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On
Integrated Coastal Zone
Management (ICZM) Policy

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MINISTRY OF ENVIRONMENT WATER AND NATURAL RESOURCES
OCTOBER 2014



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**Sessional Paper No.13 of 2014
On
Integrated Coastal Zone Management (ICZM)
Policy**

**Ministry of Environment, Water and Natural
Resources**

October 2014

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ABBREVIATIONS AND ACRONYMS

AFS	International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001
CBOs	Community Based Organizations
CDA	Coast Development Authority
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Coordination Act 1999
ENNDA	Ewaso Ng'iro North River Basin Development Authority
ENSDA	Ewaso Ng'iro South River Basin Development Authority
EQOs	Environmental Quality Objectives
GDP	Gross Domestic Product
HNS	Protocol on Preparedness response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances, 2000
ICZM	Integrated Coastal Zone Management
IWRM	Integrated Water Resources Management
KARI	Kenya Agriculture Research Institute
KEFRI	Kenya Forest Research Institute
KMFRI	Kenya Marine Fisheries Research Institute
KFS	Kenya Forestry Service
KVDA	Kerio Valley Development Authority
KWS	Kenya Wildlife Service
LAPSSET	Lamu Port Southern-Sudan-Ethiopia Transport

LBDA	Lake Basin Development Authority
LDC	International Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Dumping Convention), 1972
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973
MEAs	Multilateral Environmental Agreements
MPAs	Marine Protected Areas
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organizations
OSMAG	Oil Spill Mutual Aid Group
NMHA	National Museum and Heritage Act, 2006
NMK	National Museums of Kenya
PES	Payment for Ecosystem Services
PPP	Public – Private sector Partnership
RDA	Regional Development Authority
REDD	Reducing Emissions from Deforestation and Degradation
TARDA	Tana and Athi Rivers Development Authority
UNCLOS	United Nations Convention on Law of the Sea, 1982
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
WRMA	Water Resources Management Authority

FOREWORD

The coastal area of Kenya is endowed with a rich variety of natural resources that form the socio-economic base of the region. The resources therein support multiple forms of uses including tourism, agriculture, shipping, fisheries and forestry, which make significant contributions to the local and national economy. For example, about 60% of the contribution of tourism to the national economy comes from coastal tourism. However, different sectoral interests have tended to seek exclusive access to and use of coastal resources, and past sectorally based governance systems failed to recognise the interconnectedness of ecosystems in resource management. Consequently, the sectoral approach to development planning and management, combined with population pressure and the intensity and complexity of human activities in the coastal area have spawned resource use conflicts and adverse socio-economic and environmental effects.

The development and implementation of an Integrated Coastal Zone Management (ICZM) action strategy for the Nyali-Bamburi-Shanzu area in Mombasa in 1996 by a multi-sectoral team under the coordination of the Coast Development Authority (CDA) marked early efforts at integrated management of coastal resources for sustainable development. Later in 1999, the enactment of the Environmental Management and Coordination Act (EMCA 1999) obliged the National Environment Management Authority (NEMA), in consultation with the relevant lead agencies, to conduct a survey of the coastal zone and prepare an integrated national coastal zone management plan based on the report of the survey. The preparation of the State of the Coast report in 2009 was in response to this requirement. Subsequent efforts coordinated by NEMA culminated in the formulation of the ICZM policy framework to guide development planning and management, conservation of the environment and accommodate the social and economic needs of local communities. The objectives of the policy are to:-

- i) Promote integrated planning and coordination of coastal developments across the various sectors;
- ii) Promote sustainable economic development to secure livelihoods of coastal communities;
- iii) Conserve the coastal and marine resources and environment for sustainable development;
- iv) Manage environmental risks associated with changes in shoreline and climate;

- v) Develop capacity in research and education and enhance stakeholder awareness and participation in sustainable resource management;
- vi) Establish effective institutional and legal frameworks for implementation of the ICZM Policy.

The ICZM Policy is rooted in the understanding that the coastal and marine environment is a limited spatial area and a distinctive system in which a range of environmental and socio-economic interest interconnect in a manner which requires a dedicated and integrated management approach. Its preparation was participatory, involving stakeholders from government agencies, private sector, non-governmental organisations (NGOs), expert groups and community based organisations (CBOs).

The vision of the policy is “*A coastal zone with healthy ecosystems and resources that sustain the socio-economic development and well-being of the current and future generations*”. It seeks to promote sustainable development in the coastal zone in line with the principles of the Kenya Constitution 2010 and objectives of Vision 2030. The Government is committed to the implementation of this policy to ensure sustained benefits to coastal communities and the national economy.



PROF. JUDI W. WAKHUNGU

**CABINET SECRETARY, MINISTRY OF ENVIRONMENT, WATER
AND NATURAL RESOURCES**

PREFACE

The coastal zone is endowed with rich multiple-use resources which are of great socio-economic significance to the local community and the nation at large. The need for the ICZM Policy framework is premised by the failure of the largely sectoral-based resource management approach to adequately address the cross-cutting developmental and environmental issues. The sectoral-based planning, development and management of the resources, compounded with pressure from rapid population growth, have spawned resource use conflicts and adverse socio-economic and environmental effects.

The ICZM Policy is the culmination of a consultative and participatory process involving lead government agencies, NGOs, CBOs and other stakeholders actively engaged in the utilisation and management of resources along the coastal zone. Development of the policy was informed by, among others, the report on the State of the Coast prepared under the stewardship of NEMA, and the draft National Environment Policy. Finalisation of the policy preparation process coincided with the promulgation of the constitution for the country in August 2010. This prompted revision of the policy to align it with the constitution on matters pertaining to environment and development.

As such the ICZM Policy recognizes the state and public obligations in relation to the environment and the right of participation by citizens in environmental matters and processes that affect their lives as outlined in Article 69 in the constitution. The vision of the ICZM Policy is “*A coastal zone with healthy ecosystems and resources that sustain the socio-economic development and well-being of the current and future generations?*”. It seeks to promote sustainable development in the coastal zone in line with the principles of the constitution and objectives of Vision 2030.

The policy is presented in five chapters. Chapter 1 provides the background to the policy. Presented in this chapter are the relevant policies and legal instruments governing the utilization and management of the resources, justification for the policy and a description of the policy formulation process.

In Chapter 2, an overview of the coastal zone and diversity of resources and their socio-economic importance are highlighted. The issues affecting the coastal zone and the main challenges in the management of the resources and environment are elucidated.

Chapter 3 presents the vision and mission statements providing direction to the policy. The objectives of the policy are enumerated and guiding principles towards the preparation of the policy framework elaborated.

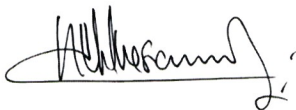
Chapter 4 provides in detail specific policy statements addressing issues appertaining to;

- Integrated planning and coordination of coastal development and communication among the various government and non-government stakeholders,
- Community empowerment and resource use conflicts,
- Environmental conservation, encompassing the conservation of coastal and marine habitats, management of cultural and natural heritage, pollution control and the provision of potable water supplies,
- The management of environmental risks, especially shoreline change and emerging issues such as climate change and episodic extreme environmental events,
- Awareness creation and education, and research focusing on the coastal zone, and
- Institutional and legal frameworks to guide the implementation of the ICZM Policy.

In Chapter 5, a framework to guide implementation of the ICZM Policy is presented, which addresses capacity building and policy enforcement.

Annexed to the policy is an implementation matrix which outlines strategic actions and expected output, and proposed roles of government and non-government stakeholders.

On domestication of Multilateral Environmental Agreements (MEAs), the policy recognises the provision in the Kenya Constitution 2010 that any regional and international agreement or law that the country becomes party to is part of the country's laws. Domestication and implementation of MEAs will be promoted to foster international and regional cooperation for better management of transboundary issues. The ICZM Policy will be implemented through ICZM National Plan of Action prepared by NEMA jointly with stakeholders.



RICHARD L. LESIYAMPE (PhD)

**PRINCIPAL SECRETARY, STATE DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES**

CHAPTER 1: INTRODUCTION

1.1 Background

The Kenyan coastal area is endowed with a variety of rich resources and landscape that form the social and economic base of the region. These resources include the land, rivers, lakes, estuaries and other wetlands, grasslands, coastal and mangrove forests, sea grass and coral reefs all of which are characterised by high productivity and biodiversity. Their exploitation contributes not only to local livelihoods but also to the overall economy of the country.

Key sectors in the coastal economy include tourism, fisheries, agriculture, forestry and trade. The contribution of tourism to the national economy is about 12% of the gross domestic product (GDP), 60% of which comes from coastal tourism. Fisheries contribution to the national economy stands at 5% of the GDP, of which about 5.6% comes from marine fisheries. While the contribution of tourism to the coastal economy accounts for 45%, the port and shipping contributes 15%, agricultural industry contributes 8%, agriculture contributes 5% and forestry accounts for 4%. This is a significant contribution to Kenya's GDP. Over time however, these resources have been under pressure from a rising population and rapid development.

The management of coastal resources in Kenya has evolved from the traditional system based on traditional knowledge and organized around the localized realm encompassing the resource, resource exploiters and marketers. This was a period of few resource exploiters and the integrity of the environmental resource base remained largely functional, serving the socio-economic needs of the people.

Over the years, coastal resources and the environment have been managed through uncoordinated sectoral policies. With population increase and society placing many legitimate, but often competing, demands on the resource base and the environment, the sectoral management approaches have failed to achieve the objectives of coastal planning and sustainable development.

The above situation is the result of limited understanding of coastal and marine resources, natural processes and opportunities. This is compounded by institutional weaknesses, single sector planning, bureaucracy, competing interests among institutions and misplaced priorities. The situation is exacerbated by inadequate

legislation and enforcement. In addition, inadequately trained personnel, use of inappropriate technologies and equipment, and limited experience in integrated coastal planning, development and management further worsens the situation. This is manifested in deficient pollution management, over-extraction of resources and unsustainable livelihoods, among other examples. The consequence is unsustainable use patterns, resulting in wide spread degradation and loss of critical habitats and loss of development opportunities.

ICZM, thus, presents a holistic approach in the planning and management of coastal resources, ensuring sustainable livelihoods and the protection of the environment. A policy direction towards achieving this goal is needed in order to help address the current and emerging coastal management issues.

1.2 Existing Legal and Policy instruments

1.2.1 The Constitution of Kenya 2010

The Constitution of Kenya guarantees the right to a clean and healthy environment and obliges the state to ensure sustainable exploitation, utilization, management and conservation of the environment and its natural resources. The principle of sustainable development has been entrenched in Article 10 2(d) of the constitution as one of the national values and principles of governance. To achieve sustainable development, balancing between economic development objectives and environmental objectives is required so as to meet the needs of the present without compromising the ability of future generations to meet their own needs.

In order to have the environment protected for the benefit of present and future generations, the constitution has called for development of appropriate legislative frameworks and imposes obligations on the state and the public as outlined in Article 69. Development of the ICZM Policy contributes to the achievement of this requirement as it relates to protection of the coastal zone. The policy recognises the state and public obligations in relation to the environment and the right of participation by citizens in environmental matters and processes that affect their lives.

1.2.2 The Environment Management and Coordination Act, 1999 (EMCA)

This is an Act of Parliament establishing a legal and institutional framework for the management of the environment. Section 42 (2) of the Act empowers the Minister responsible for environment to declare a lake shore, wetland, coastal zone or river bank to be a protected area and to impose such restrictions as he considers necessary to protect the same. Section 42 (3) of the Act further empowers the Minister to issue general and specific orders, regulations or standards for the management of river banks, lake shores, wetlands or coastal zones.

