

## TAITA TAVETA COUNTY WATER AND SANITATION POLICY

### 1. BACKGROUND

Taita Taveta County is one of the six Counties in the Coastal region of Kenya. It is located approximately 200 Km northwest of the coastal city of Mombasa and 360 Km southeast of Nairobi, the capital city of Kenya. It borders Tana River, Kitui and Makueni Counties to the North, Kwale and Kilifi Counties to the East, Kajiado County to the North-west, and the Republic of Tanzania to the South and South-west. The County covers an area of 17,084.1 Km<sup>2</sup> and lies between latitude 20 46/ South and 40 10/ South and longitude 37 36/ East and 300 14/ East.

The County is divided into three major topographical zones. The upper zone, suitable for horticultural farming, comprises of Taita, Mwambirwa and Sagalla hills regions with altitudes ranging between 304 metres and 2,208 metres above sea level. The lower zone consists of plains where there is ranching, national parks and mining. The third topographical zone is the volcanic foothills zone which covers the Taveta region with potential for underground water and springs emanating from Mt. Kilimanjaro.

The main rivers in the County are the Tsavo, Lumi and Voi rivers. Mzima springs is the major water supplier to Voi town and Mombasa City, while small springs and streams include Njukini, Njoro kubwa, Kitobo, Sanite, Maji Wadeni, Humas Springs and Lemonya Springs.

In addition, there are two lakes, Jipe and Challa, both found in Taveta area. Lake Challa is a crater lake with little economic exploitation, while Lake Jipe is slightly exploited through small scale fishing. Both lakes are served by springs emanating from Mt. Kilimanjaro.

The County is mainly dry, except for the Taita hills which are considerably wet. The effect of the South-Easterly winds influences the climate of the County. The hilly areas have ideal conditions for condensation of moisture, which result in relief rainfall.

Taita Taveta County is divided into various administrative and political units crucial for management of the County and also service delivery to the public. In terms of political units, the County has four constituencies namely, Wundanyi, Mwatate, Voi and Taveta. These are further divided into 20 electoral wards, otherwise referred to as County assembly areas.

With regard to administrative subdivisions, the County is composed of four sub-County units which follow the same boundaries as the constituencies and hence go by the same name as those of the constituencies. The County is further divided into 32 and 90 locations and sub-locations respectively.

As of 2009, the population of the County was 284,657 (KNBS, 2009) where females and males were 139,323 and 145,334 respectively. The County population was projected to be 306,205 in 2012 comprising of 149, 869 females and 156,336 males. Further projections indicate that the total County population will increase to 329,383 and 345,800 in 2015 and 2017 respectively. The projected 2018 population of the county is 347,909 comprising of 177,333 males and 170,584 females

The intercensal growth rate for the County population is 1.6%. Whereas this is below the national average, estimated at 3%, (KNBS, 2009) the County population is nevertheless projected to increase to close to 347,909 people in 2018. The increase is expected to directly impact on the basic needs such as food, water and housing; social services such as health and education; and infrastructure including access roads and markets.

The Gender Inequality Index (GII) reflects gender-based disadvantage in three dimensions — reproductive health, empowerment and the labour market. The index shows the loss in potential human development due to inequality between female and male achievements in these dimensions. It varies between 0 – when women and men fare equally – and 1, where one gender fares as poorly as possible in all measured dimensions.

Improving equity in gender issues and reducing gender disparities will benefit all sectors and thus contribute to sustainable economic growth, poverty reduction and social injustices.

### **1.1 SITUATION ANALYSIS**

Taita Taveta County's Integrated Development Plan (CIDP 2018-2022) is *"A prosperous County that supports modern quality life for her people"*. The Water and Sanitation Policy has the main objective to *"promote an efficient and effective management system and environmentally sound development of all water resources and sanitation in Taita Taveta County"*.

The County and sectoral policies communicate the general aims and intentions of the county government, and the fulfillment is thus premised on planning and setting measures locally. For the county to achieve the above objective and to respond to current priorities, it is important to adopt a holistic approach to water resources management and development. Adopting Integrated Water Resources Management (IWRM) will enhance sustainable management of water resources and provide appropriate decision support systems for valuating competing uses of water.

In managing demand for competing uses of water, there are challenges in making allocation-decisions, including those concerning the following;

- (i) balancing the needs for improving food supplies with that of preserving water courses or wetlands for fish and wildlife habitat; and demands from human settlements and farms
- (ii) estimating how much groundwater should be pumped now and how much should be preserved for future needs, taking into consideration the need to preserve borehole water quality long after installation;
- (iii) forecasting how much ground water and how much surface water should be withdrawn to meet current and future water demands;
- (iv) carrying out studies on how much beneficiaries can afford to pay for sustaining water and services;

To ensure sustainable development of water resources which responds to sector issues including those mentioned above, water resources management would be considered within the context of the following two main areas:

1. Conservation of the water resources stock in all its occurrences to sustain availability and maintain acceptable quality for the betterment of human health and the environment; and
2. Regulation and control of demands of water use, sanitation and waste disposal to stay within the natural capacity of the water resources base, which must necessarily maintain its regeneration and self-purification characteristics.

### **1.2 WATER AND POLICY**

Water plays a cardinal role in socio-economic development and it is fundamental for sustaining all forms of life. Productive activities ranging from agriculture, mining, tourism and other industries are dependent on water. However, Taita Taveta County's water resources are yet to be fully exploited for the benefit of its people to enhance their productive ability for improved livelihood. To achieve this, the County Government of Taita Taveta has formulated the County Water and Sanitation Policy which will lead to significant changes in the water and sanitation sector.

However, in view of the new challenges and modern approaches that have evolved, regarding the management of water resources, the Ministry of Energy and Water Development in consultation with other stakeholders undertook the formulation of the Taita Taveta County Water and Sanitation Policy in order to provide a comprehensive framework for sustainable development, management and utilization of the water resources. Water is a crucial element for the preservation of the environment and thus has to be managed in ways that will not only benefit the environment but future generations as well. The Policy embraces modern principles of water resources management and endeavors to deal with the daunting challenges of poverty reduction.

The Policy also seeks to address cross-sectoral interests in the water and sanitation sector with particular focus on water resources planning, water supply and sanitation development, management and utilization. Integrated water resource management will address cross-sectoral issues such as, wetland conservation, climate change and conflict management.

The Taita Taveta County Government is committed to improving the sector and has attempted through this Policy to create an enabling environment by providing a clearly defined framework within which all stakeholders would perform. This will contribute to positive economic growth and increased production. Ultimately, Taita Taveta County will attain its Vision of *“optimally harnessing the water resource for the efficient and sustainable utilization of this resource to enhance economic productivity and reduce poverty”*.

### **1.3 EXPECTED OUTCOMES AND BENEFITS**

This County Water Policy provides a direction and framework for management, development and utilization of water resources. It sets out the approach, objectives, principles and strategies for implementation. This Policy in addition outlines the human, institutional, technological and financial requirements for the achievement of the policy objectives.

The major outcome of this National Water Policy is to improve the management of water resources, institutional coordination and defined roles and responsibilities. It encourages the use of water resources in an efficient and equitable manner consistent with the social, economic and environmental needs of present and future generations. This will help to achieve the national goal of increasing accessibility to reliable safe water by all sectors of the economy in order to enhance economic growth and improve quality of life.

### **1.4 POLICY FORMULATION PROCESS**

Since the beginning of the 1980's, the Government of Kenya has introduced a number of policy reforms in the water sector that were specially intended to improve efficiency in rural, urban and irrigation water as well as attain some measure of environmental protection and conservation.

After the 2010 Kenya Constitution, which created the county governments, one key challenge for the Counties has been the absence of a comprehensive water policy focusing on all aspects of water

resources management. As part of the process, policies specific to urban water supply and community water and sanitation services are developed and incorporated.

The process has been enhanced by applying the National Ministry of Water and Irrigation Strategic Management Plan (2018) principles to ensure that the policy appropriately addresses environmental sustainability constraints of proposed county government policy measures covering natural resources, socio-cultural, economic and institutional issues.

The issues highlighted from the considerations of the overview of the Kenya water sector, the Kenya Poverty Reduction Strategies, Sustainable Development Goals (SDGs), which all fit into the key issues presented in the Taita Taveta County Water and Sanitation Policy. The policy is also set within the Kenya Government commitment to international obligations and protocols and to the broad guiding principles of water management.

