



REPUBLIC OF KENYA

DRAFT NATIONAL WETLANDS CONSERVATION AND MANAGEMENT POLICY

JUNE 2013

EXECUTIVE SUMMARY

Wetlands are areas of swamps, marshes, bogs, shallow lakes, ox-bow lakes, dams, riverbanks, floodplains, fishponds, lakeshores and seashores. In Kenya, wetlands occupy about 3% to 4%, which is approximately 14,000 km² of the land surface.

The development of this policy was recognized in 1990 when the country ratified the Convention on Wetlands of International Importance. The convention obligates contracting parties to “formulate and implement their planning so as to promote the conservation” of wetlands.

The actual process of policy development started in 1997 and climaxed in the publication in April 2008 of the revised Draft National Wetlands Conservation and Management Policy. This Policy was developed through a multi-stakeholder consultative process with the aim of ensuring wise use and sustainable management of wetlands in order to enhance sustenance of their ecological and socio-economic functions for the present and future generations.

Wetlands contribute directly and indirectly to the national economy through provisioning, supporting, regulatory and cultural services. As a result of this recognition, the Government of Kenya through the Ministry of Environment, Water and Natural Resources has produced the Kenya Wetlands Atlas (2012) which maps the country’s wetland resources. A master plan for the conservation and sustainable management of water catchment areas in Kenya has also been developed to guide practical and transformative actions for the sustainable management of these complex ecosystems. Furthermore, a nationwide inventory of wetlands to take stock of the resources, challenges and opportunities for their sustainable development and management is ongoing. The Government has also constitutionalised the right to a clean and healthy environment. This policy also fulfils the aspirations of Kenya’s Vision 2030, the National Land Policy and the Draft Environment Policy 2013.

Despite the numerous benefits provided by wetlands, and the efforts made by the Government, sustainable management of wetlands continues to face a myriad of challenges. Such challenges include reclamation and encroachment for agriculture, settlement and industrial development; invasive and alien species; pollution and eutrophication. Other key challenges identified in this policy include challenges relating to conservation and management wherein ownership of wetlands, institutional arrangements and inadequate resources stand out. Additionally, findings from research do not inform planning and decision making. This policy therefore sets out policy statements on how the Government intends to address each of these challenges with the following objectives:

- i. To enhance and maintain functions and values derived from wetlands

- ii. To establish an effective and efficient institutional and legal framework
- iii. To improve scientific information and knowledge base on Kenyan wetland ecosystems.
- iv. To strengthen institutional capacity on conservation and management of wetlands
- v. To promote innovative planning and integrated management approaches
- vi. To promote communication, education and public awareness
- vii. To promote partnership and cooperation at regional and international levels

A sound policy with a strong institutional regulatory framework will provide a clear roadmap to enhance compliance and enforcement of wetlands conservation and management in line with the Constitution, Vision 2030 and other key policy development instruments ensuring sustainable development of wetlands. This is based on the underlying principles and values governing this policy which include: wise use, precautionary principle, devolution, ecosystem based management, taking cognizance of the national and international cooperation.

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Glossary of terms

Conservation Area- is any area (including national parks and reserves) wholly or partially designated and approved for conservation of wildlife.

FOREWORD

1.0 INTRODUCTION

In Kenya, wetlands are defined as *areas of land that are permanently or occasionally water logged with fresh, saline, brackish, or marine waters, including both natural and man-made areas that support characteristic plants and animals*. These include swamps, marshes, bogs, shallow lakes, ox-bow lakes, dams, riverbanks, floodplains, fishponds, lakeshores and seashores. They also include coastal and marine wetlands such as deltas, estuaries, mud flats, mangroves, salt marshes, seagrass beds and shallow reefs all of which at low tide should not exceed 6 meters. These wetlands occupy about 3% to 4%, which is approximately 14,000 km² of the land surface and fluctuates up to 6% in the rainy seasons.

The need to develop a national policy to guide the conservation and management of wetlands in Kenya has been recognized since 1990 when the country ratified the Convention on Wetlands of International Importance especially as Waterfowl Habitat of 1971 (the Ramsar Convention). Article 3 of the Convention obligates contracting parties to “formulate and implement their planning so as to promote the conservation” of wetlands. However, the actual process of policy development started in 1997 and climaxed in the publication in April 2008 of the revised Draft Sessional Paper on National Wetlands Conservation and Management.

