Regional Centre on Groundwater Resources
Education Training & Research

2023-2027

Strategic Plan

Regional Centre on Groundwater Resources, Education, Training and Research (RCGW)

VISION

The premier centre in groundwater research and capacity building

MISSION

To advance sustainable development and management of groundwater resources through research, education and training

CORE VALUES

1. Professionalism
2. Integrity
3. Sustainable Development
4. Innovativeness
5. Team work

FOREWORD

It gives me great pleasure on behalf of the Board of Directors, to present the Strategic Plan for Regional Centre on Groundwater Resources Education, Training and Research (RCGW) for the period 2023–2027. This Strategic Plan marks a significant milestone in the Centre's journey as a leading institution in the advancement of groundwater technologies, capacity development, and research to facilitate the sustainable groundwater development and management in the region.

Groundwater resources are increasingly recognized as vital to climate resilience, food security, public health, and sustainable livelihoods across Africa. Kenya is classified as a water-scarce country that faces challenges from both natural and anthropogenic factors compromising the quality and quantity of water sources. In response to these pressing needs, RCGW has sharpened its strategic focus around five interrelated goals that will guide the Centre over the next five years. These goals aim to enhance the generation and application of scientific knowledge, develop regional capacity and expertise, promote sustainable partnerships, secure long-term institutional sustainability, and strengthen our internal systems and capabilities.

At RCGW, we deploy a myriad of the state-of-the-art technologies in Groundwater assessment to characterize all parameters of aquifers. We have gone ahead to embrace peaceful application of nuclear technology in water resource management. RCGW aligns its mandate with the government's transformative agenda, as outlined in the Bottom-up Economic Transformation Agenda (BETA), that is, Agriculture, Micro, Small and Medium Enterprises (MSMEs), Universal Healthcare, Affordable Housing and Settlement, and the Digital Superhighway & Creative Economy. Water, identified as an enabler in BETA, underscores the critical contribution of groundwater to Kenya's water resources, ensuring a resilient ecosystem and a robust economy.

This Strategic Plan is anchored on four Key Result Areas, that is, Groundwater Research, Development and Knowledge Management; Capacity Building on Groundwater Management; Partnerships and Resource Mobilization; and Institutional Capacity Development. Together, these pillars provide a comprehensive roadmap for realizing our vision of becoming the Premier Centre in Groundwater Research and Capacity building.

As Chairperson of the Board, I reaffirm the Board's unwavering support and oversight to ensure the successful implementation of this Plan. I also call upon all partners, both local and international, to continue walking this journey with us as we work towards a future where groundwater resources are sustainably managed for the benefit of current and future generations.

I recognize that success will require concerted effort and collaboration across sectors and borders. I therefore extend our sincere appreciation to all our partners, staff, and stakeholders who contributed to the development of this Strategic Plan. Your insights, expertise, and support remain invaluable as we embark on this journey of transformation and impact. I look forward to seeing the objectives of this Strategic Plan being translated into tangible results that will uplift communities, empower professionals, protect our shared water resources and safeguard our invisible groundwater resources for present and future generations.

Dr. Stephen K. Maore, PhD

BOARD CHAIRPERSON

PREFACE AND ACKNOWLEDGEMENT

In the dynamic landscape of water resource management in Kenya, the need for a comprehensive and forward-thinking approach to groundwater research has become more imperative. This strategic plan will serve as a guiding document for the Regional Centre on Groundwater Resources Education Training and Research (RCGW), an institution committed to advancing knowledge and sustainable practices in the realm of groundwater within the Country.

This Strategic Plan reflects our renewed commitment to providing thought leadership, scientific excellence, and practical solutions in groundwater resource management. Our vision is aligned not only with Kenya's development agenda—including Vision 2030 and the Bottom-Up Economic Transformation Agenda (BETA)—but also with global efforts such as Sustainable Development Goals, particularly SDG 6 on Clean Water and Sanitation.

We've aligned our vision and mission with five strategic pillars that seek to: generate and apply scientific knowledge for sustainable groundwater management; enhance professional and institutional capacity; ensure long-term sustainability; strengthen strategic partnerships; and modernize our internal systems for greater efficiency.

In addition, the Plan is both visionary and pragmatic. It provides a roadmap that responds to national needs while positioning RCGW as a regional and global knowledge hub for groundwater science, technology, and innovation. Our strategic direction recognizes that achieving water security requires more than research; it demands bold innovation, cross-sector collaboration, and actionable insights. We therefore aim to be a catalyst for invention and technology uptake—harnessing cutting-edge tools such as isotope hydrology, GIS, and machine learning to advance understanding and conservation of groundwater resources.

The development of this Strategic Plan has been a collaborative effort. I extend my deepest gratitude to the RCGW Board of Directors for their strategic guidance and unwavering support. I also thank our dedicated staff, who continue to demonstrate commitment, passion, and professionalism in delivering on our mandate. Sincere appreciation also goes to our partners, stakeholders, and technical contributors, whose insights and contributions enriched the planning process and will be critical to the Plan's successful implementation.

This Strategic Plan is not just a document—it is a call to action. It challenges us to lead with integrity, innovate with purpose, and deliver measurable results. As we implement this Plan, we remain steadfast in our mission to support the sustainable development of groundwater resources—ensuring water security, resilience, and prosperity for all.

Let us walk this path together with renewed determination and shared responsibility.

Geol. Patrick W. Murunga
Ag. CHIEF EXECUTIVE OFFICER

TABLE OF CONTENTS

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

AIA	Appropriation in Aid
AfCTA	African Continental Free Trade Area
AU	Africa Union
BETA	Bottom-up Economic Transformation Agenda
CoK 2010	Constitution of Kenya 2010
COMESA	Common Market for Eastern and Southern Africa
EAC	East Africa Community
ERP	Enterprise Resource Planning
GIS	Geographic Information System
GNIP	Global Network of Isotopes in Precipitation
GoK	Government of Kenya
ICT	Information and Communications Technology
IWAVe	Integrated Water Availability Enhancement
i-WSSM	International Centre for Water Security and Sustainable Management
KRAs	Key Result Areas
LAN	Local Area Network
M&E	Monitoring and Evaluation
MAR	Managed Aquifer Recharge
MoU	Memorandum of Understanding
MSME	Micro, Small & Medium Enterprises
MTEF	Medium Term Expenditure Framework
MTP	Medium Term Plan
MoWSI	Ministry of Water Sanitation and Irrigation
PESTEL	Political, Economic, Social, Technological, Environment and Legal
RCGW	Regional Centre on Groundwater Resources Education, Training and Research (The Centre)
SDG	Sustainable Development Goals
SOP	Standard Operating Procedures

SWOT	Strengths, Weaknesses, Opportunities, and Threats
UNESCO	United Nations Educational, Scientific and Cultural Organization
VRIO	Valuable, Rare, Imitable, Organizational support.
WASPA	Water Service Providers Association
WRA	Water Resources Authority
WRUAs	Water Resources Users Associations
WSPs	Water Service Providers
WSUP	Water and Sanitation for the Urban Poor

EXECUTIVE SUMMARY

The Regional Centre on Groundwater Resources Education Training and Research Strategic Plan (2023-2027) has been prepared to provide strategic direction in implementation of priorities in the Kenya Vision 2030, the Medium-Term Plan IV, and the Bottom-Up Economic Transformation Agenda (BETA) as well as international commitments such as UN Sustainable Development Goals (SDGs) and AU Agenda 2063. The process has been guided by the Revised Guidelines for Preparation of the Fifth- Generation Strategic Plans issued by the National Treasury and Economic Planning and relevant sectoral policies and laws.

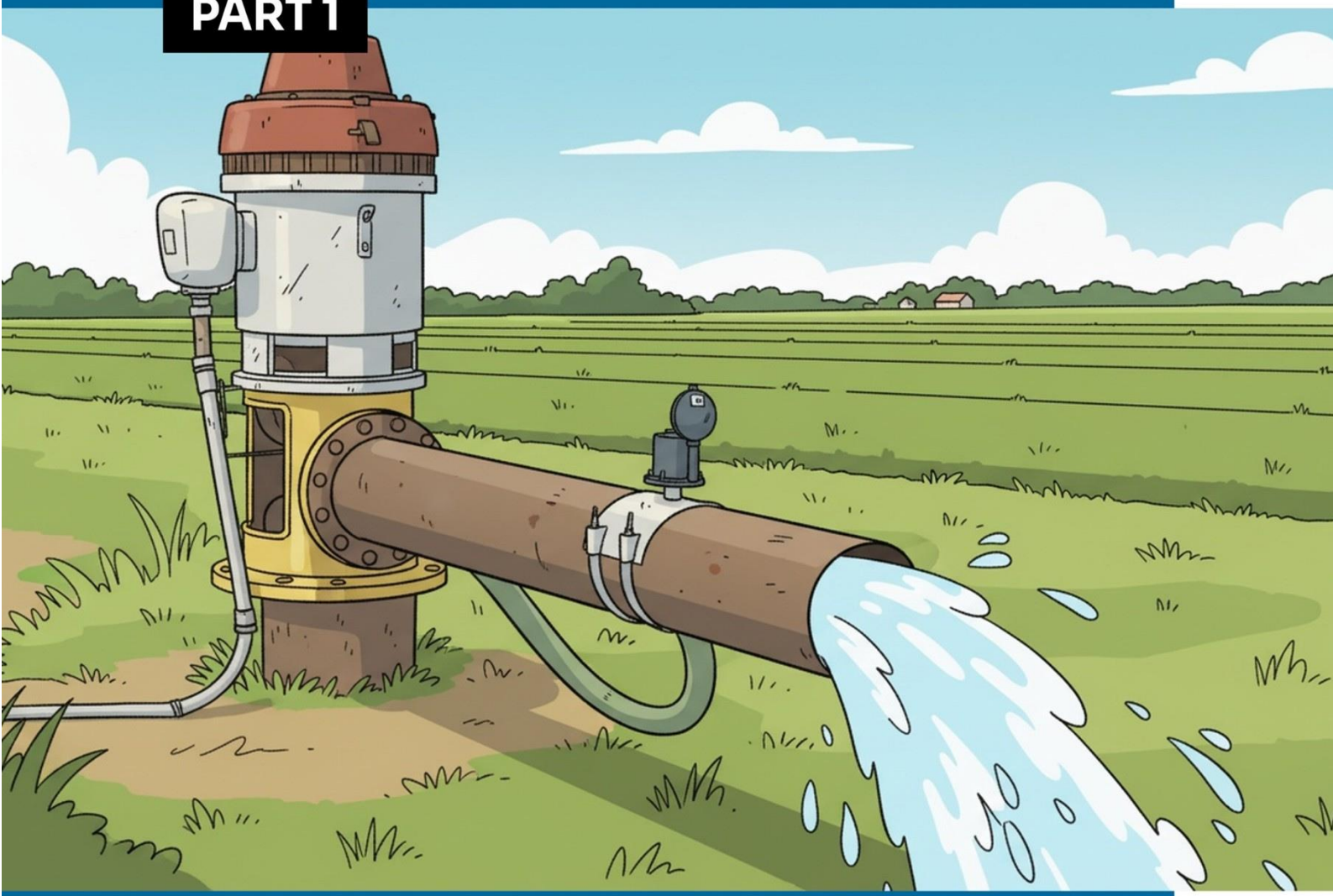
The Plan is founded on a comprehensive analysis of the working environment using the SWOT and PESTEL analytical tools to map out strategic responses that will exploit strengths and tap into opportunities while at the same time dealing with weaknesses and threats to the achievement of the Centre's strategic objectives. The situational analysis was conducted on both the internal and external environment of RCGW with a view also assessed the Centre's governance and administrative structures, internal business processes, resources and capabilities, as well as stakeholders to successfully deliver the strategies in the Strategic Plan 2023/2024 – 2027/2028. The outcome of this analysis has together with the review of other documents led to the identification of the following strategic issues: Information and knowledge on groundwater; Financial Sustainability; Attraction and Retention of Key Technical Staff; Overlapping mandates; Centre's scope of operation; advocacy and marketing.

The Vision of the Centre during the implementation of the Plan has been formulated as "The premier Centre in Groundwater Research and Capacity building". The Mission is "To advance the sustainable management and development of groundwater resources through research, education and training". In order to realize this vision, the Plan outlines four (4) Key Result Areas to achieve namely: Research & Development and Knowledge Management; Capacity Building on Groundwater Management; Partnership and Resource Mobilization; and Institutional Capacity Development. Under these KRAs, the Centre seeks to achieve the following strategic objectives: Increase geographical coverage of groundwater occurrence and assessment; Enhance sustainability of the aquifer systems; Increase access to information on groundwater; To enhance knowledge, skills and professional competencies in groundwater exploration, development and management; Enhance community participation in groundwater resources management initiative; To Increase revenue(A-In-A) by 50% YoY; Increase the number of Strategic partnership and networks by 50%; Enhance institutional effectiveness by strengthening governance frameworks, upgrading operational systems, and building staff competencies.

The Plan proposes an effective implementation and coordination framework to ensure the achievement of the strategic objectives set. This includes a detailed implementation matrix which outlines which key activities are to be undertaken, when, by whom and at what cost the objectives under each KRA are to be achieved. In addition, to ensure that the strategies have requisite resources in terms of skills and competencies, a detailed analysis of available versus optimal skills, competences, leadership structures, systems and procedures has been undertaken. All the activities in the plan have also been carefully costed, giving a budget requirement of Ksh 2,159 million to implement for the five years.

The Plan has an in-built robust monitoring and evaluation framework to ensure achievement of the planned targets. Monitoring the plan will be undertaken based on the indicators and targets under each Key Result Area and as outlined in the Implementation Matrix. Midterm and End term evaluations have been provided in the M&E framework to provide information on the achievement of strategic results, challenges and lessons learnt. Some of the key outcome indicators in the M&E framework that will be used to evaluate the achievement of strategic results include: Area of aquifer(s) delineated (KM2); No of Artificial Groundwater Recharge/MAR infrastructures installed; No of publications on groundwater; No. of public awareness fora held; No. of additional water practitioners trained; Amount of revenue generated (Kshs Millions); Brand awareness Index (%); No of new partnerships; employee satisfaction index (%); and customer satisfaction Index (%).

PART 1



Introduction

INTRODUCTION

Overview

This chapter highlights the strategy as an imperative to organizational success, national development priorities, regional and international development frameworks, the sector's policies and laws, history of the Centre and the methodology followed to develop the Strategic Plan.

1.1 Strategy as an imperative for Organizational Success

The Centre recognizes the role of strategic planning in steering organizational success. Faced with the mandate of research, training, and outreach, strategic planning is not just an option but a fundamental requirement for the Centre's pursuit of excellence in groundwater research and management. Our strategic plan for 2023-2027 stands as a testament to this imperative in establishing the Centre's strategic direction for the plan period. It articulates a progressive approach, aligning our vision with measurable outcomes and guiding our endeavors in sustainable water management.

In this context, strategy becomes the driving force shaping our research focus, training initiatives, and outreach activities. It ensures coherence and synergy in our multifaceted endeavors, particularly fundamental in addressing challenges like climate change and biodiversity loss. This strategic imperative is more than a managerial tool; it's a cultural spirit that fosters adaptability and innovation. As we navigate the complexities of groundwater research and management, strategic planning emerges as the prerequisite, not only guiding our present actions but propelling us toward a future where our impact is both meaningful and lasting. This strategic plan is essential for achieving the organization's success because it provides a roadmap that aligns the organization goals, resources and initiatives. This strategic plan defines the Key Result Areas (KRAs), strategic objectives and the strategies that the Regional Centre on Groundwater Resources Education, Training and Research (RCGW) will focus on during this plan period to deliver on its mandate.

