THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR

MINISTRY OF WATER, ENERGY AND MINERALS

ZANZIBAR WATER AND SANITATION POLICY 2025

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FOREWORD

Water resources are an important enabler for realizing the aspirations of the Zanzibar Development Vision 2050, the primary objective of which is to make Zanzibar achieve upper middle-income status by 2050. Equally important is the fact that the use of water resources in socioeconomic development processes generates a significant amount of wastewater that needs to be properly managed to ensure protection of public health, environmental integrity and enable resource recovery.

Significant progress has been made in the sector, and I am particularly grateful for the visionary leadership of Dr. Hussein Ali Mwinyi, the President of Zanzibar and the Chairman of the Revolutionary Council, for his tireless efforts in ensuring that all citizens get access to safe water. Through such patriotic and steadfast efforts, the President was awarded the Global VIP Water Changemakers Award during the 2023 United Nations Water Conference. The Award is bestowed to national leaders who have demonstrated high-level leadership and commitment in initiating climate-resilient water investments at the country level. I am also grateful to Dr. Jakaya Mrisho Kikwete, the Chair of Global Water Partnership Africa and the former President of the United Republic of Tanzania, for great support in the water sector in Zanzibar.

Despite the tremendous progress, there are inherent operational and institutional challenges that this Policy addresses. These include inadequate water supply services, low infrastructural coverage and development, increased pollution of water sources, uncoordinated water resources planning and development, limited monitoring of our hydrological systems and ineffective stakeholder engagement in the sector. Some of the causes of these challenges are the extant policy gaps and weak enforcement measures.

One of the institutional gaps has been the novice set-up of the water sector, which provided the Zanzibar Water Authority with the sole mandate over water resources management, water supply and regulation. This led to conflicting functions within the same authority and, as a result, ineffective implementation of some mandates.

Sanitation in Zanzibar has not been given the proper attention through a targeted policy and legal framework. Sanitation, water resources, and water supply systems affect and influence each other, and best practice demands that they be best managed under the same policy and legislative framework. Therefore, this Policy addresses this institutional issue and the gaps identified in the 2004 Water Policy while aligning with national development programmes, international initiatives and best practices.

The 2025 Water and Sanitation Policy sets up an enabling environment for ensuring water security in Zanzibar as well as economic and social transformation to achieve Vision 2050. I urge all stakeholders in Zanzibar to unite and support the water and sanitation sector to ensure water security for current and future generations.

Shaib Hassan Kaduara
Minister for Water, Energy and Minerals

ACKNOWLEDGEMENTS

The Ministry of Water, Energy and Minerals would like to thank everyone who participated in the preparation of this important policy. Specifically, we would like to express our sincere gratitude to the United Nations Children's Fund (UNICEF) for its funding, technical assistance, and facilitation in developing the 2025 Water and Sanitation Policy, as well as to the World Bank for its valuable technical support. We extend our appreciation to Global Water Partnership Tanzania for its technical support, particularly in the development of the Zanzibar Water Investment Programme of which the development of this policy is part of its implementation. We also acknowledge all other development partners and research institutions for their continued support in the water and sanitation sector.

The process of developing the Water and Sanitation Policy was inclusive and participatory, in which stakeholders in urban and rural areas of both Pemba and Unguja were engaged. Their contributions made the process a great success. The Ministry is grateful for the unreserved support from the Office of the President through the Presidential Delivery Bureau, the Office of the First Vice President, the Office of the Second Vice President, all sectoral ministries, government institutions, academic and research institutions, the private sector, faith-based organizations and local communities. Special commendation goes to the policy review team for their insight and unwavering commitment to the policy development process.

Our gratitude also extends to all staff in the Ministry of Water, Energy and Minerals, including experts and officials from Zanzibar Utilities and Regulatory Authority as well as Zanzibar Water Authority in Unguja and Pemba. Their significant contributions and invaluable insights enriched the 2025 Zanzibar Water and Sanitation Policy.

Joseph J. Kilangi
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Ministry of Water, Energy and Minerals

ABBREVIATIONS

CSO	Civil Society Organization
DMC	Disaster Management Commission
DP	Development Partner
EAC	East African Community
FBO	Faith-Based Organization
IWRM	Integrated Water Resource Management
MoWEM	Ministry of Water Energy and Minerals
NGOs	Non-Governmental Organizations
NRW	Non-Revenue Water
NTA	National Technical Awards
PPP	Public-Private-Partnership
SADC	Southern African Development Community
SDGs	Sustainable Development Goals
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
WASH	Water Sanitation and Hygiene
WHO	World Health Organization
WTP	Wastewater Treatment Plant
Zan-WIP	Zanzibar Water Investment Programme
ZADEP	Zanzibar Development Plan
ZAWA	Zanzibar Water Authority
ZIP	Zanzibar Investment Policy
ZURA	Zanzibar Utilities Regulatory Authority

DEFINITION OF KEY TERMS

Climate Resilience	The capacity of water systems to anticipate, prepare for, respond to, and recover from climate-related hazards, while ensuring sustainable water management and the protection of water resources under changing climatic conditions.
Coastal Waters	An open body of water along the country's coastline starting from the shoreline and extending outward up to the 200-metre isobaths or three-kilometre distance, whichever is farther.
Desalination	The process by which dissolved mineral salts in water are removed to make the water fresh again. The process mainly involves forcing the salty water through a membrane that has the capacity to filter the dissolved salts through reverse osmosis.
Disaster Preparedness	Actions and measures taken to ensure that communities and water systems are ready to effectively respond to and manage potential disasters.
Karst System	A unique geological landscape formed from the dissolution of soluble rocks such as limestone, dolomite and gypsum, leading to distinctive features like underground water systems, fissures, sinkholes and springs. Karst systems are highly porous but very sensitive to pollution, making their management challenging.
Over-abstraction	Excessive pumping of groundwater leading to seawater intrusion and the abandonment of some boreholes.
Sanitation	The provision of appropriate facilities and services for the safe and sustainable disposal of human urine and faeces as well as wastewater that is generated from human activities.
Sanitation Facilities	Specific installations and systems used for the safe disposal of human waste, including toilets, sewage systems, and other mechanisms that hygienically separate human excrement from human contact, preventing the spread of diseases; essentially, the means to practice proper sanitation.

S**anitation Infrastructure**	The larger system that supports the functioning of individual sanitation facilities. It includes the broader network and systems necessary for the collection, transport, treatment and disposal or reuse of sanitary waste.
Water Resources	Surface water (rivers, lakes, springs and reservoirs), groundwater, rainwater, coastal waters, desalinated sea or brackish water and reclaimed wastewater.

1. INTRODUCTION

1.1. BACKGROUND

Zanzibar is an archipelago, with the main islands being Unguja and Pemba. Unguja has seven districts, and Pemba has four. The primary source of freshwater in Zanzibar is groundwater, with high-yielding aquifers being located in densely populated areas, such as Mjini Magharibi region in Unguja. Balancing anthropogenic activities with water source conservation and protection while sustainably meeting water supply and sanitation needs presents a significant challenge in Zanzibar. This has further been exacerbated by weak institutional frameworks in the water and sanitation sector and a lack of clear policy guidance on sanitation.

These long-standing challenges are integral to the history of Zanzibar's water and sanitation sector, which can be traced back to the 1880s, when some initiatives were undertaken to develop water supply works in what is currently Stone Town. These services were later rolled out in other urban centres in Zanzibar under the supervision of the Public Works Department (PWD) during the colonial regime, as was the management of sanitation in Zanzibar, which started in the 1920s under the jurisdiction of a Public Health Decree, which provided guidance on waste disposal. The Decree was later replaced by the Public and Environmental Health Act No. 11 of 2012 under the Ministry of Health and Social Affairs that provided more elaborate guidance on waste management in Zanzibar, including potential technologies that could be used. Nevertheless, all such legal frameworks operated without a robust, coordinated policy framework as proposed in the present Policy.

During the colonial regime, water supply services were paid for under stipulated guidelines as part of cost recovery. The population was much smaller at the time, and hence, freshwater resources were abundant. After the revolution in 1964, the Revolutionary Government of Zanzibar proclaimed free water services for domestic use. In the mid-1960s, the Revolutionary Government of Zanzibar made a bold move to establish a Ministry responsible for water, but such a Ministry had multiple functions. For example, between 1964 and 1975, water was managed under a section in the Ministry of Works, Roads and Technical Units. Since then, the name and functions of the Ministry responsible for water have continued to change. Between 1984 and 2004, water was managed as a department in the Ministry of Water, Construction, Energy, Lands and Environment, while between

2018 and 2021, water was managed as a department in the Ministry of Lands, Housing, Water and Energy. In 2004, the Ministry of Water, Construction, Energy, Lands and Environment developed the National Water Policy (2004) and further enacted the Water Act No. 4 of (2006) that laid the foundation for the management of water resources and provision of water services.

Since 2021, the water sector has been managed by the Ministry of Water, Energy and Minerals together with the Zanzibar Water Authority (ZAWA). The Water Act of 2006 granted ZAWA usurping mandates in all aspects of water, including regulating itself in service delivery. The Zanzibar Utilities Regulatory Authority (ZURA) was established in 2013 with the mandate to provide regulatory functions over water and energy utilities. However, the 2006 Water Act has not been amended to align with the functions of ZURA, causing an overlap of mandates. In 2024, as part of delivering its mandate, ZURA developed the Water and Sanitation Roadmap that specifies regulations guiding water supply and sanitation services in Zanzibar.

The water per capita, i.e., the quotient obtained after dividing all freshwater resources in a country by its population, has decreased in Zanzibar over time due to increased population. According to the 2022 Population and Housing Census, the population of Zanzibar was 1,889,773, with Unguja accounting for over 70 per cent of the total population. Zanzibar's population growth rate is 3.7 per cent, and the population is expected to double by 2044, leading to lower water per capita and higher demand for water supply and sanitation services. This calls for effective and sound strategies for managing water for current and future generations in Zanzibar. High population densities in unplanned settlements pose challenges for water resources management and service delivery. Over-pumping of groundwater and increased risk of water pollution due to human activities highlight the need for effective water resources management and effective service delivery on both water supply and sanitation fronts to ensure water security in Zanzibar.

The main goal of the 2004 Zanzibar Water Policy and the 2006 Water Act was to ensure access to clean water for all and support economic activities. Despite progress, challenges in service delivery persisted, necessitating reforms in policy and institutional framework. To effect this, in 2021, the Ministry of Water, Energy and Minerals initiated water sector reforms with the publication of the Zanzibar Water Sector Improvement Report. The report identified the following key areas that required reforms:

a) Policy, legal systems and guidelines
b) Institutional structure and governance
c) Development and management of water resources
d) Water quality and demand management
e) Infrastructural development and management
f) Capacity development (human and financial resources)
g) Monitoring and evaluation

In 2022, the Ministry of Water, Energy and Minerals developed the Zanzibar Water Investment Programme (ZanWIP) that provided a coordination framework for all interventions in the water and sanitation sector. The strategic intervention areas

identified during the development of the programme were further structured into programme activities, one of which was the need to review the 2004 Zanzibar Water Policy and its legal framework.

The main focus for reviewing the 2004 Policy was to:

i) Accommodate the envisioned reforms by the Ministry of Water, Energy and Minerals.

ii) Align the visionary framework of the sector with inherent best practices.

iii) Take into account ongoing national, regional and global development processes.

1.2 SCOPE OF THE POLICY

The Policy applies to the Zanzibar archipelago under the jurisdiction of the Revolutionary Government of Zanzibar. It covers the water and sanitation sector in Zanzibar, encompassing freshwater (surface and groundwater) and coastal water resources in the context of conservation and protection of water sources, as well as the allocation and development of water resources. Coastal water resources cover seawater up to a maximum distance of three kilometres from the shoreline. The Policy also covers infrastructural development and provision of water supply and sanitation services. Specifically, this Policy aligns with international best practices by managing the provision of water supply and sanitation services under the same policy jurisdiction. Solid waste management is not covered under this Policy. Its implementation will consider water-related plans and strategies from other sectors as well as collaboration with public and private sectors, development partners, community-based organizations, local communities, individuals and other stakeholders.

