Management Strategy	09/2004	MLGH
43	Integrated Water Resources Management and Water Resources Implementation Plan (2007-2030)	04/2008	MEWD/GWP/ZWP
44	Menstrual Hygiene Management Strategy 2016	/2016	MoGE
45	Monitoring and Evaluation Framework for the National Rural Water Supply and Sanitation Programme (Draft)	10/2017	MWDSEP
Review/evaluation reports:			
46	National Rural Water Supply and Sanitation Programme Mid-Term Review	01/2013	MLGH
47	Zambia: Joint Annual Water Sector Review-2014	10/2014	MLGH
48	Final Report: End of Term Evaluation of the NRWSSP, 2006-2015	11/2015	MLGH
49	Progress on Drinking Water and Sanitation: 2015 update and MDG Assessment	2015	WHO/UNICEF
50	Progress on Drinking Water, Sanitation and Hygiene, 2017 update on SGD baseline	07/2017	WHO/JMP/UNICEF
Background/other reports:			
51	Economic Impacts of Poor Sanitation	2012	World Bank WSP
52	Social Accountability: An introduction to the Concept and Emerging Practice.	2004	World Bank
53	The Impact of Climate Variability on Economic Growth and Poverty in Zambia	2008	Purdue University

Additional reference documents cited in the text are provided in Reference section.

11. PROGRAMME MONITORING AND EVALUATION

11.1 Introduction

The M&E framework for the water supply and sanitation sector is under development. Many strides have been made to establish an effective and reliable M&E framework and system. Goals, targets and indicators have been identified and aligned to SDGs, National Vision 2030 and the 7NDP.

11.2 Organisation of Monitoring System

It is anticipated that the MWDSEP shall establish an overall M&E system covering all sector functions under the Ministry such as WRM, WSS and EM, linked to the individual regulator information systems. The M&E function of the MWDSEP is under the DPI with two units consisting of ICT and the M&E. The M&E Unit has overall responsibility of the M&E, whereas the ICT is responsible for development and maintenance of ICT systems that include M&E.

The M&E system in covering the progress of implementation of the NRWSSP II shall include all five components, namely; water supply, sanitation and hygiene promotion, sustainable operation and maintenance, sector development and planning, monitoring, evaluation and reporting. Programme, targets, output and outcome indicators have been developed and aligned to the Vision 2030, SDGs and 7NDPs as stated above.

The reporting on rural WSS will be undertaken based on existing reporting structures and data availability. Measures shall be put in place for further improvement on quality of reporting in having more complete data and information by improving data collecting mechanisms in rural areas.

11.3 Maintenance of the M&E System

The ICT Unit of the DPI are responsible for maintenance of ICT in the MWDSEP, including development and installation of systems and Ministry websites.

11.3.1 Use of the M&E system

The M&E framework shall be used by

- Sector players and implementing agencies to monitor and evaluate sector performance
- DPI in collaboration with DWSS to monitor and evaluate progress on implementation of the NRWSSP, determine any policy, programme and strategic measure to support provincial and local structures in improving implementation

11.4 Targets and Indicators

- The targets for the RWSS are in line with the Vision 2030 target, SDGs and 7NDP as outlined earlier. The output indicators for Programme activities are primarily numbers or percentages of population with access to safe drinking water supply and sanitation facilities, which are regularly measured by service providers and will be included in the NRWSSP II progress reports.

11.4.1 Vision 2030 and 7NDP Indicators

- The Vision 2030 and 7NDP gives the targets and performance indicators for the national sector programme.

11.4.2 Logical Framework Indicators

The Programme's expected Outcomes/Results are provided in the NRWSSP II logical framework (see Appendix 3) and in Chapter 2.4 Table 2.1 above. Indicators which can be used to objectively verify the progress and achievement of the Outcomes/Results are also included in the logical framework matrix.

11.4.3 Key Performance Indicators

The priority or 'Key performance indicators' for Programme evaluation are selected from SDGs, Vision 2030 and The Key performance indicators are given in the Table 11 (Key performance indicators).

Table 11.1: Key performance indicators

The outcome indicators that will be used to track progress towards improving access to water supply and sanitation are listed in the table below.

OUTCOME INDICATORS FOR IMPROVED ACCESS TO WATER SUPPLY AND SANITATION

Outcome Indicators	Baseline	Year of Baseline	Target 2021	Target 2030
Percentage of Households with access to improved drinking water				
Rural	46.6	2013-14	67.0	100
Percentage of Households with access to improved sanitation				
Rural	18.5	2013-14	37.0	90.0
Percentage of water samples from a representative sample of water points that meet ZBS/WHO				
	64.0	2017	100	100

The table below shows the strategies, programmes, outputs, indicators and targets to be implemented to improve access to water supply and sanitation.

Table 11.2

Output Targets and Indicators: Improved access to water supply and sanitation

Strategy 1: Enhance provision of adequate safe water and sanitation										
Programmes	Programme Outputs	Output Indicator	Baseline	Plan target	Target					
					2017	2018	2019	2020	2021	2030
(a)Water quality monitoring improvement	Water quality systems strengthened	Number of additional water quality assurance facilities*	10*	130	10	10	20	30	40	130
		Percentage of water points whose water samples meet the National drinking water standards (ZBS/WHO)	<i>Data not available</i>	100	0	0	20	30	50	100
		Percentage of districts with water safety plans	0	100	0	0	20	35	50	100

Water Supply and Sanitation Improvement	Water Supply and Sanitation Services Improved	Percentage of population with access to basic drinking water source (Rural)	44	100	44	48	54	60	70	100
		Percentage of population with access to Safely Managed drinking water source (Rural)	0	100	0	10	20	30	40	100
		Percentage of population with access to Basic Sanitation Services (Rural)	30	90	35	40	45	50	55	90
		Percentage of population with access to Safely Managed Sanitation Services (Rural)	34	90	32	35	40	45	50	90
		Percentage of population practicing Open Defecation (Rural)	22	0	22	18	15	12	10	0
		Proportion of Health Care Facilities with Basic Water Supply Services	50	100	55	60	65	70	70	100
		Proportion of Health Care Facilities with Basic Sanitation Services	50	100	55	60	65	70	70	100
		Proportion of Schools with Basic Water Supply facilities	20	100	25	30	35	40	40	100
		Proportion of Schools with Basic Sanitation facilities	20	100	25	30	35	40	40	100
	Hygiene Practices in Households and Communities improved	Percentage of population having a Handwashing facility with Soap and Water	13	90	20	25	30	35	40	90

Communication and advocacy enhancement	Policy Framework for WASH Sector strengthened	WASH Behaviour Change Communication and Advocacy Strategy Developed	0	1	0	0	1	0	0	0
		WASH Gender Guidelines Developed	0	1	0	0	1	0	0	0
		WASH Capacity Development Strategy Reviewed and Developed	1	1	0	0	0	0	1	0
Multi-Sectoral Coordination to Water and Sanitation provision enhanced	Multi-Sectoral Coordination to Water and Sanitation provision strengthened	Government-led WASH Sector Coordination Mechanism (SCM) established	0	1	0	1	0	0	0	0
		National Water Supply, Sanitation and Solid Waste Policy and Strategies in place	0	1	0	1	0	0	0	0
Strategy 2: Improve availability of water and sanitation infrastructure										
Sustainable Operation and Maintenance of Water Supply and Sanitation Infrastructure	Management of Water Supply and Sanitation Infrastructure enhanced	Percentage of functional water points	70	100	74	78	82	86	90	100
Strategy 3: Enhance research in water supply and sanitation services										
Research and knowledge management improvement	Evidence based decision making on water and sanitation services enhanced	Number of additional applied research publication on WASH Sector per year	0	10	1	1	1	1	1	5
		Functional MIS for water and sanitation	0	1	0	1	0	0	0	0
Strategy 4: Promote alternative financing for water and sanitation										
Basket financing promotion	Sustainable mechanism for financing of water and sanitation services established and operational	Basket fund for water and sanitation sector established	0	1	0.5	1	0	0	0	0

* Facilities can also mean portalabs

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APPENDICES

APPENDIX 1: CSO Rural Population Projections to 2030

Province	2015	2016	2017	2018	2019	2020	2021	2022
Central	1,130,609	1,161,785	1,193,683	1,226,329	1,259,737	1,293,919	1,328,910	1,364,771
Copperbelt	402,421	406,647	410,867	415,086	419,301	423,511	427,724	431,952
Eastern	1,592,260	1,632,622	1,673,819	1,715,879	1,758,817	1,802,643	1,847,401	1,893,170
Luapula	890,159	908,053	926,202	944,614	963,294	982,240	1,001,471	1,021,020
Lusaka	396,823	409,588	422,713	436,213	450,097	464,374	479,059	494,181
Muchinga	683,328	702,391	721,906	741,885	762,338	783,273	804,713	826,694
Northern	1,057,125	1,089,255	1,122,228	1,156,076	1,190,816	1,226,466	1,263,065	1,300,681
North Western	607,392	615,098	622,827	630,583	638,365	646,170	654,012	661,905
Southern	1,374,255	1,410,079	1,446,673	1,484,062	1,522,263	1,561,285	1,601,167	1,641,979
Western	867,275	883,216	899,346	915,675	932,203	948,930	965,870	983,058
Zambia	9,001,647	9,218,734	9,440,264	9,666,402	9,897,231	10,132,811	10,373,392	10,619,411

