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FOREWORD

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ACRONYMS AND ABBREVIATIONS

ASALs	Arid and Semi-Arid Lands
CBD	Convention on Biological Diversity
CBOs	Community Based Organisations
CDM	Clean Development Mechanism
CITES	Convention on International Trade in Endangered Species
CMS	Convention on Migratory Species
COPDS	Chronic Obstructive Pulmonary Disease
EAC	East African Community
EHIA	Environmental Health Impact Analysis
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Coordination Act
EPDS	Environment Policy Development Secretariat
EPNSC	Environment Policy National Steering Committee
FIRMS	Fishery Resources Monitoring System
GDP	Gross Domestic Product
GIS	Geographical Information Systems
GoK	Government of Kenya
ICZM	Integrated Coastal Zone Management
IPM	Integrated Pest Management
IWRM	Integrated Water Resources Management
LMOs	Living Modified Organisms
MDGs	Millennium Development Goals
MEA	Multilateral Environmental Agreement
MEMR	Ministry of Environment and Mineral Resources
MPA	Marine Protected Area
NBSAP	National Biodiversity Strategy and Action Plan
NEAPC	National Environment Action Plan Committee
NEC	National Environment Council
NEIMS	Environmental Information Management System
NEMA	National Environment Management Authority
NEPAD	New Partnership for Africa's Development
NET	National Environment Tribunal
NGOs	Non-Governmental Organizations
NRA	Natural Resource Accounting
PAs	Protected Areas
PCC	Public Complaints Committee
PES	Payment for Environmental Services
RECs	Regional Economic Commissions
SEA	Strategic Environmental Assessment
SERC	Standards and Enforcement Review Committee
UNCCD	United Nations Convention to Combat Desertification
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WEHAB	Water, Energy, Health, Agriculture and Biodiversity
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

1.0 INTRODUCTION

- 1.1 Environment has a very broad meaning. It includes the physical factors of the surroundings of human beings including land, water, atmosphere, sound, odour, taste, the biological factors of animals and plants and the social factors of aesthetics, and includes both the natural and the built environment
- 1.2 Kenya has a wide variety of ecosystems ranging from mountains, forests, arid and semi-arid areas, freshwater, wetlands, coastal and marine, offering myriad opportunities for human, social and economic development. These ecosystems are natural capital which provide important regulatory services (such as forests and mountains serving to regulate water flow, sustain biodiversity), provisional services (such as forests providing timber and fuelwood), cultural services (such as aesthetic, recreational or spiritual values and uses), and supporting services (such as soil formation, nutrient cycling and primary production)
- 1.3 The survival and socio-economic wellbeing of Kenyan's is ultimately twined with the environment. Most Kenyan citizens depend directly or indirectly on environmental goods and services. In addition, Kenya's environmental resources contribute directly and indirectly to the local and national economy through revenue generation and wealth creation in such productive sectors as agriculture, fishing, livestock, water, energy, forestry, trade and industry.
- 1.4 That is why the Environment has been an essential feature of Kenya's development policy. Environmental imperatives were initially captured through the periodic development planning cycles. Whole sections or chapters of the successive National Development Plans have dealt with the environment since independence. But modern environment management and planning in Kenya can be traced to the Rio Earth Summit of 1992, which helped a great deal in raising understanding of the link between environment and development. Following the Summit, Kenya initiated the national environmental action plan (NEAP) process. This was completed in 1994. It recommended the need for a national policy and law on the environment.
- 1.5 The policy process culminated into the Draft Sessional Paper No. 6 of 1999 entitled "*Environment and Development.*" The legislative process gave forth the Environment Management and Coordination Act (EMCA) (Act No. 8 of 1999) as Kenya's first framework environmental law. Both the Draft Policy and Act added to a large number of existing sectoral laws and policies dealing with various facets of the environment, such as water, forests, minerals and many others. This has created a diffuse system of environmental laws and policies, some of whose provisions are not in harmony – making them ill-suited to aid the pursuit of sustainable development objectives as set out in the Vision 2030.

- 1.6 The promulgation of the Kenya Constitution, 2010 marked an important chapter in Kenya environmental policy development. Hailed as a green Constitution, it embodies elaborate provisions with considerable implications for sustainable development. These range from environmental principles and implications of multilateral environmental agreements (MEAs) to the right to clean and healthy environment enshrined in the Bill of Rights. Its Chapter V is entirely dedicated to land and environment. It also embodies a host of social and economic rights of an environmental character, such as the right to water, food and shelter – among others.
- 1.7 This National Environment Policy aims to provide a holistic framework to guide the management of the environment and natural resources in Kenya. It further ensures that the linkage between the environment and poverty reduction is integrated in all government processes and institutions in order to facilitate and realize sustainable development at all levels

2.0 THE STATE OF THE ENVIRONMENT

- 2.1 Kenya has undergone unprecedented social, economic, political and technological changes since independence. These interlinked components provide the backdrop against which to view changes in the state of the country's environment because they serve a dual purpose as some of the most forceful drivers of that environmental change. The main human activities contributing to environmental degradation in Kenya include unsustainable agricultural land use, poor soil and water management practices, deforestation, overgrazing, and pollution.
- 2.2. These activities contribute a great deal to degradation of the country's natural resources such as land, fresh and marine waters, forests and biodiversity threatens the livelihoods of many people. They undermine the sink function of the environment which operates through such processes as nutrient recycling, decomposition and the natural purification and filtering of air and water.
- 2.3 In fact, environmental degradation in Kenya is partly responsible for rising costs of water treatment, food imports and medical treatment. These are not only increasing human vulnerability and health insecurity but also draining the country's economic resources. The expansion of agriculture into marginal areas and clearance of natural habitats such as forests and wetlands has been a major driving force behind land degradation throughout the country. The loss of biological resources translates into loss of economic potential and options for commercial development in the future.

2.4 This backdrop provides the justification for this environment policy. It gives the framework to guide the country's efforts to deal with the considerable and ever-growing environmental issues and challenges, such as:-

- (a) *Need for harmonization of sectoral policy instruments with EMCA and the Constitution:* There are several sectoral policies and laws relating to the environment which are not harmonized with both the EMCA and the Constitution. These include policies concerning agriculture, water, forests, trade and industry, which have significant implications for the environment. It is imperative that policy instrument in these sectors are harmonized with the EMCA and the Constitution and requirements made that they be subjected to strategic environmental assessment in order to promote sustainable development.
- (b) *Implementation of Land Policy:* Striking the right balance between land tenure and environmental imperatives is critical for sustainable development. The National Land Policy and the Constitution provide a critical basis for addressing the long-standing tensions around land tenure and use in Kenya. However, they need effective legislation to ensure implementation.
- (c) *Valuation of environmental and natural resources:* The value of environmental resources is hardly reflected in pricing of marketed goods and services. In fact, environmental and natural resources are largely considered "public goods". This is symptomatic of market failure. Integrating environmental considerations into the behaviour of enterprises and consumers would reflect a change in consumption and production patterns. Prioritization of environment and natural resources remains low among policy makers partly due to inadequate appreciation of the total economic value of the sector. Thus there is less public investment in the sector.
- (d) *Rehabilitation of degraded areas:* There are several degraded areas in Kenya which require rehabilitation. Examples of such degraded areas include abandoned quarries and mines, wetlands, riverbanks, deforested areas, eroded shoreline and hilltops.
- (e) *Loss of biodiversity:* Biodiversity plays a fundamental role in underpinning ecosystems and the services they provide. The most important causes of loss of biodiversity include habitat destruction, overgrazing, deforestation, pollution, unsustainable harvesting of natural resources, biopiracy and introduction of invasive and alien species. Indeed, available data suggests that despite a variety of initiatives, Kenya's biodiversity continues to decline.
- (f) *Concessions and incentives:* Several policies particularly in the agricultural, trade and industrial sectors provide for concessions and incentives without the requisite safeguards, causing negative environmental impacts.
- (g) *Urbanization and waste management:* Increasing levels of urbanization are caused by natural growth of the urban population and migration of

the rural population towards urban centres. Urbanization often leads to destruction of sensitive ecosystems. In addition, inadequate waste collection and waste management cause urban pollution and poor health. Thus many urban environmental problems are the result of poor management and planning and absence of coherent urban policies rather than of urbanization itself.