1.3 POLICY LINKAGES

Water has both social and economic value and significantly contributes to the country's economy. This is evident in how the water sector is associated and reflected in other sectoral policies, development strategies as well as regional and global development initiatives as highlighted in subsections (i) and (ii) below:

i) Alignment with global and regional development agendas

The Policy aligns with United Nations Sustainable Development Goal 6 and other related goals, such as reduction of poverty (SDG 1), good health and well-being (SDG 3), gender equality (SDG 5), affordable renewable energy (SDG 7), climate action (SDG 13), life on land (SDG 15), and partnership (SDG 17). It also resonates with Africa Agenda 2063, Southern African Development Community Vision 2050 and East African Community Vision 2050, all emphasizing water security, sustainability and social well-being for regional development.

ii) Alignment with national development agenda and policies (*see the box below*)

a) Zanzibar Development Vision 2050

The main focus of the Zanzibar Development Vision 2050 is to elevate the region's economy to upper middle-class status while ensuring essential services like water and sanitation that support other productive sectors. The Vision aims to improve access, affordability and sustainability of water supply, sanitation and hygiene in Zanzibar.

b) The CCM Election Manifesto (2020-2025)

The CCM manifesto highlights the need to accelerate the supply of clean and safe water to meet the needs of more than 85 per cent of rural areas and more than 95 per cent of urban areas in mainland Tanzania and more than 95 per cent in Zanzibar by 2025.

c) Zanzibar Development Plan (2021-2026)

The plan aims to achieve reliability and efficiency in service delivery, diversified water sources, optimal water supply for both social and economic sectors, improved sanitation services, and robust waste management frameworks that align with Zanzibar's broader development goals.

d) Information Policy (2023)

The Policy aims to ensure that the public is well informed in all facets of life, empowering citizens on all socioeconomic issues, conserving water sources, water supply and sanitation issues, and protecting the environment.

e) Blue Economy Policy (2022)

The Policy aims to achieve sustainable development, utilization and environmental conservation of resources found in the ocean and water bodies for better livelihoods. It also aspires to promote resilient tourism that considers sustainable management of water resources.

f) Health Policy (2022)

The Policy advocates for health and well-being, which is heavily dependent on the availability of good quality water supplies. It highlights the need to strengthen quality control and safety measures for not just food and medicine but also water supplies and wastewater management.

g) Zanzibar Population Policy (2008)

The Policy recognizes that there is a direct link between population and the water sector, especially challenges related to encroachment of water sources, water supply and sanitation and how all these affect public health.

h) Industrial Policy (2019)

The Policy advocates for the growth of the national economy through expansion and development of the manufacturing sector. The sector requires substantial freshwater supplies, and hence the Policy highlights the need for developing water supply and sanitation infrastructure.

i) Zanzibar Land Policy (2018)

The Policy recognizes the importance of environmental and natural resources, including both ground and surface water sources, emphasizing their protection and conservation, including safeguarding the environment and natural resources, particularly water sources.

j) Sports Policy (2018)

The Policy advocates for the active participation of all citizens in sports and investment in related infrastructure. The availability of clean and safe water supplies in sports centres and schools is key to unlocking the potential of sports in the country.

k) Tourism Policy (2017)

The Policy promotes Zanzibar as a leading tourism destination and seeks to provide visitors with a high-value, memorable experience. It highlights the limited tourism-based infrastructure, which includes, among others, water supply and wastewater management infrastructure.

l) Gender Policy (2016)

The Policy highlights the importance of gender equality and equity in development processes, the role of women in ensuring water security at homesteads, as well as the protection and conservation of water sources.

m) Zanzibar Oil and Gas (Upstream) Policy (2016)

The Policy emphasizes the protection and management of both fossil and freshwater resources through various strategies, including forming an integrated water resources management (IWRM) committee, safeguarding fossil water reserves and treating wastewater before discharging it.

n) Zanzibar Public-Private Partnership Policy (PPP) (2014)

The Policy highlights areas where the private sector could support the development and implementation of water and energy projects, including investing in water infrastructure, providing water supply and sanitation services, and solid waste management, among others.

o) Environment Policy (2013)

The Policy highlights the importance of sustainable use of water resources by promoting integrated water resources management, protection and conservation of water sources, sustainable sanitation, waste management, public awareness, and adaptation to climate change.

p) Zanzibar Livestock Policy (2011)

The Policy identifies water as a crucial resource for livestock development and promotes environmentally-friendly animal husbandry practices. It aims to foster a sustainable livestock sector that contributes to the national economy by increasing household income and enhancing food security.

q) Disaster Management Policy (2011)

The Policy emphasizes minimization of risks and loss of life and property due to floods and waterborne diseases by building each community's preparedness capacity and establishing relevant legal and institutional frameworks.

r) Zanzibar Energy Policy (2009)

The Policy supports renewable energy and recognizes the impact of non-renewable sources of energy on environmental degradation, such as the uncontrolled cutting of trees for firewood or the use of charcoal, which directly affect water quality and availability.

s) Education Policy (2006)

The Policy advocates for scientific and technological advancement in environmental issues, including all aspects of the water sector. It also highlights the importance of a healthy learning environment, which requires basic amenities, including supply of water and sanitation facilities.

t) Zanzibar Investment Policy (2005)

The Policy identifies the water sector as an enabler of industrial production, with water serving as both a raw material and a medium for production. It encourages public-private-community partnerships while taking advantage of technological advancements to provide water services.

u) Occupational Safety and Health Policy (2017)

The Policy aims to ensure prevention and/or elimination of occupational hazards at all workplaces, including construction sites. Given the ongoing construction works in the water sector, this Policy provides for a safe and healthy working environment for all.

v) Agriculture Policy (2002)

The Policy highlights the critical role of water in enhancing agricultural productivity, especially through irrigation. Currently, there are plans to expand irrigated areas to meet food security, which will translate to an increase in water demand.

w) Zanzibar National Forest Policy (1995)

The Policy promotes the conservation and protection of forests and highlights the role of forests in soil conservation and watershed protection. It calls for collaborative efforts to establish land-use plans for water source catchment areas and prevent groundwater pollution.

2. SITUATIONAL ANALYSIS

2.1 WATER RESOURCES MANAGEMENT

Zanzibar receives substantial rainfall, with Unguja and Pemba recording an average annual rainfall of 1,600 mm and 1,700 mm, respectively. Freshwater resources in Zanzibar include deep and shallow groundwater, surface water and rainfall. However, recent concerns have emerged regarding the risk of contamination and bacteriological pollution of water due to increased human activities near water sources. Additionally, despite the wealth of available resources, there is an absence of active monitoring of surface water in the archipelago. In this regard, the total freshwater resource potential (surface and groundwater) in Zanzibar is largely unknown. This is mainly because there has been no monitoring of surface water, which is a significant component of the water balance. This complicates and derails efforts to estimate available surface water resources as potential supplements for meeting the growing water demand in Zanzibar.

An elementary study by Johnson in 1983, using a basic rule-of-thumb approach, indicated that Unguja had 3,500 million cubic metres (MCM) of groundwater resources. He assumed that all annual groundwater recharge (estimated to be 30 per cent of total rainfall) was available for use. However, a detailed study on groundwater potential by Halcrow in 1994 found that Unguja's groundwater resources had an annual acceptable abstraction limit of approximately 293 MCM, constituting about 50 per cent of the estimated groundwater recharge. Conversely, in Pemba, the acceptable annual abstraction limit across all aquifers was estimated at 46 MCM, which was 38 per cent of the annual recharge. This adds to a total of 339 MCM permissible abstraction limit for Zanzibar.

Unfortunately, there has been no documented, verified and comprehensive study on water resource potential in Zanzibar after 1994. It is worth noting that the above estimates of water resource potential are not static. The impacts of climate change, combined with an increase in impervious surface areas due to urbanization, have likely contributed to the alteration of these values. These impervious surfaces in urban areas, e.g., roads, roofs, pavements and more, hinder infiltration and percolation of rainwater, reducing the rate of groundwater recharge. This phenomenon, coupled with the risks arising from increased uncontrolled human activities near crucial water sources as well as the impacts of climate change on freshwater resources, underscores

the urgency for updating water assessment studies, undertaking coordinated planning and hydrological monitoring initiatives with other sectors and embracing protective and conservation measures for water sources.

2.1.1 Water resource planning

There is a significant lack of coherence in water resources management, planning and development in Zanzibar. Other sectors have been developing water resources without proper guidance or consultations with the Ministry responsible for water. This lack of coordination is exemplified by the agricultural sector sinking boreholes and impounding rivers without consulting the Ministry of Water, Energy and Minerals or the Zanzibar Water Authority. The absence of integrated water resources management and development plans at various levels has hindered effective coordination in water resource planning efforts. Developing and implementing integrated water resources management plans are globally recognized as effective ways for enhancing sectoral coordination. These plans also consider the current and future water demands of other sectors.

2.1.2 Water resources monitoring and data management

A major challenge in water resource management in Zanzibar is the lack of proper hydrological monitoring and data management. Groundwater monitoring wells are mostly non-functional due to a shortage of equipment and skilled labour. There is limited monitoring and data recording of the main springs, some of which are sources of water supply for communities. The management of hydrological and water quality data is not prioritized; data is often stored in hardcopy formats, leading to disorganization and potential data loss. Non-compliance with well registration regulations has resulted in unregulated drilling of boreholes, further straining the already unbalanced freshwater resources and worsening freshwater resource imbalance. Embracing technological innovations for real-time monitoring and data information management systems is crucial.

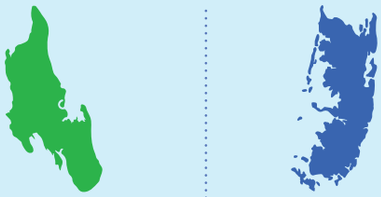
2.1.3 Water source conservation and protection

Most water sources in Zanzibar are vulnerable to human activities and encroachment as they are not protected. While some sources are known, there has been no effort to map their extent. This increases the risk of pollution, especially due to poor sanitation and waste management practices. Most water sources lack official demarcation and title deeds from authorities. Despite these sources being located within community territories, local involvement in their conservation remains limited. Protection of water sources and conservation of surrounding catchments has the net benefit of enhancing infiltration of surface water to groundwater reserves, improving water quality, regulating both surface and groundwater flows and providing a natural buffer against climate impacts, such as floods and erosion.

2.1.4 Water resources development

Groundwater remains the predominant water source, with the ZAWA operating 173 boreholes in Unguja and 135 in Pemba. The total production capacity of these boreholes for water supplies is 143,404,735 litres a day, i.e., 52.34 MCM per year. However, this production capacity is below the domestic water demand of 59.09 MCM. More than 22,629 unregulated private boreholes were recently documented, with

Water resources development in Unguja and Pemba



ZAWA - operated boreholes

173 boreholes | **135** boreholes

Unregulated private boreholes

18,831 boreholes | **3,798** boreholes

Surface runoff to sea

36% of rainfall | **52%** of rainfall

18,831 in Unguja and 3,798 in Pemba. The distribution of these private boreholes and other numerous shallow wells is uneven and uncoordinated. Considering the multiple environmental changes that have taken place since Halcrow's study in 1994, an updated comprehensive assessment is needed on potential sites for water resource development in Zanzibar.

Rainwater harvesting is an underutilized but promising water source that could supplement freshwater needs in Zanzibar. It has been established that 36 per cent and 52 per cent of rainfall received in Unguja and Pemba, respectively, flows as surface run-off into the sea, which could instead be harvested for use. Other sources of water that could be developed to meet the freshwater demands of Zanzibar include coastal water resources through desalination, wastewater recycling, and access to deep freshwater sub-marine aquifers. Some private companies in Zanzibar have already started desalinating seawater, and the average energy consumption is estimated at 1 kilowatt-hour per cubic metre of desalinated water.