Wetlands constitute part of critical natural capital to the country's economy. For instance, Lake Naivasha contributes 5.3 Billion Shillings (US 63 million dollars) while over Thirty thousand (30,000) people derive their livelihoods from this important wetland ecosystem. Lake Nakuru on the other hand contributes 2.1 Billion Shillings (24 Million US dollars) per year. In addition they provide invariable ecosystem goods and services such as provision of fish, water, reeds, crafts, building material and baskets, regulates climate and sequester carbon from the atmosphere and acts as an important biodiversity habitat.

Despite the numerous benefits provided by wetlands, the sustainable management of wetlands in Kenya continues to face a myriad of challenges. These include reclamation and encroachment for agriculture, settlement and industrial development; invasive and alien species; pollution and eutrophication as a result of which the integrity of wetlands has been compromised. Currently there is greater recognition of the importance of wetlands to the overall environmental, economic and social spheres by the government.

The Government of Kenya through the Ministry of Environment, Water and Natural Resources has produced the Kenya wetlands atlas (2012) which maps the country's wetland resources. It provides visual evidence and the severity of the changes taking place in the wetlands occasioned by intense and detrimental human activities. The publication provides decision makers, planners and managers with visual information about the state of the country's wetland resources using satellite images, graphics and

ground photos. A master plan for the conservation and sustainable management of water catchment areas in Kenya has been developed which is meant to guide practical and transformative actions for the sustainable management of these complex ecosystems. Additionally, there is an on-going nationwide inventory of wetland resources to take stock of the resources, challenges and opportunities for their sustainable development and management. The government has elevated the right to a clean and healthy environment for all to a fundamental right in the Bill of Rights in the Constitution of Kenya, 2010.

The Constitution of Kenya bestows the respect to the environment as a national heritage and to sustain it for the benefit of future generations. Matters environment are further interspersed in the Constitution in Article 10 (2) (d) on sustainable development, Article 42 on the right to a clean and healthy environment and Chapter 5 on Land and Environment. Article 69 specifically provides the obligations of the state and all persons with respect to the environment. The Environment Management and Coordination Act (EMCA) 1999 also provides for the right to a clean and healthy environment under Section 3. All these provisions on the management of the environment apply to the management of wetland resources. This policy also fulfils the aspirations of Kenya's Vision 2030, the National Land Policy and the Draft Environment Policy (2013). The latter also recommended the development of a National Wetlands Policy

The National Wetlands Conservation and Management Policy, developed through a rigorous multi-stakeholder consultative process, therefore seeks to secure and ensure the benefits of wetlands for posterity. It also aims at providing a framework for mitigating the diverse challenges that affect wetlands conservation and wise use in Kenya. Adoption of the policy also fulfills Kenya's obligations under the Ramsar Convention and other relevant Multilateral Environmental Agreements and provides the framework for tackling wetland threats.

PRINCIPLES, GOALS, AND OBJECTIVES

The challenges affecting wetlands are impacting negatively on their ability to function optimally, thereby impeding their sustainable use and contribution to socio-economic development. In order to address the challenges, the National Wetlands Conservation and Management Policy is guided by the following principles and values .

Guiding Principles and Values

- I. *Wise use:*** Wise use of wetlands is the maintenance of the ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development.
- II. *Precautionary principle:*** Where there are credible threats of serious or irreversible damage to key wetland resources, lack of full scientific certainty will not be used as a reason for postponing cost effective measures to prevent wetland degradation.

- III. **Polluter pays principle:**The polluter and users of wetland resources shall bear the full environmental and social costs of their activities.
- IV. **Equity:** The management of environment and natural resource will ensure equitable access to the resources for present and future generations
- V. **Ecosystem Based Management Approach:** An integrated ecosystem approach to conserving environmental resources will be adopted and enhanced to ensure that all ecosystems are managed in an integrated manner while also providing arrange of benefits to people.
- VI. **Devolution:** For the sustainable wetland management in Kenya, the National Government shall cooperate and consult with County Governments in the management and conservation of wetlands in accordance with the Constitution
- VII. **Coordination: To promote sustainable management and conservation** of wetlands, the government shall ensure effective coordination of different sectors, agencies and actors as well as implementation of different policies and laws that have a bearing on wetlands.
- VIII. **Public participation:**
The government shall encourage Public participation in the management and conservation of wetland resources in country. In addition, the government shall ensure continuous education and awareness on matters wetlands.
- X. **International and regional cooperation:** Multilateral Environmental Agreements and regional instruments will be domesticated and implemented cooperatively for better wetland management of shared resources.