1.2 The Context of Strategic Planning

The formulation of the 2023–2027 Strategic Plan for the Regional Centre on Groundwater Resources (RCGW) comes at a pivotal time when water security, environmental sustainability, and climate resilience are becoming increasingly urgent on national and regional agendas. As a regional institution mandated to promote research that informs sustainable development, management and utilization of groundwater resources in Kenya. RCGW operates within a complex and evolving landscape characterized by rapid population growth, increasing demand for water, and the adverse impacts of climate change.

The previous strategic plan (2018–2022) laid a foundational framework for institutional development, capacity enhancement, and stakeholder engagement. However, the period also revealed persistent challenges, including limited financial resources, constrained human capital, weak implementation capacity, and disruptions caused by the COVID-19 pandemic. These factors, combined with emerging global and regional trends, necessitated a renewed strategic direction grounded in evidence, inclusivity, and adaptability.

The current planning process is also guided by Kenya's national development priorities as outlined in Vision 2030, the African Union Agenda 2063, the Sustainable Development Goals (SDGs)—particularly SDG 6 (Clean Water and Sanitation)—and relevant policies such as the National Water Master Plan and the Regional Water Resource Management Strategy. These frameworks underscore the centrality of groundwater in achieving long-term water security, economic development, and resilience to climate variability.

In this context, the 2023–2027 Strategic Plan seeks to reposition RCGW as a Centre of excellence in groundwater governance, research, and capacity building. It outlines strategic priorities and actionable pathways that will enable the Centre to respond effectively to both existing and emerging challenges while maximizing opportunities for impact and growth.

1.2.1 United Nations 2030 Agenda for Sustainable Development

Sustainable Development Goals (SDGs) are a set of 17 globally recognized objectives established by the United Nations to address and solve some of the world's most pressing social, economic, and environmental challenges. These goals, officially known as the 2030 Agenda for Sustainable Development, aim to create a more equitable and sustainable world by 2030, fostering prosperity, protecting the planet, and ensuring that no one is left behind. They represent a shared commitment by the international community to build a better future for all, and their successful implementation requires collaborative efforts from governments, businesses, civil society, and individuals worldwide. In this context, it is imperative to explore and understand the Sustainable Development Goals to work towards a more sustainable and inclusive future.

During the Strategic Plan period, RCGW will undertake activities related to the SDG No. 6, which aims at ensuring availability and sustainability of water and sanitation for all by 2030; and SDG No. 13 that seeks to reduce effects of climate change. Under the eight targets outlined in SDG 6, universal access to safe and affordable drinking water and management of water resources among others is fundamental to achieving sustainable development.

In attainment of the above SDG targets, the Centre will carry out research projects, hydrogeological and geophysical surveys to map and establish aquifer extent and characteristics to promote development and sustainable management of groundwater resources; Establish surface groundwater interaction towards determination and protection of groundwater recharge areas for sustainability of the resource; Monitoring and protecting groundwater recharge areas to prevent contamination and ensure the continued replenishment of the aquifers; Application of isotope hydrology techniques towards sustainable planning and development of water resources; Mapping of groundwater quality to assess groundwater pollution vulnerability areas and advise on necessary mitigation measures; Establish Global Network of Isotopes in Precipitation (GNIP) stations; Support the development of a comprehensive water resource management plan; Delineate potential aquifers in Kenya and determine their safe yield; Initiation and application of Managed Aquifer Recharge (MAR) towards restoration of aquifer in terms of quantity and quality ensuring restoration of alarmed aquifers and sustainability in water supply; Design & Develop Groundwater Training Materials and conduct trainings; Dissemination of research findings to the policy makers, groundwater professionals and the public and Carry out public awareness about the importance of groundwater conservation and sustainable water usage.

1.2.2 African Union Agenda 2063

Africa's Agenda 2063 is a visionary continental development plan that outlines a comprehensive strategy for the socio-economic transformation of Africa over a 50-year period. It aims to promote peace, prosperity, and unity while addressing key challenges such as poverty, inequality, and underdevelopment. This ambitious agenda seeks to harness the continent's diverse resources and potential to create a more integrated and globally competitive Africa by 2063, "The Africa We Want".

Aspiration 1 (18) of Africa we want to envision that the continent shall have equitable and sustainable use and management of water resources for socio-economic development, regional cooperation and the environment.

Towards this, the Centre will implement key programs/projects aligned to MTP IV including incorporating advanced technology on geophysical and geotechnical methods in research, establishment and equipping of a Centre for Hydrometry and Instrumentation; groundwater mapping countrywide, conducting research on groundwater quality and availability, advancing knowledge and skills in groundwater management and putting in place measures to enhance water conservation and management of water resources leading to improved quality of life.

1.2.3 East Africa Community Vision 2050

The East Africa Community (EAC) Vision 2050 is a forward-looking strategic framework that outlines the long-term development aspirations and goals for the East African region. The vision emphasizes the critical role that water resources play in sustainable development, socio-economic progress, and environmental preservation within East Africa. The East African Community Vision 2050 envisions improved access to safe water to 92.9 percent in 2050, while sanitation will improve from 40 percent accessibility to 90 percent by the end of the Vision period.

The Centre will contribute towards the achievement of EAC vision 2050 by conducting Groundwater Assessment and Mapping that will help in identifying areas with untapped water resources, carrying out water quality testing to ensure that the groundwater is safe for consumption and agricultural use and training the agricultural communities on sustainable groundwater management practices to avoid aquifer depletion.

1.2.4 Constitution of Kenya

The Constitution of Kenya (CoK) in Article 43(b) and (d) articulates that every person has the right to reasonable standards of sanitation as well as the right to clean and safe water in adequate quantities.

The Centre will carry out water quality testing to ensure that the groundwater is safe for consumption, groundwater mapping countrywide, advancing knowledge and skills in groundwater management and putting in place measures to enhance water conservation and management of water resources.

The Constitution of Kenya recognizes the provision of water as one of the devolved functions and a responsibility of the County Governments. The Centre works closely with County Governments in carrying out their mandate on development and management of water

resources. The Centre conducts groundwater assessment to generate information for policy formulation, water availability and sustainability, capacity building to increase ground water knowledge and offering consultancy service on groundwater technical services.

1.2.4.1 Kenya Vision 2030

Kenya Vision 2030 is the long-term development blueprint for the country and is motivated by a collective aspiration for a better society by the year 2030. The aim of Kenya Vision 2030 is to create “a globally competitive and prosperous country with a high quality of life by 2030”. It aims to transform Kenya into “a newly-industrializing, middle income country providing a high quality of life to all its citizens in a clean and secure environment". Kenya Vision 2030 is anchored on three pillars namely: economic pillar, social pillar and political pillar.

a) The Economic pillar: Aims at providing prosperity for all Kenyans by attaining an annual growth rate of 10% per annum and sustaining it through the Vision period. Under this pillar, flagship projects have been identified in Tourism, Agriculture, manufacturing, wholesale and retail, business process outsourcing, and financial services.

b) The Social pillar: Seeks to build a just and cohesive society with social equity in a clean and secure environment. To achieve this, the priority sectors identified include education and training, health, water and sanitation, the environment, housing and urbanization, gender, youth, and vulnerable groups.

c) The Political pillar: It aims at realizing an issue-based, people-centered, result-oriented, and accountable democratic system. The specific areas identified for the achievement of this priority are respect for the rule of law, protection of individual rights and freedom, electoral and political processes, democracy and public service delivery, transparency and accountability, security, peace building, and conflict resolution.

During MTP IV the water sector will focus on raising the standards of the country’s overall water resource management, storage, and harvesting capacity; Rehabilitation of hydro-meteorological data-gathering network; Construction of multipurpose dams; Construction of water and sanitation facilities to support industries and a growing urban population. The Centre will focus on establishment of surface groundwater interaction towards determination and protection of groundwater recharge areas for sustainability of the resource; Monitoring and protecting groundwater recharge areas to prevent contamination and ensure the continued replenishment of the aquifers; Application of isotope hydrology techniques towards sustainable planning and development of water resources; and Mapping of groundwater quality to assess groundwater pollution vulnerability areas and advise on necessary mitigation measures.

1.2.4.2 Bottom-Up Economic Transformation Agenda

The Bottom-Up Economic Transformation Agenda (BETA) is geared towards economic turnaround and inclusive growth. It’s anchored on five key pillars i.e. (1) Agriculture-Agricultural Transformation and Inclusive Growth; (2) MSME Economy- Transforming Micro, Small and Medium Enterprise (MSME) Economy; (3) Housing and Settlement- Affordable Housing and settlement; (4) Healthcare- Universal Healthcare; and (5) Digital and creative Economy-Digital Superhighway and Creative Industry.

The priority interventions proposed in the plan are expected to contribute toward six broad objectives including lowering the cost of living, eradicating hunger, managing unemployment, improving fiscal performance, stabilizing foreign exchange, and ensuring inclusive economic growth.

To increase agriculture productivity, the Government seeks to increase productivity of key food chains, reduce dependence on basic food imports, revamp underperforming and collapse export crops while expanding emerging ones, boost tea value chain among other measures.

The Centre will play a critical role in the implementation of this priority area through: Managed Aquifer Recharge where the purpose is to recharge water to aquifers hence enhancing water security thus increasing agricultural productivity and production, groundwater research, mapping of aquifer systems and Water quality testing. The Centre will also establish groundwater database system to disseminate research findings and develop groundwater map for Nairobi city to inform policy makers. Finally, the Centre will foster innovative entrepreneurship in groundwater resources. By doing so, it ensures availability and sustainable management of water and sanitation for all.

1.2.4.3 Sector Policies and Laws

The Water Act, 2016

The Water Act 2016 is an Act of Parliament that provides for the regulation, management and development of water resources, water and sewerage services; and for other connected purposes. The Act recognizes that water-related functions are a shared responsibility between the National Government and the County Governments. It also gives priority to the use of abstracted water for domestic purposes and irrigation use and management of the use of international waters and water resources.

National Water Policy

The overall goal of the policy is to guide the achievement of sustainable management, development, and use of water resources in the country. The overall objective of the policy is to provide a framework that is dynamic, innovative, and effective for re-engineering the water sector to address missing gaps in water resources management.

The policy sets out seven priority climate action areas with adaptation and mitigation actions to enhance resilience of the blue economy and water sector by ensuring access to, and efficient use of water for domestic uses, agriculture, and wildlife by improving access to good water quality, increasing water availability through the development of water infrastructure, developing climate-proof water harvesting and water storage infrastructure and flood control, increasing affordable water harvesting–based livelihood programs, and promotion of water efficiency (monitor, reduce, reuse, and recycle).The Centre plays a critical role on conducting research in mapping and assessment of aquifer systems, management, conservation, protection and governance of groundwater resources.

1.3 History of the Centre

Regional Centre on Groundwater Resources, Education, Training and Research (RCGW) is a State Corporation under the State Department for water and Sanitation established through legal notice No. 252 of 2015 under the State Corporations Act Cap 446 to initiate and conduct research, mapping and assessment of aquifer systems to inform the management, conservation, protection, development and governance of groundwater resources.

1.4 Methodology of Developing the Strategic Plan

The development of the 2023-2027 Strategic Plan for the Centre followed a participatory and consultative approach through various essential steps. It began with an initiation process, which included management and board resolution, the appointment of a strategic planning technical committee, and the issuance of Terms of Reference to the Technical Committee. Subsequently, a performance assessment of the previous strategic planning period was conducted to identify achievements, gaps, challenges, and lessons learned.

The subsequent strategic plan development process involved identifying stakeholders, conducting stakeholder interviews, staff and management interviews, internal analysis, external environment analysis, and drafting the strategy. The draft was then validated by the management team, presented to and validated by the Board of Directors, externally validated by stakeholders, and ultimately approved by the Board of Directors, up on which the strategic plan was launched and disseminated.

PART 2

Strategic Direction

STRATEGIC DIRECTION

Overview

This chapter provides an overview of the organization's mandate, vision and mission. Strategic goals to guide the organization direction have been formulated for implementation in the plan period. In this section the Centre has also identified its core values and set the quality policy statement.

1.5 Mandate

The Centre is responsible for initiating and conducting research in mapping and assessment of aquifer systems for management, conservation, protection, development and governance of groundwater resources. Key functions include:

I. Initiate and conduct research in mapping and assessment of aquifer systems.
II. Management, conservation, protection and Governance of groundwater resources.
III. Offer training programmes, workshops, seminars in groundwater resources management and development.
IV. Provide a forum for effective collaboration with the public, private sectors and all other stakeholders, whether local or foreign for the development of groundwater resources.
V. Promote civic education through public awareness programme in relation to groundwater management.
VI. Prepare, disseminate and transmit scientific and technical information through the mass media, e-learning, distance learning and any other mode especially with regard to local and regional scientific, technical and management knowledge in the various domains of groundwater management and development.
VII. Initiate and propose policy review on groundwater management.
VIII. Offer consultancy services in groundwater management; and
IX. Undertake any functions, as may be directed by the cabinet Secretary.

1.6 Vision Statement

The premier centre for groundwater research and capacity building

1.7 Mission Statement

To advance sustainable development and management of groundwater resources through research, education and training

1.8 Strategic Goals

1. Sustainable Groundwater Research and Development
2. Enhanced capacity for groundwater development
3. Financial Sustainability
4. Enhanced Institutional capacity

1.9 Core Values

a) Professionalism

The Centre commits to maintain high standards of excellence, ethical behaviour, and a strong work ethic while maintaining a high standard of competence, demonstrating respect for others, and upholding integrity in all professional interactions.

b) Integrity

The Centre commits to maintain high standards of honesty, moral uprightness, and a commitment to doing what is right, building a foundation of transparency, trust and accountability.

c) Sustainable Development

The Centre embodies the commitment to meeting the needs of the present without compromising the ability of future generations to meet their own needs. The Centre will prioritize environmental stewardship, social equity, and economic prosperity and long-term management of groundwater resources to ensure environmental and social well-being.

d) Innovativeness

The Centre will foster creativity, adaptability and forward-thinking, driving its mission to develop pioneering solutions and technologies in the field of groundwater management, promoting sustainability and addressing pressing water challenges.