2.1.5 Water resource allocation

Zanzibar faces challenges in water allocation plans, with water permits not being consistently enforced. Unauthorized groundwater abstraction is common, as evidenced by the unregulated 22,629 boreholes. This situation emphasizes the urgent need for instituting an effective water allocation strategy to ensure sustainable management and equitable allocation of water resources across all sectors. Given the finite nature of freshwater resources in Zanzibar, judicious management of water allocations becomes even more vital.

2.1.6 Water demand management

Water demand in Zanzibar is increasing due to population growth, lifestyle changes and the need for increased production in all sectors. In 2020, the annual water demand for Unguja and Pemba islands was estimated as 59.09 MCM for domestic use, 27.60 MCM for irrigation, 20.4 MCM for industries, 1.42 MCM for tourism, and 0.9 MCM for other sectors. However, ZAWA has the capacity to

produce only 52.34 MCM of water through its reticulation systems, much below the annual domestic water demand. There is significant misuse and inefficiency in water usage, with over 60 per cent of treated reticulated water being lost as non-revenue water.

According to ZAWA, the country recorded the highest amount of non-revenue water in 2008. That year, 91 per cent of all reticulated water could not be accounted for. This inefficient use of treated freshwater resources only amplified the already increasing water demand, further straining the limited available resources. Current practices of wastewater management do not facilitate recycling and reuse, a lost opportunity for maximizing the use of water resources. This calls for effective intervention in water demand management, focusing on increasing efficiency and behavioural change towards prudent use of finite freshwater resources as well as establishing mechanisms for the reuse of wastewater.

2.2 WATER SUPPLY

Water supply, especially at the national level, is both an art and a science. Developing and maintaining a sound operational reticulation system requires substantial financial, human and technical resources. Water supply covers both the infrastructural system and the governance aspects that consider how the service is availed and delivered to the satisfaction of the end users. However, a noticeable concern has been the difference in the interpretation of service delivery. On the one hand, ZAWA focuses on coverage, which has been defined as having a water point within a one-kilometre radius. On the other, the citizenry is more focused on access, commonly referred to as last-mile connectivity, which means having water in their houses and the service being available at a defined frequency. Water coverage is more aligned with infrastructural development, while access is based on the reliability of service. Unfortunately, these two aspects of water supply are inadequately managed, with access to water services being the most affected and unsatisfactory. One aspect that has continued to affect water supply services is non-revenue water, which, according to ZAWA, currently stands at 60 per cent. The trend of non-revenue water has been inconsistent over time – while in 2008, it was 91 per cent, in 2013, it fell to 58 per cent and then rose to 63 per cent in 2018.

This is a considerable loss that requires targeted intervention. Several factors contributing to high non-revenue losses include leakages due to old and dilapidated water supply infrastructure, theft, poor estimation of water bills for consumers due to lower metering ratio and metering malfunctioning. Two interventions to explore are: placing bulk-water metres in all boreholes and replacing dilapidated pipes in the network. It is of concern that ZAWA does not have daily production data of raw water from boreholes or production output from the water treatment facilities. In several locations, some of the water produced in boreholes is pumped directly to the consumers, increasing operational costs. It also reduces the reliability of water service and raises doubt about the actual quantities supplied to the consumers.

2.2.1 Water supply services

Zanzibar faces significant water supply challenges as ZAWA can only produce water to cover approximately 60 per cent of the total demand for all sectors. The annual total water

demand for Zanzibar, including domestic, industries, tourism, etc., is estimated to be 108 MCM. The domestic water demand alone is estimated to be 59.09 MCM, higher than the total production capacity of ZAWA, which is 52.34 MCM. The domestic water demand is calculated based on the assumption that, on average, each person in Zanzibar requires 140 litres per day for healthy living. The other challenge in water supply is the reliability of service provision, which has been unsatisfactory. In additional to reliability issues, there is often contamination of treated piped water with wastewater along the water supply network. Such incidences of contamination, which have continued to happen in many areas, have often been linked to cholera outbreaks. The 1964 Government proclamation on promoting free domestic water services coupled with the broader citizenry perspective on water – viewing it as a free divine gift – have continued to strain the water supply service. This compounded effect has led to unsustainably low tariffs, non-metering of volumetric water consumption that leads to misuse of treated reticulated water in non-domestic activities and significant non-revenue water losses.

During the financial year ending in 2021, the collection from water sales by ZAWA was 30.5 per cent of its projections, with metered connections reported at only 13.8 per cent and a good number of the metres not working properly. In the same period, the total revenue from ZAWA (water sales, other income and subsidies from the Government) was only 35.6 per cent of the total budget, further frustrating efforts to deliver quality water services. The monopolistic nature of ZAWA, coupled with its inability to deliver effective and quality services, has made it challenging to ensure access to desired water services. This calls for the adoption of other plausible service delivery models, including decentralization of service delivery and/or engaging the private sector.

2.2.2 Water supply infrastructure development

The water supply infrastructure in Zanzibar includes boreholes, springs, pumps and chlorination units. Water is treated before consumption. Household piped connections are reported to be between 73 per cent and 84 per cent. However, water quality is unsatisfactory due to contamination from broken sewage pipes and dysfunctional sanitation facilities. The islands' dilapidated, old water infrastructure, high cost of pumping and expansive unplanned settlements complicate the efforts to enhance water supply services. The non-revenue water in Zanzibar is currently at 60 per cent, which is relatively high compared to the internationally acceptable threshold set by the World Bank (25 per cent). The process of lowering the non-revenue water to acceptable limits in Zanzibar requires a compounded intervention, including both innovative managerial skills and investment in infrastructural development.

Even though the production capacity of ZAWA meets only 60 per cent of water demand, efforts are underway to bridge this gap. New water supply schemes supported by the International Monetary Fund (COVID-19) and the EXIM Bank of India are expected to increase water production to 85 per cent of the demand by the end of 2025. However, to maximize the returns of these high-capital infrastructural investments and ensure the longevity and integrity of the infrastructure, it is essential to bolster the operational and

maintenance capabilities of the water utilities, which are currently unsatisfactory. This is over and above the need to develop renewable energy sources with the broader aim of managing the substantial electricity costs for groundwater pumping across Zanzibar.

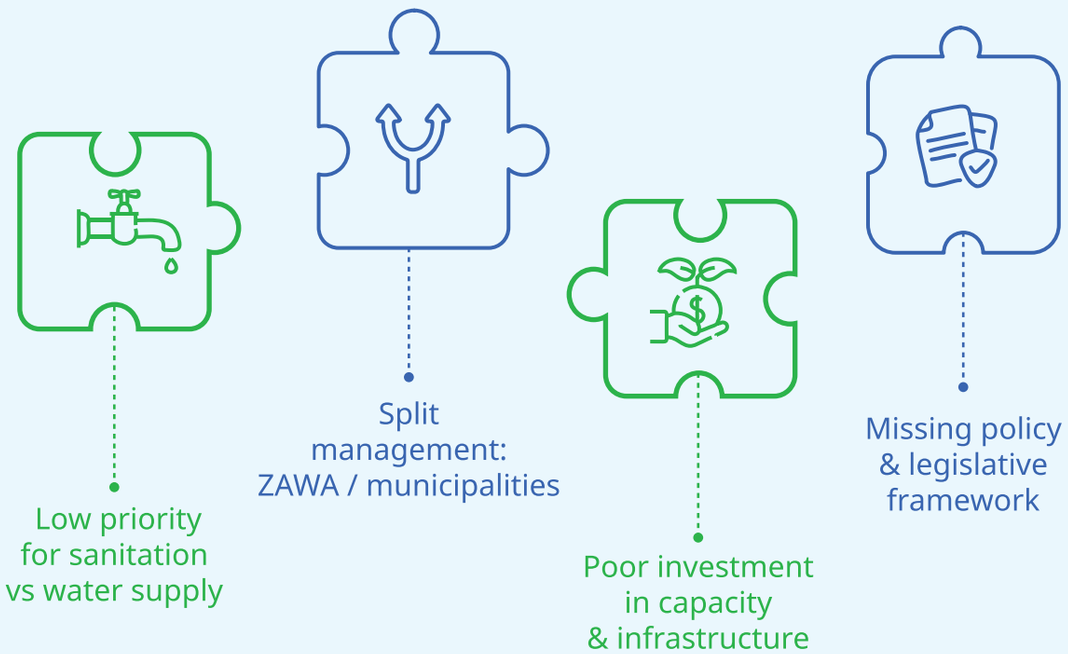
2.3 SANITATION AND POLLUTION CONTROL

Sanitation involves managing liquid waste from domestic and industrial sources through collection, transport, treatment and disposal. Ineffective sanitation has led to water pollution and waterborne disease outbreaks in Zanzibar. The challenging state of sanitation services in Zanzibar is attributed to various factors, including (i) the general institutional perception of sanitation, which prioritizes only water supply services, (ii) the management of water supply and sanitation under different institutional mandates, with sanitation managed by municipalities and water supply by ZAWA, (iii) the lack of dedicated coherent efforts to invest in technical capacity and infrastructural development for the provision of sanitation services and (iv) the lack of a clear policy and legislative guidance on sanitation.

2.3.1 Sanitation services

Effective sanitation services are essential for preventive healthcare and are widely regarded as indicators of socioeconomic development. In Zanzibar, 91 per cent of households have improved toilets, yet 20 per cent lack basic

Key sanitation challenges in Zanzibar



sanitation services and 7.3 per cent still practice open defecation. The island relies solely on on-site sanitation due to the absence of a proper sewerage system, posing significant risks of groundwater pollution, particularly in densely populated urban areas like the Mjini Magharibi region, where buildings are crowded and the soil is water-saturated. This is also the same region where the high-yielding aquifers of Zanzibar are located.

The lack of adequate sanitation services in Zanzibar has contributed to repeated cholera outbreaks, especially in areas with poor sanitation and chronic shortages of safe water. These areas often suffer from persistent wastewater overflow from septic tanks and soakaway pits, which often contaminate the groundwater. Wastewater emptying services are minimal and poorly regulated, primarily managed by municipalities under the Ministry for Regional Administration and Local Government. Private emptying trucks, which transport wastewater to disposal sites without proper treatment facilities, are licensed by municipalities but operate without clear guidelines or resource recovery options.

In rural and slum areas, manual labour is commonly used to empty latrines, posing environmental and health risks. The lack of a comprehensive institutional framework also impacts sanitation in schools, health care facilities and public areas, where inadequate emptying facilities lead to overflow once septic tanks and pits are full. Management of industrial waste, which needs treatment before being released into the environment, is similarly affected by these inadequate institutional and infrastructural conditions.

Unfortunately, there are neither authoritative studies documenting the state of sanitation nor a clear pathway on how to manage sanitation in Zanzibar. This is primarily due to the absence of a robust policy and legal framework to establish institutional processes, capacity building, infrastructural development and research in this critical area. Thus, this Policy addresses such an anomaly by establishing an institutional set-up where both the water and sanitation portfolios are managed under the same policy framework, aligning well with global best practices.