In addition to the foregoing, Section 55 (1) empowers the Minister to declare an area to be a protected coastal zone while Section 55(2) and (3) mandates NEMA to prepare a survey of the coastal zone and thereafter develop an integrated national coastal zone management plan every two years based on the survey report. Section 55 (4) requires that the Management Plan shall, amongst other things, include an inventory of the state of the coral reefs, mangroves and marshes found within the coastal zone, an inventory of all areas within the coastal zone of scenic value or of value for recreational and cultural purposes, an estimate of the extent, nature, cause and sources of coastal pollution and degradation, an estimate of fresh water resources available in the coastal zone and inventory of all structures, roads, excavations, harbours, outfalls, dumping sites and other works located in the coastal zone.

1.2.3 The Physical Planning Act of 1996

The Physical Planning Act of 1996 provides for the preparation and implementation of physical development plans and for connected purposes. Sections 4 and 5 of this Act proclaims that development should be in harmony with environmental considerations, and the Director of Physical Planning has powers to declare special planning areas that could conceivably apply, inter alia, to the unique coastal ecosystems on land areas owned by government, held in trust by Count Governments or private within the area of the authority of a city, municipal, town, or urban council or with reference to any trading or market centre.

However, given the sectoral approach to planning, abuse of influence and inadequately regulated development along the coast, physical development has often not mainstreamed environmental concerns, resulting in degradation of environmentally sensitive areas, loss of beach access points, beach encroachment and shoreline erosion. To ensure sustainable development of the coastal zone, planning of the area should take into consideration environmental concerns and address special issues related to the impacts of global warming and sea level rise on low-lying areas and coastal islands.

1.2.4 The National Land Commission Act

Section 5 of the National Land Commission Act empowers the National Land Commission to, amongst other things, recommend a national land policy to the national government, conduct research related to land and the use of natural resources and thereafter make appropriate recommendations to relevant authorities to exercise oversight responsibilities over land use planning throughout the country and to develop and maintain an effective land information management system at national and county levels. This means that implementation of the ICZM Policy framework must be done with reference to work and recommendations of the commission.

1.2.5 Merchant Shipping Act of 2009

The Merchant Shipping Act 2009 makes provision for, among others, the registration and licensing of Kenyan ships and ancillary matters, prevention of collisions and pollution, safety of navigation and cargoes, maritime security, the control, regulation and orderly development of merchant shipping and related services.

The Act empowers the Minister to make regulations for the protection and preservation of the marine environment from pollution by matter from ships, taking cognizance of international maritime conventions and agreements of which Kenya is party to, which include, UNCLOS (1982), MARPOL (1973) as modified by the Protocol of 1978 relating (as amended), the Intervention Convention (as amended), LDC (1972), HNS Protocol (2000) and AFS (2001). Other relevant international conventions or agreements are;

- The Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances Other than Oil, 1973
- The International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990
- The International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004.

The Minister is further empowered to make regulations in respect of vessels operating in inland waters including near coastal voyages to enhance the safety and security for vessels as well as preserve the aquatic environment.

The Director-General is empowered to, among other functions, take measures in accordance with generally recognized principles of international law to protect the environment from pollution following a maritime casualty or acts relating to such casualty which may reasonably be expected to result in harmful consequences.

The Act has a crucial role in regulating shipping activities in the inshore areas and extending to the Exclusive Economic Zone (EEZ), providing for maritime safety and security and pollution control and environmental conservation. The provisions of the Act can be synergistic to the ICZM Policy.

1.2.6 National Museums and Heritage Act 2006

The National Museums and Heritage Act, 2006 consolidates and repeals the Antiquities and Monuments Act 1983 (Cap. 215) and the National Museums Act 1983 (Cap. 216) into one law that governs museums and heritage in Kenya. The Act provides for establishment, control, management and development of national museums. The Act also provides for identification, protection, conservation and transmission of the cultural and natural heritage of Kenya.

The National Museums of Kenya (NMK) is the legal custodian of natural and cultural heritage such as archaeological finds, submerged settlements and shipwrecks within territorial seas of Kenya as well as historical monuments.

This act allows NMK to conduct Environmental Impact Assessment (EIA) for proposed development projects. However, this EIA focuses on prediction of negative impacts of development projects on the natural and cultural heritage.

1.2.7 The Land Act 2012

The Act mandates the National Land Commission to take appropriate action to maintain public land that has endangered or endemic species of flora and fauna, critical habitats or protected areas and to identify ecologically sensitive areas that are within public lands. The Act further requires the commission to undertake an inventory of all land based natural resources, and reserve public land for any purposes, including environmental protection and conservation. The Act further empowers the commission to make rules and regulations for the sustainable conservation of land based natural resources including;

- i) Measures to protect critical ecosystems and habitats;
- ii) Incentives for communities and individuals to invest in income generating natural resource conservation programmes;
- iii) Measures to facilitate the access, use and co-management of forests, water and other resources by communities who have customary rights to these resources;
- iv) Procedures for the registration of natural resources in an appropriate register;
- v) Procedures on the involvement of stakeholders in the management and utilization of land based natural resources; and
- vi) Measures to ensure benefit sharing to the affected communities.

1.2.8 The County Governments Act 2012

The Act elaborates on the county governments' powers, functions and responsibilities and clarifies how the County Governments shall perform their constitutional mandates, which includes implementation of specific government policies on environment and natural resources conservation. Additionally, the Act requires that there shall be a five year integrated development plan for each county and clarifies that cooperation in planning between the national and county governments shall be done within the context of the Inter-Governmental Relations Act, 2012. Those aspects of the ICZM Policy framework that require the input of the county government and/or harmonization with county laws and standards shall accordingly be implemented by reference to such provisions.

1.2.9 The Inter-Governmental Relations Act 2012

This is an Act of Parliament establishing a framework for consultation and co-operation between the national and county governments and amongst county governments and establishing mechanisms for resolution of intergovernmental disputes. As far as planning, policy development and implementation is concerned, the Act provides that cooperation and consultation between the National Government and the County Governments shall be undertaken through the National and County Government Coordinating Summit comprising the President and 47 County Governors. The Council of County Governors is also established under the Act as a forum for consultation amongst County Governments on matters of common interest and dispute resolution.

It is expected that the Summit and Council shall harmonise environmental policies, plans, standards and laws of the national and county governments and provide a platform for interaction between the various state organs for better environmental governance.

1.2.10 Treaty for the Establishment of the East African Community Act

Section 8 of this Act provides that the Acts of Parliament of the East African Legislative Assembly (EALA) shall be part of Kenyan law upon Gazettement. This offers the opportunity for regional cooperation and harmonized management of the coastal zone in the East African Community (EAC). In particular, EALA passed the *East African Community Transboundary Ecosystems Management Bill, 2010* and the *East African Community Tourism and Wildlife Management Bill, 2008* in January 2012 and February 2010 respectively. It is expected that, upon gazettement, these Bills shall guide the partner states in developing laws, policies, standards and guidelines for management of the region's coastal zone.

1.2.11 Treaty for the Establishment of the East African Community

Under Article 111 of the Treaty, the partner states have agreed to co-ordinate their policies and actions for the protection and conservation of the natural resources and environment for sustainable development. Article 112 requires that in implementing Article 111, the partner states shall amongst other things;

- a) Develop a common environmental management policy that would sustain the eco-systems of the partner states, prevent, arrest and reverse the effects of environmental degradation; and
- b) Integrate environmental management and conservation measures in all developmental activities such as trade, transport, agriculture, industrial development, mining and tourism in the community.

Additionally, Article 9 of the EAC Protocol on Environment and Natural Resources Management obliges partner states to develop mechanisms that will ensure sustainable use of transboundary ecosystems and adopt common policies and strategies for sustainable management of transboundary natural resources.

The EAC Treaty also provides for management of water and marine resources under Article 114 (2) (b) thereof, which provides that the parties shall cooperate through;

- (i) The establishment and adoption of common regulations for the better management and development of marine parks, reserves, wetlands and controlled areas;
- (i) The adoption of common policies and regulations for the conservation, management and development of fisheries resources;
- (i) The establishment of common fisheries management and investment guidelines for inland and marine waters; and
- (i) The strengthening of regional natural resources management bodies.

Thus, the EAC Treaty and EAC Protocol on Environment and Natural Resources Management provide the platform for establishment of the structure and roadmap for promoting, developing and coordinating transboundary conservation in East Africa including a common ICZM Policy framework.

The Government of Kenya is also a signatory to other regional and international treaties on management of the coastal zone and its resources. These include the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region. It also includes the United Nations Convention on Law of the Sea which is the international legal regime of management of oceans and their resources. Under the UNCLOS treaty the Government of Kenya has submitted a bid for delineation of its outer continental shelf.

1.1.12 National Oceans and Fisheries Policy

The overall objective of the National Oceans and Fisheries Policy of 2008 is “to enhance the fisheries sector’s contribution to wealth creation, increased employment for youth and women, food security and revenue generation through effective private, public and community partnerships”. The policy seeks to address, among other issues, unsustainable utilization of fisheries resources, resource use conflicts, inadequate infrastructure and lack of a comprehensive legal and institutional framework for effective fisheries management.

The policy has further recognised the inter-jurisdictional aspects of marine fisheries and has called for collaboration and cooperation in the management of migratory/shared stocks. A coordinating role of the ICZM Policy *vis á vis* the Oceans and Fisheries Policy will create synergy in coastal resource management.

1.2.13 Water Policy

The Water Policy (1999), seeking to comprehensively deal with the problems of water and sanitation, adopts an integrated approach to water resources management. The policy recognises the inextricable link between the provision of water supply and wastewater disposal and applies various tools for effective management such as effluent discharge standards, permits for water abstraction and disposal, and using economic instruments for water pollution control. It encourages the participation of communities and private institutions in the provision of water supply and sanitation services and makes the role of government regulatory as opposed to the direct provision of services.

The Water Policy espoused the harmonization of the provisions of the Water Act (2002) with those of the Environmental Management and Coordination Act (EMCA, 1999), but this has not been fully realised. There is need for the Water Act to provide for the promotion of cooperation and partnership with other countries on the management of shared water bodies, an issue that requires addressing by the ICZM Policy.

1.2.14 National Land Policy

The overall objective of the National Land Policy (2009) is to provide for sustainable growth and investment and the reduction of poverty in line with the government’s overall development objectives. Its specific objectives are to

develop a framework of policies and laws designed to ensure the maintenance of a system of land administration and management that will provide:-

- a) All citizens, particularly the poor, with the opportunity to access and beneficially occupy and use land;
- b) An economically, socially equitable and environmentally sustainable allocation and use of land; and
- c) The efficient, effective and economical operation of the land market.

To achieve an integrated and comprehensive approach to the management of the environment and natural resources, the draft National Land Policy requires that all policies, regulations and laws dealing with land based resources be harmonized with the framework established by the Environmental Management and Coordination Act, 1999.

The draft National Land Policy seeks to reform the ambiguities inherent in the multiplicity of proprietary regimes in Kenya's agrarian (Agriculture and Mining) landscape by;

- Facilitating more efficient and socially-relevant decision-making;
- Securing confidence and security in access of agrarian resources; and
- Enabling participation in land governance at the land-use level.

It seeks to design a property structure which is free from complexities, accords greater equity of access to land resources and empowers agrarian resource managers to make appropriate and sustainable environmental decisions.

The draft National Land Policy recognises the coastal zone as fragile, where guidelines for its use and management need to be formulated. It has also recognized that existing legal organization of the agrarian sector does not provide a rational framework for environmentally sound decisions. Considering the impact of land use on the coastal and marine environment, there is need to mainstream ICZM principles in the implementation of the land policy.

