

REPUBLIC OF KENYA



MINISTRY OF WATER AND SANITATION

STRATEGIC PLAN

2018 – 2022

FINAL DRAFT

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FOREWORD

The Government of Kenya is committed to accelerated development and more efficient delivery of public services to the citizens, with an emphasis on the need for prudent management in the utilization of resources. This enables the Government to achieve its goals of growth, productivity, efficiency and improvement in service delivery. Against this backdrop, the Government adopted the Third Medium Term Plan of Kenya Vision 2030, which requires Ministries to prepare a five-year strategic plan detailing priority projects that will be implemented during the period.

The Ministry of Water and Sanitation (MWS) was established by the Organization of the Government, Executive Order No. 1 of 2018(revised) issued in June 2018. Its mandate is development and management of water resources, transboundary waters, water harvesting and storage, water services and sanitation regulation, dams and sanitation management. This Strategic Plan aligned to the MTP III (2018-2022) and the “Big Four” Agenda shall form the basis for identifying development priorities and establishing deliverables under the Ministry’s Performance Contract system. Towards ensuring its full implementation, the Plan is linked to the Government budget system through the Medium-Term Expenditure Framework (MTEF).

Realization of universal access to water appears to be a heavy task that must be performed within the next five years considering that at present, the national water coverage is 60% while urban sewerage coverage is at 25%. This means that at the moment about 18.6 million Kenyans are using unimproved water sources; hence the task of providing safe water is much heavier than 55 years ago at independence when there were about 6 million Kenyans.

It is therefore my considered expectation that the implementation of this strategic plan shall help the country to achieve universal access as defined in the Sustainable Development Goals (SDG) No. 6 and contribute to meet the national development goals, particularly enabling the delivery of the Government’s “Big Four” Agenda. In addition, the Ministry will strengthen coordination structures and platforms for increased stakeholder and consumer participation in decision-making and implementation processes, in an effort to combat the water and sanitation sector challenges.

For effective implementation of the strategic plan, the ministry is committed to supporting mobilization of resources for the sector, water use efficiency technology strengthening of partnerships and collaboration among stakeholders, monitoring, evaluation and reporting. This will be achieved through translating the strategic action plan into departmental work plans and thus providing the basis for departmental performance evaluation.

Simon K. Chelugui
Cabinet Secretary
Ministry of Water and Sanitation

PREFACE

The Constitution has placed a human right to clean water in adequate quantities and to reasonable standards of sanitation to every citizen. This, therefore, calls for key actors in the Water and Sanitation Sector to put in place plans, systems and mechanisms to achieve gradual realization of the universal access to water and sanitation.

The purpose of this Strategic Plan is therefore to outline the policies, programmes and projects that the Ministry of Water and Sanitation will be implementing during the period 2018-2022 to support progressive realization of right to water and sanitation, SDG 6 and national development goals.

Emphasis will be given to full operationalization of Water Act 2016, investment planning, water storage and last mile water connectivity so that households benefit from the already completed projects with no connections. The Water Act 2016 has given effect to enabling environment towards universal access, as there is separation of policy, regulation and implementation roles. Universal access to water and sanitation will be progressively achieved during the period of the SDGs. It is estimated that about 200,000 new water connections and 350,000 new sewer connections (for about 3.2 million people) will be required annually in urban areas for universal water access to be reached by 2030.

Despite the efforts towards realization of universal access to water, the level of Non-Revenue Water is still very high at about 42%, threatening the sector's sustainability. Every effort is needed to reduce the Non-Revenue Water from the current level to below 20% by the year 2030.

The Plan has thus been prepared through a sector-wide approach consultative process that involved various stakeholders in the Water and Sanitation sector whose invaluable comments are incorporated. Moving forward, it is expected that further collaborative mechanisms and networks will be established and strengthened through establishment of strong building blocks namely sector policy and strategy; institutional arrangements; sector financing; planning, monitoring and review; and capacity development.

To support monitoring and reporting of this strategic plan and wider water sector indicators, institutions involved in data collection, collation, analysis and storage must therefore ensure that the data submitted is accurate, adequate and reliable for use in making informed policy decisions.

I sincerely thank all those who participated in the preparation of this Plan and call upon implementation of the yearly corresponding targets, which must be matched with the annual Performance Contract and work plans.

Winnie Guchu
Chief Administrative Secretary
Ministry of Water and Sanitation

ACKNOWLEDGEMENT

The Constitution gives the Ministry a noble mandate of ensuring that the water resources are sustainably managed. This Strategic Plan (2018-2022) is thus founded on the strategic goal “Ensure availability and sustainable management of water and sanitation for all”, which looks at the whole water cycle incorporating Integrated Water Resources Management (IWRM).

The Ministry is also taking part in implementation of the national development goals including the Third Medium Term Plan of Kenya Vision 2030, the “Big Four” Agenda among others, for which this Plan provides the roadmap.

Building on the gains of the water sector reforms period, the lessons learnt and experiences gained over the time, there is renewed confidence among stakeholders and citizens on the preparedness of the water sector to achieve universal access to water and sanitation. The overwhelming interest by the Private Sector has given a shot in the arm to the “water and sanitation for all” campaign and put the country firmly on track to attain the national development and SDG 6 targets.

I am now happy that after working collaboratively in a process that has involved all key sector players; the Ministry has been able to develop Strategic plan which is aligned to both national development goals and international commitments. It is therefore critical at this stage for all partners to own the plan and derive implementation of programmes and projects from it making sure that we use it for effective decision-making.

I would like to express sincere appreciation to water and sanitation sector partners and all other technical contributions towards this very important initiative. I urge all key water stakeholders to use the plan in their operations and any policy guideline that may be issued by the Ministry from time to time so as to improve service delivery to the Kenyan citizens.

I sincerely thank all those who participated in the preparation of this Plan. In particular, we acknowledge the contributions of our development partners, the technical staff in the Ministry and its State Corporations. We also wish to appreciate the Central Planning and Project Monitoring Unit in the Ministry for providing the secretariat services as well as other logistics, which facilitated the process.

Joseph W. Irungu, CBS
Principal Secretary
Ministry of Water and Sanitation

Table of Contents

FOREWORD	i
PREFACE	ii
ACKNOWLEDGEMENT	iii
ACRONYMS AND ABBREVIATIONS	vii
EXECUTIVE SUMMARY	viii
CHAPTER ONE: INTRODUCTION	1
1.0 Overview	1
1.1 Background	1
1.2 Mandate and Functions	1
1.3 Global, Regional and National Development Challenges	2
1.4 Ministry’s Role in National Development	6
CHAPTER TWO: SITUATIONAL ANALYSIS	11
2.0 Overview	11
2.1 Review of Previous Strategic Plan Implementation	11
2.1.1 Milestones/ Key Achievements	11
2.1.2 Challenges Faced	14
2.1.3 Lessons Learnt	14
2.2 Environmental Scan	15
2.2.1 Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis	15
2.2.2 Environmental Scanning (PESTEL Analysis)	16
2.2.3 Stakeholder Analysis	17
CHAPTER THREE: STRATEGIC MODEL	20
3.0 Overview	20
3.1 Vision, Mission, Overall goal, Core Values, Motto and Guiding Principles.....	20
3.1.1 Vision.....	20
3.1.2 Mission	20
3.1.3 Overall Goal.....	20
3.1.4 Core Values	20
3.1.5 Motto.....	21
3.1.6 Guiding Principles	21
3.2 Key Result Areas (KRAs)/ Strategic Focus Areas	21
3.3 Strategic Objectives and Strategies	25
CHAPTER FOUR: IMPLEMENTATION AND COORDINATION FRAMEWOK	29

4.0	Overview.....	29
4.1	Structure of the Organization.....	29
4.1.1	Current organization.....	29
4.1.2	Ministry’s Organizational Structure.....	31
4.2	Staff Establishment.....	31
4.2.1	Current Staff Establishment and Proposed Staffing Levels.....	32
4.2.2	Human Resource Development Strategies.....	34
4.3	Financial Resources.....	35
4.3.1	Financial Resource Requirements.....	36
4.3.2	Resource Gaps.....	36
4.3.3	Resource Mobilization Strategies.....	37
4.4	Risk Analysis and Mitigation Measures.....	40
4.4.1	Risk Management Framework.....	40
4.4.2	Risks Monitoring System.....	42
CHAPTER 5: MONITORING, EVALUATION AND REPORTING.....		43
5.0	Overview.....	43
5.1	Monitoring Framework.....	43
5.1.1	Project Implementation and Coordination Team.....	43
5.1.2	Project Monitoring and Evaluation Team.....	44
5.1.3	Monitoring Methodologies.....	44
5.2	Evaluation Mechanisms.....	44
5.2.1	Reporting and Progress Review.....	45
5.3	Review of the Strategic Plan.....	45
ANNEX I: Implementation Matrix.....		46
Annex II: Monitoring and Evaluation Framework.....		71
ANNEX III: Current Organization Structure.....		73
ANNEX IV: Proposed Organization Structure.....		74

ACRONYMS AND ABBREVIATIONS

ASAL	Arid and Semi-Arid Land
AWSR	Annual Water Sector Review
CAS	Chief Administrative Secretary
CCTV	Closed Circuit Television
CE	Chief Economist
CFO	Chief Finance Officer
CoG	Council of Governors
CPPMU	Central Planning and Project Monitoring Unit
CS	Cabinet Secretary
D/HRM&D	Director Human Resource Management and Development
DTW	Director Transboundary Waters
DNWR	Director National Water Resources
DWSSD	Director Water, Sanitation and Sewerage Development
HAU	Head of Accounts Unit
HSCM	Head Supply Chain Management
KEWI	Kenya Water Institute
KNBS	Kenya National Bureau of Statistics
KRA	Key Result Area
KWSCRIP	Kenya Water Security and Climate Resilient Project
LAN	Local Area Network
MoUs	Memorandum of Understanding
MTEF	Medium Term Expenditure Framework
MTP III	Medium Term Plan III of Kenya Vision 2030
MWS	Ministry of Water and Sanitation
NIMES	National Integrated Monitoring and Evaluation System
NRW	Non-Revenue Water
NWHSA	National Water Harvesting and Storage Authority
NWHSS	National Water Harvesting and Storage Strategy
NWMP2030	National Water Master Plan 2030
NWRMS	National Water Resources Management Strategy
NWSSS	National Water and Sanitation Services Strategy
PCO	Public Communication Officer
PESTIEL	Political, Economic, Social, Technological, Infrastructural Environmental and Legal
PPPs	Public Private Partnerships
PS	Principal Secretary
SA	Secretary Administration
SCMP	Sub-catchment management Plans
SDGs	Sustainable Development Goals
SP	Strategic Plan
SWOT	Strength, Weakness, Opportunities and Threat
UN	United Nations
WASH	Water Sanitation and Hygiene
WASREB	Water Services Regulatory Board
WRA	Water Resources Authority
WS	Water Secretary
WSPs	Water Services Providers
WSTF	Water Sector Trust Fund
WT	Water Tribunal
WWDAs	Water Works Development Agencies

EXECUTIVE SUMMARY

The Ministry mandate is development and management of water resources, transboundary waters, and water harvesting & storage and water & sanitation development (as per Organization of the Government, Executive Order No. 1 of 2018 (revised). This together with the need to align to MTP III necessitated the development of the Strategic Plan 2018-2022.

Water subsector has aligned its plans to the achievement of the Sustainable Development Goals (SDGs) relating to water and sanitation. SDG 6 has the sole objective of ensuring availability and sustainable management of water and sanitation for all.

The situation in the country: Access to safe drinking water increased from 53.3% in 2013 to 60% in 2017 translating to an additional 4.65 million people accessing clean and safe water. Urban water supply coverage increased from 66.7% to 70% during the same period. With regard to sewerage, the national population with access sewerage coverage increased from 7% to 10% during the review period. The trend on sewerage coverage has been low due to low investments and growing population.

Kenya is a water scarce country as per capita fresh water endowment is about 527m³(NWMP2030) against UN standard of above 1000m³ for countries which are not under water stress. During drought periods the country experiences tight Water Balance due to a high-Water Demand / Resource Ratio resulting in water stress. This plan will be addressing this challenge through construction of large and medium dams to store water as well investing in groundwater storage through managed aquifer recharge by making use of storm water generated during the rainy seasons

The SWOT analysis of the water sector featured in this plan summarizes situation analysis and the current trends.

Considering the mandate as well as the situation and the SWOT analysis, the Vision and Mission of the plan are as follows:

Vision: *“Universal access to adequate, safe and sustainably managed water resources and sanitation”.*

Mission: *“To ensure good governance in the conservation, protection, harvesting and storage, management and development of water resources and sanitation infrastructure for national socio-economic development”.*

Following the Vision and the Mission, seven (8) Strategic Objectives have been identified (chapter 3):

Strategic Objectives

1. To enhance sector governance and leadership through formulation and implementation of 4 no. Policies, 3no. Bills and 3no. Strategies in full compliance with the Water Act 2016 by 2022
2. To Increase per capita fresh water endowment from 527 M³ to 700 M³ through management, protection and conservation of water resources by 2022.
3. To increase percentage of national population with access to safe water from 60% in 2017 to 80% by 2022
4. To increase percentage of national population with access to improved sanitation from 68% in 2017 to 80% by 2022
5. To Increase water storage per capita from 4.5M³ in 2017 to 14M³ by the year 2022
6. To build human resource capacity through training of 363 no. of staff annually and recruitment of 255 no. of staff by 2022.
7. To undertake research, development and adoption of appropriate technologies through the establishment and operationalization of 3 water research institutions and conduct 200 research projects by 2022.
8. To enhance water sector financing by mobilizing Kshs. 607 Billion to support programmes and projects

In line with Ministry's Vision, Mission, eight Key **Result Areas (KRA)** have been identified and will be the pillars of this Strategic Plan. The Key Result Areas are:

KRA 1: Policy, Legal and Institutional Framework: Key outcome will be Good Governance in the Management of Water Resources with major focus being on the full operationalization of Water Act 2016 by 2022 and development/ implementation of policies and strategies.

KRA 2: Management, Protection and Conservation of Water Resources and Transboundary Waters: Major outcome will be increased availability of safe and adequate water resources. Emphasis on water resources monitoring, water quality; ground water assessment, catchment management and implementation of negotiated MOUs for shared water resources.

KRA 3: Water Coverage: The Ministry will increase percentage of national population with access to safe water from 60% in 2017 to 80% in 2022. In addition, last mile water connectivity will be undertaken in collaboration with WSPs, County Governments and non-government actors to benefit 500,000 households nationwide.

KRA 4: Sanitation Coverage: During the plan period, the Ministry will increase the percentage of urban population with access to improved sanitation from 67.5% to 85%, and that of rural population from 52% to 76%. In addition, the Ministry will increase the percentage of urban population with access to sewerage from 25% to 40%.

KRA 5: Water Storage and Flood Control: During the plan period, the ministry will increase water storage per capita from 4.5M³ to 14M³. This will be through the construction of 2 large dams, 4 medium size dams and 500 small dams and pans.

KRA 6: Human Resource Capacity: This will entail enhancing staff competencies, improving working environment, enhancing performance management, succession management and enhancing knowledge management.

KRA 7: Research and Technology: Key outcome will be enhanced water research and technology through establishment and operationalization of three water research institutions, establishment of financing mechanism to fund 200 research projects, adoption of appropriate water and sanitation technologies, and improvement of water data collection and information management.

To ensure that the key results above mentioned are met, this strategic plan outlines prioritized policies, programmes and projects that will be undertaken during the Plan period (2018-2022). The Plan has been prepared through a sector-wide approach consultative process that involved various stakeholders in the Water and Sanitation sub sector.

KRA 8: Partnerships and Resource Mobilization

The Ministry will mobilize Kshs. 607 Billion to support programmes and projects. This will done through the enhancement of exchequer funding including equalization funds, bond financing, public private partnerships, leveraging on commercial financing, collaboration with County Governments on last mile water connectivity and establishment of an endowment fund.

To achieve the strategic objectives; appropriate strategies, output and activities/actions for each strategic focus areas were identified. In addition, the implementing actors, the time frame, the expected outcome and key Performance Indicators were determined. These have been outlined in the implementation matrix presented in Annex I.

This document is further organized in five chapters followed by results matrix in the annex. Chapter one is on introduction; chapter two on situation analysis; chapter three on strategic model; chapter four focus on implementation and coordination mechanism while lastly chapter five on monitoring, evaluation and reporting of the plan.

CHAPTER ONE: INTRODUCTION

1.0 Overview

This chapter highlights the background and mandate of the Ministry of Water and Sanitation and the global regional and national development challenges specific to its mandate. It also focuses the Ministry's role in the national development agenda including the Kenya Vision 2030, Third Medium-Term Plan (2018-2022), the "Big Four Agenda", Sustainable Development Goals (SDGs) and the African Union's Agenda 2063

1.1 Background

The Ministry of Water and Sanitation (MWS) was established by the Organization of the Government, Executive Order No. 1 of 2018 (revised) issued in June, 2018. Its mandate is development and management of water resources, transboundary waters, water harvesting & storage and water services & sanitation

The Ministry's mandate is guided by key legal instruments and policies as provided by the Constitution of Kenya, Water Act 2016, KEWI Act 2001, Legal Notice No. 252 of 2015, Agenda 2063, Sustainable Development Goals (SDGs) No. 6, the Kenya Vision 2030, the Third Medium Term Plan (MTP III) 2018-2022, Jubilee Manifesto and 'Big Four' agenda plan. These legal instruments and policies emphasize the need for efficiency and better management in the utilization of natural resources to enable the government achieve its strategic goals of economic growth, poverty reduction and social stability.

The Ministry is committed to formulation of policies, legal and regulatory frameworks for promoting sustainability in water resources and transboundary waters management, improvement of water and sanitation services while at the same time mitigating and adapting to the effects of land use climate change. However, the Ministry faces challenges in ensuring that it continues to increasingly support and contribute to the country's socio-economic development.