2.3.2 Sanitation infrastructure

The groundwater table in Zanzibar is relatively high. Most of the sanitation infrastructure is often in contact with groundwater and not operating optimally. This includes sewers, cesspits and pit latrines, among others. Most of Zanzibar's population dwells in unplanned settlements and relies on on-site sanitation systems with no guidelines on how to manage such infrastructure when the groundwater table rises. The sewerage system covers only 18 per cent of the residents of Zanzibar, mainly in Stone Town and neighbouring areas. Untreated sewage is directly discharged into the sea, thus polluting the coastal water resources. Most business enterprises, such as tourist hotels, have established on-site sanitation infrastructure. A few hotels are instituting cost-recovery procedures to treat wastewater and reuse it for watering gardens. A constructed wetland and a Decentralized Wastewater Treatment System (DeWATS) have been established at Kibele and Kizimbani-Dole, respectively. Additionally, a Waste Stabilization Pond (WSP) is located in Msingini, Pemba. However, due to lack of regular maintenance, wastewater from these ponds is often directly discharged into the ocean, resulting in significant

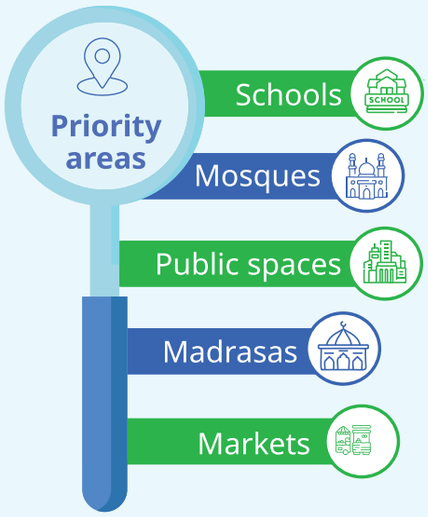
pollution threatening marine life and coastal environments. There are many other improper wastewater discharge points in Zanzibar which direct untreated wastewater directly into the ocean with serious pollution consequences along the coastal waters. The involvement of the private sector in sanitation is minimal' only limited to emptying of sludge.

Unfortunately, there is no documented literature on integrated sanitation systems or even a master plan that accommodates current and future development projections. The absence of such planning tools makes it difficult to establish a sound baseline for sanitation in Zanzibar. In addition , it is noted that the philosophical setting of the existing sanitation infrastructure was founded on the premise of handling the wastewater as an unwanted product, without maximizing the benefit of recovering the inherent resources in the wastewater. There was also minimal consideration of its ecological impact to the receiving body. In this regard, the design of new sanitation infrastructure should incorporate sustainable development pathways while considering ecosystem preservation, safety measures on human health, and the integration of technological innovations for resource recovery.

2.3.3 Sanitation education and hygiene-related behaviour

In Zanzibar, unhygienic practices, including poor hand-washing and unregulated food vending, are linked to the risk of cholera outbreaks. The Ministry of Health has made efforts through the Zanzibar Comprehensive Cholera Elimination Programme to handle specific sanitation challenges. According to the UNICEF 2018 School Water, Sanitation and Hygiene (SWASH) Assessment, 58.3 per cent

Priority areas for improvement



of schools in Zanzibar used basic sanitation services. This coverage leaves a significant number (41.7 percent) of schools without basic sanitation services. In addition, having sanitation and hygiene facilities in public institutions is one thing, and empowering communities to utilize them is another. In this regard, a two-pronged approach is needed – with a dedicated effort to establish the requisite sanitation and hygiene facilities in all public areas and raise awareness among all communities to maximize the use of such facilities. Sanitation and hygiene conditions must be improved, especially in schools, madrasas, mosques, markets, and public areas. Educating communities on sanitation and hygiene issues is vital.

Generally, there is a lack of awareness of business enterprise and recovery in the wastewater value chain. The potential for using recycled wastewater in irrigation and other non-consumptive uses has not been fully explored in Zanzibar. This entails

establishing and operationalizing dedicated knowledge-sharing platforms and educational campaigns and developing appropriate business models across the wastewater value chain. Well-structured business models in sanitation have the advantage of enticing private sector entrepreneurs to identify investment opportunities. Engaging the private sector in the sanitation value chain is among the suitability pillars that must be developed and sustained.

2.3.4 Pollution control

Zanzibar's water resources, water supply systems and overall environmental integrity are severely impacted by inadequate sanitation, liquid wastewater and leachates from solid waste. The islands' dominant Karst geological formation, characterized by high porosity, interconnected underground caves, cavities and fissures, presents a unique challenge. This characteristic of the aquifer is prominent, especially in the Bumbwisudi Corridor on the western side, making it a crucial groundwater recharge zone. Unfortunately, this area is rapidly being encroached upon by housing developments, increasing the risk of groundwater pollution from on-site sanitation and leachate from informal dumpsites. Both point source and non-point source pollution have significantly impacted the quality of the islands' freshwater resources. The confluence of these types of pollution has been detrimental in certain areas. Evidence of this contamination has been observed in samples taken from freshwater resources, where counts of up to 723 cells per 100 ml of faecal coliforms were observed. Such high levels of contamination of freshwater and/or pollution from human waste can be traced back to inadequate sanitation systems coupled with contaminants from leachates generated from solid waste dumping sites.

Another challenge is the absence of clear guidelines on faecal sludge management, which poses a considerable risk of groundwater contamination. In the absence of specific guidelines, Zanzibar refers to mainland Tanzania's wastewater quality management guidelines. However, there remains a noticeable lack of strong regulations and effective oversight for wastewater discharge.

2.4 SECTOR GOVERNANCE

2.4.1 Water resources governance

The Water Act of 2006 granted ZAWA the governance mandate of the sector, allowing it to manage water resources, supply water through reticulated systems and regulate the water sector. With an overwhelming triple mandate, ZAWA has not performed well on water resources management, primarily because of its focus on the water supply side, which is always a funded political priority for the Government and most development partners. As in many countries, despite being a fundamental priority, water resources management in Zanzibar remains scarcely funded and often ignored. The best practice in addressing such a governance anomaly is to separate the mandates where water resources management and water supply are managed separately under different institutional and philosophical set-ups. Management of water supply services generally has a business orientation, while water resources management is determined by science and stewardship principles.

A comprehensive independent assessment of ZAWA's performance was conducted in

2022. One key recommendation was to relieve ZAWA from the mandate of managing water resources and make it focus on water supply and sanitation. Most often, as in the case of ZAWA, if these two mandates are managed under one institution, the function with a business orientation will likely take centre stage at the detriment of the other. That is why there are very few strategic studies on water resources in Zanzibar.

The separation of mandates for water resources management and water supply and sanitation services is a global best practice, informed by the fact that water resources management is directly linked to national security, which is primarily the responsibility of the national government rather than water utilities. Therefore, a Division of Water Resources Management needs to be established within the Ministry responsible for water as part of the measures to ensure water security for Zanzibar.

2.4.2 Water supply and sanitation governance

A policy and regulatory gap analysis revealed that the sanitation value chain is not clearly outlined. It is unclear which institutions are responsible in each segment of the sanitation service chain, from generation to disposal and reuse, nor are their mandates based on best practices. This has led to ineffective and inefficient sanitation service delivery due to a breakdown of the service and recovery chain.

Currently, sanitation and waste management predominantly fall under the jurisdiction of local governments through municipalities and the Zanzibar Environmental Management Authority (ZEMA). However, best practice dictates that water supply and sanitation be managed under the same framework. In this regard, sanitation needs to be managed by the Ministry responsible for water, while solid waste management can continue to be managed by the municipalities. There is a recognized global benefit to managing sanitation and water supply together. For example, it ensures a holistic view of the water supply cycle and can easily facilitate the institutionalization of effective resource recovery processes throughout the wastewater value chain. The other benefit is the ability to charge both services under one framework, with sanitation being charged as a fraction of the water supply bill.

Nevertheless, the requisite institutional and governance structures on water supply and sanitation at the Ministry responsible for water are not well established and need to be developed. This will entail establishing a division responsible for overseeing water supply and sanitation and developing relevant regulations while adopting operational standards as developed and enforced by the Zanzibar Regulatory Authority (ZURA).

2.5 INVESTMENT AND SUSTAINABILITY

Addressing the challenge of investment and sustainability will require an effective and innovative financial strategy, a robust human resource development plan and an actionable sector investment plan. Recognizing this, the Ministry of Water, Energy and Minerals has developed ZanWIP (2022-2027). This programme underscores the potential investment areas and serves as a tool for resource mobilization. The investment programme is aligned with the broader African Union initiative and the Africa Water Investment

Program, which is focused on bridging the water investment gap in Africa. Effective implementation of this plan demands financing and human resource capacity, which can be achieved through a collaborative multi-stakeholder approach.

2.5.1 Financial resource sustainability

There is still a need to further diversify sources of finance and promote innovative financing models to ensure sustainable investment. Climate finance is one source of funding that is readily available for the water and sanitation sector, but its access has been limited primarily by low capacity to develop bankable projects. For sustainability, the private sector needs to be encouraged to invest in the water and sanitation sector as part of unlocking more financial resources and enhancing efficiency through technological innovations. However, it is acknowledged that the private sector can only invest where there is a clear pathway for cost recovery. Hence, this requires the Government to utilize all investment instruments at its disposal, including the Public-Private-Partnership and Public-Private-Community Participation. Application of any of the financial instruments will require a change in philosophical positioning on the provision of water and sanitation services; "payment for services" will replace "contribution towards services" while taking equity into consideration, especially for the poor.

2.5.2 Human resource capacity development

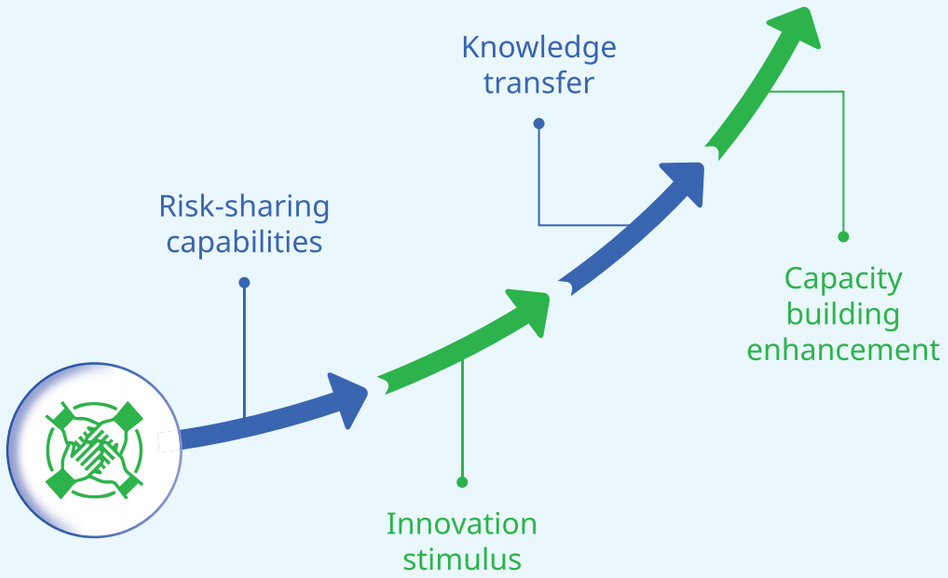
The water and sanitation sector faces significant human resource challenges, including a shortage of qualified professionals and a skills mismatch, particularly amid rapid technological advancements. A comprehensive capacity assessment is essential to address these gaps and support the adoption of new technologies. Initiatives such as water and sanitation graduate programs and the establishment of a dedicated Water Institute can help strengthen vocational and technical expertise in Zanzibar.

This human resource gap not only impacts operational efficiency but also has tangible consequences on delivery. The comprehensive capacity assessment in the water and sanitation sector will establish the proxy thresholds for each profession, as well as the requisite technological innovations that need to be in place or adopted. Additional human and technological capacity will be required on and above the current and future thresholds to maintain and sustain the ongoing infrastructural developments. Specifically, sanitation will require a dedicated effort on all fronts, such as financial resources, human capacity development and technological innovations, to institute the requisite foundational pillars within the sector. Some of the efforts may include introducing water and sanitation graduate programmes in local universities and establishing a Water Institute in Zanzibar with a dedicated mandate to build the requisite vocational technical capacity for the sector.

2.6 PRIVATE SECTOR PARTICIPATION

Private sector participation in Zanzibar's water sector remains noticeably limited despite global evidence of its potential benefits. Around the world, the integration of private entities into water management has been proven to enhance risk-sharing, stimulate innovative solutions and facilitate knowledge and capacity building. The 2004 Water

Benefits of private participation



Policy in Zanzibar robustly championed the involvement of the private sector. However, a series of obstacles have stymied the realization of this vision.

