

**POLICY AND GOVERNANCE ASSESSMENT OF COASTAL AND MARINE RESOURCE SECTORS IN  
KENYA IN THE FRAMEWORK OF LARGE MARINE ECOSYSTEMS**

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## LIST OF ACRONYMS

<b>ASCLME</b>	Agulhas and Somali Current Large Marine Ecosystem
<b>AMCEN</b>	African Ministerial Conference on the Environment
<b>CBOs</b>	Community Based Organizations
<b>CBD</b>	Convention on Biological Biodiversity
<b>CDA</b>	Coast Development Authority
<b>CITES</b>	Convention on International Trade in Endangered Species of Wild Fauna and Flora
<b>CTTDLT</b>	Catering Training and Tourism Development Levy Trust
<b>DOALOS</b>	Division for Ocean Affairs and the Law of the Sea
<b>EBA</b>	Ecosystem Based Assessment
<b>EBM</b>	Ecosystem Based Management
<b>EEZ</b>	Exclusive Economic Zone
<b>EMCA</b>	Environment and Management Coordination Act
<b>EIA</b>	Environmental Impact Assessment
<b>ESD</b>	Ecosystem Sustainable Development
<b>FAO</b>	Food and Agriculture Organization
<b>GEF</b>	Global Environment Facility
<b>GIS</b>	Geographical Information System
<b>GIWA</b>	Global International Water Assessment
<b>GOF</b>	Government of Finland
<b>GOK</b>	Government of Kenya
<b>GPA</b>	Global Plan of Action for the Protection of Marine Environment from Land –based Activities
<b>ICZM</b>	Integrated Coastal Zone Management
<b>IMO</b>	International Maritime Organization
<b>IOC</b>	Inter-governmental Oceanographic Commission
<b>IUCN</b>	International Union of Conservation of Nature
<b>KCM</b>	Kenya Chamber of Mines
<b>KMA</b>	Kenya Maritime Authority

<b>KMFRI</b>	Kenya Marine and Fisheries Research Institute
<b>KNHC</b>	Kenya National Hydrographic Committee
<b>KPA</b>	Kenya Ports Authority
<b>KTB</b>	Kenya Tourism Board
<b>KTDC</b>	Kenya Tourism Development Cooperation
<b>KWS</b>	Kenya Wildlife Services
<b>LME</b>	Large Marine Ecosystem
<b>MARPOL</b>	International Convention for the Prevention of Pollution from Ships
<b>MDGs</b>	Millennium Development Goals
<b>MEAs</b>	Multilateral Environment Agreements
<b>MEDA</b>	Marine Ecosystem Diagnostic Analysis
<b>MEMR</b>	Ministry of Environment and Mineral Resources
<b>MENR</b>	Ministry of Environment and Natural Resources
<b>MOE</b>	Ministry of Environment
<b>MOFD</b>	Ministry of Fisheries Development
<b>MOL</b>	Ministry of Lands
<b>MOT</b>	Ministry of Tourism
<b>MOTW</b>	Ministry of Tourism and Wildlife
<b>MoU</b>	Memorandum of Understanding
<b>MPA</b>	Marine Protected Areas
<b>MSY</b>	Maximum Sustainable Yield
<b>NEMA</b>	National Environment Management Authority
<b>NGO</b>	Non-governmental Organization
<b>NOCK</b>	National Oil Corporation of Kenya
<b>SAP</b>	Strategic Action Plan
<b>Sida</b>	Swedish International Development Agency
<b>SPS</b>	Sanitary and Phyto-Sanitary
<b>TAC</b>	Total Allowable Catch

<b>TDA</b>	Transboundary Diagnostic Analysis
<b>UNCED</b>	United Nations Convention on Environment Declaration
<b>UNCCD</b>	United Nations Convention to Combat Desertification
<b>UNCLOS</b>	United Nations Convention on Law of the Sea
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>UNIDO</b>	United Nations Industrial Organization
<b>WWF</b>	World Wildlife Foundation
<b>WSSD</b>	World Summit for Sustainable Development

## INTRODUCTION

The Agulhas and Somali Current Large Marine Ecosystem (ASCLME) Project is a UNDP/GEF regional project covering nine countries in the Western Indian Ocean which include: Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa and Tanzania all of which following the UNCLOS (1982), have proclaimed their ocean ward extents to the 200 nautical mile limit of their Exclusive Economic Zones. The proclamation gives the countries jurisdictional powers over the governance of the natural resources in these LMEs as provided by UNCLOS (1982). The LMEs are anchored on the Rio 1992 UNCED Declaration (UN 2002) which recommended that Nations:

- Prevent, reduce and control degradation of the marine environment so as to maintain and improve its life system and productive capabilities.
- Develop and increase the potential of marine living resources to meet human nutritional needs as well as social, economic and development goals.
- Promote the integrated management and sustainable development of coastal areas and the marine environment.

Following the 2002 WSSD in Johannesburg (FAO 2008) further recommendations were made to address ecosystem related issues and put targets for plan of action so that:

- Land based sources of pollution be substantially reduced by 2006.
- Ecosystem based approach be introduced for practice by 2010.
- Marine protected areas to have a designated network by 2012.
- Restoration and sustainability of fisheries to possibly be restored to MSY by 2015.

LMEs are therefore global centres of efforts to reduce coastal pollution, restore damaged habitats (Coral reefs, mangroves, sea grass etc.) and recover depleted fishery stocks (Olsen et al 2006). International collaborating parties in LME are: IOC (Intergovernmental Oceanographic Commission), UNDP (United Nations Development Programme), UNEP (United Nations Environment Programmes), Global International Waters Assessment (GIWA), Global Programme of Action for the Protection of the Marine Environment from Land Based Activities (GPA), UNIDO (United Nations industrial Development Organization), FAO (Food and Agriculture Organization) Fisheries Division, GEF (The Global Environment Facility). Others are: The World Bank, Non- Governmental Organizations (NGO's), IUCN (International Union for the Conservation of Nature, GEF LME Projects) and WWF (World Wildlife Fund).

The LME concept covers for transboundary activities that impact on the ocean from land based activities in river basins, coastal waters and offshore deep ocean waters whose limits are defined by extents of ocean currents along the coasts and offshore oceanic waters. All these transboundary activities require integrated adaptive management in ecosystem based approach for Ecological Sustainable Development. It is important to note that the geographical limits of the LMEs do not follow political boundaries hence the importance of regional and international consideration of agreements, treaties and laws in their governance.

The LMEs operate on a 5 modular assessments to support LME restoration and sustainable development and are as follows: Productivity Module, Pollution and Ecosystem Health Module, Fish and Fisheries Module, Socio – economic Module and the Governance Module. Each of the module has indicators as shown in Table 1.