This Strategic Plan is aligned to the MTP III (2018-2022) and the "Big Four" Agenda shall form the basis for identifying development priorities and establishing deliverables under the Ministry's Performance Contract system. Towards ensuring its full implementation, the Plan is linked to the Government budget system through the Medium Term Expenditure Framework (MTEF).

1.2 Mandate and Functions

The full details of the mandate of the Ministry of Water and Sanitation are outlined in the Executive Order No. 1 of 2018(revised) issued in June, 2018 and Assignment of Ministerial Functions.

The functions of the Ministry are:

1. Water Resources Management Policy,
2. Water Catchment Area Conservation, Control and Protection,
3. Water and Sewerage Services Management Policy,

4. Waste Water Treatment and Disposal Policy
5. Water Quality and Pollution Control,
6. Sanitation Management,
7. Management of Public Water Schemes and Community Water Projects
8. Water Harvesting and Storage for Domestic and Industrial Use
9. Flood Control Management
10. Transboundary Water policy

1.3 Global, Regional and National Development Challenges

Kenya is facing a number of key challenges at the global, regional and national levels which can be categorized as follows. This includes Global, Regional and National challenges.

A. Global Challenges

1. **Climate Change:** Climate change affects water resources through its impacts on the quality, quantity, timing, form and intensity of precipitation leading to decreased water resources available for water supply, food production and social economic services. The impacts of Climate change have caused an increase in incidences of natural disasters such as floods, droughts, landslides and introduction of micro-organisms in fresh water sources thereby reducing quality. These have led to high stress on the national economy and human health. Climate change impacts on the water sector therefore require innovative adaptation measures to reduce the vulnerability of water systems and water services.
2. **E-Waste:** The rapid technological advancement increases solid and liquid waste generation leading to degradation of water resources.

B. Regional challenges

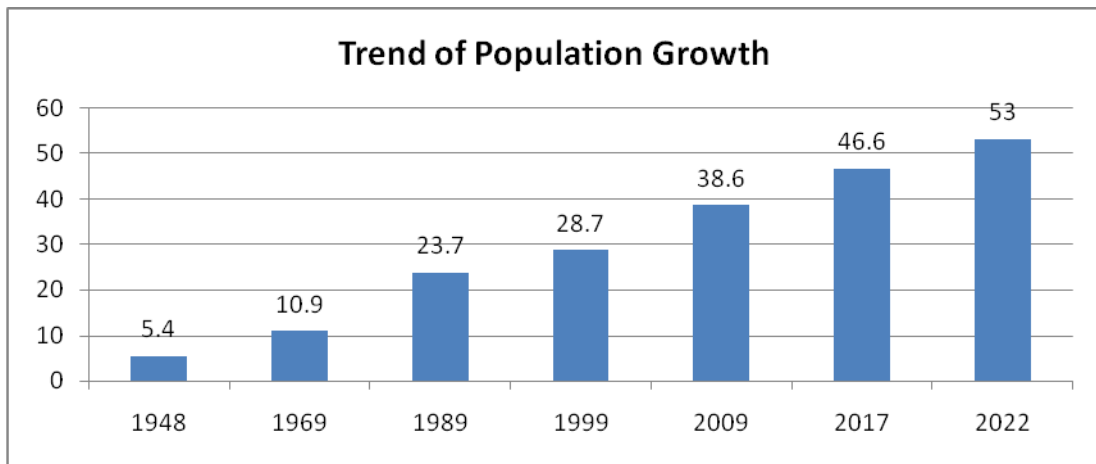
Transboundary Water Resources:

Kenya is both an upstream as well as a downstream country, and shares substantial proportion of water resources with neighbouring countries. These resources are governed by international Law. Kenya's constitution provides for adoption of ratified international law as part of Kenyan domestic law. Kenya has negotiated and signed a number of instruments, which are in the process of ratification, and these will impact on how our transboundary water resources are managed. Moreover, international instruments depend on good will of state parties to enforce negotiated instruments through rafts of national legislation in which state parties do to meet Transboundary obligations. The Ministry's Transboundary sector has weak technical capacity for transboundary water resource management, and development, which needs to be strengthened in order to enhance reasonable utilization to protect national strategic interests

C. National Challenges

- 1. Population:** Kenya's population was 5.4 million in 1948, 10.9 million in 1969, 23.7 million in 1989, 28.7 million in 1999 and 38.6 million in 2009. The population is estimated to grow at the rate of at least 2.6% per annum (Economic Survey, 2018). This therefore implies that currently, the population is estimated at 46.6 million in 2017 and will be expected to grow to about 53 million by the end of the plan period in 2022.

Figure 1: Population growth trends in Kenya

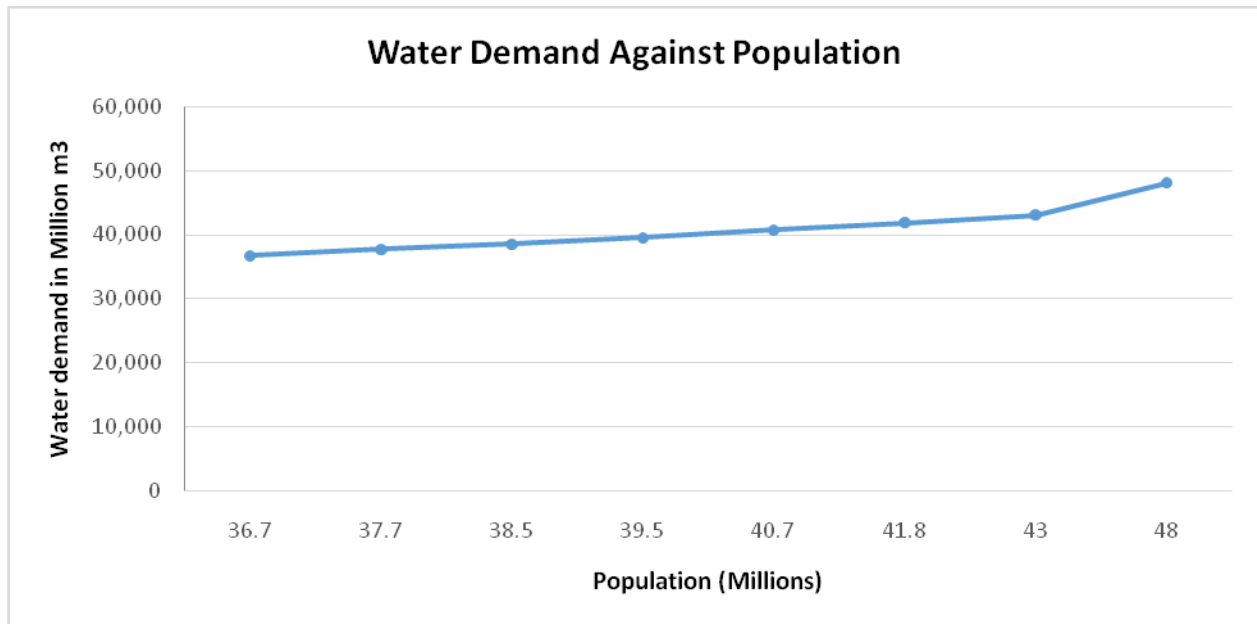


Source: KNBS

As the country is highly dependent on natural resources and in particular agriculture, the growing population will exert considerable pressure on the water resources including encroachment of marginal lands to cater for human settlement.

Figure 2 shows positive correlation between population growth and water demand. The total water demand-all sector has been calculated as the minimum water requirements to satisfy the per capita water share based on the water scarcity limit of $1000\text{m}^3/\text{cap}/\text{yr}$. This is a theoretical per capita water demand that can be used to evaluate the overall water supply level.

Figure 2: Population growth and total water demand for all sectors



Source: African Ministers' Council on Water (AMCOW) annual reports, Ministry of Water and Sanitation

2. **Human Settlements:** High population densities are evident in urbanized counties like Nairobi, Mombasa, Kisumu, Kiambu and Nakuru. This exerts a lot of pressure on the quantity and quality of human settlements. The densely populated settlements are often characterized with poor physical planning and low incomes that in turn has led to:
 - Increased informal settlements and low-income urban areas due to rapid rural-urban migration.
 - Declining living standards, polluted air and water resources and unsanitary living conditions.
 - Inadequate provision of water and sanitation services.
3. **Poverty:** According to the 2015/16 Kenya Integrated Household Budget Survey Report, the proportion of population living below the overall poverty line was 36.1%. The Poverty level scoring is based on the Households and individuals whose monthly adult equivalent total consumption expenditure per person is less than KSh. 3,252 in rural and peri-urban areas and less than KSh. 5,995 in core-urban areas. The high levels of poverty have both direct and indirect relationship on the status of the environment and natural resources as the poor are largely victims and causes of natural resource depletion, and environmental degradation due to their dependence on natural resources. In addition, there are large income disparities between regions in the country. This is a challenge, which may undermine realization of the Plan targets and may indeed compel the Ministry to re-evaluate the sustainability of user charges or community contributions among the poor especially in the Arid and Semi-Arid Land (ASAL) regions.
4. **Non-Revenue Water:** The current levels of Non-Revenue Water stands at 42% with the largest water losses being through illegal connections, leaks due to dilapidated infrastructure and commercial losses (flat rate supply). Small water schemes have inadequate capacity to manage Non-Revenue Water. Having devolved water services, the ministry will support counties through capacity building to develop policies and increase investment in the reduction of Non-Revenue Water. The Ministry will support the counties in improving the sustainability of water supplies and sewerage schemes by

providing technical support to reduce NRW, carrying out monitoring of NRW annually and developing and issuing policy guidelines on reduction of NRW

5. **Human health:** Pollution as evidenced by presence of wastewater, heavy metals and agro-chemicals in rivers and water bodies as well as catchment degradation continue to be major challenges to human health.
6. **Pollution and degradation of catchment areas:** Contamination of water resources leads to reduced water available for use. Cleaning water of low quality requires a high amount of energy, which increases the cost of delivering water to the people. Furthermore, degradation of catchment areas has not only reduced flows and quality of water in the rivers but also increased possibility of conflict between upstream and downstream users.
7. **Wastewater management:** Untreated or inadequately treated municipal sewerage is a major source of ground and surface water pollution in Kenya. It is estimated that only about 25% of the urban areas in the country have some form of sewerage collection. During the plan period, the Ministry will prioritize expansion of sewerage services by construction of new sewerage systems and expanding the existing ones.
8. **Low investment in the water and sanitation sector:** Development of infrastructure for water and sewerage requires heavy capital investment. The funding from the government and development partners fall short of the requirements resulting in a backlog of investments in water services, water storage and sewerage infrastructural development.
9. **Governance:** Water governance has remained a major challenge in Kenya. Adherence to global and regional instruments and policy commitments at national level have not been adequately addressed or coordinated. Globally and Regionally, National policies and interventions often have implications on the trans-boundary water management. It is therefore incumbent upon the Ministry to play a leading role in the formulation of policies and conventions that are affecting the shared water resources in which Kenya has interest, especially trans-boundary lakes, rivers and aquifers. There is also a need for harmonized sector policies and management practices both nationally and regionally to avoid conflicts. The Ministry is in the process of operationalizing the Water Act 2016 and it will complete the transition of the Water Sector Institutions to enable them meet their new and expanded mandate.
10. **Data and Information:** The inadequate modern ICT-based systems are a particular challenge to the sector whose technical departments continue to rely largely on manual and paper-based information systems. Data, Information and various datasets are collected, maintained, managed and disseminated by different agencies within the sector. The key challenges are lack of integration of data management and inadequate technologies to collect, analyze and store data. This makes it difficult to get adequate and reliable data and information for financial and investment planning water sector. There is therefore a need to have an integrated data management system that will be used for data collection, analysis and storage by the sector. During the plan period, the Ministry will establish and manage an e-water system that will contain up-to-date data required for decision-making.
11. **Capacity:** The Ministry current staffing level is 363 officers against an approved establishment of 655 officers resulting in a shortfall of 292 officers. This insufficient human capacity hampers adequate development in the water sector. The sector require highly skilled officer to oversee the various developments being undertaken in the sector

12. Inadequate water storage infrastructure development: The current water storage capacity is 180 Million M³ while the demand is 4,800 Million M³. The low water storage capacity is attributed to lack of clear policy on water harvesting and storage, which has led to among other factors limited investment in water storage and water wastage due to low off the roof and ground water runoff harvesting and storage.

1.4 Ministry's Role in National Development

The country's development agenda as expounded in the Vision 2030, is to transform it into a newly industrialized, middle- income country providing a high quality of life to its entire citizen with access to clean and safe water while, simultaneously, meeting the Sustainable Development Goals by 2030. The Social Pillar of Vision 2030 highlights targets that are to be achieved by 2030. The development will be achieved through phased development as spelt out in Medium Term Plans. The Plan will address the Medium Term Three through the implementation of the following Programmes:

Water Resources Management

During the plan period 56 Sub-catchment management Plans (SCMPs) will be developed and 236 SCMPs implemented, 400 monitoring stations will be rehabilitated, upgrade 130 to telemetry, and establish 80 surface water and 50 groundwater monitoring stations and establish 4 national Water Quality reporting stations to reduce incidences and outbreak of water borne diseases during flood and drought periods. Further, country-wide groundwater mapping will be undertaken; isotope hydrology techniques will be employed to quantifying water resource in the Kilimanjaro Aquifer. Pollution of water resources will be identified and measures undertaken to mitigate against its occurrence. These will include establishment of aluminium residues in drinking water, mapping of arsenic and fluoride in groundwater resource in 30 counties identified during a preliminary study conducted by UNICEF in 2009. During the plan period, dam catchment conservation and protection, Kikuyu Springs and Lamu Groundwater Conservation will be undertaken. Isotope Hydrology Laboratory will be established and operationalized.

For the counties, the sector will undertake development of Trans-County Water Resources Management Framework to guide the management of inter-county water resources which will ensure equity in water access and management. This will mitigate against the emerging inter-county conflicts on resource sharing and management. Mapping of water conflict areas and resolution mechanism will be undertaken in the hot spot areas and develop conflict resolution frameworks. A framework for protection and gazettement of water bodies and the sources will be developed.

Water Harvesting and Storage

The Ministry targets to enhance reliable and adequate water harvesting and storage capacity to meet domestic, irrigation, industrial, hydropower generation, flood control and environmental needs through the construction of dams and water harvesting structures. The Ministry will construct 57 multi-purpose medium size dams and 500 small dams/ water pans across the country to increase water storage per capita from the current level of 4.5M³ to 14M³.The

Ministry recognizes domestic water harvesting as an important source of water. It will therefore develop a policy to encourage water harvesting at household level.

Urban Water Supply

The programme strives to achieve universal access to safe water in urban areas for socio-economic development. During the plan period, a number of projects will be undertaken to increase the national water coverage from 60% to 80%. Consequently, urban water coverage will increase from 70.3% to 83%. This will be achieved by improving water supplies in major urban towns of Nairobi, Mombasa, Kisumu, Nakuru and Eldoret. Nairobi Northern collector, Chemususu water project, Itare water project, Mwache Water Project and Mzima II are some of the major projects that will increase water supply in the major urban towns. Expansion of water supply and sanitation will also be undertaken in 20 medium sized towns through the Kenya Sustainable Towns Programme.

Rural Water Supply

The programme seeks to achieve universal access to safe water in rural areas for household, industrial and irrigation uses. Water access coverage to rural areas has remained low over the years and it is expected that county governments will prioritize projects that target the rural areas. During the plan period, water coverage in rural areas will be increased from 55.9% to 78% by rehabilitating and expanding existing large water supplies to increase rural water coverage. A total of 215 strategic boreholes will be drilled and equipped.

Sewerage and Sanitation programme:

The Government endeavours to provide universal access to sewerage facilities in urban centres by 2030. During the planning period, the improvement of sewerage facilities to increase coverage from 25% to 40% in urban areas by expanding sewerage infrastructure in Nairobi and satellite towns will be undertaken as well as expansion of sewerage facilities in 15 medium sized towns.

In addition, to fast-track implementation of commitment of the Ngor-Dakar declaration of May 27th 2015 on sanitation and hygiene, the Ministry in collaboration with county governments will strive towards achieving universal access to adequate and sustainable sanitation and hygiene services and eliminate open defecation. This will be undertaken by focusing on the poorest marginalized and unserved aimed at progressively eliminating inequality in access to sanitation services ; and mobilization of resources and support at the highest political level for sanitation and hygiene to increase sanitation and hygiene annual budget to 0.5% of GDP by 2020.

Water Research

The Ministry targets to enhance and facilitate research in fields related to water resources utilization and management. The Ministry will operationalize Water Resource Center at KEWI; establish and operationalize Water Resources Management Institute; establish Sewerage Research Centre in Kisumu; establish a Water Sector Research Funding mechanism to support water research projects; capacity building and technical assistance will be undertaken at county level. It will support and strengthen the participation of local communities in improving water resources management in the basins. Regional Centre for Groundwater Resources Education, Training and Research will conduct research on the status of groundwater in the East African Region and undertake capacity building. The Isotope Hydrology laboratory will continue being developed.

Provision of Water to Poor Unserved areas including informal settlements

The Ministry will ensure that under-served areas in Kenya have adequate access to water and sanitation services to improve health care. The Ministry will finance rural and urban water and sanitation projects in low-income areas in collaboration with County Governments and implement the WASH programme for schools. The social/flat rate tariff shall continue to be implemented on an area basis and develop a system for reporting on low income areas to monitor progress in coverage.

Trans-boundary Waters

This will entail development of legal framework for the implementation of trans-boundary water policy; implementation of Kocholia multipurpose trans-boundary water resources project; sustainable development of Lake Turkana and its River Basin including establishment of four green villages for sustainable livelihoods, four monitoring stations and Project Coordination mechanism; mapping all surface and ground trans-boundary water resources and establishing their status; establishment of 20 hydro-meteorological stations on trans-boundary waters; implementation of bilateral frameworks on Sio-Malaba-Malakisi river sub-basin; Mara River basin and Lakes Chala/Jipe and Uмба River basin; negotiations for a joint management and development of shared water resources and review of three international water treaties/conventions. Implementation of Maira and Norera trans-boundary storage dams; implement integrated management plan for Daua trans-boundary shared water resources.