The current Policy seeks to reshape the environment in which the water sector operates. It aims to harness the latent potential of the private sector, drawing inspiration from global best practices, to effectively and sustainably address Zanzibar's water and sanitation challenges. By fostering a conducive ecosystem for private sector involvement, Zanzibar hopes to optimize its sectoral potential and ensure a more resilient and prosperous future for its inhabitants.

2.7 CLIMATE RESILIENCE

The potential impacts of climate change in the water sector in Zanzibar are primarily associated with a rise in temperature, change in rainfall patterns, rise in sea level and extreme events such as floods and droughts.

Currently, the coastal areas of Zanzibar are experiencing impacts of climate change, including coastal erosion, a phenomenon that is likely to increase in intensity with sea level rise and an increase in severe weather and storm surges. The increase in seawater levels has led to saltwater intrusion along the coastal areas where freshwater sources have been polluted, producing unusable saline waters. Recent analysis indicates that salt intrusion has affected nine sources of water – eight boreholes and one cave in Unguja. The actual cost of climate change on the water sector and economy of Zanzibar in general has not been fully established, but such costs are anticipated to continue rising. In this regard, it is recommended that the water sector purposefully integrate climate resilience in all its sectoral and cross-sectoral plans as

envisioned in this new Water and Sanitation Policy. The Policy highlights potential areas for accessing climate finance to support the water and sanitation sector in Zanzibar in becoming climate-resilient.

2.8 DISASTER PREPAREDNESS RESPONSE AND RECOVERY

In recent years, Zanzibar has experienced floods that led to loss of life and the destruction of infrastructure and property. Zanzibar receives substantial annual rainfall, with more than 1600 mm in Unguja and 1700 mm in Pemba. This often induces floods, especially in poorly drained areas and increases public health risks, notably through waterborne diseases. Floods in Zanzibar are caused by various factors like poor drainage systems and the inherent flat terrain, especially in Unguja. In recent years, Zanzibar has experienced water-related disasters such as floods, hurricanes and outbreaks of cholera and other diseases. The floods have caused extensive damage to infrastructure and loss of life, even in neighbouring countries.

To manage water-related disasters, Zanzibar is required to institute appropriate mechanisms for preparedness, response and recovery to safeguard the country against such incidents.

2.9 RESEARCH AND TECHNOLOGICAL INNOVATIONS

In Zanzibar, the water and sanitation sector has significant gaps in knowledge management, dedicated research and innovation. It is a matter of concern that universities in Zanzibar do not currently offer undergraduate or graduate programmes on water. This research and academic void implies a lack of requisite local technical expertise and institutional research capacity to address the unique water and sanitation challenges in Zanzibar. The absence of a robust knowledge base and research infrastructure means that crucial water and sanitation-related information remains fragmented or inaccessible. This absence hampers informed decision-making processes and hinders the evolution of strategies and policies that are adapted to the islands' unique challenges.

2.10 GENDER EQUALITY AND SOCIAL INCLUSION

Women, girls and the socially marginalized often have unique water, sanitation and hygiene (WASH) challenges, and WASH practices often influence traditional norms and stigma. Strengthened WASH and IWRM practices often require the empowerment of marginalized voices within the home, workplace, community and society. Improvements in IWRM and WASH can 'ripple out' to positively transform social structures and systems. Women and girls are the primary providers, managers and users of water; however, women comprise less than 17 per cent of the water, sanitation and hygiene labour force in developing economies and only a fraction of policymakers, regulators, management and technical experts.

2.11 INTEGRATED PLANNING AND COORDINATION

Cross-sectoral and multi-stakeholder coordination in the water and sanitation sector in Zanzibar is unsatisfactory. There are no coordination mechanisms in place for sectors to plan and collaborate and no platforms to engage stakeholders. Coordination includes ensuring active engagement of stakeholders and participation of communities

through sharing of information, continuous learning and joint planning across the water and sanitation-related ministries, which includes: Lands and Housing; Agriculture, Irrigation, Natural Resources and Livestock; Infrastructure, Communication and Transport; Education; Health; and Tourism. In sanitation, several actors work to elevate the state of hygiene and sanitation in Zanzibar, including the Ministry responsible for Health, the Ministry responsible for education, the local government authorities and different development partners.

Coordination mechanisms in the water and sanitation sector in Zanzibar may include (i) a multi-sectoral forum on water and sanitation where all water-related ministries, government agencies, research institutions and development partners, etc., will have the opportunity to convene at a prescribed frequency to jointly plan and reflect on inherent trajectories, challenges and opportunities in the sector, (ii) a mechanism for coordinating development partners to ensure that each is well informed of government priorities and the activities of other partners in the sector, (iii) a knowledge management process in the form of an annual water conference that brings together the Government and all sectoral partners to share best global practices, network and identify potential opportunities for collaboration.

Key takeaways from the situation analysis

Despite the progress in the sector since the gazetting of the 2004 Zanzibar Water Policy, gaps and issues still need to be addressed while being cognizant of the national and global development dynamics. The main issues afflicting the water sector in Zanzibar can be categorized as systemic and operational, which are best addressed through establishing appropriate governance and institutional frameworks and enhancing prowess in sectoral management functions, respectively. While the institutionalization of sanitation in the water sector is a milestone in Zanzibar, such institutional and governance processes need to be backed by progressive investments on three main fronts: infrastructure, technological innovations and human resource development. Unfortunately, the current status of these three fronts is unsatisfactory, and dedicated efforts need to be made to ensure water security and sustainable sanitation in Zanzibar. This requires substantial financial resources for which a blended approach could be used where the private sector invests in the water and sanitation sector. The active engagement of the private sector has not been fully explored in the past as provided in this Policy.

3. VISION, MISSION AND OBJECTIVES

3.1 RATIONALE

While the Zanzibar National Water Policy 2004 has been instrumental in addressing shortcomings in the water sector, especially on the fronts of service delivery and sustainable management of water resources, several changes have occurred in the last 19 years. Since 2004, there have been various national, regional and global initiatives in the water and sanitation sector and other related sectors, including the United Nations Sustainable Development Goals, especially Goal 6 on Water and Sanitation for All, that are not reflected in the current Policy. There is also a need to apply global best practices by managing sanitation together with water supply services and harmonizing the Water and Sanitation Policy with development and economic priorities in Zanzibar, e.g., blue economy, tourism and industrialization, among others. The ongoing global and local changes affecting the water and sanitation sector require a different policy framework. There is also a need to streamline water governance and institutional arrangements at various levels to enhance sustainability and efficiency in water resources management, water supply and sanitation. This requires, among other things, the separation of managerial functions of water resources management from water supply and sanitation. The latter is usually managed through water utilities. The Policy will address the adoption of technological innovations in the water and sanitation sector for monitoring, conserving, protecting, regulating and allocating water resources, as well as for enhancing sustainable sanitation, including the safe disposal of wastewater and resource recovery.

3.2 VISION

The Policy's vision is to ensure universal access to sustainably managed water and sanitation services for all.

3.3 MISSION

The Policy's mission is to enhance efficient and equitable planning, investment and sustainable management of water resources, supplies, quality and sanitation to support socioeconomic development for all.

3.4 GENERAL OBJECTIVE

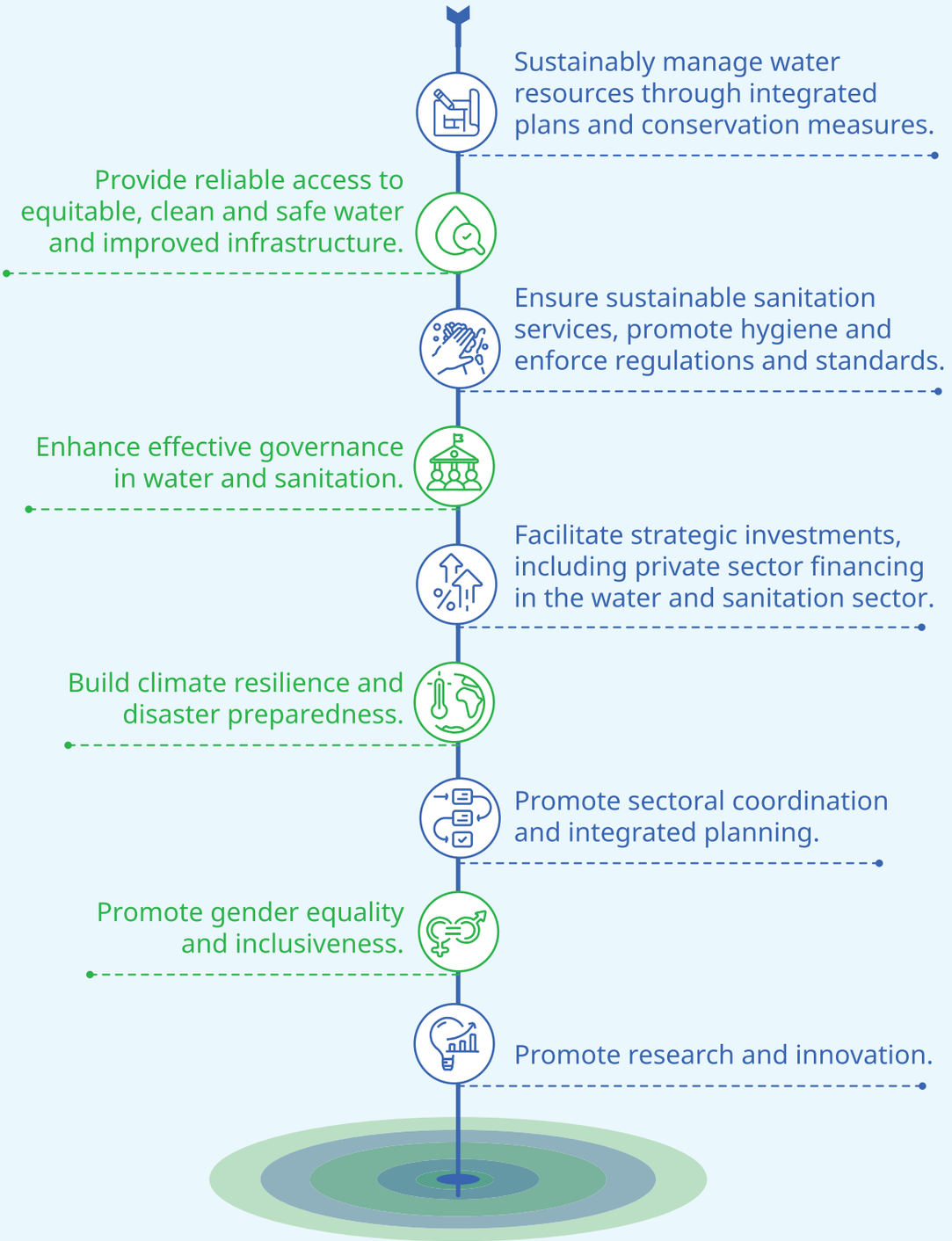
The Policy aims to ensure sustainable water resources management to foster an equitable supply of water and sanitation services for socioeconomic development

and water demand management while accentuating efficient sanitation services to enhance public health and environmental protection.

3.5 SPECIFIC OBJECTIVES

The specific objectives of the Zanzibar Water and Sanitation Policy are given below.

Specific objectives of the Zanzibar Water and Sanitation Policy



3.6 GUIDING PRINCIPLES (*see the box below*)

1) Best practices

The natural occurrence of water on earth is governed by a set of established norms, and humanity has continued to align and adapt to the occurrence and use of water, all of which form best practices.

2) Water is a finite resource

Water use should be rational and sustainable, and it should abide by environmental regulations and safeguards.

3) Water is a basic, social and economic good

Water has no substitute and hence is a basic need. The essence of water transcends its mere utility value, impacting and influencing both social and economic sectors.

4) Catchment and aquifer management

Water resources should be managed within biophysical boundaries, such as watershed catchment areas and/or aquifers, to ensure sustainability of the resource and service provision.