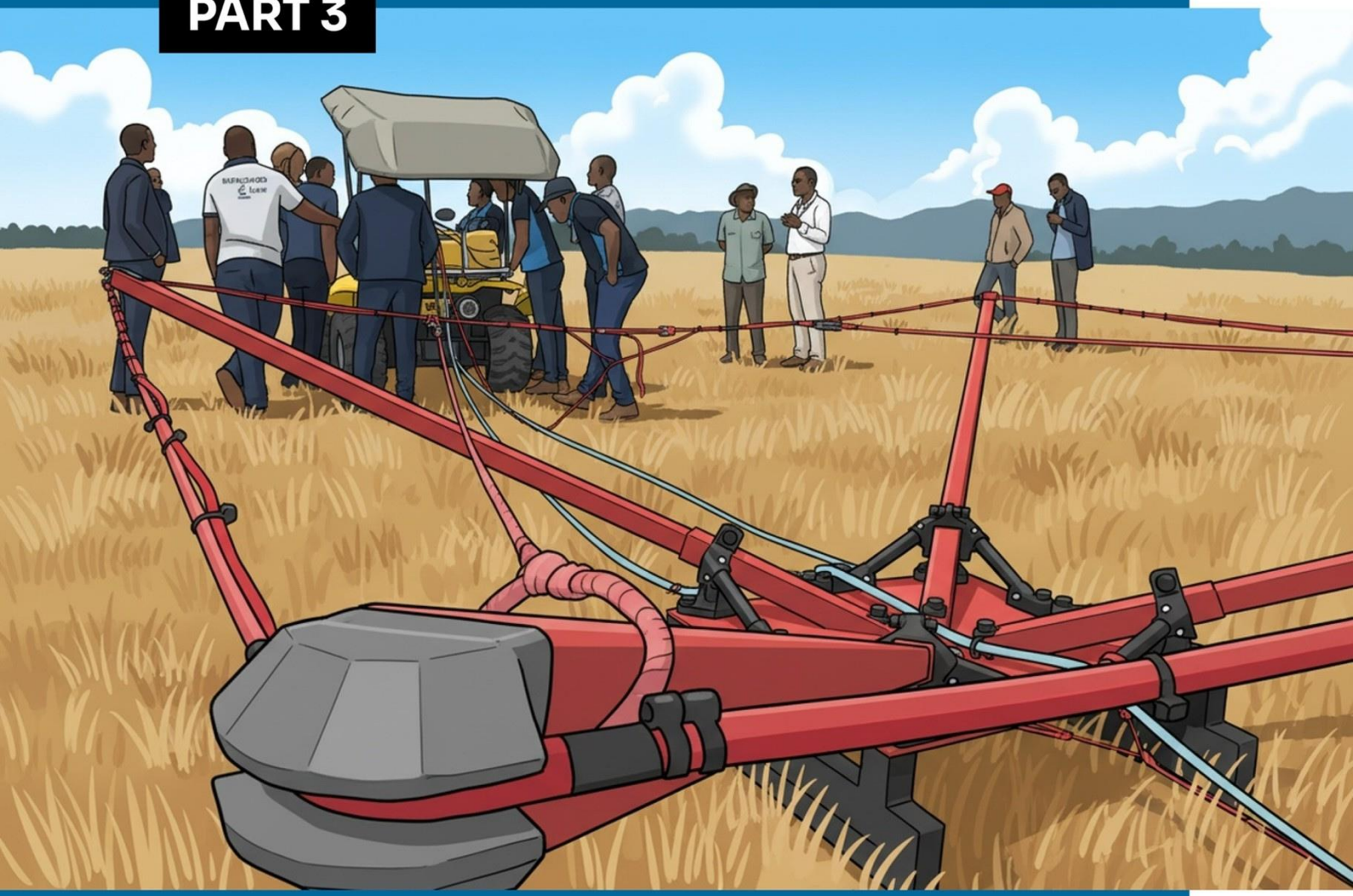
e) Team work

The Centre will relentlessly build and pursue teamwork to attain targeted results at all levels through high level coordination, networking and collaboration with all staff, stakeholders and the public.

1.10 Quality Policy Statement

The Centre is committed to providing quality, credible and reliable scientific research findings; training and education through capacity building to inform policy makers in decision making on groundwater resources development and management and provide consultancy services on management and development of groundwater resources. In pursuit of the above the Centre will endeavor to conform to the recognized standards in ensuring efficient and effective service delivery applying the rule of equity and equality.

PART 3



Situational Analyses

SITUATIONAL ANALYSES

Overview

This chapter presents an analysis of the environment in which the Centre operates. The analysis covers both the external and internal environment. It analyzes the working environment using the Strength, Weakness, Opportunities and threat (SWOT) and Political, Economic, Social, Technological, Environment and Legal (PESTEL) analytical tools. This process is critical as it enables RCGW to map out strategic responses that will exploit strengths and tap into opportunities while at the same time dealing with weaknesses and threats to the achievement of the Centre's strategic objectives. The chapter also documents the performance of the previous strategic plan, the challenges encountered, and the lessons learnt. Finally, the chapter concludes by presenting a stakeholder analysis which involves mapping of the various stakeholders in order to understand their roles, their expectations and also the Centre's expectations from them

1.11 Situational Analysis

Analysis of the internal and external environment identified factors influencing Centre's operation during the planned period. The internal environment explores strengths and weaknesses of the Centre while the external environment reviews opportunities and threats that may affect achievement of planned objectives and operations.

1.11.1 External Environment

The external environment was analysed using the PESTEL tool which allows the assessment of Political, Economic, Social, Technological, Ecological and Legal factors that may pose threats or provide opportunities for the Centre to achieve its strategic goals.

1.11.1.1 Macro-environment

The Centre's PESTEL analysis is presented as follows:

POLITICAL FACTORS

The political landscape plays a crucial role in shaping the operational and strategic environment of the Regional Centre on Groundwater Resources (RCGW). As an institution operating within the public sector RCGW is influenced by national, regional, and international political priorities and commitments. Key factors include political goodwill, government policies on water resource management, regional integration agendas, donor relations, political stability, and the commitment of member states to support sustainable groundwater development. Understanding the political context enables RCGW to align its strategic interventions with national development plans, regional water strategies, and multilateral agreements, while mitigating potential risks arising from shifts in governance, regulatory frameworks, and geopolitical dynamics.

Table 0-1: Summary of Political Opportunities and Threats

Opportunities	Threats
I. **Political stability**: Conducive environment for implementation of the Plan, engagement of stakeholders and mobilization of resources. II. **Political goodwill**: Leverage on the country's leadership led by His Excellency the President, has continuous championing of conservation efforts including the planting of 15 billion trees campaign and the Nairobi River Basin Regeneration Programme. These efforts are key to supporting aquifer recharge which is a key concern to the Centre. This is also key in lobbying for increased Government funding and support for groundwater research and capacity building. III. **Regional political integration**: Extension of RCGW services to the regional market due to Kenya's strategic involvement in regional political integration, particularly as a member of the AfCFTA, COMESA and EAC. IV. **Enhanced Regional Diplomacy:** Enhancement of cross-border collaborations on groundwater management and attract international support for water resource initiatives due to the approved the Foreign Policy 2024, emphasizing strategic objectives such as promoting economic prosperity, enhancing regional and global peace, and positioning Nairobi as a global diplomatic hub. V. **International Partnerships:** New sources of provide financial and technical support for RCGW's initiatives, enhancing capacity for groundwater resource management as a result of Kenya's strengthened ties with the other Countries. VI. **Devolution: Formulation of more** responsive and context-specific groundwater management strategies since Devolution has empowered county governments to tailor water service delivery to their specific needs.	a) **Civil Unrest:** Some political decisions have the potential of causing civil unrest that may disrupt implementation of Plan, engagement of stakeholders and mobilization of resources. b) **Coordination Challenges in devolved units:** potential inefficiencies or conflicts as a result of the division of responsibilities between national and county governments can lead to overlaps or gaps in water resource management. c) **Policy and Regulatory Inconsistencies:** inconsistent groundwater management practices resulting from Variations in policy interpretation and implementation across counties. d) **Regional Water Disputes:** The activation of the Nile Basin Cooperative Framework Agreement without Egypt's backing underscores ongoing tensions over water-sharing among Nile basin countries. While Kenya is not directly involved, such disputes can influence regional water politics and may impact collaborative efforts on transboundary water management, posing challenges for RCGW's regional initiatives. e) **International Aid Volatility: Decline in funding from international funding due to** the suspension of USAID funding by the U.S. administration has disrupted Kenya's economy, particularly affecting aid-dependent sectors.

ECONOMIC FACTORS

Economic factors play a pivotal role in shaping the implementation of RCGW 2023–2027 Strategic Plan. An analysis of current and projected economic conditions at the national, regional, and global levels reveals several opportunities and threats that could impact RCGW's strategic objectives.

The Economic factors include: **Economic Growth:** Real Gross Domestic Product (GDP) expanded by 5.6 percent in 2023 compared to a revised growth of 4.9 per cent in 2022 trajectory that is expected to continue ; **Global Economic Recovery:** The global economy is expected to grow by 3.7% in 2025, supported by recoveries in manufacturing and construction sectors; **Public private partnership**- the government has developed a framework on implementing PPP. The Water Act (Amendment) (No. 13 of 2024), amended the Water Act 2016, explicitly incorporating Public–Private Partnerships (PPPs) by enabling both national and county-level entities to enter into PPP-style arrangements for bulk water services;

Other factors are: **Debt Sustainability Concerns:** Kenya's public debt remains a concern, with significant portions of government revenue allocated to debt servicing. This fiscal pressure may limit the government's ability to invest in groundwater management projects; **Inflationary Pressures:** The annual inflation rate as measured by the Consumer Price Index (CPI) was 7.7 per cent in 2023 as was recorded in 2022, is projected to stabilize between 2.7 – 7.7% within the plan period. **Global Economic Uncertainties:** Persistent global challenges, including geopolitical tensions and climate-related risks, pose threats to economic stability.

Table 0-2: Summary of Economic opportunities and Threats

Opportunities	Threats
I. **Economic Growth:** Increased funding and support for groundwater resource management initiatives due to enhanced government revenues and private sector confidence, II. **Global Economic Recovery: Increased** international funding, technological transfers, and capacity-building opportunities for RCGW due to global economic growth. III. **Public private partnership: Enhanced participation of private sector in Groundwater programmes as a result of** developed a framework on implementing PPP and the Water Act (Amendment) (No. 13 of 2024), amended the Water Act 2016, explicitly incorporating Public–Private Partnerships (PPPs) by enabling both national and county-level entities to enter into PPP-style arrangements for bulk water services.	I. **Debt Sustainability Concerns:** Decline in funding due to fiscal pressure emanating from large portions of government revenue allocated to debt servicing. II. **Inflationary Pressures: Increased project costs due to spikes in inflation** III. **Global Economic Uncertainties:** Shifts in donor funding due to Persistent global challenges, including geopolitical tensions and climate-related risks, pose threats to economic stability may negatively affect availability of international funding for groundwater resource management

SOCIAL FACTORS

Social factors are central to the effectiveness of RCGW's mission, particularly in promoting sustainable and inclusive groundwater management. Population growth, rapid urbanization, changing water consumption patterns, and community awareness about water conservation directly influence groundwater demand and stress. Additionally, public perceptions, cultural attitudes toward natural resources, and levels of community engagement affect the uptake of groundwater-related initiatives. Addressing social dynamics—such as education, gender inclusion, rural-urban disparities, and equitable access to water—enables RCGW to design programs that are not only technically sound but also socially responsive and impactful.

Table 0-3: Summary of Social Opportunities and threats

Opportunities	Threats
I. **Rural- Urban Migration**: Increased demand for groundwater in urban areas due toan upward trend in the number of Kenyans moving from their rural homes to urban areas and cities like Nairobi in search of employment and business opportunities. II. **Water Resource Based Conflicts**: enhancement of the Centre's visibility and impact through the provision of groundwater as part of peace building processes. III. **Youth Bulge:** driving innovation and sustainability in water resource management **by** engaging the youthful cohort through targeted education and employment programs. IV. **Digital Literacy and Technological Adoption:** Leverage digital platforms for awareness campaigns, data collection, and dissemination of information related to groundwater conservation.	a) **Brain Drain**: There are a number of experts in groundwater still leaving the country for greener pastures abroad. This affects the ability of the Centre to attract and retain competent human resources, especially in highly technical areas. b) **High Youth Unemployment:** Despite government efforts, youth unemployment remains a pressing issue, with approximately 80% of unemployed individuals being young people. This economic challenge can lead to social unrest and may divert attention and resources away from environmental initiatives like those of RCGW. c) **Disease Burden:** Kenya has not completely managed its health challenges with Malaria, HIV/AIDS, respiratory diseases, non-communicable diseases and waterborne diseases being responsible for the significant health morbidity. The Centre therefore has a key role to play in increasing access to portable water as a preventive measure for controlling waterborne diseases in the Country.

TECHNOLOGICAL FACTORS

Technological factors are crucial in shaping the implementation of RCGW's 2023–2027 Strategic Plan. An analysis of current and emerging technological trends at the national, regional, and global levels reveals several opportunities and threats that could impact RCGW's strategic objectives. To navigate these factors, the Centre should focus on adopting and integrating advanced monitoring and management technologies, fostering collaborations with governmental and private entities to leverage AI initiatives, ensuring robust data security measures, addressing technological disparities through capacity building, and staying adaptable to rapid technological advancements.

Table 0-4: Summary of Technological Opportunities and Threats

Opportunities	Threats
I. **Advancements in Groundwater Monitoring Technologies:** The global groundwater monitoring systems market is experiencing significant growth, driven by the need for sustainable water management. Innovations such as smart meters and IoT sensors enable real-time data collection and analysis, enhancing the efficiency of groundwater resource management. Integrating these technologies can improve decision-making processes and optimize resource allocation. II. **Artificial Intelligence (AI) and Operational Intelligence:** The integration of AI and operational intelligence is transforming water management practices. These technologies	I. **Data Privacy and Security Concerns:** The adoption of digital technologies in water management raises issues related to data privacy and security. Ensuring the protection of sensitive information is vital to maintain public trust and comply with regulatory standards. II. **Technological Disparities and Accessibility:** Variations in technological infrastructure and access across different regions can impede the uniform implementation of advanced groundwater management systems. Addressing these disparities is essential

facilitate predictive analytics, anomaly detection, and process optimization, leading to more effective groundwater management strategies. Embracing AI can provide RCGW with a competitive edge in resource management. III. **Government Initiatives Promoting Technological Adoption:** Kenya's Artificial Intelligence Strategy 2025–2030 underscores the country's commitment to fostering AI development and application. This strategic direction aligns with RCGW's objectives, offering opportunities for collaboration and support in implementing AI-driven groundwater management solutions. IV. **Integration of Traditional and Modern Water Management Systems:** Combining indigenous knowledge with contemporary technologies can enhance water security. For instance, integrating traditional water conservation methods with modern data platforms can lead to more resilient and sustainable groundwater management practices	to ensure equitable resource management. III. **Dependence on External Technological Solutions:** Relying heavily on imported technologies may pose challenges related to customization, maintenance, and cost. Developing local technological capacities can mitigate these risks and promote sustainability. IV. **Rapid Technological Changes:** The fast-paced evolution of technology necessitates continuous learning and adaptation. Keeping abreast of emerging technologies and integrating them effectively into existing systems can be resource-intensive

ECOLOGICAL FACTORS

The ecological context is a critical consideration for RCGW, given its mandate in groundwater resource management. Environmental factors such as climate change, deforestation, land degradation, pollution, and over-abstraction directly impact groundwater availability, recharge rates, and quality. Ecosystem fragility and declining watershed health further threaten sustainable access to groundwater. As climate variability intensifies and environmental stress increases, RCGW must integrate ecological sustainability into its research, policy advisory, and capacity-building efforts to ensure long-term water security and ecosystem resilience across the region.

Table 0-5: Summary of Ecological opportunities and Threats

Opportunities	Threats
I. **Environmental Conservation Programmes:** the president has issued a directive to plant 15 billion trees to promote environmental conservation. Equally there is need to undertake catchment conservation and Nature Based Solution to promote natural groundwater recharge. II. **Green financing** is a potential area for resource mobilization for the environmental and climate resilience initiatives for example the GCF and the GEF funding	a) **Climate change**: Effect of climate change include extreme climatic events such and droughts and flooding which lead to unpredictable fluctuation in water resources availability. These changes affect groundwater recharge, availability and quality leading to water scarcity, contamination and ecological disruptions. b) **Groundwater depletion and pollution vulnerability** is a growing concern driven by over-abstraction due to increasing water demand, land use changes, and climate variability. This challenge is particularly critical in strategic aquifers such as the Nairobi Aquifer System (NAS), Nakuru Aquifers where 80% of water supply is from groundwater and the Mombasa that is 100% dependent on groundwater leading to potential of over abstraction. The Nairobi City County itself has recorded a groundwater level decline at a rate ranging between 5– 2 m/year (Oiro, 2020). Groundwater just like surface water remains vulnerable to pollution in certain regions in Kenya due to natural processes and human induced activities. High salinity at the Northern and coastal regions and fluoride contamination in the rift valley, render groundwater non-potable and limit its usability thus the need to promote sustainable groundwater management practices to ensure safe and reliable groundwater exploitation across the country.