### **1.3 GUIDING PRINCIPLES**

The key principles that provide the basis for policy direction for sustainable management, development and use of water in Taita Taveta County include the following key ones:

- (i) the principle of fundamental right of all people without discrimination to safe and adequate water to meet basic human needs;
- (ii) the principle of meeting the social needs for water as a priority, while recognizing the economic value of water and the goods and services it provides;
- (iii) the principle of recognizing water as a finite and vulnerable resource, given its multiple uses;
- (iv) the principle of improving equity and gender sensitivity;
- (v) the principle of integrating water resources management and development with environmental management in order to ensure the sustainability of water resources in both quantity and quality;
- (vi) the principle of subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society;
- (vii) the principle of solidarity, expressing profound human companionship for common problems related to water;
- (viii) the principle that inter-county, national and international cooperation is essential for sustainable development of shared catchments and basins;
- (ix) the principle of the greatest common good to society in prioritizing conflicting uses of water

These principles are in conformity with the Taita Taveta CIDP (2018-2022, National PRS and in line with the statutes of The Republic of Kenya.

## **2. STRATEGIC ACTIONS OF THE COUNTY WATER AND SANITATION POLICY**

### **2.1 OVERALL GOAL**

Consistent with the CIDP, the overall goal of the Taita Taveta Water and Sanitation Policy is to “achieve sustainable development, management and use of Taita Taveta County’s water resources to improve health and livelihoods, reduce vulnerability while assuring good governance for present and future generations”. This will be achieved by addressing relevant issues under water resources management, urban water supply and rural/community water and sanitation. For each broad area, a number of focus areas for policy considerations have been identified. Within each the main principles and challenges are listed followed by policy objectives and the corresponding measures.

### **2.2 WATER RESOURCES MANAGEMENT**

The County has the biggest water supply scheme in the coastal region. This is the Mzima Water Project, which supplies water to Voi town and its environs through a number of major projects including Voi water supply, Mbololo water supply, Irima, Kimwa and Kaloleni water projects, Miasenyi water project, Manyani water supply, and Maungu-Buguta water project. This scheme is also among the major suppliers of water in the coastal city of Mombasa. The source of the water is Mzima springs, which is situated in the Tsavo West National Park.

Other major water schemes are found in Taveta and Wundanyi areas. In Taveta, there are four schemes. These are Taveta Lumi water supply, Challa water project, Chumvuni water project, and Kitobo water project.

The County is home to both surface and underground water sources. The surface water sources include Mzima springs, Lakes Challa and Jipe, and some rivers like Mwatate, Kishenyi, Ziwani, Lumi, Sanga, Wanganga and Voi, Challa, Kigombo and Kishushe. Underground water resources include two springs, Homer’s and Lemonya, and a number of streams including Njukini, Sanite Njoro Kubwa, Kitobo, and Maji ya waleni.

Current trends point to the fact that an integrated water resources management approach is needed to ensure that water does not become a constraint to national development. Previously, water was regarded as a free commodity – considered unlimited in quantity and available as required. However, with continued population growth and urbanization, and rapidly growing and diversified demands, including water for irrigation, hydropower generation, industrial processes, fisheries and aquatic ecosystem protection, the resource is becoming increasingly scarce and often of inferior quality.

These trends are exacerbated by past practices whereby planning, development and management of the resource for the envisaged uses were approached from a sectoral perspective without recourse to coordination and dialogue among the relevant agencies and institutions. The result of this prevalent situation has often been in the form of non-optimal and unsustainable use of the resource. Additionally, in the past, environmental sustainability – integrating natural resources issues with socio-economic dimension - in water resources management has not featured prominently among policy makers and planners concerned with the development and utilization of the resource. Today, however, modern approaches to natural resource management acknowledge that planning for use and preservation of the natural resource must take the wider sustainable development needs of society into consideration.

## **2.2.1 Focus Area 1 - Integrated Water Resources Management**

### **Principles and Challenges**

The main principles applicable to IWRM are:

- (i) recognizing water as a finite and vulnerable resource, given its multiple uses;
- (ii) integrating water resources management and development with environmental management in order to ensure the sustainability of water resources in both quantity and quality;
- (iii) coordinating water resources planning with land use planning;
- (iv) adopting the river basin (or sub-basin) as a planning unit; and
- (v) integrating river basin management with management of the coastal zone and wetlands.

The main challenges in integrated water resources management are;

- (i) ensuring that there is adequate water, both quantity and quality, to restore and preserve the natural character and functions of eco-systems;
- (ii) adhering to stipulated standards of water quality;
- (iii) ensuring that human activities do not adversely impact on long-term availability of water resources; and
- (iv) ensuring that the appropriate institutional arrangement and human resources are available.

### **Policy Objectives**

The key policy objectives of applying the principles and meeting the challenges above are to:

- (i) achieve sustainable management of water resources;
- (ii) ensure equitably sustainable exploitation, utilization and management of water resources, while maintaining biodiversity and the quality of the environment for future generations;
- (iii) Use GPS to position sites and Map out water sources, flood prone areas , water pans ,spring sites

### **Policy Measures and/or Actions**

In order to meet the above objectives, Government will:

- (i) adopt water resources planning as a cross-cutting basic component of county economic planning;
- (ii) ensure preparation of IWRM strategies using the various catchments and river basins as the planning units;
- (iii) establish appropriate institutional structures and enhance capacity building;
- (iv) adopt sustainable practices that avoid damage to critical natural capital and irreversible ecological processes;
- (v) promote partnerships between the public and private sectors for the protection and conservation of water resources through the use of cleaner and efficient technologies, effective waste management and sound land management and agricultural practices; and
- (vi) ensure cost recovery and sustainability of water projects, taking into account the specific needs and preferences of the poor.

## **2.2.2 Focus Area 2- Access to Water**

### **Principles and Challenges**

The main principles and challenges include:

- (i) the fundamental right of all people without discrimination to safe and adequate water to meet basic human needs;
- (ii) ensuring a minimum water requirement for the maintenance of health and well-being is assured.
- (iii) Encroachment of water catchment areas, streams, poor land use and other human activities
- (iv) Water harvesting and storage at house hold and community levels (for irrigation, livestock and wildlife)
- (v) Well conserved catchment areas, playing its environmental roles for sustainability of water resources and aquatic life;

### **Policy Objectives**

The policy objectives are to;

- (i) facilitate improving access to potable water without discrimination; and
- (ii) enhance the management and development of water resources in a manner which, as first priority, safeguards that the entire population, particularly the poor and vulnerable, will have access to adequate and potable water;
- (iii) increase the availability of water for irrigation, livestock and wildlife use;
- (iv) enhance access to water for irrigation, livestock and wildlife use;

### **Policy Measures and/or Actions**

In order to meet the above objectives Government will:

- (i) strengthen and ensure sustainability of ongoing community management, operation and maintenance of facilities, in order to safeguard investments already made;
- (ii) strengthen Ward Committees to assume a central role in supporting community management of water and sanitation facilities, and in maintaining the integrity of aquatic ecosystems;
- (iii) increase the stake of and clearly define the role of the formal and informal private sector in the provision of water and sanitation in urban and rural communities and ensure the facilitative role of County Government agencies;
- (iv) promote partnership between the public and private sectors in the provision of water supply and sanitation services for improved management and to facilitate capital inflows;
- (v) improve efficiency in production and distribution through effective and improved O&M and pricing mechanism (strategy and structure) taking into account the poor and vulnerable;
- (vi) ensure sustainability through cost recovery, taking into account the basic right to a threshold level of supplies ("some for all"), especially for the segment of the populace who can demonstrably not afford the full cost of supplies;
- (vii) gazette for conservation and protection of clerical local water towers and water catchment areas;
- (viii) sensitize / capacity building the community on sustainable land use;
- (ix) involve public and private players for the conservation and protection of the catchment areas;
- (x) carry out capacity building on WRUA and CFAs to engage in conservation and protective activities e.g. tree growing and maintenance;
- (xi) ensure marking and pegging of riparian lands;
- (xii) encourage roof water harvest for domestic and livestock use;
- (xiii) Promote water storage infrastructure developments e.g. small dams, water pans underground water tanks etc.;

### **2.2.3 Focus Area 3 - Water for Food Security**

#### **Principles and Challenges**

The key principles are:

- (i) recognizing water as a finite and vulnerable resource, given its multiple uses;
- (ii) integrating gender equality principles into all aspects of IWRM;

The main challenge with regards to food security is;

- (i) ensuring availability of water for food security for all seasons;

#### **Policy Objectives**

The key objectives are to:

- (i) ensure availability of water in sufficient quantity and quality for cultivation of food crops, watering of livestock and sustainable freshwater fisheries to achieve sustainable food security for the country;
- (ii) ensure availability of water in sufficient quantity and quality to support the functions of the eco-systems in providing alternative livelihoods;

#### **Policy Measures and/or Actions**

The County Government will take the following measures and/or actions for achieving food security:

- (i) Support the establishment of micro-irrigation and valley bottom irrigation schemes among rural communities with the assistance of district assemblies;
- (ii) strengthen district assemblies to assume a central role in supporting community operation and maintenance of small-scale irrigation and other food production facilities;
- (iii) Promote partnership between the public and the private sector in the provision of large commercial irrigation infrastructure taking into consideration effects on economy, culture, environment and health;
- (iv) encourage the efficient use of fertilizers to reduce pollution of water bodies and ensure conservation of water;
- (v) promote and encourage water use efficiency techniques in agriculture and reduce transmission losses of water in irrigation systems;
- (vi) manage land use and control land degradation, to reduce soil loss and siltation of water bodies;

### **2.2.4 Focus Area 4 - Water for Non-Consumptive and Other Uses**

#### **Principles and Challenges**

The principles applicable here are:

- (i) the precautionary principle that seeks to minimize activities that have the potential to negatively affect the integrity of all water resources;
- (ii) the polluter pays principle, to serve as a disincentive to uncontrolled discharge of pollutants into the environment;
- (iii) recognizing water as a finite and vulnerable resource, given its multiple uses;
- (iv) Water harvesting and storage at house hold and community levels ( for irrigation, livestock and wildlife use

The challenges include:

- (i) ensuring availability of water in suitable quantities for energy production and other non-consumptive uses;
- (ii) ensuring effective water demand management, improved efficiency of use, effective conservation measures, realistic pricing and prevention of pollution of water resources and the environment;
- (iii) balancing the competing and conflicting demands of water between industries, mining firms and adjacent communities;
- (iv) encroachment of the water catchment areas, streams, poor land use and other human activities;

### **Policy Objective**

The policy objectives are to:

- (i) ensure availability of water for hydropower generation, various industrial and commercial uses, mining operations, water transport and recreational purposes;
- (ii) ensure adequate protection of water sources in mining and other industrial areas;
- (iii) well conserved catchment area, playing its environmental roles for sustainability of the water resources and aquatic life;
- (iv) to increase the availability of water for irrigation, livestock and wildlife;
- (v) enhance access to water harvest for domestic and livestock use;

### **Policy Measures and/or Actions**

The County Government will take the following measures and actions:

- (i) facilitate availability of water resources for industrial uses through sustainable water resources management;
- (ii) require industries, including mining operations, to develop and implement environmental management systems which take into account the impact of industries on the country's water resources;
- (iii) fully implement the enacted requirements related to licensing of water uses (permits) and issuance of waste water (effluent) discharge permits;
- (iv) encourage development of codes of practice for efficient water use and cleaner production technologies in industrial activities;
- (v) gazette for conservation and protection of critical local water towers and catchment areas;
- (vi) sensitize / capacity building the community on the sustainable land use;
- (vii) involve the public and private players on conservation and protection of the catchment areas;
- (viii) capacity building on WRUAs and CFAs to engage in conservation and protective activities e.g. tree growing and maintaining them;
- (ix) pegging and marking of riparian areas;
- (x) encouraging roof water harvesting for domestic and livestock use;
- (xi) water storage infrastructure development e.g. storage tanks, water pans etc;

## **2.2.5 Focus Area 5 – Financing For Water Resources Management**

### **Principles and Challenges**

The underlying principle in financing water resources management is:

- (i) meeting the social needs for water as a priority, while recognizing the economic value of water and the goods and services it provides.

The main challenges are:

- (i) ensuring sustainability in water resources management through appropriate pricing mechanisms while ensuring equity;
- (ii) ensuring water resources management is adequately funded and appropriate levies instituted for raw water abstraction to promote efficiency, sustainability and equity; and
- (iii) sustaining appropriate levels of funding to the sector to meet the CIDP targets and the SDGs.

### **Policy Objectives**

The policy objective is to;

- (i) ensure that adequate funds are available for the development of the water sector to achieve the goal of making water available for all.

### **Policy Measures and/or Actions**

To achieve the objectives, the County Government will:

- (i) permit the application of cost sharing with vulnerable communities to cover capital costs, in view of the social value of water;
- (ii) where appropriate, encourage the adoption of a tiered tariff structure system (for example, as for instance, for water supply and industrial services);
- (iii) promote incentives for demand management measures in order to ensure the rational allocation and conservation of water resources;
- (iv) institute a mechanism of sharing with Water Resources Authority (WRA) the levied water charges, e.g. water use fees, with the dual purpose of providing a tool for regulating water use; and the means of defraying the costs incurred in maintaining an efficient system for IWRM activities

## **2.2.6 Focus Area 6 – Climate Variability and Change**

### **Principles and Challenges**

The relevant principles include:

- (i) recognizing water as a finite and vulnerable resource, given its multiple uses;
- (ii) coordinating water resources planning with land use planning;

The main challenges of mitigating the effects of extreme events and disasters are:

- (i) ensuring adequate response strategies are in place;
- (ii) ensuring adequate support to vulnerable people for implementing their own coping strategies.

### **Policy Objectives**

The policy objectives are;

- (i) to minimize the effects of climate variability and change; and
- (ii) to institute measures to mitigate the effects of, and prevent damage caused by extreme hydrological occurrences ( floods and droughts).

### **Policy Measures and/or Actions**

In order to assure preparedness for extreme events and disasters, Government will:

- (i) construct flood protection structures at appropriate locations;
- (ii) apply appropriate technologies to provide the necessary information for detection and early warning systems for floods and drought;

- (iii) establish and enforce appropriate buffer/riparian zones along river banks, water catchments, pans, dams;
- (iv) ensure that land-use planning/building regulations are adequate and enforced in respect of waterways and flood-prone areas;
- (v) provide water conservation structures of adequate capacity after carrying out environmental assessments taking into account multiple uses (e.g. fisheries and tourism) and removing conflicts (e.g. pegging the riparian areas, fencing of intakes in rivers, pans/dams to allow for restricted access to avoid encroachment);
- (vi) ensure rainwater harvesting techniques are incorporated into the building code and enforced;
- (vii) ensure implementation of mitigation strategies in consultation with affected communities.

### **2.3 URBAN WATER SUPPLY**

Taita Taveta County is in a period of rapid urbanization. It is estimated that forty percent of the about 400,000 people live in urban areas, in the county's largest towns – Voi, Mwatate, Wundanyi and Taveta. Migration from rural areas to the towns is driving urban growth rates.

The rate of urbanization outstrips current levels of urban water supply. The TAVESO currently operates 3 urban systems of Voi Water and Sewerage, Mwatate water and Sewerage and Taveta Water and Sewerage systems. Water is mostly rationed to many consumers with only a few customers able to get 24-hour supply. In the peri-urban areas and the densely populated poor urban areas customers receive supplies once a week or none at all. Among the urban poor, water can be a critical resource in short supply, with most families were relying on neighbours and vendors for their water. With rapid expansion of new housing developments, often ahead of utility services, more and more urban residents will depend on vendors and tanker services, at costs far in excess of utility rates. Additionally, the urban centres are the focus of the County's industrial and commercial activities many of which rely on adequate and reliable water supplies for efficient production.

Most of the water supply systems were built over 30 years ago. The yields from supply sources are thus no longer able to meet current demand. In addition, the variability of rainfall has increased and dry season shortages are becoming more pronounced.

The quality of water resources are increasingly being degraded as a result of agricultural, housing, commercial, industrial and mining activities. Treatment costs are therefore increasing.

The other key challenges facing the urban sub-sector include:

- the urgent need for improved management in operations and maintenance of water supply
- low-service quality and tariffs not linked to levels of service
- difficulty in setting tariffs to recover costs in view of high levels of wastage (high levels of unaccounted for water, over 40%)
- inadequate revenue and investment, in large part the result of overage facilities

The Taita Taveta County Government is determined to halt the falling trends in water supply coverage and quality and resume a programme of expansion and improvement. This requires consistent high levels of investment from public and increasingly, private (local and foreign) sources.

### **2.3.1 Focus Area 1 – Urban Water Supply Sources**

#### **Challenges**

The main challenges facing the urban water sub-sector in relation to water resources include:

- (i) increasing and improving existing water sources, tapping new sources and managing catchments to eliminate or abate depletion and degradation of water resources;
- (ii) meeting increasing demand within finite supplies; and
- (iii) increasing degradation of water quality resulting in high treatment cost

#### **Policy Objectives**

The objective for overcoming the above challenges is to:

- (i) ensure water resources are planned and managed by appropriate agencies to make it available at all times for life and health.

#### **Policy Measures and/or Actions**

In order to meet the above objective, the County Government will:

- (i) ensure effective conservation and protection of existing water sources; and
- (ii) ensure that the land and water agencies that are responsible for river catchments/basin management fulfil their mandates;
- (iii) ensure that alternative sources will be harnessed to meet present and future demand; and
- (iv) ensure that due consideration be given to water harvesting as a source of water supply in building regulations.