1.2.15 Regional Development Authorities Policy, 2007

The policy provides the framework to guide the implementation of the mandate of the Ministry of Regional Development Authorities. The overall goal of the policy is to achieve equitable and balanced national socio-economic development through the promotion of sustainable economic utilization of natural resources and the promotion of resource based investments in the regions. The policy addresses the fragmented legal framework and mandates governing the six Regional Development Authorities (RDAs), with a view of providing an integrated approach in coordinating the activities of the RDAs, namely KVDA, LBDA, ENNDA, ENSDA, CDA and TARDA. It provides framework for coordination to ensure that stakeholders contribute meaningfully towards regional and national development. The functions of the RDAs include the following;

- Formulation of integrated regional development plans in close consultation with other stakeholders and ensuring that the plan is owned by the whole region.
- Management of natural resources, specifically addressing gaps in regional resource mapping, promotion of resource based investments and formulation of a framework through which communities would benefit from such investments.

The policy has a direct bearing on streamlining and strengthening the roles and functions of CDA and TARDA in coastal zone development and management. Noting that the goals and principles of the ICZM and RDA policies have a lot in common, the CDA and TARDA are in an enviable position where they can play a significant role in ICZM.

1.2.16 Draft Environmental Policy

The aim of the draft National Environment Policy (2009) is to provide a framework for sound environmental and natural resource governance by mainstreaming environmental considerations into sectoral policies and strengthening regional and international cooperation in environmental management.

Key objectives of the policy include:-

- (a) Provide a framework for integration of environmental considerations into the various sectoral policies, national development planning and decision making processes.
- (b) 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.
- (c) Promote and enhance collaboration, synergy, partnerships and participation in the protection and conservation of the environment by all stakeholders.

The key issues addressed by the policy include the harmonization of sectoral policy instruments with the framework environmental law (EMCA, 1999) in order to enhance sustainable environmental management.

Section 55 of EMCA institutionalizes ICZM as a tool for the management and conservation of the coastal and marine environment. The ICZM Policy finds a legal anchor in the Act.

1.2.17 Draft Integrated Ocean Policy

The draft Integrated Ocean Policy (2009) is derived from the provisions of the 1982 Law of the Sea Convention (UNCLOS), Maritime Zones Act 1989 Section 5(5) and the Presidential Proclamation of 9 June 2005 where Kenya has sovereign rights with respect to exploration, exploitation, conservation and management of the natural resources. The draft policy focuses on resource management in internal waters, territorial waters and EEZ. Implementation of this policy will require synchronising with the ICZM Policy in order to minimize duplication of effort and conflict and to foster synergy.

1.2.18 Draft National Wetlands Policy

The draft National Wetland Policy (2013) recognizes the importance of the variety of wetlands found in the coastal, marine and inland areas in the provision of goods and services which support agriculture, tourism, industry, biodiversity conservation, social economic and cultural activities. Identified pressures to wetlands include conversion and overexploitation of their resources, catchment degradation and pollution associated with proliferation of invasive species.

The policy seeks to foster an integrated approach that would promote conservation and sustainable use of wetlands. It provides a framework for, *inter alia*, review of the status of wetlands and identifying priority issues including transboundary issues, addressing legislation and government policies with a bearing on wetland management and conservation, enhancing knowledge through research and raising awareness on wetlands and their values to promote stakeholder participation, and addressing institutional and organizational arrangements to facilitate implementation of the policy.

The policy complements the other sectoral policies on environment and development. Adoption of the policy fulfills Kenya's obligations under the Ramsar Convention and other relevant multilateral environmental agreements and protocols. The objectives of the Wetland Policy are to address issues that are very pertinent with the development, management and sustainable exploitation of the coastal zone and its resources.

1.2.19 Draft Forestry Policy

The draft Forest Policy (2009) envisages a radical change in the way forests are managed. It provides mechanisms for streamlining the participation of the private sector and community in the management of state forests. The conservation of forests will ensure sustainable environmental and ecosystem services. This will create employment and reduce poverty, which will contribute towards meeting the millennium development goals and aspirations of Vision 2030.

The policy offers a guiding framework for the Forest Act of 2005 for the management, conservation and utilization of forest resources which include coastal and mangrove forests. The Forest Act mandates the Kenya Forest Service (KFS) to manage forests in water catchment areas and associated wildlife. The Act empowers associations and communities in the control and management of forest resources. This necessitates harmonization of the provisions of the Water Act and Wildlife and Forest Act to avoid conflict of mandates and foster synergy.

1.1.20 Draft Wildlife Policy

The goal of the draft revised Wildlife Policy (2008) is to provide a framework for conserving Kenya's rich diversity of species, habitats and ecosystems for the

well being of its people and the global community. The policy addresses wildlife ownership and responsibilities, human wildlife conflicts and compensation, equitable benefit sharing, hunting and strengthening the institutional framework for wildlife management, among other issues.

The policy proposes restructuring of the Kenya Wildlife Service (KWS) to enable it dispense its mandates effectively, devolution of wildlife management responsibilities to local communities and land owners, maintenance of the integrity protected areas and introduction of new and varied economic incentives for communities, land owners, NGOs and the private sector. The draft policy offers incentives to promote community participation in conservation as espoused by ICZM principles.

1.2.21 Draft Tourism Policy

The draft National Tourism Policy (2009) provides a framework for decision-making by the government and allows sectoral stakeholders to partner with government to develop the tourism sector and deliver sustainable growth. The policy recognizes the negative impacts of the industry on both the natural and human environments. Thus the policy seeks to address impacts of sectoral activities on the environment, the economy and socio-cultural aspects. The draft policy recognizes that its implementation shall involve streamlining the tourism policy with wildlife, land-use and other cross-cutting policies.

The policy further recognises the issues affecting sustainable development of the industry such as community participation, conflict resolution, safety and security, product development and diversification, infrastructure, transport and communication development, quality health care, marketing and promotion, pricing mechanisms, investment financing, employment, human resources development, information management and research.

The draft Tourism Policy recognises the need for multi-sectoral involvement to create synergy and harmony among sectors in propounding the principles of ICZM in the process.

1.3 Justification for the ICZM Policy

Coastal systems provide a multiplicity of uses which are of socio-economic importance to the community. However, the various sectoral interests most

often seek exclusive access and use of coastal area and resources. The systems of governance in the area have normally been sectoral-based and uncoordinated in their application. The sectoral approach in development planning and resource management, compounded by population pressure and the complexity of human activities in coastal ecosystems has led to use conflicts and adverse socio-economic and environmental effects. Thus, there is need for an ICZM Policy framework that will integrate and coordinate planning and management of the coastal zone and resources to ensure sustainable development.

There is need for a policy to guide the management and sustainable utilization of coastal resources while protecting the environment for the benefit of the many different stakeholders in the coast and for posterity. An ICZM Policy fulfils the need for an alternative and effective management system that balances development and conservation interests in the coastal zone. There is need for a policy to guide and ensure a coordinated response to emerging issues such as global warming and climate change, including extreme weather events and other disasters.

The ICZM policy framework provides for sustainable development of the coastal zone which will be an important contribution to meeting the goals of Vision 2030 development blue print to make Kenya a middle-income country.

1.4 ICZM Policy Formulation Process

The documentation of an ICZM action strategy for the Nyali-Bamburi-Shanzu area in Mombasa in 1996 by a multi-institutional team under the coordination of CDA marked early efforts at integrated management of coastal resources for sustainable development. The EMCA 1999, Section 55 (2) empowers NEMA, in consultation with the relevant lead agencies, to prepare a survey of the coastal zone and prepare an integrated national coastal zone management plan based on the report of such survey. The preparation and production of the State of the Coast report in 2007 was thus a first step in providing information for development of such plans.

Subsequently, a multi-sectoral ICZM Steering Committee coordinated by NEMA embarked on the process of formulating an ICZM Policy framework. The policy formulation process was consultative and participatory involving stakeholders from public, private, civil society and local community groups who contributed

towards formulation of the policy through thematic working groups and workshops.

The ICZM Steering Committee helped in identifying the coastal zone management issues and facilitated the formation of thematic groups. Then experts were identified to generate the necessary information on the issues. The information was then presented in a National Stakeholders Workshop for validation where other issues were identified and included. It was through this process that the ICZM Policy document was produced. An ICZM National Plan of Action for implementation of the ICZM Policy will be developed.

1.5 Policy Review

The ICZM Policy will be reviewed after every 10 years or any other time as need arises taking into consideration emerging issues, development trends and changing demands.

CHAPTER 2: COASTAL RESOURCES, OPPORTUNITIES, ISSUES AND CHALLENGES

2.1 Geographical Extent and Management Area for ICZM

The geographical extent of the coastal zone is defined by the administrative boundaries of counties bordering the Indian Ocean while the EEZ provides the extent and seaward boundary. However, the ecosystem approach will be applied in the management of the resources as some of the pressures affecting the coastal environment are external to the coastal zone such as river catchment areas.

2.2 Coastal Resources and Socio-economic Opportunities

The coastal zone is endowed with an abundance and variety of resources that provide ecological services and support both local and national economic activities. These include terrestrial and marine habitats such as coastal forests, mangrove swamps, coral reefs, sea grass meadows, rocky shores, estuaries, beaches, mudflats and sand dunes. These resources are exploited for tourism, fisheries, salt manufacturing, shipping, agriculture and construction among other economic activities.

The coastal area has its rich share of national heritage consisting of antiquities, monuments and cultural and natural sites. The preservation of the cultural and natural heritage has direct links with mainstream societal concerns such as development, environment, health, education, access to information, construction and the coastal economy.

2.2.1 Coastal and mangrove forests

The coastal forests exist as isolated blocks covering a total area of about 83,800 hectares in a narrow belt which extends inland for about 30 km. The largest of these forest patches is the Arabuko Sokoke forest reserve. Other forest patches include the Boni-Lungi, Dakacha, Dodori, the Shimba Hills Forest reserve and the Kaya forests.

These coastal forests bare unique communities of flora with high drought resilience, high levels of adaptation, endemism of birds, mammals and other

fauna. They play a significant role in the hydrological cycle, enhance soil moisture content, mitigate against soil erosion and promote the flow of clear water in rivers.

There are between 53,000 - 61,000 hectares of mangrove forests along the coast with the largest stands occurring in Lam County (67%) and the Funzi-Vanga system in the south coast. The mangrove ecosystem is a critical habitat for a variety of fish species and invertebrates, which depend on it for feeding and nursery grounds. The habitat also hosts a wide variety of bird life and provides a line of defence against shoreline erosion and excessive suspended sediment from terrestrial sources.

Coastal and mangrove forests are important carbon sinks, reducing green house gases that cause global warming. Kaya forests are of spiritual and cultural importance to the Mijikenda community. Coastal and mangrove forests have been exploited for timber, wood-fuel and herbal medicines. The artisanal fishers rely on the mangrove ecosystem for a substantial part of their catch. Non-consumptive uses of coastal forests include aesthetic use of forest biodiversity in eco-tourism and for beekeeping. The mangrove skyline on Manda Island as seen from Lamu is gazetted as a national monument.

2.2.2 Coral reefs

A fringing reef system spans the length of the coast from the Kenya/Tanzania border to Malindi, broken at places where river mouths, creeks and bays open into the ocean. There are patch reefs in the south of Malindi Bay. Patch and small fringing reefs border the islands of the Lamu-Bajuni archipelago. This reef system extends from the sea surface to about 20-25 meter depth.

The coral reef system provides a natural defence of the shoreline from wave-erosion and is a source of white sand that replenishes local beaches. The coral reefs and associated lagoons harbour rich and diverse species of flora and fauna, which support artisanal fishery and tourism. Some caves and rock shelters along the shoreline are popular sites for indigenous religious and cultural practices for coastal communities. Other sites were in past history used for holding slaves and as places of refuge from enemies e.g. Shimoni cave. The Malindi-Watamu Biosphere Reserve, designated in 1979, covers 19,600 hectares and encompasses two marine national parks and two marine national reserves, with major habitats composed of coral reefs, mangrove forest and sea grass beds.