Province	2023	2024	2025	2026	2027	2028	2029	2030
Central	1,401,567	1,439,374	1,478,270	1,518,343	1,559,655	1,602,248	1,646,159	1,691,415
Copperbelt	436,210	440,513	444,877	449,319	453,848	458,466	463,171	467,964
Eastern	1,940,029	1,988,077	2,037,415	2,088,155	2,140,372	2,194,113	2,249,419	2,306,316
Luapula	1,040,928	1,061,240	1,081,999	1,103,256	1,125,043	1,147,372	1,170,256	1,193,699
Lusaka	509,769	525,853	542,471	559,659	577,448	595,861	614,916	634,635
Muchinga	849,255	872,446	896,312	920,909	946,273	972,432	999,408	1,027,221
Northern	1,339,382	1,379,246	1,420,357	1,462,809	1,506,673	1,551,998	1,598,832	1,647,210
North Western	669,874	677,944	686,140	694,491	703,006	711,691	720,547	729,572
Southern	1,683,794	1,726,700	1,770,784	1,816,146	1,862,856	1,910,958	1,960,488	2,011,474
Western	1,000,528	1,018,321	1,036,479	1,055,047	1,074,054	1,093,509	1,113,421	1,133,791
Zambia	10,871,336	11,129,714	11,395,104	11,668,134	11,949,228	12,238,648	12,536,617	12,843,297

Source: Table A4 (CSO, 2013)

APPENDIX 2: The Sustainable Development Goals relevant to WSS

GOAL 1: 'End poverty in all its forms everywhere.'	
TARGET	INDICATOR
1.4. By 2030, ensure that all men and women in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services including microfinance.	1.4.1. Proportion of population living in households with access to basic services.
GOAL 4: 'Ensure inclusive and equitable quality education and promote lifelong learning opportunities'	
TARGET	INDICATOR
4.a. Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.	4.a.1. Proportion of schools with access to (a) electricity ; (b) the internet for pedagogical purposes ; (c) computers for pedagogical purposes ; (d) adapted infrastructure and materials for students with disabilities ; (e) basic drinking water ; (f) single-sex basic sanitation facilities ; and (g) basic handwashing facilities(as per the WASH indicator definitions)

GOAL 5 : 'Achieve gender equality and empower all women and children'	
TARGET	INDICATOR
5.5. Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.	5.5.1. Proportion of seats held by women in (a) national parliaments and (b) local governments
	5.5.2. Proportion of women in managerial positions
5.c. Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	5.c.1. Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment
GOAL 6 : 'Ensure availability and sustainable management of water and sanitation for all'	
TARGET	INDICATOR
6.1. By 2030, achieve universal and equitable access to safely and affordable drinking water for all.	6.1.1. Proportion of population using safely managed drinking water services.
6.2. By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.	6.2.1. Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water.
6.3. By 2030, improve water quality by reducing pollution, eliminating, dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.1. Proportion of wastewater safely treated
	6.3.2. Proportion of bodies of water with good ambient water quality
6.4. By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.1. Change in water-use efficiency over time
6.a. By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	6.a.1. Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan.
6.b. Support and strengthen the participation of local communities in improving water and sanitation management	6.b.1. Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management
GOAL 11 : 'Make cities and human settlements inclusive, safe, resilient and sustainable'	
TARGET	INDICATORS
11.6. By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	11.6.1. Proportion of urban solid waste regularly collected and with adequate final discharge out of total solid waste generated, by cities
GOAL 12 : 'Ensure sustainable consumption and production patterns'	
TARGET	INDICATORS
12.5. By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5.1. National recycling rate, tons of material recycled

*Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.

APPENDIX 3: Programme Log Frame

	Objectively Verifiable Indicators	Sources of Verification	Assumptions
<p>Overall Objective:</p> <p>Sustainable and equitable access to safe water and adequate sanitation to meet basic needs for improved health and poverty alleviation for all of Zambia's rural population in line with Sustainable Development goals for Water Supply and Sanitation, vision 2030 and the National Development Plan.</p>	% of Households with access to improved drinking water and sanitation	CSO socio-economic and health reports. WASH Management Information System Progress Reports JMP	Continued Government and Cooperating Partners funding of the NRWSSP
<p>Programme Objectives:</p> <p>Water</p> <p>-1. To increase and improve the number of functioning WS facilities in rural areas through systematic investments in new water supply facilities, rehabilitation, proper operations and maintenance of existing facilities.</p>	<p>% of population with access to basic drinking water source</p> <p>% of population with access to safely managed drinking water source</p> <p>Proportion of health care facilities with basic water supply services</p> <p>Proportion of schools with basic water supply facilities</p> <p>Number of additional water quality assurance facilities</p> <p>% of Water Points whose water samples meet the national drinking water standards (ZBS/WHO)</p> <p>% of districts with water safety plans</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	<p>Common agreement between GRZ and Cooperating Partners on coordination and financing mechanisms</p> <p>Policy environment remains supportive of the sector</p> <p>Appropriate and effective water supply technologies are promoted</p> <p>WASH MIS functional</p> <p>Common agreement between GRZ and Cooperating Partners on coordination and financing mechanisms</p> <p>Policy environment remains supportive of the sector</p> <p>Appropriate and effective water supply technologies are promoted</p> <p>WASH MIS functional</p>
<p>Sanitation and Hygiene Promotion</p> <p>2. To increase access to adequate and appropriate environmentally friendly sanitation facilities to 90% by 2030 at household level and public institutions in rural areas through hygiene promotion, sanitation marketing, construction of facilities and legal enforcement.</p>	<p>% of population with access to basic sanitation services</p> <p>% of population with access to safely managed sanitation services</p> <p>% of the population practicing open defecation</p> <p>Proportion of health care facilities with basic sanitation services</p> <p>Proportion of schools with basic sanitation facilities</p> <p>% of population having a hand washing facility with soap and water</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	
<p>1. Sustainable Operations and Maintenance</p> <p>To increase and improve the number of functioning WS facilities in rural areas through systematic investments in new water supply facilities, rehabilitation, proper operations and maintenance of existing facilities.</p>	<p>% of functional water points</p> <p>Number of districts with functional spare part shops</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	

<p>Sector Development</p> <p>To strengthen systems for enhanced service delivery in the Water Supply and Sanitation sub-sector.</p>	<p>Government led WASH Sector coordination Mechanism</p> <p>National Water Supply, Sanitation and Solid Waste Management Policy</p> <p>Basket Fund for Water Supply and Sanitation</p> <p>WASH Behaviour Change Communication And Advocacy Strategy</p> <p>WASH Gender Guidelines</p> <p>Review of WASH Capacity Development Strategy</p> <p>Number of Provinces with functional PWASHE</p> <p>Number of districts with functional DWASHE</p> <p>% of trained APMs</p> <p>% of trained Community Champions</p> <p>Proportion of functional water committees against the number of water points</p> <p>Number of additional applied research publication of WASH sector per year</p> <p>Number of launch and dissemination event for the NRWSSP II at National, Provincial, Districts and sub district levels</p> <p>Number of media conducted events</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports
<p>Planning Monitoring, Evaluation and Reporting</p> <p>To improve performance of the RWSS sub-sector in planning, implementation and management of RWSS through effective monitoring, evaluation and reporting.</p>	<p>Functional MIS for Water and Sanitation</p> <p>Presence of functional WASH MIS at all levels (National, Provincial, District and sub districts)</p> <p>WASH M&E Framework operational</p> <p>Increased number of provinces with improved sector monitoring and performance reporting</p> <p>Increased number of districts with improved sector monitoring and performance reporting</p> <p>National plan for WASH related surveys in place and implemented</p> <p>Improved data management and usage systems (M&E, MIS and others) established at national, provincial and district levels</p> <p>% of districts reporting timely and complete data to the WASH MIS</p> <p>% of community champions reporting consistently in the WASH MIS</p> <p>Reporting rates at districts and provincial levels</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports

Results/Outcomes:			
<p>Water</p> <p>1.1 Increased % of population with access to basic drinking water source</p> <p>1.2 Increased % of population with access to safely managed drinking water source</p> <p>1.3 Increased proportion of health care facilities with basic water supply services</p> <p>1.4 Increased proportion of schools with basic water supply facilities</p> <p>1.5 Increased number of additional water quality assurance facilities</p> <p>1.6 Increased number of Water Points whose water samples meet the national drinking water standards (ZBS/WHO)</p> <p>1.7 Increased number of districts with water safety plans</p>	<p>Basic Water Supply Coverage increased from 44% (2016) to 70 % (2021) and finally to 100% by 2030</p> <p>Safely Managed Water Supply Coverage increased from 0% (2016) to 40 % (2021) and finally to 100% by 2030</p> <p>Basic water supply services in health care facilities increase from 50% (2016) to 70% (2021) and finally to 100% by 2030</p> <p>Basic water supply facilities in schools increase from 20% (2016) to 40% (2021) and finally to 100% by 2030</p> <p>Increased number of additional water quality assurance facilities from 10% (2016) to 40% (2021) to finally 100% (2030)</p> <p>increased number of Water Points whose water samples meet the national drinking water standards (ZBS/WHO) from 0 (2016) to 50% (2021) and finally 100% (2030)</p> <p>Increased % of districts with water safety plans from 0% (2016) to 50% (2021) and finally 100% by 2030</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	<p>Timely and sufficient allocation of resources to RWSS sector by GRZ and Cooperating Partners</p>
<p>Sanitation</p> <p>1.1. Increased % of population with access to basic sanitation services</p> <p>1.2. Increased % of population with access to safely managed sanitation services</p> <p>1.3. Reduced % of the population practicing open defecation</p> <p>1.4. Increased proportion of health care facilities with basic sanitation services</p> <p>1.5. Increased proportion of schools with basic sanitation services</p> <p>1.6. Increased % of population having a hand washing facility with soap and water</p>	<p>Basic sanitation coverage increased from 30% (2016) to 55 % (2021) and finally to 90% by 2030</p> <p>Safely Managed sanitation coverage increased from 34% (2016) to 50 % (2021) and finally to 90% by 2030</p> <p>Open defecation reduced from 22% (2016) to 10% (2021) and finally 0% by 2030</p> <p>Basic sanitation services in health care facilities increase from 50% (2016) to 70% (2021) and finally to 100% by 2030</p> <p>Basic sanitation facilities in schools increase from 20% (2016) to 40% (2021) and finally to 100% by 2030</p> <p>Increased % of population having a hand washing facility with soap and water from 13% (2016) to 40 (2021) and finally 90% by 2030</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	
<p>Sustainable Operations and Maintenance</p> <p>1.1. Increased % of functional water points</p> <p>1.2. Increased number of districts with functional spare part shops</p>	<p>Increased % of functional water points from 70% (2016) to 90% (2021) and finally 100% by 2030</p> <p>Increased number of districts with functional spare part shops from 55 (2016) to 90 and finally 130 by 2030</p>	<ul style="list-style-type: none"> • - CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	<p>Timely and sufficient allocation of resources to RWSS sector by GRZ and Cooperating Partners</p>

<p>Sector Development</p> <ol style="list-style-type: none"> 1.1. Government led WASH Sector coordination Mechanism established 1.2. National Water Supply, Sanitation and Solid Waste Management Policy developed 1.3. Basket Fund for Water Supply and Sanitation established 1.4. WASH Behaviour Change Communication And Advocacy Strategy developed 1.5. WASH Gender Guidelines developed 1.6. WASH Capacity Development Strategy reviewed 1.7. Increased number of Provinces with functional PWASHE 1.8. Increased number of districts with functional DWASHE 1.9. Increased % of trained APMs 1.10. Increased % of trained Community Champions 1.11. Increased proportion of functional water committees against the number of water points 1.12. Increased number of additional applied research publication of WASH sector per year 1.13. Increased number of launch and dissemination event for the NRWSSP II at National, Provincial, Districts and sub district levels 1.14. Increased number of media conducted events 	<p>Government led WASH Sector coordination Mechanism established by 2018</p> <p>National Water Supply, Sanitation and Solid Waste Management Policy developed by 2018</p> <p>Basket Fund for Water Supply and Sanitation established by 2018</p> <p>WASH Behaviour Change Communication And Advocacy Strategy developed by 2019</p> <p>WASH Gender Guidelines developed by 2019</p> <p>WASH Capacity Development Strategy reviewed by 2021</p> <p>Increased number of Provinces with functional PWASHE from 3 (2016) to 10 by 2021</p> <p>Increased number of districts with functional DWASHE from 68 (2016) to 130 by 2021</p> <p>Increased % of trained APMs from 55% (2016) to 100% by 2021</p> <p>Increased % of trained Community Champions from 55% (2016) to 100% by 2021</p> <p>Increased proportion of functional water committees against the number of water points from 40% (2016) to 100% by 2021</p> <p>Increased number of additional applied research publication of WASH sector per year from 0 (2016) to 5 (2021) to 10 by 2030</p> <p>Increased number of dissemination events for the NRWSSP II at National, Provincial, District and sub district levels - 10 provinces and all rural districts</p> <p>Increased number of media conducted events from 2 (2016) to 10 (2021) and 20 by 2030</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	<p>Partners and sector Ministries continue to support MLGH and local authorities as the lead WSS agencies</p>
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<p>Planning, Monitoring, Evaluation and Reporting</p> <ol style="list-style-type: none"> 1.1. WASH MIS functional 1.2. WASH MIS functional at all levels (National, Provincial, District and sub Districts) 1.3. WASH M&E Framework operational <ul style="list-style-type: none"> Number of provinces with improved sector monitoring and performance reporting increased Number of districts with improved sector monitoring and performance reporting increased 1.4. National plan for WASH related surveys in place and implemented 1.5. Improved data management and usage systems (M&E, MIS and others) established at national, provincial and district levels 1.6. Increased % of districts reporting timely and complete data to the WASH MIS 1.7. Increased % of community champions reporting consistently in the WASH MIS 1.8. Increased reporting rates at districts and provincial levels 	<p>Functional MIS for Water and Sanitation in place by 2018</p> <p>Presence of functional WASH MIS at all levels (National, Provincial, District and sub districts) by 2018</p> <p>WASH M&E Framework operational by 2019</p> <p>Increase the number of provinces with sector monitoring and performance reporting from 3 to 10 by 2019</p> <p>Increase the number of districts with sector monitoring and performance reporting from 68 in 2016 to 100 by 2019</p> <p>National plan for WASH related surveys in place and implemented by 2019</p> <p>Improved data management and usage systems (M&E, MIS and others) established at national, provincial and district levels by 2019</p> <p>Increased % of districts reporting timely and complete data to the WASH MIS from 55% in 2016 to 100% in 2021</p> <p>Increased % of community champions reporting consistently in the WASH MIS from 60% in 2016 to 100% in 2021</p> <p>Reporting rates at districts and provincial levels increased from 40% in 2016 to 100% in 2021</p>	<ul style="list-style-type: none"> • CSO reports; • WASH MIS Reports • JMP • Progress report • Midterm Review Reports 	<p>Decentralisation plan being implemented effectively</p>
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Activities	Inputs			
<p>Water</p> <p>1.1.1 Planning and construction of RWS facilities in all districts, with priority given to districts currently without major on-going RWSS programmes</p>	<ul style="list-style-type: none"> • Financial resources; • Technical assistance • Qualified personnel at all levels. • Supply of materials and equipment 	<ul style="list-style-type: none"> • Timely release of funds • Availability of construction materials in rural areas • Technical skills for investment, capacity building and O&M in rural areas 		
<p>Sanitation</p> <p>2.1.1. conduct sanitation and hygiene promotion activities in all districts using community approaches to sanitation, sanitation marketing and school led total sanitation</p> <p>2.1.2 Construction sanitation facilities in public institutions</p> <p>2.1.3 Procure hardware (phones and bicycles) to support hygiene promotion</p>				
<p>Sustainable Operations and Maintenance</p> <p>1.1.1 Planning and rehabilitation of RWS facilities in all districts,</p> <p>1.1.2 Design appropriate multi-tier O&M systems suited to different types of technologies</p> <p>1.1.3 Provide capacity building for relevant agencies at national, district and community levels to ensure successful implementation of the O&M systems.</p> <p>1.1.4 Procure hardware (tool kits, spare parts, phones and bicycles) to support operation and maintenance of water facilities</p>				
<p>Sector Development</p> <p>1.1.1 Train community structure and volunteers (VWASHE, NHCs, SAGs, CCs, APMs, Masons)</p> <p>1.1.2 Conduct capacity development at all levels for staff involved in the implementation of NRWSSP</p> <p>1.1.3 Institutional capacity development for implementing agencies</p> <p>1.1.4 Conduct communication and awareness activities to raise the profile of the NRWSSP</p> <p>1.1.5 Carry out applied research on technologies for RWSS, for varying physical environments</p>				
<p>Planning, Monitoring, Evaluation and Reporting</p> <p>1.1.1. Conduct midterm review of the NRWSSP</p> <p>1.1.2. Integrate and harmonise indicators into the WASH MIS</p> <p>1.1.3. Disseminate WASH M&E Framework</p> <p>1.1.4. Rollout the WASH MIS to all Districts</p> <p>1.1.5. Conduct water and sanitation national survey</p>				

APPENDIX 4: Underlying Cost Assumptions for Water and Sanitation.