Goal

The goal of the National Wetlands Conservation and Management Policy is to ensure wise use and sustainable management of wetlands in order to enhance sustenance of their ecological and socio-economic functions for the present and future generations of Kenya.

Objectives

- i. Establish an effective and effecient institutional and legal framework for integrated management and wise use of wetlandsEnhance and maintain functions and values derived from wetlands in order to protect biological diversity and improve livelihood of Kenyans.
- ii. Promote communication, education and public awareness among stakeholders.
- iii. To improve scientific information and knowledge base on Kenyan wetland ecosystems.
- iv. To strengthen institutional capacity on conservation and management of wetlands.

- v. Promote innovative planning and integrated management approaches towards wetlands conservation and management in Kenya
- viii. Promote partnership and cooperation at regional and international levels for the management of transboundary wetlands and migratory species.

1.0 IMPORTANCE OF WETLANDS

Wetlands are known to perform crucial functions and provide vital products and services essential for environmental integrity and human well being. Being diverse in their interactions, wetland ecosystems provide essential benefits to communities and the environment. In more recent times, the quantification of these goods and services has revealed enormous socio-economic and cultural values.

1.1 Ecological Importance

1.1.1 Flood Control and Soil Erosion Prevention: Wetlands act as sponges, absorbing excess storm from heavy rainfall, thereby ensuring flow regulation/ flood control and soil erosion prevention. Floodwater can be stored in the soils or retained as surface water, thereby reducing floodwater volumes downstream. In addition, wetland vegetation slows down the flow of floodwater resulting in silt and sediment retention and riverbank protection. Besides reduction of flooding events downstream, this process also ensures river flows are maintained for longer periods. Wetland vegetation also shields the soil from damage by strong waves and wind.

1.1.2 Water Discharge and Recharge: The retention ability of wetland enables them to discharge and recharge both surface and ground water resources respectively. The impeded drainage allows the water to stay in one place long enough to maximize infiltration, enhancing recharge of groundwater aquifers. Excess water in wetlands and aquifers discharges into springs, rivers and other water bodies. Aquifers also play a complementary role by the recharging wetlands during dry spells.

1.1.3 Water Purification, Nutrient and Toxic retention: Wetland vegetation absorbs nutrients and toxic substances from inflowing water thereby improving the quality of water downstream. Nutrients and toxic substances originate from agricultural, domestic and industrial sources. The materials eroded in the watershed are filtered by the wetland vegetation resulting in water purification. The sediment retained in the wetland protects downstream resources, such as dams, farmlands, rivers and lakes from silting. Sediment retention in the flood plains benefits agriculture by renewing nutrients and soil.

1.1.4 Wetlands for climate change mitigation and adaptation

Globally wetlands are recognized as net carbon sinks providing invaluable and effective ecosystems for carbon capture and storage. For instance papyrus dominated wetlands in East Africa have been found to accumulate $480\text{g-Cm}^{-2}\text{yr}^{-1}$. The wetland vegetation takes up carbon from the atmosphere and converts it into plant biomass during the process of photosynthesis. In many wetlands, waterlogged soil conditions prevent decomposition of the plant material thereby retaining carbon in the form of undecomposed organic matter. The long retention of carbon in wetlands prevents excessive amounts of atmospheric carbon, thereby reducing global warming. In terms of adaptation, they provide unique areas for agriculture, control extreme flooding, water resource provisioning during extreme droughts and promote livelihood security to communities-hence improving the adaptive capacities of wetland dependent vulnerable communities.

1.1.5 Wildlife Habitats and Centers of Biodiversity: Wetlands are natural habitats for a variety of plants and animals some of which are of conservation significance including endemic, endangered and migratory species. Wetlands are also *in-situ* banks for genetic resources. Thus, the management of wetlands for biodiversity conservation is critical.

1.1.6 Prevention of Saline water Intrusion: Wetlands are essential for maintaining a buffer zone between freshwater and saline water. The destruction of wetlands due to over-extraction or drainage reduces the influx of freshwater and hence increases the intrusion of saline water. Intrusion of saline water deprives people, agriculture, industry, and ecological communities of valuable freshwater arable land and pasture.