### **2.3.2 Focus Area 2 - Improving Access to Urban Water Supply**

#### **Challenges**

The main challenges of improving access to water in the urban sector include:

- (i) rehabilitation and expansion of existing infrastructure;
- (ii) achieving equity in access to water supply for peri-urban and urban poor to meet their basic needs at affordable cost;
- (iii) improving operations and management;
- (iv) reducing the high level of physical losses;
- (v) improving coordination with the urban planning department;

#### **Policy Objectives**

The objectives of meeting the above challenges are:

- (i) to ensure sustainable financing of the infrastructure deficit to meet present and future demand; and
- (ii) to improve management and operations.

#### **Policy Measures and/or Actions**

To achieve the above objective, the County Government will:

- (i) introduce private sector participation in the operations and management of urban water supply
- (ii) carry out rehabilitation and upgrading of reservoirs to restore and increase their capacities, where feasible, using appropriate means (e.g. dredging, raising spillway levels), and new ones built where required;

- (iii) prioritize new investments in system extensions and expansion of bulk water production based on well-established criteria that include health factors;
- (iv) ensure that an equitable amount of investment resources are dedicated to extending services to low-income communities
- (v) ensuring good coordination with the urban planning, roads and other relevant departments for wayleaves and right location of water facilities during design and implementation;

### **2.3.3 Focus Area 3 – Financing Urban Water Supply**

#### **Challenges**

The main challenges of financing urban water supply in the county include:

- (i) reducing the consistent high non-revenue water;
- (ii) improving the financial position of TAVASO, to be able to attract funds for investment to rehabilitate and expand its infrastructure to meet growing demand;
- (iii) gradually increasing tariffs to recover costs fully while paying attention to affordability, particularly of the poor;
- (iv) improving the number of viable urban water supply systems;

#### **Policy Objectives**

The objective is;

- (i) to ensure a financially viable utility and adequate funding levels to rehabilitate, improve and expand infrastructure, and also undertake operation and maintenance;

#### **Policy Measures and/or Actions**

To meet the challenges and objectives, Government will:

- (i) ensure efficient asset management by TAVASO (e.g. TAVASO setting up a Depreciation fund (for replacement of fixed assets), and a sinking fund (for expansion development);
- (ii) identify and source the required financing and undertake the required extensions to extend coverage of the water supply system to the unserved urban population;
- (iii) encourage the private sector to participate in the share-holding of the management of TAVASO;
- (iv) support TAVASO in ensuring that average water tariffs reflect the full efficient cost of water supply;
- (v) ensure the timely payment of water bills by subvented organizations;
- (vi) support TAVASO in exploring the potential of mini-hydro power installations at main intake reservoirs (and water falls) to reduce cost;
- (vii) incorporate other low energy sources in pumping water supply (e.g. solar energy, hydrams);
- (viii) work with and provide guarantees to the commercial banks to provide short term (recurrent) and long term (infrastructure) loan facilities to TAVASO and qualified DAs for expansion of water supply systems;

### **2.3.4 Focus Area 4 - Emergency and Extreme Events**

#### **Challenge**

The key challenge is:

- (i) effectively taking care of the increasing occurrences of water-related emergencies and extreme events;

#### **Policy Objective**

The policy objective is:

- (i) to effectively mitigate the effects of droughts and floods and other water-related emergencies;

#### **Policy Measures and/or Actions**

In order to assure the preparedness of the urban water sub-sector in responding to extreme events and disasters, Government will:

- (i) facilitate the development of Emergency Water Supplies Action Plan for each system in consultation with the relevant emergency services and critical consumers;
- (ii) make every effort to facilitate the delivery of adequate quantity of water for public emergency event in the timeliest manner possible;
- (iii) make sure that water supplied for public emergency event takes precedence over supplies for domestic consumers while taking steps to prevent and reduce conflicts of demand and access;

### **2.3.5 Focus Area 5 - Pro-Poor Issues**

#### **Challenges**

The main challenges of making the urban sector sensitive to pro-poor issues include:

- (i) reviewing tariffs to recover costs fully while paying attention to affordability, particularly by the poor;
- (ii) achieving equity in access to water supply for peri-urban and urban poor to meet their basic needs at affordable cost;
- (iii) understanding the needs of the poor and designing interventions to suit their supply and payment choices;

#### **Policy Objective**

The key objective in responding to urban-water issues affecting the poor is:

- (i) to ensure improved and sustainable access to water by the poor for their basic needs;

#### **Policy Measures and/or Actions**

To achieve the above objective, the County Government will:

- (i) adopt a tariff structure that provides an optimal benefit to consumers including low-income consumers;
- (ii) encourage cooperation between private operators and small-scale independent providers, rather than grant exclusivity to either party, to facilitate adequate and affordable provision of safe drinking water to unserved and underserved areas;
- (iii) establish a programme such as a Social Connection Fund to support the connection of low-income consumers to the network;
- (iv) facilitate defining unserved zones and identify cost-effective alternatives for progressively extending services to these areas;
- (v) recognize the current roles of small-scale providers (secondary and tertiary) in the water supply chain and provide support where appropriate;

### **2.4 RURAL/COMMUNITY WATER SUPPLY**

Taita Taveta County's plans outlined in the County Integrated Development (CIDP) (2018-2022) and other related development priorities, give focus to improved rural water supply, sanitation, health and, the control and eradication of water-borne diseases. A significant achievement of the

last CIDP (2013-2017) is the development of the appropriate institutional structure to implement the CIDP. The Water Department is now firmly established in all the 4 Sub-Counties of the county and continues to facilitate and provide support to community water committees in executing water and sanitation facilities including project planning and procurement.

According to the CIDP (2013-2018), the County has a total of 71,090 households, of which 35% (24,882) have access to piped water. 41,390 households, representing 58% of the total households have access to portable water. The number of households with roof catchment systems stands at 13,400 representing 19% of the total number of households. With scarcity of rainfall, efforts should be made to increase the number of households with roof catchments to tap rain water. The water quality (% of cleanliness) is 80%. In terms of water resources, there are six main rivers, 95 shallow wells, 92 protected springs, 25 water pans, five dams, 25 boreholes and 57 Water supply schemes in the County

An underlying principle of the Taita Taveta County Water and Sanitation Policy is its emphasis on community ownership and management, which entails effective community participation in the planning, implementation and management of the water and sanitation facilities in the belief that, as custodians, communities will ensure the sustainability of these systems. Water and Sanitation Committees (WSCs) have been established for all facilities and have been given some level of training to take care of their water and sanitation facilities. A necessary condition for promoting good health requires a change in behaviours and attitudes towards hygiene and so another important aspect of the policy is to maximize health benefits by integrating water, sanitation and hygiene education/promotion (including hand washing) interventions.

All water and sanitation interventions must recognize and protect the specific needs and roles of women, men and children and the physically challenged. Both women (and girls) and men (and boys) use water in different ways and share the burden of collecting water disproportionately and mainstreaming gender issues and concerns are important considerations under the Policy. Women must be seen not only as beneficiaries and water users, but also as water and waste managers and decision-makers. The role of women in the community ownership concept is crucial and must be fully operationalized.

The County has made some progress since its launch in 2013, making some achievements through the rehabilitation of boreholes and hand-dug wells (HDWs); construction of new bore-holes and water points; the assumption of responsibility for small town piped water systems for community management and construction of several public & institutional sanitation.

To sustain gains made and make accelerated progress to meet the targets of the CIDP and SDGs, the continued operation and use of existing facilities is critical. Sustaining the use and functioning of facilities at the community level depend not only on performance of Community Management Committees and but a lot also on regular maintenance. Routine maintenance depends on the presence of area mechanics and small enterprises to provide these services. A critical aspect of the chain in maintenance services is the reliable supply of spare parts sustained by ready markets for the delivery of these goods and services.

The County needs to establish, as part of the Policy, a Spares Network (e.g for hand pumps) to support the supply chain for spares to meet of community needs within limits of cost. The distribution network should be a public-private-partnership between Community Management Committees and a network manager (private company), with sub-county distribution outlets that

assures spares availability to communities. Maintaining sufficient returns from sale of spares to sustain the distribution network remains a critical challenge.