- (h) *Pollution*: Pollution continues to have a negative impact on Kenya's environment. The introduction of pollutants into air, water and land, intentionally or accidentally, negatively affects people's health and well being as well as the environment.
- (i) *Energy*: Energy consumption in the country is on the increase. However, the utilization of renewable energy sources exclusive of hydro-electricity is still relatively low.
- (j) *Climate change and disaster management*: Climate change poses significant environmental implications for Kenya. Indeed, some of its adverse impacts are already being observed, as evidenced by vanishing glaciers on Mt. Kenya and Kilimanjaro. People and the environment are increasingly suffering from the effects of frequent and intensified natural disasters such as floods, landslides and prolonged droughts. Kenya is very vulnerable to climate change. Increased frequency and intensity of extreme climate events continue to undermine the country's sustainable development. Managing climate-related disasters remains a significant challenge.
- (k) *Conservation of shared natural resources*: Conflicts over control and management of shared/transboundary resources are very common. For example, Lake Victoria experiences perennial conflicts concerning access to its fisheries resources. This calls for a framework for a harmonized and common approach to the conservation and management of such shared/transboundary resources.
- (l) *Invasive and alien species*: Invasive and alien species are a major threat to the environment. They threaten indigenous species through the effects of predation, alteration of habitat or disruption of ecosystem processes. The prevention, control or eradication of invasive and alien species that threaten ecosystems, habitats and species, is a major environmental management challenge.
- (m) *Public participation, environmental education and awareness*: Broad public participation in decision making processes is one of the fundamental preconditions for sustainable development. This presupposes access to timely and accurate information on the environment. Sound environmental management has to be based on openness and participation at all levels. Therefore, it is imperative that environmental education and public awareness is promoted.
- (n) *Data and information*: Inadequate and disaggregated data is a challenge for integrated planning and management of the environment and undertaking total economic valuation.

- (o) *Poverty*: Rising poverty levels have impacted negatively on the environment. Poverty is a major cause and consequence of environmental degradation and resources depletion because of lack of alternatives. The poor who represent the majority of the country's total population rely heavily on environment and natural resources for their livelihoods.
- (p) *Weak enforcement*: Weak enforcement of laws and weak implementation of policies remains a major issue of concern in Kenya's environment sector.
- (q) *Fragmentation*: Kenya has for a long time adopted sectoral rather than integrated and ecosystem approaches to the management of natural resources. This needs to change because the key economic sectors are interlinked while environmental matters cut across all of them.

3.0 GOAL, OBJECTIVES AND GUIDING PRINCIPLES

3.1 GOAL

The goal of this Policy is:

A better quality of life for current generation without compromising the quality of life of future generations through sustainable management of the environment and natural resources

3.2 OBJECTIVES

The objectives of this Policy are to:

- (a) Provide a framework for an integrated approach to planning and sustainable management of Kenya's environment and its natural resources.
- (b) Strengthen the legal and institutional framework for effective coordination and management of the environment and natural resources.
- (c) Ensure sustainable management of the environment and natural resources, such as unique terrestrial and aquatic ecosystems, for national economic growth and improved people's livelihood and well-being.
- (d) Promote and support the use of innovative environmental management tools – such as incentives, disincentives, total economic valuation, indicators of sustainable development, SEA, EIA, Environmental Audit, and payment of environmental services – in environmental management.
- (e) Promote and enhance cooperation, collaboration, synergy, partnerships and participation in the protection, conservation and better management of the environment by all the stakeholders.

- (f) Ensure inclusion of cross-cutting issues – such as poverty reduction, gender, disability and HIV/AIDS – in national and sectoral planning processes.

3.3 GUIDING PRINCIPLES

Kenya's Environmental policy shall be implemented in accordance with the following guiding principles:-

- (a) **A Right to a Clean and Healthy Environment:** Every person in Kenya has a right to a clean and healthy environment and a duty to safeguard and enhance the environment.
- (b) **A Right to Development:** The right to development will be exercised taking into consideration the economic, social and environmental needs.
- (c) **Ecosystem 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 a range of benefits to people.
- (d) **Total Economic Value:** The benefits that ecosystems generate will be integrated into the national accounting system, programmes and projects.
- (e) **The Principle of Sustainable Use:** Environmental resources will be utilized in a manner that does not compromise the quality and value of the resource, or decrease the carrying capacity of supporting ecosystems.
- (f) **Inter- and Intra-generational Equity:** The management of the environment and natural resources will be based on long term views where present generations make choices that benefit them without compromising the ability of future generations to meet their own needs.
- (g) **Public Participation and Inclusivity Principle:** A coordinated and participatory approach to environmental protection and management will be enhanced to ensure that the relevant government agencies, local authorities, private sector, civil society and communities are involved in planning, implementation and decision making processes.
- (h) **The Principle of Subsidiarity:** The management of the environment and natural resources will be through decentralization and devolution of authority and responsibilities at the lowest level possible.
- (i) **The Precautionary Principle:** Where there are credible threats of serious or irreversible damage to key environmental resources, lack of full scientific certainty will not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
- (j) **The Polluter Pays Principle:** The polluter and users of environmental and natural resources shall bear the full environmental and social costs of their activities.
- (k) **International Cooperation:** Multilateral environmental agreements (MEAs) and regional instruments will be domesticated and implemented for better environmental management of shared resources.
- (l) **Good Governance:** rule of law, effective institutions, transparency and accountability, respect for human rights and the meaningful participation of citizens will be integrated in environmental management.

4.0 MANAGEMENT OF ECOSYSTEMS AND SUSTAINABLE USE OF NATURAL RESOURCES

Ecosystems provide a wide variety of goods and services. These include provisioning, regulating, cultural and supporting services. Despite the services they provide, natural ecosystems are under tremendous pressure from human activities. The most critical ecosystems in Kenya include forests, freshwaters, wetlands, coastal and marine ecosystems, mountains, arid and semi-arid lands (ASALs), and grasslands.

Within these ecosystems are key natural resources which provide natural capital for economic development. The foundation for sustainable use of natural resources is secure and equitable access to and control of natural resources – including fair distribution of the costs, associated benefits and opportunities. The majority of Kenya's population lives in rural areas, and depend on natural resources for their livelihood and survival. The key natural resources are land, soils, biodiversity, water, wildlife, forests, fisheries, minerals and livestock.

4.1 FOREST ECOSYSTEMS

4.1.1 The conservation and sustainable development of forest ecosystems and their associated resources is essential for lasting poverty reduction and sustainable development. Forest ecosystems are important in conservation of soil, water and biodiversity as well as in moderation of climate. They are the richest terrestrial habitats for biodiversity. Maintaining forest biodiversity protects the economic potential of future opportunities for new non-timber products, such as foods and medicines, as well as social sustainability by offering aesthetic, spiritual and recreational settings for people.

4.1.2 Kenya's forests are being subjected to considerable pressure from competing user-groups. Agriculture, industry, human settlement and development of infrastructure affect them the most. In addition to extraction of forest products, there has been immense pressure for conversion of forest land to other uses, especially to agriculture and settlements. Further, illegal logging, cutting trees for fuelwood and charcoal, and grazing cattle and goats, have all degraded forests. These competing land uses have adverse environmental effects on long term sustainability of forest ecosystems.

4.1.3 Large scale loss of forests would lead to catastrophic, permanent change in the country's ecology – with consequent loss of agricultural productivity, industrial potential development, living conditions and aggravated natural disasters such as floods and drought. It would also endanger the country's water supplies since the five major water towers are located in forested lands.