General

- The projected cost escalation in ZMW terms is 6% per year.
- The projected cost escalation in US \$ terms is 2.5% per year.
- The Base Exchange Kwacha to Dollar exchange rate is K 10 per US \$

Assumptions Water Supply

Average Per Capita Cost Computation	US \$	ZMW	Comments
New Water point	\$7,500	ZMW75,000	
Rehabilitation	30%		of new water point
Therefore Rehabilitation Cost	\$2,250	ZMW22,500	
Average user per Water point	250		Using NRWSSP I Standard
Therefore Average per capita Cost of New Water point	\$30	ZMW300	
Per capita cost to:	\$40	ZMW400	
Therefore Average Cost of Rehabilitated Water point	\$12	ZMW120	
Failure rate of NRWSSP I	2.5%		
Failure rate Revised to:	10.0%		of annual investment per year
Population Covered pre-NRWSSP II	4,217,600		
Annual Rehab	425,000		10% covered
CD for O&M of Water supply Systems	10%	of Infrastructure costs	10% of infrastructure cost will cover CD activities
Details	Coverage	Targets	Comments
2015 Base	47%		
2030 Target		100%	
Gap			53%
# of 5 Year Steps			3
Increase per 5 Year step			18%
Per year			3.5%

Population Projections – Water Supply

Baseline 7NDP out indicator Population and Population growth rate: Source CSO (2010)

Population Implications

Year	2015	2021	2026	2030	Total
Coverage	47%	67%	85%	100%	
Rural Population	8,973,715	10,357,477	11,672,272	12,843,297	12,843,297
Period		2016 - 2021	2022 - 2026	2027 - 2030	
Total Population Covered by end of period	4,217,646	6,960,224	9,905,868	12,843,297	12,843,297
Additional Population To Be Covered During Period		2,742,578	2,945,644	2,937,429	8,625,651

Sanitation and Hygiene Promotion

Cost of Toilets

S code	Description of Technology	Short Description	Cost (US\$)	Appropriate Number of people serviced	O&M (as % of cost)	Per Capita Cost
SS 1	Improved traditional pit latrine with slab; hand washing device	Improved Traditional	500	8	5	62.5
SS 2	Single VIP Latrine; lined; hand washing device	Single VIP	1800	10	5	180
SS 3	Double VIP Latrine, Lined; hand washing device	Double VIP	3500	20	10	175
SS 4	Communal/School Ablution Block complete with septic tanks	Communal / School	20000	500	20	40
Source: UNICEF						

Sanitation Costing

- Related HH Sanitation Promotion Costs (NRWSSP II) are 40% of HH Infrastructure per recommendation from NRWSSP Consultation Workshop
- O&M Institutional Sanitation at 1.00% of Infrastructure cost; mostly institution.

Description	US \$	ZMW	Comment
HH Sanitation Infrastructure Cost Per Capita	\$70.00	ZMW 700	Number of units constructed per year. Determined at the consultative meeting
Contribution to construction of Institutional & Communal Sanitation facilities	300		
Unit cost of Institutional Ablution Block	\$20,000.00	ZMW 200,000	
Description/details	Coverage		
2015 Base	19%		
2030 Target	90%		
Gap	71%		
Annual Increase	4.7%		

Population Projections

Year	2015	2021	2026	2030	Total
Coverage	0.19	0.37	0.67	0.90	
Rural Population	8,973,715	10,357,477	11,672,272	12,843,297	
Total Population Covered	1,705,006	3,873,696	7,828,204	11,558,967	
Additional Population Covered for the period		2,168,690	3,954,508	3,730,763	9,853,961

Sector Development

6.1 Governance, Management & Sector Coordination

Cost Item	Base Amounts \$	Base Amounts ZMW	Frequency (Years)	Comment
Strategy Development	\$ 80,000	ZMW 800,000	5	
Strategy Implementation	\$ 250,000	ZMW 2,500,000	1	Annual implementation expenditure after development
Strategy Monitoring	\$ 50,000	ZMW 500,000	1	
Strategy Impact Evaluation and Review	\$ 75,000	ZMW 750,000	5	After Implementation
Sector Coordination	\$ 50,000	ZMW 500,000	1	
Strategy Update	\$ 50,000	ZMW 500,000	5	Undertake year after review After initial Implementation

6.2 Planning, Monitoring, Evaluation and Reporting

Cost Item	Base Amounts \$	Base Amounts ZMW	Frequency (Years)	Comment
Development of M&E & Reporting Framework	\$ 250,000	ZMW 2,500,000	5	
Implementation of Systems	\$ 600,000	ZMW 6,000,000	1	Annual R&D expenditure after development
Planning	\$ 1,000	ZMW 10,000	1	Per district
Data Collection & Reporting	\$ 2,000	ZMW 20,000	1	Per district
Review of planning and reporting processes	\$ 150,000	ZMW 1,500,000	5	After Implementation
Update of systems	\$ 150,000	ZMW 1,500,000	5	Undertake year after review After initial Implementation

6.3 Capacity Development

Cost Item	Base Amounts \$	Base Amounts ZMW	Frequency (Years)	Comment
Strategy Development	\$ 100,000	ZMW 1,000,000	5	
Strategy Implementation	\$ 300,000	ZMW 3,000,000	1	Annual implementation expenditure after development
Strategy Monitoring	\$ 100,000	ZMW 1,000,000	1	

Strategy Impact Evaluation and Review	\$ 100,000	ZMW 1,000,000	5	After Implementation
Strategy Update	\$75,000	ZMW 750,000	5	Undertake year after review After initial Implementation

6.4 Research and Development

Cost Item	Base Amounts \$	Base Amounts ZMW	Frequency (Years)	
Strategy Development	\$ 200,000	ZMW 2,000,000	5	
Strategy Implementation	\$ 500,000	ZMW 5,000,000	1	
Strategy Monitoring	\$ 150,000	ZMW 1,500,000	1	
Strategy Impact Evaluation and Review	\$ 150,000	ZMW 1,500,000	5	
Strategy Update	\$ 150,000	ZMW 1,500,000	5	

6.5 Cross Cutting

Item	Base Amounts \$	Base Amounts ZMW	Frequency (Years)	
Strategy Development	\$ 300,000	ZMW 3,000,000	5	
Strategy Implementation	\$ 400,000	ZMW 4,000,000	1	
Strategy Monitoring	\$ 150,000	ZMW 1,500,000	1	
Strategy Impact Evaluation and Review	\$ 200,000	ZMW 2,000,000	5	
Strategy Update	\$ 200,000	ZMW 2,000,000	5	

6.4 Advocacy and Communication

Strategy Development	\$200,000	ZMW2,000,000	5	
Strategy Deployment	\$500,000	ZMW5,000,000	1	
Strategy Monitoring	\$150,000	ZMW1,500,000	1	
Strategy Impact Evaluation and Review	\$550,000	ZMW5,500,000	5	
Strategy Update	\$150,000	ZMW1,500,000	5	

6.5 Climate Change & Environmental Protection

Strategy Development	\$200,000	ZMW2,000,000	5	
Strategy Deployment	\$500,000	ZMW5,000,000	1	
Strategy Monitoring	\$150,000	ZMW1,500,000	1	
Strategy Impact Evaluation and Review	\$150,000	ZMW1,500,000	5	
Strategy Update	\$150,000	ZMW1,500,000	5	

6.6 Solid Waste Management

Source: Recommendations from NRWSSP II formulation consultative stakeholder workshop on 24th to 25th August, 2017 at Mulungushi Conference on the draft NRWSSP II

APPENDIX 5: Component 1 – Water Supply – Annual Population, Targets and Costs for Water Supply

Population and Targets										
Year	2016	2017	2018	2019	2020	2021	2022	2023		
Rural Population	9,190,784	9,413,103	9,640,801	9,874,006	10,112,853	10,357,477	10,608,018	10,864,620		
Coverage	0.51	0.54	0.58	0.61	0.65	0.68	0.72	0.75		
Total Covered	4,644,409	5,089,351	5,553,101	6,036,309	6,539,645	7,063,799	7,609,485	8,177,437		
New	426,763	444,942	463,750	483,208	503,336	524,154	545,686	567,952		
Rehabilitated	156,732	162,785	169,804	176,599	183,988	192,306	200,422	208,361		
Total	740,228	927,245	1,122,876	1,325,727	1,537,232	1,758,674	1,988,744	2,227,311		
Infrastructure Costs										
Year	2016	2017	2018	2019	2020	2021	2022	2023		
New Supply Systems	ZMW180,947,600	ZMW199,779,000	ZMW220,745,000	ZMW244,020,100	ZMW269,284,800	ZMW297,195,400	ZMW327,957,300	ZMW361,785,500		
Rehabilitated Systems	ZMW18,094,800	ZMW19,977,900	ZMW22,074,500	ZMW24,402,100	ZMW26,928,500	ZMW29,719,600	ZMW32,795,800	ZMW36,178,600		
CD for O&M of Systems	ZMW199,042,400	ZMW219,756,900	ZMW242,819,500	ZMW268,422,200	ZMW296,213,300	ZMW326,915,000	ZMW360,753,100	ZMW397,964,100		
Total Cost Water Supply	ZMW218,947,400	ZMW241,732,900	ZMW267,101,500	ZMW295,265,200	ZMW325,835,300	ZMW359,607,000	ZMW396,829,100	ZMW437,761,100		
Year	2024	2025	2026	2027	2028	2029	2030	Total		
Rural Population	11,127,429	11,396,595	11,672,272	11,954,617	12,243,792	12,539,963	12,843,297			
Coverage	0.79	0.82	0.86	0.89	0.93	0.96	1.00			
Total Covered	8,768,414	9,383,196	10,022,591	10,687,428	11,378,564	12,096,884	12,843,297			
New	590,977	614,782	639,395	664,837	691,136	718,320	746,413	8,625,651		
Rehabilitated	216,163	225,214	234,140	243,273	253,320	263,579	274,070	3,160,756		
Total	2,474,299	2,732,370	3,000,050	3,277,897	3,567,564	3,868,586	4,181,239	11,786,407		
Infrastructure Costs										
Year	2024	2025	2026	2027	2028	2029	2030	Total		
New Supply Systems	ZMW398,909,500	ZMW440,184,000	ZMW485,300,900	ZMW535,193,800	ZMW589,539,100	ZMW649,361,300	ZMW715,063,700	ZMW5,915,267,000		
Rehabilitated Systems	ZMW39,891,000	ZMW44,018,400	ZMW48,530,100	ZMW53,519,400	ZMW58,954,000	ZMW64,936,200	ZMW71,506,400	ZMW591,527,300		
CD for O&M of Systems	ZMW438,800,500	ZMW484,202,400	ZMW533,831,000	ZMW588,713,200	ZMW648,493,100	ZMW714,297,500	ZMW786,570,100	ZMW6,506,794,300		
Total Cost Water Supply	ZMW482,681,500	ZMW532,623,400	ZMW587,215,000	ZMW647,585,200	ZMW713,343,100	ZMW785,727,500	ZMW865,228,100	ZMW7,157,483,300		