2.2.3 Sea-grass beds

Sea-grass beds are found predominantly in the sandy and muddy coastal lagoons and shallow reef slopes. They provide a habitat for a variety of commercially important fish species. These habitats also support relatively mature fish whose early life stages are found in estuaries and mud-flats. Sea grass meadows are feeding grounds for threatened and/or endangered species such as the green turtle, the hawksbill turtle and the dugong.

2.2.4 River basins, deltas and estuaries

The Tana and Athi-Galana-Sabaki Rivers form the largest river basins in Kenya, with the relatively smaller basins drained by the River Uмба, River Ramisi and River Mwache. The Tana River discharges an average of 4 million cubic metres of freshwater and 6.8 million tonnes of sediment annually into the Ungwana Bay. The Athi-Sabaki River discharges about 6 million cubic metres of freshwater and 5 to 13 million tonnes of sediments into the Malindi Bay annually. These high sediment loads are attributed to poor land use practises upstream and affect the sustainability of coastal habitats, the aesthetic value of beaches, adversely impacting coastal tourism. Major archaeological sites and Kaya forests in the north coast are found along river basins.

There a number of estuaries along the Kenyan coast which are generally sheltered from high energy waves and receive fine grain sediments from inflowing streams. These include the expansive Tana and Sabaki estuaries. Most of the estuarine shores are fringed by mangrove trees and associated plants.

Estuaries have experienced various human-induced changes. The clearing of mangrove forest, for example, exposes the soft shores and lead to erosion. On the other hand, increasing amounts of sediment discharge by rivers are fed into the inshore environment leading to beach accretion, such as in Malindi.

The Tana River Delta is Kenya's only major ocean delta. It is a low-lying area composed largely of sediments brought down by the river. It is subject to frequent flooding and changes in the network of channels and canals. The delta is characterized by diverse habitats including riverine forests, grasslands, woodlands and bush land, lakes, mangroves, sand dunes and coastal waters. The delta maintains high levels of productivity in a dynamic balance which revolves around the frequency, extent and duration of flooding. Water transports nutrients,

it influences a wide variety of habitat types, flushes away wastes, controls salinity and disperses and nurtures larval stages of a number of marine organisms. Lately, the Tana River Delta and forest complex nomination proposal as a world heritage site was submitted to UNESCO by the Kenya Wildlife Services.

2.2.5 Beaches and sand dunes

Sand beaches are common along the Kenyan coastline, with river discharge being the main source of terrigenous sediment replenishing the beaches and dunes. There are an estimated 27,000 hectares of beach and sand dunes in Kenya. Prominent wind-blown dunes stretch from Malindi to Lamu, with the high loads of suspended sediment from River Sabaki and Tana supplying the beach sand. Dunes are stabilized by associated vegetation binding loose sand with their root system. Shorelines dominated by coral reefs usually feature smaller beaches with white carbonate sands of marine origin.

Beaches provide nesting grounds for sea turtles and an important habitat for shore and migratory birds. They are important in providing access to the sea for fishing, recreation and tourism. Among other functions, sand dunes are known to assist in the retention of freshwater tables against saltwater intrusion. Indeed the supply of drinking water to Lamu town, Ngomeni and Mambrui is sourced from adjacent dune areas.

2.2.6 Cultural and natural heritage

Cultural and natural heritage are closely interlinked with the creations of human beings impacting the environment and likewise the environment influencing the former resources. Thus, effective management of natural and cultural heritage as a matter of necessity has to be integrated.

Cultural heritage includes;

- Monuments,
- Architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combination of features which are of universal value from point of view of history, art or science,

- Groups of separate or connected buildings which because of their architecture, homogeneity or their place in the landscape are outstanding from the point of view of history, art or science,
- Works of humanity or combined works of nature and humanity and areas including archaeological sites which are of outstanding value from the historical, aesthetic, ethnological or anthropological point of view.

While natural heritage includes;

- Natural features consisting of physical and biological formations or groups of such formations which are of outstanding universal value from the aesthetic or scientific point of view,
- Geological or physiographical formations of special significance, rarity or beauty,
- Precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science, conservation, or natural beauty, or
- Areas which are or have been of religious significance, use or veneration and which include but not limited to Kayas.

National and world heritage areas continue to be a magnet for tourism, generating regional economic development. Both domestic and international tourism make significant contributions towards the conservation of cultural heritage in Kenya. The cultural impacts of international tourism are found to be both positive and negative and much more pronounced at the coast. While the local community is actively involved in tourism development and derives benefits from the industry, the need for proper visitor management to minimize negative cultural impacts on local communities cannot be overemphasized.

The culturally important Kaya forests have been treated as inviolable sanctuaries by the Mijikenda community, which have enabled them to retain high biodiversity and preservation of the resource. However, this heritage has been under increasing pressure from population growth, deforestation, farming and uncontrolled tourism. Seven Kaya sites have been listed as UNESCO Heritage Sites, a measure

that has helped to ensure the protection and safeguarding of this natural and cultural heritage.

2.3 Coastal zone issues

The major coastal zone issues that the policy seeks to address are;

1. Poorly planned and uncoordinated coastal development as a result of a sectoral approach in planning and management.
2. Inadequate partnership and cooperation between government and non-government stakeholders at local, national, regional and international level towards development and management of the coastal zone.
3. Weak institutional and legal frameworks that do not adequately address the complex multi-sectoral problems facing coastal areas, particularly with regard to coordination and enforcement mechanisms.
4. Inadequate strategies for community empowerment to address sustainable livelihoods.
5. Poor waste management practices, especially in urban centres, are a potential source of environmental pollution and pose public health risks.
6. Declining water quality and quantity, and inadequate sources of potable water is a serious constraint to the socio-economic development of the coastal area.
7. Shoreline change, manifested in beach erosion and accretion, poses threats to coastal developments.
8. Destruction and loss of coastal and marine habitats as a result of unsustainable exploitation, poor land use practices, encroachment and unplanned and unregulated human settlement and urban development.
9. Inadequate public participation, communication, education and awareness on coastal zone management issues.
10. Inadequate and uncoordinated research, including recognizing the relevance of indigenous knowledge in research, and monitoring programmes that do not adequately inform the management of coastal zone resources and issues affecting them.

11. Inadequate mechanisms to address emerging issues affecting the coastal zone such as climate change, droughts, floods, tsunami and storm surges, among others incidents.
12. Inadequate mechanisms to preserve national cultural and natural heritage and manage tourist activities at heritage sites.

2.3.1 Emerging Issues

Emerging issues of concern in the coastal zone include large scale economic development projects being initiated in the coast within the framework of Vision 2030. Such projects include infrastructure development projects such as the LAPSSET Project in Lamu as well as resort cities projects in Kwale and Kilifi counties; Biofuel projects mainly involving *Jatropha* farming and sugarcane and rice farming; Agriculture projects involving mainly sugarcane and fish farming; Mining projects such as the Titanium project in Kwale County, and oil and gas exploration in the sea among others at planning stages. With the initiation of these projects, environmental and social impacts are envisaged including loss of critical habitats, loss of fishing grounds and pollution. Policy recommendations have been made to ensure social and environmental safeguards are implemented to minimise potential negative impacts.

2.4 Coastal zone management challenges

The main challenge in managing coastal resources and its environment is the existence of multiple jurisdictions with a stake in the area. This makes coastal zone management a secondary responsibility of most jurisdictions, but a primary responsibility of none. In the sectoral approach, the management focus tends to be biased towards economic and development goals without much regard to the interconnections within coastal ecosystems to the detriment of sustainability. There is thus a need to adopt the ICZM approach in management of the coastal zone and its associated resources.

CHAPTER 3: POLICY GOAL, OBJECTIVES AND PRINCIPLES

3.1 Vision

A coastal zone with healthy ecosystems and resources that sustain the socio-economic development and well-being of the current and future generations.

3.2 Mission

To conserve the coastal and marine environment and ensure that its resources are utilized in a sustainable manner for the benefit of coastal communities, the national economy and as a common heritage.

3.3 Policy Objectives

The overall objective of the ICZM Policy is to guide the management and utilization of coastal and marine environment and its resources to ensure sustainable livelihoods and development. The policy specifically seeks to;

- i) Promote integrated planning and coordination of coastal developments across the various sectors.
- ii) Promote sustainable economic development to secure livelihoods of coastal communities.
- iii) Conserve the coastal and marine resources and environment for sustainable development.
- iv) Manage environmental risks associated with changes in shoreline and climate.
- v) Develop capacity in research and education and enhance stakeholder awareness and participation in sustainable resource management.
- vi) Establish effective institutional and legal frameworks for implementation of the ICZM Policy.

3.4 Guiding principles

The development and implementation of this policy will be guided by the following principles;

- i) Use of **ecosystem-based approach** that recognizes the relationships and inter-linkages between all components of the wider ecosystem in addressing coastal zone management issues. This principle is critical in effectively addressing issues affecting ecosystems that stretch beyond the coastal zone administrative area.
- ii) Uses a **participatory and inclusive approach** which entails involvement of stakeholders and consensus building on matters of planning and decision making.
- iii) Applies a **precautionary approach**. The lack of scientific information should not prevent the implementation of necessary measures to address an environmental issue. This approach allows room for amending or adjusting the strategy as more certain scientific information becomes available.
- iv) Applies **best available science and adaptive management**. The best available knowledge, scientific information and data should be used to support application of ICZM Policy.
- v) Promotes **stewardship** in coastal resource management to ensure sustainable development for posterity. All government institutions, private sector, community and individuals should bear a sense of responsibility individually and collectively towards protection and wise use of coastal resources. Stakeholders should recognize the value of the coastal resources, support appropriate policies and act responsibly while minimizing negative environmental impacts.
- vi) **Multiple resource use** management. Multiple use of the coastal resources necessitates the adoption of an integrated ecosystem approach to ensure that ecosystems are managed as a whole. The management of multiple uses of the resources should be considered jointly so that their impacts on the environment and impacts on each other can be addressed.

- vii) Applies the **polluter pays principle**. Developments and persons who pollute the coastal and marine environment should meet the cost of cleaning the pollutants and also meet the cost of the pollution to resource users.
- viii) ICZM Policy provides for a balance between development and conservation requirements. This is key in ensuring conservation and sustainable development of the coastal zone.
- ix) Multilateral environmental agreements (MEAs) and regional instruments will be domesticated and implemented to foster **international and regional cooperation** for better management of transboundary issues.

CHAPTER 4: THE ICZM POLICY STATEMENTS

4.1 Integrated Planning and Coordination

4.1.1 Planning and management of coastal development

Development activities in the coastal zone have occurred with less than robust planning and organization. Planning and management has mostly been sectoral. The result has often been unwise changes in land use, affecting both environmental quality and economic stability for the local community. Poor planning and unregulated development is manifested in the mushrooming of slums and squatter settlements lacking in essential services such as health care and clean water and sanitation. Haphazard development has in certain cases been the result of outright violation of development plans.

Policy Statement

To achieve adequately planned and managed development, the government shall:-

- i) Guide and coordinate participatory planning and management of development in the coastal zone through spatial planning;
- ii) Put in place appropriate strategies for managing development and growth in the coastal zone;
- iii) Strengthen the capacity of institutions responsible for coastal planning and development;
- iv) Integrate development planning in the coastal zone with local land use plans, taking cognisance of environmental safety and aesthetics;
- v) Promote implementation of the National Land Policy to address issues of land tenure in the coastal zone.