1.2. Socio-economic importance

1.2.1 Energy Production: Wetlands provide energy in various forms, the most important being hydropower generation and plant biomass. Several hydroelectric power plants have been constructed especially on the upper reaches of the Tana, Kerio and Sondu Miriu Rivers. Reeds such as *Papyrus* sp. and *Phragmites* sp. are harvested and dried to provide a source of fuel.

1.2.2 Research and Education: Many wetlands are important sites for scientific research and education. They are often used to study long term global environmental status and trends. Research areas within wetlands include ecology, fisheries, ornithology, hydrology, geology, pollution control, medicine, agriculture, climatology, and paleolimnology.

1.2.3 Transport and Communication

In many wetland areas, water transport is a common medium of conveying goods and people. It is efficient and cost effective compared to other modes of transportation.

1.2.4 Religious and Cultural Significance: Wetlands are important historical sites that comprise important components of Kenya's cultural heritage. Local communities have

strong attachments to the sites because of their social, cultural and spiritual importance. The communities also promote indigenous knowledge and practices on environmental functions and values that are essential for their survival.

1.2.5 Tourism and Recreation

The nature and serenity of wetlands makes them important ecotourism and recreation centres. The presence of a wide range of wildlife species as well as their aesthetic value makes them a unique attraction for tourism, which is an important foreign exchange earner at the national level and source of livelihood for local communities.

1.2.6 Sources of water and grazing grounds

Wetlands are critical source of water for domestic use and livestock watering. They also form important grazing grounds for livestock and wild animals especially during dry seasons.

1.3 Wetland products

1.3.1 Fish and other food products: Wetlands sustain commercial and subsistence/artisanal fisheries in many areas. Their importance as fish nursery grounds and for replenishing natural stocks is recognised for over 70% of fish species globally. Fish farming within wetland areas is increasingly becoming an important alternative to natural production.

1.3.2 Soil and Minerals: Wetlands are major sources of clay and sand products such as bricks and ceramics. They are also essential sources of minerals such as sand and salt.

1.3.3 Animal and plant products: Wetlands provide a number of wildlife resources and products. These include reptile skins and ornamental (aquarium) fish. Many communities are increasingly harvesting these resources to enhance and improve their livelihoods. Wetland plants are also harvested to provide materials for construction and thatching, the cottage industry, canoes, fishing baskets and traps. Wetland plants are also used for medicinal purposes and as a food source. The economic values of wetlands cannot be over-stated. The Nyando Wetland in Kisumu County provides an aggregated economic value estimated at Ksh. 204.1 Billion shillings (US\$ 2.1 Billion).

2.0 CHALLENGES AND STRATEGIES IN WETLAND CONSERVATION AND MANAGEMENT

Wetlands contribute significantly to the socio-economic development of Kenya. They however face diverse and severe threats including unsustainable human activities within the wetland catchment area and in the wetlands, lack of coordinated and holistic policy guidelines, and climate change. The threats have induced changes that have eroded the ecological and socio-economic values and services derived from wetlands. The underlying threat remains lack of recognition of the importance of wetlands and the roles they play in both the national economy and community livelihoods.

2.1 Challenges and Threats

2.1.1 Reclamation and Conversion of wetlands

Reclamation and conversion of wetlands for agricultural development, human settlement and industrial development is one of the biggest threats to wetland conservation and management. In the past, wetlands have been regarded as “wastelands”, which can be converted for other economic gains. This has led to large-scale drainage and conversion for alternative uses without regard to ecological and socio-economic values. This is compounded by lack of harmony among the various laws and regulations related to delineation, conservation and management of the riparian/buffer zones in different wetland ecosystems. In this case:

Policy Statement 1: Reclamation and conversion of wetlands will not be allowed.

Policy Statement 2: Any alteration of a wetland for public interest will be subject to approval standard procedures including Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), Cost Benefit Analysis (CBA), and wide stakeholder consultations.

Policy Statement 3: Any conversion including drainage which, introduction of inappropriate animal and plant species and burning of wetlands which negatively impact on the ecological integrity of wetlands shall be prohibited.

Policy Statement 4: The government shall harmonize wetland riparian (buffer) zones/setback limits for all wetland ecosystems in the country.

2.1.2 Overexploitation of wetland goods and services

Increasing human population and change from subsistence to commercial exploitation of wetland resources continue to exert increasing pressure on limited wetland resources, resulting in the decline of the quality of regulating provisioning, cultural and support services provided by wetlands. To address this challenge, the government shall:

Policy statement 1: Promote sustainable extraction and utilization of goods and services derived from wetlands.