Water related Disaster Risk Management and Coordination

In order to reduce vulnerability to risk, during the plan period there will be development of community-based drought and floods risk reduction action plans in 29 prone counties¹. Drought

¹Baringo, Garissa, Isiolo, Mandera, Marsabit, Samburu, Tana River, Turkana, Wajir, Embu, Kilifi, Kwale, Laikipia, Lamu, Makueni, Meru, Narok, Nyeri(Kieni), Taita Taveta, Tharaka

mitigation interventions including water trucking, drilling and equipping of boreholes, construction of water tanks, will be undertaken during the plan period. Water point mapping will be undertaken to map disaster prone areas. It will also include development of disaster risk management, and coordination strategic plans, and capacity building/technical assistance to counties and communities.

Ministry's Role in Advancing Big Four Agenda

As an enabler to the 'Big Four' Agenda the Ministry will provide reliable water and sewerage/sanitation services to manufacturing, universal healthcare, affordable housing and food & nutrition security in the next five years, in line with Vision 2030. This will be through the construction of 2 large dams and 4 medium size dams in the planning period. These are Thwake, Mwache, Siyoi Muruny, Itare, Karimenu II and Yamo respectively.

Additionally, the Ministry will undertake Water supply and sewerage projects to serve the proposed industrial parks in Naivasha and Mombasa; providing reliable water and sewerage services for the planned affordable housing in Mavoko and Portland land in Athi River; Social housing in Kibera, Kiambiu, Mariguini and affordable housing in Kisumu, Eldoret, Nakuru and Mombasa and Water Supply to Nairobi Satellites Towns and Tatu City. The Ministry will also support Universal Health Care by mapping the health facilities to be connected to water and sewerage services where projects in 15 key towns will be developed and connection in level 5 hospitals and health facilities with water and sewerage/sanitation facilities will be developed.

Sustainable Development Goals

SDG 6 aims to ensure availability and sustainable management of water and sanitation for all. Towards domestication of SDG 6, Water sector has undertaken mapping the SDGs with the Kenya Vision 2030 and MTP III, setting up an institutional framework and preparation of SDG 6 pilot report.

Universal access to water and sanitation will progressively be achieved during the period of the SDGs, of which about 200,000 new water connections and 350,000 new sewer connections (for about 3.2 million people) will be required annually in urban areas for universal water access to be reached by 2030. Last mile connectivity will be undertaken in peri-urban and rural areas to

ensure all projects have water connections to households with a collection time of not more than 30mins (roundtrip).

Africa Agenda 2063

Water is critical to achieving Agenda 2063 development goals and aspirations. Aspiration 1 (18) of Africa we want envisions that Africa shall have equitable and sustainable use and management of water resources for socio-economic development, regional cooperation and the environment.

Towards this, the Ministry, during the plan period will domesticate and implement IWRM principles on all the strategies required as per the Water Act 2016 and implement key priority programmes aligned to MTP III which include: implementation of 236 Sub Catchment Management Plans; ground water mapping countrywide; water resources pollution control; transboundary waters management; water and sanitation infrastructure development; increase water storage per capita.

CHAPTER TWO: SITUATIONAL ANALYSIS

2.0 Overview

This chapter reviews the performance of the 2013-2017 Strategic Plan highlighting achievements, challenges and lessons learnt. The chapter further provides analysis of external and internal environment using the Strengths, Challenges, Opportunities and Threats (SWOT) and Political, Economic, Socio-cultural, Technological, Environmental and Legal (PESTEL) analytical tools. A stakeholder analysis has also been undertaken to establish the role of each stakeholder in the implementation of the strategy.

2.1 Review of Previous Strategic Plan Implementation

2.1.1 Milestones/ Key Achievements

A review of the strategic plan 2013-2017 was done and the table 2.1 presents the findings on extent of results achieved during the Plan period and table 2.2 presents the budget analysis .

Table 2.1: Summary of Key achievements /Milestones

Key Result Area	Key Target	Achievement
Governance and Institutional framework	<ul style="list-style-type: none"> • Formulate/review 4No. bills and Acts- Water Bill, Water policy ,Land reclamation • Formulate 6No. policies and sessional papers • Set 2No. National Standards for water provision • Ratify 2No. transboundary agreements • Install CCTV, implement LAN, Redesign and update website • Reserve and award 30% of Ksh. 746.9 M, (Ksh. 224M) to youth, women and persons with disabilities 	<ul style="list-style-type: none"> • The Water Act 2016 enacted • Draft National Water Policy, Transboundary policy, Land Reclamation policy and National Irrigation policy • Signed 3 River Basin MOUs: Mara River basin ,Sio Malaba Malakisi Transboundary and Lakes Chala and Jipeand Uмба River Ecosystem • 3No. AWSR Reports • CCTV installed in Maji House, LAN in place and Redesigned and updated website • Awarded 30 % of the value of total procured goods and services amounting to a total of Kshs. 365.6 Million to Youth, Women, and Persons with Disabilities

Key Result Area	Key Target	Achievement
Access to Clean Water, Safe Water and Sanitation Services	<ul style="list-style-type: none"> • Carry out a national survey on water • Increase access to safe water from 53.3% to 58% • Increase Sewerage coverage from 21.5% to 34% • Increase National population of sewerage from 10% to 20% • Increase urban population with access to improved sanitation from 66.7% to 76% • Construct 195 urban water projects • Increase the number of Urban marginalized people accessing safe water by 1,080,700 people • Increase the number of rural marginalized people accessing safe water by 624,000 people 	<ul style="list-style-type: none"> • Survey carried out during Annual Water Sector Review • The water coverage increased from 53.3% in 2013 to 59.9% • The sewerage coverage increased from 21.5% in 2013 to 25% in 2017 • The national population with access sewerage coverage increased from 7% to 10% • Increased percentage of urban population with access to safe water from 66.7% to 70% • 27 Urban water projects constructed • Water and Sanitation Access to 450,333 People in Underserved Areas
Partnerships and Collaboration for Resource Mobilization and Capacity Devolvement	<ul style="list-style-type: none"> • Construct and Equip the Water Resources Centre at KEWI • Establish UNESCO Category II Groundwater Centre for Training and Research • Increase the No. of Automatic Hydro-met stations by 100 • Train and build capacity and create awareness of water sustainability and management and land reclamation with county governments • Build Capacity in counties to engage with Water Boards 	<ul style="list-style-type: none"> • Resource Centre at an advance stage (71%) • Centre on Groundwater Resources Education, Training and Research in Eastern Africa was established in 2015 • 140 hydro-meteorological stations for water resources information rehabilitated and installed across 6 catchment regions • 25 gauging stations were upgraded to telemetry • Established Isotope Hydrology laboratory at the Central Water Testing Laboratory • Build capacity of 5No. officers in isotope hydrology analysis and interpretation
Research Development and Technology	<ul style="list-style-type: none"> • Establish KEWI Geo-Information Centre in collaboration with the ministry • Disseminate 5No. research reports • Adopt 2No. research findings • Develop 3No. service delivery innovations 	<ul style="list-style-type: none"> • 3No. Research reports disseminated on: <ul style="list-style-type: none"> i. Effectiveness of post-decision stage of the EIA process in Kenya in managing environmental and social impacts of water supply dams ii. Assessment of the quality of water in sand dams as sources of drinking water in Kitui iii. Earth Observation Based Identification of Suitable Sites for Rainwater Retention – Talek Basin

Key Result Area	Key Target	Achievement
Water Resources Management and Conservation	<ul style="list-style-type: none"> • Increase water storage per capita to 7M³ • Develop 6No. Catchment Management Strategies • Establish 100NO. Water Quality monitoring stations • Undertake 120 No. of surveillance of water Services Providers 	<ul style="list-style-type: none"> • 1000No. New Registration of Water Contractors • 90No. New Registration of Water Professionals • 6No. Catchment Management Strategies developed and • 273No. Water Quality monitoring stations • Conducted groundwater assessment in Central and Northern Turkana County and drilled 5No. high yielding boreholes for use in Lodwar and surrounding areas
Land Reclamation	<ul style="list-style-type: none"> • Rehabilitate 50,000ha degraded lands • Construct 200No. land reclamation structures • Create awareness of formation of land reclamation committees in 10No. counties • Collaborate with relevant stakeholders in reclamation of 10No. hotspots 	<ul style="list-style-type: none"> • 4,800 ha of land reclaimed in Turkana, Garissa and West Pokot counties (Land reclamation activities mainly done by County governments. National government contributed to the area reclaimed through Policy direction) • Conducted 1 basin based land degradation assessment (LADA)-a GIS/RS based land changes for the last 30 years • 842water pans and small dams constructed • 4,984 reclamation structures like trapezoidal bunds, zai pits, etc. constructed • Review and harmonization of the Land Reclamation 2013 draft policy and Bill where 3 inter-ministerial stakeholder's consultative workshop were held • A Kenya Socio Economic Atlas outlining areas vulnerable to degradation was also published during the plan period. • A practice manual for construction of small dams and pans was published and launched in 2015. • Capacity building communities of 1200 people in ASAL counties to respond and participate in reversing degradation and climate change was undertaken • The directorate conducted 1 region based land degradation assessment (LADA)-a GIS/RS based land changes for the last 30 years

Table 2.2: Budget Analysis

BUDGET ANALYSIS FOR THE FY 2013/14 - FY 2017/18 - ALLOCATION VS EXPENDITURE										
ECONOMIC CLASSIFICATION	ALLOCATION					EXPENDITURE				
	2013/14	2014/15	2015/16	2016/17	2017/18	2013/14	2014/15	2015/16	2016/17	2017/18
	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.
Current Expenditure	4,356	4,242	4,260	3,625	3,375	3,178	1,860	3,731	3,753	3,270
Compensation of Employees	774	650	660	617	600	434	642	633	536	535

Use of Goods and Services	260	267	283	165	187	274	263	260	180	173
Current Grants and Transfers	3,306	3,308	3,308	2,835	2,567	2,470	955	2,834	3,032	2,558
Other Recurrent	16	17	9	8	21	-	-	4	5	4
Capital Expenditure	33,792	29,285	34,348	39,606	35,072	22,824	23,993	29,225	36,534	29,573
Capital Grants and Transfers	2,049	1,263	6,324	12,050	34,827	1,191	1,162	5,003	10,758	29,573
Acquisition of Non-Financial Assets	31,110	27,718	27,719	27,451	245	21,281	22,527	23,918	25,671	
Other Development	633	304	305	105	-	352	304	304	105	-
TOTAL EXPENDITURE	38,148	33,527	38,608	43,231	38,447	26,002	25,853	32,956	40,287	32,843

The total budget expenditure of the Ministry in the last five years is Ksh. 157,941 Million. The total recurrent budget expenditure is Ksh. 15,792 million and development expenditure is Ksh. 142,149million which represents 10% and 90% respectively of the total budget expenditure. The Ministry total approved budget amounted to Ksh. 191,961million, which implies that the overall absorption capacity was 82%.

2.1.2 Challenges Faced

- i. Little focus on water infrastructure development as opposed to water resource and sanitation management
- ii. Land acquisition issues for large infrastructure projects
- iii. Inadequate funding of the planned programs and projects
- iv. Increased peri-urban and satellite towns has led to increased demand for water and sanitation services.
- v. Inadequate enforcement of laws, policies, strategies and regulatory guidelines
- vi. Effects of climate change and associated extreme weather events threaten sustainable water resources development. This results in substantial reallocations towards mitigation and adaptation
- vii. Slow career progression and hence gaps in succession management

2.1.3 Lessons Learnt

- i. There is a need to increase investment on water resources, sewerage and sanitation management.
- ii. Project sites should be acquired and cordoned off early to reduce compensation claims which arise during project commencement. Further there is need to improve collaboration with National Treasury, National Land Commission and project affected persons.
- iii. Resource mobilization strategies are essential to support implementation of programmes and projects
- iv. There is a need for master planning to meet increased demand for water and sanitation services arising from peri-urban and satellite towns
- v. Collaborative framework between the national and county governments is essential for sustainable water resource and sanitation management

- vi. On climate change effects, there is need to allocate more resources for improvement of capacity to forecast extreme events and mitigation of their effects
- vii. Adequate Institutional capacity development is critical for effective implementation of a strategic plan

2.2 Environmental Scan

2.2.1 Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

Table 2.3: Strengths-Strengths are characteristics of an organization that give it an advantage over others

S/NO.	STRENGTH	STRATEGIC IMPLICATION	STRATEGIC RESPONSE
1.	Water Act 2016	<ul style="list-style-type: none"> • Legally Established and recognized water sector institutions • Separation of roles: policy, implementation and regulation 	Operationalization of the Act
2.	Adoption of SDG 6	Domestication of SDG 6 in national plans	Budgeting towards universal access
3.	Clear mandate as per constitution of Kenya and Executive order No. 1 of 2018	Mandates and Functions clearly spelt out	Comply to the provisions of the constitution and Executive order
4.	Signed Intergovernmental framework/MoU with CoGs	Collaboration/ partnership	Operationalization of the signed MoU

Weaknesses

Table 2.4: Weakness-Weaknesses are characteristics of an organization that place the business or project at a disadvantage relative to others

S/NO.	WEAKNESS	STRATEGIC IMPLICATION	STRATEGIC RESPONSE
1	Inadequate funding to reach universal access to water and sanitation	Ksh.100 B required annually against average allocation of Ksh.40 B	Mobilize external resources of Ksh.30 B annually
2	Inadequate Human Capacity	Limited capacity to implement programmes	<ul style="list-style-type: none"> • Increase staffing to reach approved establishment • Capacity building initiatives
3	Old dilapidated water and sewerage infrastructure	frequent infrastructure breakdowns	<ul style="list-style-type: none"> • Last mile connectivity to new infrastructure
4	High Non Revenue Water (at 42%)	WSPs losing about Ksh.9.9 B annually	<ul style="list-style-type: none"> • Target to reduce by at least 2% annually
5	Weak M&E and reporting framework	Unreliable information system especially in rural areas to guide proper planning	Collect and digitize real time data at all levels

Opportunities

Table 2.5: Opportunities-Opportunities are elements in the environment that the Ministry could exploit to its advantage

S/NO.	OPPORTUNITIES	STRATEGIC IMPLICATION	STRATEGIC RESPONSE
1	Good will from Development partners	Increased funding for programmes/projects	Request for funds from development partners
2	Water as an enabler to “Big Four” Agenda	Opportunity for increased funding	Completion of water projects to support manufacturing, affordable housing, Nutrition and food security and universal health care
3	Human Right to Water and Sanitation	Progressive realization due to huge capital investments	support universal access to water and sanitation services

Threats

Table 2.6: Threats- Threats are elements in the environment that could cause trouble for an organization

S/NO.	THREAT	STRATEGIC IMPLICATION	STRATEGIC RESPONSE
1	Climate change	Dwindling water resources due to droughts and damage to water and sewerage infrastructure due to floods	Build resilience and disaster preparedness and response in planning
2	High public debt	Impact on sharing of national revenues which affects project implementation	Austerity measures on expenditures and cost efficiency
3	High population growth	<ul style="list-style-type: none"> • Increased demand and abstraction of water resources • Pollution of water resources • Water Catchment degradation 	<ul style="list-style-type: none"> • Formulate water regulations and guidelines • Lobby for laws that provide for protection of water catchment areas • Advice on water catchment areas • Enhance water harvesting and storage

2.2.2 Environmental Scanning (PESTEL Analysis)

This PESTIEL Analysis looks at the factors within the operating external environment that are political, economic, social, technological, environmental or legal in nature and their implications to the work of the MWS.

Table 2.7 below; present Political, Economic, Social, Technological, Environmental and Legal (PESTEL) Analysis for the Ministry.