**Table 1: Indicators for the 5 LME Modules (Olsen et al 2006).**

<b>MODULE</b>	<b>INDICATORS</b>
Productivity	Photosynthetic activity, Zooplankton biodiversity, Oceanographic variability
Pollution and Ecosystem Health	Eutrophication, Biotoxins , Pathology of Emerging diseases and Health indices
Fish and Fisheries	Biodiversity , Fin fish, Shellfish, Demersal species Pelagic species
Socio-economic	Integrated assessments, Human forcing, Sustainability of long-term socio-economic benefits
Governance	Stakeholder participation and adaptive management

The LMEs follow the Ecosystem Based Management paradigm shift (Table 2). Sectoral approach undermines sustainable use of natural resources and the environment consequently reducing the maximization of sustainable use of goods and services that would be provided by a healthy system. Efforts are therefore geared towards multisectoral approach that involves a holistic approach to include not only the knowledge of the exploited natural resource and its management but broadly the ecological well being of the resource and environment, socio-economic human well being and governance. This is what is now called Ecosystem Based Management which is an ecosystem paradigm shift from the sectoral approach. Such an approach ultimately builds into the Ecosystem Based Sustainable Development.

**Table 2: Change management from sectoral to ecosystem management: a paradigm shift**

<b>FROM</b>	<b>TO</b>
Individual species	Ecosystems
Small spatial scale	Multiple scales
Short –term perspectives	Long –term perspectives
Humans: Independent of ecosystems	Humans: Integrated part of ecosystems
Management divorced from research	Adaptive management
Managing commodities	Sustaining productive potential for goods and services.

The ASCLME like with any other LME based project follows the 5 Modular Assessments approach. The subject at hand deals with the 5<sup>th</sup> Module which is the Governance Module but it is integrated with the rest of the 4 modules to bring about the desired Ecosystem Based Management for Ecological Sustainable Development. To institutionalize a cooperative, adaptive and results based management in the Western Indian Ocean of the Agulhas and Somali Current Large Marine Ecosystem (ASCLME) for ecological

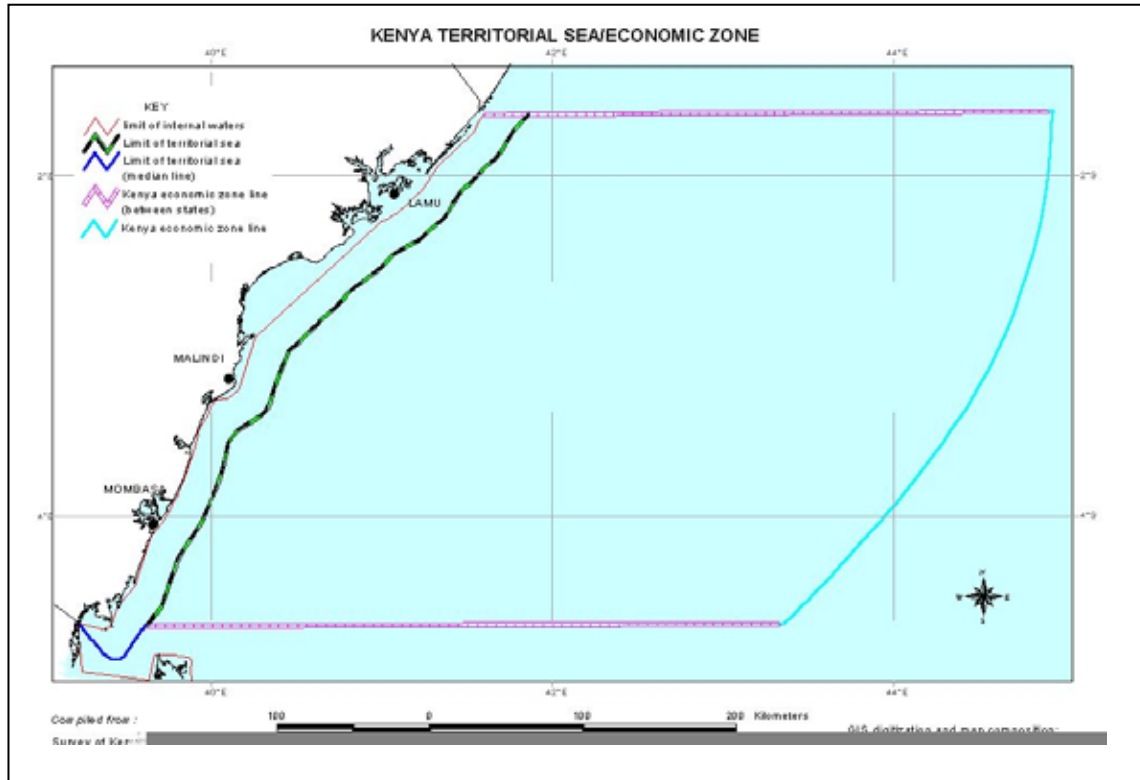
sustainable development is the major goal of the ASCLME project. This initiative is geared to be fulfilled through joint GEF supported programmes involving the UNDP/GEF WIOLaB project and the World Bank/GEF SWIOFP project besides the UNDP/GEF ASCLME project. Towards fulfilling this major goal, a national Marine Ecosystem Diagnostic Analysis (MEDA) was undertaken to provide a basis for evaluating the status of the strength of the existing policies, legal, institutional structures and governance for ecological sustainable development. Consequently, these will feed into the regional Transboundary Diagnostic Analyses (TDAs) and a comprehensive regional Strategic Action Programme (SAP).

The activities that will be undertaken in the policy and governance assessment for the marine and coastal resources covering a period of at least 20 years; coming up with recommendations for reforms for the implementation of an Ecosystem Based Approach (EBA) to managing the marine and coastal resources and a proposal for a set of indicators for assessing progress in achieving the EBA to managing the marine and coastal resources.

### **Country Background**

The State of Kenya has a total land area coverage of about 583, 000 km<sup>2</sup> with a coastline of about 650km which borders with Somalia in the North and with Tanzania in the South. The coastal land area is about 32,447km<sup>2</sup> and lies in a semi arid zone (Ruwa et al 2004). Her oceanward boundary extends to the 200 nautical mile Exclusive Economic Zone limit in accordance with the UN Law of the Sea (UNCLOS) proclamation and has further applied to extend to 350 nautical mile limit for exploitation of bottom ocean bed resources. The additional application 150 nautical mile gives Kenya an extra 103,000 km<sup>2</sup> making the new total ocean area upto 350 nautical mile, 245,000 sq