5) Participatory management of water resources and sanitation services

Management of water resources and sanitation services requires inclusivity and participation from all sectors, stakeholders and communities to ensure sustainability.

6) Resource recovery

Management of water resources and provision of water and sanitation services will be guided by frameworks that promote resource recovery through technological innovations.

7) Multiple service providers

The water sector in Zanzibar will adopt a decentralized approach where several utilities will be responsible for providing water and sanitation services in different areas of jurisdiction.

8) Climate resilience

All interventions and technological innovations in the water sector need to be climate-resilient.

4. POLICY ISSUES, STATEMENTS AND STRATEGIES

4.1 WATER RESOURCES MANAGEMENT

4.1.1 Water resource planning

Policy issue

Planning and management of water resources in Zanzibar is currently unsustainable due to limited cross-sectoral coordination and minimal consideration of the biophysical boundaries of surface or groundwater basins.

Policy statement

The Government shall ensure that the planning, development, and management of water resources are guided by integrated water management (IWRM) principles, which focus on wider stakeholder involvement and cross-sectoral planning.

Policy strategies

The Government shall:

i) Formulate and implement IWRM development plans for Zanzibar.

ii) Promote development and research innovation in providing solutions to challenges in water resources management.

iii) Promote stakeholder awareness to facilitate sustainable development and implementation of IWRM development plans.

4.1.2 Water resources monitoring and data management

Policy issue

Inadequate and ineffective monitoring of the state of surface and groundwater water resources and climatic conditions in Zanzibar makes it difficult for the Government to conserve, protect, manage, plan and allocate available water resources to different users.

Policy statement

The Government shall utilize technological innovations to establish a modern water resource monitoring network and an accompanying database that provides information on the state of surface and groundwater resources at any time and location.

Policy strategies

The Government shall:

i) Establish a national resource base on the state of surface and groundwater in Zanzibar.

ii) Establish effective surface and groundwater operational monitoring networks to monitor both the quantity and quality of water.

iii) Establish an effective and affordable Water Resources Information Management System to enhance water resources management.

4.1.3 Water source conservation and protection

Policy issue

Inadequate conservation and protection measures on available water resources has led to encroachment of catchment areas, pollution of water sources and uncontrolled utilization, leading to diminishing freshwater resources.

Policy statement

The Government will institute measures to demarcate, conserve and protect all water sources in Zanzibar, ensuring a water-secure future for the country.

Policy strategies

The Government shall:

i) Develop a National Water Resources Master Plan to promote water resources conservation and use.

ii) Develop a water resources protection and conservation strategy with specific responsibilities for different stakeholders, including mapping and gazetting water sources.

iii) Strengthen legal framework to support conservation strategies.

iv) Promote community engagement in conservation planning.

4.1.4 Water resources development

Policy issue

A lack of coordination in developing existing water resources and exploring alternative sources of freshwater has made the country vulnerable to water insecurity.

Policy statement

The Government shall ensure effective and coordinated efforts towards developing existing water resources and progressively explore alternative sources to meet national priorities in both social and productive sectors.

Policy strategies

The Government shall:

i) Explore and develop alternative freshwater sources, such as rainwater harvesting and desalination, to cater to current and future demand.

ii) Develop a national water storage infrastructure plan.

iii) Design wastewater reuse and recycling systems to maximize water resource use.

4.1.5 Water resource allocation

Policy issue

Unsustainable utilization of finite freshwater resources to cater to the growing needs and competing water demands, further exacerbated by rapid and uneven population growth, has diminished water per capita and affected the allocation for ecosystems.

Policy statement

The Government shall ensure that water is allocated fairly and equitably among different users in a way that balances water availability and demand while also considering the needs of freshwater-dependent ecosystems and scientifically determined safe and sustainable abstraction limits.

Policy strategies

The Government shall:

i) Formulate a water allocation and utilization framework that clearly defines permitting and licensing guidelines.

ii) Define and establish regulatory mechanisms and authorities to set and review water rights allocation in a manner that ensures the sustainability of resources and the integrity of ecosystems.

iii) Strengthen community-based institutions to take part in equitable resource allocation.

4.1.6 Water demand management

Policy issue

Current practices of inefficient water use in various sectors have led to an unsustainable increase in water demand and development.

Policy statement

The Government will provide guidance and strategies for managing the growing water demand for all sectors to achieve a balance between economic and social equity and environmental sustainability.

Policy strategies

The Government shall:

i) Promote technological innovations to improve water use efficiency.

ii) Institute economic incentives for the adoption of water-saving measures.

iii) Regulate and control the withdrawal of water resources.

iv) Promote safe recycling of wastewater at different levels (e.g., streets, villages, regions).

v) Promote awareness campaigns and capacity-building initiatives on water-saving approaches for different water users, including religious leaders.

4.2. WATER SUPPLY

4.2.1 Water supply services

Policy issue

Reliable access to clean and safe water services is inadequate, and the coverage of the reticulated water supply network is low in Zanzibar.

Policy strategies

The Government will enhance equitable, adequate and reliable access to clean and safe water supply services for all in Zanzibar.

Policy strategies

The Government shall:

i) Promote access to reliable, clean and safe water supplies for each homestead.

ii) Institute and implement reasonable water tariffs for different water users.

iii) Promote technological innovations in metering and billing volumetric water consumption for all water users.

iv) Promote awareness campaigns and capacity-building initiatives on community participation in local water supply projects.

v) Institute measures for managing non-revenue water.

vi) Institute measures for undertaking risk assessments on water supply services.

4.2.2 Water supply infrastructure development

Policy issue

The water supply system in Zanzibar is mainly primed by the continuous pumping of groundwater, which requires substantial electrical energy. The coverage of the water supply distribution network is inadequate and aged, resulting in frequent leakages and pipe failure, with the net effect being a compounded non-revenue water loss exceeding 60 per cent. The capacity of water storage is insufficient, and the reliability of water supply services is unsatisfactory.

Policy statement

In collaboration with other stakeholders, the Government will undertake appropriate measures to ensure the development of improved infrastructure for sustainable and efficient water supply services.

Policy strategies

The Government shall:

i) Develop a master plan for the national water supply system.

ii) Invest in the development of new water supply infrastructure, including distribution networks, storage and treatment plants, to sustainably meet current and future demand.

iii) Institute preventative and operational maintenance guidelines for all water supply infrastructure.

iv) Promote the use of advanced technologies to improve the efficiency of water supply and distribution systems.

v) Develop and promote alternative renewable sources of energy to support pumping groundwater.

vi) Institute measures for undertaking risk assessments on water supply infrastructure.

4.3 SANITATION AND POLLUTION CONTROL

4.3.1 Sanitation services

Policy issue

A majority of households that use on-site sanitation still use poor sanitation facilities that are below the definition of an improved sanitation facility.

Policy statement

The Government will enhance access to safe and adequate basic sanitation facilities and services for every household and community in Zanzibar.

Policy strategies

The Government shall:

i) Promote access to basic and safely managed sanitation services for all.

ii) Institute measures for all new buildings, institutions and commercial settings to provide adequate basic, and safely managed sanitation facilities on their premises.

iii) Institute measures that guarantee the provision of sanitation services during emergencies and disasters.

4.3.2 Sanitation infrastructure

Policy issue

Zanzibar has inadequate coverage of sewerage systems and generally lacks sewerage treatment facilities. The situation is worsened by limited funding for sanitation infrastructure development.

Policy statement

The Government will develop sustainability in sanitation by investing in the development and maintenance of robust infrastructure, including on-site treatment facilities, sewage systems and wastewater treatment plants .

Policy strategies

The Government shall:

i) Prepare a sanitation master plan to enhance the overall planning and implementation of progressive sanitation programmes.

ii) Increase coverage and sustainability of sanitation systems through the application of appropriate planning approaches.

iii) Implement sanitation technologies that ensure optimum resource recovery from the sanitation service chain.

iv) Institute preventative and operational maintenance guidelines for sanitation infrastructure.

v) Institute measures for undertaking risk assessments on sanitation infrastructure.

4.3.3 Sanitation education and hygiene-related behaviour

Policy issue

Poor sanitation and hygiene practices persist, which are often linked to outbreaks of water-related diseases such as cholera.

Policy statement

The Government will formulate educational and awareness campaigns on the importance of best hygiene practices and actively promote behaviour change within communities.

Policy strategies

The Government shall:

i) Implement comprehensive public awareness campaigns and behavioural change communication strategies to promote best hygiene practices and encourage positive sanitation behaviours.

ii) Develop appropriate capacity-building programmes to generate adequate local expertise in providing sanitation services at different levels and localities.

iii) Promote sustainable sanitation and hygiene practices in all public places, including schools.

4.3.4 Pollution control

Policy issue

The unregulated disposal of wastewater and faecal sludge has led to environmental pollution and an increased risk of polluting water resources.

Policy statement

The Government will establish and enforce regulations and standards for sanitation services to ensure compliance with health and environmental requirements.

Policy strategies

The Government shall:

i) Develop and enforce a basin-wide water quality monitoring programme.

ii) Institute regulatory frameworks for end-use and disposal of treated effluent and faecal sludge.

iii) Develop and promote the adoption of effluent discharge standards by various industries or other potential sources of environmental pollution.

4.4 SECTOR GOVERNANCE

4.4.1 Water resources governance

Policy issue

Currently, governance of water resources is merged with water supply, which has led to a limited focus on water resource management and, hence, sustainability of the resource. This has led to weak governance of water resources.

Policy statement

In collaboration with all stakeholders, the Government will strengthen regulation and the institutional and capacity-building framework for water resources management while promoting coordination and community engagement at all levels.

Policy strategies

The Government shall:

i) Strengthen water resources management regulation and institutional frameworks.

ii) Establish community-based organizations or committees to participate in planning, implementing and monitoring water resources management.

iii) Establish and implement capacity-building frameworks on water resources management.

iv) Promote accountability by ensuring that mobilized financial resources for water resources management are allocated in an efficient, transparent and timely manner.

v) Establish and implement robust monitoring and evaluation systems to assess the performance and impact of water resources management.

vi) Promote accountability and transparency in water resources management.

4.4.2 Water supply and sanitation governance

Policy issue

Ineffective and inefficient governance of water supply and sanitation in Zanzibar, due to the lack of a clear institutional set-up and robust

regulatory framework, has made it a challenge to map the value of investments, maximize economies of scale in projects, ensure sustainability and improve accountability in service delivery.

Policy statement

The Government, together with partners, will strengthen the water supply and sanitation regulations as well as institutional and capacity-building frameworks, and will improve governance and accountability.

Policy strategies

The Government shall:

i) Establish and enforce robust institutional, legal and regulatory frameworks for water supply and sanitation service delivery that clearly define the roles and responsibilities of different stakeholders.

ii) Establish and implement capacity-building programmes on water supply and sanitation for different stakeholders in the water supply and sanitation value chains.

iii) Establish community-based organizations or committees to participate in planning, implementing and monitoring water supply and sanitation projects.

iv) Establish and implement robust monitoring and evaluation systems to assess the performance and impact of water supply and sanitation programmes.

v) Promote accountability and transparency in water supply and sanitation, as well as mobilization and allocation of financial resources in an efficient and timely manner.

4.5 INVESTMENT AND SUSTAINABILITY

4.5.1 Financial resources sustainability

Policy issue

The water and sanitation sector requires high-capital investments to maintain and operationalize both infrastructural and non-infrastructural programmes. This requires a concerted effort in resource mobilization as well as establishing mechanisms for recovering the costs of the projects with the objective of ensuring sustainability of the services in Zanzibar.

Policy statement

The Government will institute measures to mobilize financial resources for investments in the water and sanitation sector and ensure that cost recovery underpins all infrastructural developments and operations while taking into account the Government's social responsibilities.