Table 2.7: PESTEL Analysis

EXTERNAL ENVIRONMENT	FACTOR	STRATEGIC IMPLICATION	STRATEGIC RESPONSE
Political	Change in political leadership	Change in Government policies and priorities of impacting on the functioning of the Ministry	The ministry should be able to adapt to the new changes when it occurs.
	devolution of water and sanitation services	disputes in sharing water resources within counties	Develop and implementation framework of collaboration
Economic	High public debt	Increased interests leading to reduced funds allocated to water sector	Alternative sources of financing
	Increased Taxation	High cost of imported equipment and technical services on water and sanction projects	<ul style="list-style-type: none"> • Increase research to enhance innovation • Seek for tax exemptions
Social	High population growth	<ul style="list-style-type: none"> • Increased demand and abstraction of water resources • Pollution of water resources • Water Catchment degradation 	<ul style="list-style-type: none"> • Enhance water harvesting and storage • Develop and implement water regulations and guidelines
	Increased urbanization	Increased demand for water resources and sanitation services	Mobilise resources and provide adequate funding for water and sewerage projects
Technological	Improved technological development and advancement	Ease in prospecting for and monitoring water and sanitation services	<ul style="list-style-type: none"> • Continual capacity building and adoption of new water technologies
Environmental	Climate Change	<ul style="list-style-type: none"> • Land degradation, drought, floods and desertification • Decrease in water resources 	Development and implementation of contingency /adaptation/mitigation plans, and capacity building Sustainable water resources use management
	Pollution of water resources	Compromised water quality	<ul style="list-style-type: none"> • Enhance water quality monitoring • Improve water quality laboratory services • polluter pays principle
Legal	Water Act 2016	Inconsistencies and gaps in the Act	Identify inconsistencies and propose amendments of the Act
	Transboundary Cooperative Frameworks and Treaties	Modalities of sharing transboundary water resources	Comply and implement provisions of ratified regional laws and regulations

2.2.3 Stakeholder Analysis

Stakeholders have certain expectations which should be fulfilled by the Ministry in the execution of its mandate. The following is the outcome of the Ministry’s stakeholder analysis:

Stakeholder	Stakeholder Expectation	Ministry Expectation
Public/citizenry Active participation	<ul style="list-style-type: none"> • Active participation • Enhanced awareness in the sector • Efficient and effective services • Transparency and accountability in the service delivery • Enhanced awareness in the sector 	<ul style="list-style-type: none"> • Regular feedback on our services • Responsive citizenry • Compliance with laws and regulations. • Ownership and sustainability of projects
Staff	<ul style="list-style-type: none"> • Commitment to their welfare • Their excellent performance to be rewarded • Favorable terms & conditions of service and good work environment • Skills/capacity development and career progression • Efficient and effective Human Resource services; • Participatory and fair appraisal 	<ul style="list-style-type: none"> • Improved productivity • provision of necessary skills and manpower • Exhibit good image of the Ministry • Efficient and timely services to the citizens and stakeholders • Adherence to policies, rules, and regulations of the ministry; • Efficient utilization of resources allocated
Researchers and academic institutions	<ul style="list-style-type: none"> • Provide attachment and internship to their students; • Share the generated data and information • Partnership and collaboration in research and policy formulation 	<ul style="list-style-type: none"> • Qualified, disciplined and well trained students. • Training of manpower who are competent enough to deliver on the Ministry's mandate • Confidentiality on shared information and feedback.
Ministries Department and Agencies (MDAs)	Strengthen support and collaboration with Ministries and state agencies	Promote inter-ministerial coordination and collaboration, devolution and decentralization opportunities
Contractors, Suppliers and Consultants	<ul style="list-style-type: none"> • Timely payments for goods supplied and services rendered. • Procurement process which is transparent and accountable as well as Fair competition • Affirmative action on 30% access to government procurement opportunities for youth, women and Persons With Disabilities 	<ul style="list-style-type: none"> • Efficient, effective and timely delivery of goods and services. • High standards of technical works undertaken, goods and services supplied that meet contractual obligations • Competitive and fair pricing
Professional bodies	<ul style="list-style-type: none"> • Compliance by technical staff through registration and renewal of membership • Provide opportunities for continuous professional development 	<ul style="list-style-type: none"> • Improved standards of technical expertise and professional management in the sector • Partner in the implementation of development projects and programs. • Improved innovation, research and development; and policy analysis
Non-State Actors such as NGOs, Civil Societies, CBOs and others	<ul style="list-style-type: none"> • Participation in the Ministry's policies, projects and programs development. • Provision of quality services 	Improve methods of collaborations by signing of MOU's that ensure serious commitment
Development	<ul style="list-style-type: none"> • Efficient use of Resources 	<ul style="list-style-type: none"> • Support specific programs whose

Stakeholder	Stakeholder Expectation	Ministry Expectation
partners and international organizations	<ul style="list-style-type: none"> • Achievement of planned outputs and outcomes of projects implemented • Involvement in stakeholder consultations in planning for the sector • Timely payment of subscription fees. 	<p>implementation is coordinated by the Ministry.</p> <ul style="list-style-type: none"> • Timely disbursement of promised resources;
Parliament	<ul style="list-style-type: none"> • Timely submission of draft bills for legislation. • Timely response to all parliamentary questions • Efficient utilization of allocated resources 	<ul style="list-style-type: none"> • Effective and Timely formulation of bills on Water and Sanitation • Quality bills • Ensure adequate funding
Media	Timely, Accurate and reliable information	<ul style="list-style-type: none"> • Enhanced awareness, information documentation and effective communication. • Fair and responsible coverage
County Governments	<ul style="list-style-type: none"> • Policy guidance on , water, sanitation and land reclamation • Partnership in implementation of devolved functions in water, sanitation and land reclamation • Capacity building on water, sanitation and land reclamation • Technical advisory and support 	<ul style="list-style-type: none"> • Proper implementation of policies, legislation and regulations for both levels of Governments. • Partnership in implementation of national programs and projects. • Timely and Quality provision of, water and sanitation services to the public. • Share data and information on their achievement on water and sanitation
Private Sector	<ul style="list-style-type: none"> • Increased involvement in Public Private Partnerships (PPPs) for water, sanitation and Land reclamation services provision. • Provide enabling environment and incentives For business • Involvement in policy formulation in the sector 	<ul style="list-style-type: none"> • Increased funding for prioritized PPPs projects in water and sanitation • Play their rightful role in sector growth • Compliance with laws, regulations and best business practices

CHAPTER THREE: STRATEGIC MODEL

3.0 Overview

This chapter presents the strategic model that set out the Vision, Mission, Overall goal, core values and guiding principles that guide the implementation of this strategic plan. It also outline the Key Result Areas (KRAs) that inform the focus areas for implementation of the strategic objectives and strategies

3.1 Vision, Mission, Overall goal, Core Values, Motto and Guiding Principles

The Ministry will be guided by the following strategic foundations over the planning period:

3.1.1 Vision

“Universal access to adequate, safe and sustainably managed water resources and sanitation”.

3.1.2 Mission

“To ensure good governance in the conservation, protection, harvesting and storage, management and development of water resources and sanitation infrastructure for national socio-economic development”.

3.1.3 Overall Goal

Accelerating access to quality water and sanitation services

3.1.4 Core Values

The Ministry will draw its values from the Constitution of Kenya, 2010, Article 10, which details the national values and principles of governance, which include the following:

- a. **Sustainable Development:** The ministry will pursue development in the sector that satisfies the needs of the present generation without compromising the capacity of future generations, guaranteeing balance between economic growth, care for the environment and social wellbeing
- b. **Honesty and Integrity:** The ministry shall conduct its affairs in serving the public in an honest manner upholding highest degree of responsiveness to the aspirations of the public it serves
- c. **Human Dignity:** The Ministry is committed to uphold reasonable standards of living through provision of water services and sanitation for the citizens.
- d. **Teamwork and focus on results:** The Ministry will relentlessly pursue timely attainment of targeted results at all levels through high level coordination, networking and collaboration with all staff, stakeholders and the public.
- e. **Innovativeness:** The Ministry is committed to innovativeness, creativeness, resourcefulness and focused planning and customer driven service delivery
- f. **Participatory Approach:** The Ministry is committed to consultations, joint and comprehensive partnership with all its stakeholders in all its undertakings.

3.1.5 Motto

“Water is life and sanitation is dignity”.

3.1.6 Guiding Principles

Governance and management of the water sector will be guided by the national values and principles set out in articles 10, 43, 60, 69 and 232 of the Constitution. More specifically, the following principles shall apply:

- a. **Intergovernmental and institutional collaborative effort:** National and County governments shall work in a consultative and collaborative manner with a clear coordination framework to promote the objectives of the sector, taking into account the distinct mandates of each level of government; incorporating recognition of concurrent and overlapping areas of jurisdiction.
- b. **Integrated planning and resource management:** Planning of water sector activities should take national, cross-county and county approach towards the development of national integrated investment and financing plan. The management and development of water resources shall take into account different and competing interests of groups, sectors and the needs of the environment. Planning for water service and resource management should be integrated.
- c. **Respect for human rights:** Every sector player shall act in a manner that protects respects and fulfils the human right to water and sanitation. Every Kenyan has a right to clean and safe water in adequate quantities, and to reasonable standards of sanitation. The management and use of water resource should take into account the needs and rights of riparian communities as well as guaranteeing access rights to other users for surface and ground water.
- d. **Equity and inclusivity:** Water resources shall be allocated fairly according to need, value to economy and efficient usage, mindful of the marginalized and vulnerable groups. Cross-county equity should apply in sharing water resource.
- e. **Polluter pays principle:** The cost of cleaning up any element of the environment damaged by pollution, compensating victims of pollution, cost of beneficial uses lost as a result of an act of pollution and other costs that are connected with or incidental to the foregoing, is to be paid or borne by the person convicted of pollution under this EMCA Act (Revised 2012) or any other applicable law
- f. **Consumer protection:** The sector will implement measures that shall ensure the water is available, accessible, affordable, reliable, sustainable, and in the right quality, quantity and time, and being mindful of marginalized and vulnerable groups.
- g. **Efficiency and value for money:** Every effort should be made in maximizing output per unit of public resource, and in maximizing the expected outcome(s) across the value chain.
- h. **Ring fencing:** Revenues generated from water charges, fees and tariffs should be used for the purpose of promoting water activities only.
- i. **User pays principle:** the recognition of water resources as an economic and social good, and the application of the most efficient pricing model to ensure full cost coverage while meeting the social, economic and environmental costs.

3.2 Key Result Areas (KRAs)/ Strategic Focus Areas

In line with Ministry’s Vision, Mission, eight key result areas which reflect MWS mandate and responsibilities in the realization of Kenya Vision 2030, Third Medium Term Plan (2018-2022)

and Big Four Agenda have been identified and will be the pillars of this Strategic Plan. The Key Result Areas are:

KRA 1: Policy, Legal and Institutional Framework

The Ministry will facilitate the full operationalization of Water Act 2016 by 2022 through the finalization of the development of five regulations and guidelines namely: Water Services Rules; Water Resources Rules; Water Harvesting & Storage Rules, Water Tribunal Rules and Water Sector inter-governmental regulations. Additionally five (5) Water sector institutions (NWHSA, WSTF, WRA and WASREB, WT) will be established. The ministry will also develop the criteria to establish WWDA(s) as per the Water Act 2016. The review of the Water Act 2016 will also be undertaken through the finalization of the miscellaneous amendment bill. Further three Strategies: NWSSS, NWRMS, NWHSS will be developed. The Ministry will also develop and review policies, legislation and regulations on National Water Resources, Trans-boundary and National Water Services. During the plan period, the finalization and operationalization of the following will be undertaken: National Water Policy 2018, Finalization of the Legal Framework to operationalize Trans-Boundary Water policy, Hydrologist Act 2017 and review KEWI Act 2001. The Ministry will strengthen linkages between planning, budgeting and monitoring to enhance service delivery of and mainstream cross cutting issues.

KRA 2: Management, Protection and Conservation of Water Resources and Transboundary waters

During the Plan period, Water resources assessments will be carried out through the rehabilitation of 580 hydro metrological stations for water resources information monitoring; installation and upgrading of 80 river gauging stations to telemetric stations and establishment of 20 hydro meteorological stations for monitoring of Transboundary waters. A total of 292 Sub catchment management plans will be developed and implemented to manage water resources. Groundwater resources mapping and assessment will be carried out in 6 Counties. Drilling of 15 exploratory of boreholes will be undertaken. Managed aquifer recharge programme will also be initiated in order to augment groundwater recharge and quantity. A National Isotope Hydrology laboratory will also be established for capacity building in Isotope Hydrology Technique and Isotope analysis to enhance water resources assessment. Surveillance for drinking water quality and pollution control will be improved coupled with development and implementation of Trans-boundary waters pollution control Programme. Transboundary waters will implement 3 Transboundary Memorandum of Understanding and two surface Transboundary projects as well as Groundwater mapping of Transboundary aquifers for enhanced water availability.

KRA 3: Water Coverage

The Ministry will increase percentage of national population with access to safe water from 60% in 2017 to 80% in 2022. This will be through the implementation of the ‘Big Four’ Agenda Projects that will support the manufacturing, affordable housing, food security and universal health care through connection of water and sanitation services by implementing 32 projects. The Ministry will also rehabilitate water supply infrastructure in major urban areas of Nairobi, Mombasa, Nakuru and Eldoret and expansion and rehabilitation of water supplies in 20 medium sized towns. To serve rural population with access to safe water, the ministry will rehabilitate and expand existing large rural water supply schemes, drill and equip 215 strategic boreholes. In the urban informal settlements and rural marginalized areas, the ministry targets to serve 1,660,000 and 2,800,000 people with safe water respectively. In addition, last mile water connectivity will be undertaken in collaboration with WSPs and county governments to benefit 500,000 households nationwide. To enhance water availability for schools the Ministry will connect 3,000 primary and 500 secondary schools to safe water.

KRA 4: Sanitation Coverage

During the plan period, the Ministry will increase the percentage of population with access to improved sanitation from 68% to 80% nationally. This will be through increase in urban population with access to improved sanitation from 67.5% to 85%, and that of rural population from 52% to 76%. This will be achieved through improvement of onsite-sanitation facilities in major urban and satellite towns and construction of new sanitation facilities in selected towns across the country. In addition, the Ministry will increase the percentage of urban population with access to sewerage system connection from 25% to 40%. This will be realized through improvement sewerage facilities in Nairobi and its satellite towns, augmentation of sewerage facilities in various towns and construction of new sewerage systems/infrastructure across the country.

KRA 5: Water Storage and Flood Control

During the plan period, water storage capacity will be increased by 605 Million Cubic Metres. This will be through the construction to completion of two large dams (Thwake, Mwache), four medium size dams (Siyoi Muruny, Itare, Karimenu II and Yamo), 500 small dams and pans. Planning, design and preparation of dam construction will be done. The Ministry will also build

35km dykes to protect 50,000ha of land and install 103 flood early warning systems in various parts of the country.

In addition, the Ministry will enhance groundwater storage through managed aquifer recharge by making use of storm water generated in urban areas. This will be undertaken in four sites in Nairobi County, one site in Nakuru County, one in the greater Merti aquifer Counties of Nanyuki, Marsabit, Isiolo, Wajir and Garissa; two sites in the Coast and one site in Turkana County. The actual works will involve drilling of recharge wells and redirecting storm water to those sites for managed aquifer recharge.

KRA 6: Human Resource Capacity

Human resources capacity will be enhanced in order to deliver on the Strategic Plan. This will entail enhancing staff competencies, improving working environment, enhancing performance management, succession management and enhancing knowledge management. The recruitment of 50 staff every year will also be carried out to reduce the shortfall of 292 officers as per the approved establishment.

KRA 7: Research and Technology

Water research and technology will be enhanced through establishment and operationalization of 3 water research institutions, establishment of a mechanism to finance water sector research programmes to fund 200 research projects, adoption of appropriate water availability and sanitation improvement technologies i.e. Water recycle and reuse, wastewater management, storm water management, desalination, and development of water sector data and information management guidelines, establishment of water sector data and information system (E-Water portal) for effective planning and decision making. Additionally, institutional and human capacity on research and information management will be developed.

KRA 8: Partnerships and Resource Mobilization

During the plan period, the Ministry will mobilize Kshs. 607 Billion to support programmes and projects. This will be done through the enhancement of exchequer funding including equalization funds, bond financing, public private partnerships, leveraging on commercial financing,

collaboration with County Governments on last mile water connectivity and establishment of an endowment fund.

3.3 Strategic Objectives and Strategies

The following are the strategic objectives which will guide the Ministry realize its mandate during the planning period:

1. To enhance sector governance and leadership through formulation and implementation of 4 no. Policies, 3no. Bills and 3no. Strategies in full compliance with the Water Act 2016 by 2022
2. To Increase per capita fresh water endowment from 527 M³ to 700 M³ through management, protection and conservation of water resources by 2022.
3. To increase percentage of national population with access to safe water from 60% in 2017 to 80% by 2022.
4. To increase percentage of national population with access to improved sanitation from 68% in 2017 to 80% by 2022.
5. To Increase water storage per capita from 4.5M³ in 2017 to 14M³ by the year 2022.
6. To build human resource capacity through training of 363 no. of staff annually and recruitment of 255 no. of staff by 2022.
7. To undertake research, development and adoption of appropriate technologies through the establishment and operationalization of 3 water research institutions and conduct 200 research projects by 2022.
8. To enhance water sector financing by mobilizing Kshs. 607 Billion to support programmes and projects.

The strategic elements of the Ministry have been summarized in the following matrix:

Table 3.1: Strategy Matrix

Key Result Areas	Strategic Objectives	Strategies
Policy, Legal and Institutional Framework	1. To enhance sector governance and leadership through formulation and implementation of 4 no. Policies, 3no. Bills and 3no. Strategies in full compliance with the Water Act 2016 by 2022	<ol style="list-style-type: none"> 1. Operationalize Water Act 2016 by 2022 2. Development and review of policies, legislation and regulations 3. Strengthen linkages between planning, budgeting and monitoring 4. Enhance Service delivery of the Ministry 5. Mainstreaming and implementation of cross cutting issues in Ministry programmes and projects
Management, Protection and Conservation of Water Resources and transboundary waters	2. To Increase per capita fresh water endowment from 527 M ³ to 700 M ³ through management, protection and conservation of water resources by 2022.	<ol style="list-style-type: none"> 1. Improve Water Catchment protection and Conservation 2. Strengthen enforcement of regulations in the development and management of Water Resources 3. Improve Surveillance for drinking Water Quality and pollution control. 4. Upgrade Hydrometric networks to telemetric status. 5. Digitize the Registration and processing of applications for Contractors and Water Professionals 6. Increase ground water mapping and assessment from 2 to 6 counties 7. Promote managed artificial groundwater /aquifer recharge 8. Support and enhance negotiations and peace initiatives on shared water resources 9. Enhance Flood Management and drought mitigation measures in 29 drought prone counties and 8 flood prone counties.