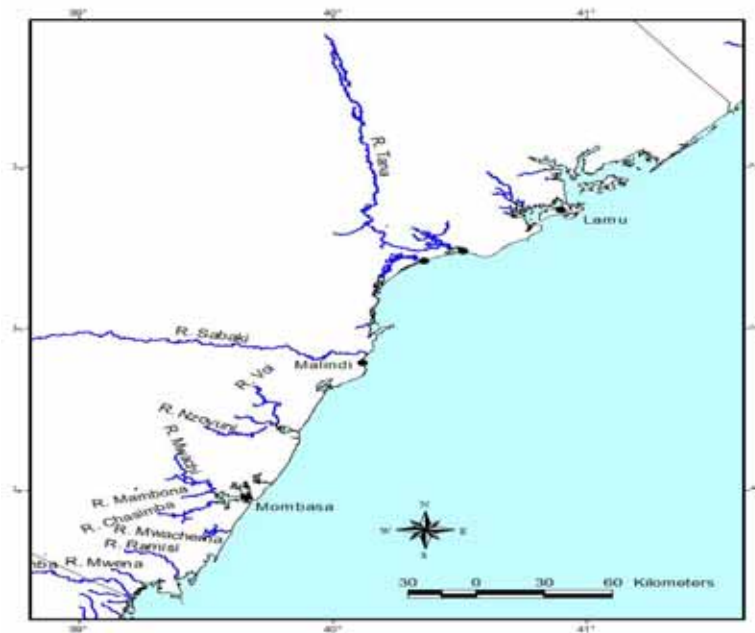
km which makes about 42% of her total of land area which makes Kenya a significant maritime country. With a total national population of about 40 million people and a total land area of 583,000 km<sup>2</sup> Kenya has national population density of about 69 people per km<sup>2</sup> (UNESCO 2010). The coastal area with about 2.5 million people has a higher density of 77 per km<sup>2</sup> Most of the population is further concentrated in areas which are virtually all located along the coastline. In urban district of Mombasa which covers 282km<sup>2</sup> has a population density of 3190 people per km<sup>2</sup>. At national level the coastal area is food –deficient and is the second poorest of Kenya’s eight provinces.



**Figure 1: Kenya’s territorial waters (Source: Survey of Kenya map series SK 74)**

The country is also endowed with a large drainage basin called Tana-Athi-Sabaki Drainage Basin (Fig.2) whose major rivers discharge into the Indian Ocean. In the Tana-Athi-Sabaki Drainage Basin there are relatively few lakes which are the smallest in Kenya and are Lake Jipe and Lake Chala in Taveta near Mount Kilimanjaro. However the region is endowed with two large oceanward bound rivers whose catchment areas are in the Central Kenya Highlands around Mount Kenya and both discharge within the Kenya’s coastline into the Indian Ocean.





**Figure 2: Major rivers draining into the Indian Ocean (Source: KMFRI GIS Coastal Resource Database)**

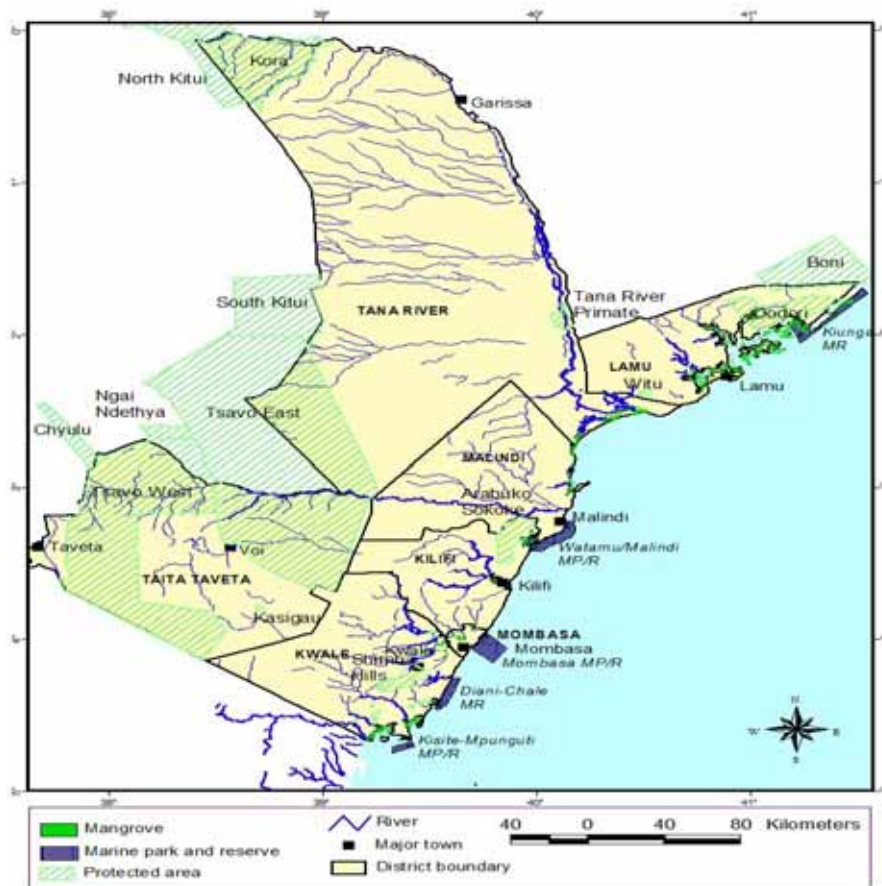
These two rivers are River Tana and River Athi- Galana- Sabaki whose lengths are 708km and 547km respectively. The two rivers constitute a wide river drainage basin totaling 202,020km<sup>2</sup> with River Tana accounting for 132,090 km<sup>2</sup> and a mean annual runoff of 4,700 million m<sup>3</sup>. Whereas River Athi –Galana- Sabaki drainage basin is about 69,930km<sup>2</sup> with a mean annual runoff of 1,295 millions<sup>3</sup> (Ruwa et al 2004a). The drainage basin creates a very significant wetland in the Coast region. The Tana and Athi river waters are abstracted to support irrigation and for domestic and industrial consumption purposes. The River Tana has further been dammed for production of hydropower.

Along the 650km shoreline Kenya is endowed by various combinations of critical habitats extending into shallow waters that are popular with small scale fishing by artisanal fishermen and tourists who enjoy viewing the aesthetic nature of the biodiversity in these critical habitats especially in marine protected areas (Table 3 and Fig. 3).

These critical habitats are mangroves systems which are also nursery grounds for juvenile fish; seagrass beds which are also grazing grounds of various types of fish and reptiles like the sea turtles and mammals like the dugongs; and coral reefs which support a large variety of fish both for human consumption and for aquaria trade.