Policy strategies

The Government shall:

i) Formulate appropriate sectoral resource mobilization strategy for both short- and long-term investments in water resources management, water supply and sanitation.

ii) Devise appropriate economic instruments for environmental protection and water source conservation.

iii) Design and implement sustainable and realistic cost recovery schemes that consider the financial viability of the water utilities and pro-poor policies.

iv) Devise strategies for funding water sector infrastructure development.

v) Devise innovative resource mobilization approaches that are geared towards funding non-infrastructural water resources management functions.

vi) Collaborate with international organizations and donor agencies to devise a mechanism for mobilizing international financing and access funding in water and sanitation.

vii) Design ways to increase national budgetary allocation to water and sanitation in line with the principles of integrated water resources management.

viii) Devise mechanisms for improving financial accountability.

ix) Strengthen the capacity of water utilities to mobilize financial resources.

4.5.2 Human resource capacity development

Policy issue

The water and sanitation sector has inadequate human resource capacity and skills to achieve the planned policy goals and objectives.

Policy statement

The Government will develop and strengthen the human resource base required to successfully implement the outlined policy objectives within the indicated timeframe.

Policy strategies

The Government shall:

i) Conduct a sector-wide human resource capacity needs assessment.

ii) Formulate and implement capacity development programmes in the sector.

iii) Strengthen the capacity of the Ministry responsible for water and associated institutions to write bankable proposals as well as design and implement projects on water resources management, water supply and sanitation.

iv) Strengthen the capacity of the Ministry and associated institutions to undertake strategic research and analytical endeavours in the water and sanitation sector.

v) Strengthen the capacity of Shehia Water Conservation Associations and other user groups to safeguard and maintain water supply, sanitation and hygiene projects in their localities.

4.6 PRIVATE SECTOR PARTICIPATION

Policy issue

There is inadequate participation of private entities in investing in the water and sanitation sector, including infrastructural development, operations and maintenance of water supply and sanitation services. There is also a notable absence of innovative, bankable financial models that foster collaboration between the public and private sectors in water investments.

Policy statement

The Government will create an enabling environment for international and local private sector participation and investment in water and sanitation, including water resources management, infrastructural development, operations and maintenance of the water supply and sanitation services in utilities, water harvesting and storage technologies.

Policy strategies

The Government shall:

i) Encourage and mobilize private sector participation in water resources management, strategic water and sanitation infrastructural development and service delivery, creating a suitable mechanism for private and public investors by endorsing incentives that attract investment in clean water and sanitation projects.

ii) Establish regulatory frameworks, including Public-Private-Partnerships (PPP), that guide private sector investment in water resources management, water supply and sanitation.

iii) Develop and implement effective PPP to support the water and sanitation sector.

iv) Encourage the private sector to actively participate in stewardship endeavours, notably in water conservation and water source protection.

v) Empower the local private sector to increase its participation in the water and sanitation sector.

4.7 CLIMATE RESILIENCE

Policy issue

There is inadequate mitigation and adaptation to climate change in the water and sanitation sector of Zanzibar.

Policy statement

The Government will provide climate leadership by recognizing and maximizing international commitments and mainstreaming climate resilience in the water and sanitation sector.

Policy strategies

The Government shall:

i) Enhance access to sustainable climate resilience financing in the water and sanitation sector.

ii) Enhance climate vulnerability assessments in the water and sanitation sector.

iii) Mainstream climate resilience in the plans and guidelines of water and sanitation infrastructure.

iv) Promote the application and use of climate-friendly and appropriate technologies.

v) Strengthen human, technical, regulatory and institutional capacity on climate change adaptation and mitigation measures.

vi) Develop and implement climate change adaptation and mitigation actions in the water and sanitation sectors.

4.8 DISASTER PREPAREDNESS, RESPONSE AND RECOVERY

Policy issue

The country is vulnerable to water-related disasters that include floods, droughts and waterborne diseases, and there is a need to build national resilience to manage such occurrences.

Policy statement

In collaboration with stakeholders, the Government will institute an appropriate mechanism for risk assessment and establish mitigation plans for managing water-related disasters in Zanzibar.

Policy strategies

The Government shall:

i) Establish appropriate risk assessment, mitigation and management plans as well as response strategies for water-related disasters.

ii) Support disaster management and coordination efforts as directed by the National Disaster Management Commission in the Second Vice President's Office.

iii) Institute early warning systems that can detect, analyse, predict and communicate to relevant authorities the potential occurrence of water-related disasters in a timely manner.

4.9 RESEARCH AND TECHNOLOGICAL INNOVATIONS

Policy issue

The inadequate research capacity and technological innovations in the sector have hindered advancement and progress in undertaking strategic research and assessment studies in Zanzibar.

Policy statement

The Government will promote technological innovations and integrate research in all undertakings in the water and sanitation sector while creating an enabling environment for collaborative research with institutions in and outside the country.

Policy strategies

The Government shall:

i) Support and promote applied research in the identification and implementation of best practices in water resources management, water supply and sanitation.

ii) Foster collaborative research endeavours with academic institutions and research organizations.

iii) Develop and apply appropriate, cost-effective technological innovations in the sector.

iv) Promote and develop the capacity of local research institutions in water and sanitation.

4.10 GENDER EQUALITY AND SOCIAL INCLUSION

Policy issue

There is limited involvement of marginalized groups such as women, youth and people with disabilities in decision-making, planning and implementation of interventions in water and sanitation.

Policy statement

The Government will take the necessary steps to create a conducive environment for women, the youth and those with disabilities to participate in the water and sanitation sector.

Policy strategies

The Government shall:

i) Support women, girls, youth, and those with disabilities in having equal employment opportunities, career opportunities, capacity building, and decision-making in the sector.

ii) Mainstream gender and social inclusion in designing and implementing water and sanitation programmes.

iii) Mainstream gender and social inclusion into the legal and regulatory frameworks of the water and sanitation sector.

iv) Empower local and international implementation partners to be sensitized and trained on gender stereotypes and social norms in the context of Zanzibar's cultural values.

4.11 INTEGRATED PLANNING AND COORDINATION

Policy issue

The management of water resources and the provision of water supply and sanitation services lack integrated coordination and a blueprint plan that guides sustainable future development and investments.

Policy statement

The Government will undertake strategic measures to ensure that planning in the water and sanitation sector is carried out in an integrated and coordinated manner while taking into consideration various water-dependent sectoral plans and needs.

Policy strategies

The Government shall:

i) Strengthen coordination and integrated planning within the water and sanitation departments and institutions in the Ministry responsible for water and sanitation.

ii) Foster intersectoral collaboration and wider stakeholder engagement in the sector.

iii) Establish and adopt knowledge exchange platforms at different levels.

5. INSTITUTIONAL AND LEGAL FRAMEWORK

5.1 INSTITUTIONAL FRAMEWORK

The institutional arrangement provided in this Policy will ensure full participation of stakeholders and user communities in the water and sanitation sector. It will support the establishment of appropriate participatory frameworks at different levels of jurisdiction and promote decentralized provision of water supply and sanitation services as well as management of water resources, as appropriate, down to the Shehia level.

The functions of the Ministry responsible for water and sanitation will be defined as appropriate and may vary from time to time, but its main focus will be to ensure water security in Zanzibar. Some of the functions include providing all coordination aspects in national water resources management, overseeing water supply and sanitation projects, safeguarding environmental health, developing appropriate guidelines, ensuring public and private sector participation, instituting information management systems, coordinating capacity development and research in the sector and ensuring communication and awareness on all matters relating to water and sanitation in Zanzibar.

Specifically, the Ministry responsible for water and sanitation will:

i) Implement the Water and Sanitation Policy in collaboration with other partners.

ii) Undertake strategic studies in the water and sanitation sector.

iii) Ensure human capacity development and resource mobilization for the implementation of water and sanitation projects.

iv) Ensure all relevant stakeholders are engaged through an effective sectoral coordination mechanism.

v) Ensure sustainable and reliable water supply and sanitation services are available in both urban and rural areas.

vi) Promote alternative water sources, including rainwater harvesting.

vii) Invest in national strategic, large-scale water and sanitation programmes and projects.

viii) Ensure water resources are managed sustainably, protected and conserved.

ix) Develop and ensure water quality standards are maintained, and water pollution is controlled.

x) Manage Zanzibar Water Laboratories.

xi) Manage any extra-ministerial and quasi-government departments, parastatal organizations and agencies in Zanzibar.

For effective implementation of the Policy, and based on the issues raised in Chapter 2 and Chapter 4 of this Policy, the following departments and/or institutions are recommended to be domiciled in the Ministry responsible for water and sanitation:

a) Department of Water Development and Sanitation Management

The Department of Water Development and Sanitation Management will be the technical arm of the Ministry responsible for ensuring water security in Zanzibar, with the mandate to oversee all functions of water resources management, water supply, and sanitation in Zanzibar. The department will have the following two divisions:

Division of Water Resources Management

This Division will be responsible for:

i) Overseeing all functions of water resources management and development, including water demand management, new water source development, water source and catchment conservation, water resource planning, monitoring, data management and allocation.

ii) Undertaking strategic studies and developing requisite guidelines on water resources management.

iii) Establishing a national water resources budget and sustainable allocation measures that consider any changes in water availability while prioritizing domestic water use to ensure water security in Zanzibar.

iv) Establishing a mechanism for issuing and enforcing permits and licensing for water resource users. Examples of water resource users include water utilities, industries and irrigation, among others.

v) Controlling pollution of water resources through issuing licences to intending polluters, such as the release of treated wastewater to rivers.

Division of Water Supply and Sanitation Management

This Division will be responsible for:

i) Overseeing and supervising all water supply and sanitation utilities.

ii) Developing requisite guidelines on water supply and sanitation.

iii) Undertaking strategic initiatives and studies on water supply and sanitation.

iv) Managing national water laboratories.

b) Zanzibar Utilities Regulatory Authority (ZURA)

The Zanzibar Utilities Regulatory Authority will be responsible for technical and economic regulation of water supply and sanitation services. Specifically, ZURA will be responsible for:

i) Promoting effective competition and economic efficiency in the provision of water supply and sanitation services.

ii) Setting and regulating tariffs, fees and charges for water supply and sanitation services.

iii) Protecting the interests of consumers by controlling the efficiency of water supply and sanitation services.

iv) Promoting the availability of regulated water supply and sanitation services to all consumers.

v) Issuing operational licences to water supply and sanitation utilities as well as regulatory guidelines on service delivery.

vi) Enhancing public awareness on the regulated water supply and sanitation services.

c) Water supply and sanitation utilities

Water and sanitation utilities will be provided under the regulatory function of ZURA. Each utility (public and/or privately operated) will be semi-autonomous under the supervision of the Ministry responsible for water and sanitation. The primary function of the utilities will be to:

i) Invest and operate water supply and sanitation infrastructure.

ii) Request permit from the Department of Water Development and Sanitation Management to access and develop water resources.

iii) Request permit from the Department of Water Development and Sanitation Management to release treated wastewater into water sources.

iv) Provide clean and safe water supply services as per stipulated regulatory guidelines.

v) Provide sustainable sanitation services as per stipulated regulatory guidelines.

vi) Collect revenue for the provision of water supply and sanitation services as per stipulated regulatory guidelines.

d) Zanzibar Water Fund

The Fund will have a Board composed of a chairperson and a maximum of six other members who are competent in areas of programme management and resource mobilization in the water and sanitation sector. Some of the sources of funds will include (but will not be limited to) water services charges, water permits, water licences, penalties and grants. The purpose of the Fund will be to:

i) Devise new sources of funds to ensure sustainable financial resources for continuous implementation of water programmes and projects in Zanzibar.

ii) Ensure effective collection and transfer of funds from various sources to the Fund's account.

iii) Disburse and be accountable for the funds as per stipulated guidelines.

e) Zanzibar Water Institute

The current ZAWA training centre will be renamed the Zanzibar Water Institute and managed under the Ministry responsible for water and sanitation. The mandate of the institute will be to:

i) Provide premier and high-quality technical training under vocational training guidelines in the water and sanitation sector.

ii) Undertake strategic research and capacity development in the water and sanitation sector.

iii) Develop strategic collaboration and partnership on research and capacity development with stakeholders and partners at the country, regional and international levels.

f) Shehia Water Conservation Associations

These will be voluntary community water conservation associations in each Shehia and will form the basic structures for water source protection and catchment conservation in Zanzibar. The Division of Water Resources

Management will develop guidelines on the formation of water conservation associations, and their main function will be to:

i) Facilitate active participation of local communities in the conservation, protection and management of water sources at the local level.

ii) Facilitate participation of local communities in planning, development and safeguarding water projects in the respective local communities.

iii) Facilitate awareness and behavioural change and communication activities on various aspects of the water sector at the local level.