Year	2016	2017	2018	2019	2020	2021	2022	2023
Rural Population	9 190 784	9 413 103	9 640 801	9 874 006	10 112 853	10 357 477	10 608 018	10 864 620
Coverage	0,48	0,51	0,55	0,59	0,63	0,66	0,70	0,74
Total Covered	4 387 067	4 844 611	5 321 722	5 819 081	6 337 388	6 877 365	439 757	8 025 333
New	438 632	457 544	477 111	497 359	518 307	539 977	562 392	585 576
Rehabilitated	161 087	167 400	174 699	181 770	189 460	198 112	206 556	214 827
Total	760 805	953 431	1 154 996	1 364 084	1 582 182	1 810 616	2 048 030	2 294 313
Infrastructure Costs								
Year	2016	2017	2018	2019	2020	2021	2022	2023
New Supply Systems	ZMW 185 980 000	ZMW 205 437 300	ZMW 227 104 900	ZMW 251 166 300	ZMW 277 294 300	ZMW 306 167 000	ZMW 337 997 600	ZMW 373 012 000
Rehabilitated Systems	ZMW 18 598 000	ZMW 20 543 800	ZMW 22 710 500	ZMW 25 116 700	ZMW 27 729 500	ZMW 30 616 700	ZMW 33 799 800	ZMW 37 301 200
CD for O&M of Systems	ZMW 204 578 000	ZMW 225 981 100	ZMW 249 815 400	ZMW 276 283 000	ZMW 305 023 800	ZMW 336 783 700	ZMW 371 797 400	ZMW 410 313 200
Total Cost Water Supply	ZMW 225 036 000	ZMW 248 580 100	ZMW 274 797 400	ZMW 303 912 000	ZMW 335 526 800	ZMW 370 462 700	ZMW 408 977 400	ZMW 451 345 200

Year	2024	2025	2026	2027	2028	2029	2030	Total
Rural Population	11 127 429	11 396 595	11 672 272	11 954 617	12 243 792	12 539 963	12 843 297	
Coverage	0,78	0,81	0,85	0,89	0,93	0,96	1,00	
Total Covered	8 634 885	9 269 230	9 929 212	10 615 700	11 329 589	12 071 804	12 843 297	
New	609 552	634 345	659 982	686 488	713 889	742 215	771 493	8 894 862
Rehabilitated	222 956	232 381	241 675	251 194	261 660	272 347	283 275	3 259 399
Total	2 549 373	2 815 973	3 092 580	3 379 799	3 679 326	3 990 685	4 314 167	12 154 261
Infrastructure Costs								
Year	2024	2025	2026	2027	2028	2029	2030	Total
New Supply Systems	ZMW 411 447 600	ZMW 454 191 100	ZMW 500 926 400	ZMW 552 622 900	ZMW 608 947 400	ZMW 670 962 400	ZMW 739 090 300	ZMW 6 102 347 500
Rehabilitated Systems	ZMW 41 144 800	ZMW 45 419 200	ZMW 50 092 700	ZMW 55 262 300	ZMW 60 894 800	ZMW 67 096 300	ZMW 73 909 100	ZMW 610 235 400
Sb-total	ZMW 452 592 400	ZMW 499 610 300	ZMW 551 019 100	ZMW 607 885 200	ZMW 669 842 200	ZMW 738 058 700	ZMW 812 999 400	ZMW 6 712 582 900
CD for O&M of Systems	ZMW 45 260 000	ZMW 49 962 000	ZMW 55 102 000	ZMW 60 789 000	ZMW 66 985 000	ZMW 73 806 000	ZMW 81 300 000	ZMW 671 266 000
Total Cost Water Supply	ZMW 497 852 400	ZMW 549 572 300	ZMW 606 121 100	ZMW 668 674 200	ZMW 736 827 200	ZMW 811 864 700	ZMW 894 299 400	ZMW 7 383 848 900

APPENDIX 6: Component 2- Sanitation and Hygiene Promotion- Annual Population, Targets and Costs

Year	2016	2017	2018	2019	2020	2021	2022	2023
Rural Population	9,218,734	9,440,264	9,666,402	9,897,231	10,132,811	10,373,392	10,619,411	10,871,336
Coverage	0.24	0.28	0.33	0.38	0.43	0.47	0.52	0.57
Total Covered	2,187,913	2,687,328	3,209,245	3,754,350	4,323,333	4,916,988	5,536,253	6,182,166
Additional	482,907	499,415	521,917	545,105	568,983	593,655	619,265	645,913
Year	2016	2017	2018	2019	2020	2021	2022	2023
Household Sanitation								
Unit Cost	ZMW 700	ZMW 750	ZMW 800	ZMW 850	ZMW 910	ZMW 970	ZMW 1 030	ZMW 1 100
Total Cost	ZMW 338 035 000	ZMW 374 562 000	ZMW 417 534 000	ZMW 463 340 000	ZMW 517 775 000	ZMW 575 846 000	ZMW 637 843 000	ZMW 710 505 000
Related HH Sanitation Promotion Costs (NRWSSP II)	ZMW 135 214 000	ZMW 149 824 800	ZMW 167 013 600	ZMW 185 336 000	ZMW 207 110 000	ZMW 30 338 400	ZMW 255 137 200	ZMW 284 202 000
Institutional Sanitation								
Units	300	300	300	300	300	300	300	300
Unit Cost	ZMW 200 000		ZMW 225 000	ZMW 239 000	ZMW 254 000	ZMW 270 000	ZMW 287 000	ZMW 305 000
Total Cost - Institutional San.	ZMW 60 000 000	ZMW 212 000	ZMW 67 500 000	ZMW 71 700 000	ZMW 76 200 000	ZMW 81 000 000	ZMW 86 100 000	ZMW 91 500 000
Institutional and HH Hygiene Promotion	ZMW 24 000 000	ZMW 5 440 000	ZMW 27 000 000	ZMW 28 680 000	ZMW 30 480 000	ZMW 32 400 000	ZMW 34 440 000	ZMW 36 600 000
Waste Management	ZMW 3 200 000	ZMW 742 000						
	10,0000	10,6000	11,2500	11,9500	12,7000	13,5000	14,3500	15,2500
			ZMW 1 123 600	ZMW 1 191 000	ZMW 2 524 900	ZMW 2 007 300	ZMW 1 418 600	ZMW 1 503 600
Component Total	ZMW 222 414 000	ZMW 239 606 800	ZMW 262 637 200	ZMW 286 907 000	ZMW 316 314 900	ZMW 345 745 700	ZMW 377 095 800	ZMW 413 805 600

Year	2024	2025	2026	2027	2028	2029	2030	Total
Rural Population	11 129 714	11 395 104	11 668 134	11 949 228	12 238 648	12 536 617	12 843 297	
Coverage	0,62	0,66	0,71	0,76	0,81	0,85	0,90	
Total Covered	6 855 904	7 558 752	8 292 154	9 057 515	9 856 191	10 689 555	11 558 967	
Additional	673 738	702 848	733 402	765 361	798 676	833 364	869 412	9 853 961
Year	2024	2025	2026	2027	2028	2029	2030	
Household Sanitation								
Unit Cost	ZMW 1170	ZMW 1250	ZMW 1330	ZMW 1410	ZMW 1500	ZMW 1590	ZMW 1690	
Total Cost	ZMW 788 274 000	ZMW 878 560 000	ZMW 975 425 000	ZMW 1 079 160 000	ZMW 1 198 014 000	ZMW 1 325 049 000	ZMW 1 469 307 000	ZMW 11 749 229 000
Related HH Sanitation Promotion Costs (NRWSSP II)								
Institutional Sanitation								
Units	300	300	300	300	300	300	300	ZMW 4 500
Unit Cost	ZMW 324 000	ZMW 344 000	ZMW 365 000	ZMW 387 000	ZMW 411 000	ZMW 436 000	ZMW 463 000	
	ZMW 97 200 000	ZMW 103 200 000	ZMW 109 500 000	ZMW 116 100 000	ZMW 123 300 000	ZMW 130 800 000	ZMW 138 900 000	ZMW 1 416 600 000
Institutional and HH Hygiene Promotion								
Waste Management								
Component Total	ZMW 452 983 400	ZMW 499 282 900	ZMW 546 156 200	ZMW 596 102 200	ZMW 653 837 800	ZMW 715 272 600	ZMW 786 704 700	ZMW 6 714 866 800