The Government will:

1. *Formulate an innovative strategy to increase forest and tree cover from the current to at least 10% as required under the Constitution.*
2. *Develop and implement a National Strategy for Rehabilitation and Restoration of degraded forest ecosystems.*
3. *Protect and conserve forests located in key water catchment areas.*
5. *Support effective implementation of the Forests Act, 2005.*
6. *Develop and implement cost-effective, objective and measurable national standards, principles and criteria of sustainable forest management.*
7. *Develop and support appropriate forest-based development mechanisms in the emerging carbon markets*

4.2 FRESHWATER AND WETLAND ECOSYSTEMS

4.2.1 Freshwater ecosystems and wetlands are essential in the provision of environmental goods and services. Their provisioning services include the storage and retention of water for domestic, agricultural and industrial use. Regulating services include modifying water flows (hydrological flows), recharging and discharging groundwater resources and diluting or removing pollutants. Supporting services of the hydrological cycle are important for soil formation and soil retention and nutrient cycling. The ecosystems also provide habitats for a great number of species, promoting biodiversity which underlies the resilience and productivity of ecosystems. They are also important for recreation (e.g., Lakes Nakuru and Naivasha) as well as their spiritual and inspirational roles in different cultures.

4.2.2 Many freshwater and wetland ecosystems have been degraded by impoundment, excessive abstraction, land use changes and pollution. The pollutants tend to accumulate in rivers, lakes and wetlands causing much damage to wildlife. As rivers run to the sea, pollutants also end up in coastal and marine ecosystems such as lagoons, estuaries and bays.

Policy Statements

The Government will:

1. *Develop and implement integrated wetland and water resources management strategies and action plans.*
2. *Promote and institutionalize payment for environmental services schemes to support catchment protection and conservation.*
3. *Promote sustainable use of freshwater and wetland resources and the conservation of vulnerable river and lake ecosystems through development and implementation of river basin management plans.*
4. *Develop a national wetland policy and regulations.*
5. *Map wetland areas countrywide*
6. *Develop and implement catchment-based wetland management plans for all Ramsar sites through a participatory process.*
4. *Ensure restoration of degraded wetlands, riverbanks and lakeshores and, where appropriate, promote and support establishment of constructed wetlands.*

5. *Harmonise and coordinate the roles of various regulatory agencies charged with the management of freshwater and wetland ecosystems.*

4.3 COASTAL AND MARINE ECOSYSTEMS

4.3.1 Coastal and marine ecosystems are composed of multiple interacting systems – maritime, terrestrial and aquatic – and include the islands and the 200 nautical miles exclusive economic zone (EEZ). Islands offer unique ecosystems. Coastal and marine ecosystems provide a wide range of important goods and services. The services include storing and cycling nutrients, regulating water balances, buffering land and protecting it against erosion from storms and waves, and filtering pollutants. On a larger scale, the oceans also play an important role in regulating planetary balances in hydrology and climate.

4.3.2 Coastal and marine ecosystems are under increasing pressure. The major direct threats to these ecosystems include urbanization, poor waste management, shoreline modification, pollution (from land-based and other sources), over-exploitation and destruction of marine living resources such as mangroves, oil and gas exploration, use of destructive fishing methods, invasive and alien species and adverse effects of climate change. The coastal zone is also receiving increasing numbers of tourists.

Policy Statements

The Government will:

- 1. Promote sustainable use of marine resources and the conservation of vulnerable coastal ecosystems.*
- 2. Develop a harmonized Integrated Coastal Zone Management (ICZM)/ Integrated Ocean Management Policy, Strategy and Action Plan.*
- 3. Undertake and support research and training in the conservation and management of coastal and marine ecosystems and resources.*
- 4. Promote closer regional and international cooperation in the conservation and management of marine migratory species of importance.*
- 5. Harmonize and coordinate the roles of various regulatory agencies charged with the management of coastal and marine resources.*

4.4. FISHERY RESOURCES

4.4.1 Fisheries contribute a significant portion of Kenya's GDP. It also plays an important role in ensuring food security. A large population depends on fisheries both directly and indirectly for livelihood through fishing and linkages to fish processing and trade. In fact, the fisheries sector is now identified as one with great potential areas for value addition and provision of rural incomes in the country.

4.4.2 Today, apart from deep sea marine fishery, the overall state of Kenya's fishery resources and their ecosystems is deteriorating due to unsustainable fishing practices, habitat destruction, pollution, and weak

management structures. Other challenges include uncoordinated development approaches, low investment, inadequate aquaculture development, weak linkages between research and management, and cross-border conflicts. To reverse this trend and achieve sustainability of fisheries, careful stewardship is required to conserve and protect all aquatic habitats for present and future generations.

Policy Statements

The Government will:

- 1. Promote sustainable management and utilization of fishery resources.*
- 2. Establish and implement a Fishery Resources Monitoring System (FIRMS).*
- 3. Promote sustainable aquaculture development.*
- 4. Strengthen community participation in fisheries resources management, value addition and marketing.*

4.5 MOUNTAIN ECOSYSTEMS

4.5.1 Mountain ecosystems are especially important for biodiversity conservation since many harbour unique assemblages of plants and animals, including high levels of endemic species. Mountains are an important source of water. For example, Mt Kenya, Mt Elgon, Aberdare Ranges, Mau Escarpment and Cherangani Hills are Kenya's major water towers. Mountain ecosystems are very distinct from lowlands, being particularly fragile and highly susceptible to erosion and landslides.

4.5.2 Mountain ecosystems have been subjected to a variety of uses and in the process have been susceptible to degradation. The main drivers of mountain ecosystems degradation are deforestation, illegal logging, poaching of wild plants and animals, destruction of habitats by fire and mining, uncontrolled grazing, encroachment by human settlements and agriculture, and the effects of climate change.

Policy Statements

The Government will:

- 1. Generate and strengthen knowledge about the ecology and sustainable management of mountain ecosystems.*
- 2. Develop and implement strategies and action plans for sustainable management of mountain ecosystems.*
- 3. Promote integrated watershed management and alternative livelihood opportunities to enhance community participation in the conservation and management of mountain ecosystems.*
- 4. Adopt appropriate land use planning and watershed management practices for sustainable development of mountain ecosystems.*

4.6 ARID AND SEMI-ARID LANDS ECOSYSTEMS

- 4.6.1 Arid and Semi-Arid Lands (ASALs) are fragile ecosystems that receive very low and unreliable rainfall. The main form of land use in ASALs is livestock grazing – mainly camels, cattle, goats and sheep – accounting for a large proportion of the total livestock population in the country. Pastoralism involves considerable mobility to capitalize on spatially and temporally dispersed commonly-owned natural resources which are regulated at the level of collectivity, rather than by separate landowners.
- 4.6.2 The ASALs further provide critical habitats for wildlife and ecosystem diversity, including wetlands for migratory species. The main threats to ASALs include expanding agriculture, charcoal burning and fuelwood collection, uncontrolled fires, human settlements, land degradation, deforestation and overgrazing. This is exacerbated by the impacts of climate change. The Government is giving special attention to investment in ASALs that include development of an Integrated Land Use Master (Development) Plan.

Policy Statements

The Government will:

- 1. Develop and implement an Integrated Land Use Master (Development) Plan for the ASALs.*
- 2. Promote integrated natural resource management in ASALs.*
- 3. Ensure application of IWRM in ASALs with a view to harvesting flood and river water.*
- 4. Promote efficient adaptation measures for productive and sustainable resource management in the ASALs.*
- 5. Implement the National Action Plan (NAP) to combat desertification and revitalise the Desertification Trust Fund.*

4.7 GRASSLAND ECOSYSTEMS

- 4.7.1 There are several types of grasslands ranging from highland grasslands, savannah grasslands, moorland grasslands to rangelands. Other important grassland types include fire induced grasslands, seasonal flood plain grasslands and delta grasslands. Grasslands are well known as the habitats of the greatest assemblages of large wild mammals in the world. Grasslands also support a rich bird fauna. Consequently, grasslands are important for nature-based tourism, extensive livestock production and recreation activities as well as for water conservation and erosion control.