5.2 LEGAL FRAMEWORK

The current Water Act No. 4 of 2006 has established ZAWA as a monopolistic institution responsible for all aspects of water, including water resource management, marine waters, water supply, and water sector regulation. The 2006 Water Act was not formulated to provide a Principal Water Act but rather focused on establishing ZAWA. Also, the Act does not expressly provide for sanitation functions to be under the Ministry responsible for water.

For effective implementation of this Policy and to avoid ambiguity and duplication of functions, there is a need to:

i) Undertake a comprehensive review of Water Act No. 4 of 2006 and draft a new, robust Principal Water Act that covers all aspects of water and sanitation in Zanzibar.

ii) Review ZURA Act No. 7 of 2013 to align with the new Principal Water Act.

iii) Undertake a comprehensive review of Public and Environmental Health Act No. 11 of 2012 to align with the new Principal Water and Sanitation Act.

iv) Review the Zanzibar Environmental Management Act No. 3 of 2015 to align with the new Principal Water Act.

v) Review the existing policy and regulatory framework in the local government to transfer sanitation functions to the Ministry responsible for water and sanitation.

5.3 ROLES AND RESPONSIBILITIES OF KEY PLAYERS

a) Government ministries

Ministries with functions related to water resources, supply and sanitation will work with the Ministry responsible for water and sanitation to realize the water policy objectives. The Ministry responsible for water and sanitation will coordinate various aspects of support from the following ministries:

i) **Ministry responsible for Regional Administration and Local Government:** Support local community mobilization, local civil works and collaboration on managing solid waste.

ii) **Ministry responsible for Finance and Planning:** Monitor the implementation of water and sanitation plans, programmes and projects, as well as mobilize financial resources for policy implementation.

iii) **Ministry responsible for Agriculture, Natural Resources, Irrigation and Livestock:** Support and promote the efficient use of water resources in agricultural and livestock production, including alternative water sources for

irrigation, such as rain harvesting, recycled wastewater, etc., and supporting all efforts of protecting water sources.

iv) **Ministry responsible for Environment:** Support all efforts in the management and protection of the environment, especially catchment conservation and water source protection.

v) **Ministry responsible for Education and Vocational Training:** Lead in developing and implementing capacity-building WASH programmes in schools and training institutions, community awareness on water use and developing vocational skills on water.

vi) **Ministry responsible for Trade and Industrial Development:** Promote the efficient use of water in industries, technological innovations in managing water supply and sanitation, and develop renewable energy and low-cost technologies for exploring new water sources such as desalination and rainwater harvesting.

vii) **Ministry responsible for Lands and Housing Development:** Ensure the development of sustainable integrated land-use plans and issue of title deeds for conserved and water source areas.

viii) **Ministry responsible for Health:** Strengthen the management of wastewater from health facilities, support public and institutional WASH and hygiene services, collaborate closely with the Ministry responsible for water and sanitation to ensure compliance with the Public Health Act, standards and guidelines, and promote improved public health.

ix) **Ministry responsible for Infrastructure, Communication and Transport:** Coordinate infrastructure construction plans to ensure inter-linkages and alignment, thereby preventing damage to water supply and sanitation systems.

x) **Ministry responsible for Tourism:** Support tourism facilities to adopt water conservation measures and efficient water usage, collaborate with relevant authorities to prevent water pollution from tourism activities, and invest in technological innovations to promote wastewater treatment and reuse.

xi) **Ministry responsible for Blue Economy and Fisheries:** Promote conservation and protection of coastal water resources and surrounding areas while ensuring environmental integrity by preventing pollution of the coastal water resources.

xii) **President's Office responsible for Economy and Investment:** Oversee infrastructural development projects and integrated planning in water and sanitation. This includes attracting both local and international investments to enhance infrastructure and service delivery. Also work with various stakeholders, including private sector and development partners, to coordinate efforts and oversee the implementation of water and sanitation projects.

xiii) **Ministry responsible for Disaster Management:** Support coordination in managing water-related disasters by establishing appropriate response mechanisms in dealing with floods, droughts, disease outbreaks, etc.

xiv) **Ministry responsible for Information:** Support publicity and information-sharing on the conservation and protection of water sources and progress in water and sanitation projects.

xv) **Ministry responsible for Sports:** Ensure adequate water and sanitation facilities in sports centres.

b) Research and academic institutions

A dedicated effort will be made to develop effective collaboration pathways with academic and research institutions in and outside the country. These institutions will provide the requisite knowledge base through research as well as support capacity-building endeavours in the sector.

c) Private sector

Private sector entities, either firms or individuals, will be encouraged to participate in financing and/or implementing water and sanitation projects. This may include undertaking water resources management and development activities, providing water supply and sanitation services, and promoting and investing in appropriate innovative technologies in the sector.

d) Individual participation

All individuals in Zanzibar will be encouraged to participate in and contribute to the water and sanitation sector, including the protection and conservation of water sources, catchment management, efficient use of water, adopting sustainable sanitation practices and aligning with various guidelines and regulations in the sector.

e) Non-state actors

The media, non-government organizations, not-for-profit organizations, civil society organizations, community-based organizations, faith-based organizations, and private sector entities shall be encouraged to actively take part in resolving issues related to water supply, sanitation and hygiene services, water resources management, communication, education, public awareness, advocacy as well as undertaking related analytics in the water and sanitation sector.

f) Development partners

All development partners will be encouraged to fully participate in implementing the Policy by providing financial resources, offering technical support and participating in sector review dialogue.

6. MONITORING, EVALUATION AND LEARNING

6.1 MONITORING

The Government will ensure that a cost-effective monitoring system is put in place to assess the implementation pathway of the Policy. The monitoring system will be structured on the principles of results-based management. In this regard, the Ministry responsible for water, in collaboration with partners, shall implement the monitoring and evaluation strategy by developing appropriate tools such as progress reports and field visits, among others, in order to track the enumerated indicators to fully realize the policy objectives.

6.2 EVALUATION

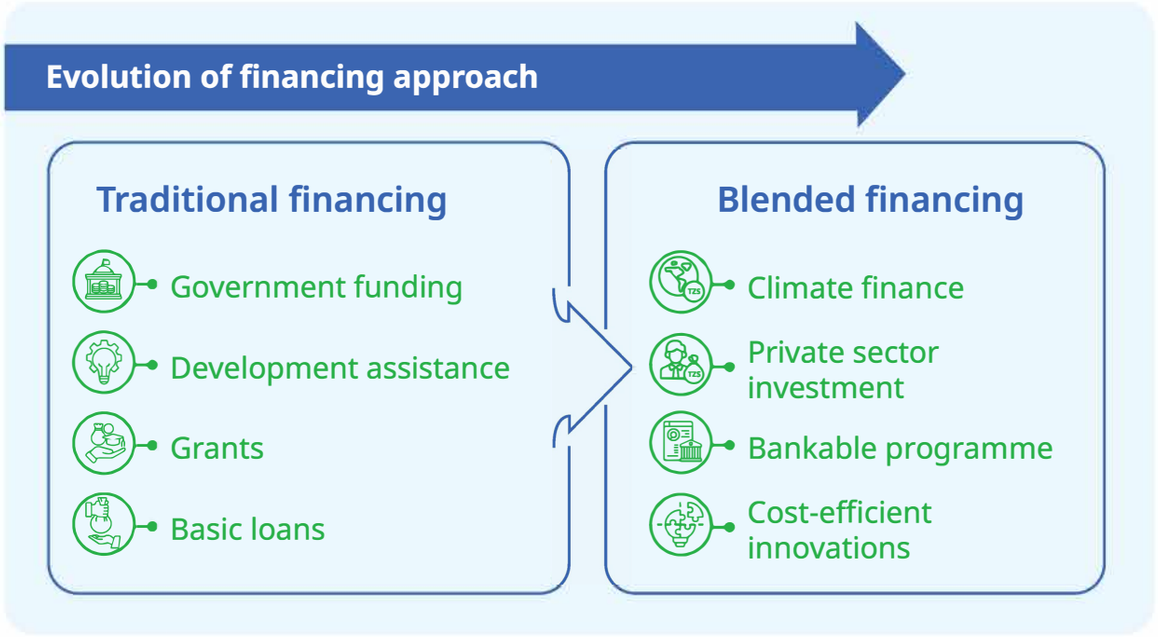
The Zanzibar Water and Sanitation Policy will be evaluated every two years through internal evaluation. The evaluation is intended to assess the accomplishments of the Policy's main and specific objectives as elaborated in the monitoring and evaluation strategy. The evaluation will also highlight challenges encountered and achievements made during the implementation period.

6.3 LEARNING

The lessons learnt during the monitoring and evaluation of the Policy will be documented and used to inform subsequent phases of implementing the Policy. Specifically, the learning process will entail reflecting on the challenges encountered during the implementation of the Policy and developing appropriate response measures in subsequent phases of the Policy. Such an approach has the benefit of ensuring continuous improvement and alignment of the Policy with emerging challenges, opportunities or needs in the sector.

6.4 POLICY REVIEW

The Zanzibar Water and Sanitation Policy will be subjected to a review after five years or when the need for review arises. The review will be undertaken to accommodate inherent development challenges and opportunities, in both social and economic sectors, that will have emerged after the gazettement of the Policy. Before undertaking a policy review, the Ministry responsible for water will prepare a White Paper on the anticipated policy review, highlighting the extent, scope and guidelines of the policy review.



6.5 COST AND RESOURCE MOBILIZATION

The Zanzibar Water and Sanitation Policy will require substantial financial resources to cover its implementation costs. The Government will earmark budget allocations and seek support from partners to bridge the anticipated financial gaps. The financial support is expected to come from multilateral and bilateral partners, international and national NGOs, knowledge management institutions and the private sector. Support is anticipated through official development assistance, grants, loans and technical support.

The Zanzibar Water Investment Programme (ZanWIP) will be integral in supporting resource mobilization for implementing the Policy. ZanWIP is a tailored resource mobilization tool aimed at coordinating partners to mobilize financial resources for the water and sanitation sector. By leveraging this tool, the Government intends to foster partnerships with stakeholders and realize set targets.

The Government will be committed to supporting efforts towards the development of bankable, integrated programmes that can draw investment from diverse sources. Climate finance opportunities will be maximized where the Government, in collaboration with development partners and other sectors, will develop climate-resilient water and sanitation programmes. A conducive environment will be created for the private sector to invest in the water and sanitation sector. This signifies a move from depending solely on traditional financing methods to a more innovative, blended financing approach. In line with this, there will be an emphasis on cost-efficiency in all governmental activities in the sector. Not only will the Government target operational efficiencies internally, but it will also promote cost-efficient technological innovations in the water and sanitation sector.

6.6 COMMUNICATION STRATEGY

The communication strategy aims to ensure that stakeholders and the public are adequately aware of the provisions in the Policy, including its implementation pathways. Therefore, the communication strategy is an important element in enhancing the political visibility and strategic prioritization of the water and sanitation sector, which is critical in accelerating efforts towards achieving Sustainable Development Goal 6 and other water-related goals. Achieving the desired goals requires various efforts, including positively changing the perception and mindset of the people, which can be achieved through effective communication pathways and sharing knowledge. The sector will develop new ways of reaching out to partners so that all stakeholders can actively participate in supporting the sector.

THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR

MINISTRY OF WATER, ENERGY AND MINERALS

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