4.1.2 Provision of adequate infrastructure and public service

Rapid increase in population, human settlements and urbanization has out-paced the ability of local authorities to provide infrastructure and public services. This has placed high demand on existing infrastructure to manage wastewater, service for solid waste management, provision of water, health and education, roads,

electricity and telecommunication services. Consequently, the environment, economic prosperity, natural and cultural heritage, public health and the quality of life of coastal communities are compromised.

In view of the above, there is need for appropriate policy to guide the provision of infrastructure and essential services to coastal inhabitants to ensure sustainable development.

Policy Statement

To improve the infrastructure and services to the public, the government shall: -

- i) Promote the provision of amenities and infrastructure through integrated spatial planning;
- ii) Promote private-public partnership in the delivery of services;
- iii) Ensure infrastructure development mainstreams environmental considerations.

4.1.3 Coordination and communication mechanisms within and between government, community and other stakeholders

Past experience has seen the application of a top-down approach in development planning and management by government. The beneficiaries of development were insufficiently consulted and involved in the project development.

There is need for a policy to bolster the shift in approach in which coastal planning and development is all inclusive and participatory and ensures community involvement in the development and management processes.

Policy Statement

To ensure improved coordination and communication within government departments, communities and other stakeholders in the management of coastal resources, the government shall: -

- i) Ensure the support and involvement of relevant administrative bodies and sectors concerned with the management of the coastal area;

- ii) Ensure the inclusion of communities and all other stakeholders in the planning of coastal zone management programs;
- iii) Develop and implement strategies that will enhance communication and coordination among government, NGOs, CBOs and communities.

4.2 Sustainable Economic Development

4.2.1 Community empowerment and sustainable livelihoods

Traditional natural resource-based economic activities such as artisanal fisheries and timber harvesting from coastal and mangrove forests have supported local community livelihoods for generations. However, due to over-harvesting and habitat destruction, timber harvesting is restricted while catches of certain fish species have declined due to over-fishing in the near-shore waters. This situation has resulted in traditional resource users losing esteem, with the young fishers switching to other sectors of the economy such as tourism, leaving the older fishermen behind with diminished means of livelihood support.

Policy Statement

To promote natural resource based economic sectors, the government shall: -

- i) Promote off-shore fishery to ameliorate near-shore stocks;
- ii) Promote alternative livelihoods;
- iii) Strengthen mechanisms for co-management, rehabilitation of coastal ecosystems and sharing of benefits;
- iv) Promote public private partnerships in the conservation and management of resources;
- v) Restore and promote traditional values and practices that ensure sustainable management and exploitation of resources;
- vi) Promote a multi-sectoral approach to the management of coastal resource;
- vii) Promote market based instruments for payments for environmental services, e.g. Reducing Emissions from Deforestation in Developing countries (REDD).

4.2.2 Resolving resource use conflicts and benefits sharing

High population growth and poverty among coastal communities is exerting unrelenting pressure on coastal resources, resulting in use conflicts. Unplanned and unregulated developments in tourism, housing, including private developments, is attributed with turning fishing grounds into recreational areas, impeding access to fishing grounds and depletion of resources. Despite large revenues generated from tourism, coastal communities have not been able to realize the full potential of opportunities provided by the sector. Illegal business structures on the beach conflict with recreational use and interfere with fishing activities. Increased competition amongst tourism players in providing services to tourists is compounding the conflicts.

The declaration and delineation of protected areas without consultation with communities has in certain cases spawned resentment because it restricts resource use without providing viable options. Large scale agriculture and industrial fishing generate appreciable incomes but can cause negative environmental and social-economic impacts. The former activity tends to deny local communities land for development, while prawn trawling destroys the sea grass habitat and fishing gear for artisanal fishers. The entry of fishers from neighbouring countries causes trans-boundary conflicts in the sector. Coastal communities do not get a fair share of the benefits from exploitation of the resources despite suffering the impacts.

Policy Statement

To resolve resource use conflicts and benefits sharing, the government shall: -

- i) Ensure equity in access to land and water space, and use of coastal resources;
- ii) Promote zoning schemes that resolve space and on-water use conflicts;
- iii) Promote awareness and education programmes on resolving resource use conflicts;
- iv) Develop and implement a code of conduct for tourists and tourism operators that is sensitive to cultural and religious values of local communities;

- v) Develop and implement mechanisms for benefits sharing for local communities from revenues accrued from the utilization of coastal natural resources;
- vi) Strengthen the guidelines for management of wildlife to minimize human wildlife conflicts;
- vii) Promote best practice in resource exploitation;
- viii) Encourage multiple uses of ecosystems to reduce selective pressure.

4.3 Conservation of the Coastal and Marine Environment

4.3.1 Coastal and mangrove forests

Considerable reduction of coastal and mangrove forest cover has occurred as a result of conversion to farmland and clearing of mangroves for the establishment of saltpans. Other direct threats include excessive/uncontrolled logging for timber, wood-fuel and charcoal production, illegal cultivation and encroachment, and excision for settlements and agricultural production. Climate change is expected to enhance degradation of the forest habitat.

To stem these threats, it is important that policies that guide the sustainable exploitation and management of coastal and mangrove forests are put in place.

Policy Statement

To preserve, protect and restore the integrity of coastal and mangrove forests, the government shall: -

- i) Ensure mainstreaming of the management of coastal forests and mangroves into land use planning;
- ii) Promote IWRM strategies to ensure the conservation of water catchments, coastal and mangrove forests;
- iii) Promote multi-sectoral approach in managing coastal and mangrove forest areas to guide and regulate the multiple activities carried out in these habitats;

- iv) Promote co-management of coastal and mangrove forests;
- v) Ensure developments proposed for areas in and adjacent to forest areas are subjected to EIA;
- vi) Strengthen and enforce regulations governing protection of coastal forests, including mangroves to facilitate their conservation;
- vii) Develop and implement site specific management plans for coastal terrestrial forests and mangroves;
- viii) Undertake initiatives to effect the restoration of degraded coastal terrestrial forests and mangroves.

4.3.2 Coral reefs and sea grass beds

The discharge of municipal wastewater, port development, deforestation and bad agricultural practices along coastal river basins and catchment areas has resulted in high loads of suspended sediments into coastal waters, suppressing coral and sea-grass growth and impacting the biodiversity negatively. Trawling for prawns damages sea-grass habitats. Coral reef ecosystems are under threat from rise in sea level and water temperature due to global warming, resulting in coral bleaching. The problems faced by these habitats are aggravated by the lack of awareness of the importance of these habitats and inadequate enforcement of relevant regulations to protect them.

Policy Statement

To preserve, protect and restore the integrity of coral reefs and sea grass beds, the government shall: -

- i) Enforce relevant laws to regulate fishing, including trawling, and tourism activities in sea grass and coral areas;
- ii) Promote good land use practices that address soil erosion, to control sediment loading and siltation of coral reefs and sea grass beds;
- iii) Promote international best practices and develop guidelines and standards for sea-bed mining and oil exploration;

- iv) Promote the build up of the knowledge base on coral reef and sea grass ecosystems through scientific research and monitoring;
- v) Promote the use of indigenous knowledge and scientific information in the exploitation and management of coral reef and sea grass resources;
- vi) Promote the establishing of flagship MPAs for the conservation of coral reef and sea grass habitats;
- vii) Domesticate the United Nations Framework Convention on Climate Change (UNFCCC), and related Multilateral Environmental Agreements (MEAs).

4.3.3 Deltas and estuaries

Traditional land use practices of small-scale agriculture, pastoralism and fishing have sustainably maintained the ecological balance of the delta for thousands of years. However, more recent human influence has been very strong. Most notably, draining of wetlands for agriculture and control of water flow for irrigation and hydro-power production have resulted in reduced stream flow and saltwater intrusion.

Policy Statement

To preserve, protect and restore the integrity of estuaries and deltas, the government shall: -

- i) Ensure good land use practices to manage erosion and minimize the high loads of suspended sediments and siltation;
- ii) Promote integrated river delta planning and management to rationalize diversion, damming of rivers and flood control and to ensure environmental flows are maintained;
- iii) Promote conservation of deltas and estuaries to ensure protection of biodiversity in line with the Wildlife Conservation and Management Policy;
- iv) Ensure enforcement of international best practices in planning and implementation of river basin development for environmental sustainability;

- v) Promote incentives for upstream communities through Payment for Ecosystem Services (PES).

4.3.4 Management of cultural and natural heritage

The inter-linkage of the cultural and natural heritage makes the coastal region unique and attractive for multi-sectoral investments and developments including expansion of infrastructure, housing, tourism and port development. These developments occur hand-in-hand with population growth, rapid urbanization and an increasing demand for agricultural land. However, they exert significant pressure on heritage sites, manifested as encroachment onto national monuments, archaeological sites and forests. The pressures on heritage result from, among others, inadequate awareness and education, weak legislation and protection programmes and inadequate development plans that impinge on its integrity. This calls for appropriate measures to mitigate the destruction of heritage sites and enhance sustainable management for the socio-economic and cultural development of stakeholders.

Policy Statement

To preserve, protect and ensure the integrity of cultural and natural heritage, the government shall: -

- i) Promote cultural tourism and ensure proper planning and visitor management to minimize negative cultural impacts on local communities;
- ii) Promote community participation in the conservation and management of heritage sites through the use of indigenous knowledge and observing cultural values;
- iii) Promote public private partnership involving local and international agencies in the preservation, conservation and sustainable management of heritage sites;
- iv) Promote awareness and education for the community and other stakeholders on the importance of cultural and natural heritage in socio-economic development, cultural development and national cohesion;
- v) Promote the development of alternative non-extractive or consumptive uses of natural heritage sites for the benefit of the community;

- vi) Ensure that archaeological and EIA studies are undertaken as requisite for development projects on land and underwater environment as provided for in the NMHA, 2006 and EMCA Environmental (Impact Assessment and Audit) Regulations, 2003.

4.3.5 Pollution control and waste management practices

Rapid urbanization in the coastal area has resulted in increased volumes of solid wastes and sewage. The lack of, or inadequate waste management systems in most urban centres is the cause of pollution on land and water systems. High densities of plastic waste threaten beach ecology and aesthetics, which may adversely impact tourism. Ballast water from ships is a potential source of alien species to seaports. The effects of this include water borne diseases and loss of aesthetic value of the environment, introduction of alien/invasive species and impact on the productivity and biodiversity of natural water systems.

Policy interventions are necessary to empower county governments adopt innovative ways to effectively manage both municipal wastewater and solid waste to mitigate environmental pollution.

Policy Statement

To improve the management of municipal wastewater and solid waste, the government shall: -

- i) Empower county governments to effectively manage urban waste;
- ii) Promote public private partnership in waste management;
- iii) Promote public awareness on good waste management practices to ensure a clean and healthy environment;
- iv) Enforce the EMCA (Waste Management and Water Quality) Regulations 2006.
- v) Develop and implement pollution prevention and control guidelines for the coastal zone.
- vi) Strengthen county governments to enforce by-laws regulating municipal waste management;

- vii) Implement the oil spill contingency plan;
- viii) Monitor and control of the incidence of alien invasive species;
- ix) Enforce of the Merchant Shipping Act, 2009 (Pollution Control Regulations).

4.3.6 Reversing the declining water quality

Coastal waters are threatened by pollution from coastal development, discharges from municipal wastewater, storm-water, leachate from solid waste and oil spills. Groundwater in particular is contaminated as a result of the extensive use of on-site sanitation, while over-extraction of aquifers causes salt water intrusion, leading to the decline in freshwater quality.

Polluted water is a potential source of water borne diseases, negative impact on recreation and stress to ecosystem functions.