Policy Statements

The Government will:

- 1. Generate and strengthen knowledge about the ecology and sustainable management of grassland ecosystems.*
- 2. Develop and implement guidelines for planning and managing grassland ecosystems.*

4.8 LAND

- 4.8.1 Land resources are finite, fragile and non-renewable. Land is considered a capital and asset that provides the essential services for development and human well being. Consequently, the demand and pressure on land is ever increasing. The main driving force leading to pressure on land resources is the increasing rate of population growth; hence demand for more food and shelter.
- 4.8.2 The unsustainable use of land in urban and rural areas remains a major challenge to all Kenyans due to the serious impact on the environment. Activities contributing to land degradation include unsuitable agricultural land use, poor soil and water management practices, deforestation and overgrazing. Natural disasters, including droughts, floods and landslides, also contribute to land degradation.

Policy Statements

The Government will:

- 1. Ensure implementation of the Constitution and the National Land Policy in a way that that will take into account sustainable conservation and management of the environment and land resources.*
- 2. Promote and enhance best practices for sustainable land use.*
- 3. Promote and support the establishment of environmentally significant areas for purposes of enhancing the protection and conservation of the environmental resources.*
- 4. Promote sustainable urban agriculture.*

4.9 SOILS

- 4.9.1 Quality fertile soils are a foundation of sustainable agriculture. Soils are also essential in the hydrological cycle. Soil degradation processes of particular concern throughout the country include erosion, compaction and soil fertility depletion. Loss of natural habitats has reduced vegetation cover and exposed soils to extensive wind and soil erosion in many parts of the country.
- 4.9.2 Soil erosion is a major factor in land degradation and has severe effects on soil functions, such as the soil's ability to act as a buffer and filter for pollutants, its role in the hydrological and nitrogen cycle, and its ability to provide habitat and support biodiversity. Soil erosion also causes increased rates of siltation of dams and rivers, and increased risk of flooding in rivers and estuaries. Thus, soil erosion reduces the productivity of land, requiring farmers to apply more and more fertilizers and other chemicals that help check falling productivity. The resultant excessive use of fertilizers and other chemicals contributes to soil degradation and water pollution. However, many small-scale farmers cannot afford to buy these inputs. This leads to low yields.

Policy Statements

The Government will:

1. *Develop and implement a National Soil Conservation Action Plan.*
2. *Promote and support eco and organic farming so as to maintain soil fertility.*
3. *Ensure the protection of wetlands, riverbanks, hilltops and slopes from unsustainable practices to prevent soil erosion and environmental degradation.*

4.10 BIODIVERSITY

4.10.1 Kenya is internationally recognized as a mega diverse country in terms of richness in biodiversity. Biodiversity contributes to a wide variety of environmental services, such as regulation of the gaseous composition of the atmosphere, protection of coastal zone, regulation of the hydrological cycle and climate, generation and conservation of fertile soils, dispersal and breakdown of wastes, pollination of many crops, and absorption of pollutants. Human health and well-being are directly dependent on biodiversity. Biodiversity also provides genetic resources for food and agriculture, and therefore constitutes the biological basis for food security and support for human livelihoods.

4.10.2 Loss of biodiversity is going on at unprecedented rate. The most important drivers are land degradation, climate change, pollution, unsustainable harvesting of natural resources, unsustainable patterns of consumption and production, and introduction of invasive and alien species. Such invasive and alien species as *Prosopis juliflora*, *Eichornia crassipes*, and *Lantana camara* constitute major threats to biodiversity in Kenya.

Policy Statements

The Government will:

1. *Revise and implement the National Biodiversity Strategy and Action Plan (NBSAP).*
2. *Regulate and encourage sustainable utilization and bioprospecting of biological resources in accordance with international law.*
3. *Develop mechanisms to ensure that the benefits arising from access to genetic resources, including intellectual property rights, traditional knowledge and technology are shared equitably with communities living in areas where the genetic material originated.*
4. *Develop and implement a strategy to contain, control and mitigate alien and invasive species.*

4.11 WILDLIFE RESOURCES

4.11.1 Wildlife resources contribute directly and indirectly to the local and national economy through revenue generation and wealth creation. But increasing population, growing numbers of refugees, human wildlife conflicts, widespread pollution, climate change and the transformation of vast wildlife areas into other land-uses threaten the continued existence of wildlife in Kenya now and in the future.

4.11.2 Human – Wildlife Conflict is a growing concern and provides a major challenge to Wildlife Conservation in Kenya. Conflicts are becoming more prevalent as human population increase, development expands, the global climate change and other human and environmental factors put people and wildlife in greater direct competition for a shrinking resource base especially living space and food. The impacts are often huge. People lose their crops, livestock, property and sometimes their lives. The animals, many of which are threatened or endangered, are often killed in retaliation or to 'prevent' future conflicts. Despite the efforts made to reduce conflicts the losses remain high and some of the conflict mitigation measures that are in place for instance fencing and compensation for losses, demand for increased financial resources. The government paid 71.5 million and 66.5 million shillings as compensation claims in the year 2010 and 2011 respectively.

Policy Statements

The Government will:

- 1. Protect, conserve and improve the habitats, corridors and dispersal areas of wildlife.*
- 2. Review the existing Wildlife Policy and Wildlife (Conservation and Management) Act to comprehensively address contemporary wildlife conservation and management issues.*
- 3. Provide incentives for investment in sustainable tourism and wildlife conservation initiatives.*
- 4. Promote the establishment of transboundary and/or transfrontier wildlife conservation areas as a basis of enhancing the conservation of shared wildlife resources and their ecosystems through relevant regional instruments.*
5. Encourage and support the establishment of community based conservation areas in order to expand protected area network and win more space for wildlife.
6. Maintain and expand all gazetted protected areas and reclaim and restore the encroached parks and reserves for enhanced wildlife conservation.
7. Strengthen and support wildlife research and monitoring to generate adequate information for decision making

4.12 MINERAL RESOURCES

4.12.1 Kenya's mineral potential is yet to be fully exploited due to lack of adequate geological information on deposits occurrence. With countrywide coverage of geological surveys and mineral exploration, it is possible to fully exploit the mineral potential. Increased mining activity, including quarrying and harvesting of sand, may result in environmental degradation unless measures are taken to guide and control operations in the mining sub-sector. The Government has formulated a draft mineral resources policy and law.

Policy Statements

The Government will:

- 1. Ensure approval and implementation of the Mineral Resources Development and Exploitation Policy.*
- 2. Enact a new Mining Act that takes into consideration the environmental considerations.*
- 3. Develop and implement mechanisms for sustainable harvesting of sand.*
- 4. Ensure rehabilitation and restoration of all mining sites such as quarries.*

4.13 LIVESTOCK RESOURCES

4.13.1 Livestock production is the major activity in ASALs and contributes about 10% of the GDP while employing 50% of the agricultural labour force. Overgrazing in ASALs leads to land degradation. In high potential areas, especially where zero grazing is practiced, the main issue in livestock production is waste management and disposal resulting in water pollution. In urban areas, disposal of effluents from abattoirs, butcheries and tanneries is a major problem.

Policy Statements

The Government will:

- 1. Develop and implement an environment-friendly livestock production policy which incorporates free disease zones.*
- 2. Develop and implement guidelines for livestock waste disposal.*

4.14 NATURAL CAPITAL

4.14.1 Capital has often been thought of narrowly as physical capital – the machines, tools, and equipment used in the production of other goods, but our wealth and well-being also relies on natural capital. Natural capital is the extension of the economic notion of capital (manufactured means of production) to goods and services relating to the natural environment. Natural capital is thus the stock of natural ecosystems that yields a flow of valuable ecosystem goods or services into the future. Since the flow of services from ecosystems requires that they function as whole systems, the structure and diversity of the system are important components of natural capital. If we forget this, we risk degrading the services that natural ecosystems provide, which support our economies and sustain our lives. Natural capital is easy to lose, a challenge to conserve and expensive and difficult to restore. There are also synergies and linkages within these various ecosystems which must be harmonized.