#### **2.4.1 Focus Area 1 - Access to Rural/community Potable Water**

##### **Principle**

- (i) achieving accelerated coverage and sustainability through community ownership and management;

##### **Challenge**

The key challenge of improving access to potable water to rural and small town communities is:

- (i) acquisition of land for water projects (Land ownership in potential water sources);
- (ii) inadequate management, operation and maintenance capacity;
- (iii) lack of enforcement of sustainability measures;

##### **Policy Objective**

The policy objective for assuring sustainable provision of and access to potable water to rural communities and small towns is to:

- (i) provide basic water and sanitation services for communities that will contribute towards the capital cost and ensure payment for normal operation, repair and replacement costs of their facilities, mindful of the need to ensure affordability, equity and fairness for the poor and vulnerable;
- (ii) ensure timely acquisition of adequate and potential land for water projects;
- (iii) ensure minimum service provision levels through adequate pricing, hours of supply, quality of water supplied etc. towards ensuring sustainability of the projects;
- (iv) ensure adequate, quality and equitable water supply in a sustainable manner;

##### **Policy Measures and/or Actions**

In order to achieve the above objective, the County Government will:

- (i) promote an equitable demand responsive approach where communities express demand by participating in making informed decisions on choices of services that fit their needs;
- (ii) support institutions responsible for providing information on ground-water occurrence and availability (quantity and quality);
- (iii) cascade and define at the county level the processes, conditions and stakeholders involved toward acquisition of project land as enshrined in existing Acts of law;
- (iv) facilitate and sensitize the community on their rights, responsibilities and roles as stakeholders in managing water projects;
- (v) facilitate and carry out capacity building of the Community Water Project Management Committees;
- (vi) establish operation guidelines for community water project management;
- (vii) facilitate the continuous regulation, control and supervision of Community Water Projects Management Committees;
- (viii) Define the mandate and the role of WSP in management of Rural Water Supplies;
- (ix) Protection of catchment areas from encroachment and associated effects of climate change.
- (x) gazette of existing potential water sources;
- (xi) implement effective conflict resolution mechanism;

- (xii) promote mechanisms for ensuring effective community participation, involvement and engagement;

#### **2.4.2 Focus Area 2 - Decentralized Delivery of Water Services**

##### **Challenges**

The critical challenges include:

- (i) decentralizing the effective management of the delivery of water and sanitation services;
- (ii) ensuring the sustained provision of interventions by the Development Agencies (DAs), and community based service providers/partners, owing to their inadequate financial and institutional (including shortage of trained human resources) circumstances;
- (iii) ensuring the presence of good caliber private sector service providers at district level to support services;

##### **Policy Objectives**

The objectives for meeting the above challenge are to:

- (i) support DAs to meet their statutory obligations of providing services to communities within their jurisdictions;
- (ii) ensure sustainability through effective community ownership and management of facilities, active participation of women, public sector facilitation and private sector provision of goods and services;
- (iii) facilitate the DAs while processing of land easement forms for intake catchments, pipelines wayleaves and water and sanitation facilities;

##### **Policy Measures and/or Actions**

To achieve the above objective, the County Government will take the following measures and actions:

- (i) support service providers and DAs to develop, and contribute to financing water and sanitation plans as a key requirement for participating in the CIDP;
- (ii) support service providers and DAs to actively promote and market water and sanitation projects at the community level, with support from the County Water Department;
- (iii) ensure that DAs and other community groups live up to the provisions of decentralization measures and create the required structures such as Sub-County Water and Sanitation Forums;
- (iv) build capacity at the community level for the provision of water and sanitation services;
- (v) support DAs in the monitoring and supervision of water and sanitation services;
- (vi) promote the establishment of relevant institutions at sub-county level for drinking and raw water quality assurance;

#### **2.4.3 Focus Area 3 – Financing Rural Water Supply**

##### **Challenges**

The main challenges of sustainable financing include:

- (i) financing capital and operation and maintenance costs including low internally-generated funds to complement those provided by development partners;
- (ii) setting tariffs to ensure the sustainability of operations;
- (iii) current leveraging of donor funds by County Government that has created an imbalance and a heavy dependence on funds from the country's development partners, creating doubts as to County Government commitment to meeting the sub-sector's goal;

- (iv) the problem of sustaining spare parts supply owing to inadequate involvement of the private sector;

### **Policy Objective**

The key objective in addressing the above challenges is:

- (i) to mobilize adequate financing in a sustainable fashion for scaling up delivery including an increase in local financing of investment, through organizing investment conferences;
- (ii) to establish basket/pool fund to provide for matching funds contribution

### **Policy Measures and/or Actions**

In order to achieve the objective Government will therefore:

- (i) progressively increase its portion of community water and sanitation projects funding through greater budgetary allocations as will be indicated in the County Strategic Water and Sanitation Plan for the sub-sector;
- (ii) facilitate and ensure that rural water development levy on payments for urban water is transferred for use in community water sub-sector (e.g. set up a Fund for the purpose);
- (iii) encourage DAs to dedicate a portion of their funds to meet the contribution to the capital cost of water projects by poor and vulnerable communities;
- (iv) leverage more grant/credit financing for the community water and sanitation projects; and
- (v) provide guidelines on DAs and Community Water and Sanitation Committees as entities providing utility-services, and facilitate payment of bills by the county institutions;

## **2.4.4 Focus Area 4 - Operation and Maintenance (O&M)**

### **Challenges**

The main challenges of O&M include;

- (i) sustaining O&M by communities to ensure continued use of facilities during useful-life of installed facilities;
- (ii) assuring effective supply chain management for spare parts close to community users;

### **Policy Objective**

The policy objective is to;

- (i) promote sustained use of facilities through continual awareness creation on the benefits of routine and regular maintenance practices;

### **Policy Measures and/or Actions**

To meet the above objective Government will:

- (i) strengthen DAs with the required structures and capacity for supporting communities with O&M;
- (ii) provide sufficient support to institutions that train pump mechanics, operators and managers of community and small town systems;
- (iii) provide support to local equipment and machinery manufacturers, suppliers and distributors in a bid to sustain markets for spare parts; and
- (iv) ensure that area mechanics are recognized as important partners in sustaining delivery of community water services and given adequate business development support.

## **2.5 DRAINAGE, HYGIENE AND SANITATION**

The majority of households in the County use pit latrines, which are 75.8% of total number of toilet facilities. 67.4% of these are covered pit latrines. The Ventilated Improved Pit (VIP) latrines form 4.5% of total toilet facilities. The other main type of facility is Flush toilets, which accounts for 5.8%. An estimated 63,981 (about 86%) of the total households in the County have access to toilet facilities while about 14% of households do not have any kind of toilet facility.

The farm/garden accounts for the largest garbage/waste disposal type at 44.1%, followed by garbage pits at 23.7%, burning at 22.1%, public garbage heaps at 6.4%, collection by local authority at 2.4%, and collection by private firms at 0.3%. The local authorities have began to play a more active role in garbage collection to make the environment more habitable.

The water and sanitation sector at the County level has been assigned the storm water management, provision of water services and implementation of small scale irrigation projects. The responsibility for the implementation of large scale Irrigation projects was however retained by the National government

### **2.5.1 Hygiene Education and Environmental Sanitation**

The purpose of the Policy is to guide and facilitate individuals, institutions, community leaders of all kinds and all levels, families amid communities to contribute to achieve optimal, sustainable sanitation standards and thereby improving their quality of life and eradication of poverty:

#### **Challenge**

The key challenge of hygiene education and environmental sanitation in rural and urban water supply include:

- (i) preventing pollution of water sources through indiscriminate discharge of wastes (solid/liquid) from domestic, commercial and industrial (mining) activities;
- (ii) sustaining TAVASO's support to management of the Urban Sewerage systems;
- (iii) ensuring change in behaviours and attitudes towards fundamental principles of hygiene
- (iv) mainstreaming and highlighting sanitation activities under the CIDP

#### **Policy Objectives**

The objectives are to;

- (i) minimize the pollution of water sources from poor environmental sanitation services and thus contribute to improving the health of communities;
- (ii) maximize health benefits through integration of water, sanitation and hygiene education interventions;

#### **Policy Measures and/or Actions**

To meet the challenges and achieve the above objectives, the County Government will:

- (i) maintain the national or its Environmental Sanitation Policy and ensure the County Government co-operates with national government ministries which have been given the responsibility for overall environmental sanitation including excreta disposal;
- (ii) adhere to the policy of charging a percentage of the cost of drinking water supplied as fee for providing sanitation services by TAVASO and private sewerage exhauster service providers;
- (iii) support the integration of water, sanitation and hygiene education/promotion (including hand washing) interventions;
- (iv) ensure all water supply projects have budgets allocated to sanitation delivery and hygiene education to meet the CIDP requirements;
- (v) ensure improved access to safely managed sanitation and sewerage services;

## **2.5.2 Waterworks and Storm Water Drainage**

### **Principle**

- (i) Ensure appropriate and suitable storm water infrastructure and management in major sub-counties in -Voi, Mwatate, Wundanyi and Taveta towards safeguarding of public health, loss of public property i.e. road networks, power grid, social amenities.

### **Challenge**

The main challenge is:

- (i) Flood Management Manage Storm Water and convert it to useful water

### **Project Objective**

The objectives in addressing flooding and storm water drainage challenges are to:

- (i) Facilitate appropriate and suitable designs of storm water infrastructure.
- (ii) Provision of storm water management plan.
- (iii) Allocation of adequate resources i.e. funds, human resource.