Policy Statement

To improve water quality, the government shall: -

- i) Promote IWRM strategies to safeguard water quality;
- ii) Enforce EMCA (Water Quality) Regulations 2006;
- iii) Ensure sustainable extraction of groundwater to control the problem of saltwater intrusion into water aquifers;
- iv) Promote public awareness on the importance of protecting natural water systems and development;
- v) Implement the national Oil Spill Response Contingency plan.

4.3.7 Provision of potable water supplies

Potable water is a key resource in coastal development. Its supply in adequate quantities is therefore essential. Most coastal urban and rural areas experience deficiencies in the supply of potable water for domestic use. Consequently a

majority of the population has resorted to abstraction of groundwater to supplement the available reticulated supplies. Tourist beach hotels almost invariably use the available brackish groundwater for their bathrooms. There is no significant effort to promote harvesting of rainwater.

Over-extraction of groundwater and destruction of water catchments exacerbate the water supply problem and threaten environmental flows.

Policy Statement

To ensure the supply of adequate and potable water, the government shall: -

- i) Identify and develop alternative sources of freshwater to reduce pressure on groundwater sources;
- ii) Promote suitable management strategies that protect water catchments and water supply aquifers;
- iii) Promote strategies that ensure environmental flow objectives are met;
- iv) Encourage the adoption of water recycling and water saving practices;
- v) Promote public awareness on the importance of protecting natural water systems and development.

4.4 Environmental Risk Management

4.4.1 Addressing shoreline change

Shoreline change and instability occurs as a result of the manipulation of the hydrological cycles, mining of sand, limestone and coral, destruction of natural protective systems such as the fringing barrier reef and coastal vegetation and construction of structures along the shoreline. For example, the construction of sea-walls is common practice in protecting capital investments from beach erosion, but this interferes with shoreline dynamics and tends to exacerbate the problem in adjacent unprotected areas. The converse, beach accretion attributed to excessive supply of alluvial or lagoon sediments, is also a cause of shoreline instability. Sea level rise, resulting from climate change, is poised to aggravate the problem.

Considering the severity of the problem the present trend must be managed through policy intervention.

Policy Statement

To minimize the impacts of shoreline change, the government shall: -

- i) Develop and implement a Shoreline Management Strategy for the entire coast based on an understanding of the natural coastal processes and dynamics;
- ii) Ensure that land use plans along the shoreline are informed by the Shoreline Management Strategy and monitoring data;
- iii) Harmonize, strengthen and enforce the regulations guiding development along the shoreline.

4.4.2 Addressing emerging issues affecting the coastal zone

Emerging issues of concern in the coastal zone include; i) large economic development projects that are likely to impact the environment in large scale; (ii) environmental disasters related to cyclic droughts, floods, tsunamis and storm surges and, (iii) Climate change. On economic development, a number of large scale projects have been initiated in the coast in the recent past within the framework of Vision 2030. Such projects include infrastructure development projects such as the LAPSET Project in Lamu as well as Resort Cities projects in Kwale and Kilifi counties; biofuel projects mainly involving *Jatropha* farming; Agriculture projects involving mainly sugarcane and fish farming; Mining projects such as the Titanium project in Kwale County and oil and gas exploration in the sea among others at planning stages.

Despite the immense economic benefits these projects present to the country, negative impacts on the environment and socio-economic aspects are bound to be experienced during implementation. To mitigate the likely impacts, the government shall ensure that the projects adhere to environmental and social safeguards such as SEA and EIA.

In respect to natural disasters, the coastal zone has in the recent past suffered from a Tsunami incident that struck the Indian Ocean in 2004 leading to loss of life and property. With changing climate incidences of droughts, floods and storm surges have become more common. This calls for development of adequate policy measures to safeguard the coastal zone and the resident communities from the disasters.

Climate change is a phenomenon that is still inadequately understood but one which is bound to affect our coastal environment and development activities. Expected impacts of climate change along the coast include degradation of habitats, loss of biodiversity, increased shoreline erosion, sea level rise and flooding. These will affect people's livelihoods through loss of harvestable resources, loss of revenue from tourism, diminishing water resources, destruction of infrastructure and increased incidences of disease outbreaks.

The diverse issues emerging in the coastal zone require adequate policy direction and development of strategies to mitigate the potential negative effects.

Policy Statement

To address the effects of emerging issues affecting the coastal zone, the government shall: -

- i) Ensure that new development policies, programmes and projects are subjected to SEA and EIA;
- ii) Ensure environmental management plans for approved projects are implemented to mitigate potential negative impacts;
- iii) Conduct land suitability mapping and integrated spatial planning;
- iv) Develop and implement a strategy for protection of the shoreline against the impacts of climate change and other natural disasters;
- v) Assess the vulnerability and resilience of the coastal resources to the impacts of climate change;

- vi) Develop early warning systems for natural disasters such as tsunami and effects of sea-level rise and impact on vulnerable areas;
- vii) Promote sharing and dissemination of knowledge and technology in the response to climate change and natural disasters;
- viii) Promote the adoption of preventive and adaptive measures to mitigate against the impacts of climate change;
- ix) Promote the ecosystem based management.

4.5 Capacity Building, Education, Awareness and Research

4.5.1 Education, awareness and information programmes focusing on coastal zone management

Improving levels of education and access to information on coastal zone issues imparts knowledge and creates awareness on coastal zone management. Involvement of the community and other stakeholders in planning and development of ICZM strategies is important for successful implementation and sustainability of coastal programmes. Participation of the stakeholders at all levels promotes ownership and stewardship in resource management activities. As such, capacity building to strengthen institutions and the development of appropriate communication channels to pass on educational materials and awareness programmes targeting the community cannot be overemphasized.

Policy Statement

To ensure appropriate education, awareness and information programmes that focus on coastal zone management, the government shall: -

- i) Develop and implement an ICZM Education and Awareness strategy;
- ii) Consider traditional knowledge and practice in the conservation, planning and management of coastal resources;
- iii) Establish mechanisms for information dissemination to decision makers, communities and other stakeholders;

- iv) Promote the integration of environmental best practices into the activities of government, developers, communities and other stakeholders;
- v) Support the scaling-up of best practices in coastal resources management;
- vi) Promote participation of the community and other stakeholders in planning and implementation of ICZM policies.

4.5.2 Research and monitoring programmes on the coastal zone

Effective coastal zone planning and management requires a thorough understanding of the specific attributes of the area and an appreciation of the pressures and driving forces that influence the area dynamics, including trans-boundary factors. Understanding the variations in the physical, social, cultural, institutional and economic characteristics require data on trends and use of the area. Considerable research effort has been made by researchers from government institutions, NGOs and individuals addressing specific coastal zone issues. However, the research activities have been uncoordinated with no established mechanism to disseminate information at various levels. Thus, there is need for coordinated research and monitoring programmes to generate the appropriate data and information and to ensure proper flows of the information between the researcher and those implementing coastal zone actions.

Policy Statement

To ensure research and monitoring that informs coastal zone management, the government shall: -

- i) Promote the coordinated generation, dissemination and sharing of data and information for use in planning and decision making;
- ii) Mainstream the use of traditional knowledge in research and management;
- iii) Establish an Information Management System for, among other functions, disseminating information on policy implementation, monitoring and reporting on ICZM activities and maintaining databases on coastal resources to support decision making.

4.6 Institutional Arrangements and Legal Frameworks

4.6.1 Addressing the complex multi-sectoral problems of coastal areas

The sectoral approach in planning and management is un-coordinated and non-participatory. EMCA 1999, Section 55 has mandated NEMA, in consultation with the relevant lead agencies, to prepare an integrated national coastal zone management plan. In this regard, the State of the Coast Report was prepared to inform the development of the ICZM Policy and management plan. However, the cooperation and close collaboration of national lead agencies, local government, research institutions, private sector, CBOs and NGOs in the development of the national coastal zone management plan needs to be sustained.

Policy Statement

To establish institutional framework that adequately address complex multi-sectoral problems of coastal areas, the government shall: -

- i) Put in place an institutional framework to fully implement the ICZM Policy. The framework will encompass all major stakeholders from government, private sector and civil society;
- ii) Finance the implementation of the ICZM Policy and institutional arrangements.

4.6.2 Legal framework

Most of the current legislations and policies were formulated to capture sector specific management issues. The result has been conflicting legislation, duplication of effort and weaknesses in policy implementation and enforcement. EMCA 1999 has provided for, among other activities, the preparation of an integrated coastal management plan which needs to be supported by legislation to ensure its implementation.

Policy Statement

To provide for a legal framework for integration and coordination of sectoral policies for the development and management of the coastal zone, the government shall: -

- i) Enact legislation on integrated coastal zone planning and management;
- ii) Provide for financial arrangements to sustain implementation of the policy;
- iii) Harmonize sectoral policy and legal frameworks to address policy overlaps and gaps.

CHAPTER 5: IMPLEMENTATION FRAMEWORK

5.1 Implementation Framework

NEMA, in consultation with other sectoral agencies and development partners, shall set out to provide for the establishment of an institutional framework for implementation of this Policy. In addition, the framework shall provide for capacity building and mechanisms for financing this policy.

5.1.1 Capacity building

Training shall be undertaken to build capacity at both national and local level institutions that will be involved in implementation of the policy. The government will develop, in the long term, manpower to ensure efficient and effective implementation of the ICZM Policy.

5.1.2 Policy enforcement and monitoring

In order to instil good governance in coastal zone administration and management, there shall be need to put in place integrated enforcement measures to protect the policy from interference. This policy will form the basis for, and be recognized as the overall guide to all coastal zone management activities.

The government shall also put in place monitoring and evaluation mechanisms to monitor and ensure that implementation of the policy is effective and on course.

ANNEX: IMPLEMENTATION MATRIX

Policy Theme: Integrated Planning and Coordination						
Policy Objective	Policy Statement	Strategic Actions	Results Expected	Indicator	Implementation Responsibility	Time Frame
Planning and Management of Coastal Development	Guide and coordinate participatory planning and management of development through spatial planning	Develop an integrated spatial plan for the coast region	Coordinated development	An integrated spatial plan	Physical Planning Department, County governments	1 year
	Strategize for managing development and growth	Formulate a strategic development and growth plan for the coast	Sustainable development and growth	Strategic action plan	CDA, County Governments	1 Year
	Strengthen capacity of planning and development institutions	Develop capacity building plan for institutions	Enhanced proficiency in service delivery	Capacity building plan	CDA, County Governments	3 months
	Integrate environmental safety and aesthetics in development planning in harmony with land use plans	Integrate environmental safety and aesthetics in development planning	Environmental health integrated in development planning	Environmental Quality Objectives (EQOs)	NEMA and implementing institution	Long-term
Provision of eco-friendly Infrastructure and Public Service	Promote implementation of the National Land Policy (NLP) to address issues of land tenure in the coast	Develop an implementation plan of the NLP in the Coastal Zone	Reduction of land tenure problems	Implementation Action plan	Ministry of Lands, Housing & Urban development	1 year
	Promote the provision of amenities and infrastructure through integrated spatial planning	Undertake needs assessment for amenities and infrastructural development	Priority areas identified	Needs assessment report	Physical Planning Department and County governments	6 months
	Promote private-public partnership in promotion of green/eco-friendly economic activities	Provide incentives to private sector to encourage green economy activities	Thriving green economy initiatives	Enhanced service delivery	NEMA, MEWNR, Private sector, lead institutions, County governments	Long-term
	Ensure infrastructure development mainstreams environmental considerations	Integrate EIA in the provision of infrastructure and public services	EIA integrated in the provision of infrastructure and public services	EIA Reports for infrastructure development projects	NEMA, MEWNR and County governments	Long-term
Coordination and Communication Mechanisms between government, community and other stakeholders	Ensure support and involvement of relevant administrative bodies and sectors in ICZM	Establish mechanisms for integration and coordination of ICZM	Integrated and coordinated approach in coastal zone management	ICZM Coordination mechanisms	NEMA, MEWNR, County Governments, stakeholders	Long-term
	Involve communities and all other stakeholders in planning ICZM programs	Participatory ICZM planning forum	Wider participation in ICZM programs	Number and diversity ICZM planning forum	NEMA, County Governments, stakeholders	Long-term
	Develop and implement strategies that enhance communication among government and other stakeholders	Establish channels of communication on environmental matters	Effective communication among stakeholders	Communication mechanisms in place	All stakeholders	Long-term