4.14.2 One reason why our natural resources continue to be degraded is that decision makers do not have a reliable way to assess the true value of the services that ecosystems provide, that is, what is their worth, what their loss would cost and what can be done about the loss.

- 4.14.3 The policy implication is that their future competitiveness and well-being depend heavily on improving the efficiency of natural resource use. It involves undertaking total economic valuation of national capital which included the review of what is known about the environmental services generated by natural capital, the ways in which humans benefit from those services, and the ways in which human activities impact natural capital and change the future flow of services derived from it. This will lead to the green economy.

Policy Statements

The Government will:

1. Quantify and value ecosystem services, assessing how amounts and values of services will change under various development scenarios
2. create and apply incentives for conservation of natural capital
3. *Develop and apply instruments and methodologies for integrating environment into national accounts and planning processes*
4. *Ensure cross - and inter-sectoral coordination and policy integration of environmental considerations into sectoral policies, programmes, and plans.*
5. *Develop and implement Environmental Management Guidelines for all sectors.*
6. *Ensure that cost and benefit analyses on the environment are applied in development planning at national and county level.*
7. *Develop and promote payments of environmental services that ensure that valuable services provided by natural ecosystems are captured in the development process.*
8. Develop indicators to monitor use of natural capital and the distribution of their benefits among stakeholders

5.0 ENVIRONMENTAL STEWARDSHIP

Sustainable development requires that at competitive prices, business and industry can supply goods and services that meet societal and individual needs, contribute to improved quality of life and ensure management and efficient use of renewable and non-renewable resources.

5.1 TRADE AND ENVIRONMENT

- 5.1.1 International and regional trade are important drivers of economic growth, hence Kenya's commitment to integration of regional trade through regional economic commissions (RECs), such as the East African Community (EAC) and Common Market for Eastern and Southern Africa (COMESA). Furthermore, the trend towards globalization has in part reduced barriers to international trade and investment flows.

- 5.1.2 There are both direct and indirect effects that trade may have on the environment and society. Trade-offs between economic gains, environmental impacts and social effects must be made taking into consideration the multilateral trading system embodied in World Trade Organization (WTO). Trade liberalization within the framework of sustainable development and its contribution to poverty reduction remains a priority concern for the Government.

Policy Statements

The Government will:

- 1. Mainstream environmental considerations into the National Trade Policy.*
- 2. Ensure that issues on environment are integrated into international and regional trade negotiations and domesticate resulting agreements.*
- 3. Promote and support capacity building in the field of trade and environment.*

5.2 SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

- 5.2.1. Changing patterns of consumption and production through integration of environmental considerations in all sectors and other policy areas is a pre-requisite for sustainable development. Currently, most of the production and consumption practices do not take into account the associated environmental costs. As a result, the benefits provided by natural resources appear to be much smaller than they really are.
- 5.2.2. An integrated accounting system will ensure that environmental costs in the production systems are considered. The repercussions of unsustainable consumption and production practices have been growing and have resulted in some of today's environmental challenges such as climate change, ozone depletion, loss of biodiversity, water and air pollution, forest and soil degradation as well as increasing waste generation. Environment-friendly technologies can yield enormous environmental benefits.
- 5.2.3. As espoused in Principle 8 of the Rio Declaration, to achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies. There is a need to develop and apply methods and tools serving to promote resource efficiency in consumption and production patterns across sectors.

Policy Statements

The Government will:

- 1. Provide economic incentives for investment in more efficient, clean and environment-friendly production technologies and methods for improved productivity and environmental sustainability.*
- 2. Promote, in close collaboration with business and industry, application of sound environmental management tools, especially strategic environmental assessment, environmental impact assessment, environmental audits,*

environmental management systems, risk assessment/management and environmental reporting.

3. *Work with private sector, NGOs and CBOs to enhance corporate and social responsibility and accountability.*
4. *Promote public procurement policies that encourage development and diffusion of environmentally sound goods and services.*
5. *Strengthen and support consumer organisations.*

5.3 INDUSTRIAL DEVELOPMENT

5.3.1 The structural changes implicit in attaining the growth rates demanded by the income poverty, MDGs, and Vision 2030 means that ways must be found to achieve sustainable industrial development. This calls for an environmentally-friendly industrial development strategy that integrates and promotes cohesion of industrial and environmental policies and that enhances transfer of environmentally sound technologies.

5.3.2 The Small and Medium Enterprises (SMEs) have been recognized as the engine to industrialization. The SMEs and other industries, besides contributing to economic growth and job opportunities, also contribute significantly to environmental degradation and pollution due to factors such as the type and age of the technologies in use, shop-floor practices and other specific industry characteristics.

Policy Statements

The Government will:

1. *Mainstream environmental consideration into the Draft Industrialization Policy.*
2. *Develop and implement a National Environmentally-friendly Industrial Development Strategy and Action Plan that encourages clustering of industries and other development activities to facilitate setting up of environmental management infrastructure.*
3. *Promote and support SMEs and other industries to adopt appropriate environmentally sound technologies through provision of appropriate incentives and disincentives.*
4. *Develop and promote use of strategic environmental assessment in the industrial development plans, policies and programs.*
5. *Develop capacity and promote environmental education and awareness among the SMEs.*

5.4 SUSTAINABLE HUMAN SETTLEMENTS

5.4.1 The pattern of human settlements in the country is influenced by natural resource endowments which include availability and accessibility of land, shelter, water, food and social amenities. Kenya is still largely a rural society with a high population growth rate which constrains the country's resource base. Rural settlements have environmental problems which are influenced by many factors including population growth, cultural traditions, topography, climate, available resources, and the economy. The huge

numbers of refugees seeking a safe place from conflicts, often in refugee camps, can have major impact on the local environment, through their own fuelwood and food needs.

5.4.2 There have been notable population movements over the last two decades due to rapid urbanization. The capacity of the urban centres to provide housing, infrastructure, services and job opportunities remains a challenge. Sustainable human settlement involves creating the conditions under which people in both rural and urban settings can enjoy healthy, productive and well integrated lifestyles. This should ensure that people live in safe, healthy and dignified conditions, with relatively easy access to amenities.

Policy Statements

The Government will:

1. *Encourage Kenyans to have family sizes which are sustainable.*
2. *Integrate population and public health into environmental management and natural resources conservation*
3. *Promote environmental management principles among school children to inculcate the importance of environment life supporting systems*
4. *Develop and implement an Integrated Housing Policy and Housing Master Plan that takes into account environmental considerations.*
5. *Promote and support upgrading of slums and informal settlements by improving infrastructure and social services.*
6. *Develop and enforce integrated land use planning at all levels.*
7. *Develop and promote a policy on eco-settlement centres.*
8. *Mainstream environmental considerations in the refugee policy and legislation.*
9. *Support development and implementation of integrated community-based environment management plans in refugee and settled areas.*

5.5 ENERGY

5.5.1 Energy is essential for development. Deliberate efforts have been made by the Government to provide power to remote areas in Kenya in order to spur development and improve livelihoods. The main sources for the country's power production are at present hydropower energy, petroleum energy and geothermal energy.

5.5.2 The projection is that the country's energy requirements will substantially increase. The country's energy policies must ensure a robust and efficient energy system. It must lead to high supply security and a high degree of sufficiency in order to facilitate industrial competitiveness. The energy system should focus more on increasing the use of renewable energy.