### **Policy Measures and/or Actions**

To address the above objectives in environmental sanitation, the County Government will:

- (i) Strengthening of urban planning department to allow for land demarcation between public urban infrastructure vs residential e.g. roads, markets, storm drains, water supply, power grid, industries, institutions
- (ii) Consideration of ultimate storm sewer design, mapping of areas that need storm water drains to cater for changing trends and needs i.e. population, industrial growth.
- (iii) Elaborate establishment of storm water management plan in terms of lead management body and consumptive utilization of the storm water i.e. waste water treatment for agricultural re-use, drinking water supply, ground recharge.
- (iv) Promote partnerships between public and private sectors for enhanced storm drains infrastructure creation/development and strengthening of management system.
- (v) Enhance multi-sectoral approach, coordination and implementation between County and National Government.
- (vi) Control soil erosion causing formation of galleys;
- (vii) De-silt of water intakes, pans and dams;
- (viii) Construct of check dams in major streams and run-off waterways;

## **2.5.3 Sewerage Management**

### **Principles and Challenges**

- (i) Ensure appropriate, hygienic and suitable sewerage system and management in major sub-counties in -Voi, Mwatate, Wundanyi and Taveta.

### **Policy Objective**

- (i) Facilitation appropriate and suitable separate sewerage system designs.
- (ii) Provision of sewerage management plan.
- (iii) Allocation of adequate resources i.e. funds, human resource.

### **Policy Measures and/or Actions**

- (i) Strengthening of planning and design unit within the water department to allow for separation of designs of storm water, clean water from sewerage networks and sewage treatment site;
- (ii) Consideration of mapping and siting, ultimate sewerage systems designs and rehabilitation of the existing lagoons e.g. Sikujua Estate;
- (iii) Development of regulations, standards of operation governing on-site water borne sanitation systems and relocation of the existing dry-beds;
- (iv) Establishment of operation and management plan in terms re-use and recycling of waste water and storm water;
- (v) Promote partnerships between public and private sectors for enhanced sewerage infrastructure;
- (vi) Enhance multi-sectoral approach, coordination and implementation between County and National Government;
- (vii) Adherence to recommended effluent standards before discharge of waste water into the environment and sewerage tariffs;

## **2.6 CROSS-CUTTING ISSUES**

### **2.6.1 Focus Area 1 – Gender Mainstreaming and Good Governance**

The management and development of water resources from the lowest to the highest decision-making levels require effective participation by both genders. It is well recognized that, women play a vital role in the provision, management and safeguarding of water. As custodians of natural resources, it is imperative that they take proactive decisions on how these resources are managed and developed. In order to achieve this, the following measures shall be implemented:

#### **Principles and Challenges**

The underlying principles of water resources management contributing to good governance include:

- (i) the principle of subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society;
- (ii) the principle of solidarity, expressing profound human companionship for common problems related to water;
- (iii) the principle of the greatest common good to society in prioritizing competing uses of water;

The challenges include:

- (i) ensuring that water planning and decision-making follow a participatory approach in which all affected parties are included, and in which gender issues are mainstreamed;
- (ii) ensuring appropriate conflict resolution processes and mechanisms are instituted;
- (iii) ensuring public accountability in water and sanitation service operations;
- (iv) adhering to the principle of integration of women and gender sensitivity;
- (v) ensuring active involvement of women in decision making in promoting transparency and accountability;

#### **Policy Objectives**

The objectives for assuring Good Governance are to:

- (i) ensure participation of all stakeholders, including the private sector, local communities, particularly women, in decision-making on water-related issues; and
- (ii) ensure good governance and a stable macro-economic situation to provide the enabling environment for sustainable water resources management and development

- (iii) ensure that existing regulations regarding participation, disclosure and procurement are adhered to;
- (iv) ensure active participation of women as a tool for empowering them to take charge of water and sanitation issues at all levels; and
- (v) ensure that there are transparent processes for accountability of managing and delivering the CWSP.

### **Policy Measures and/or Actions**

To buttress the above objectives in water resources management, the County Government will:

- (i) deepen democratization of society, through transparent and accountable leadership, adherence to the rule of law, recognizing the role of the press and access to information;
- (ii) accelerate the representation of women at all levels and in all spheres of water management activities;
- (iii) expand the private sector's role and participation in identification and implementation of water resources development projects
- (iv) ensure accountability and cost effectiveness at all levels in the sector in order to safeguard investments;
- (v) facilitate the application of relevant laws that govern water use and resolution of conflicts and adhere to national and international water laws and conventions;
- (vi) ensure that public hearings provided under the Water Act 2016, WASREB and WRA Regulations are adhered to;
- (vii) ensure that TAVASO publishes its annual report and audited accounts as required by the Companies Act; and
- (viii) ensure that delivery of TAVASO services recognize the needs of the vulnerable and is gender-sensitive
- (ix) empowering women through training at all levels to perform their roles in partnership with their male counterparts;
- (x) ensuring accountability and transparency through timely reporting and participatory discussion of results; and
- (xi) facilitate effective coordination of the sector and harmonize DAs and service providers activities and ensure collaboration particularly between the Water, Public Health and Social Services Departments

## **2.6.2 Focus Area 2 - Planning and Research**

### **Principles and Challenges**

The relevant principles include:

- (i) recognizing water as a finite and vulnerable resource, given its multiple uses;
- (ii) integrating water resources management and development with environmental management in order to ensure the sustainability of water resources in both quantity and quality; and
- (iii) the principle that inter-county, national and international cooperation is essential for sustainable development of shared basins.

The main challenge in the planning and research area is:

- (i) ensuring availability of adequate and timely data to users at all levels
- (ii) ensuring availability of adequate data and appropriate technologies to support improved urban water supply in the face of increasing demand;

- (iii) the need for a clearly defined and adequately funded research strategy that ensures continuous knowledge sharing of “good practice” obtained from implementation of the CWSP.

### **Policy Objective**

The objectives in addressing planning and research challenges are to;

- (i) promote and support scientific, technological and socio-economic research, including the development and use of appropriate technologies and practices for sustainable water resources development;
- (ii) to ensure evidence-based decision making in provision of urban water;
- (iii) to promote generation, sharing and utilization of knowledge relevant to CWSP

### **Policy Measures and/or Actions**

In order to improve and streamline planning and research, the County Government will:

- (i) encourage interdisciplinary and participatory research that recognizes the need for a link between technology and communities;
- (ii) support the standardization of methods of data collection, archiving, processing and dissemination, both at county and sub-county levels; and
- (iii) ensure that assessment and analysis of water resources availability and the impact of climate change and catchment degradation on water resources, are facilitated.
- (iv) continue to strengthen and support the County Water Department to provide accurate and regular data about the water cycle;
- (v) ensure linkages with research institutes and University departments in the land and water sectors;
- (vi) support studies/research into alternative options for improving services to low-income areas and serving the poor more effectively;
- (vii) ensure the provision of funds for research on key issues affecting decentralized service delivery and management by community-level structures;
- (viii) promote interaction and training networking activities that support the creation of effective partnerships among sector stakeholders; and
- (ix) promote coordination of existing research as well dissemination to stakeholders.

### **2.6.3 Focus Area 3 - Capacity Building and Public Awareness Creation**

There is need to build capacity in the water sector in order to support the legal and institutional framework, and implementation of measures as provided in this policy. To achieve this objective the following shall be implemented:

#### **Principles and Challenges**

The relevant principles are:

- (i) subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society;
- (ii) integrating gender equality approaches in IWRM;

The main challenges with respect to capacity building and awareness creation include:

- (i) ensuring training and retention of adequate number of sector professionals;
- (ii) ensuring adequate capacity encompassing administrative, financial, technical and logistical provisions;
- (iii) ensuring effective dissemination of information to enable decision-making by the public on progress towards CIDP and SDG targets;

- (iv) developing and maintaining institutional structures responsive to the need for sustainable management of water resources;
- (v) rationalizing manpower levels based on the sector standards;
- (vi) instituting capacity building in a holistic manner to cover organization and systems and not just staff training, especially for Private Sector Participation (PSP) environment
- (vii) building knowledge among sector practitioners to support the community water and sanitation projects (CWSPs);
- (viii) instituting a continuous capacity building process for development agencies, and community level actors; and
- (ix) improving the current low involvement of local private firms in the community water and sanitation sub-sector which affects installation and O&M

### **Policy Objectives**

The key policy objectives are to:

- (i) develop and strengthen human resources and institutional and operational capacities; and
- (ii) promote the generation and wide dissemination of information on IWRM to the general public;
- (iii) develop and strengthen human resources and institutional /operational capacities;
- (iv) build capacities of DAs, and all key actors including Community Water and Sanitation Committees (CWSCs), NGOs, CBOs, CSOs;
- (v) enhance the capacity of local private sector to play a greater role in the delivery of goods and services;

### **Policy Measures and/or Actions**

To achieve the objective, Government will:

- (i) support the development of skills related to various water management functions at all levels;
- (ii) adequately empower and equip water management institutions and WRUAs, WUAs with appropriate tools and sustainable resources to effectively undertake their functions;
- (iii) ensure public awareness is propagated through a network of major stakeholders, including CBOs, NGOs, WUAs, WRUAs and traditional self-help organizations;
- (iv) carry out advocacy to integrate IWRM as co-curricular at the primary and secondary levels of the educational system and encourage its interdisciplinary nature at the tertiary level;
- (v) ensure particular emphasis is placed on the use of public participatory mechanisms, including enhancement of the role of members of disadvantaged groups, youth, and local communities, with a special focus on women;
- (vi) support the review and update of operational guidelines on capacity building to ensure adequate capacities at all levels;
- (vii) enhance engagement of private sector and tertiary institutions in training of relevant water and sanitation sector practitioners;
- (viii) encourage and give support to the formation of joint-venture and other partnership arrangements between local and foreign firms to promote technology and know-how transfer;
- (ix) build knowledge among sector practitioners to support the community water and sanitation projects (CWSP);
- (x) support mechanisms that ensure sustained provision of post-installation capacity building to facility and system managers;

#### **2.6.4 Focus Area 4 - Public Private Partnership**

The Taita Taveta CIDP has proposed various capital projects to be undertaken during the plan period. These include infrastructure projects which will facilitate provision of services in health, education, ICT, agriculture, livestock and fisheries, energy and transport and communication networks.

The projects include construction and maintenance of roads, land planning, provision of water, irrigation, drainage and sanitation infrastructure and street lighting among others. These projects need a lot of capital resources. To supplement the County resources, The County Government proposes to implement the identified infrastructure projects pursuant to the provisions of the Public Private Partnership Act 2013. The County commits to developing a conducive policy and investment framework to encourage investors to partner with the County to support such projects under the Build – Own - Operate and Transfer (BOOT) model.

### **Challenge**

The main challenges include:

- (i) creating an enabling environment for public-private partnerships in urban water supply, especially for extending supply to peri-urban areas;
- (ii) ensuring viability of urban town systems
- (iii) attracting and protecting private investments in community water and sanitation services;
- (iv) utilizing the potential of the private sector for preparation, implementation and O&M of water supply facilities and systems;
- (v) ensuring private sector participation in managing parts supply chains in a sustainable manner;

### **Policy Objective**

The objectives are to:

- (i) promote private sector participation in investment and management of urban water supply as a means of mobilizing investment and improving overall efficiency;
- (ii) encourage community ownership and local private sector participation;
- (iii) create the enabling environment that will aid the attraction of non-traditional sources of finance;

### **Policy Measures and/or Actions**

The County Government will therefore:

- (i) where feasible, enter into management contracts with private operators to manage the small towns supply of water from source to consumer;
- (ii) reduce arrears of payment of water bills through provision of incentives (e.g. charging interest on delayed payments by large consumers, pre-paid metering etc.);
- (iii) further lease the assets of the County to private operators to run for specific periods on conditions which promote efficiency in service, affordability of tariffs and profitability on investment;
- (iv) establish the regulatory regime to allow for participation of private entrepreneurs;
- (v) actively promote and protect the involvement of the local private sector in water delivery through arrangements that are beneficial to all stakeholders (operators, consumers and public entities);
- (vi) implement a scheme of tax incentives to private investors in community water and sanitation services;

### **2.6.5 Focus Area 5 - Monitoring and Evaluation (M&E)**

According to the Taita Taveta CIDP (2013-2018), the Monitoring and Evaluation Framework for the development of Taita Taveta County has been designed so that the implementation of the projects towards the achievement of the County's strategic goals is primarily sectoral in nature but recognizes

the links to other sectors. This M&E Framework also recognizes the need to identify the impact and/or contribution of the specific projects in addressing the thematic and cross-cutting issues. In light of this, the identified sectors projects need to be linked to their respective sector priorities.

The County will put in place a County Monitoring and Evaluation system to serve the needs of the County Government, while complimenting the National M&E system (See Annex 1). The County Monitoring and Evaluation Committee answerable to the executive committee will play a key role in tracking the implementation of the CIDP and annual budget allocations. At the sector level, each CEC will have an M& E committee which will be reporting regularly to the County M& E Committee.

All county Departments will also form a Departmental M&E committee. M& E committees will also be constituted at the Sub-County, Ward and Village levels.

Key M& E reports to be produced by the different committees will include Quarterly and Annual Progress Monitoring and Evaluation Reports. Departments, wards and villages will also be expected to produce Monthly Reports.

### **Challenge**

The main challenges are:

- (i) institutionalizing M&E processes;
- (ii) institutionalizing a well-defined participatory M&E system for CWS that adequately informs the county government and all stakeholders of sector progress;
- (iii) strengthening the application of the M&E system at the DA level;
- (iv) ensuring compliance by donor- and NGO-assisted projects;

### **Policy Objective**

The policy objectives in addressing this challenge are;

- (i) to ensure that policies are implemented to achieve desired results of improving access and livelihoods;
- (ii) to provide evidence-based decision making and investments in community water and sanitation services;

### **Policy Measures and/or Actions**

The County Government will therefore:

- (i) support the development of appropriate sector M&E indicators;
- (ii) set up and ensure adequate support to county M&E institutions (e.g M&E Coordinating Group) for carrying out M&E;
- (iii) support the relevant agencies to define indicators for M&E and ensure implementation of a sector M&E plan and strategy;
- (iv) support institutional strengthening of county-level DAs and lower-level structures in carrying out M&E;
- (v) support the establishment of mechanisms for DAs and community-level monitoring and assessment of functionality of systems and the reliability of mode of parts distribution and ability of communities to pay for spare parts;
- (vi) ensure that relevant agencies, at all levels, provide timely and reliable data and information for tracking sector progress and contributing to the annual county database update;

### **3. POLICY IMPLEMENTATION ARRANGEMENTS**

This section provides an outline of the relevant policy implementation procedures and guidelines including institutional roles and responsibilities, standards, regulations, definitions and references (e.g. Implementation manuals – project, sub-county (district), community operational manuals – and established instruments of agencies).

The implementation of this policy in the medium term will follow the broad framework of the National Water Act 2016, and the CIDP which recognize the critical and cross-cutting role of water in meeting basic human needs, promoting accelerated growth and good governance.

The Focus Areas discussed under Section 2 cover the main areas of water and sanitation uses and services in Taita Taveta County. The County Water Department is responsible for developing the implementation plan for the whole policy, while sector agencies responsible for specific areas will develop implementation strategies and plans for delivering the relevant policy actions.

#### **3.1 Institutions - Roles and Responsibilities**

An important aspect of supporting the implementation of the Taita Taveta County Water Policy is ensuring effective inter-institutional coordination and collaboration. This is achievable by identifying and defining the roles and responsibilities of the various institutions responsible for implementing and providing the necessary guidelines for various water uses and services as well as for environmental health and sanitation. The institutions responsible for various water uses and services are divided into “principal sector agencies” that deal with direct facilitation and implementation and “allied sector agencies” that play supporting roles including regulation and oversight.

Taita Taveta County is divided into various administrative and political units crucial for management of the County and also service delivery to the public. In terms of political units, the County has four constituencies namely, Wundanyi, Mwatate, Voi and Taveta. These are further divided into 20 electoral wards, otherwise referred to as County assembly areas.

With regard to administrative subdivisions, the County is composed of four sub-County units which follow the same boundaries as the constituencies and hence go by the same name as those of the constituencies. The County is further divided into 32 and 90 locations and sub locations respectively.

#### **3.2 Overview of Key Water Sector Institutions at the County**

The Ministry of Water and Sanitation (MWS) is the lead national government institution responsible for water and sanitation in Kenya. The MWS’s main focus is on overall water resources management and drinking water supply, while other sector ministries deal with sector-related water uses such as irrigation under ministry of Agriculture and Irrigation. At the County level, the Water and Sanitation Department is the lead.