Policy Theme: Sustainable Economic Development							
Policy Objective	Policy Statement	Strategic Actions	Results Expected	Indicator	Implementation Responsibility	Time Frame	
Promotion of community empowerment and sustainable livelihoods	Promote off-shore fishing to reduce pressure on near-shore stocks	Empower local fishers to venture off-shore	Increased Exploitation of off-shore fisheries by local fishers	Thriving near shore fishery, Improved livelihoods	Department of Fisheries, BMUs, NGOs, County governments	Long-term	
	Promote alternative livelihoods	Empower local communities to diversify means of livelihood	Diversified economic base	Number of livelihood options	Government Lead institutions, NGOs, County governments	Long-term	
	Strengthen mechanisms for co-management, rehabilitation of coastal ecosystems, and sharing of benefits	Establish community managed areas (CMAs) in marine and terrestrial	network of protected areas expanded through CMAs	Expanded network of protected areas in coast	KWS, KFS, Department of Fisheries, CBOs and NGOs, County Governments	Long-term	
	Promote PPPs in the conservation and management of coastal resources	Develop and implement projects based on PPPs	Thriving PPPs on coastal and marine resources conservation	number of PPPs	NEMA, CDA, private sector, CBOs, County Governments	Long-term	
	Restore and promote traditional values and practices that ensure sustainable exploitation of resources	Document best traditional practices and mainstream them in conservation	Traditional knowledge and best contributing to conservation	Documentation on best traditional practices	MEWNR, NMK, KWS, Department of Fisheries, KFS, CBOs & NGOs	1 Year	
	Promote multi-sectoral approach to the management of coastal resources	Develop and implement site specific ICZM action plans	Integrated management of coast resources	site specific ICZM action plans	NEMA, stakeholders, County governments,	Long-term	
	Promote market based instruments for payments for ecosystem services	Develop schemes that promote payment for ecosystem services	Improved conservation of critical habitats and benefits to local communities	schemes on payment for ecosystem services	NEMA, MEWNR, lead institutions, private sector, NGOs, Local communities, County Governments	Long-term	

Resolving Resource Use Conflicts and Benefits Sharing	Ensure equity in access and use of resources	Provide access to marine resources and establish benefit sharing schemes	Equitable access to marine resources	Access & Increased benefits to the community	County Governments	Long-term
	Promote zoning schemes to resolve space and on-water use conflicts	Develop and enforce zone plans	Zoned areas	Reduced resource use conflicts	Physical Planning, County Governments	Long-term
	Promote awareness and education on resolving resource use conflicts	Develop and implement conflict resolution mechanisms	Harmonious co-existence of resource users	Reduced resource use conflicts	NEMA, MEWNR, CDA, Resource users, KWS, County Governments	Long-term
	Develop and implement a code of conduct that is sensitive to the cultural and religious values of local communities	Establish code of conduct for visitors	Visitors sensitised on cultural and religious values	Code of conduct	Department of Tourism & MMK	6 months
	Develop and implement mechanisms for benefits sharing for local communities from revenues accrued from the utilization of coastal natural resources.	Establish a benefit sharing schemes	Equitably shared benefits	Improved livelihood	KWS, County Governments	Long-term
	Strengthen guidelines to minimise human wildlife conflicts	Institute regulations and by-laws to address human-wildlife conflicts	Resolution of human-wildlife conflicts	Reduced human-wildlife conflicts	KWS, local communities & County Governments	1 year
	Promote best practice in resource exploitation	Develop guidelines on resource management	Sustainable resource exploitation	Sustained benefits to the community	KFS, KMFRI, CDA, KWS & Stakeholders	5 years
	Diversify livelihoods for local communities to reduce pressure on critical habitats	Identify and promote alternative income generating activities	Improved livelihoods, recovery of critical habitats	Increased and sustained benefits to the community	Lead Institutions, NGOs, Private sector, Local communities, County Governments	Long-term

Policy Theme: Conservation of the Coastal and Marine Environment

Policy Objective	Policy Statement	Strategic Actions	Results Expected	Indicator	Implementation Responsibility	Time Frame
Coastal and mangrove forests	Ensure mainstreaming of the management of coastal forests and mangroves into land use planning	<ul style="list-style-type: none"> Establish zones for specific activities Provide access for non-extractive uses 	integrity of forest ecosystem maintained; Provision of socio-cultural services	Land-use plan	KFS, MEWNR, KWS, Physical Planning Department	1 year
	Promote IWRM strategies to ensure the conservation of water catchments, coastal and mangrove forests	Map and gazette water catchment areas	Services of water catchments maintained	Land use plan	WRMA, KFS, County Governments	5 years
	Promote a multi-sectoral approach in managing coastal and mangrove forests	Set up mechanisms for coordination of sectoral activities	Minimize duplication of effort and foster synergy	Standing Committee	KFS, County Governments	Long-term
	Promote co-management of coastal and mangrove forests	Strengthen mechanisms for co-management	Conservation and sharing of benefits	Co-managed conservation areas	KFS, KWS, Fisheries Department	Long-term
	Ensure developments proposed for areas in and adjacent to forest areas are subjected to EIA	Integrate EIA in development planning and management	Environmental health integrated in development planning and management	EIA reports	NEMA and Lead Institution	Long-term
	Strengthen and enforce regulations governing protection of coastal forests, including mangroves to facilitate their conservation	Harmonize sectoral regulations governing coastal forests and mangroves	Harmonized and effective regulations	Healthy forest systems	MEWNR, KFS	2 years
	Develop and implement site specific management plans for coastal terrestrial forests and mangroves	Develop and implement site specific management plans	Sustainable management of resources	Number of site specific management plans	KFS, KMFRI, Community Forest Associations, County Governments	Long-term
	Undertake initiatives to restore degraded coastal terrestrial forests and mangroves	Establish schemes for restoration of degraded coastal forests	Healthy and productive ecosystems	Number of successful restoration schemes	KFS, KMFRI, NGOs, Community Forest Associations, County Governments	5 years

Coral reefs and seagrass	Enforce relevant laws to regulate fishing, including trawling, and tourism activities in sea grass and coral areas;	<ul style="list-style-type: none"> Establish activity zones Establish conservation areas 	<ul style="list-style-type: none"> Minimize use conflicts Maintaining ecosystem integrity 	Space use plan	Fisheries Department, KWS, Tourism Department	2 years
Promote good land management practices that address soil erosion, to control sediment loading and siltation of coral reefs and sea grass beds	Establish erosion control measures	Coral reefs and sea grass beds free from impacts of siltation	Healthy ecosystems	KFS, Department of Agriculture, KEFRI, NEMA	Long-term	Long-term
Promote best practices and guidelines and standards for sea-bed mining and oil exploration	<ul style="list-style-type: none"> Adopt best practices Establish guidelines and standards 	Minimize impacts of sea-bed mining and oil exploration	A schedule of best practices, guidelines and standards	Ministry of Mining, Ministry of Energy and Petroleum	1 year	1 year
Promote the build up of knowledge base on the coral reef and sea grass ecosystems through scientific research and monitoring	Strengthen research and monitoring programs	Scientific data and monitoring information	Database	KMFRI, Cordio, CRCP, Academia	Long-term	Long-term
Promote the use of indigenous knowledge and scientific information in the exploitation and management of coral reef and sea grass resources	<ul style="list-style-type: none"> Document indigenous knowledge Apply traditional knowledge best practices 	Information Conservation of coral reefs and sea grass beds	Database Healthy ecosystems	KMFRI, Cordio, CRCP	Long-term	Long-term
Promote the establishing of flagship MPAs for the conservation of coral reef and sea grass habitats	Identification and gazettement of MPAs	Increased area for coral reef conservation	Number of new MPAs	KWS, Department of Fisheries, BMUs, County Governments	Long-term	Long-term
Domesticate the United Nations Framework Convention on Climate Change, (UNFCCC), and related Multilateral Environmental Agreements (MEAs)	Domesticate UNFCCC and other MEAs	Kenya meeting its international obligations	Number of international obligations domesticated	MEWNR, NEMA, Lead Institutions, County Governments	Long-term	Long-term

Deltas and estuaries	Ensure good land use practices to manage erosion and minimize the high loads of suspended sediments and siltation	Establish erosion control measures at catchment areas and along river basins	Reduced siltation in deltaic and estuarine areas	Healthy delta and estuarine ecosystems	KFS, WRMA, TARDA, CDA, Local communities County Governments	Long-term
	Promote integrated river delta planning and management to rationalize diversion, damming of rivers and flood control and to ensure environmental flows are maintained	Implement IWRM principles	Healthy river basins	Reduced impacts on river basins	WRMA, TARDA, CDA, County governments	Long-term
	Promote conservation of deltas and estuaries to ensure protection of biodiversity	Develop and implement integrated Tana delta management plan	Sustainably managed Tana delta	Healthy Tana delta ecosystems	NEMA, KWS, TARDA, CDA, WRMA, County Governments	Long-term
	Ensure enforcement of best practices in planning and implementation of river basin development for environmental sustainability	Develop capacity in human resource and technical capability	Effective enforcement	Sustainable river basin management	WRMA, TARDA, CDA, County governments	Long-term
	Promote incentives for upstream communities through Payment for Ecosystem Services	Develop PES scheme for river basins draining to the ocean	Sustainably managed river basin	PES for river basins draining to Indian Ocean	NEMA, TARDA, WRMA, CDA, County Governments	Long-term

Coastal and maritime heritage resource management	Promote cultural tourism and ensure proper planning and visitor management to minimize negative cultural impacts on local communities	<ul style="list-style-type: none"> Develop a visitor management plan Develop a code of conduct for tourists 	Cultural values of local communities maintained and respected	<ul style="list-style-type: none"> A visitor management plan A code of conduct 	NMK , KWS	2 years
	Promote community participation in the conservation and management of heritage sites through the use of indigenous knowledge and observing cultural values	Identify and document indigenous knowledge	Indigenous knowledge and cultural values incorporated in conservation of heritage sites	Documentation on indigenous knowledge	NMK, KWS	2 years
	Promote public private partnership involving local and international agencies in the preservation, conservation and sustainable management of heritage sites	Establish incentives for PPP	Thriving PPP in conservation and sustainable management of heritage sites	Number of functional PPPs	NMK, KWS, County Governments	1 year
	Promote awareness on the importance of cultural and natural heritage	Develop awareness and education program targeting the community and other stakeholders	Well informed and cohesive community and other stakeholders	Number of awareness and education programs	NMK, KWS, NEMA, CDA	2 years
	Promote the development of alternative non-extractive or consumptive uses of natural heritage sites for the benefit of the community	Empower the community with skills and tools to develop alternative livelihoods	Community engaged in alternative non-consumptive uses of heritage sites	Number and diversity of successful community based alternative ventures	CDA, NMK, KWS	3 years
	Ensure development projects likely to impact archaeological sites are subjected to EIA	Enforce EMCA regulations on EIA studies on development projects.	<ul style="list-style-type: none"> Compliance with regulations Sound management of heritage sites 	EIA study reports for development projects	NMK, NEMA	Long-term