LEGAL FACTORS

The legal landscape significantly influences RCGW's operations, partnerships, and strategic interventions. As a regional public institution, RCGW operates within a framework shaped by national water laws, regional protocols, environmental regulations, and international agreements on transboundary water resources. Compliance with legal standards related to groundwater rights, environmental protection, data sharing, and institutional governance is essential to maintain legitimacy, accountability, and cooperation. Evolving legal reforms across member states and the harmonization of water-related laws present both opportunities and challenges that RCGW must navigate to effectively fulfill its mandate.

Table 0-6: Summary of Legal opportunities and Threats

Opportunities	Threats
I. **Comprehensive National Legal Frameworks:** o *Water Act 2016:* This Act provides for the regulation, management, and development of water resources and services in Kenya, aligning with constitutional mandates. It establishes principles guiding water resource management, which can support RCGW's initiatives. o *Environmental Management and Coordination Act (EMCA):* EMCA offers a legal framework for environmental management, including provisions relevant to groundwater protection. Compliance with EMCA can enhance the sustainability of RCGW's projects. II. **National Water Resources Strategy (2020–2025):** This strategy outlines the legal, policy, and institutional frameworks governing Kenya's water sector, providing a structured approach to water resource management. Aligning RCGW's activities with this strategy can facilitate regulatory compliance and strategic partnerships. III. **Regional Cooperation Frameworks:** Collaborative legal frameworks for transboundary groundwater management in East Africa promote cooperative resource utilization. Engaging with these frameworks can open avenues for regional partnerships and shared resource management strategies	I. **Regulatory Compliance Challenges:** The Water Resources Regulations impose specific requirements, such as obtaining authorization for activities like artificial groundwater recharge. Non-compliance can lead to legal repercussions, underscoring the need for RCGW to navigate these regulations diligently. II. **Evolving Legal Landscape:** Recent legislative changes, such as the Water Act (Services)(Revocation) Regulations, 2025, indicate a dynamic legal environment. RCGW must stay abreast of such developments to ensure ongoing compliance and adapt its strategies accordingly. III. **Institutional Coordination Complexities:** The Water Act 2016 delineates roles among various institutions, including county governments. Misalignments or overlaps in these roles can pose challenges for RCGW, necessitating effective coordination mechanisms. IV. **Regional Legal Variations:** Differences in groundwater management laws across East African countries can complicate regional initiatives. RCGW must navigate these disparities to implement cross-border strategies effectively.

1.11.1.2 Micro- Environment

Suppliers: Dependable suppliers play a pivotal role in maintaining uninterrupted operations. Any disruptions in the supply chain can result in service delivery downtime for the Centre. To align with procurement guidelines and legislation, the Centre actively engages in negotiations with suppliers to secure favorable terms. This approach aims to drive cost reduction while upholding the quality of services provided.

The general public: The organization has a duty to be a good corporate citizen. Any actions the company takes must be considered from the angle of the general public and how they are affected. The public has the power to help the organization reach its goals; just as they can also prevent the organization from achieving them. The opinion of the public can play a key part in the success of any marketing efforts.

Labour Market: A skilled and knowledgeable workforce is a cornerstone of efficient water organization operations, especially for critical tasks such as water treatment, distribution, and research. The Centre places a strong emphasis on maintaining a competitive and effective recruitment process to attract highly skilled professionals. Additionally, the Centre diligently adheres to the guidelines set forth by the Salary and Remuneration Commission to ensure fair compensation for its employees.

1.11.2 Internal Environment

The internal operating environment of the Centre was analyzed including functional analysis of the governance and administrative structure, Valuability, Rarity, Imitability and Organizational support -VRIO analysis of the resources and capabilities as well as value chain analysis of internal business processes to establish areas of weaknesses and strengths moving into the next strategic plan period

1.11.2.1 Governance and Administrative Structures

The Regional Centre on Groundwater Resources Education, Training and Research in Eastern Africa (RCGW) is a state corporation under the Ministry of Water, Sanitation and Irrigation (MoWSI), established under the State Corporations Act (449) through legal notice No 252 of 18th December 2015. The Centre has a board comprising of members from both private and public sectors that provides oversight and strategic direction. The Board is headed by a chairman, appointed by His Excellency, the President. The Board is fully constituted and meets regularly, discharging its mandate through committees.

Table 0-7: Summary of Strengths and Weaknesses in Governance and Administrative Structures

Strengths	Weaknesses
Collaborative partnerships with national and regional institutions	Overstepping of mandate and functions between various governance bodies, causing inefficiencies
Clear organizational hierarchy and defined roles for effective decision-making	Limited decentralization of decision-making authority in certain areas
Strong leadership with expertise in groundwater management and related sectors	Potential gaps in accountability mechanisms, leading to delays in execution
Established legal and regulatory framework guiding operations	Not anchored in an Act of Parliament e.g Water Act

1.11.2.2 Internal Business Processes

The efficiency and effectiveness of internal business processes are critical to the successful implementation of the RCGW 2023–2027 Strategic Plan. This section assesses the core operational systems, workflows, governance structures, and organizational capabilities that drive service delivery and institutional performance. By evaluating how well these processes support strategic objectives—such as research, data management, stakeholder engagement, and policy implementation, RCGW can identify areas for improvement, innovation, and alignment with its mandate. Strengthening internal processes will not only enhance operational efficiency but also ensure responsiveness to dynamic stakeholder needs and the evolving groundwater management landscape in Kenya and the region.

Table 0-8: Summary of Strengths and Weaknesses in Internal Business Processes

Strengths	Weaknesses
Well-defined organizational structure supporting functional coordination	Some internal processes remain bureaucratic, slowing down decision-making
Skilled and technically competent staff in core areas of groundwater science	Limited capacity in certain areas such as ICT, communication, and knowledge transfer
▪ Established protocols for data collection and analysis ▪ Research Guidelines Established	Inadequate integration of digital tools and real-time monitoring systems
State-of-the-art Lab equipment and Space to undertake analysis	Lab Accreditation process not complete
	O&M cost being high
Established SOPs for general and key Equipment's	Calibration of some equipment not done.

Modern tools and Equipment for geophysical hydrological and environmental measurements	Limited geophysical methods employed at the Centre. e.g. only due three geophysical methods instead of eight challenges related to technology and specialized personnel
Strong partnerships with government and regional institutions	Weak internal mechanisms for monitoring and evaluating project impact
Partnership with stakeholders such as the partnership with Aarhus University to have external trainers assist in delivering training programs	Inadequate marketing of the offered training programs and implementation of marketing strategy.
Established consultancy guidelines Offers consultancy services	Office in charge of Consultancy services not established/Set up
Mandate aligned with national and regional water policies	Limited innovation in internal processes and slow adoption of best practices
Experience in managing donor-funded projects and technical programs	Overreliance on external funding can constrain long-term planning
Commitment to quality assurance in research and technical reporting	Gaps in documentation, knowledge management, and information sharing.
Staff training and capacity-building programs exist	Inconsistent implementation of performance appraisal and staff motivation

1.11.2.3 Resources and Capabilities

In assessing the resources and capabilities of RCGW, the VRIO framework—Valuability, Rarity, Imitability, and Organizational support— was used to evaluate the competitive advantage the Centre can leverage in achieving its strategic objectives for 2023–2027. This analysis focused on both tangible and intangible assets, including human capital, technological infrastructure, and organizational competencies. By evaluating whether these resources meet the VRIO criteria, RCGW can determine which assets are a source of sustained competitive advantage, which areas require investment or improvement, and how to align its capabilities with strategic goals. Strengthening these resources will be key to enhancing operational efficiency, driving innovation, and ensuring the long-term success of groundwater management initiatives at both national and regional levels.

Table 0-9: VRIO analysis

Resource/Capability	Valuable?	Rare	Imitable?	Competitive Implication
Skilled and Experienced Workforce	Yes	No	No	Temporary competitive advantage
Strong Partnerships with National & Regional Bodies	Yes	Yes	No	Sustained competitive advantage
Established Data Collection and Analysis Systems	Yes	No	Yes	Competitive parity
Research and Technical Expertise in Groundwater	Yes	Yes	No	Sustained competitive advantage
Robust Legal and Regulatory Framework	Yes	No	Yes	Competitive parity
Financial Resources (Donor-Funded Projects)	Yes	No	No	Temporary competitive advantage
Technology Infrastructure (GIS, Monitoring Tools)	Yes	Yes	Yes	Sustained competitive advantage
Reputation and Credibility in the Sector	Yes	Yes	No	Sustained competitive advantage
Collaborative Governance and Administrative Structure	Yes	No	No	Temporary competitive advantage
Training and Capacity-Building Programs	Yes	No	No	Temporary competitive advantage

Summary of VRIO Analysis:

1. Valuable: RCGW possesses several valuable resources such as skilled personnel, strong partnerships, technology infrastructure, and credibility, all of which enable the organization to meet its strategic goals and respond effectively to challenges in groundwater resource management.
2. Rare: Some of RCGW's resources, such as its research infrastructure, water testing technology and technical expertise in groundwater surveys and strong national/regional partnerships, are rare, giving the organization a sustained competitive advantage.
3. Imitable: While many of RCGW's resources are valuable, some (like the workforce, financial resources, and technology) are imitable to a degree. However, certain elements like organizational culture and reputation are harder to imitate.
4. Organizational Support: RCGW has strong organizational support to harness its resources and capabilities, with clear governance structures, policies, and processes in place to leverage these resources effectively.

Competitive Implications:

- Sustained Competitive Advantage: RCGW has several resources, including research expertise, strong regional partnerships, and technology infrastructure, that give it a sustained competitive advantage in the field of groundwater management.
- Temporary Competitive Advantage: Resources like a skilled workforce, donor funding, and collaborative governance structures offer a temporary competitive advantage but may be subject to external factors like talent turnover or changes in funding.

1.11.3 Summary of Strengths and Weaknesses

Table 0-10: Summary of Strengths and Weaknesses

Factor	Strengths	Weaknesses
Governance and Administrative Structures	▪ A fully constituted Board of Directors and effective management ▪ A clear mandate as prescribed in the establishing legal instrument. ▪ Adherence to relevant policies and regulations ▪ Sound internal control procedures & policies	▪ Inadequate institutional policies and regulations ▪ Inadequate Groundwater strategy, guidelines and policies for Managed aquifer Recharge policy.
Internal Business Processes	▪ Effective and documented processes for service delivery ▪ Existence of a marketing strategy ▪ Accessible through digital platforms ▪ Strong collaborations with government agencies and institutions	▪ Reliance on manual business processes ▪ Incomplete accreditation of the laboratory
Resources and Capabilities	▪ Competent team with diverse expertise. ▪ Strong organizational culture / young workforce ▪ Available groundwater research infrastructure (equipment, tools and ICT) ▪ Available performance management tools ▪ Existing collaboration and partnership ▪ Strong research capabilities and knowledge base	▪ Inadequate equipment tools and ICT for business processes ▪ Inadequate financial resources to fully deliver on the mandate. ▪ Limited office space. ▪ Low visibility of the Centre to the public. ▪ Lack of an integrated ICT system ▪ Understaffing

1.11.4 Analysis of Past Performance

A review of the Centre's achievements during implementation of the previous plan period was undertaken. Key achievements, challenges and lessons learnt were identified.

1.11.4.1 Key Achievements

The evaluation examined the progress made toward achieving the set goals and objectives during the term. Significant achievements were identified across various areas, including financial performance, operational efficiency, and employee engagement. Key milestones were successfully met, and several initiatives resulted in positive outcomes. The strategic plan played a vital role in driving these achievements, demonstrating its effectiveness in guiding the Centre's activities.

The 2018-2022 Strategic Plan had four strategic pillars. The key achievements made are as outlined:

1) Training and groundwater outreach

To ensure quality training in groundwater development and management, the Centre achieved the following during the period under review: Training guidelines for professional trainings developed; training on Isotope hydrology and introduction to integrated water availability enhancement approach (iWAVE); National and Regional MAR training sessions geared towards sustainable management of Groundwater; MAR was done in Naivasha Dairy Institute; Nakuru MAR – Kabatini, Bahati and Rongai; Conducted theoretical and practical training on geophysical, hydrological and GIS and remote sensing targeting professionals in groundwater.; Theoretical Virtual training of 100 Groundwater professionals on GIS and Remote sensing and tTEM by USGS; Practical training of 10 groundwater professionals under use of geophysical equipment Syscal; Practical Training of 5 water professionals on the application of ADV; and One-week practical training on application of GIS and Remote sensing in water resources management.

To enhance awareness on groundwater resources, the Centre undertook the following: Groundwater awareness programmes developed; Groundwater management and conservation training materials were prepared and developed; Training and civic education guidelines developed; Conducted Groundwater awareness forums in Ewaso Ng'iro, Athi Basin (coastal region), Lake Victoria North & South Catchment Areas (Kisumu & Homa Bay counties) to promote knowledge on Groundwater Resources Management; Public Awareness forums in coastal, Central and Western region Kenya) in 12 counties.; Participated through presentations and exhibitions in in fifty (50) international, regional and national fora.

2) Research and Consultancy

To generate knowledge on groundwater resources, the Centre achieved the following: Developed one (1) Research Guideline.; Undertook MAR Project in Athi Basin under RRI and performed a groundwater infiltration suitability analysis in the area generating groundwater recharge potential map; Conducted hydrogeological, hydrochemical and hydrological assessment in Athi Basin, Rift Valley basin, Ewaso Ng'iro Basin and Tana Basin; Installation of the GNIP station in Timau, oloitokitok, Mombasa and Kilifi areas; Developed a policy brief for the Kiambu (Kikuyu and Limuru areas) groundwater resources; The Nairobi MAR proposal was successful and attracting funding from GOK; and Donated and Planted 10,000 tree seedlings to enhance watershed management.

To provide consultancy services on management and development of groundwater resources, the following were achieved: Developed capacity for the Centre to offer consultancy services; Establishment and equipment of a specialized lab; Developed consultancy guidelines; Offered consultancy services for the Kiambu County government on the sustainability of groundwater in Kikuyu and Limuru areas.

3) Institutional Capacity

In order to enhance Corporate Governance, the following were achieved: capacity building for members of the board was undertaken; The Centre developed and had its human resource instruments approved; participated in national and regional forums; conducted public awareness forums; and Reviewed policies and guidelines (JDS).

To build Optimal Human Capacity, the following were achieved:

Employed twenty-six 26) staff on Permanent and Pensionable terms of service and 15 staff engaged on contact; Undertook both internal and external trainings for staff -50 staff trained both internal and external trainings; and established a performance management system.

To improve the research infrastructural capacity for the Centre, one (1) deionizer and two (2) ion chromatography machines were installed with their accessories and software.

4) Partnerships and Collaborations

To create synergy towards realization of Centre's mandate, the following were achieved: Signed the MoU and framework with International Centre for Water Security and Sustainable Management (UNESCO-i-WSSM) Korea. This MoU has been implemented, and the outputs include the establishment of the International Centre for water security and sustainable management offices in Kenya, trained 11 groundwater professionals on groundwater investigation and management in Korea, and training on wastewater management for MAR.

1.11.4.2 Challenges

While implementing projects and programmes during the last 5 years, the following challenges were encountered.