APPENDIX 7: Component 3- Operation and Maintenance Annual Costs

Year	2016	2017	2018	2019	2020	2021	2022	2023
Water	ZMW21,894,942	ZMW23,965,892	ZMW26,263,252	ZMW28,803,422	ZMW31,556,132	ZMW34,583,702	ZMW37,905,512	ZMW41,542,212
Sanitation	ZMW6,000,000	ZMW6,567,600	ZMW7,197,100	ZMW7,893,300	ZMW8,647,600	ZMW9,477,200	ZMW10,387,600	ZMW11,384,100
Total	ZMW27,894,942	ZMW30,533,492	ZMW33,460,352	ZMW36,696,722	ZMW40,203,732	ZMW44,060,902	ZMW48,293,112	ZMW52,926,312

Year	2024	2025	2026	2027	2028	2029	2030	Total
Water	ZMW45,515,352	ZMW49,906,343	ZMW54,685,703	ZMW59,942,223	ZMW65,668,713	ZMW71,938,953	ZMW78,814,713	ZMW672,987,065
Sanitation	ZMW12,473,000	ZMW13,676,200	ZMW14,986,000	ZMW16,426,500	ZMW17,995,800	ZMW19,714,000	ZMW21,598,300	ZMW184,424,300
Total	ZMW57,988,352	ZMW63,582,543	ZMW69,671,703	ZMW76,368,723	ZMW83,664,513	ZMW91,652,953	ZMW100,413,013	ZMW857,411,365

APPENDIX 8: Component 4- Sector Development - Annual Costs Summary

Year	2016	2017	2018	2019	2020	2021	2022	2023
6.1 Governance, Management & Sector Coordination		ZMW1 378 000	ZMW 3 933 000	ZMW 5 064 000	ZMW 5 053 000	ZMW 4 686 000	ZMW 4 967 000	ZMW 5 264 000
6.2 Capacity Development		ZMW1 060 000	ZMW 3 371 000	ZMW 4 766 000	ZMW 5 051 000	ZMW 6 693 000	ZMW 5 675 000	ZMW 7 143 000
6.3 Research and Development		ZMW2 120 000	ZMW 5 618 000	ZMW 7 743 000	ZMW 8 207 000	ZMW 8 700 000	ZMW 11 349 000	ZMW 12 031 000
6.4 Advocacy and Communication		ZMW2 120 000	ZMW 5 618 000	ZMW 7 743 000	ZMW 8 207 000	ZMW 8 700 000	ZMW 17 023 000	ZMW 12 031 000
6.5 Climate Change & Environmental Protection		ZMW2 120 000	ZMW 5 618 000	ZMW 7 743 000	ZMW 8 207 000	ZMW 8 700 000	ZMW 11 349 000	ZMW 12 031 000
6.6 Cross Cutting Issues (SIGM)		ZMW3 180 000	ZMW 3 371 000	ZMW 8 339 000	ZMW 8 838 000	ZMW 9 368 000	ZMW 12 059 000	ZMW 13 534 000
Total		ZMW11 978 000	ZMW 27 529 000	ZMW 41 398 000	ZMW 43 563 000	ZMW 46 847 000	ZMW 62 422 000	ZMW 62 034 000

Year	2024	2025	2026	2027	2028	2029	2030	Total
6.1 Governance, Management & Sector Coordination	ZMW 6 775 000	ZMW 6 759 000	ZMW 6 270 000	ZMW 6 646 000	ZMW 7 045 000	ZMW 9 067 000	ZMW 9 046 000	ZMW81 953 000
6.2 Capacity Development	ZMW 6 376 000	ZMW 6 759 000	ZMW 7 164 000	ZMW 9 493 000	ZMW 9 560 000	ZMW 8 532 000	ZMW 9 044 000	ZMW90 687 000
6.3 Research and Development	ZMW 10 361 000	ZMW 10 983 000	ZMW 11 642 000	ZMW 15 188 000	ZMW 16 099 000	ZMW 13 865 000	ZMW 14 697 000	ZMW148 603 000
6.4 Advocacy and Communication	ZMW 10 361 000	ZMW 10 983 000	ZMW 11 642 000	ZMW 22 781 000	ZMW 16 099 000	ZMW 13 865 000	ZMW 14 697 000	ZMW161 870 000
6.5 Climate Change & Environmental Protection	ZMW 10 361 000	ZMW 10 983 000	ZMW 11 642 000	ZMW 15 188 000	ZMW 16 099 000	ZMW 13 865 000	ZMW 14 697 000	ZMW148 603 000
6.6 Cross Cutting Issues (SIGM)	ZMW 11 158 000	ZMW 11 827 000	ZMW 12 537 000	ZMW 16 137 000	ZMW 18 111 000	ZMW 14 931 000	ZMW 15 827 000	ZMW159 217 000
Total	ZMW 55 392 000	ZMW 58 294 000	ZMW 60 897 000	ZMW 85 433 000	ZMW 83 013 000	ZMW 74 125 000	ZMW 78 008 000	ZMW790 933 000

APPENDIX 9 : Component 5- Annual Costs – Planning, Monitoring, Evaluation and Reporting

Year	Base Year 2016	2017	2018	2019	2020	2021	2022	2023
Development of M&E & Reporting Framework	ZMW 2 500 000	ZMW 2 650 000						
Deployment of Systems	ZMW 6 000 000		ZMW 6 742 000	ZMW 7 147 000	ZMW 7 575 000	ZMW 8 030 000	ZMW 8 512 000	ZMW 9 022 000
Planning	ZMW 1 050 000	ZMW 1 113 000	ZMW 1 180 000	ZMW 1 251 000	ZMW 1 326 000	ZMW 1 406 000	ZMW 1 490 000	ZMW 1 579 000
Data Collection & Reporting	ZMW 2 100 000	ZMW 2 226 000	ZMW 2 360 000	ZMW 2 502 000	ZMW 2 652 000	ZMW 2 811 000	ZMW 2 979 000	ZMW 3 158 000
Review of planning and reporting processes	ZMW 1 500 000			ZMW 1 787 000	ZMW 1 894 000	ZMW 2 008 000	ZMW 2 128 000	ZMW 2 256 000
Update of systems	ZMW 1 500 000						ZMW 2 128 000	
Total		ZMW 5 989 000	ZMW 10 282 000	ZMW 12 687 000	ZMW 13 447 000	ZMW 14 255 000	ZMW 17 237 000	ZMW 16 015 000

Year	2024	2025	2026	2027	2028	2029	2030	Total
Development of M&E & Reporting Framework								ZMW 2 650 000
Deployment of Systems	ZMW 9 564 000	ZMW 10 137 000	ZMW 10 746 000	ZMW 11 390 000	ZMW 12 074 000	ZMW 12 798 000	ZMW 13 566 000	ZMW 127 303 000
Planning	ZMW 1 674 000	ZMW 1 774 000	ZMW 1 881 000	ZMW 1 994 000	ZMW 2 113 000	ZMW 2 240 000	ZMW 2 374 000	ZMW 23 395 000
Data Collection & Reporting	ZMW 3 348 000	ZMW 3 548 000	ZMW 3 761 000	ZMW 3 987 000	ZMW 4 226 000	ZMW 4 480 000	ZMW 4 748 000	ZMW 46 786 000
Review of planning and reporting processes	ZMW 2 391 000	ZMW 2 535 000	ZMW 2 687 000	ZMW 2 848 000	ZMW 3 019 000	ZMW 3 200 000	ZMW 3 392 000	ZMW 30 145 000
Update of systems				ZMW 2 848 000				ZMW 4 976 000
Total	ZMW 16 977 000	ZMW 17 994 000	ZMW 19 075 000	ZMW 23 067 000	ZMW 21 432 000	ZMW 22 718 000	ZMW 24 080 000	ZMW 235 255 000

APPENDIX 10 : Annual Programme Costs by Component

	Base Year 2016	2017	2018	2019	2020	2021	2022	2023
6.1 Governance, Management & Sector Coordination								
Strategy Development	ZMW 800 000	ZMW 848 000						
Strategy Deployment	ZMW 2 500 000		ZMW 2 809 000	ZMW 2 978 000	ZMW 3 157 000	ZMW 3 346 000	ZMW 3 547 000	ZMW 3 760 000
Strategy Monitoring	ZMW 500 000		ZMW 562 000	ZMW 596 000	ZMW 632 000	ZMW 670 000	ZMW 710 000	ZMW 752 000
Strategy Impact Evaluation and Review	ZMW 750 000			ZMW 894 000				
Sector Coordination	ZMW 500 000	ZMW 530 000	ZMW 562 000	ZMW 596 000	ZMW 632 000	ZMW 670 000	ZMW 710 000	ZMW 752 000
Strategy Update	ZMW 500 000				ZMW 632 000			
Total	ZMW 1 378 000	ZMW 3 933 000	ZMW 5 064 000	ZMW 5 053 000	ZMW 4 686 000	ZMW 4 967 000	ZMW 5 264 000	