Policy statement 2 : Promote environmental friendly alternative livelihood activities inline with the wise use principle.

2.1.3 Pollution, Eutrophication and Salinization of wetlands

The quality of many water sources in Kenya is declining as a result of municipal, agricultural and industrial wastes/ discharges. These have negatively impacted water quality and biodiversity within the wetland ecosystems thereby reducing their values. Increased nutrient loads have led to eutrophication which leads to algal blooms. In certain areas excessive abstraction of fresh waters, diversions, and catchment degradation, have led to increased salinity. In this regard, the government shall:

Policy Statement 1: Support and promote enforcement of relevant regulations and laws related to environmental pollution.

Policy Statement 2: Enhance public awareness on proper management of waste including reduction, reuse and recycling will be promoted.

2.1.4 Alien and Invasive Species

Wetlands are highly vulnerable to alien and potentially invasive species. Many wetlands have in the past been affected by the introduction of alien invasive species that have altered the biodiversity characteristic and diminished the services provided by wetlands. For example, the introduction of Nile perch nearly eliminated the indigenous fish species of Lake Victoria while water hyacinth, *Salvinia sp*, and *Mimosa sp*. have affected numerous wetlands. Introduced species easily occupy new niches due to lack of competition and predators. These have various impacts on the landscape. They threaten hydrology of water and water retention capacities, block transport, impede hydropower energy development, biodiversity and slow down human and economic quality of life especially in the context of exacerbated climate change, and lack of scientific evidence for planning and decision-making. In view of this, the government shall:

Policy Statement 1: Develop and implement a national strategy and action plan for mapping and management of alien and invasive species in wetland ecosystems

Policy Statement 2 : Undertake research, public education and awareness campaigns on the dangers of alien species.

2.2 Conservation and management

2.2.1 Ownership of wetlands

Land under the Constitution includes any body of water on or under the surface; marine waters in the territorial sea and exclusive economic zone and natural resources completely contained on or under the surface. The Constitution also provides that all land belongs to the people of Kenya collectively as a nation as communities and as individuals. It classifies land as public, private or community land and states that all rivers lakes and other water bodies defined by an Act of Parliament are public land.

The provisions of the Constitution were an attempt to deal with the myriad of problems identified in land administration and management in Kenya. These include encroachment into public land and natural resources. The constitution has placed obligations on all citizens to cooperate with state organs and other persons ensure ecologically sustainable development and use of natural resources. Despite the existence of these provisions, wetlands have continued to face a myriad of challenges related to land ownership including encroachment into wetland and riparian areas. The government shall:

Policy Statement 1: Map, delineate and publicize boundaries for all wetlands within its jurisdiction.

Policy Statement 2: seek to regulate, protect, manage and conserve all wetlands including those within public, private and community land in line with the Constitution.

Policy Statement 3:Recognize and permit cultural and traditional practices for use of wetland resources subject to existing guidelines, policies, laws and legislation.

2.2.2 Establishment of Wetland Conservation Areas

Many wetland areas including deltas provide vital services such as acting as biodiversity reservoirs, water sources and cultural values. The Government has established parks and reserves to ensure that they are adequately protected as conservation areas. However given that majority (80%) of fragile wetland ecosystems are situated outside protected areas, they continue to face serious and deleterious impacts including loss of biodiversity and lose of other socio-economic benefits. In this case, the government shall ensure that:

Policy Statement 1: it continues to protect and identify other unique wetlands for gazettelement as protected areas

Policy Statement 2: Deltas are sustainably managed through participatory and integrated planning and co- management

Policy Statement 3: Appropriate management plans are developed and implemented through a participatory process.

2.2.3 Wetlands of International importance

Kenya is a signatory to the Ramsar Convention and as such is required to identify critical wetlands of international importance (Ramsar Sites) based on the laid down criteria. Six sites have been listed under these criteria. These are Lakes Nakuru, Naivasha, Baringo, Bogoria, Elementeita and Tana Delta. Despite their designation, they continue to face severe threats mainly from anthropogenic activities. The government therefore shall:

Policy Statement 1: Identify and list wetland sites that fulfill Ramsar criteria.