1. COVID 19 Pandemic: The implementation of the Center's Strategic Plan (2018–2022) was significantly affected by the COVID-19 pandemic, particularly during the peak period of 2020 to 2021. Public health restrictions, lockdowns, and travel bans disrupted planned training programs, field-based research activities, and regional outreach engagements. Key stakeholder interactions and collaborative initiatives were either postponed or shifted to virtual platforms, which posed technological and logistical challenges, especially for hands-on groundwater training and fieldwork. Additionally, budget reallocation and funding uncertainties during the pandemic period slowed down implementation of some institutional capacity-building initiatives and delayed procurement processes. The pandemic also impacted on staff availability and productivity due to remote working arrangements and health-related concerns.

2. Budgetary Constraints: This was caused by inadequate and delayed allocation of funds from the National treasury and failure to identify Appropriation in Aid (AIA). This led to departments not having enough money to cover their planned expenses potentially leading to difficulties in delivering services or carrying out necessary operations due to financial limitations.
3. Low visibility of the Centre amongst some stakeholders and the general public: Activities, policies, and initiatives of the Centre are not widely known, understood, or acknowledged by key stakeholders and the broader population that lead to decreased support, misinformation and limited accountability.
4. Inadequate technical skills and equipment: The Centre had inadequate infrastructure which restricted the capacity to innovate, conduct research, and execute projects effectively. The gaps in knowledge and skills led to underutilization of resources and improper handling of equipment leading to reduced productivity, innovation & growth constraints and competitive disadvantage.
5. Insufficient Human Resource capacity: The Centre faced understaffing challenges that caused reduced productivity. Out of a staff establishment of 80, only 26 are in-post
6. Conflict and duplication in the implementation of groundwater mandate: The challenge arose in executing the Centre strategic plan that resulted into conflicting strategies, duplicated efforts and competing interests
7. Lengthy process for the approval of collaboration frameworks: MoUs and other agreements that were critical for the Centre in discharging its mandates and achieving results within the planned timelines took a very long time to be signed. This was due to the many offices that were required to review and approve the frameworks.

1.11.4.3 Lessons learnt

During the implementation of the Centre's strategic plan 2018-2022, the key lesson learned was that to deliver on the groundwater research mandate, the Centre requires to acquire the right number of skilled staff, enhance collaborations with similar institutions and enhance sensitization of stakeholders on its services.

1.12 Stakeholder Analysis

Stakeholders are those who have vested interest in the issues and activities of the Centre. Undertaking Stakeholder analysis is imperative for identification and needs assessment. This information is used to assess how the power and interests of those stakeholders and those of the organization should be addressed in a project plan, policy, program, or other action. The following is the outcome of the stakeholder analysis:

Table 0-11: Stakeholder Analysis

S/No.	Stakeholder	Role	Expectations of the Stakeholder	Expectations of the Centre
1.	Ministry of Water Sanitation and Irrigation	▪ Policy formulation, planning, oversight and administration	▪ Implementation of programs and projects to realize the mandate of the Centre.	▪ Financial and technical support
2.	National Treasury	▪ Allocate National Revenue	▪ Prudent management of the resources allocated ▪ Generate Appropriation in Aid	▪ Allocate adequate financial resources ▪ Pursue financial sustainability
3.	Ministry of Education, KEWI Academia and Research Institutions	▪ Undertake research and dissemination of results on various areas ▪ Facilitate innovation, generate new knowledge and technologies. ▪ Undertake training of groundwater professionals and development of programmes on groundwater issues	▪ Capacity development of groundwater experts through internship and attachment ▪ Partnership and collaboration in the development of training programmes and groundwater research.	▪ Opportunities for exchange programs ▪ Collaboration on groundwater research and capacity building ▪ Technical support in the development of groundwater training programmes
4.	Water works development agencies and Water Services Providers	▪ Infrastructural development	▪ Advisory services on development and management of groundwater resources. ▪ Capacity building of staff on groundwater resources research, development and conservation	▪ Fair harnessing and distribution of quality water
5.	Other Water Sector Institutions, Water Resources Authority (WRA), National	▪ Enforce regulations and standards	▪ Advisory services on development and management of groundwater resources	▪ Regulate and protect water resources ▪ Provide consultancy opportunities

	Irrigation Authority (NIA)	▪ Develop and improve infrastructure for national or public schemes; ▪ Funding and mobilization of ▪ resources	▪ Provide information and Research proposals on groundwater resources ▪ Identification and carrying out studies on potential groundwater to be used for irrigation.	▪ Funding of research proposals
6.	County Governments	▪ Deepen devolution through consultation, information sharing, capacity building and coordination in implementation of programs and projects	▪ Information on groundwater aquifers for development and management	▪ Provision of data and information ▪ Provide Access and security to research space.
7.	Development Partners	▪ Provide financial and technical support	▪ Provision of data on groundwater ▪ Preparation of research proposals on groundwater resources	▪ Financial and technical support ▪ ▪
8.	Ministries, Other Government Agencies/Commissions	▪ Drafting of laws ▪ Oversight ▪ Litigation ▪ Interpretation and application of laws ▪ Provide linkage with partners	▪ Compliance with law, court directives and adherence to Government circulars and policies ▪ Make requests on the interpretation and application of laws ▪ Undertake public participation when developing policies and programmes ▪ Prudent utilization of resources	▪ Provide legal and technical advice ▪ Fair and prompt dispensation of justice ▪ Resolution of disputes ▪
9.	Professional Bodies	▪ Register professionals and enforce regulations and standards	▪ Staff Compliance through registration, renewal and continuous professional development	▪ Improved standards of technical expertise and professional management in the sector ▪ Enforce professional ethics

		▪ Train and provide necessary professional guidance ▪ Approve curriculums in training institutions	▪ Uphold professional ethics ▪ Provide opportunities or continuous professional development	▪ Partner in the implementation of Centre's programmes
10.	Media	▪ Information and communication	▪ Sensitize on Centre's mandate and functions ▪ Timely, accurate and reliable information update on Centre activities	▪ Fair and responsible coverage
11.	General Public	▪ Conservation, protection and management of groundwater resources	▪ Access to groundwater information. ▪ Sensitization on groundwater resources ▪ Swift complaint handling and feedback mechanisms ▪ Equitable access to Centre opportunities	▪ Sustainable use of groundwater resources. ▪ Adherent to Centre policies and procedures; provide feedback. ▪ Participate in the development or formulation of Centre's policies
12.	Suppliers	▪ Provision of goods and services	▪ Fair evaluation and award of tenders. ▪ Prompt payments ▪ Swift complaint handling and feedback	▪ Quality products and services ▪ Provision of competitive prices of goods or services ▪

PART 4

Strategic Issues, Goals & Key Result Areas

STRATEGIC ISSUES, GOALS AND KEY RESULT AREAS

Overview

This chapter outlines the strategic issues arising from the situational analysis, strategic goals as well as the key result areas, which provide the Centre's aspirations over the medium term (2023-2027). The Plan has four (4) Key Results Areas (KRAs) which are in line with the Centre's vision and mission statement.

1.13 Strategic Issues

An analysis of previous performance, the challenges, lessons learnt, emerging issues, SWOT and PESTEL generated the following strategic issues that the Centre will focus on during the 2023-2027 planning period to achieve its strategic objectives.

a) Information and knowledge on groundwater
- Research capacity: The Centre undertook some research during the previous plan period; however, the geographical coverage was inadequate due to a number of reasons including limited staff numbers, financial resources and non-accreditation as a research organization.
- Information Dissemination: To ensure use, research findings must be shared in the right format to the right audience at the right time. The number of relevant stakeholders reached with information on ground water was still low. Specifically, policy makers since no policy briefs emanating from research findings, were prepared and shared with the relevant ministries, Departments and Agencies (MDAs)

b) Financial Sustainability
- Reliance on Donor Funding: RCGW's financial structure has historically been dependent on donor funding and the exchequer for many of its projects and programs. While this has provided initial support, donor and government funding can be unpredictable and contingent on donor and government priorities, which may change over time. The unpredictability of this funding exposes RCGW to financial instability and limits its capacity to engage in long-term strategic planning.
- Limited Internal Revenue Generation: RCGW lacks robust mechanisms for generating internal revenue, such as fee-for-service models or partnerships that bring in consistent funding. This reliance on external funding sources limits its autonomy and financial independence.

c) Attraction and Retention of Key Technical Staff
- Competitive Job Market: RCGW faces intense competition for skilled technical staff, especially in niche fields like hydrogeology, environmental engineering, and water resources management. The private sector and international organizations often offer more attractive compensation packages.
- High Turnover: Retaining skilled professionals is a persistent issue due to the allure of better-paying positions or career advancement opportunities elsewhere, often in the private sector or international organizations.

d) Legal Status of RCGW
   - Lack of Formal Legal Recognition: RCGW has been established through a legal notice and is not explicitly anchored within the Water Act 2016. This creates uncertainties regarding its formal status, role, and mandate within the broader institutional framework governing water resources management in Kenya.

e) Leveraging Technology and Data Management
   - Technology Gaps: While RCGW has made strides in adopting technology for groundwater monitoring, there are still gaps in terms of advanced data analytics, real-time monitoring, and integration of geographic information systems (GIS) and remote sensing technologies.
   - Data Management Systems: Managing large volumes of water-related data from various sources can be challenging. Without a centralized, efficient data management system, data collection and analysis can be slow and prone to errors, impacting decision-making.

f) Overstepping of Mandate by Other Government Agencies
   - There have been instances where there has been an overstepping of mandate by other public entities leading to inefficiencies, duplication of efforts, and conflicting priorities.

g) Scope of Operations (National vs. Regional)
   - In the conceptualization of the Center, it had a mandate to serve the entire East African region. However, the institutionalization process that was required to exercise this mandate in the region was not completed. The legal notice

h) Partnerships
   - Although RCGW has some collaborative initiatives, there is significant untapped potential for partnerships with devolved governments, international agencies, academic institutions, and the private sector.

i) Advocacy and Marketing
   - Low Advocacy Efforts: RCGW's advocacy efforts are relatively low, limiting its ability to influence policy, garner support for groundwater conservation, and engage the public, attain visibility and recognition that will lead to increased consumption of its services and products.

1.14 Strategic Goals

In addressing the strategic issues identified, the Centre seeks to achieve the following strategic goals:

1) Enhance generation and use of scientific information for sustainable management and development of groundwater resources
2) Enhance knowledge and expertise on groundwater resources
3) Enhance long term organization sustainability by securing and managing diverse resources effectively
4) Enhance strategic partnership and shared resource utilization
5) To strengthen organizational structures, systems, and human resource capabilities to enhance operational efficiency

1.15 Key Results Areas

The Centre will pursue excellence in the following key result areas towards achieving its Vision and Mission:

KRA 1: Research & Development and Knowledge Management

The Centre seeks to improve Groundwater Assessment and Mapping towards groundwater availability by conducting comprehensive groundwater research and development; adopting and applying new technologies and innovations in groundwater research approaches; review and dissemination of research findings; and promoting generation, storage, retrieval, sharing and use of information on ground water management including indigenous knowledge. Emphasis will also be laid on ensuring sustainability of aquifers through water quality and vulnerability assessment and installation of recharge systems.

KRA 2: Capacity Building on Groundwater Management

During the plan period, the Centre will seek to promote civic education on groundwater resources; promote research on groundwater, enhance professional capacity on groundwater mapping, development and management; develop public awareness programs; Undertake capacity building programmes focusing on the professionals within the water sector; and enhancing community participation in ground water management.

KRA 3: Partnership and Resource Mobilization

The Centre seeks to enhance collaboration and linkages towards realization of Centre's mandate by seeking new partnership and sustaining existing partnerships and collaborations; Mobilize financial resources for the Centre through donor diversification and provide consultancy services on management and development of groundwater resources to improve financial sustainability.

KRA 4: Institutional Capacity Development

During the plan period the Centre will seek to strengthen human resource capacity and improve on productivity through planning and compliance, staff recruitment and training to enhance staff performance; enhance corporate governance through leadership development, policy formulation and review; strengthen institutional ICT capacity; improve strategic communication capability and enhance brand visibility and reputation management; enhance prudent utilization of resources, strengthen the procurement and supply chain role, enhance resource mobilization and enhance internal controls and risk management.

Table 4 1: Strategic Issues, Goals and KRAs

Strategic Issues	Goal	KRAs
Information and knowledge on Groundwater	Enhance generation and use of scientific information for sustainable management and development of groundwater resources	Ground Water Research & development and Management
Ground water capacity and awareness	Enhanced capacity for groundwater development	Capacity Building on Groundwater Management
Financial Sustainability	Enhance long term organization sustainability by securing and managing diverse resources effectively	Partnership and Resource Mobilization
Institutional Capacity	To strengthen organizational structures, systems, and human resource capabilities to enhance operational efficiency	Institutional Capacity Development

PART 5

Strategic Objectives & Strategies

STRATEGIC OBJECTIVES AND STRATEGIES

Overview

This chapter outlines the strategic objectives derived from the strategic goals, which provide the Centre's aspirations over the medium term (2023-2027). The formulation of strategic objectives and strategies is informed by the Centre's mandate, Vision, Mission, situational analysis, emerging issues, challenges and lessons learnt from the previous strategic planning period.

1.16 Strategic Objectives

During the 2023-2027 strategic plan period, the Centre will seek to:

1. Increase geographical coverage of groundwater occurrence and assessment
2. Enhance sustainability of the aquifer systems
3. Increase access to information on groundwater
4. To enhance knowledge, skills and professional competencies in groundwater exploration, development and management
5. Enhance community participation in groundwater resources management initiatives.
6. Enhance strategic partnerships and networks to drive a 50% year-on-year growth in revenue (A-in-A).
7. Enhance institutional effectiveness by strengthening governance frameworks, upgrading operational systems, and building staff competencies.