	2024	2025	2026	2027	2028	2029	2030	Total
6.1 Governance, Management & Sector Coordination								
Strategy Development								
Strategy Deployment	ZMW 3 985 000	ZMW4 224 000	ZMW4 478 000	ZMW4 746 000	ZMW5 031 000	ZMW5 333 000	ZMW5 653 000	ZMW55 547 000
Strategy Monitoring	ZMW 797 000	ZMW845 000	ZMW896 000	ZMW950 000	ZMW1 007 000	ZMW1 067 000	ZMW1 131 000	ZMW11 115 000
Strategy Impact Evaluation and Review	ZMW 1 196 000					ZMW1 600 000		ZMW4 440 000
Sector Coordination	ZMW 797 000	ZMW845 000	ZMW896 000	ZMW950 000	ZMW1 007 000	ZMW1 067 000	ZMW1 131 000	ZMW11 645 000
Strategy Update		ZMW845 000					ZMW1 131 000	ZMW3 108 000
Total	ZMW 6 775 000	ZMW6 759 000	ZMW6 270 000	ZMW6 646 000	ZMW7 045 000	ZMW9 067 000	ZMW9 046 000	ZMW81 953 000

	Base Year 2016	2017	2018	2019	2020	2021	2022	2023
6.2 Capacity Development								
Strategy Development	ZMW 1 000 000	ZMW 1 060 000						
Strategy Deployment	ZMW 3 000 000		ZMW 3 371 000	ZMW 3 574 000	ZMW 3 788 000	ZMW 4 015 000	ZMW 4 256 000	ZMW 4 511 000
Strategy Monitoring	ZMW 1 000 000			ZMW 1 192 000	ZMW 1 263 000	ZMW 1 339 000	ZMW 1 419 000	ZMW 1 504 000
Strategy Impact Evaluation and Review	ZMW 1 000 000					ZMW 1 339 000		
Strategy Update	ZMW 750 000							ZMW 1 128 000
Total		ZMW 1 060 000	ZMW 3 371 000	ZMW 4 766 000	ZMW 5 051 000	ZMW 6 693 000	ZMW 5 675 000	ZMW 7 143 000

6.2 Capacity Development	2024	2025	2026	2027	2028	2029	2030	Total
Strategy Development								ZMW 1 060 000
Strategy Deployment	ZMW 4 782 000	ZMW 5 069 000	ZMW 5 373 000	ZMW 5 695 000	ZMW 6 037 000	ZMW 6 399 000	ZMW 6 783 000	ZMW 63 653 000
Strategy Monitoring	ZMW 1 594 000	ZMW 1 690 000	ZMW 1 791 000	ZMW 1 899 000	ZMW 2 013 000	ZMW 2 133 000	ZMW 2 261 000	ZMW 20 098 000
Strategy Impact Evaluation and Review				ZMW 1 899 000				ZMW 3 238 000
Strategy Update					ZMW 1 510 000			ZMW 2 638 000
Total	ZMW 6 376 000	ZMW 6 759 000	ZMW 7 164 000	ZMW 9 493 000	ZMW 9 560 000	ZMW 8 532 000	ZMW 9 044 000	ZMW 90 687 000

6.3 Research and Development	Base Year 2016	2017	2018	2019	2020	2021	2022	2023
Strategy Development	ZMW 2 000 000	ZMW 2 120 000						
Strategy Deployment	ZMW 5 000 000		ZMW 5 618 000	ZMW 5 956 000	ZMW 6 313 000	ZMW 6 692 000	ZMW 7 093 000	ZMW 7 519 000
Strategy Monitoring	ZMW 1 500 000			ZMW 1 787 000	ZMW 1 894 000	ZMW 2 008 000	ZMW 2 128 000	ZMW 2 256 000
Strategy Impact Evaluation and Review	ZMW 1 500 000						ZMW 2 128 000	
Strategy Update	ZMW 1 500 000							ZMW 2 256 000
Total	ZMW 2 120 000	ZMW 5 618 000	ZMW 7 743 000	ZMW 8 207 000	ZMW 8 700 000	ZMW 11 349 000	ZMW 12 031 000	

6.3 Research and Development	2024	2025	2026	2027	2028	2029	2030	Total
Strategy Development								ZMW 2 120 000
Strategy Deployment	ZMW 7 970 000	ZMW 8 448 000	ZMW 8 955 000	ZMW 9 492 000	ZMW 10 061 000	ZMW 10 665 000	ZMW 11 305 000	ZMW 106 087 000
Strategy Monitoring	ZMW 2 391 000	ZMW 2 535 000	ZMW 2 687 000	ZMW 2 848 000	ZMW 3 019 000	ZMW 3 200 000	ZMW 3 392 000	ZMW 30 145 000
Strategy Impact Evaluation and Review				ZMW 2 848 000				ZMW 4 976 000
Strategy Update					ZMW 3 019 000			ZMW 5 275 000
Total	ZMW 10 361 000	ZMW 10 983 000	ZMW 11 642 000	ZMW 15 188 000	ZMW 16 099 000	ZMW 13 865 000	ZMW 14 697 000	ZMW 148 603 000

6.4 Advocacy and Communication	Base Year 2016	2017	2018	2019	2020	2021	2022	2023
Strategy Development	ZMW 2 000 000	ZMW 2 120 000						
Strategy Deployment	ZMW 5 000 000		ZMW 5 618 000	ZMW 5 956 000	ZMW 6 313 000	ZMW 6 692 000	ZMW 7 093 000	ZMW 7 519 000
Strategy Monitoring	ZMW 1 500 000			ZMW 1 787 000	ZMW 1 894 000	ZMW 2 008 000	ZMW 2 128 000	ZMW 2 256 000
Strategy Impact Evaluation and Review	ZMW 5 500 000						ZMW 7 802 000	
Strategy Update	ZMW 1 500 000							ZMW 2 256 000
Total		ZMW 2 120 000	ZMW 5 618 000	ZMW 7 743 000	ZMW 8 207 000	ZMW 8 700 000	ZMW 17 023 000	ZMW 12 031 000

6.4 Advocacy and Communication	2024	2025	2026	2027	2028	2029	2030	Total
Strategy Development								ZMW 2 120 000
Strategy Deployment	ZMW 7 970 000	ZMW 8 448 000	ZMW 8 955 000	ZMW 9 492 000	ZMW 10 061 000	ZMW 10 665 000	ZMW 11 305 000	ZMW 106 087 000
Strategy Monitoring	ZMW 2 391 000	ZMW 2 535 000	ZMW 2 687 000	ZMW 2 848 000	ZMW 3 019 000	ZMW 3 200 000	ZMW 3 392 000	ZMW 30 145 000
Strategy Impact Evaluation and Review				ZMW 10 441 000				ZMW 18 243 000
Strategy Update					ZMW 3 019 000			ZMW 5 275 000
Total	ZMW 10 361 000	ZMW 10 983 000	ZMW 11 642 000	ZMW 22 781 000	ZMW 16 099 000	ZMW 13 865 000	ZMW 14 697 000	ZMW 161 870 000

6.5 Climate Change & Environmental Protection	Base Year 2016	2017	2018	2019	2020	2021	2022	2023
Strategy Development	ZMW 2 000 000	ZMW 2 120 000						
Strategy Deployment	ZMW 5 000 000		ZMW 5 618 000	ZMW 5 956 000	ZMW 6 313 000	ZMW 6 692 000	ZMW 7 093 000	ZMW 7 519 000
Strategy Monitoring	ZMW 1 500 000			ZMW 1 787 000	ZMW 1 894 000	ZMW 2 008 000	ZMW 2 128 000	ZMW 2 256 000
Strategy Impact Evaluation and Review	ZMW 1 500 000						ZMW 2 128 000	
Strategy Update	ZMW 1 500 000							ZMW 2 256 000
Total		ZMW 2 120 000	ZMW 5 618 000	ZMW 7 743 000	ZMW 8 207 000	ZMW 8 700 000	ZMW 11 349 000	ZMW 12 031 000

6.5 Climate Change & Environmental Protection	2024	2025	2026	2027	2028	2029	2030	Total
Strategy Development								ZMW 2 120 000
Strategy Deployment	ZMW 7 970 000	ZMW 8 448 000	ZMW 8 955 000	ZMW 9 492 000	ZMW 10 061 000	ZMW 10 665 000	ZMW 11 305 000	ZMW 106 087 000
Strategy Monitoring	ZMW 2 391 000	ZMW 2 535 000	ZMW 2 687 000	ZMW 2 848 000	ZMW 3 019 000	ZMW 3 200 000	ZMW 3 392 000	ZMW 30 145 000
Strategy Impact Evaluation and Review				ZMW 2 848 000				ZMW 4 976 000
Strategy Update					ZMW 3 019 000			ZMW 5 275 000
Total	ZMW 10 361 000	ZMW 10 983 000	ZMW 11 642 000	ZMW 15 188 000	ZMW 16 099 000	ZMW 13 865 000	ZMW 14 697 000	ZMW 148 603 000