Key Result Areas	Strategic Objectives	Strategies
Water Coverage	3. Increase percentage of national population with access to safe water from 60% in 2017 to 80% by the year 2022	<ol style="list-style-type: none"> 1. Support implementation of the ‘Big Four’ Agenda Projects as an enabler 2. Increase percentage of urban population with access to safe water from 70.3% to 84% 3. Increase Percentage of rural population with access to safe water from 55.9% to 78% 4. Increase the number of people accessing safe water in urban informal settlements by 1,660,000 5. Increase the number of people accessing safe water rural marginalized by 2,811,000 6. Undertake last mile water connectivity in collaboration with county governments to benefit 500,000 households nationwide 7. Enhance water availability for schools 8. Reduce Non Revenue Water losses from 42% to 35%
Sanitation and Sewerage Coverage	4. Increase Percentage of National population with access to improved sanitation from 68% in 2017 to 80% by the year 2022	<ol style="list-style-type: none"> 1. Increase Percentage of urban population with access to improved sanitation from 67.5% to 85% 2. Increase Percentage of rural population with access to improved sanitation from 52% to 76% 3. Increase Percentage of urban population with access to sewerage from 25% to 40% 4. Increase the number of people in rural marginalized accessing adequate and safe sanitation by 205,500 5. Increase the number of people urban informal settlements accessing adequate and safe sanitation by 1,655,000 6. Enhance waste water treatment through piloting in selected urban centres
Water Harvesting, Storage and Flood control management	5. To Increase water storage per capita from 4.5M ³ in 2017 to 14M ³ by the year 2022.	<ol style="list-style-type: none"> 1. Increase water storage capacity for domestic and industrial use by 623 Million Cubic Meters by 2022 2. Enhance flood control structures 3. Improve climatic data collection for planning and flood early warning 4. Enhance water availability for public institutions
Human Resource Capacity	6. To build human resource capacity through training of 363 no. of staff annually and	<ol style="list-style-type: none"> 1. Determine and implement the Human Resource(HR) needs of the Ministry 2. Enhance competency development 3. Improve working environment by 5% each year

Key Result Areas	Strategic Objectives	Strategies
	recruitment of 255 no. of staff by 2022	<ol style="list-style-type: none"> 4. Enhance human resource performance management 5. Strengthen human resource development and succession management 6. Enhance Knowledge management
Research and Technology	7. To undertake research, development and adoption of appropriate technologies through the establishment and operationalization of 3 water research institutions and conduct 200 research projects by 2022.	<ol style="list-style-type: none"> 1. Establish and Operationalize three water research institutes 2. Development and adoption of appropriate water and sanitation technologies 3. Improve data collection and information management for effective planning and decision making 4. Enhance institutional and human capacity on research and information management
Partnerships and collaboration for resource mobilization	8. To enhance water sector financing by mobilizing Kshs. 607 Billion to support programmes and projects.	<ol style="list-style-type: none"> 1. Raise Kshs. 306.4 Billion through MTEF budgeting process 2. Tap into the capital markets to raise Kshs. 10 Billion. through Water Infrastructure Bond financing 3. Mobilize Kshs. 235.2 Billion through PPPs to support water sector programmes 4. Leverage on commercial financing to mobilize Kshs.10 Billion for development of the Water Sector 5. Mobilize Kshs 10 Billion through equalization fund 6. Partner and collaborate with County Governments on last mile water connectivity targeting Kshs. 20 Billion 7. Develop a sustainable water sector funding model by investing Kshs. 15.4 Billion in an endowment Fund

CHAPTER FOUR: IMPLEMENTATION AND COORDINATION FRAMEWOK

4.0 Overview

This chapter presents the current and proposed organization structure of the Ministry of Water and Sanitation and its staffing levels .It also outlines the human resource gaps, financial resource requirements, risk analysis and mitigation measures. The Ministry will ensure effective resources mobilization from Government of Kenya (GoK), Development Partners, and Public Private Partnerships (PPPs) collaboration.

4.1 Structure of the Organization

4.1.1 Current organization

The present structure of the Ministry provides for Cabinet Secretary who is responsible for the overall policy direction and supervision of the Ministry; principal advisor to the President and the National Assembly on matters relating to relevant water policy as well as coordination of overall governance and programmes to meet the objectives of the Ministry. The Ministry has a Principal Secretary who has the primary responsibility for policy, finance and general administration of the Ministry. The Ministry also has a Chief Administrative Secretary who assists the Cabinet Secretary in the day to day management of the Ministry's affairs.

The mandate of the Ministry is vested on the Ministry Headquarters and its institutional set-up is discussed below:

Directorates and Departments in the Ministry Headquarters

1. Directorate of Water

The Directorate is in charge of the Technical Services in the Ministry. It consists of four departments as shown below.

i) Department of National Water Resources

The department of National Water Resources is charged with the responsibility of policy guidance, management and equitable allocation of the country's water resources for the benefit of all. Specifically, the department has the mandate of water resources policy formulation, guidance, direction, and coordination, supervision of water resources policy implementation and research policy on water resources. It is also mandated to enforce technical standards in water resources management including water quality and pollution control, as well as conducting pilot water resources assessment in collaboration with other institutions.

ii) Department of Transboundary Waters

The department is charged with the responsibility to sustainably manage and effectively utilize Kenya's transboundary waters on the basis of the internationally recognized principles. Key

functions include: formulation, review and implementation of transboundary water policies and protocols, negotiations of the development and implementation of joint management Cooperative Frameworks Agreements (CFA) and Memorandum of Understanding (MoUs) with other riparian states.

iii) Department of Water, Sewerage and Sanitation Development

The department provides policy guidance and strategies for water and sewerage services, donor coordination, planning and design reviews of National Public Water and Sewerage Works, oversights Quality Assurance and safety of hydraulic structures, maintains data and technical information on water supply and sewerage, provides supervision for Water Services Boards, Water Services Regulatory Board and National Water Conservation and Pipeline Corporation, and coordinates and guides the water services sub-sector.

iv) Department of Water Infrastructure Development

Coordination of planning, design and construction of water infrastructure particularly the cross county bulk water infrastructure carried out by the water institutions; contract management, community water infrastructure development and Public Private Partnership in water infrastructure development.

2. Directorate of Shared Services

The Directorate coordinates and provides support services to the technical departments to facilitate the realization of the strategic objectives of the Ministry. It comprises Administration, Planning, ICT, Finance, Accounts, Human Resource Management and Development, Human Resources Development, Public Communications, Internal Audit, Legal and Procurement.

Statutory Institutions in the Ministry

In addition, the Ministry provides policy guidance, capacity building, resource mobilization, coordination and oversight for the following statutory institutions as defined in “Organization of the Government, Executive Order No. 1 of 2018 issued in June, 2018 by the presidency.

- 1. Water Services Regulatory Board (WASREB)** is established under the Water Act, 2016 to regulate water and sewerage services provision, including issuing of licenses, setting service standards and guidelines for tariff and prices.
- 2. Water Resources Authority (WRA):** The Authority is established under the Water Act 2016 to regulate the management and use of water resources including water allocation, source protection and conservation, water quality management and pollution control as well as collaboration on international waters. WRA is the successor of Water Resources Management Authority (WRMA).

3. **The Water Sector Trust Fund (WSTF)** is established under the Water Act, 2016 to provide conditional and unconditional grants to Counties, in addition to the Equalization Fund and to assist in financing the development and management of water services in marginalized and underserved areas. This includes community level initiatives for the sustainable management of water resources, development of water services in under-served rural areas, development of water services in the under-served poor urban areas, and research activities in the area of water resources management, water services, sewerage and sanitation. Water Sector Trust Fund is the successor of Water Services Trust Fund (WSTF) under the Water Act, 2002
4. **Water Tribunal (WT):** The Tribunal is established under the Water Act, 2016 to hear and determine any dispute concerning water resources or water services. WT is the successor of Water Appeals Board (WAB) that was enacted under Water Act, 2002.
5. **National Water Harvesting and Storage Authority (NWHSA)** is established under the Water Act, 2016 to undertake the development of national public water works for water resources storage and flood control on behalf of the national government; and maintain and manage national public water works infrastructure for water resources storage. The Authority is the successor of National Water Conservation and Pipeline Corporation (NWCPC) under the Water Act 2002. The Transition from NWCPC to NWHSA is still in progress.
6. **Eight (8) Regional Water Services Boards (WSBs):** The 8 WSBs were established under the Water Act, 2002 to manage water and sewerage service provision in their respective areas of jurisdiction. The eight Water Services Boards are: Tana, Athi, Tanathi, Lake Victoria South, Lake Victoria North, Rift Valley, Coast and Northern Water Services Boards. The Water Services Boards will be transformed to Water Works Development Agencies in line with Water Act, 2016, once the ongoing studies have been finalized and public consultation undertaken as per the Act.
7. **Kenya Water Institute (KEWI):** KEWI was transformed into a semi-autonomous institution in July 2002 through the Kenya Water Institute Act, 2001. KEWI provides training, research and consultancy services in the water and irrigation sector.
8. **Regional Centre on Ground Water Resources Education, Training and Research (Legal Notice No.252 of 18th December, 2015):** The institution works to build knowledge and information on ground water potential. The institution also undertakes training and research on ground water resources.

4.1.2 Ministry's Organizational Structure

The current organizational structure for the Ministry of Water and Sanitation is shown in Annex III. However, the Ministry is aligning its self to the expanded mandate and new functions as per Executive order No. 1 of 2018 and Water Act 2016. The proposed organizational structure of the Ministry is presented in Annex IV.

4.2 Staff Establishment

The Ministry's major strength is in its human resource and capacity development. This plan will focus to build staff capacity and provide a good working environment for their service delivery

4.2.1 Current Staff Establishment and Proposed Staffing Levels

The Ministry's current total number of staff is 363 against an authorized establishment of 655 officers, resulting in a variance of 292 staff. Out of the 363 in post, technical departments constitute 42% of staff while shared services 58%. The breakdown is as summarized in Table 4.1 below

Table 4.1: Current staffing levels per approved departments

S/No.	Department	Authorised establishment	In post	Variance
1.	Water, Sewerage and Sanitation Development	113	85	-28
2.	National Water Resources	134	57	-77
3.	Transboundary Waters	54	7	-47
4.	Water Infrastructure development	80	0	-80
5.	Administration	189	151	-38
6.	Finance	9	5	-4
7.	Human Resource Management & Development	13	11	-2
8.	Planning	8	8	0
9.	Supply Chain Management Department	10	12	2
10.	Public Communications	5	2	-3
11.	Records Management	13	10	-3
12.	Accounts	19	12	-7
13.	Information Communication Technology Department	8	3	-5
	Grand total	655	363	-292

Proposed Departments Staffing Levels

The Ministry has proposed establishment of 1,300 staff, out of which 363 are already in post, this gives a variance of -937. Out of the proposed 1300 staff, technical services has proposed 992 staff while shared services 308 staff giving a percentage of 76% for technical and 24% for shared services. The details per proposed department is summarized in Table 4.2

Table 4.2: Proposed Departments Staffing Levels

S/No.	Department	Proposed Posts
	<i>Technical Services</i>	
1	Directorate of Water Development	
	Water sector Coordination and Reforms	82
	Water Storage and flood control	57
	Rural water coordination and development	65
	Water Infrastructure Development	57
	Electrical and mechanical services	123
2	Directorate of Sanitation	
	Sewerage Development	63
	Sanitation Management	70
	Storm water management	65
3	Directorate of Water Resources	
	Groundwater	122
	Water Rights	40
	Hydrological	76
	Water quality and pollution control	74
	Water Research and Information Management	43
4	Directorate of Transboundary Waters	
	TW Policy, Bilateral/Multilateral Cooperation	55
	TW International Frameworks	
	TW Projects and Programmes	
	TW Information and Systems Management	
	Subtotal Technical	992
	<i>Shared Services</i>	
5	Directorate of shared Services	
	Administration	197
	Finance	9
	Human Resource Management & Development	30
	Planning	17
	Supply Chain Management Department	10
	Public Communications	5
	Records Management	13
	Accounts	19
	Information Communication Technology	8

S/No.	Department	Proposed Posts
	Department	
	<i>Subtotal shared services</i>	<i>308</i>
	Grand total	1,300

4.2.2 Human Resource Development Strategies

The Ministry will put in place human resource strategies to develop its staff so as to effectively deliver on its mandate. This will entail: Enhancing staff competencies, improving working environment, enhancing performance management, succession management and enhancing knowledge management

Water Institutions in the Ministry

In addition, the Ministry provides policy guidance, capacity building, resource mobilization, coordination and oversight for the following statutory institutions as defined in “Organization of the Government, Executive Order No. 1 of 2018 issued in June, 2018 by the presidency.

9. **Water Services Regulatory Board (WASREB)** is established under the Water Act, 2016 to regulate water and sewerage services provision, including issuing of licenses, setting service standards and guidelines for tariff and prices.
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11. **The Water Sector Trust Fund (WSTF)** is established under the Water Act, 2016 to provide conditional and unconditional grants to Counties, in addition to the Equalization Fund and to assist in financing the development and management of water services in marginalized and underserved areas. This includes community level initiatives for the sustainable management of water resources, development of water services in under-served rural areas, development of water services in the under-served poor urban areas, and research activities in the area of water resources management, water services, sewerage and sanitation. Water Sector Trust Fund is the successor of Water Services Trust Fund (WSTF) under the Water Act, 2002
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13. **National Water Harvesting and Storage Authority (NWHSA)** is established under the Water Act, 2016 to undertake the development of national public water works for water resources storage and flood control on behalf of the national government; and maintain and manage national public water works infrastructure for water resources storage. The Authority is the successor of National Water Conservation and Pipeline Corporation (NWCPC) under the Water Act 2002. The Transition from NWCPC to NWHSA is still in progress.
14. **Eight (8) Regional Water Services Boards (WSBs):** The 8 WSBs were established under the Water Act, 2002 to manage water and sewerage service provision in their respective areas of jurisdiction. The eight Water Services Boards are: Tana, Athi, Tanathi, Lake Victoria South, Lake Victoria North, Rift Valley, Coast and Northern Water Services Boards. The Water Services Boards will be transformed to Water Works Development Agencies in line with Water Act, 2016, once the ongoing studies have been finalized and public consultation undertaken as per the Act.
15. **Kenya Water Institute (KEWI):** KEWI was transformed into a semi-autonomous institution in July 2002 through the Kenya Water Institute Act, 2001. KEWI provides training, research and consultancy services in the water and irrigation sector.
16. **Regional Centre on Ground Water Resources Education, Training and Research (Legal Notice No.252 of 18th December, 2015):** The institution works to build knowledge and information on ground water potential. The institution also undertakes training and research on ground water resources.

4.3 Financial Resources

The financial resources will be mobilized mainly from the exchequer and development partners. Other additional avenues of resource mobilization the Ministry will utilize will be through collaborations with County Governments, Kenya Pooled water fund, commercial financing, equalization fund and endowment fund. Funds

to support capacity development will also be mobilized from Regional and International Partners such IAEA and UNESCO

4.3.1 Financial Resource Requirements

The Ministry will require KShs.607, 037.13 Million to fully implement this Strategic Plan. The projected resource requirement for the KRAs is shown in table 4.3 below.

Table 4.3: Financial Requirements of the Strategic Plan as per Key Result Area

Key Result Area	Financial Year (In Ksh. Millions)					
	Printed Estimates 2018/19	Requirements				Total
		2019/20	2020/21	2021/22	2022/23	
1. Policy, Legal and Institutional Framework	108	415	461	530	553	2,068
2. Management, Protection and Conservation of Water Resources and Transboundary waters	6,902	5,648	6,275	7,216	7,530	33,571
3. Water Coverage	33,557	54,778	71,976	97,772	106,371	364,455
4. Sanitation Coverage	1,192	14,880	16,549	19,041	19,870	71,532
5. Water Storage and Flood Control	10,405	25,722	28,580	32,868	34,296	131,872
6. Human Resource Capacity	636	171	190	219	229	1,445
7. Research and Technology	55	401	446	513	535	1,950
8. Partnerships and collaboration for resource mobilization	59	35	23	14	15	144
Total	52,914	102,050	124,500	158,174	169,399	607,037

4.3.2 Resource Gaps

The funding of the programs and projects will come from the Government of Kenya (GoK) through the

exchequer releases, Development Partners, and Public Private Partnerships (PPPs) collaboration. The Ministry requires KSh. 607 billion to implement the Strategic Plan over the five year period. It is projected that Ksh. 306.4 billion will be total financial allocation by GoK and Development Partners (Ksh. 102 billion from GoK and KShs 204.4 billion from Development Partners). This leaves a funding gap of Ksh. 300.6 billion which will be mobilized through Kenya Pooled water fund, commercial financing, equalization fund and endowment fund. Table 4.4 summarizes the resource requirements and deficits

Table 4.4: Summary of Resource Gap (KShs. Millions) 2018/19 – 2022/23 financial years

Expenditure	2018/19 Estimates in Ksh. Millions	Projected Requirement in Ksh. Millions				Projected Allocation in Ksh. Millions			
		2019/20	2020/21	2021/22	2022/23	2019/20	2020/21	2021/22	2022/23*
Recurrent	4,143	10,205	12,450	15,818	16,940	4,319	4,449	4,562	7,849
Development	48,771	91,845	112,050	142,357	152,459	48,309	49,034	49,646	85,415
Subtotal (MTEF)	52,914	102,050	124,500	158,175	169,399	52,628	53,483	54,208	93,264
Recurrent Deficit/Funding gap						5,886	8,001	11,256	9,091
Recurrent Deficit/Funding gap						43,536	63,016	92,711	67,044
Total Deficit/Funding Gap						49,422	71,017	103,967	76,135

4.3.3 Resource Mobilization Strategies

The funding of the programs will mainly come from the Government of Kenya through the exchequer releases, Development Partners, and Public Private Partnerships (PPPs) collaboration.

Government Financing

The Ministry will effectively bid for allocation of more resources through Medium Term Expenditure Framework Budgets focusing on priority programs in line with the Kenya Vision 2030 and its Medium Term Plan 2018 – 2022. In addition, it will explore opportunities for generating AIA from the existing programs and implement cost Reduction measures through “e technology” and outsourcing of services to improve its financial status.

Development Partners

The Ministry has a Resource mobilization mechanism for marketing of project proposals on socio economic development and investment opportunities for donor funding. This is done in collaboration with Kenya Investment Authority and other Government Agencies. The key Development Partners are World Bank, KfW, KIDDP, AfDB, GIZ, JICA, SIDA, BADEA, IFAD and UNICEF.

Other Financial Sources

The available resource opportunity for the Ministry to explore includes partnerships with other government departments, private sector, NGOs, CBOs and local communities. Other additional avenues of resource mobilization the Ministry can utilize will be through collaborations with County Governments and Constituency Development Fund (CDF). Regional and International Partners also contribute in cash and through support for capacity development i.e. IAEA and UNESCO.