**Table 3. List of marine protected areas along the Kenyan coastline (GOK/MOTW 2007).**

Name of marine protected area	When established	Coverage (km <sup>2</sup> )
Kiunga Marine National Reserve	1979	250
Malindi-Watamu Marine National Park	1968	16.3
Malindi-Watamu Marine National Reserve	1968	245
Mombasa Marine National Park	1986	10
Mombasa Marine National Reserve	1986	200
Kisite Marine National Park	1978	28
Mpunguti Marine National Reserve	1978	11
Diani Marine National Reserve	1995	75
<b>Total</b>		<b>835.3</b>



**Figure 3: Marine and terrestrial parks and reserves at the Kenya coast (Source: KMFRI GIS Coastal Resource Database).**

## **METHODOLOGY**

The activity involved sourcing and accessing information from government institutions and other relevant organizations addressing policy, legal, institutional arrangements and governance both at national, regional and international levels. In this way, regional and international agreements, treaties and conventions dealing with transboundary issues would be captured. The study involved analyzing documentations for at least 20 years ago so as to describe and discern any possible nature of response to policy and governance change and practice. This study is interlinked with the findings of the ASCLME MEDA and the socio-economic study on coastal community livelihoods in order to understand the ecological well being, social and economic well being and governance (FAO 2008). The latter are the fundamental pillars for Ecological Based Management (EBM) of natural resources for Ecological Sustainable Development (ESD). For EBM the major domains are the natural resources and the environment whose interactions as principally dictated by human social and economic factors ultimately determine the nature of ESD. From this perspective and within the scope of the GEF Programme, the primary sectors are the environment and the fisheries sectors. However, there are other interactive sectors to the latter that are essential to consider though secondary which are:

The agricultural sector; mining sector; maritime sector; tourism sector; forestry sector and wildlife sector. Cross-cutting issues arising across these sectors and affecting the environment and fisheries sectors will need to be addressed across the relevant policies, legal provisions, agreements and treaties and how they relate to governance across sectors and how they may influence the same across national, regional and international levels. To discern the nature of inclusiveness of the policies and laws in terms of accommodating adaptive management in natural resources scoping for key words which can give evidence for this practice will be made. The key words that may reflect this inclusiveness are for example: multisectoral integration, sustainable resource utilization, ecosystem based management, sustainable development, sustainable management, precautionary approach, stakeholder consultation, community based organization participation, participatory approach, and adaptive management.

## **SYSTEM OF GOVERNMENT AS PER CONSTITUTION**

Kenya is a multiparty democracy and holds parliamentary elections to elect a President and Members of Parliament at 5 year intervals. Primarily, resource governance in Kenya is under three organs, that is, the Executive (Cabinet and Civil Service), the Parliament (Legislature) and Judiciary as per Kenya's old, first Constitution (GOK 1992). However, the new second Constitution which was promulgated in August 2010 further provides for devolved governance to Counties and the Senate (GOK 2010a). This therefore increases the resource governance to five organs as per Article 6: Devolution and access to services, of the 2010 Constitution which states: *6.(1) The territory of Kenya is divided into the Counties specified in the First Schedule.(2) The governments at the national and county levels are distinct and inter-dependent and shall conduct their mutual relations on the basis of consultation and cooperation.(3) a national State organ shall ensure reasonable access to its services in all parts of the Republic , so far as it is appropriate to do so having regard to the nature of the service.*

As regards creation of the Senate which is part of the Parliament, Article 93 of the new Constitution which provides for its creation states as follows: *93.(1) There is established a Parliament of Kenya, which shall consist of the National Assembly and the Senate. (2) The National Assembly and the Senate shall perform their respective functions in accordance with this Constitution.*

The roles of the National Assembly and the Senate are distinct as described by Article 95(1) which states: *The National Assembly represents the people of the constituencies and special interests in the National Assembly;* whereas the Senate according to Article 96(1) states that: *The Senate represents the counties, and serves to protect the interests of the counties and their governments.*

### **Devolved Government**

The new Constitution establishes rules, national values and principals that facilitate the realization of equality and inclusiveness in governance which include establishing mechanisms that ensure fairness in sharing of national resources and devolution of governance to County levels. Devolution is to ensure grassroots participation in decision making in governance to avoid marginalization as per Articles 174 (a) to (i) which state as follows: *174:The objects of devolution of government are – (a) to promote democratic and accountable exercise of power; (b) to foster national unity by recognizing diversity; (c) to give powers of self-governance to the people and enhance the participation of the people in the exercise of the powers of the State and in making decisions affecting them; (d) to recognize the right of communities to manage their own affairs and to further their development; (e) to protect and promote the interests and rights of minorities and marginalized communities; (f) to promote social and economic development and the provision of proximate, easily accessible services throughout Kenya; (g) to ensure equitable sharing of national and local resources throughout Kenya; (h) to facilitate the decentralization of State organs, their functions and services, from the capital of Kenya; and (i) to enhance checks and balances and the separation of powers.*

The old Constitution did not provide for enough checks and balances to control the powers over the institutions of governance, the legislature, judiciary, the civil service or government in general leading to conflicts in their functions and unsustainable management. The new constitution provides for independence of the pillars of governance i.e the Executive, Legislature and Judiciary by providing explicit checks and balances and further

containing provisions to ensure the realization of equality and inclusive citizenship in the formulation and implementation of public policy, failure to which affected people can seek judicial intervention.

### **Constitutional Provision for Natural Resource Governance**

The relevant parts of the Constitution for the policy and governance for the ASCLME as a region have been extracted from the 2010 Constitution to facilitate understanding how this over-arching law can address the 5 Modular Assessments of the LME. The new Constitution of Kenya is the supreme law of the State of Kenya and Article 2.1 which states: *(5) The general rules of international law shall form part of the law of Kenya; (6) Any treaty or convention ratified by Kenya shall form part of the law of Kenya under this Constitution*, clearly gives recognition to internalization of international law, treaty or convention to which Kenya has ratified to be part of law of Kenya and this was not part of the repealed old Constitution.

As regards Culture, Environment and Economic and Social rights which are all important in natural resource governance, the new Constitution provides for these as follows: On culture, Article 11(2b): *The state shall recognize the role of science and indigenous technologies in the development of the nation*; and that Article 42 about environment, provides for every person the right to a clean healthy environment that includes the right (a) *to have the environment protected for the benefit of present and future generations and through legislative and other measures, particularly those contemplated in article 69 on Obligations in respect of the environment; and (b) to have obligations relating to the environment fulfilled under Article 70 on Enforcement of environmental rights*. For economic and social rights, Article 43 provides for various cross cutting rights to persons that are variously in line with the MDGs.

Further obligations are given in the new Constitution which emphasize the importance attached to the environment and natural resources for ensuring ecologically sustainable development and equitable sharing of the accruing benefits from sustainable exploitation and utilization of the natural resources as are given in Article 69.

The Constitution furthermore recognizes every person's right to have obligations relating to the environment fulfilled. Article 70 provides that a person may apply to a court for redress if he or she alleges that a right to a clean and healthy environment recognized and protected under Article 42 has been, is being or is likely to be, denied, violated, infringed or threatened. On application, the court may make any order, or give any directions, to prevent, stop or discontinue any act or omission that is harmful to the environment; to compel any public officer to take measures to prevent or discontinue any act or omission that is harmful to the environment; or to provide compensation for any victim of a violation of the right to a clean and healthy environment.