6.6 Cross Cutting Issues (SIGM)	Base Year 2016	2017	2018	2019	2020	2021	2022	2023
Strategy Development	ZMW 3 000 000	ZMW 3 180 000						
Strategy Deployment	ZMW 3 000 000		ZMW 3 371 000	ZMW 3 574 000	ZMW 3 788 000	ZMW 4 015 000	ZMW 4 256 000	ZMW 4 511 000
Strategy Monitoring	ZMW 4 000 000			ZMW 4 765 000	ZMW 5 050 000	ZMW 5 353 000	ZMW 5 675 000	ZMW 6 015 000
Strategy Impact Evaluation and Review	ZMW 1 500 000						ZMW 2 128 000	
Strategy Update	ZMW 2 000 000							ZMW 3 008 000
Total	ZMW 3 180 000	ZMW 3 180 000	ZMW 3 371 000	ZMW 8 339 000	ZMW 8 838 000	ZMW 9 368 000	ZMW 12 059 000	ZMW 13 534 000

6.6 Cross Cutting Issues (SIGM)	2024	2025	2026	2027	2028	2029	2030	Total
Strategy Development								ZMW 3 180 000
Strategy Deployment	ZMW 4 782 000	ZMW 5 069 000	ZMW 5 373 000	ZMW 5 695 000	ZMW 6 037 000	ZMW 6 399 000	ZMW 6 783 000	ZMW 63 653 000
Strategy Monitoring	ZMW 6 376 000	ZMW 6 758 000	ZMW 7 164 000	ZMW 7 594 000	ZMW 8 049 000	ZMW 8 532 000	ZMW 9 044 000	ZMW 80 375 000
Strategy Impact Evaluation and Review				ZMW 2 848 000				ZMW 4 976 000
Strategy Update					ZMW 4 025 000			ZMW 7 033 000
Total	ZMW 11 158 000	ZMW 11 827 000	ZMW 12 537 000	ZMW 16 137 000	ZMW 18 111 000	ZMW 14 931 000	ZMW 15 827 000	ZMW 159 217 000

APPENDIX 11: Annual Equipment Costs – Capital Expenditure

Year	2016	2017	2018	2019	2020	2021	2022	2023
Motor Vehicles District	ZMW163,500,000	ZMW173,310,000					ZMW231,928,000	
Motor Vehicles Provincial	ZMW15,000,000	ZMW15,900,000					ZMW21,278,000	
Motor bikes - District	ZMW21,800,000	ZMW23,108,000			ZMW27,522,000			ZMW32,780,000
IT Hardware & Software	ZMW18,350,000	ZMW19,451,000			ZMW23,167,000			ZMW27,592,000
Total		ZMW231,769,000			ZMW50,689,000		ZMW253,206,000	ZMW60,372,000

Year	2024	2025	2026	2027	2028	2029	2030	Total
Motor Vehicles District				ZMW 310 372 000				ZMW 715 610 000
Motor Vehicles Provincial				ZMW 28 475 000				ZMW 65 653 000
Motor bikes - District			ZMW 39 041 000			ZMW 46 498 000		ZMW 168 949 000
IT Hardware & Software			ZMW 32 863 000			ZMW 39 140 000		ZMW 142 213 000
Total			ZMW 71 904 000	ZMW 338 847 000		ZMW 85 638 000		ZMW 1 092 425 000

APPENDIX 12 : 7NDP - Result Area 3: Improved Access to Water Supply and Sanitation

To achieve the result of improved water supply and sanitation services to all segments of the population, four strategies and nine programmes will be implemented. The programme, targets, output indicators and resource requirements are listed in the tables below together with the outcome indicators that will be used to track progress towards improving access to water supply and sanitation.

Table Outcome indicators: Improved access to water supply and sanitation

Outcome Indicators	Baseline	Year of Baseline Estimate	Target
4.3.1 Percent of households with access to improved drinking Water			
<i>a) Total</i>	64.5	2013-14	85.0
<i>b) Rural</i>	46.6	2013-14	67.0
<i>c) Urban</i>	89.5	2013-14	98.0
4.3.2 Percent of households with access to improved sanitation			
<i>a) Total</i>	25.4	2013-14	50.8
<i>b) Rural</i>	18.5	2013-14	37.0
<i>c) Urban</i>	35.0	2013-14	70.0
4.3.3 Percentage of water samples from a representative sample of water points that meet ZBS/WHO standards	64	2017	100

The table below shows the Strategies, Programmes, Outputs, Indicators and targets per year to be implemented to improve access to water supply and sanitation.

Table Output targets and indicators: Improved access to water supply and sanitation

Strategy 1: Enhance provision of adequate safe water and sanitation									
Programmes	Programme Outputs	Proposed Indicator	Baseline	Target 2021	Target per Year				
					2017	2018	2019	2020	2021
a) Water quality monitoring improvement;	Water quality systems strengthened	Number of additional water quality assurance facilities (Urban)	16	26	16	19	22	24	26
		Percentage of commercial utilities whose water samples meet the national drinking water standard (ZBS/WHO) standards by Province, rural/ urban	36	100	36	50	65	80	100

Strategy 1: Enhance provision of adequate safe water and sanitation									
Programmes	Programme Outputs	Proposed Indicator	Baseline	Target 2021	Target per Year				
					2017	2018	2019	2020	2021
b) Water supply and sanitation improvement	Water supply and sanitation services improved	Percentage of population with access to basic drinking water source disaggregated by rural/urban	Urban: 86	100	86	89	92	95	100
			Rural: 44	70	44	48	54	60	70
		Percentage of population with access to safely managed drinking water source rural/urban	Urban: 19	40	22	25	30	35	40
			Rural: 0	40	0	10	20	30	40
		Percentage of population with access to basic sanitation service rural/urban	Urban: 56	70	59	62	65	68	70
			Rural: 30	55	35	40	45	50	55
		Percentage of population with access to safely managed sanitation services rural/urban	Urban: 30	50	32	35	40	45	50
			Rural: 34	50	32	35	40	45	50
		Percentage of population practicing Open defecation (ODF) by rural/Urban	Urban: 1	0	0.8	0.5	0.3	0	0
			Rural: 22	10	22	18	15	12	10
	Proportion of health care facilities with basic WASH services	50	70	55	60	65	70	70	
Proportion of schools with basic WASH facilities	20	40	25	30	35	40	40		
Hygiene practices in households and communities improved	Percentage of population having a handwashing facility with soap and water	13	40	20	25	30	35	40	
c) Communication and advocacy enhancement;	Policy Framework for WASH Sector strengthened	Number of policy strategies developed	0	3	1	1	1	0	0
d) Multi-sectoral coordination to water and sanitation provision enhanced	Multi-sectoral coordination to water and sanitation provision strengthened	Government-led WASH sector coordination mechanism (SCM) established	0	1	0	1	0	0	0
		National Water Supply, Sanitation and solid waste Policy and Strategies in place	0	1	0	1	0	0	0
Strategy 2: Improve availability of water and sanitation infrastructure									
Programmes	Programme Outputs	Proposed Indicator	Baseline	Target	Target per Year				
					2017	2018	2019	2020	2021
a) Climate smart water supply and sanitation infrastructure development;	Water and sanitation infrastructure developed	Percentage of existing water infrastructure expanded per year	0	15	0	4	5	2	4
		Proportion of people accessing climate smart water supply and sanitation infrastructure	10	40	10	15	25	35	40

Strategy 1: Enhance provision of adequate safe water and sanitation										
Programmes	Programme Outputs	Proposed Indicator	Baseline	Target 2021	Target per Year					
b) Sustainable operation and maintenance of water supply and sanitation infrastructure	Management of water supply and sanitation infrastructure enhanced	Percentage reduction in Non-Revenue Water	49	25	48	43	37	31	25	
		Percentage of functional water points	70	90	74	78	82	86	90	
		Percentage reduction in sewerage flooding	13	0.5	13	10	5	1.5	0.5	
Strategy 3: Enhance research in water supply and sanitation services										
Programmes	Programme Outputs	Proposed Indicator	Baseline	Target	Target per Year					
a) Research and knowledge management improvement	Evidence based decision making on water and sanitation services enhanced	Number of additional applied research publication of WASH sector per year	0	5	1	1	1	1	1	1
		Functional MIS for Water and Sanitation	0	1	0	1	0	0	0	0
Strategy 4: Promote alternative financing for water and sanitation										
Programmes	Programme Outputs	Proposed Indicator	Baseline	Target	Target per Year					
a) Basket financing promotion	Sustainable mechanism for financing of water and sanitation services established and operational	Basket Fund for water and sanitation sector established	0	1	0.5	1	0	0	0	0
		PPP framework for water and sanitation is developed	0	1	0.5	0.8	1	0	0	0
b) Public-private partnership enhancement.	Participation of the private sector in water and sanitation services enhanced	Number of Public Private Partnerships (PPPs) initiatives in water and sanitation	0	3	0	0	1	1	1	1