Policy statement 2: Ensure effective management and conservation of all Ramsar sites

2.2.4 Restoration and Rehabilitation of Degraded Wetlands

Many wetlands have been degraded through drainage, pollution, sedimentation, introduction of exotic species, catchment degradation, over exploitation of resources, upstream damming and diversion among others. The benefits derived from these wetlands have therefore been lost or reduced. In order to promote the restoration and rehabilitation of degraded wetlands, the government shall:

Policy statement 1: Develop and implement measures in order to:

- (a) Give priority to indigenous vegetation and other biodiversity in restoring degraded areas;
- (b) Allow natural regeneration of degraded wetlands where feasible;
- (c) Make use of local available appropriate technology and involving local communities where possible; and
- (d) Put in place monitoring frameworks to ensure maintenance of integrity and functions

Policy Statement 2: Support restoration, rehabilitation and management of wetlands.

2.2.5 Manmade Wetlands

Manmade wetlands constitute dams, fishponds, rice paddies and sewerage treatment ponds. Constructed wetlands for example have gained prominence worldwide as alternative cost-effective and environmentally friendly technologies in wastewater treatment. Others such as dams, fish ponds and rice paddies are also important for food production and aesthetic uses. In Kenya the use of these types of wetlands has been minimal despite their huge potential. In this regard, the government shall:

Policy Statement 1: Promote the use of constructed wetlands for waste water management in the relevant sectors such as industries, agriculture and municipalities.

Policy Statement 2: Establish and sustainably manage man-made wetlands for food production, water supply, hydro power production and livelihoods.

2.2.6 Trans- boundary wetlands

A number of trans-boundary wetlands are shared between Kenya and its neighbours. These include Lakes Victoria, Turkana, Jipe and various rivers such as Ewaso Ngiro South, Sio, Malakisi, and Mara. These wetlands face various conservation and management challenges and there is need for collaborative measures on their management.

Kenya is party to the Treaty Establishing the East African Community and the Protocol on Environment and Natural Resource Management, which require Member States to cooperate in the management of trans-boundary resources. To play an effective role in promoting the sustainable management of trans-boundary wetlands, the government shall;

Policy Statement 1: cooperate with neighboring countries bilaterally and within the framework of the East African Community and other regional frameworks to develop and implement harmonized policies and strategies for sustainable management of wetlands and equitable sharing of the benefits there from

Policy Statement 2: Develop harmonized regional approaches and policies for sustainable management of trans-boundary wetlands.

2.3 Research, education and awareness

2.3.1 Inventorying, Monitoring and Information Systems

Sustainable management of wetlands requires comprehensive data obtained through an all-inclusive inventory, research and use of indigenous knowledge. Currently monitoring of wetlands is based on inadequate information as there is no comprehensive national database to inform planning and decision making.

To ensure that decisions about management and conservation of wetlands are based on sound scientific data and evidence, the government shall:

Policy statement 1: Adopt and implement measures for continuous generation, storage, and dissemination of scientific information on wetlands and wetland resources and using the same to inform planning and decision making over wetlands conservation and management.

Policy Statement 2: Establish, maintain and update a standardized county and national wetlands database.

2.3.2 Capacity and Human Resource Development

One of the reasons for the degradation of wetlands has been the inadequate human capacity to manage enforce and give appropriate guidance on wetland conservation and management. In addition there is a general lack of infrastructure to support sustainable wetland management. To improve human resource and infrastructural capacity for sound wetlands management, the government shall institute measures to:

Policy Statement: Build capacity for sustainable wetlands management and conservation

2.3.3 Education and Public Awareness

Wetlands are often degraded because the public is either not fully aware or does not appreciate the diversity of their functions and values. Education and public awareness is essential to create commitment and positive attitudes towards conservation and sustainable utilization of wetland resources.

Policy Statement 1: Promote education and public awareness on wetland resources to encourage understanding and participation of the public, private sector, local authorities, NGOs and other interested parties through all appropriate means.

Policy Statement 2: Incorporate wetland conservation and management issues into the national environmental education strategy and other available and relevant systems

Policy Statement 3: Establish guidelines and procedures on wise use of wetland resources for various purposes..

Policy statement 4: Promote recognition and application of traditional indigenous knowledge in wetland management.

3.0 LEGAL AND INSTITUTIONAL ARRANGEMENTS

3.1 Legal and Institutional Framework.

Lack of a holistic institutional framework has affected wetland management in Kenya. Different aspects of wetland conservation and management are handled by different agencies. This has therefore meant that no single agency is in charge of overall coordination. This has contributed to massive wetland loss and degradation.