Policy Statements

The Government will:

1. *Develop and promote an integrated national strategy for sustainable utilization of renewable energy such as wind, solar, mini and micro hydro, geothermal and bioenergy among others.*
2. *Promote adaptation of the cleaner production concept in all energy production and consumption activities.*

5.6 CLIMATE CHANGE

- 5.6.1 There is now general consensus around the work of the Intergovernmental Panel on Climate Change (IPCC) that climate change is a reality and that human activities are largely responsible for increasing concentration of greenhouse gases (GHGs) in the earth's atmosphere. Kenya, like many other countries, is concerned about climate change and its impacts. In addressing climate change, two approaches are adopted, aimed at tackling both the causes of climate change (GHG emissions) and the adaptation measures on the impacts of climate change.
- 5.6.2 Kenya experiences heavy, devastating floods during strong *El Nino* and *La Nina* events. The economic impacts of the floods cut across all the key sectors of the economy. Agricultural production, industrial processing, manufacturing, tourism, infrastructure and public health are impacted the most. Like floods, drought affects nearly all sectors of the economy. It is expected that with climate change the frequency and intensity of extreme weather events such as floods and droughts will increase.
- 5.6.3 Many of the disasters in Kenya are climate related. They are associated with the extreme climate events which occasion landslides, increased disease episodes, negative effects on farming, and massive livestock deaths.

Policy Statements

The Government will:

1. *Implement the National Climate Change Strategy.*
2. *Identify and raise awareness on the opportunities for adaptation measures through promotion of appropriate technology transfer and capacity building.*
3. *Develop and implement under the Kyoto Protocol's Clean Development Mechanism (CDM) programmes and projects that encourage significant levels of investment and technology transfer for sustainable development.*
4. *Develop an integrated, improved early warning and response systems for climate and disaster risks with a clear strategy for dissemination of information to the grassroots.*
5. *Build and strengthen research capacity on climate change and related environmental issues.*

5.7 DISASTER MANAGEMENT

- 5.7.1 In the last two decades, Kenya has continued to face a rising degree of vulnerability to disaster risk. This risk is the probability of a hazard turning into a disaster, with households or communities being affected in such a manner that their lives and livelihoods are seriously disrupted beyond their capacity to cope or withstand using their own resources, with the result that affected populations suffer serious widespread human, material, economic or environmental losses. Communities are predisposed to disasters by a combination of factors such as poverty, aridity, settlement in areas prone to perennial flooding or areas with poor infrastructure and services such as the informal urban settlements or even living in poorly constructed buildings.
- 5.7.2 These factors, coupled with naturally occurring hazards such as drought, floods, HIV and AIDS, landslides and epidemic outbreaks, and currently propelled by climate change phenomena, pose extremely high and increasing disaster risks to the Kenyan society.
- 5.7.3 Although Kenya's economy and by extension its population could be classified as highly vulnerable to natural and man-made disaster risks, the country does not have a comprehensive disaster management framework and strategies guided by appropriate policy and legislative provisions.

Policy Statement

The Government will establish an Institutional, policy and legal framework to effectively manage disaster risk and disasters in general.

5.8 GENDER AND ENVIRONMENT

- 5.8.1 Gender plays an important role in the management of the environment. For example, women interact with the environment on day to day basis as they farm, collect firewood and fetch water. Recognition of different roles played by men and women will assist in integrating both genders optimally in environmental conservation and management.

Policy Statements

The Government will endeavour to:

- 1. Mainstream gender issues into environment and natural resource conservation and management.*
- 2. Develop and implement an Environment and Gender Strategy and Action Plan.*
- 3. Provide incentives to attract the under-represented gender into environmental management careers and occupations.*

5.9 YOUTH AND ENVIRONMENT

5.9.1 High population growth is reflected in the country's population structure. The youth account for close to 50% of the total country's population. While this could be seen as a positive characteristic in terms of the large number of young workers available, it also has significant negative socio-economic implications, particularly in terms of high unemployment. In addition, large numbers of young people entering their productive years compound the pressures of population growth. Nevertheless, the youth represents future generations in respect of sustainable environmental management. It is therefore important to engage the youth in managing the environment. At the same time, it should be ensured that their specific needs are considered and addressed within the context of promoting sustainable environmental management.

Policy Statements

The Government, in collaboration with stakeholders, will endeavour to:

- 1. Mainstream youth issues into environmental management.*
- 2. Develop and implement a Youth and Environment Strategy and Action Plan.*

5.10 HIV/AIDS AND ENVIRONMENT

5.10.1 Despite gains in life expectancy, the HIV/AIDS pandemic has had far reaching impacts on all sectors of the economy due to loss of lives or absence from work due to prolonged ailment periods. The pandemic has, therefore, caused a shortage of both skilled and unskilled labour, thereby undermining environmental protection activities. The increased burden due to the cost of treatment results in reduced investment in the sector as more resources are devoted to health care.

Policy Statements

The Government will endeavour to:

- 1. Mainstream the fight against HIV/AIDS in the environmental protection programmes, projects, and activities.*
- 2. Support and strengthen research in traditional herbal medicine taking into consideration the role of indigenous knowledge.*
- 3. Support and promote conservation of traditional medicinal biodiversity.*

6.0 ENVIRONMENTAL QUALITY AND HEALTH

All life depends on a clean and healthy environment. This vast web of interwoven life systems is often threatened by the presence of harmful substances as well as ionizing agents. Air pollution, waste, radiation, and noise require special attention. In fact, the most pressing problems today, in terms of environmental

health, are those associated with air and water pollution, water supply and sanitation, waste disposal, and chemical and food safety. The ill-health effects of harmful environmental exposures may be acute. Sometimes a long time may elapse between the initial exposure and the appearance of an adverse health effect

Policy Statements

The Government will:

- 1. Promote Environmental Health Impact Analysis (EHIA) as a component of the Environmental Impact Assessment (EIA) for all development projects.*
- 2. Enhance the provision of occupational health and safety services.*
- 3. Promote capacity building in the field of health impact analysis.*

6.1 AIR QUALITY

6.1.1 Air pollution is a leading cause of respiratory diseases such as chronic obstructive pulmonary disease (COPD), lung cancer, pulmonary heart disease, and bronchitis. The effects of outdoor air pollution are compounded by those of indoor air pollution. Most households use charcoal and firewood for domestic cooking. Indoor air pollution affects both urban and rural populations.

Policy Statements

The Government will to:

- 1. Establish air quality standards and develop enforcement capacity.*
- 2. Promote efficient non-motorized and mass transport system.*
- 3. Encourage energy saving devices and construction of well ventilated houses.*

6.2 WASTE MANAGEMENT

6.2.1 Inefficient production processes, low durability of goods, and unsustainable consumption and production patterns lead to excessive waste generation. Despite efforts to encourage reuse, recycling and recovery, the amount of solid waste generated remains high and appears to be on the increase. In addition to solid wastes, wastewater effluents represent one of the largest threats to the quality of Kenya's waters. Wastewater often results in increased nutrient levels leading to algal blooms and depleted dissolved oxygen resulting in destruction of aquatic habitats. Other categories of wastes that require special consideration are electronic wastes, military wastes and clinical wastes. Spills from oil tankers can devastate coastal and marine ecosystems.

Policy Statements

The Government will:

- 1. Develop an integrated national waste management strategy*
- 2. Promote the use of economic instruments to manage waste.*
- 3. Promote establishment of facilities and incentives for cleaner production, waste recovery, recycling and re-use*

6.3 RADIATION

- 6.3.1. Nuclear energy, X-rays, radioactive wastes mining and use of equipment with ionizing agents can release harmful radiation into the environment. Different types of radiation vary in their ability to affect health. Ionizing radiation can cause cancer and other negative health effects such as teratogenic and genetic mutations.

Policy Statements

The Government will:

- 1. Maintain an inventory of sources, types and quantities of radioactive materials, periodically monitor status and trends, and enhance protection measures.*

6.4 TOXIC AND HAZARDOUS SUBSTANCES

- 6.4.1 Toxic and hazardous chemicals are widely used in Kenya particularly in the agricultural and industrial sectors. Exposure to these substances is likely to produce chronic rather than acute effects. Like many other countries in Africa, Kenya is vulnerable to illegal dumping of obsolete and banned toxic and hazardous substances.