Table 0-1: Outcomes Annual Projections

KRA 1: Ground Water Research & development and Management							
			Projections				
Strategic Objective	Outcome	Outcome Indicator	Year 1	Year 2	Year 3	Year 4	Year 5
Increase geographical coverage of groundwater assessment	Increased coverage of groundwater assessment	Area of aquifer(s) delineated (KM2)	15,000	15,000	15,000	15,000	16,300
Enhance sustainability of the aquifer systems	Enhanced sustainability of the aquifer systems	No of groundwater quality Reports	-	1	1	1	1
		No of Artificial Groundwater Recharge/MAR infrastructures installed	-	-	-	2	2
		No of groundwater vulnerability assessment reports	-	-	1	1	1
Increase access to information on groundwater	Increased access to information on groundwater	No of publications on groundwater	-	-	-	1	6

KRA 2: Capacity Building on Groundwater management							
Strategic Objective	Outcome	Outcome Indicator	Year 1	Strategic Objective	Outcome	Outcome Indicator	Year 1
To enhance knowledge, skills and professional competencies in groundwater exploration, development and management	Increased groundwater skills and awareness	No. of water practitioners trained	-	-	50	-	50
		No. of public awareness for a held	4	4	4	4	4
Collaboration with relevant research and training institutions to roll out long term training	MSc. Programme rolled out	No. of MSc candidates enrolled					2
	PhD. Programme rolled out	No. of PhD candidates enrolled					1
To enhance community participation in groundwater resources management initiatives	Increased community participation in ground water management	No of community led initiatives promoting GW Sustainability	4	4	4	4	4

KRA 3: Partnership and Resource Mobilization							
Strategic Objective	Outcome	Outcome Indicator	Year 1	Strategic Objective	Outcome	Outcome Indicator	Year 1
Enhance strategic partnerships and networks to drive a 50% year-on-year growth in revenue (A-in-A)	Increased Revenue	Amount of revenue generated (A-in-A) (Kshs Millions)	-	0.4	61.5	11.5	34.5
	Increased strategic partnerships	No of new partnerships	-	-	2	2	2
	Increased Brand awareness	Brand awareness Index (%)	-	-	-	45	60
KRA 4: Institutional Capacity Development							
Enhance institutional effectiveness by strengthening governance frameworks, upgrading operational systems, and building staff competencies	Improved governance	governance score (%)	96	96.5	97	98.9	100
	Improved employee satisfaction	employee satisfaction rate (%)	60	63	66	69	72
	Improved service delivery	% level of customer satisfaction	65	72	80	83	87
	Increased automation of services	Proportion services of automated	40	50	55	60	65

1.17 Strategic Choices

Table 0-2: Strategic Objectives and Strategies

KRA 1	Strategic Objectives	Strategies
R&D and Knowledge management	▪ To increase geographical coverage of groundwater occurrence and distribution assessment.	▪ Accelerate the spatial extent of the assessed groundwater potential zones
		▪ Strengthen groundwater research infrastructures and technologies
	▪ To enhance sustainability of the aquifer systems	▪ Strengthen evaluation of pollution risk and vulnerabilities for strategic aquifer systems.
		▪ Enhance groundwater replenishment
		▪ Enhance adaptation to climate change.
	▪ Increase access to information on groundwater	▪ To strengthen knowledge sharing mechanism

KRA 2	Strategic Objective	Strategies
Capacity building	▪ To enhance knowledge, skills and professional competencies in groundwater exploration, development and management.	▪ Strengthen the capacity building function (*Modules/online, capacity building programmes, Training plans, Review of training guidelines*)
	▪ Collaboration with relevant research and training institutions to offer training	▪ Collaboration in master's programmes ▪ Collaboration in PhD programmes
	▪ To enhance community participation in groundwater resources management initiatives	▪ Strengthen community awareness and advocacy on ground water management
		▪ Promote peer to peer community learning

KRA 3	Objective	Strategies
Resource Mobilization and Partnerships	Enhance strategic partnerships and networks to drive a 50% year-on-year growth in revenue (A-in-A)	▪ Increase the number of revenue streams (Training, Lab Services, Research services, Funded proposals)
		▪ Promote creation of new strategic partnership and constructive engagement with existing partners
		▪ Strengthen marketing function

KRA 4	Objective	Strategies
Institutional Capacity Development	Enhance institutional effectiveness by strengthening governance frameworks, upgrading operational systems, and building staff competencies.	• Enhance organization structures and systems • Strengthen the capacity of the Board
		• Enhance performance management • Enhance staff skills and competencies • Enhance Staff welfare
		• Strengthen institutional ICT infrastructure and systems

PART 6

Implementation & Coordination Framework

IMPLEMENTATION AND COORDINATION FRAMEWORK

Overview

This chapter presents the implementation and coordination framework to support the achievement of the strategic objectives set out in the strategic plan. The framework clearly defines the implementation plan, organizational structure, skills and competencies required for effective implementation of the Plan. In addition, a brief description of leadership, systems and procedures that will be needed to supported the implementation of the strategic plan has been provided. An analysis of anticipated risks and suggested mitigation measures have also been outlined to ensure that the planned results are achieved.

1.18 Implementation Plan

The Centre will implement the Strategic Plan through the development of an action plan. The action plan gives the strategic objectives of each Key Result Area with well-defined annual targets, annual budgets and responsibility for execution of the activities.

1.18.1 Action Plan

In order to facilitate the implementation of the strategic plan, the Centre has developed the implementation plan which contains strategic issues, strategic goals, Key Result Areas, Outcomes, Strategic Objectives, Strategies, key activities, expected outputs, output indicators, annual targets, annual budgets, and responsibility for execution of the activities. The implementation matrix is as outlined in Table 6.1

Table 0-1: Implementation Matrix

Strategy	Key Activities	Expected Output	Output Indicators	Target for 5 years	Target					Budget Allocation (Kshs Millions)					Responsibility	
					Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4	Y5	Lead	Support
Strategic Issue: Information and Knowledge on Groundwater Resources																
Strategic Goal: Enhance generation and use of scientific information for sustainable management and development of groundwater resources																
Key Result Area 1: Groundwater Research & development and Management																
Outcome: Increased geographical coverage of groundwater occurrence and distribution assessment																
Strategic Objective 1: To Increase geographical coverage of groundwater assessment																
Accelerate the spatial extent of the assessed groundwater potential zones	Delineate lateral and vertical aquifer extent	lateral and vertical aquifer extent delineated	Area of aquifer(s) delineated (KM^2)	78,108	15,000	15,000	16,000	16,000	16,108	18	20	87	88	91	Research and Mapping	Administration, Finance
	Characterize aquifer properties.	Aquifer properties characterized.	No of Aquifers with characterized properties	2	-	1	-	1	-	0	20	0	20	0	Research and Mapping	Administration, Finance
Strengthen groundwater research infrastructures and technologies	Acquisition of new groundwater research technologies	No of new groundwater research technologies acquired	No of research technologies.	4	-	1	1	1	1	0	12	7.5	32	15	Research and Mapping	, Finance, procurement
	Installation of Global Network of Isotopes in	Local Meteoric water lines determined	No. of stations installed	20	4	4	4	4	4	1	1.2	1.4	1.6	1.8	Installation of Global Network of Isotopes in	Local Meteoric water lines determined

	precipitation (GNIP)														precipitation (GNIP)	
	Laboratory accreditation	Laboratory accredited	Accredited Laboratory	1	-	-	-	1	-	0	0	0	5	0	Research and Mapping	Administration, Finance
Strategic Issue: Information and Knowledge on Groundwater Resources																
Strategic Goal: Enhance generation and use of scientific information for sustainable management and development of groundwater resources																
Key Result Area 1: Groundwater Research & development and Management																
Outcome: Increased geographical coverage of groundwater occurrence and distribution assessment																
Strategic Objective 1: To Increase geographical coverage of groundwater assessment																
Strengthen evaluation of pollution risk and vulnerabilities for strategic aquifer systems	Determine groundwater quality in the strategic aquifers	groundwater quality in the strategic aquifers determined	No of reports	4	-	1	1	1	1	0	1.5	1.5	1.5	1.5	DR&M	Finance, Procurement
	Determine vulnerabilities of groundwater pollution in strategic aquifers	vulnerabilities of groundwater pollution in strategic aquifers determined	No. of Reports	3	-	-	1	1	1	0	0	20	20	20	DR&M	Finance, Administration
	Installation of Artificial Groundwater Recharge/MAR infrastructure	Artificial Groundwater Recharge/MAR infrastructures installed	No of Artificial Groundwater Recharge/MAR infrastructures installed	4	-	-	-	2	2	0	0	0	120	120	DR&M	

	Conduct Monitoring of the effects of hydrological processes to groundwater quality and quantity	Monitoring of effects of hydrological processes to groundwater quality and quantity conducted	No. of Monitoring systems installed	3	-	-	1	1	1	0	0	4.5	3.5	3.5	DR&M	Finance, Administration, procurement
			No. of Monitoring reports	3	-	-	1	1	1	-	-					
Enhance groundwater replenishment	Mapping of potential groundwater recharge zones in strategic aquifers	Potential groundwater recharge zones in strategic aquifers mapped	No. of strategic aquifers with Potential Ground water recharge Zones mapped	3	-	1	1	1	-	0	2.5	20	20	0	DR&M	Finance, Administration
	Identify and develop suitable groundwater recharge technologies in the vulnerable aquifers	Identify and develop suitable groundwater recharge technologies in the vulnerable aquifers developed	No of suitable groundwater recharge technologies developed	3	-	1	1	1	-	0	25	50	50	0	DR&M	Finance, Administration, procurement
	Identify and Implement appropriate Nature	Nature Based solutions implemented	No of Nature Based Solutions	2	-	-	1	-	1	0	0	4.5	0	10	DR&M	Finance, Administration, procurement

	Based solutions		implemented													
Enhance adaptation to climate change	Conduct assessment of effects of climate change variabilities on groundwater	Assessment of effects of climate change variabilities on groundwater conducted	No of assessment Reports	1	-	-	-	-	1	0	0	0	0	7.5	DR&M	Finance, Administration
	Develop and implement Climate change adaptation initiatives	Climate change adaptation initiatives implemented	No of Climate change adaptation initiatives implemented	1	-	-	-	-	1	0	0	0	0	12	DR&M	Finance, Administration, procurement
Strategic Issue: Information and Knowledge on Groundwater Resources																
Strategic Goal: Enhance generation and use of scientific information for sustainable management and development of groundwater resources																
Key Result Area 1: Groundwater Research & development and Management																
Outcome: Increased geographical coverage of groundwater occurrence and distribution assessment																
Strategic Objective 1: To Increase geographical coverage of groundwater assessment																
Strengthen knowledge sharing mechanism	Develop a knowledge management policy	Knowledge management Policy developed	Approved Policy document	1	-	-	-	-	1	0	0	0	0	3.5	CEO.	Research and Mapping; Training and Capacity Building

	Establish and maintain groundwater data management system	groundwater data management system developed	Functional groundwater data management system	1	-	-	-	-	1	0	0	0	0	5	DR&M	Finance, Administration, ICT, Training and Capacity Building, Procurement
	Publish scientific research findings	Scientific research findings published	No of publications	7	-	-	-	1	6	0	0	0	0.5	1	RDR&M	Finance, Training and Capacity Building and Communication.
	Participate in Local, National and international fora	Local, National and international fora attended or organized	No of fora	30	6	6	6	6	6	9	9	9	9	9	DR&M	Finance, Admin, ICT, Training and Capacity Building
	Re-invigorate and optimize social media platforms	social media platforms re-invigorated and optimized	No. of active social media platforms	4	-	-	-	-	4	0	0	0	0	5	Communications	Research and Mapping; Training and Capacity Building
Strategic Issue: Limited Skills and awareness on Ground water management																
Strategic Goal: Enhanced capacity for groundwater development																
Key Result Area 2: Capacity Building on Groundwater Management																
Outcome: Enhanced professional capacity on groundwater resources development and management																
Strategic Objective 1: To enhance knowledge, skills and professional competencies in groundwater exploration, development and management																

Strengthen the capacity building function	Develop Comprehensive Capacity Building Programmes	Capacity Building Programmes Developed	Capacity Building Programmes	2	-	1	-	1	-	0	0	0	4	0	ADCB	ALL
	Develop and roll out Modular Short Courses	Modular Short Courses rolled out	No of Modular Short Courses	4	-	1	1	1	1	4	1	1	1	3	ADCB	ALL
			No of trainees	300	20	65	70	70	75	1.5	3	3.5	3.5	4	ADCB	ALL
	Collaboration with relevant research and training institutions to offer training	Short courses	No. of short courses	74	7	33	4	15	15	1.8	4.4	0.5	0.5		ADCB	ALL
		Msc. Programme rolled out	No. of MSc candidate enrolled	4		2	1		1		7.5	10	9.3		ADCB	ALL
		PhD. Programme rolled out	No. of PhD candidate enrolled	1				1			3	3	3		ADCB	ALL
	Host Technical Seminars	Technical Seminars hosted	No of Technical Seminars hosted	3	-	1	-	1	-	1	5	0	5	5	ADCB	ALL

	Develop a concept note for the establishment of East African Community Groundwater Management Institute (EAC GMI)	Concept note for the establishment of East African Community Groundwater Management Institute (EAC GMI) developed	Approved concept-note for the establishment f East African Community Groundwater Management Institute (EAC GMI)	1	-	-	-	-	1	0	0	0	0	2.5	ADCB	ALL
Strategic Issue: Limited Skills and awareness on Ground water management																
Strategic Goal: Enhanced capacity for groundwater development																
Key Result Area 2: Capacity Building on Groundwater Management																
Outcome: Enhanced professional capacity on groundwater resources development and management																
Strategic Objective 1: To enhance knowledge, skills and professional competencies in groundwater exploration, development and management																
Strengthen community awareness and advocacy on ground water management	Undertake capacity and training needs assessment for the community	capacity and training needs assessment for the community Undertaken	No of capacity and training needs assessments reports	2	1	-	1	-	-	0	0.5	0	0.5	0	ADCB	ALL
	Develop and implement engagement programs with local communities	Community engagement program developed and implemented	No of Community engagement programs	2	1	-	1	-	-	0	4.5	0	4.5	0	ADCB	ALL
			No of advocacy	20	4	4	4	4	4	6	6	6	6	6	Capacity Building	ALL

			and public awareness fora													
Promote peer to peer community learning	Identify community led best practices on groundwater management	community led best practices on groundwater management identified	No of community led best practices on groundwater management	10	2	2	2	2	2	1	1	1	1	1	ADCB	ALL
	Develop a peer-to-peer community learning plan	Community peer-to-peer learning plan developed	Operational community peer-to-peer learning plan	5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	ADCB	ALL
	Coordinate community exchange visits on ground	community exchange visits on ground water management facilitated	No of community exchange visits facilitated	2	-	-	-	1	1	0	0	0	2	2	ADCB	ALL
Strategic Issue: Financial Sustainability																
Strategic Goal: Enhance long term organization sustainability by securing and managing diverse resources effectively																
Key Result Area 3: Partnership and resource mobilization																
Outcome: Increased Revenue																
Strategic Objective 1: Enhance strategic partnerships and networks to drive a 50% year-on-year growth in revenue (A-in-A)																
Increase the number	Review the resource	Resource mobilization	Approved resource	2	-	-	2			0	0	7.5	0	0	DD-RM	RMO

of revenue streams (Training, Lab Services, Research services, Funded proposals)	mobilization strategy	strategy reviewed	mobilization strategy													
	Undertake consultancy services on groundwater Assessment	consultancy services undertaken	No of consultancy services	5	1	1	1	1	1	2	2	2	2	2	DD-CPD	DCB/R
	Provide Laboratory, equipment hiring and data services	Services offered	No of times equipment are hired	10	2	2	2	2	2	0	0	0	0	0	DD-RM	DR
			No of Laboratory tests done	1,450	100	100	300	450	500	0.1	0.1	0.2	0.3	0.4	DR	
			No of data sets sold	5	1	1	1	1	1	0	0	0	0	0	DR	ICT
	Development of bankable funding Proposals	Funding proposals Developed	No of funding Proposals Developed	8	1	1	2	2	2	2.5	2.5	7	7	7	DD-RM	RMO

Strategic Issue: Financial Sustainability																	
Strategic Goal: Enhance long term organization sustainability by securing and managing diverse resources effectively																	
Key Result Area 3: Partnership and resource mobilization																	
Outcome: Increased Revenue																	
Strategic Objective 1: Enhance strategic partnerships and networks to drive a 50% year-on-year growth in revenue (A-in-A)																	
Promote creation of new strategic partnership and constructive engagement with existing partners	Develop Strategic Partnership Frameworks	Strategic Partnership Frameworks developed	No. of Strategic Partnership Frameworks	6	-	-	2	2	2	0	0	7	15	7	DD-CPD	RMO
	Operationalize strategic partnership frameworks	strategic partnership frameworks operationalized	No of strategic partnership frameworks operationalized	6	-	-	2	2	2	0	0	6	6	7	DD-CPD	DR/DC
	Review Existing strategic partnership frameworks	Existing strategic partnership frameworks	No of strategic partnership frameworks reviewed	4	-	-	-	2	2	0	0	0	7.5	8	DD-CPD	RMO
Strategic Issue: Financial Sustainability																	
Strategic Goal: Enhance long term organization sustainability by securing and managing diverse resources effectively																	
Key Result Area 3: Partnership and resource mobilization																	
Outcome: Increased Revenue																	
Strategic Objective 1: Enhance strategic partnerships and networks to drive a 50% year-on-year growth in revenue (A-in-A)																	
Strengthen marketing function	Develop a Marketing and	Marketing and Communication	Communication Strategy document	2	-	1	-	1	-	0	3	0	7.5	0	DD-Corporate Services	ADMIN