Alternative sources of financing:

The Ministry will explore additional financing through Kenya Pooled water fund, commercial financing, equalization fund and endowment fund.

Public Private Partnership

The Ministry will explore funding through PPPs using three models namely Build Operate and Transfer (BO&T), Engineering Procurement Construction (EPC) and handover and Design Build and Finance (DB&F)

Measures to minimize losses and Wastages in Ministry's Operations

Improvements in Capacity and Efficiency

The Ministry continues to enjoy improved relationship with development partners. As has been in the past, it is expected that development partners will continue being a significant source of funding. To leverage on this relationship and harness resources from the vital source, the Ministry will build capacity and put emphasis on the following: Improving the absorption capacity of development partner funds Enhancing transparency and accountability in planning, implementation, monitoring and accounting of projects and programs Championing the improvement of the Government's image in order to attract more funding from Development Partners

Improving efficiency in the Use of Resources

The Ministry will put in place the following measures to optimize use of available resources by improving efficiency and reducing wastage: Improved costing of programs and activities Preventive maintenance, by ensuring the maintenance of ministerial facilities, equipment and vehicles Paperless communication, through the leveraging of ICTs in order to reduce use of telephones and increase use of e mails Introduction of fleet management system

Strategy Implementation

Pre-Implementation: Stakeholders will be sensitized on their roles/ contributions on implementation and reporting on the strategic plan. Mapping of all stakeholders with their respective targets will be undertaken; this assigns responsibilities to each implementing department/ agency.

During Implementation: Periodic review will be undertaken to ascertain progress against the identified KRAs. The Strategic Plan will for basis for resource allocation during the subsequent budgeting process, work planning and annual Performance Contracting.

Post Implementation: Situation analysis and lessons learnt will inform the next generation strategic plan. In addition, the progress will inform the next five years strategies to be developed under the Water Act 2016. The reporting will be harmonized with the international and regional linkages (SDG6 and AMCOW).

Linkages and Collaboration

In executing its mandate the Ministry has direct and indirect linkages with other Ministries, County Governments and other institutions which promote socio-economic development. These Ministries are:

i. Ministry of Agriculture and Irrigation

The Agriculture and Irrigation has a direct linkage with the Ministry Water sub-sector through provision of water to meet their water demands for agriculture and livestock

ii. Ministry of Energy

Sustainable management and conservation of water resources greatly contribute towards sustainable provision of hydro power.

iii. Ministry of Health

Provision of clean drinking water and basic sanitation promotes good health to the population through reduction to water related diseases which in turn reduces pressure on the health sector budget.

iv. Ministry of Education

The Ministry facilitates integration of water issues in education systems that produce manpower for the country. It does this through provision of water to education facilities which results into enhanced community empowerment through higher children enrolment levels, conservation programmes and employment opportunities.

v. Ministry of Transport, Infrastructure, Housing and urban Development

Water is a major input to construction of houses, roads, airports, seaports, bridges and other infrastructure. Water is also important in modernization of urban areas in housing development.

vi. Ministry of Foreign Affairs

The Ministry reviews relevant international treaties and agreements for the Management of Trans-boundary water resources with a view to domesticate them as a way of facilitating the implementation of these treaties and agreements. This enhances collaboration with neighboring countries. Nationally, the Ministry formulates and enforces implementation of policies and legislations on water resources.

vii. Ministry of Environment and Forestry

Protection of forests which form the water catchment areas is critical for availability of water resources.

viii. Ministry of East Africa Community and Regional Development

The Lake Victoria Basin Commission coordinates the implementation of Lake Victoria Environmental Management Programme that has a direct bearing on the pollution control in the catchment areas of the lake. The Commission also collaborates with LVSWSB in the implementation and Lake Victoria Water and Sanitation (LVWATSAN).

The Regional Development Authorities implement multi-purpose water programs in various areas within the country. Coordination of these programs with those being implemented by the Water Services Boards is necessary because they operate in the same space and funding is sourced from the same Development Partners.

ix. County Governments

Schedule four of the Constitution of Kenya recognizes water and sanitation services as devolved functions. The Ministry will continue collaborating with County Governments in order to increase coverage in water and sanitation nationally especially on last mile water and sewerage connectivity to households.

- x. Community participation in the Management of Water resources:** There is need for community participation and involvement in management and utilization of water resources to avoid incidences of court litigation and conflict resolution.

4.4 Risk Analysis and Mitigation Measures

The Ministry’s core values that include sustainable development, honesty, integrity, human dignity, team work, innovativeness, equity and participatory approach will be adhered to with a view to utilize resources efficiently. Further, the delivery of services is guided by the service charter and the official procurement and financial management procedures.

4.4.1 Risk Management Framework

The risk framework envisages the various categories of risks that may arise in the course of implementing the Plan and points out the key areas that may be affected. The risk category, areas of impact and potential impact (high, medium or low) plus mitigating measures are discussed in table 4.5 below.

Table 4.5: Summary of the Risk Framework

Risk category	Key areas	Level of risk	Potential impact	Mitigation strategy
Strategic	▪ Lack of Stakeholder participation	▪ Medium	▪ Non engagement	▪ Undertake stakeholders analysis for all activities and make decisions on level of participation
	▪ Expected litigation from citizenry on their constitutional rights (right to clean and secure environment, right to water)	▪ High	Delay of projects implementation	▪ Work with other stakeholders and Government Departments to enhance their rights ▪ -Stakeholder consensus, creation of awareness
	▪ Weak governance at the national and county level	▪ High	▪ Environmental degradation ▪ Low service level of water and sewerage	▪ Ensure support to policy, legislation and institutional reforms ▪ Enhance institutional collaboration
Operations	▪ Long processes, resistance to change,	▪ High	▪ Un-responsiveness to reforms, Delays and	▪ Enhance use of Citizens charter, ISO compliance,

Risk category	Key areas	Level of risk	Potential impact	Mitigation strategy
	long procurement processes		inefficiencies	Undertake sensitization and awareness creation, stakeholder engagement Continuous review and rationalization of procurement procedures and regulations
	▪ Duplication of functions within Ministry SAGAs and other institutions	▪ High	Delay of project implementation due to confusion	▪ Continuous review of roles and rationalization
	▪ High number of underutilized (redundant)/over utilized staff in the water sector institutions as a result of re-organization as per Water Act 2016	▪ Medium	Waste of resources	▪ Off-loading, re-designation and redeployment (Rationalization)
	▪ Loss of natural capital	▪ High	▪ Environmental degradation	▪ Apply tools to conserve natural capital
	▪ People and culture	▪ High	▪ Loss of Biodiversity	▪ Enhance participation at all levels
	▪ Legal and Regulatory Environment	▪ Medium	▪ Environmental degradation	▪ Capacity devolvement
Financial	▪ Inadequate Financial Resources and levels of funding and infrastructure	▪ Medium	▪ Poor stewardship	▪ Increased resources mobilization and continuous identification and utilization of partnerships, networks and Donor support
	▪ Budgetary reallocations	▪ Medium	▪ Slow implementation/stalling of projects	▪ Putting in place safety nets ▪ Implement service charter and Being ISO compliant
	▪ Unpredictability of donor funding	▪ Medium	▪ Stalled projects	▪ Enhance capacity for negotiations
Information Management	▪ IT Systems	▪ Medium	▪ Poor management	▪ Embrace use of ICT at all levels
	▪ Information Management	▪ Medium	▪ Policy note informed by information gathered and analyzed	▪ Build and manage information data bases

Risk category	Key areas	Level of risk	Potential impact	Mitigation strategy
Environmental	<ul style="list-style-type: none"> ▪ Drought, Floods, Famine 	<ul style="list-style-type: none"> ▪ High 	<ul style="list-style-type: none"> ▪ Loss of livelihood 	<ul style="list-style-type: none"> ▪ Early warning systems and Sensitization on disaster preparedness
Policy/ Structural changes	<ul style="list-style-type: none"> ▪ Reorganization of government and policy changes 	<ul style="list-style-type: none"> ▪ Medium 	<ul style="list-style-type: none"> ▪ Disorientation of operations 	<ul style="list-style-type: none"> ▪ Strengthen adherence to policy implementation and Effective articulation of ministry's mandate

4.4.2 Risks Monitoring System

The Ministry will establish a Risk Monitoring System for mitigating the impact of risks. The components of the System are to be: A Ministerial risk management policy and plan to guide the development and operationalization of the system in the Departments as well as in the SAGAs.

A Ministerial Risk Management Committee composed of all Heads of Departments, to be chaired by the Principal Secretaries. The Committee's main responsibility will be to consider and adopt risk management measures and report on the same.

A Risk Management Coordinators (RMCs) to harmonize and oversee the risk management activities in all Departments. These activities include risk identification; risk assessment; as well as the development and implementation of appropriate mitigation measures. Another critical activity for the RMC will be the development of early warning indicators for risks on its radar.

CHAPTER 5: MONITORING, EVALUATION AND REPORTING

5.0 Overview

This chapter covers overview of water sector Monitoring, Evaluation and Reporting Framework which will be used to monitor and report on implementation of the Strategic Plan the objectives, guiding principles, modalities and standards together with the key deliverables of this ME&R framework which have been derived from best practices locally, regionally and globally.

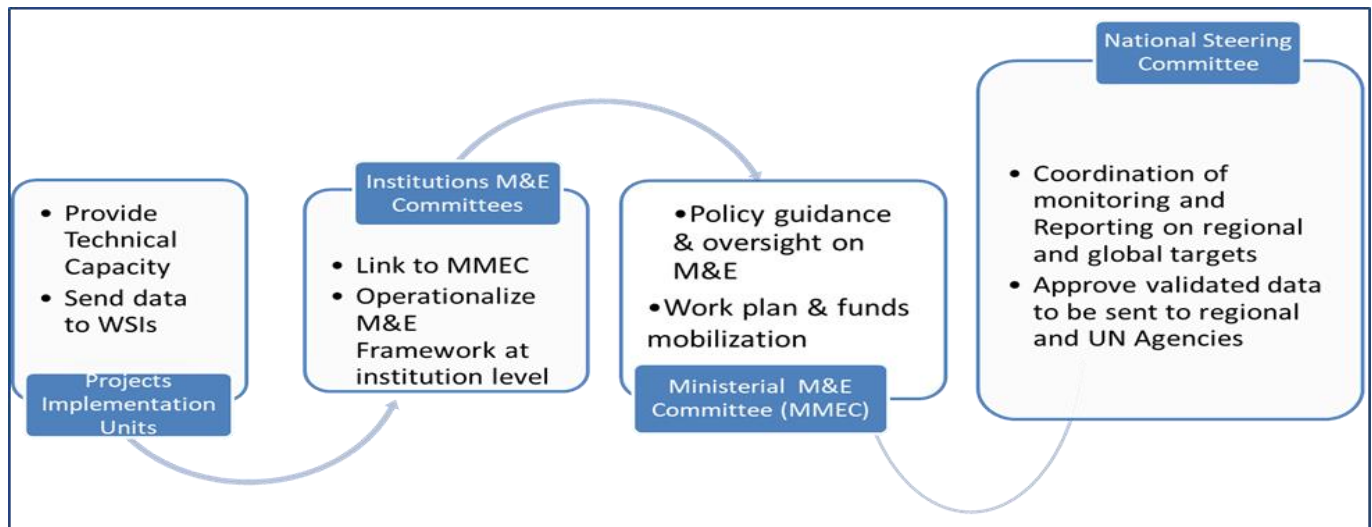
Recognizing the critical role monitoring and reporting plays in decision-making for water and sanitation sector development', both at national, basin and regional levels, the Ministry has developed water and sanitation sector harmonised monitoring, evaluation and reporting framework for Kenya based on a common framework of indicators and methodologies.

In order to effectively undertake monitoring and evaluation activities, 1% of development budget should be allocated to M&E.

5.1 Monitoring Framework

5.1.1 Project Implementation and Coordination Team

The M&E technical coordination structures will include monitoring committees at the national and institutional levels with roles as outlined below



Ministerial Projects / M&E committee will be responsible for prioritization of projects based on the Ministry Strategic Plan, MTP III, and Big Four Agenda. They will be recommending the mode of project financing and monitoring and evaluating the achievement of programmes/ projects outputs and outcomes. Monitoring will be conducted based on key result areas, outcome indicators and targets as per the monitoring and evaluation framework (Annex II)

5.1.2 Project Monitoring and Evaluation Team

The data will flow from the departments and agencies that will send their progress reports through CPPMU. The Departments and Agencies reports will include information from the devolved level institutions. The CPPMU will share the consolidated report with the ministerial M&E committee before onward submission to the NIMES.

5.1.3 Monitoring Methodologies

Monitoring of the Strategic Plan 2018-22 implementation is instituted in order to continuously and periodically check progress against set targets and to determine whether activity implementation is on course towards achievement of set objectives and goals. The Strategic Plan has adopted logical framework- results matrix- which provides a summary of the goal, objectives, and results to be achieved, and the indicators to be used to verify what progress has been made, in a single table.

Programme/ projects monitoring will be undertaken to cover the following elements:

Monitoring type	Description	Frequency
Compliance monitoring	The Ministry majorly disburses funds to WSIs for implementation. Thus, monitoring will be undertaken on: <ol style="list-style-type: none"> i. Absorption of funds ii. Compliance of contract/ work plan. iii. Value for money 	Quarterly
Process monitoring	Monitoring progress of the project towards the intended results. This kind of monitoring will measure the inputs, activities and outputs.	Quarterly
Performance monitoring	Site meetings, follow ups	As scheduled
Annual Operations Monitoring	The Annual Joint Operations Monitoring Exercise is premised on project follow-up, which focuses upon the post-commissioning phase in order to assess and increase long-term sustainability.	Annual
Impact/Outcome STRATEGIC monitoring	<ol style="list-style-type: none"> i. Direct impacts (early on) and eventual outcomes (somewhat later) ii. Consequences direct or indirect of the results. 	Annual

5.2 Evaluation Mechanisms

Human Rights approach to monitoring and evaluation will be adopted. The evaluation criteria will be as follows:

Criteria	Description
Availability	Availability refers to the quantity of water, sanitation, and hygiene facilities available to meet individual needs and whether enough water exists in a geographic area to supply the population
Accessibility	Accessibility refers to whether people can physically access water and sanitation facilities readily and whether there are informational or financial barriers to obtaining water and sanitation
Acceptability	The project output is ethical and sensitive to cultural factors as well as age, gender, disabilities, ethnicity, etc.
Quality	The project outputs provided are satisfactory for all the groups according to their needs

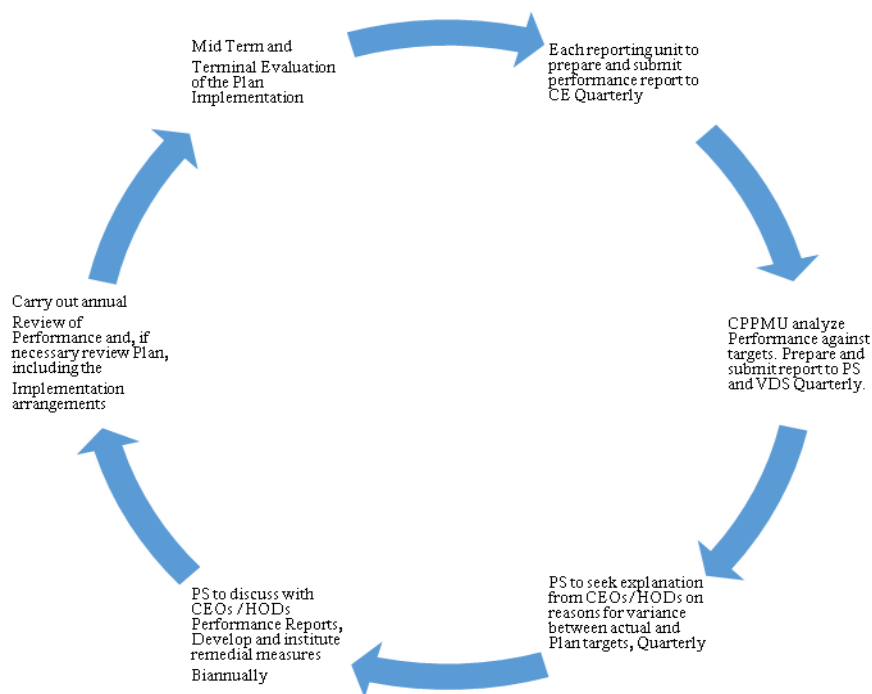
Criteria	Description
	and international standards.
Inclusiveness and inequality	The project outputs include different types of people and treat them all fairly and equally, reducing and eliminating inequalities among population subgroups. Comparing the access to water (or sanitation) of the worst-off population group with the better-off population to establish the disparity.
Affordability	The project outputs pricing is not a barrier to access to or prevent people from meeting basic human needs.

5.2.1 Reporting and Progress Review

To streamline results reporting across the Ministry, annual progress report (APR) to be presented to the Principal Secretary on an annual basis. This report will be produced in August every year and will include progress and financial performance. This report will also identify key challenges and possible time bound monitorable mitigation and resolution mechanisms.

A summary report to be called the Results Scorecard (RS) will be presented on annual basis to the Cabinet Secretary presenting a cumulative progress towards the achievement of the annual targets. The Results Score Card will comprise of mainly quantitative and qualitative indicators.

Reporting cycle:



5.3 Review of the Strategic Plan

Midterm review: To be undertaken externally by 2020

End term evaluation: To be undertaken externally by 2022.