The Kenyan Government has undertaken reforms aimed at conservation of environmental resources including wetlands. The Constitution reaffirms the government commitment on sustainable exploitation, utilization, management and conservation of the environment and natural resources, and ensures the equitable sharing of the

accruing benefits. This includes enactment of legislations related to conservation and management of wetlands in the country. The relevant laws include the Environment Management and Coordination Act (section 42), the Merchant shipping Act of 2009, the Wildlife policy and Bills and the Water Act (2002) which deals with management, conservation and control of water sources.

Despite the numerous pieces of legislation, sustainable management of wetlands in Kenya has not been realized. To address this, the government shall:

Policy Statement 1: Identify, strengthen and provide adequate resources to a coordinating agency at national and county levels to implement the National Wetlands policy.

Policy Statement 2: The national and county government shall develop strategies for the implementation of National Wetland policy.

Policy Statement 3: institute measures and mechanisms to manage within and across-counties.

Policy Statement 4: Adopt and implement ecosystem-based Approach in the management of all wetlands especially the water towers

Policy statement 5: Institute legal mechanisms for access to wetland genetic resources benefit sharing and technology transfer.

3.2 Resource Mobilization

Sustainable financial resources have remained the principal impediment to promoting sustainable development and environmental protection. National budgetary resources have failed to adequately provide for wetland conservation and management. As a result, the country has been unable to effectively respond to challenges of wetland conservation and management. To address this challenge, the government:

Policy Statement 1: Allocate and mobilize adequate resources from development partners, private sector and other agencies to support conservation and management of wetlands including Payment for Ecosystem Services (PES) and eco-tourism.

4.0 SECTOR LINKAGES AT NATIONAL AND INTERNATIONAL LEVELS

4.1 Coordination with related policies

Pressure imposed on wetland ecosystems and resources are often caused or influenced by external factors from other sectors.. There is need to create synergies between the policies that govern local authorities as well as the National Land Policy. The government shall:

Policy Statement 1: Institute an appropriate mechanism for achieving harmonization of the various sectoral policies that relate to wetlands

4.2 Promoting International obligations

A number of provisions in International Agreements, Protocols and Conventions provide guidance on sustainable wetland management and conservation. These include the Ramsar Convention, Convention on Conservation of Migratory Species of Wild Animals (CMS), UNESCO World Heritage Convention, The United Nations Convention to Combat Desertification (UNCCD), United Nations Framework Convention on Climate Change (UNFCCC), African Eurasian Water Bird Agreement (AEWA) and Convention on Biological Diversity (CBD).In addition, there are regional and continental agreements such as the East Africa Community (EAC) protocol on environment and natural resource management that provide opportunity for Kenya to cooperate with member state on management of trans-boundary wetland resources. To promote these international obligations, the government shall:

Policy Statement 1: Ensure that all provisions of relevant conventions and agreements are domesticated and implemented.

Policy statement 2: Ensure synergy and coordinated national approach in implementation of Multilateral Environmental Agreements (MEAs) relating to wetlands.

4.3 Mainstreaming Gender and youth

The exploitation of wetland resources follows specific and distinct gendered patterns. In addition, environmental incomes derived from wetland ecosystems have shown remarkable gender disparities due to unequal power relations. Similarly the traditional gender roles have inhibited the participation of women and youth in sustainable wetland management initiatives leading to their marginalization. Vulnerable women and youth have convincingly been marginalized in most of wetland management interventions. In order to ensure gender equity and equality in sustainable management of wetlands, the government shall:

Policy Statement1: Involve women and youth in participatory wetland management planning, decision making and implementation processes.

Policy Statement 2: Ensure the one-third gender rule in wetland management structures.

4.4 Non-State Actors

Participatory wetland management will be enhanced, by involving concerned non-state actors and local communities in planning and implementation of wetland conservation activities. This approach will be used to plan and implement wetland management plans among other strategies to bring on board other stakeholders in wetland management. To address this, the government shall:

Policy Statement 1: Support non-state actors and local communities to undertake wetland related conservation activities.

4.5 Public Health and HIV/AIDs

Wetlands are known to harbour specific vectors that cause water borne and water related diseases which are of concern to public health. The diseases and HIV/AIDs pandemic have had far reaching impacts on wetland management through increased dependency in wetland resources thereby undermining wetland related programmes. The government shall:

Policy Statement 1: Ensure that HIV/AIDs is mainstreamed in wetland programmes and projects.

Policy Statement 2 : Promote bio-control mechanisms to mitigate the impacts of vectors causing water borne and water related diseases.