	Communication Strategy	Strategy developed														
			Marketing Strategy	1	-	-	-	-	-	1	-	-	7	-	DD-Corporate Services	ADMIN
	Run targeted media Campaigns	Media campaigns	No of Run digital ad campaigns (Google Ads, sponsored posts)	24	-	-	-	12	12	0	0	0	0.2	0.2	DD-Corporate	ICT
			No of documentaries	2	-	-	-	1		0	0	6		6	DD-Corporate	ICT
			No of Media Engagement sessions	4	-	-	-	2	2	0	0	0.5	0.8	1	DD-Corporate	ICT
	Conduct stakeholder feedback surveys	stakeholder feedback surveys conducted	No of feedback survey reports	1	-	-	-	1	-	0	0	0	0.5	0	DD-Corporate	ICT
Strategic Issue: Institutional Capacity																
Strategic Goal: To Strengthen organizational structures, systems, and human resource capabilities to enhance operational efficiency																
Key Result Area 4: Institutional Capacity Development																
Outcome: Improved service delivery and productivity																
Strategic Objective 1: Enhance institutional effectiveness by strengthening governance frameworks, upgrading operational systems, and building staff competencies																
Enhance organization structures and systems	Review/ develop institutional policies, guidelines and procedures	Institutional policies and procedures developed or reviewed	No. of policies developed	10	5	-	2	2	1	15	0	12	12	5	CEO	ALL
			No. of policies reviewed	4	-	-	4	-	-	0	0	13	0	0	CEO	ALL
		Standard Operating Procedures for all	Proportion of processes with Standard	100	20	40	60	80	100	0	0	1	2	2.5	CEO	ALL

		processes developed	Operating Procedures (%)														
		Guidelines reviewed	No of guidelines reviewed	4	-	-	-	4	-	0	0	10	0	0	CEO	ALL
Strengthen the capacity of the Board	Conduct a governance audit	governance audit conducted	No. of governance audit reports	5	1	1	1	1	1	0	0	0	0	0	CEO	ALL
	Undertake annual trainings for the Board	annual trainings for the Board undertaken	No of Trainings	5	1	1	1	1	1	7.5	7.5	7.5	7.5	7.5	CEO	ALL ALL ALL
	Undertake a training need analysis for the Board	Board training need assessment undertaken	No of Board training need assessment reports	5	1	1	1	1	1	1	1	1	1	1		ALL
Strategic Issue: Institutional Capacity																	
Strategic Goal: To Strengthen organizational structures, systems, and human resource capabilities to enhance operational efficiency																	
Key Result Area 4: Institutional Capacity Development																	
Outcome: Improved service delivery and productivity																	
Strategic Objective 1: Enhance institutional effectiveness by strengthening governance frameworks, upgrading operational systems, and building staff competencies																	
Enhance performance management	Develop performance management framework	Performance management framework developed	Operational Performance management framework	1	-	-	1	-	-	0	0	7.5	0	0	DD-CS	ICT

	Conduct regular performance appraisals	Regular performance appraisals conducted	No. of performance appraisal reports	5	1	1	1	1	1	1.5	1.5	1.5	1.5	1.5	DD-CS	ALL
	Develop institutional capacity Development Plans (IDPs) based on appraisal results	Institutional capacity Development Plans (IDPs) developed	No of Institutional capacity Development Plans (IDPs)	5	1	1	1	1	1	1	1	1	1	1	DD-CS	ALL
Enhance staff skills	Training of staff	Staff Trained	No of staff trained	50	10	10	10	10	10	5	5	5	5	5	DD-CS	ALL
Enhance Staff welfare	Sensitize and enroll staff into a mortgage scheme	staff mortgage scheme	staff mortgage scheme	1	0	0	0	1	0	0	0	0	0.5	0	DD-CS	ALL
	Sensitize and enroll staff into a Car Loan Scheme	staff Car Loan Scheme	staff Car Loan Scheme	1	0	0	0	1	0	0	0	0	0.5	0	DD-CS	ALL
	Conduct regular safety audits and risk assessments	regular safety audits and risk assessments conducted	No of safety audits and risk assessments reports	4	0	0	1	2	1	0	0	1	1.2	1	DD-CS	ALL
	Establish Work Injury Benefits Scheme (WIBA)	Work Injury Benefits Scheme (WIBA)	Operational Injury Benefits Scheme (WIBA)	3	0	0	1	1	1	0	0	5	6	7	DD-CS	ALL
	Undertake staff team building	staff team building undertaken	No of staff team building events held	3	0	0	1	1	1	0	0	3.5	3.5	3.5	DD-CS	ALL
Strategic Issue: Institutional Capacity																	
Strategic Goal: To Strengthen organizational structures, systems, and human resource capabilities to enhance operational efficiency																	

Key Result Area 4: Institutional Capacity Development																	
Outcome: Improved service delivery and productivity																	
Strategic Objective: Enhance institutional effectiveness by strengthening governance frameworks, upgrading operational systems, and building staff competencies																	
Strengthen institutional ICT infrastructure and systems	Develop ICT strategy	ICT Strategy developed	Approved ICT Strategy	1	-	-	1	-	-	0	0	3.5	0	0	ICT	ALL
	Acquire and operationalize an integrated ERP system	An integrated ERP system developed	Functional integrated ERP system	1	-	-	1	-	-	-	-	24	-	-	ICT	ALL
	Develop a Local network	Local network developed	Functional Local network	1	-	-	1	-	-	0	0	24	0	0	ICT	ALL

1.18.2 Annual Workplan and Budget

The Strategic plan targets will be implemented through annual work plans to ensure all the Centre's departments are contributing to the implementation of the Plan and that adequate budgets are allocated to the activities. The Centre will further ensure that each year the annual work plan will be drawn from the corresponding year in the strategic plan implementation matrix.

1.18.3 Performance Contracting

The strategic plan targets will be cascaded through performance contracting system to ensure all staff contribute to the implementation of this strategic plan. The Centre will therefore ensure that all the performance contracting targets are drawn from the strategic plan each year.

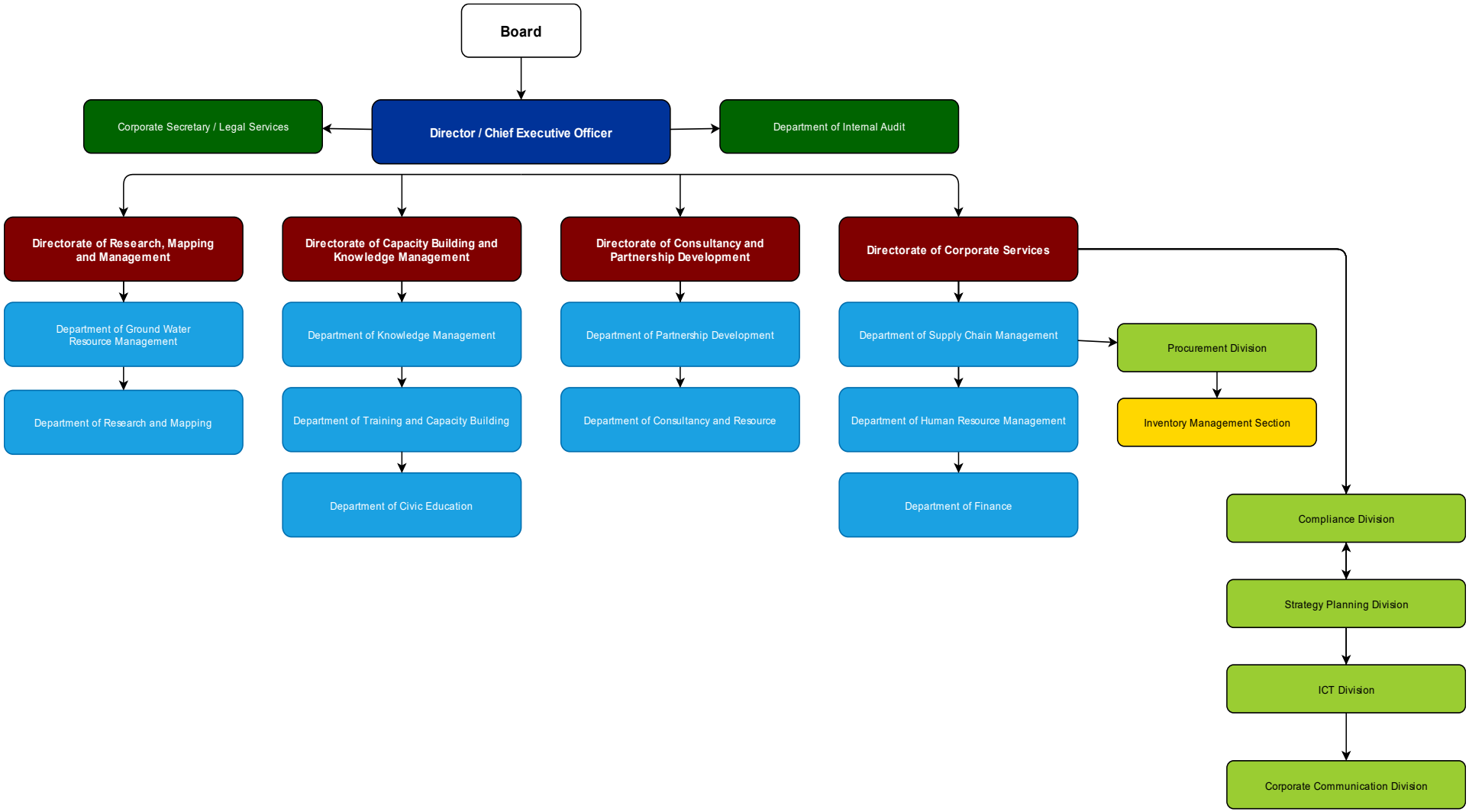
1.19 Coordination Framework

In the implementation of the strategic initiatives, there will be need to have a clear reporting structure, proper coordination among the technical departments and support service departments, synergies between the Centre and its key stakeholders. This section therefore describes how the activities and programs that are key in the implementation of the strategic plan will be coordinated. It entails the institutional framework; staffing levels; skills set and competences; leadership; and systems and procedures.

1.19.1 Institutional Framework

The Plan sets out objectives which require the right structure, skills and competencies to be achieved. The Centre will therefore review the structure to rename the current Directorate of Consultancy and Partnership Development to Directorate of Resource Mobilization and Partnerships and establish departments responsible for marketing of the centre's services, establishment of and maintenance of partnerships and management of consultancies. This will support the realization of financial sustainability of the Centre.

ORGANISATION STRUCTURE FOR REGIONAL CENTRE ON GROUND WATER RESOURCE EDUCATION, TRAINING AND RESEARCH



1.19.2 Staff Establishment, Skills Set and Competence Development-

Implementation of the Plan requires adequate staffing levels in terms of numbers, skills and competencies. An analysis of the Center's staff establishment in relation to the requirements of the strategic plan was undertaken and the optimal number of staff required established and summarized in table 6.2. Additionally, the Centre requires to add to its establishment four (4) Laboratory Technicians to support the running of the accredited laboratory envisaged in the Plan

Table 0-2: Staff Establishment

DIRECTORATE/DEPARTMENT	APPROVED ESTABLISHMENT (A)	Optimal (B)	IN-POST (C)	VARIANCE (B-C)
OFFICE OF THE CEO	4	4	4	0
DIRECTORATE OF RESEARCH, MAPPING AND MANAGEMENT				
Research and Mapping Department	9	8	4	4
Water Management and Governance Department	4	2	1	1
DIRECTORATE OF CAPACITY BUILDING AND KNOWLEDGE MANAGEMENT				
Training and Capacity Building Department	4	3	2	1

Civic Education Department	4	2	0	2
Knowledge Management Department	5	3	1	2
DIRECTORATE OF CONSULTANCY AND PARTNERSHIP DEVELOPMENT				
Consultancy and Resource Mobilization Department	9	8	3	5
Department of Partnership Development	2	2	0	2
DIRECTORATE OF CORPORATE SERVICES				
Corporate Services	1	1	0	1
Human Resource Management.	3	2	1	1
Administration	12	5	3	5
Corporate Communications	2	1	0	1
Information Communication Technology (ICT)	2	1	1	1
Finance And Accounts	6	5	3	2
Corporation Secretary and Legal Services Department	4	1	0	1
STRATEGY PLANNING, SUPPLY CHAIN AND AUDIT DEPARTMENTS				
Strategy Planning and Compliance Department	5	2	1	1
Supply Chain Management	4	2	1	1
Internal Audit Department	3	1	1	0
Totals	**83**	**53**	**26**	**27**

Table 0-3: Skills Set and Competence Development

Cadre	Skills set	Skills Gap	Competence Development
Geologist	▪ Geological Knowledge and isotope hydrology ▪ Proficiency in geological mapping, fieldwork and report writing. ▪ Proficiency in geological software's such as GIS software and remote sensing techniques ▪ Competence in 3D geological modeling and visualization software. ▪ Ability to use specialized instruments	▪ 3D geological modeling and visualization software. ▪ Groundwater modeling technology ▪ GIS software and remote sensing techniques ▪ Isotope hydrology	▪ Training on geological mapping, geological software's and 3D geological modeling ▪ Training on hydro-geological modeling ▪ Training on specialized geological instruments ▪ Isotope hydrology
Hydrologist	▪ Hydrological Knowledge ▪ Basic knowledge in groundwater modelling software tools such as MODFLOW. ▪ Knowledge of GIS and remote sensing technology in water resources management. ▪ Ability to conduct field surveys, collect samples, and analyze hydrological data ▪ Hydrological Modeling ▪ Analytical and surveying skills ▪ Ability to use specialized hydrological instruments ▪ Basic knowledge of Isotope hydrology	▪ Survey technology ▪ Isotope hydrology	▪ Training on: ▪ Isotope hydrology ▪ Hydrological survey ▪ specialized hydrological instruments
Chemist/ Water quality Officers	▪ Proficiency in laboratory techniques and instruments.	▪ Water quality modeling ▪ Integrated groundwater management	▪ Certification/accreditation by relevant authorities (e.g. KENAS and ISO).