ANNEX I: Implementation Matrix

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Strategic Objective 1: To enhance sector governance and leadership through formulation and implementation of 4 no. Policies, 3no. Bills and 3no. Strategies in full compliance with the Water Act 2016 by 2022 Key Result Area: Policy, Legal and Institutional Framework Expected Outcome: Good Governance in the Management of Water Resources														
Operationalize Water Act 2016 by 2022	Water Services Rules; Water Resources Rules; Water Harvesting & Storage Rules and Water Tribunal Rules developed	No. of regulations/guidelines developed	4	2	2	-	-	-	4	19	-	-	-	CS
	Five (5) Water sector institutions established (NWHSA, WSTF, WRA and WASREB, WT)	No. of institutions established	5	4	1	-	-	-	1	4				CS
	Criteria for WWDAs Developed	No. of criteria's	1	1		-	-	-	4					CS
	9 WWDAs established	No. of WWDAs operationalized	9	3	3	3	-	-	16	85	301	-	-	CS

²The Ministry will be tied to these annual targets in its annual Performance Contracts.

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
	Miscellaneous amendments Bill (Revised Water Act)	% finalization	100	100	-	-	-	-	7	-	-	-	-	CS
	3 Strategies: NWSSS,NWRMS,NW HSS developed	No. developed	3	-	3	-	-	-	0	154	-	-	-	CS
Development and review of policies, legislation and regulations	National water Policy developed	% finalization	100	80	100	-	-	-	58	77	-	-	-	CS
	Trans-boundary water Bill	% finalization level	100	60	100	-	-	-	3	11	-	-	-	CS
	Hydrologists Registration Board constituted and Gazetted	% operationalization level	100	60	100	-	-	-	4	15	-	-	-	CS
	Revised KEWI Act 2018	% finalization level	100	100	-	-	-	-	10	-	-	-	-	CS
	regulations to implement water sector inter –governmental framework developed	No. of regulations developed	2	1	-	1	-	-	7.5	-	7.5	-	-	CS
Strengthen linkages between	water subsector MTEF report	No.of MTEF reports	5	1	1	1	1	1	4	4	4	4	4	CFO

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
planning, budgeting and monitoring	Improved budget utilization	% of funds absorbed	100	100	100	100	100	100	0					CFO
	Improved performance and access to information	% of total ministerial results monitored & reported on	100	100	100	100	100	100	5	5	5	5	5	CFO
Enhance Service delivery of the Ministry	Service Charter commitments implemented 100%	% conformity to SC commitments	100	100	100	100	100	100	1	1	1	1	1	PCO
	complaints management mechanism	% CAJ score	100	100	100	100	100	100	1	1	1	1	1	PCO
	Customer satisfaction improved	% satisfaction level	+10	2	2	2	2	2	1	1	1	1	1	PCO
	Improved work environment	% implementation level	100	100	100	100	100	100	6	6	6	6	6	SA
Mainstreaming and implementation of cross cutting issues in Ministry	Disability policy implemented	% implementation level	100	100	100	100	100	100	1	1	1	1	1	SA
	Work Place policy on HIV/AIDS developed and implemented	% MAISHA level rating	100	100	100	100	100	100	1	1	1	1	1	SA
	National values mainstreamed and implemented, core	% implementation	100	100	100	100	100	100	1	1	1	1	1	SA

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility	
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
	values	level													
	Security and safety measures	% of activities implemented	100	100	100	100	100	100	1	1	1	1	1	SA	
	ADA policy implemented	% implementation level	100	100	100	100	100	100	1	1	1	1	1	SA	
	Corruption prevention Strategies implemented	% of strategies implemented	100	100	100	100	100	100	1	1	1	1	1	SA	
	30% tenders allocated to Women, Youth and PWDs	% of tenders awarded	30%	30%	30%	30%	30%	30%	0					HSCM	
	Gender policy implemented	% implementation	100	100	100	100	100	100	1.6	1.6	1.6	1.6	1.6	D/Youth	
	500 attachments/ internships	No of youths in attachment/ internship	500	100	100	100	100	100	6	6	6	6	6	DHRMD	
Objective 1 Budget Sub-Total in Ksh. Millions									108	415	461	530	553		
Strategic Objective 2: To Increase water storage per capita from 4.5M³ in 2017 to 14M³ by the year 2022.															
Key Result Area: Management, Protection and Conservation of Water Resources and transboundary waters															
Expected Outcome: Increased availability of safe and adequate water resources															
Improve Water Catchment	Fully equipped and staffed 1 No. National Laboratory established	% completion level	100%	-	-	-	-	100						1069	

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
protection and Conservation	56 Sub-catchment management Plans(SCMPs) developed	No. of SCMPs developed	56	11	11	11	12	11	1,092	614	504	787	711	DNWR
	236SCMPs implemented	No of SCMPs implemented	236	45	47	47	48	49						DNWR
	Lamu Ground water conserved	% completion rate	100	40%	50%	60%	80%	100						DNWR
	Water quantity and quality assessed for Laikipia, Lamu, Mandera aquifers, Tana River, Nairobi	% area conserved	100	40%	50%	60%	80%	100	2,506	352	289	828	817	DNWR
Strengthen enforcement of regulations in the development and management of Water Resources	10 counties capacity built on IWRM	Number of counties capacity built	10	2	2	2	2	2	80	80	80	80	80	DNWR
	Gazette Register of water contractors and Professional; Regulatory Rules	No. water contractors and professional registered	1,000 Water contractor and professionals	200	200	200	200	200	2	2	2	2	2	DNWR
Improve Surveillance for Water	Safe drinking water in 35No. of counties assessed	No. of counties assessed	35 Counties assessed	5	7	8	9	6	64	90	103	116	77	DNWR

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Quality and pollution control														
	50Km of Athi river cleaned	Km of river cleaned	50Km	5	11	11	12	11	45	99	99	108	99	DNWR
Enhance Flood Management and drought mitigation measures.	23 ASAL Counties assessed on flash floods occurrence	No. of counties assessed	23 ASAL Counties assessed	2	7	7	4	3	87	304	304	174	130	DNWR
	15 Counties assessed on water resources status in Athi and Tana catchment	No. of counties assessed	15 Counties assessed	2	3	4	4	3	1,312	1,106	1,210	1,735	1283	DNWR
Upgrade Hydrometric networks to telemetric status	530 stations of Water Resource Monitoring rehabilitated	No. of stations constructed/ rehabilitated	530 stations	100	105	115	110	110	98	58	52	72	71	DNWR
	80 RGS upgraded to telemetric	No. of stations upgraded	80 telemetric stations	15	15	15	20	15	77	43	35	68	50	DNWR
Digitize the Registration and processing of applications for Contractors and Water Professionals	Automated portal system	Percentage of successful online applications and registrations	100%	-	100	100	100	100	-	115	95	136	134	DNWR

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Increase ground water mapping and assessment from 2 to 6 counties	Maps for 6Counties	Number of counties/area in km mapped/ maps	6	2	1	1	1	1	300	150	150	150	150	DNWR
	15 exploratory boreholes drilled in Turkana,Marsabit and Garissa	No of exploratory boreholes drilled	15	-	3	4	5	3	-	150	170	190	150	DNWR
Promote managed artificial groundwater /aquifer recharge	Volume of the water which can be artificially recharged determined in 50 aquifers	No. of areas piloted	50	10	10	10	10	10	30	30	30	30	30	DNWR
Support and enhance negotiations and peace initiatives on	Project on Sustainable development of Lake Turkana and its River Basin implemented 100%	% completion level	100%	10	30	50	85	100	93.3	186.6	186.6	326.6	140	DTW

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
shared water resources	Kocholia multipurpose transboundary water resources project implemented 50%	% completion level	50%	5	20	30	40	50	571	1713	1142	1142	1142	DTW
	transboundary ground water aquifers well managed	% of Area mapped	100	10	30	55	80	100	25	28	28	41	32	DTW
	20 hydrological stations established and operationalize Trans-boundary Waters Resources	No. of Hydro meteorological stations installed	20	-	5	6	5	4	-	75	90	75	60	DTW
	20 transboundary Catchment management plans SCMPs developed	No. of transboundary SCMPs developed	20	1	5	5	5	4	10	50	50	50	40	DTW
	3 No. bilateral frameworks on Trans-boundary Water Resources implemented	% level of implementation	100%	10	30	55	75	100	66	74	76	87	95	DTW
	Maira and Norera Trans-boundary water storage dams 30% implemented	% completion level	30%	1	5	15	20	30	66	147	303	217	428	DTW
	3 pollution control projects implemented	No of pollution control projects implemented	3	-	1		1	1	-	138		138	138	DTW
	Trilateral Daua River watershed management plan implemented	% completion level	100%	-	17	44	70	100	-	189	246	340	386	DTW

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Strengthen Disaster Risk Management in 29 drought prone counties and 8 flood prone counties	Vulnerability and risks assessment map developed	No. of counties mapped	31 counties mapped and one vulnerability risks map developed	-	8	9	9	5	-	31	35	35	19	DTW
	29 Counties with community-based drought and floods risk reduction action plans	No. of counties with community-based drought and floods risk reduction action plans	29 Counties	-	9	9	8	5	-	24	24	22	14	DTW
	100 Boreholes drilled in 29 counties	No. of boreholes drilled and equipped	100 Boreholes drilled in 29 counties	-	26	24	23	27	-	139	128	123	145	DTW
	4 Early warning and disaster management information systems established	No. of early warning systems	4	-	1	1	1	1	-	27	27	27	27	DTW
Objective 2 Budget Sub-Total in Ksh. Millions									6,902	5,6478	6,275	7,216	7,530	
<p>Strategic Objective 3: To increase percentage of national population with access to safe water from 60% in 2017 to 80% by 2022.</p> <p>Key Result Area: Water coverage</p> <p>Expected Outcome: Enhanced accessibility of water services</p>														

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Support implementation of the 'Big Four' Agenda Projects as an enabler	10 Projects ³ implemented in Support of the Manufacturing Agenda	Number of Projects completed	10 Projects	2	2	2	2	2	15,034	15,034	15,034	15,034	15,034	WS
	12 Projects ⁴ implemented in Support of the Affordable Housing Agenda	Number of Projects completed	12 Projects	2	2	3	3	2	9,262	9,262	13,908	13,908	9,262	WS
	5Projects ⁵ implemented in Support of the Food Security Agenda	Number of Projects completed	5 Projects	1	1	1	1	1	7,861	7,861	7,861	7,861	7,861	WS
	5 projects implemented to support Universal Healthcare Agenda	Number of Projects connected to Water and Sanitation Services	5 Projects	1	1	1	1	1	7,861	7,861	7,861	7,861	7,861	WS
Increase percentage of	84% improved access to water in Urban areas	Percentage of Urban	Increase from 70.3%	72%	75.5%	78.5%	81.5%	84%	4,946	10,182	8,728	8,728	7,273	WS

³Projects that will support Manufacturing Agenda include Short Term Intervention Measures - Water Supply, Malewa Dam and Water Supply Project, Industrial Park Sewerage Project, Mavoko water supply, Mwache Dam and Water Supply Project, Mzima II Pipeline, Nairobi City Regeneration Programme, Malewa Dam and Water Supply Project, Kericho- Homa bay Wastewater (Trilateral Program), Kisumu water supply and sewerage, Oloolotikosh Dam and Water Supply Project, Ndarugu 1 Dam and Water Supply project

⁴Projects that will support Affordable Housing Agenda include: Ndarugu 1 Dam water supply project, Mavoko water supply Project, Up-scaling of Basic Sanitation for the Urban Poor (UBSUP), Water Sector Development (Support WSTF), Nairobi Sanitation OBA Project, Nairobi City Regeneration Programme, Short term measure - water supply, Northern Collector Tunnel Water Project, Nairobi Satellite Towns Water and Sanitation Program, Nairobi Metro Area Bulk water sources - Ruiru II Dam, Thika and Githunguri Water and Sanitation Project, Nairobi Metro Area Bulk water sources - Karimenu II, Kisumu water supply and sewerage, Mwache Dam and Water Supply Project, Mzima II Pipeline, Itare Dam and Water Supply Project, Sabor - Iten - Tambach Water Supply Project Phase II, Kipkarren Dam and Water Supply Project, Ellegerini and Kapsoya Water Supply Project

⁵Projects that will support Food Security Agenda include Mwache Dam and Water Supply Project, Mzima II Pipeline, Kithino Dam, Kamumu Dam, Rupingazi Dam, Thambana Dam, Maara Dam

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
urban population with access to safe water from 70.3% to 84%	water supply infrastructure in major urban areas of Nairobi, Mombasa, Nakuru and Eldoret improved	population served	to 84%											
	water supplies in 20 medium sized towns ⁶ as indicated in Medium Term Plan III expanded													
	water supplies in other medium sized towns ⁷ indicated in Medium Term Plan III improved													
Increase Percentage of rural population with access to safe water from 55.9% to 78%	existing large rural water supply schemes expanded	Percentage of Rural population served	Increase from 55.9% to 78%	60.5%	65%	69%	73.5%	78%	12,356	12,087	10,744	12,087	12,087	WS
	215 strategic boreholes at selected sites identified under MTP III drilled and equipped	No. of Boreholes drilled and equipped	215	30	45	55	50	35						

⁶The 20 Medium Sized towns include Chuka, Chogoria, Runyenjes, Naivasha, Narok, Maralal, Moyale, Wote, Kitui, Mavoko, Matuu, Wajir, Lamu, Moi's Bridge, Matunda, Malava, MarsabitNanyukiNyahururu and Londiani

⁷The other Medium Sized towns are Maseno, Mbale, Kaimosi, Malaba, Kapsabet, Nandi Hills, Wanguru, Kerugoya, Kutus, Kinango, Malindi, Meru, Embu, Karatina, NaroMoru, Timau, Nkubu, Kathwana and Garissa, Mandera, Makueni, Kisii, Homabay, Nyamira, Kericho, Migori and Mutuati. Mwala-Mbiuni cluster, Oyugis, Kendubay, Ukwala- Ugunja-Sega cluster, Mbita- Lwanda- Koyani cluster, Bomet - Mulot, Kilgoris, Lolgorian, Narok, Olkalau,, Kapenguria, Chepararia,Changamwe, Pemba, Limuru, Keroka, Isebania, Kiptogot, Kipkaren, Marigat, Turbo and Kabartojo

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Increase the population with access to safe water in urban informal settlements by 1,660,000 people	Urban water projects implemented	No. of people served	1,660,000 additional People served	185,000	275,000	375,000	400,000	425,000	408	606	826	881	936	WS
Increase the population with access to safe water in rural marginalized areas by 2,811,000 people	rural community based water projects implemented	No. of people served	2,811,000 additional people served	387,000	449,000	650,000	650,000	675,000	196	228	330	330	342	WS
Undertake last mile water connectivity in collaboration with county governments to benefit 500,000 households nationwide	Complete distribution networks for 10 WSPs	Number of distribution networks for WSPs	Distribution Networks for 10 WSPs	2	2	2	2	2	848	848	848	848	848	WS
	Connection of 500,000 households to water in collaboration with WSPs and County Governments	Number of household connections	500,000 households connected	100,000	100,000	100,000	100,000	100,000	8,453	8,453	8,453	8,453	8,453	WS

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Enhance water availability for schools	3500 schools connected to water	Number of schools connected	3000 primary schools and 500 secondary schools connected	700	700	700	700	700	848	848	848	848	848	WS
Reduce Non Revenue Water losses from 42% to 20%	NRW reduced to 20%	Level of NRW	20%	41	39	37	35	33	70	70	75	80	80	WS
	One guideline developed on NRW	No. of Guidelines	1	1					50					WS
	48 officers trained to develop their skills	No. of officers trained	48 officers	8	10	10	10	10	5	6.25	6.25	6.25	6.25	WS
Objective 3 Budget Sub-Total in Ksh. Millions									33,557	54,778	71,976	97,772	106,371	
Strategic Objective 4: Increase Percentage of National population with access to improved sanitation from 68% in 2017 to 80% by the year 2022														
Key Result Area: Sanitation and Sewerage Coverage														
Expected Outcome: Enhanced accessibility of Sanitation services														
Increase Percentage of urban population with access to improved sanitation from 67.5% to 85%	sanitation facilities in major urban and satellite towns improved	Percentage of Urban population served with sanitation	Increase from 67.5% to 85%	71.0%	74.5%	78.0%	81.5%	85.0%	161	1,771	1,941	2,144	2635	WS
	new sanitation facilities in selected towns	No. of additional	4.85 Million	0.85M	0.90M	0.97M	1.03M	1.10M						

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
	across the country as per Medium Term Plan III constructed	people served	people											
Increase Percentage of rural population with access to improved sanitation from 52% to 76%	Sanitation facilities developed for Trading/Commercial Centers in collaboration with CGs	Percentage of rural population served with sanitation	Increase from 52% to 76%	56.0%	61.0%	66.0%	72.0%	76.0%	202	2,767	3,032	4,020	3,293	WS
	Sanitation Blocks for schools under the WASH programme constructed	Number of people served	10.85 Million people	1.76M	2.17M	2.24M	2.68M	2.00M						
Increase Percentage of urban population with access to sewerage from 25% to 40%	Improved access to sewerage in Urban areas	Percentage of Urban population served with sewerage	Increase from 25% to 40%	28%	31%	34%	37%	40%	782	8,590	9,413	10,400	12,778	WS
	sewerage facilities in Nairobi and its satellite towns ⁸ improved	Number of people served	3.14 Million people	0.54M	0.58M	0.63M	0.67M	0.72M						
	sewerage facilities in various towns ⁹ augmented													
	new sewerage schemes													

⁸Nairobi Satellite towns include Kiambu, Ruiru, Juja, Kikuyu, Kiserian and OngataRongai

⁹Sewerage facilities will be Augmented in the towns of Mombasa, Kisumu, Nakuru, Eldoret, Kitale, Garissa, Nanyuki, Homabay, Meru, Embu, Kericho and Machakos