Significantly, article 162(2) prescribes that the Parliament shall establish courts with the status of the High Court to hear and determine disputes relating to the environment and the use and occupation of, and title to, land.

## **NATIONAL LEGISLATION PROCESS**

The law making process is guided by the provision of the Constitution. Being a multi-party democracy, the law making process is participatory and more so as expounded in the new Constitution. All the common three tiers of governance in the old and new Constitution which are: The Executive, Parliament and Judiciary play their constitutional roles and according to the new Constitution, Counties and Senate have further created a more inclusive participatory role through devolved governance. As provided by the Constitution the principal law making institution is the Parliament. Briefly the roles of the various institutions are as described in the following sections.

### **The Parliament**

The parliament conducts its business primarily through committees. The latter system enables the legislative to organize its affairs and to shadow the operations of government ministries, department and agencies. To enhance the accountability of the legislative, the new Constitution by Article 118 imposes a duty on Parliament to facilitate public participation and involvement in the business of Parliament and its Committees. Article 119 further gives every person the right to petition Parliament “to consider any matter within its authority” Article 104 also gives the electorate the right to recall the member of Parliament representing their constituency and imposes a duty on the Parliament to enact legislation that will establish the grounds and procedures to which a Member of Parliament may be recalled.

Parliament through its National Assembly as provided in Article 95 (3) which states:

*The National Assembly enacts legislation in accordance with Part 4 –Procedures for enacting legislation; and Senate has the legislative power to participate in making laws as provided in Article 96 (2) which states: The Senate participates in the law-making functions of Parliament by considering, debating and approving Bills concerning Counties, as provided in Articles 109 and 113.* The process involves preparation of a Bill which is then presented to the National Assembly and debated. If passed by the National Assembly, the Bill is presented to the President for his assent. He will signify to the Speaker that he assents to the Bill or refuses, and he will submit his reasons and recommendations to the Speaker in a memorandum for the National Assembly to reconsider. The National Assembly may accept the proposed recommendations and resubmit to the President for assent. However, the members of the National Assembly may refuse the proposed recommendations and still approve the Bill in its original form by a resolution through voting. The same will be resubmitted to the President for his assent. A law made by Parliament shall only come into operation after it has been published in the Kenya Gazette but Parliament may postpone the coming into operation of a law.

Both the old and new Constitutions contain similar procedures in law making. However, the new constitutions provides for a more participatory process with various stakeholders. The new Constitution provides for public participation including ordinary citizens and civil society groups when it is still a Bill otherwise once it is an Act, it may take years before any consideration is given to amending or repealing it. Bills are handled by relevant committees of the Parliament who may hear evidence and invite submissions from interested parties on the content of the Bill. The Committee will ultimately have the task of debating the issues contained in the Bill making recommendations to the National Assembly and reporting on any differences of opinion within the group.

Sometimes, a Citizen may feel strongly about an issue around into which a new proposed legislation is being prepared. Individual citizens or organizations have the rights to draw up proposed legislation of their own and submit to the relevant parliamentary committee, and do not have to wait for a government department to develop draft legislation. If the Committee feels the legislation is worth consideration, it will pass it on to the department responsible for this area. A willing Member of Parliament will be required to submit the proposed draft to the legislative.

### **The Judiciary**

The Judiciary is an autonomous institution. However under the Old Constitution the autonomy was undermined by the failure to regulate the President's and Chief Justice's power of appointment and dismissal which encouraged conflicts of interest and abuse of power. The situation also created job insecurity among the judicial officers besides undermining the authority of the Judiciary in effectively discharging its duties.

To address this issue the new constitutions Article 166 issue, seeks to give the Judiciary its autonomy from the Executive by ensuring that the President will now appoint the Chief Justice and Judges of the superior courts subject to the recommendations of the Judicial Service Commission and the approval of the National Assembly. The Judicial Service Commission has further been expanded as per Article 171; to be more inclusive in representation of stakeholders and now includes a representative of the public who is not a lawyer and besides representatives of the Subordinates courts, practicing lawyers, and the legal academy.

The objective procedures for dismissal of judges have been addressed in Article 168 of the New Constitution. Unlike the previous practice, the process of removing the Chief Justice and Judges will now be initiated by the Judicial Service Commission.

The commission will give a hearing to the affected Judges and send the petition to the President only when it is satisfied that there are grounds for removal. The President will appoint a tribunal to inquire into the matter upon receiving the petitions. The composition of the tribunal is as guided by Article 168. The President will be guided by the recommendations of the tribunal to make a decision; however, for fairness the Judge can appeal to Supreme Court as provided for in the Article 168. This objective procedure is meant to provide fairness and enhance security of tenure and independence of judges in discharging the responsibilities.

### **INSTITUTIONAL FRAMEWORK FOR IMPLEMENTATION**

The challenges and issues encountered in the environment and impacting on the resources cut across various economic sectors. Since each sector has its own policies and legal provisions it is imperative that the challenges and issues are addressed in an integrated and multi-sectoral approach. The sectors that have a direct impact on the environment which significantly affect the marine natural resources are as follows: Fisheries sector; Wildlife sector; Forestry sector; Water sector; Energy sector; Agriculture sector; Mining sector; Maritime sector; Tourism Sector and Environment sector. Taking the example of the fisheries sector and the wildlife sector and their interdependence or interlinkages, various challenges are learnt not only from a sectoral point of view but also multisectorally. The management of fisheries resources requires a holistic approach which integrates various policies and laws to create

and management the desired institutions so that they can deliver the desired results. It not only involves knowledge of fisheries as a resource, but also requires identification of appropriate infrastructure and capacity to carry out development, besides supporting linkages to both national and international legal instruments. These elements have to be integrated with appropriate inter-institutional linkages for effective management.

Thus, although as provided by law, Fisheries Act cap 328, the mandate to manage the country's fisheries resources lies with the Fisheries Department, it must also cooperate with various other institutions whose mandates facilitate its functions as also provided by their laws that created them. Such inter-institutional cooperation is regulated by Memoranda of Understanding (MOUs).

Marine protected areas are areas of coastal waters designated as marine parks or marine reserves which are protected under the Wildlife (Conservation & Management) Act by the Kenya Wildlife Service. In marine parks, no form of resource exploitation or extraction is allowed whereas in marine reserves, limited human activity including exploitation of resources is allowed. Kenya has a total marine protected area of 760 km<sup>2</sup> of which 54 km<sup>2</sup> forms the total area of marine parks while the rest is marine reserves. The marine parks and reserves, which are of different sizes are located at various intervals along the entire Kenyan coastline. There are four marine parks (Mombasa, Malindi, Watamu and Kisite/Mpunguti) and six marine reserves. The plan is for each marine park to be joined to a marine reserve. Currently, there are two marine reserves (Chale-Diani and Kiunga) which are not adjoined to marine parks (GOK/MOTW 2007).