Cadre	Skills set	Skills Gap	Competence Development
	▪ Proficiency in analyzing and monitoring water quality parameters ▪ Water quality modeling ▪ Integrated groundwater management ▪ Proficiency in data analysis		▪ Training on specialized laboratory equipment.
Environmentalist	▪ Mapping ▪ Proficiency in environmental impact analysis. ▪ Proficiency in hydrogeological software's such as GIS software. ▪ Proficiency in collecting, analyzing, and interpreting data ▪ Knowledge of various groundwater remediation techniques. ▪ Specialized instruments	▪ Environmental Impact assessment	▪ Training on remote sensing and hydrological modeling ▪ Data logger and hydro-telemetric station installation and management
Finance and Accounting officers	▪ Financial management ▪ Accounting ▪ Risk management ▪ Financial analysis, budgeting and forecasting ▪ Analytical skills ▪ proficiency in financial and accounting software's ▪ Attention to detail and quality orientation skills;	▪ Budgeting and forecasting ▪ Data analysis and validation ▪ ▪ Financial and accounting softwares	▪ Tax administration ▪ Budgeting
Internal Audit Officers	▪ Auditing ▪ Accounting ▪ Problem Solving ▪ Presentation skills	▪ Project planning, ▪ management ▪ and analysis ▪ Legal audit and	▪ Project planning ▪ management and ▪ analysis course ▪ Negotiation

Cadre	Skills set	Skills Gap	Competence Development
		▪ compliance ▪ Conflict ▪ management ▪ and resolution ▪ course	
Strategy and Planning Officers	▪ Proficiency in data analysis and statistical software's ▪ Strategic planning ▪ Performance management ▪ Proficiency in program planning and management ▪ Strong monitoring and evaluation skills ▪ Strong report writing and presentation skills ▪	▪ Project/program planning and management ▪ Statistical Data analysis	▪ Training on monitoring and evaluation, data analysis and validation ▪ Strategic planning
Human Resource Officers	▪ Good interpersonal, negotiation and leadership skills ▪ Good communication and negotiation skills ▪ Supervisory and management skills ▪ Problem solving skills ▪ Counselling skill ▪ Performance Management	▪ Data Analytics ▪ Compliance and Legal Knowledge	▪ Training ▪ Coaching and mentoring
Administration Officers	▪ Proficiency in public administration ▪ Good interpersonal and leadership skills ▪ Good communication and negotiation skills		▪ Undertake supervisory course ▪ Administration ▪ Skills course ▪ Professional ▪ communication techniques

Cadre	Skills set	Skills Gap	Competence Development
	▪ Supervisory and management skills ▪ Problem solving skills ▪ Counselling skill		
ICT Officers	▪ Computer networking ▪ Programming ▪ Database management	▪ Disaster Recovery & Data Management ▪ ICT Project ▪ management training ▪ Risk Management	▪ Database Management training ▪ Automation Course
Corporate Communication Officers	▪ Public relation and communication skills ▪ Computer skills ▪ Media relations ▪ Marketing ▪ Editing skill	▪ Innovation ▪ Public relation	▪ Crisis and issues communication ▪ Public relation course
Supply chain Officers	▪ Decision making ▪ Cost accounting ▪ Risk management ▪ Inventory management ▪ Contract management and negotiation skills ▪ Problem solving skills	▪ Risk management ▪ Contract ▪ Management	▪ Market analysis ▪ Contract Management ▪ Project Monitoring and Evaluation

6.2.3. Leadership

The Centre has a Board of Directors responsible for providing strategic leadership. The Chief Executive Officer is the accounting officer and will ensure the overall coordination, implementation, monitoring, and evaluation of the Strategic Plan. The Heads of Directorates will be responsible for the day-to-day implementation, monitoring, and evaluation of the plan. Further, the plan will be cascaded to departments and divisions.

6.2.4. Systems and Procedure

Building on our focus on continuous performance improvement, the Centre will adopt appropriate systems, policies, strategies and plans to measure, manage and improve productivity and ultimately entrench a culture of productivity. This will involve interventions on productivity awareness creation, measurement and improvement. Information Communication Technology will also be embraced leading to digitization and automation to keep pace with the changes in the ICT sector The Centre will also enhance its performance management system and build human resource capacity to enhance productivity and performance.

1.20 Risk Management Framework

In order to facilitate the implementation of the strategic plan, the Centre has a risk management framework to help the management identify and address risks associated with the operation of the Centre in the water sector. The risk management framework will help in reducing unplanned outages and emergency responses; safeguarding human health; optimizing asset management, maintenance, and resource allocation; protecting the environment, ensuring continuity of essential services, helping the Centre adapt to challenges like climate change and reducing financial losses from infrastructure failure, legal liabilities, or regulatory penalties.

Table 6 4: Risk Management Framework

S/No	Risk Factor	Risks	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level Mitigation (L/M/H)	Mitigation Measure(s)
1.	Research	Plagiarism	H	H	M	▪ Install anti-plagiarism software ▪ Sensitization of the Researchers
		Relevance of research	L	L	H	▪ Adhere to the provision of the Legal Notice No. 83 of 2015
		Quality of research work	L	L	H	▪ Develop capacity for the Centre and researchers ▪ Develop research policy
		Loss of data	H	M	H	▪ Patent data ▪ Secure research tools and equipment ▪ Back up research work
		Infringement of copyrights	H	M	M	▪ Patent the Centre's ▪ Intellectual property ▪ Commercialize research products ▪ Establish a water sector journal ▪ Develop R&D policy
2.	Training	Failing to achieve high value via transfer of the Knowledge	M	M	M	▪ Develop curricula based on comprehensive Training Needs Assessment ▪ Conduct Training Impact Assessment

S/No	Risk Factor	Risks	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level Mitigation (L/M/H)	Mitigation Measure(s)
		Failure by stakeholders to acknowledge programs offered by the Centre	M	M	M	▪ Ensure programs are accredited by necessary authorities ▪ implement customer service charter ▪ Market programs offered by the Centre ▪ Entrench programs offered by the Centre in the Schemes of Service
		Inadequate infrastructure	H	H	M	▪ Hire or lease of facilities
3.	Human Resource	Labour turnover	H	H	M	▪ Remunerate staff competitively ▪ Have good work environment ▪ Continuously update skills of staff
		Resistance to change	H	H	M	▪ capacity build on change management
		Labor disputes	H	H	H	▪ Have alternative dispute resolution mechanisms and conflict, grievances resolution mechanisms in place
		Health and safety of employees	H	H	H	▪ Customize/Develop and implement workplace health and safety guidelines ▪ Training on health and safety
4.	Integrity	Corruption	H	H	H	▪ Adequate internal and external controls ▪ development of whistle blowing policy ▪ Corruption Mitigation Plan (CRP)

S/No	Risk Factor	Risks	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level Mitigation (L/M/H)	Mitigation Measure(s)
		Insincerity among the staff	H	M	H	▪ Inculcate values, develop organizational culture
		Resources misuse	H	H	H	▪ Instill core values and enforce discipline
5.	Financial	Inadequate finances	H	H	H	▪ Resource mobilization
		Late disbursement	H	H	H	▪ seek alternative funding
		Misappropriation of funds	H	H	H	▪ Sensitize on PFM-A, PPAD-A 2015 and, Leadership and Integrity Act No. 19 of 2012 ▪ Install internal controls
6.	Technological	Outdated technology	H	H	H	▪ Embrace and appraise new technology
		Data Security	H	H	H	▪ Install Antivirus and firewalls Put in place Information ▪ security management systems
7.	Reputation Risks	Loss of credibility	H	H	H	▪ Exercise utmost diligence ▪ Promote professionalism ▪ Promote corporate image of the Centre

S/No	Risk Factor	Risks	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level Mitigation (L/M/H)	Mitigation Measure(s)
8.	Legal and Policy Risks	Contraventions of laws and regulations Change of government policies and priorities	H	H	H	▪ Study and adhere to existing laws and regulations ▪ Adapt to the new policies
9.	Security	Loss of life, equipment, records	H	H	H	▪ Installation of CCTV camera ▪ Install security ▪ Sensitize staff on disaster preparedness ▪ Policy on disaster preparedness and management

PART 7

Resource Requirements & Mobilization Strategies

RESOURCE REQUIREMENTS AND MOBILIZATION STRATEGIES

Overview

This chapter highlights the financial resource requirements, resource gaps, resource mobilization strategies and the resource management strategies for the Strategic Plan period.

1.21 Financial Requirements

Table 7 1: Financial Requirements for Implementing the Strategic Plan Cost Item

Cost Item	Projected Resource Requirements (Ksh. Mn)					
	2023/24	2024/25	2025/26	2026/27	2027/28	Total
KRA 1	28	91.2	205.4	371.1	305.8	1,001.5
KRA 2	15.8	36.4	25.5	40.8	24	142.5
KRA 3	5.6	7.6	36.2	53.8	38.6	141.8
KRA 4	31	16	120.5	41.7	35	244.2
Administrative	69.0	99.0	131.0	150.0	180.0	629
Total	**149.4**	**250.2**	**518.6**	**657.4**	**583.3**	**2159**

Table 7 2: Resource Gaps

Financial Year	Estimated Financial Requirements (KSh. Mn)	Estimated Allocations (KSh. Mn)	Variance (KSh. Mn)
2023/24	149.4	133	16.4
2024/25	250.2	214	36.2
2025/26	518.6	235.4	283.2
2026/27	657.4	258.94	398.46
2027/28	583.3	284.834	298.466
Total	2159	1,126.178	1,032.822
Financial Year	Estimated Financial Requirements (KSh. Mn)	Estimated Allocations (KSh. Mn)	Variance (KSh. Mn)

1.22 Resource Mobilization Strategies

In order to bridge the financing gaps for the smooth implementation of this strategic plan the Centre shall pursue the following resource mobilization strategies.

a) Continue lobbying for increased funding from the Exchequer through MTEF budget sector working groups and Parliamentary committees to increase GoK funding.
b) Map potential partners and develop feasible proposals seeking funding from identified partners to supplement GOK funding.
c) Enhance collaboration and partnership with like-minded organizations to implement common projects and to tap into their expertise as part of capacity building.
d) Establish income generating activities as part of appropriation in aid (AIA) through groundwater services, consultancy and training programs. commercialization of the laboratory

1.23 Resource Management

The Centre is committed to ensuring prudence and frugality in the management of scarce resources. To optimize resource management, the Centre will embrace budgetary control by ensuring strict compliance with the budget provisions. Ensure quarterly, bi- annual and annual monitoring of policies, programs and projects and submission of quarterly Expenditure Budget reports to the Controller of Budget and the National Treasury. In addition, the Centre will adopt and implement an ERP system as part of its automation process as well as to integrate its internal process for better data management, analyses and projections thus enhancing operational efficiency. Further it will deploy its financial resources in conformity with the Public Finance Management Act, 2012 and Public Procurement and Disposal Act, 2015. Further, cost-cutting measures will be implemented in every functional area.

PART 8

Monitoring, Evaluation & Reporting Framework

MONITORING, EVALUATION AND REPORTING FRAMEWORK

Overview

This Chapter describes how the Centre will undertake monitoring, evaluation and reporting of the implementation process of the Strategic Plan 2023-2027. The main objective of the exercise will be to measure progress towards planned outputs and outcomes of strategies in the key results areas. The exercise therefore tracks the implementation of activities in the plan period.

1.24 Monitoring Framework

The Centre will develop a robust framework for monitoring and reporting of the implementation process of the Strategic Plan 2023-2027. The Centre will institutionalize annual performance status report as one of the key deliverables. The monitoring framework defines the frequency and responsibility of the actors in the exercise. Further, the framework provides the key monitoring reports that will be prepared including the users of the reports. This will involve developing standard formats for data collection and reporting to ensure uniformity. The framework also outlines periods to be covered, and details of information to be supplied. The users of the developed reports include both the internal and external stakeholders of the Centre.

The Strategy and Planning Department will be responsible for designing monitoring and evaluation (M&E) tools, data analysis and generation of reports. The Department will also be responsible for coordinating and supervising the collection of data emanating from all the departments. Further, the Department will report the performance of projects and programmes in the Monitoring and Evaluation tools that have been adopted by the Government.

1.25 Performance Standards

The Centre will deploy the following methodologies in undertaking monitoring, evaluation and learning; quantitative and qualitative data collection, analysis, storage and indicator development, results analysis, report writing and dissemination.

1.26 Evaluation Framework

Evaluation of this strategic plan shall be undertaken at mid-term and end-term as guided by M&E Framework. Table 8.1 states the outcome indicators and targets to be evaluated.

Table 0-1: Outcome Performance Matrix

Key Result Area	Outcome	Outcome Indicator	Baseline		Target	
			Value	Year	Mid-Term Period	End-Term Period
Ground Water Research & development and Management	Increased coverage of groundwater assessment	Area of aquifer(s) delineated (KM^2)	10,000	2022/23	45,000	75,000
	Enhanced sustainability of the aquifer systems	No of Artificial Groundwater Recharge/MAR infrastructures installed	-	2022/23	-	4
		No of groundwater quality Reports generated	1	2022/23	2	4
		No of groundwater vulnerability assessment reports	-	2022/23	2	3
	Increased access to information on groundwater	No of publications on groundwater	1	2022/23	-	7
Capacity Building on Groundwater Management	Enhanced knowledge, skills and professional competencies in groundwater exploration, development and management	No. of public awareness fora held	4	2022/23	12	16
		No. of additional water practitioners trained	110	2022/23	50	100
	Enhance community participation in groundwater resources management initiatives	No of community awareness fora held	2	2022/23	12	20

Key Result Area	Outcome	Outcome Indicator	Baseline		Target	
			Value	Year	Mid-Term Period	End-Term Period
Partnership and Resource Mobilization	Increased Revenue	Amount of revenue generated (Kshs Millions)	0.3	2022/23	0.9	4.4
	Increased Brand awareness	Brand awareness Index (%)	No data	2022/23	45	60
	Increased No of Strategic partnership and networks	No of new partnerships	4	2022/23	4	6
Institutional Capacity Development	Improved governance	governance score (%)	92	2022/23	97	100
	Improved employee satisfaction	employee satisfaction index (%)	No data	2022/23	66	72
	Improved service delivery	customer satisfaction Index (%)	No data	2022/23	80	87
	Increased automation of services	Proportion services of automated (%)	35	2022/23	55	65

1.26.1.1 Mid-Term Evaluation

The Centre will undertake Mid-Term Evaluation at the implementation mid-point of the Strategic Plan. It will therefore be undertaken in the mid-year of the financial year 2025/2026. The Centre will assess the achievement of the planned strategic objectives using the pre-selected indicators and targets in Table 8.1 to inform the mid-term evaluation and consequently in making improvements in the strategic plan implementation.

1.26.1.2 End-Term Evaluation

End term evaluation will be conducted at the end of the strategic plan period to determine the extent to which planned objectives were achieved and to assess their overall performance of the Centre. The achievements, challenges, lessons learnt and recommendations will inform the next cycle of strategic planning process at the Centre.

1.27 Reporting Framework and Feedback Mechanism

Reporting will be undertaken by the Strategy and Planning Department in collaboration with all Departments. The reporting framework will involve a systematic and continuous process of collecting and analysing information based on the indicators and targets. The Centre will therefore have the following timelines while undertaking monitoring:

I. Quarterly Monitoring and reporting; This will involve monitoring activities at the end of each quarter in every financial year of the period as outlined in the implementation matrix.
II. Annual Monitoring and Reporting; This will involve tracking the implementation status of activities at the end of each financial year of the Strategic Plan period as outlined in the implementation matrix.
III. End-Term monitoring and Reporting; This will involve tracking the progress of the planned targets and objectives at the end of the plan period.

(Regional Centre on Groundwater Resources Education, Training and Research)

QUATERLY PROGRESS REPORT

QUARTER ENDING…

Table 0-2: Quarterly Progress Reporting Template

Expected output	Output Indicator	Target annual (A)	Quarter for Year….			Cumulative to Date			Remarks	Corrective Intervention
			Target(B)	Actual (C)	Variance (C-B)	Target(D)	Actual (F)	Variance (F-D)		

(Regional Centre on Groundwater Resources Education, Training and Research)

ANNUALPROGRESS REPORT

YEAR ENDING…

Table 0-3: Annual Progress Reporting Templates

Expected output	Output Indicator	Target annual (A)	Achievement for Year….			Cumulative to Date			Expected output	Output Indicator
			Target(B)	Actual (C)	Variance (B-C)	Target (D)	Actual (E)	Variance (E-D)		

Table 0-4: Evaluation Reporting Templates

Key Result Area	Outcome	Outcome Indicator	Baseline		Mid-Term Evaluation		End of Plan Period Evaluation		Remarks	Corrective Intervention
			Value	Year	Target	Achievement	Achievement	Achievement		
KRA 1										
KRA 2										
KRA 3										

P.O. BOX 41156-00100, Bishop Rd, NSSF Building Block A 16th Floor Western-Wing

Website: www.rcgw.go.ke, Email: info@rcgw.go.ke,

Telephone: +254208008004

Regional Centre on Groundwater Resources
Education Training & Research