The following section summarizes the key functions of principal water sector institutions and their roles:

1. **The Ministry of Water and Sanitation** is the principal water sector ministry responsible for overall policy formulation, planning, coordination, collaboration, monitoring and evaluation of programmes for water supply and sanitation.
2. **Water Resources Authority (WRA)** is the focal point for coordination of the water resources management policy harmonization, sector-wide monitoring and evaluation.
3. **Water Supply Regulatory Board (WASREB)** is responsible for regulating the water supply and sanitation services delivery, and water-related sanitation sector for policy harmonization, sector-wide monitoring and evaluation, and outcomes and SDG targets. It regulates the standard of services including the quality of drinking water provided by the service providers and also the tariff set for urban and rural water supply.
4. **The County Assembly (CA)** is the legislature of the County Government and is the statutory deliberative and legislative body for the determination of broad policy objectives of the development process within their jurisdiction. CA is responsible for the planning, implementation, operation and maintenance of water and sanitation facilities and the legal owners of communal infrastructures in rural communities and towns. The County Assembly Committee on Water, Works and Housing and the County Assembly of Taita Taveta provides legislative oversight of the water sector.
5. **The County Department Water Resources and Sanitation** is responsible for the regulation and management of water resources and for the coordination of policies in relation to them, and provides a focal point in fostering coordination and collaboration among the various actors involved in the water resources sector in the County.
6. **The County Department of Public Health and Environment** is responsible for implementing the Environmental Sanitation Policy including management and regulation of solid and liquid wastes by the County Government.
7. **The Taita Taveta Water and Sewerage Company (TAVASO)** is responsible for overall planning, managing and implementation of urban water supply.
8. **The Community Water and Sanitation Committees (CWSC)** are the lead facilitator of the rural water supply and sanitation sub-sector (rural communities and small towns), and are responsible for external liaison and co-ordination of the services at the community level.

The allied institutions in the water sector and their roles are as follows:

1. The role of the **National Environmental Management Authority (NEMA)** covers among others protection of water resources and regulation of activities within catchment areas including setting effluent standards.
2. The **Kenya Bureau of Standards (KEBS)** is responsible for developing and setting quality standards drinking water including certification and other related uses.
3. **The County and Town Planning Department** supports in physical planning of land and towns and provides layouts that give land-use and directs development of services like roads,

drainage networks, and electricity and water supply distribution lines. This is to guide DAs to regulate the grant of permits for various classes of buildings (housing, industrial, commercial, institutional) and control development.

4. **The County Department of Finance and Planning** administers all county public investments in water including negotiating for grants and loans.
5. **The County Department of Culture, Gender and Youth Affairs and Social Services** is the lead agency responsible for implementing the National and County Gender and Children's policies, being the framework for gender equality issues. Policy issues on water that affect the well-being of women and children is within the mandate of the department.

### **Non-Governmental Organizations**

There are a few Non-Governmental Organizations (NGOs) operating in Taita Taveta County, involved in the water and sanitation sector activities. International NGOs include World Vision Kenya (WVK), Wildlife Works, United Nation's World Food Programme and United States Agency for International Development (USAID).

1. **World Vision Kenya (WVK)** is involved in a number of activities geared towards poverty alleviation through programs such as water and sanitation (WASH), food for assets, educational improvement through provision of bursaries to needy students, health improvement especially for Orphans and Vulnerable Children (OVCs) by supporting them through medical assistance, feeding programmes, and cash transfers to care-givers of these children.
2. Through **APHIA Plus** programme, USAID undertakes activities that primarily focus on AIDS, poverty, and health through an integrated approach, with the overall goal of empowering vulnerable individuals in a community set-up.
3. **Wildlife Works** is an NGO that primarily focuses on environmental protection and climate change mitigation. In particular, the organization supports carbon trading initiatives through involvement of ranch management. On top of direct money benefits to ranch owners, the local community has benefited from community projects supported by the NGO in health, education and water areas.

### **Self-Help, Women and Youth Groups**

According to the Taita Taveta CIDP (2013-2018), the County has 7,459 registered groups. 1,328 groups are women groups while 1,534 are youth groups. Self-help groups (SHGs) form the majority, standing at 4,597.

### **3.3 LEGAL AND REGULATORY FRAMEWORK**

It is essential to provide clear legal and regulatory framework to facilitate effective Implementation of policy objectives and actions.

As and when appropriate, the Taita Taveta County Department of Water Resources and Sanitation shall recommend appropriate legislation to support policy implementation. These recommendations shall recognize customary and traditional laws, and practices in Taita Taveta County and Kenya for water conservation, pollution control, protection of catchment areas and protection of fisheries and existing legal enactments.

## ABBREVIATIONS AND ACRONYMS

CA- County Assembly  
CBO – Community Based Organization  
CIDP – County Integrated Development Plan  
CSO – Civil Society Organization  
CWSP – Community Water and Sanitation Project  
DA – Development Agency  
IWRM – Integrated Water Resources Management  
M&E – Monitoring and Evaluation  
MWS – Ministry of Water and Sanitation  
NEMA – National Environment Authority  
NGO – Non-governmental Organization  
O&M – Operation and Maintenance  
PPP – Public Private Partnership  
PRS – Poverty Reduction Strategy  
PSP – Private Sector Participation  
SDG – Sustainable Development Goal  
SHG – Self-Help Group  
TAVASO – Taita Taveta Water and Sewerage Company  
VIP – Ventilated Improved Pit  
WASREB – Water Services Regulatory Board  
WRA – Water Resources Authority  
WSC – Water and Sanitation Committee  
WUA – Water User Association

## WORKING DEFINITIONS

In this document the following words and terms have the following meanings:

**Biodiversity:** means the variability among living organisms from all sources including genetically modified living organisms, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part of.

**Catchment:** is a geographical area which naturally drains into a water resource and from which the water resource receives surface or ground flow which originates from rainfall.

**Climate Change:** refers to the average change in climatic conditions in a specific region which is additional to the natural changes in the climate that may be expected to occur over time.

**Domestic Purposes:** means the household use of water for various purposes including the making of bricks for the private use of the occupier or for fire-fighting.

**Ecosystem:** means the biological community of interacting organisms and their physical environment.

**Equitable and Reasonable Utilization:** refers to the management and maintenance of a fair and justified allocation system, the utilization of a water resource in a rational and sustainable manner so as to derive optimum benefits but not to cause significant harm to others and the environment.

**Integrated Water Resources Management:** is a process that promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

**Water Resources Strategy and Plan:** is a plan that is formulated after public consultation for the management, use, development, conservation, preservation, protection, control and regulation of water resources.

**Permit:** means a permit for the use of water.

**Pollution:** is any direct or indirect contamination or alteration of the biological, chemical or physical properties of water including changes in colour, odour, taste, temperature or turbidity of water.

**Polluter Pays Principle:** is the principle that any person or institution responsible for polluting the water resource must restore the water to its natural or acceptable state.

**Rainwater harvesting:** a process of capturing rain from surfaces such as roofs, and land.

**Reserve:** in relation to a water resource, means that quantity and quality of water required to satisfy basic human needs of all the people who are or may be supplied from the water resource; and protect aquatic ecosystems in order to secure ecologically sustainable development and use of the water resource.

**Riparian habitat:** includes the physical structure and associated areas of a water resource which are commonly characterized by alluvial soils and inundated or flooded to an extent, and with a frequency,

sufficient to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas.

**Riparian land:** means any land on which, or along the boundary of the whole or any portion of which, a water resource exists.

**Sustainable Water Resources Development:** is development which facilitates the equitable provision of adequate quantity and quality of water for all competing groups of users at acceptable costs that ensures security of supply under varying conditions.

**Shared Watercourse:** means a water resource that forms, or is bisected by an international border between Zambia and another state or among states including Zambia.

**Use:** in relation to water, is the entitlement limited to the equitable and reasonable utilization of water for the purposes and up to the limit prescribed or specified by a permit and includes: abstraction, obstruction or diversion of water; storing water; discharge of materials or substances into water; de-watering of a mine, quarry or any land; altering the bed, banks, course or characteristics of a water resource; or any prescribed activity of a kind relating to water but shall not include a guarantee as to the availability of water.

**Water:** includes surface water, water which rises naturally on any land or drains or falls naturally on to any land, even if it does not visibly join any watercourse, or ground-water.

**Watercourse:** is a system of surface waters and ground-waters constituting, by virtue of their physical relationship, a unitary whole and normally flowing into a common terminus.

**Water Conservation Management Practices:** are practices that minimize wastage of water, encourage sustainable and efficient use of water and improve the quality of water.

**Water Resource:** includes water, any river, spring, hot-spring, pan, lake, pond, swamp, marsh, stream, watercourse, estuary, aquifer, artesian basin or other body of naturally flowing or standing water.

**Water Resources Management:** includes planning for sustainable development of the water resource and providing for the implementation of any catchment management plan and national water resources strategy and plan; promoting the rational and optimal utilization, protection, conservation and control of the water resource; and improving the access to sufficient quality, quantity and distribution of water for various uses.

**Water Shortage Area:** is an area where, among other things, the flow of water falls under a prescribed level in a water resource or in storage works;

**Wetlands:** are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.