Although the policy goal of creating protected areas is for the conservation and management of flora and fauna for tourism values, the protected areas also act as habitat refugia for fish stocks that would otherwise be open to a measure of depletion through fishing activities as in unprotected areas. However, unprotected over-fished areas also have capacity to recover when fishing is controlled as evidenced from the creation of Mombasa Marine Park and Reserve which was earlier an area of overfishing but later recovered to show high fish densities (McClanahan and Kaunda-Arara 1996). Mombasa Marine Park and Reserve was created to boost the tourism hotel industry along the Nyali-Bamburi-Shanzu shoreline. Guidelines are however required on how to create linkages between protected and unprotected areas in terms of fish biodiversity to achieve optimal recruitment and efficient utilization of the fisheries resources with minimal conflicts between stakeholders. The problem still is that Kenya's artisanal fishermen believe that the protected areas have been exclusively created for the advantage of the tourism industry because they are not allowed to fish in the parks. Resolving this dispute would appear to be very difficult because fishermen and tourists have to some extent opposing and competing interests in the fisheries resources.



## **SECTOR ASSESSMENTS**

### **1. MARITIME ZONES**

#### **Introduction**

The maritime zone is an ocean area of multiple economic activities ranging from shipping, mining, tourism, marine biodiversity conservation, mariculture to fishing. These multiple activities have resulted in creation of various institutions with different mandates to manage and regulate these different economic activities as derived from their respective policies and legal provisions. The geographical boundaries of the maritime zone are as provided by UNCLOS, 1982.

#### **Policy and Legislation**

Kenya has plans to formulate a comprehensive and economically beneficial Maritime Policy in line with the Vision 2030's aspiration to transform the country into a newly industrialized middle-income country. It is important to note however, that there is in place the National Oceans and Fisheries Policy (GOK/MOFD 2008) which deals with living resources.

Kenya has defined its geographical delimitations with their neighbor in the south bordering with Tanzania as required for implementation of UNCLOS but has yet to accomplish the same with Somalia which borders with it in the north (Kibiwot 2008). The maritime zone according to the revised Maritime Zone Act 1989 Cap 371 includes the territorial waters which is the 12 nautical miles zone and the Exclusive Economic Zone which extends beyond the Territorial waters to the 200 nautical miles limit according to UNCLOS, 1982. The present Act consolidates the law relating to the territorial waters and continental shelf of Kenya to provide for the exploration and exploitation, conservation and management of resources of the maritime zones. The consolidated laws are the Continental Shelf Act Cap 312 and the Territorial Waters Act Cap 371. Of further significance is that the Maritime Zones Act Cap 371 domesticated the UNCLOS into Kenya law as also provided by the new Constitution. Thus offences committed in the Kenya's maritime zone can be dealt with by the courts of Kenya. According to the new Constitution; the Maritime zone is a national geographical area and does not exclusively belong to any County in part or whole. However, County Governments are at liberty to exploit maritime zone resources but have to follow the National Government regulations.

The natural resources base in the maritime zone is diverse ranging from living to non-living resources which fall in different or various sectors and therefore their exploitation and management challenges are better dealt with under the corresponding sectors identified in this process (Table 4). It is noted that further critical challenges for the maritime zone management and exploitation of its resources are monitoring, control and surveillance which require regional and international partnerships as may be provided by regional or international management organizations or treaties, conventions and agreements (Table 5).

**Table 4: List of extra-regulatory Kenyan Acts which are directly or indirectly important for maritime zone natural resource management and environment besides the Maritime Zone Act.**

Issue	Extra-Regulatory Acts
Mining	<ul style="list-style-type: none"> <li>• Water Act</li> <li>• Lakes &amp; Rivers Act</li> <li>• Wildlife (Conservation &amp; Management) Act</li> <li>• Forest Act</li> <li>• Environmental &amp; Management Coordination Act</li> <li>• Land Act</li> <li>• Mining Act</li> <li>• The Petroleum (Exploration and Production) Act</li> </ul>
Fishing and mariculture	<ul style="list-style-type: none"> <li>• Wildlife (Conservation &amp; Management Act)</li> <li>• Environmental Management &amp; Coordination Act</li> <li>• Forest Act</li> <li>• Public Health Act</li> <li>• Merchant Shipping Act</li> <li>• Water Act</li> </ul>
Surveillance	<ul style="list-style-type: none"> <li>• Security Act</li> </ul>
(v) Research	<ul style="list-style-type: none"> <li>• Science &amp; Technology Act</li> </ul>

**Table 5 List of multilateral agreements to which Kenya is a signatory or has ratified that are relevant to maritime zone management of natural marine resources and environment (Source: UNEP-Sida, 1996).**

Category	Type of Multilateral Agreement
(a) Resource-based	<ul style="list-style-type: none"> <li>• Convention on Fishing &amp; Conservation of the Living Resources of the High Seas (Geneva 1958).</li> <li>• The African Convention for the Conservation of Nature &amp; Natural Resources (Algiers 1968).</li> <li>• Convention on International Trade in Endangered species of Wild Fauna &amp; Flora (Washington, 1973).</li> <li>• Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna &amp; Flora (1994).</li> <li>• Agreement on Technical Barriers to Trade (1994).</li> </ul>
(b) Environmentally based	<ul style="list-style-type: none"> <li>• Convention on the Continental Shelf (Geneva 1958)</li> <li>• Convention of the High Seas (Geneva 1958)</li> <li>• The Ramsar Convention on Wetlands of International Importance (Ramsar, Iran 1971)</li> <li>• United Nation Convention on the Law of the Sea (1982)</li> <li>• Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi 1985)</li> <li>• Convention on Biological Biodiversity (1992).</li> <li>• International Convention for the Prevention of Pollution from Ships (MARPOL), 1993</li> </ul>

## Institutional Structure

The institution with the mandate to map the non-living resources that are geological resources and physical features of ocean bottom are the Mines and Survey Departments of Kenya. The Survey Department is mandated to produce national geographical maps including the oceanward

boundaries of Kenya according to UNCLOS, 1982. Currently the Survey Department is in the Ministry of Lands.

The geographical mapping of the maritime zone is under the mandate of the Survey Department, Ministry of Lands. The mapping activity however involves other institutions which have formed a committee known as the Kenya National Hydrographic Committee (KNHC). KNHC has membership drawn from government agencies and shipping agencies dealing with non-living resources. The institutions that are directly and indirectly involved in the management, exploitation and conservation of the maritime zone resources are many (Table 6 and 7). The wide range of diversity in mandates of these institutions indeed call for a coordination mechanism through integrated approach to minimize conflicts due to overlaps in mandates and promote efficiency and sustainability through appropriate synergies.