Pollution control and waste management practices	Empower County Governments to effectively manage urban waste	Strengthen municipal by-laws and enhance capacity of law enforcers	Effective enforcement of by-laws to manage urban waste	Effective by-laws	MEWNR, NEMA, County Governments	2 years
	Promote public-private sector-partnership in waste management	<ul style="list-style-type: none"> Provide incentives for PPP Enforce EMCA (Waste Management) Regulations 2006 	<ul style="list-style-type: none"> Private sector participation in waste management Compliance with regulation 	<ul style="list-style-type: none"> Number of successful partnerships Level of compliance 	MEWNR, NEMA, County Governments, NGOs, Private sector	Long-term
	Promote public awareness on good waste management practices to ensure a clean and healthy environment	Develop public awareness programs	Public involvement in good waste management practices	A clean environment	MEWNR, NEMA, County Governments, NGOs, Private sector, Ministry of Health	Long-term
	Enforce the EMCA (Waste Management and Water Quality) Regulations 2006	Ensure compliance with solid waste management regulations on transport and dumping sites through inspection, licensing and promotion of compliance	Appropriate solid waste disposal	Improved efficiency in solid waste management	MEWNR, NEMA, County Governments	Long-term
	Develop and implement pollution prevention and control guidelines for the coastal zone	Develop and implement pollution management and mitigation strategy	Classification and zoning of sites based on pollution sources, levels, types and potential threats	Pollution control strategy	MEWNR, NEMA, County Governments	2 years
	Strengthen County Governments to enforce by-laws regulating urban waste management	<ul style="list-style-type: none"> Establish reward schemes for best practices in waste management Strengthen the surveillance and monitoring within County authorities 	Healthy ecosystems and environment	Improved compliance in waste management	MEWNR, County Governments, NEMA	Long-term
	Implement the oil spill contingency plan	<ul style="list-style-type: none"> Strengthening OSMARG Enforce the polluter pays principle in relation to EMCA (Water Quality) Regulation 2006 	Environment free from oil pollution	Compliance to Environmental Quality Standards	KMA, KPA, OSMAG & Stakeholders	Long Term
	Monitor and control the incidence of alien invasive species	Set up monitoring program for alien invasive species	Informed response to alien and invasive species	Database	KWS, KFS, KMFRI, KEFRI	Long-term
	Enforce the Merchant Shipping Act, 2009 (Pollution Control Regulations)	Enforce the polluter pays principle	Marine environment free from pollution	Compliance to Environmental Quality Standards	KMA, OSMAG, KPA & Stakeholders	2 years

Reversing the declining water quality	Promote IWRM strategies to safeguard water quality	<ul style="list-style-type: none"> Enforce EMCA (Water Quality) Regulations 2006 Implement IWRM principles 	Sustained good water quality	<ul style="list-style-type: none"> Reduced incidences of water borne diseases Healthy water systems 	MEWNR, WRMA, NEMA, NGOs	Long-term
	Enforce EMCA (Water Quality) Regulations 2006	Enforce the polluter pays principle	Sustained satisfactory quality of surface (sea and fresh water) and groundwater	Improved quality of surface and groundwater	WRMA, NEMA, MEWNR	Long-term
	Ensure sustainable extraction of groundwater to control the problem of saltwater intrusion into water aquifers	<ul style="list-style-type: none"> Regulate extraction of groundwater based on pumping test results Regulate spacing of extraction points 	Sustained good groundwater quality	Effective regulations	WRMA, MEWNR	1 year
	Promote public awareness on the importance of protecting natural water systems and development	Develop public awareness programs	Public involvement in protecting natural water systems	Healthy water systems	WRMA, MEWNR, KFS	Long-term
	Implement the national Oil Spill Response Contingency plan	enactment of the Merchant Shipping bill	<ul style="list-style-type: none"> Institutional arrangements in place Finances are secured 	Oil spill contingency plan in operational	KMA, OSMAG, KPA	1 year
Provision of potable water supplies	Identify and develop alternative sources of freshwater to reduce pressure on groundwater sources	Identify and develop alternative sources of freshwater	Alternative sources developed	Reduced pressure on groundwater	WRMA, MEWNR	Long term
	Promote suitable management strategies that protect water catchments and water supply aquifers	<ul style="list-style-type: none"> Zoning aquifer recharge areas Implement IWRM principles 	Reliable water supply sources	Delineated water catchments	WRMA, KFS, MEWNR	2 years
	Promote strategies that ensure environmental flow objectives are met	Implement IWRM principles	Ecological services sustained and social needs satisfied	Healthy ecosystems Healthy population	WRMA, TARDA, CDA	Long-term
	Encourage the adoption of water recycling and water saving practices	Raise awareness on the need for water conservation	Controlled use of water	Reduced water consumption	WRMA, MEWNR, NEMA	Long-term
	Promote public awareness on the importance of protecting natural water systems and development	Develop public awareness programs	Public involvement in protecting natural water systems	Healthy water systems	WRMA, MEWNR, NEMA	Long-term

Policy Theme: Environmental Risk Management							
Policy Objective	Policy Statement	Strategic Actions	Results Expected	Indicator	Implementation Responsibility	Time Frame	
Addressing shoreline change	Develop and implement a Shoreline Management Strategy for the entire coast based on an understanding of the natural coastal processes and dynamics	Develop vulnerability maps of the coastal zone	Vulnerable areas identified and mapped	Vulnerability maps	KMD, CDA, KMFRI, Physical Planning Department, County Governments	3 years	
	Ensure that land use plans along the shoreline are informed by Shoreline Management Strategy and monitoring data	Generation of monitoring data	Shoreline stability and dynamics established	Database	CDA, KMFRI, Physical Planning Department	Periodic	
Addressing emerging issues affecting the coastal zone	Review and harmonise regulations guiding development along the shoreline	Define set back limits for the shoreline based on detailed study of shoreline stability	Setback limits established for shoreline based on scientific study on shoreline stability	Setback limits informed by science	NEMA, MEWNR, Physical Planning Department, County Governments	2 year	
	Develop and implement a strategy for protection of the coastal area against the impacts of climate change and other natural disasters	Develop and implement strategies to protect areas vulnerable to impacts of climate change	Effective protection of areas vulnerable to climate change impacts	Vulnerable areas secured	KMD, NEMA, CDA, Physical Planning Department, County Governments	Long term	
	Assess the vulnerability and resilience of the coastal resources to the impacts of climate change	Commission vulnerability studies	Data & information	Study Reports	KMD, KMFRI, KEFRI, CDA, NEMA, County Governments	3 years	
	Develop early warning systems for natural disasters (such as Tsunami) and monitor sea-level rise and its effects on vulnerable areas	Develop and implement early warning systems for natural disasters & strengthen capacity for sea-level monitoring	Improved capacity to detect and respond to natural disasters and sea-level rise impacts	early warning systems and sea-level monitoring reports	KMFRI, KMD, MEWNR	Long-term	
Promote the adoption of appropriate preventive and adaptive measures to mitigate against the impacts of climate change.	Promote sharing and dissemination of knowledge and technology in the response to climate change	Develop climate change information sharing mechanism	Improved awareness on climate change and its impacts	Information sharing mechanisms	MEWNR, KMFRI, KMD, NEMA, County Governments	Long-term	
	Promote the adoption of appropriate preventive and adaptive measures to mitigate against the impacts of climate change.	Identify and promote climate change mitigation and adaptation measures	Improved capability by communities to mitigate and adapt to climate change	Climate change mitigation and adaptation measures	KMD, MEWNR, NEMA, KMFRI, County Governments	Long-term	

Policy Theme: Capacity Building, Education, Awareness and Research						
Policy Objective	Policy Statement	Strategic Actions	Results Expected	Indicator	Implementation Responsibility	Time Frame
Education, awareness and information programs focusing on coastal zone management	Develop and implement an ICZM Education and Awareness strategy	Develop appropriate awareness and education programs targeting the various stakeholders	Improved awareness on importance of coastal and marine resources	ICZM Awareness strategy, Information materials	NEMA, NGOs, CBOs, stakeholders	1 year
	Consider traditional knowledge and practice in the conservation, planning and management of coastal resources	Document traditional knowledge and best practices	Application of traditional knowledge in conservation	Traditional knowledge and values applied	NMK, KMFRI, County Governments	Long term
	Establish mechanisms for information dissemination to decision makers, communities and other stakeholders	Establish mechanisms for information dissemination	Well informed decision makers, communities & other stakeholders	Information channels	NEMA, Lead institutions, NGOs, CBOs, County Governments	2 years
	Promote environmental best practices into the activities of government, developers, communities and other stakeholders	<ul style="list-style-type: none"> Develop code of conduct Propagate environmental auditing of activities 	<ul style="list-style-type: none"> Stakeholders observing environmental best practices Regular audits 	<ul style="list-style-type: none"> Code of conduct Reports 	NEMA, KWS, KFS, County Governments	Long-term
Research and monitoring programs focusing on the coastal zone	Support the scaling-up of best practices in coastal resources management	Adopt a systematic incremental approach to scaling-up of best practices	Wider appreciation and adoption of best practices in resource management	Monitoring report	NEMA, Lead institutions, Stakeholders	Long-term
	Promote participation of the community and other stakeholders in planning and Implementation of ICZM policies	Raise awareness and education on ICZM	Community involvement in ICZM planning and implementation	Increased awareness and community participation in ICZM	NEMA, CDA & Stakeholders	Long-term
	Promote the coordinated generation, dissemination and sharing of data and information, for use in planning and decision making	<ul style="list-style-type: none"> Develop monitoring programs on resource use and environmental health Establish information databases on coastal resources to support decision making 	Monitoring data and information	Databases	NEMA, CDA, Lead institutions, NGOs, CBOs, County Governments	Periodic
	Mainstream the use of traditional knowledge in research and management	Survey and document traditional knowledge in resource management	Information on traditional knowledge	Documentation	Lead Institutions, Academia, NGOs, CBOs	Long-term
Establish a centralised Information Management System (IMS) on coastal and marine resources to support decision making and planning	Develop coastal and marine resources IMS	Central database on coastal and marine resources put in place	Databases	Physical Planning, NEMA, Lead Institutions, stakeholders, County Governments	3 years	

Policy Theme: Institutional Arrangements and Legal Frameworks						
Policy Objective	Policy Statement	Strategic Actions	Results Expected	Indicator	Implementation Responsibility	Time Frame
Addressing the complex multi-sectoral problems of coastal Areas	Put in place an institutional framework to fully implement the ICZM policy	Strengthen NEMA's capacity to promote the principle of integration & sustainable development in coastal zone	Improved coordination and integration of sectoral efforts	Clean and healthy environment	MEWNR, NEMA	Long term
	Finance the implementation of the ICZM policy and institutional arrangements	Mobilise resources and implement ICZM Policy	Resources mobilised and ICZM policy implemented	ICZM policy implemented	MEWNR, NEMA, lead Institutions, NGOs, Private sector, County Governments	Long term
Legal framework	Enact legislation on integrated coastal zone planning and management	Develop ICZM legislation	ICZM legislation developed	ICZM Act	MEWNR, NEMA, Stakeholders, County Governments	3 years
	Provide for financial arrangements to sustain implementation of the policy	Secure funding from Government sources	ICZM operations funded	funding mechanisms	MEWNR, County Governments	Long term
	Harmonize sectoral policy and legal frameworks to address policy overlaps and gaps	Review policy and legal frameworks relevant to coastal resource management	Improved legal and policy environment on coastal and marine conservation	Harmonized sectoral policy and legal frameworks	MEWNR, NEMA, Lead institutions, Stakeholders, County Governments	3 years

**MINISTRY OF ENVIRONMENT, WATER AND NATURAL RESOURCES
NHIF BUILDING, RAGATI ROAD, UPPER HILL
P.O. BOX 30126 - 00100, NAIROBI**

**Email: Policydirector@environment.go.ke
Website: www.environment.go.ke**