Policy Statements

The Government will:

- 1. Establish appropriate toxic and hazardous substances disposal facilities.*
- 2. Collaborate with international community in curbing illegal dumping of obsolete or banned toxic and hazardous substances and enforce the relevant MEAs.*
- 3. Develop a national strategy on toxic and hazardous substances.*

6.5 NOISE

- 6.5.1 Exposure to high levels of noise can result in significant adverse health impacts. The most important is loss of hearing acuity caused by repeated exposure to high noise levels. Noise levels can result in hearing damage are quite loud and significantly interfere with communication. Commercial transportation and social activities within or close to residential areas also form an important category that includes both noise from the activities themselves such as discos and that of associated machinery.

Policy Statements

The Government will:

- 1. Develop a national strategy on noise pollution.*
- 2. Strengthen capacity and infrastructure to monitor noise pollution.*

7.0 RESEARCH, EDUCATION AND MONITORING

Scientific, technology and innovation are central to sound environmental management. High quality data generated from environmental research and monitoring improves the country's information base for decision making on environmental issues.

7.1. SCIENTIFIC RESEARCH AND INFORMATION MANAGEMENT

7.1.1 Information is the foundation of sustainable development and is fundamental to successful planning and decision making. Satellite and remote sensing technologies can improve capabilities of capturing environmental status and trends. In addition, satellite imagery, geographic information systems (GIS) and aerial photography have greatly expanded opportunities for data integration and analysis, modelling and map production.

Policy Statements

The Government will:

- 1. Develop a national data and information management policy on environmental and biological resources.*
- 2. Enhance integration of traditional knowledge in environmental planning and management.*
- 3. Strengthen the National Environmental Information Management System (NEIMS).*
- 4. Support research and development programmes and projects and transfer knowledge and technologies for environmental management and sustainable development*

7.2. EDUCATION, COMMUNICATION AND AWARENESS

7.2.1 Environmental education, both formal and informal, is vital to changing people's attitude to appreciate environmental concerns. Formal education is important to increase awareness, improve extension services, sensitize people on environmental issues and build institutional capacities. Non-formal environmental education benefits people outside the formal education system. Communication of environmental information to all stakeholders is still a challenge. Public awareness empowers the public to develop a strong sense of responsibility on environmental issues.

Policy Statements

The Government will:

- 1. Develop a National Strategy on Environmental Education and Public Awareness*
- 2. Develop a National Environmental Education Curriculum examinable at the primary, secondary and tertiary levels.*
- 3. Document, disseminate and encourage the use of indigenous knowledge in environmental protection and conservation.*

4. *Strengthen capacities for acquisition, packaging and dissemination of environmental information.*
5. *Establish and strengthen environmental resource centres at all levels.*

7.3 ENVIRONMENTAL MONITORING AND ASSESSMENT

7.3.1 Environmental monitoring is important for determining environmental status and trends and for enhancing enforcement and compliance.

Policy Statements

The Government will:

1. *Develop and implement standardized indicators that will form the basis of monitoring the status of the environment.*
2. *Develop and implement a National Environmental Monitoring and Assessment Programme to monitor the state of the environment.*

8.0 ENVIRONMENTAL GOVERNANCE

Functioning governance structures, legal and policy instruments as well as institutional capacity for judicious implementation and enforcement are necessary conditions for effective environmental governance.

8.1 ENVIRONMENTAL LEGAL REFORMS

8.1.1 The Environmental Management and Coordination Act (EMCA) of 1999 provides for sound management of the environment. But some of its provisions have proved inadequate and require revision. In addition, many of the sectoral and cross sectoral laws and policies are inadequate and some are in conflict with EMCA. There is need to review and harmonize EMCA and the sectoral laws and policies with the Constitution.

Policy Statements

The Government will:

1. *Take measures to promote and safeguard the Constitutional right to a clean and healthy environment for all.*
2. *Ensure revision of EMCA to streamline it with the provisions of the Constitution.*
3. *Ensure harmonization of sectoral laws with the Environment Management and Coordination Act and their implementation.*

8.2 INSTITUTIONAL ARRANGEMENTS

8.2.1 The multi-faceted nature of the environment and the need to integrate environmental considerations in all development planning and activities calls for cooperation and consultation among responsible government agencies and stakeholders at all levels. It is particularly important to

recognize the existing institutional mechanisms and consider ways and means by which coordination and cooperation can be enhanced.

Policy Statements

The Government will:

- 1. Strengthen the Directorate of Environment at the Ministry responsible for environment to support the Minister in his oversight role in environmental policy formulation, to monitor the implementation of the policy in relation to other sectoral policies and to service the National Environment Council (NEC).*
- 2. Strengthen the capacity of the National Environment Management Authority (NEMA) as the designated national institution responsible for the general supervision and coordination in all matters related to the environment.*
- 3. Streamline and strengthen the capacity of environmental institutions at the national and county levels so as to make them more effective and participatory.*

8.3 HUMAN RESOURCES DEVELOPMENT AND CAPACITY BUILDING

8.3.1 Weak enforcement of environmental compliance is attributed to inadequate technical capacities, monitoring infrastructure and inadequate trained staff in enforcement institutions. Building a cadre of professionals in environment and natural resource management is an investment for the future that requires a short and long term approach. Whereas short term training and targeted causes are important for skills and managerial development, the long term training in specific areas enhances specialization.

Policy Statements

The Government will:

- 1. Support and promote the development of expertise in Government agencies, the private sector and civil society organizations in the various areas of environmental management through targeted short and long term courses.*
- 2. Develop a wide range of training opportunities and modules in the field of environment for different levels taking into account gender equity, emerging environmental issues and devolved institutions.*
- 3. Enhance and promote networking between centres of excellence in environmental management at the national, regional and international levels.*

8.4 PARTNERSHIPS AND STAKEHOLDER INVOLVEMENT

8.4.1 Partnerships, by their very nature, represent a sustained commitment to move forward together to reach a higher common objective. To ensure an inclusive partnership and stakeholder involvement in decision making, ways must be found to, (a) ensure wide representation from across the private sector and civil society organizations, and (b) ensure that community voices are brought forward. This is because private sector, civil

society actors, and communities play a central role in environmental conservation and management.

8.4.2 These non-state actors have the advantage of being more independent of political pressures than governmental agencies. Thus they are well positioned to play a leading role in agenda setting and policy development processes. For example, NGOs can mediate in the resolution of resource conflicts at the local level by bringing considerable expertise and resources. At the national level, they can inform public debate on environmental protection issues and challenges.

8.4.3 Participation of these non-state actors can be encouraged through provision of incentives to enhance investment in the sector, as well through mechanisms that provide a framework for building partnerships between these entities and the Government.

Policy Statements

The Government, in collaboration with stakeholders, will endeavour to:

- 1. Develop and Implement a Strategy on Partnerships and Stakeholder Involvement to enhance environmental management.*
- 2. Promote investments in environmental efforts and programmes by providing appropriate fiscal and economic incentives.*
- 3. Develop and implement mechanisms for conflict resolution and management in the conservation of the environment and natural resources.*

8.5 FUNDING MECHANISMS

8.5.1 Sound environmental protection and management require sustainable financing. The Government budget is the single largest source of funding for protection and conservation of the environment and natural resources. However, the current allocation to environment and natural resources is inadequate. As such, there is an urgent need to complement Government funding by harnessing additional funding from multilateral funding mechanisms, development partners, private sector and civil society organizations.

Policy Statements

The Government will:

- 1. Provide adequate resources for environmental protection and management through the annual Government budgetary allocation.*
- 2. Promote participation of the individuals, civil society organizations and the private sector in environmental protection through fiscal incentives and voluntary agreements pegged on environmental performance indicators.*
- 3. Broaden the revenue and funding base to ensure the financial sustainability of environmental management institutions.*

8.6 REGIONAL AND INTERNATIONAL COOPERATION

8.6.1 Effective management of shared environmental resources requires regional and international cooperation. Significant benefits can be realized and effectiveness increased through regional and international cooperation. Kenya is a party to a number of multilateral and regional environmental agreements. These agreements are important in providing a framework for conservation of shared resources between countries.