**Table 6 Institutions with mandate for involvement in management of maritime zone natural resources and environment.**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Fisheries Department	<ul style="list-style-type: none"> <li>• Manage and develop fisheries resources</li> <li>• License fishing and fish marketing activities</li> <li>• Promote aquaculture</li> <li>• Enforcement of Fisheries Act</li> </ul>	Fisheries Act
Kenya Wildlife Service	<ul style="list-style-type: none"> <li>• Protect and conserve marine parks and reserves</li> <li>• Enforce Wildlife Conservation Management Act</li> </ul>	Wildlife Conservation & Management Act
Coast Development Authority	<ul style="list-style-type: none"> <li>• Promote sustainable economic exploitation of coastal and marine resources</li> </ul>	Coast Development Authority Act
Forest Department	<ul style="list-style-type: none"> <li>• Management of mangrove forests</li> </ul>	Forest Act
Kenya Maritime Authority	<ul style="list-style-type: none"> <li>• Manage maritime vessel standards; registration and licencing of ships; safety of navigation; maritime training management</li> </ul>	Kenya Maritime Authority Act Maritime Zone Act Merchant Shipping Act
Kenya Ports Authority	<ul style="list-style-type: none"> <li>• Manage ports and harbours which includes fishing ports</li> </ul>	Kenya Ports Authority Act
Mines and Geology Department	<ul style="list-style-type: none"> <li>• Mineral mining</li> </ul>	Mining Act
National Oil Corporation of Kenya	<ul style="list-style-type: none"> <li>• Exploration of oil and gas</li> </ul>	The Petroleum (Exploration and production) Act
Survey Department	<ul style="list-style-type: none"> <li>• Mapping the boundaries of the maritime zone</li> </ul>	Maritime zone Act

**Table 7 Institutions that give synergy in the management of Maritime Zones in Kenya**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Kenya Navy and Kenya Police	Surveillance and law enforcement	Security Act, Territorial Waters Act Maritime Zone Act, Lakes & Rivers
National Environment Management Authority	Environmental Management	Environmental Management & Coordination Act
Water Department	Management of water as a resource	Water Act
Research Institutes and Universities	Research and training	Science & Technology Act, University Acts
NGOs	Research community awareness	NGO Act

### **Gaps**

- Lack of integrated approach in the mapping of both living and non-living resources
- Lack of an integrated policy for coordination of exploitation, management and conservation to promote sustainable based management for both living and non-living resources; recognizing the need to link with relevant institutions, stakeholders that have a stake in maritime zone activities and resources
- Lack of a comprehensive integrated National Ocean Law addressing both living and non-living resource management, sustainable exploitation and conservation.

### **Recommendations and Conclusions**

- Kenya needs to complete defining its geographical delimitation with Somalia as required for the implementation of UNCLOS.
- For effective implementation of UNCLOS Kenya needs to strengthen its capacity to acquire knowledge of its both living and non-living resources in their jurisdictions for effective management exploitation and conservation. It is noted that Kenya's known national institutional capacity for achieving this is still inadequate although efforts are made to realize these through regional and international collaboration and cooperative programmes.
- Capacity for an effective monitoring, control and surveillance system is inadequate and needs to be strengthened. This will also assist in managing piracy which has grown into a regional menace in the Western Indian Ocean.
- There is a need to have in place a comprehensive Integrated Ocean Policy and Law to address living and non-living resources management including the ocean waters and environment for sustainable exploitation and conservation in an ecosystem based approach.

## **2 FISHERIES AND MARICULTURE**

### **Introduction**

The artisanal fisheries which are wholly marine inshore shallow water habitat fisheries contribute almost 80% of the annual marine catch landings due to the inability of local fishers to venture into deep sea fishing vessels. Further challenges for artisanal fisheries are occurring due to increased competing needs arising from multiple incompatible uses of the coastal waters for various economic activities which have even caused in access to fishing grounds besides their loss and over exploitation of the accessible fishing grounds. These challenges require specific Ocean fisheries law to coordinate and implement fisheries activities and has been lacking.

### **Policy and Legislation**

The National Oceans and Fisheries Policy, 2008(GoK/MOFD 2008) recognizes the need to empower the fishermen both in terms of developing capacity for fishing in deeper waters away from inshore waters and managing themselves in organized groups for a better bargaining or negotiating power e.g. by forming Beach Management Units that will ensure profitable and sustainable fishing and also with consolidate better skills for marketing and managing conflicts. It is noted that the policy provides for the need of precautionary approaches to fisheries as advocated by the Code of Conduct for Responsible Fisheries (FAO 2008) and Ecosystems Approach to Fisheries (FAO 2008) following the WSSD Johannesburg Summit Declaration (UN 2002).

Neither the Fisheries Management Bill (2009) nor the Fisheries Regulations (Under Section 14(1) Cap 378) provide legal support for this empowerment of fisherfolk as contained in the policy (GOK/MOFD 2009). Neither as well does the Bill explicitly provide for ecosystem approach in fisheries nor ecosystem based management but can only be indirectly implied from the functions of the proposed regulatory institutions. As regards exploitation and management of deep sea commercial Industrial fishing, both National Oceans and Fisheries Policy (2008) and the Fisheries and Management Bill (2009) strongly support the development of this fisheries to increase the national fish production and for support. However, both the policy and the Bill are weak in addressing vital elements that would support economically sustainable industrial or commercial fisheries, such as :

The Total Allowable Catches (TAC), Port State issues, Rules of Origin and Sanitary and Phyto-sanitary (SPS) issues which are all important especially in economic partnership negotiation trade agreements (Mwikya 2006). The Bill is also weak in domesticating into law issues pertaining regional and international agreements, conventions and treaties regarding fisheries related issues where Kenya is a signatory to or ratify such agreements, conventions or treaties.

As regards mariculture, both the policy and the Bill recognize this as an important activity to enhance fisheries production. However, there is need to review and relate the subjection of an environmental impact assessment (EIA) to the scale of the mariculture production. Small scale local community projects should be exempted from undertaking EIAs as this is inhibitive due to the costs involved which have to be borne by the clients and small scale local community producers are poor to afford paying for such costs. Be that as it may, however, these practices should be in harmony with best practices as advocated in the integrated coastal zone management policy.

## Institutional Structure

The Fisheries Department is mandated to manage the fisheries resources as provided by the Fisheries Act. However, from an ecological perspective, fisheries resources are directly and indirectly interlinked with the use of land, water, environment, wildlife and forestry (Table 8 and 9) and therefore interlinked with laws or Acts that manage these sectors and their institutions (Table 10). From this scenario, it is clear that the institutional mandates provided by the different Acts cause various degrees of overlaps in their mandates and therefore weaken enforcement besides causing inefficiency. The Fisheries Act therefore to have more institutional coordination role and promote harmony with the various institutions linked with fisheries resources and environment.