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
	constructed in selected towns across the country as per Medium Term Plan III													
Increase the number of people in rural marginalized accessing adequate and safe sanitation by 205,500	Improved access to sanitation in rural marginalized areas	Number of rural marginalized population served with sanitation	205,500	25,500	40,000	45,000	45,000	50,000	11	183	226	250	341	WS
Increase the number of people urban informal settlements accessing adequate and safe sanitation by 1,794,000	Improved access to sanitation in urban marginalized areas	Number of urban marginalized population served with sanitation	1,794,000	139,00	355,000	425,000	425,000	450,000	36	1,014	1,331	1452	1,557	WS
Enhanced waste water treatment through Omni processor in selected	Omni processor sanitation technology piloted in 4 urban centres	No. of urban centres piloted	4	-	1	1	1	1		553	606	670	823	WS

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
urban centres														
Objective 4 Budget Sub-Total in Ksh. Millions									1,192	14,880	16,549	19,041	19,870	
Strategic Objective 5: To Increase water storage per capita from 4.5M³ in 2017 to 14M³ by the year 2022														
Key Result Area: Water Harvesting, Storage and Flood control management														
Expected Outcome: Enhanced Water Storage and Availability														
Increase water storage capacity for domestic and industrial use by 623 Million Cubic Meters	Mwache Dam (100million M ³) constructed	Average % completion levels	100% completion	5	45	65	100		2150	6366	3606	2400		KWSCRIP
	Thwake dam (453million M ³) constructed	Average % completion levels	100% completion	13	55	75	100		7994	8170	11,787	7,748	35700	Project Manager
	Increase water storage capacity by 60 Million Cubic meters	No. of dams completed	five medium sized dams – SiyoiMuru ny, Itare, Yamo, Ruiru II and Karimenu		1	1		3	7,240	24,524	16,150	20,467		WS

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
			II completed											
	Increase water storage capacity by 10 Million Cubic meters	No. of small dams /pans completed	500 small dams/ pans	100	100	100	100	100	750	750	750	750	750	WS
	10 well sites for storm water diversion constructed <ul style="list-style-type: none"> • Nairobi -4No. sites • Naivasha-1No. site • Merti-2No. sites • Baricho-2No. sites • Turkana- 1No.site 	No. of sites for storm water diversion	10	2	2	2	2	2	50	50	50	50	50	DNWR
Enhance flood control structures	35km of dykes constructed in in lower Nzoia, Nyando, Narok, Budalangi, Migori& Homabay	kms of dykes constructed	35kms	10	10	15			857	857	1285			WS
	50,000ha of land protected	Area of land protected	50,000ha	15,000ha	15,00ha	20,000ha								
Improve climatic data collection for planning and flood early	Installation of 86 flood early warning systems	Number of flood early warning systems	103	17	30	30	26	0	132	233	233	201	0	DNWR

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
warning		installed.												
Enhance water availability for public institutions	Installation of 800 water harvesting structures	No. of Water harvesting structures installed	800	15	150	200	225	210	30	300	400	450	420	WS
Objective 5 Budget Sub-Total in Ksh. Millions									10,405	25,722	28,580	32,868	34,297	
Strategic Objective: 6.To build human resource capacity through training of 363 no. of staff annually and recruitment of 255 no. of staff by 2022.														
Key Result Area: Human Resource Capacity														
Expected Outcome: Enhanced human resources capacity														
Determine and implement the Human Resource (HR) needs of the Ministry	Certificates of remittance	No. of certificates issued	240	48	48	48	48	48	1	1	1	1	1	DHRMD
	Pensions documents processed	No. of documents processed	400	50	80	90	90	90	1	2	2	2	2	DHRMD
Enhance competency development	Training Needs Assessment Reports developed	No. of reports	2	1			1		2			2		DHRMD
	TNA Report implemented	No. officers trained	1,500	100	350	350	350	350	19	65	65	65	65	DHRMD

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Improve working environment by 5% each year	Maji House Offices rehabilitated	Percentage of officers rehabilitated	100%	6%	30%	65%	90%	100%	12	48	70	50	20	SA
	Maji House Offices maintained	Percentage of officers maintained	100%	100%	100%	100%	100%	100%	20	20	20	20	20	SA
Enhance human resource performance management	Performance management framework established	No. of Reports	1	1	-	-	-	-	-					DHRMD
	Performance management framework implemented	Performance monitoring reports	25	5	5	5	5	5	10	10	10	10	10	DHRMD
	Staff appraised	Percentage level of staff appraised	100%	100%	100%	100%	100%	100%	5	5	5	5	5	DHRMD
Human resource succession management	Schemes of service reviewed	No. of schemes reviewed	10	2	2	2	2	2	2	2	2	2	2	DHRMD
	Staff promoted	Percentage of staff promoted	100%	20%	50%	80%	100%	100%	10	15	15	10	0	DHRMD
	255 staff recruited	No. of staff recruited	255	55	50	50	50	50	36.82	33.47	33.47	33.47	33.47	DHRMD
Enhance Knowledge management	Knowledge management system established	Percentage level of knowledge management	100%	30%	100%	-	-	-	9	21				DHRMD

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
		system established												
	Knowledge management system preserved and shared across the sector	Percentage of knowledge management system preserved and shared across the sector	100%	100%	100%	100%	100%	100%	4	4	4	4	4	DHRMD
Objective 6 Budget Sub-Total in Ksh. Millions									636	171	190	219	229	
Strategic Objective 7: To undertake research, development and adoption of appropriate technologies through the establishment and operationalization of 3 water research institutions and conduct 200 research projects by 2022. Key Result Area: Research and Technology Expected Outcome: Enhanced water research and technology														
Establish and operationalize three water research institutions	Water Resource Center operationalized at KEWI	% completion rate	100%	100					30					WS
	Water Resources Management Institute established and operationalized	% completion rate	100%	0	20	60	80	100	0	100	200	100	100	WS
	Sewerage Research Centre established in Kisumu	% completion rate	100%	0	20	60	80	100	0	100	200	100	100	
Adoption of appropriate	200 Research Projects supported	No. of research projects funded	200	24	32	48	48	48	50	67	100	100	100	WS

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility	
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5		
water and sanitation technologies	Application of appropriate water technologies	Number of technologies in use	25	5	5	5	5	5	10	10	10	10	10	WS	
	Repository of groundwater studies in the East African region	% completion	100%	27	54	77	100	-	81	81	69	69	-	WS	
Improve data collection and information management for effective planning and decision making	Water Sector data and information management guidelines developed	% Guidelines document developed	100	100	100	100	100	100	6	6	6	6	6	ICT	
	Water sector data and Information digitized	% works	100	100	100	100	100	100	6	6	6	6	6	ICT	
	Development and digitization of e-water portal	No. of WSIs water infrastructure mapped	10	5	5				107	107				ICT	
	General records digitized	% works	100	100	100	100	100	100	16	16	16	16	16	ICT	
	Secured records	No. of secured records		24	-	6	6	6	6	16	16	16	16	16	SA
				140	40	25	25	25	25						
No. of officers trained			13	3	3	3	2	2							
	No. of mobile racks purchased														
Enhance institutional	upgraded LAN,	% of ICT infrastructure	100%	5%	20%	40%	65%	100%	3	9	12	15	21	ICT	

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
and human capacity on research and information management	computers, servers	and equipment acquired												
	Upgraded Laboratory infrastructure and equipment.	% of Laboratory infrastructure and equipment acquired	100%	5%	20%	40%	65%	100%	10	30	40	50	70	ICT
	Proper utilization of water sector innovative technologies	No. of counties capacities built	47	16	12	8	8	3	41	32	20	20	8	DNWR
Objective 7 Budget Sub-Total in Ksh. Millions									55	401	446	513	535	
Strategic Objective 8: To enhance water sector financing by mobilizing Kshs. 607 Billion to support programmes and projects.														
Key Result Area: Partnerships and collaboration for resource mobilization														
Expected Outcome: : Enhanced partnerships and resource mobilization for the water sector														
Raise Kshs. 306.4 Billion through MTEF budgeting process	Kshs. 306.4 Billion secured from National Treasury	Amount in Kshs. secured	Kshs. 306.4 Billion	52.9	52.6	53.5	54.2	93.9	2	2	2	2	3	CFO
Tap into the capital markets to raise Kshs. 10 Billion.	Final implementation framework of the Kenya Pooled Water Fund	No. of Frameworks developed	1	1	-	-	-	-	2	-	-	-	-	WS

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
through Water Infrastructure Bond financing	Water Bond Reserve Fund established	No. of Reserves Fund established	1	1	-	-	-	-	3					WS
	Kshs.13.5Bn Secured from multilateral funding	Amounts in Kshs.	Kshs.13.5Bn	Kshs.6.75 Bn	-	Kshs.6.75 Bn	-	-	1	-	1	-	-	WS
	3 Water Infrastructure Bonds issued and invested	No. of Bonds issued	3	1	-	1	-	1	1	-	1	-	1	WS
Mobilize Kshs. 235.2 Billion through PPPs to support water sector programmes	15projects ¹⁰ detailed designs projects designed	No of projects final designs	15	9	4	2			1.2	0.5	0.3	-	-	WS
	13 projects funded	Amount in Ksh.B mobilized	Ksh. 235.2 Billion	54.8	58.3	54.5	42.8	24.8	0.23	0.3	0.23	0.8	0.1	WS
Leverage on commercial financing to mobilize Kshs.10 Billion for development	3 output based aid/results Financing models reviewed	No. of financing models reviewed	3	3	-	-	-	-	1.5	-	-	-	-	WS
	subsidy programme developed		1	1	-	-	-	-	2	-	-	-	-	WS

¹⁰The 15 priority projects to be implemented under PPP are Bosto dam (Ksh.22B) ; Kinja dam (Ksh.7B); Pesi dam(Ksh.14B); Kinale dam (Ksh. 14B); Londiani dam (Ksh.14B); Isiolo dam(Ksh.17B); Maragua 4dam(Ksh.24B); Keben dam water supply project (Ksh.10B); Mosongo Water project (Ksh.2.2B); Mt Elgon-Bungoma water supply (Ksh.16B); Garsen-Lamu water supply (Ksh.18B); Baricho II water works (Ksh.12B); Ndarugu 1 dam (Ksh.16B); Karimenu II dam (Ksh. 24B); Ruiru II dam (Ksh.25B)

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
of the Water Sector														
	5No. trainings conducted to enhance the credit rating of Water Service Providers	No. of trainings conducted.	5	5	-	-	-	-		10				WS
	Kshs.10 Bn. credit finance	Amount in Kshs. In credit finance	Kshs.10 Bn	Kshs.5 Bn	-	Kshs.5 Bn	-	-	0.5	-	0.5	-		WS
Mobilize Ksh 10 Billion through equalization fund	Ksh. 10Billion mobilized for identified projects	Amount in Ksh.B mobilized	Ksh. 10 Billion	4.6	2.0	1.4	1.0	1.0	42	18	13	9	9	WS
Partner and collaborate with County Governments on last mile water connectivity targeting Ksh. 20 Billion	Kshs. 20 bn mobilized through collaborations	Amount in Ksh. mobilized	Kshs. 20bn.	2	4	6	5	3	1	2	3	2.5	1.5	WS

Strategy	Expected Output	Output Indicators	Target for 5 years	Target ²					Budget (Mn)					Responsibility
				Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	
Develop a sustainable water sector funding model by investing Kshs. 15.4 Billion in an endowment Fund	1No. implementation Concept and 1No. Framework developed	No. of concepts and frameworks developed	2	2	-	-	-	-	2					WS
	Kshs. 15.4 billion mobilized	Amount in Kshs. Mobilized	Kshs.15.4Bn.	-	Kshs.5.4Bn.	Kshs.5 Bn.	Kshs.5 Bn.	-	-	1	1	1	-	WS
	423 No. projects financed (9 No. projects per county)	No. of projects	423 No. projects	-	141	141	141	-	-	1	1	1	-	WS
Objective 7 Budget Sub-Total in Ksh. Millions									59	35	23	14	15	
Grand Totals per Year									52,914	102,050	124,500	158,175	169,399	

ANNEX II: Monitoring and Evaluation Framework

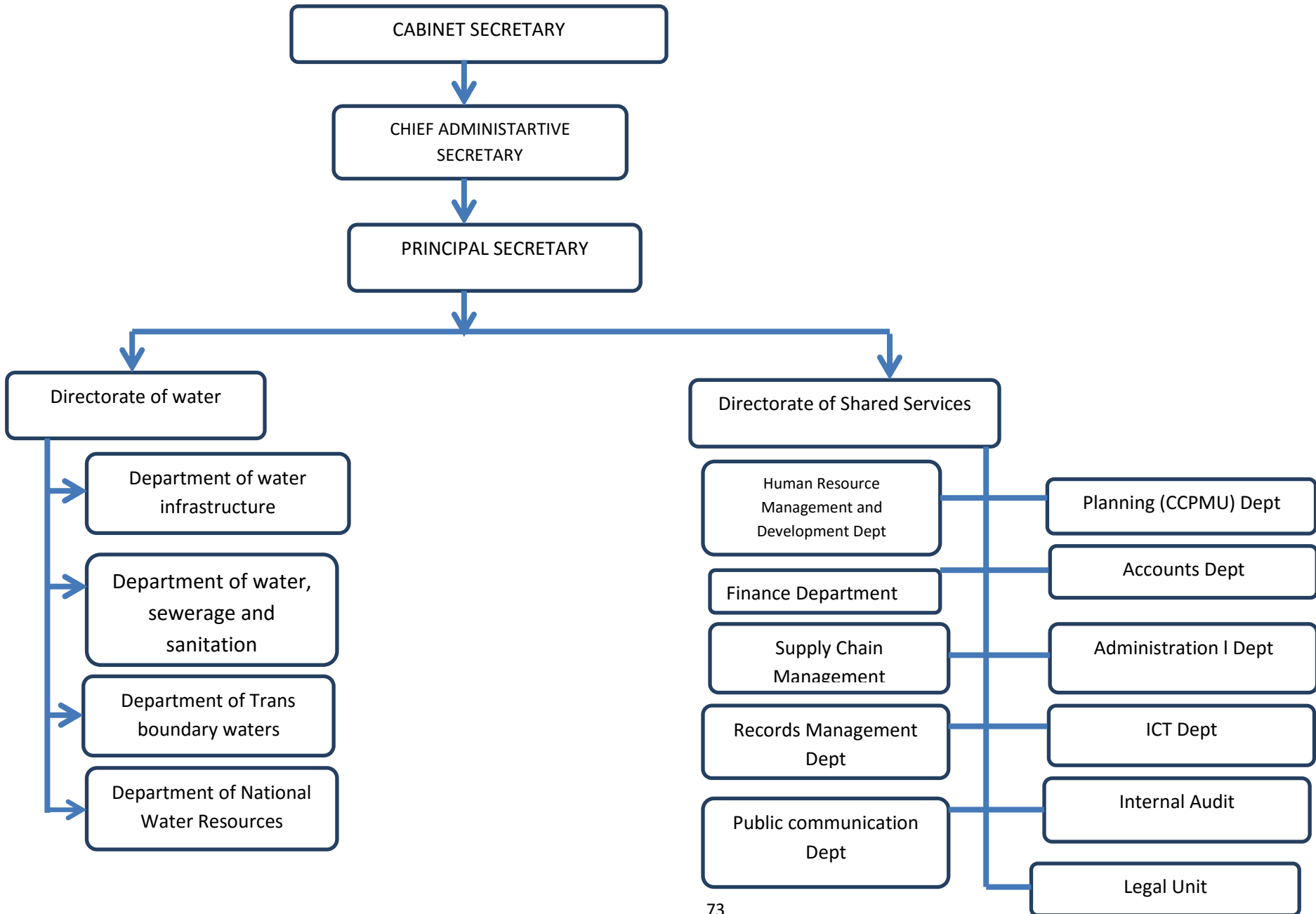
Key Result Area	Outcome	Key Performance Indicator	Baseline	Target	
				Mid-Term Period Target	End of Plan Period Target
KRA 1: Policy, Legal and Institutional Framework	Good Governance in the Management of Water Resources	Degree of implementation of enabling environment at all levels. (SDG-6.5.1, part 1)	63.3%	100%	100%
		Degree of implementation of establishment and reform of institutions at all levels. (SDG-6.5.1, part 2)	59.1%	100%	100%
KRA 2: Management, Protection and Conservation of Water Resources and Transboundary waters	Increased water availability for multipurpose use	Total Renewable Water Resources (TRWR) per capita in m ³ /yr/cap	527	859	1000
		Proportion of bodies of water with good ambient water quality (%)	35.5%	45%	50%
		Proportion of transboundary basin area with an operational arrangement for water cooperation	26%	27%	28%
KRA 3: Water Coverage	Improved access to clean and safe water	Proportion of national population with access to basic ¹¹ drinking water service	60%	72%	80%
		Proportion of urban population with access to improved water service	70.3%	78%	84%
		Proportion of rural population with access to improved water service	55.9%	68%	78%

¹¹If a total water collection time from an improved drinking water source is 30 minutes or less

Key Result Area	Outcome	Key Performance Indicator	Baseline	Target	
				Mid-Term Period Target	End of Plan Period Target
KRA 4: Sanitation Coverage	Improved access to safely managed sanitation services	Proportion of national population using basic sanitation services ¹²	68%	74%	80%
		Proportion of urban population with access to improved sanitation service	67.5%	78%	85%
		Proportion of rural population with access to improved sanitation service	52%	66%	76%
KRA 5: Water Storage and Flood Control	Increased water storage per capita	Water storage per capita in m ³ /cap	3.4m ³ /cap	5m ³ /cap	6m ³ /cap
KRA 6: Human Resource Capacity	Enhanced human resources capacity	No. of staff recruited annually	0	50	50
KRA 7: Research and Technology	Enhanced water research and technology	No. of research projects funded	3	48	48
KRA 8: Partnerships and Resource Mobilization	Enhanced partnerships and resource mobilization for the water sector	Amount in Kshs. B mobilised	52.9B	124.5 B	169.4B

¹²Use of improved sanitation facilities that are not shared with other households

ANNEX III: Current Organization Structure



ANNEX IV: Proposed Organization Structure