Policy Statements

The Government will:

- 1. Establish and strengthen coordination mechanisms to ensure consistent negotiations, implementation and reporting of the MEAs and regional agreements.*
- 2. Harmonise regional policies dealing with environmental resources.*
- 3. Promote and support the establishment of transboundary environmental protection, conservation and management initiatives as a basis of enhancing the conservation of shared resources and their ecosystems through relevant MEAs and regional instruments.*
- 4. Keep a register of all MEAs and regional instruments to which Kenya is a party and ensure their domestication, effective implementation, and reporting.*
- 5. Mobilize resources from MEAs financing mechanisms, such as the Global Environment Facility (GEF), to support sound environmental management and sustainable development.*

9.0 IMPLEMENTATION STRATEGIES AND ACTIONS

The main responsibility for following up the National Environment Policy Goal and Objectives and ensuring their realization rests with the Government. The proposed implementation strategies and actions presuppose active participation of stakeholders at all levels. In this regard, a number of strategic actions will guide the implementation of this Policy.

9.1 INTEGRATION OF ENVIRONMENTAL CONCERNS IN ALL POLICY, PLANNING AND DEVELOPMENT PROCESSES

9.1.1 Integration of environmental considerations in all national and relevant sectoral policies, planning and development processes is critical if this Policy is to achieve its goal and objectives. In order to operationalize these, the ministry responsible for the environment has to take the leadership role in ensuring that all national and all sectoral policy planning and development processes mainstream environmental considerations.

Policy Statements

The Government will:

- 1. Institutionalize cooperative governance and integrated approach to the management of the environment and natural resources by explicitly*

- identifying and integrating environmental considerations in relevant sectoral and cross-sectoral policies, laws, planning and development process*
- 2. Ensure synergies between National and County Development planning*
 - 3. Institutionalize strategic environmental assessments approaches to all policies, programmes and plans*
 - 4. Ensure that all significant development projects are subjected to environmental impact assessment.*

9.2 CLARIFYING ROLES AND RESPONSIBILITIES

9.2.1 Implementation of this Policy involves many different groups, including Government agencies at local, national and regional levels, private sector, civil society organizations, local communities and the public. A key element is defining the roles and responsibilities of the various groups.

Policy Statements

The Government will:

- 1. Strengthen the capacity of the Directorate of Environment under the ministry responsible for environment to play the oversight role of monitoring the implementation of the National Environment Policy*
- 2. Develop and implement delegation instruments to provide a framework for cooperative and collaborative management between NEMA and the lead agencies.*
- 3. Strengthen the capacity of environmental institutions at the county and national levels so as to make them more effective in ensuring compliance and enforcement.*
- 4. Strengthen government capacity to assess, negotiate and monitor investments, contracts, leases and concessions used for sustainable resources management*
- 5. Strengthening capacity in the area of environmental economics that includes natural resources accounting, development of incentives and disincentives, indicators for sustainable development and valuation of environmental goods and services*
- 6. Strengthen the capacity on SEA process and subject all sector policies, plans and programmes to SEA*

9.3 PROMOTING ENVIRONMENTAL COMPLIANCE

9.3.1 Promoting compliance encourages voluntary compliance with environmental requirements. Compliance strategies involve both actions to promote and enforce requirements. Enforcement is important in order to create a climate in which the stakeholders will have clear incentives to make use of the opportunities and resources provided. The following specific actions will be taken:

Policy Statements

The Government will:

1. *Design and implement a National Environmental Compliance and Enforcement Programme.*
2. *Enhance public private partnerships in environmental management.*
3. *Provide environmental education and build environmental management capability among the various stakeholders.*
4. *Build public support through public education and awareness.*
5. *Provide economic incentives for establishments that adopt environmental-friendly technologies.*

9.4 MONITORING COMPLIANCE

9.4.1 Monitoring compliance which involves collecting and analyzing information on the compliance status of the different stakeholders is important. Monitoring is essential to detect and correct environmental violations, provide evidence to support enforcement actions and evaluate implementation progress by establishing compliance status. Weak enforcement of environmental compliance is attributed to inadequate technical capacities, monitoring infrastructure and trained staff in enforcement institutions. The following specific actions will be taken:

Policy Statements

The Government will:

1. *Design and implement a National Environmental Inspection Programme.*
2. *Develop and implement public private partnership in environmental management.*
3. *Promote negotiated agreements, self-monitoring, self-record keeping and self-reporting by various stakeholders.*
4. *Develop and implement a National Strategy on Access to Environmental Justice (NSAEJ).*

GLOSSARY OF TERMS

“biodiversity” means the variability among living organisms from all sources including ecosystems and the ecological complexes of which they are a part. It encompasses the ecosystem, species and genetic diversity;

“biopiracy” refers to the expropriation of biological resources without fair compensation or sharing of benefits;

“bioprospecting” refers to the exploration of biodiversity for commercially valuable genetic and biochemical resources and research;

“community” refers to a clearly defined group of users, which may, but need not be, a clan or ethnic community. These groups of users hold a set of clearly defined rights and obligations;

“conservation” means the protection, maintenance, rehabilitation, restoration and enhancement of the environment;

"ecosystem" means a dynamic complex of plant, animal, micro-organism communities and their non-living environment interacting as a functional unit;

"environmental impact assessment" means a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment;

"ex-situ conservation" means conservation outside the natural ecosystem and habitat of the biological organism;

"genetic resources" means genetic material of actual or potential value;

"land use" means activities carried out on a given piece of land;

"lead agency" means any government ministry, department, parastatal, state corporation or local authority, in which any law vests functions of control or management of any element of wildlife resources;

"in-situ conservation" means conservation within the natural ecosystem and habitat of the biological organism;

"intergenerational equity" means that the present generation should ensure that in exercising its right to beneficial use of the environment the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;

"intragenerational equity" means that all people within the present generation have the right to benefit equally from the exploitation of the environment, and that they have an equal entitlement to a clean and healthy environment;

"invasive and alien species" means a species that is not an indigenous species or an indigenous species translocated to a place outside its natural distribution range in nature;

"marine protected area" means any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the marine environment;

"multilateral environmental agreement" means international legal instruments for the regulation of activities affecting the environment particularly wildlife resources to which Kenya is a Party;

"payment for environmental services (PES)" means market-based approach to conservation based on the twin principles that those who benefit from environmental services (such as users of clean water) should pay for them, and those who generate these services should be compensated for providing them. In a PES mechanism, service providers receive payments conditional on their providing the desired environmental services (or adopting a practice thought to generate those services). Participation is voluntary

"protected area" means an area declared to be a protected area under the applicable law;

“species” means a population of individual organisms capable of mating with one another and producing fertile offspring in a natural setting and that share common and specialized characteristics from others;

“stakeholder” refers to an individual or group having a vested interest in environment and natural resources;

“strategic environmental assessment” refers to a range of analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the inter linkages with economic and social considerations;

“sustainable use” means present use of natural resources, which does not compromise the ability to use the same by future generations or degrade the carrying capacity of ecosystems and habitats;

“transfrontier conservation area” means the area or component of a large ecological region that straddles the boundaries of two or more countries, encompassing one or more protected areas, as well as multiple resource use areas;

“wetlands” means areas of marsh, fen, peat land, or water, whether natural or artificial, permanent or temporary, static or flowing, fresh, brackish, salt, including areas of marine water the depth of which at low tide does not exceed 6 meters. It also incorporates riparian and coastal zones adjacent to the wetlands; and

“wise use” means sustainable utilization of resources, including wetlands for the benefit of humankind in a way compatible with the maintenance of the species and the integrity of the ecosystem.