**Table 8: List of extra-regulatory Kenyan Acts which are directly or indirectly important for fisheries resource management besides the Fisheries Act.**

Issue	Extra-Regulatory Acts
Land	<ul style="list-style-type: none"> <li>Land Act</li> </ul>
Wildlife	<ul style="list-style-type: none"> <li>Wildlife (Conservation &amp; Management) Act</li> </ul>
Water	<ul style="list-style-type: none"> <li>Water Act</li> <li>Lakes and Rivers Act</li> <li>Maritime Zones Act</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Environmental Management &amp; Coordination Act</li> </ul>
Forestry	<ul style="list-style-type: none"> <li>Forestry Act</li> </ul>
Surveillance	<ul style="list-style-type: none"> <li>Security Act</li> <li>Maritime Zones Act</li> <li>Environmental Management &amp; Coordination Act</li> </ul>
Research	<ul style="list-style-type: none"> <li>Science &amp; Technology Act</li> </ul>

**Table 9: List of multilateral agreements to which Kenya is a signatory or has ratified that are relevant to management of marine fisheries in Kenya (Source: UNEP-Sida, 1996).**

Category	Type of Multilateral Agreement
Resource-based	<ul style="list-style-type: none"> <li>Convention on Fishing &amp; Conservation of the Living Resources of the High Seas (Geneva 1958).</li> <li>The African Convention for the Conservation of Nature &amp; Natural Resources (Algiers 1968).</li> <li>Convention on International Trade in Endangered species of Wild Fauna &amp; Flora (Washington, 1973).</li> </ul>

	<ul style="list-style-type: none"> <li>• Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna &amp; Flora (1994).</li> <li>• Agreement on Technical Barriers to Trade (1994).</li> </ul>
Environmentally based	<ul style="list-style-type: none"> <li>• Convention on the Continental Shelf (Geneva 1958)</li> <li>• Convention of the High Seas (Geneva 1958)</li> <li>• The Ramsar Convention on Wetlands of International Importance (Ramsar, Iran 1971)</li> <li>• United Nation Convention on the Law of the Sea (1982)</li> <li>• Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi 1985)</li> <li>• Convention on Biological Biodiversity (1992).</li> <li>• International Convention for the Prevention of Pollution from Ships (MARPOL), 1993</li> </ul>

**Table 10      Institutions that give synergy in the management of marine fisheries in Kenya.**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Kenya Navy and Kenya Police	Surveillance and law enforcement	Security Act, Territorial Waters Act Maritime Zone Act.
National Environment Management Authority	Environmental Management	Environmental Management & Coordination Act
Forest Department	Management of mangrove forests	Forest Act
Water Department	Management of water as a resource	Water Act
Government Chemist	Forensic analyses	Public Health Act
Kenya Bureau of Standards	Food standards	Kenya Bureau Standards Act, Public Health Act
Research Institutes and Universities	Research and training	Science & Technology Act, University Acts
NGOs	Research community awareness	NGO Act

Kenya Maritime Authority	Manage maritime vessel standards; registration and licensing of ships; safety of navigation; maritime training management	Kenya Maritime Authority Act Maritime Zone Act Merchant Shipping Act
Kenya Ports Authority	Manage ports and harbours which includes fishing ports	Kenya Ports Authority Act
Coast Development Authority	Promote sustainable economic exploitation of coastal and marine resources	Coast Development Authority Act
Kenya Wildlife Service	Protect and conserve marine parks and reserves  Enforce Wildlife Act	Wildlife Conservation & Management Act

### **Gaps**

The following gaps have been observed:

- The Fisheries Act requires to be fully reviewed to empower it with coordination role since it has been weakened by various overlaps in institutional mandates of institutions that directly or indirectly interlink with fisheries resources and its environment. The draft Fisheries bill does not address this observation as well.
- There is further need to review the Fisheries Act to domesticate the regional and international conventions, and agreements into Kenyan law for their efficient implementation. The draft fisheries bill lacks to address them.

### **Recommendations and Conclusions**

- A specific Ocean Fisheries and Mariculture Policy and Law is required to coordinate and implement fisheries activities. This legislation should take into a consideration the necessary elements indentified in the existing National Oceans and Fisheries Policy which covers also inland freshwater resources.
- The proposed specific Ocean Fisheries and Mariculture Policy and Law should be detailed enough to address Marine and Coastal Fisheries issues in the context of ecosystem based management and ecosystem approach to fisheries. It should further support management of economically sustainable industrial or commercial fisheries by legislating issues, of total Accordable catches (TAC) port state issues, Rules of origin and Sanitary and Phytosanitary (SPS) issues which are all important especially in Economic Partnership Negotiations and Trade Agreements.
- Mariculture production is gaining a significant role in to enhance marine fisheries production and there is therefore a need for the Oceans Fisheries and Mariculture Policy and Law to address this activity and



- include subject of Environmental Impact Assessment (EIA) for mariculture production and providing guidelines for management of this activity to be in harmony with other maritime activities in the context of ecosystem based management.

### **3.TOURISM**

#### **Introduction**

The tourism sector is one of the most important top sectors in the Kenyan economy and is the second highest foreign exchange earner after agriculture (GOK/MOTW 2006). Kenyan tourism is nature based and therefore highly dependent on her rich landscape, wetland and marine biodiversity. Many tourists therefore combine coastal and inland tourism visits when they visit Kenya.

The tourism sector is highly interlinked with other national economic sectors especially transport sector, agriculture sector, manufacturing, financial, insurance, entertainment and the nature based sectors that are: wildlife sector, fisheries sector and forestry sector (Table 11). Tourism also benefits from historical monuments and cultural sites. As evidenced from this high inter-linkages and dependency, tourism is highly a beneficiary of the functions of the policies and laws that regulate and manage these other sectors.

#### **Policy and Legislation**

The tourism policy and Statutes have largely been to promote entrepreneurship in the development of tourism (GOK/MOTW 2006). Historically, since independence, the major policy of the Government is to increase the number of tourist visits and therefore increase the percentage contribution of tourism to the GDP. This is also supported by the Kenya Tourist Development Corporation Act Revised edition 1988 (commencement date 1965) whose purpose is basically to promote development of tourism enterprises for the Tourist Industry of Kenya.

The Act also supports enterprises for development of preservation or study of the wild and natural life, flora and vegetation of Kenya and therefore from this perspective, it can be implied that the Act supports the preservation of the ecological environment on which the biodiversity depends on the basis of which tourism thrives. However, the Act does not provide for tourism carrying capacity for ecosystems to manage its growth by promoting increases in tourist visits in various ecological zones since uncontrolled tourism growth can lead to ecological disasters and consequently unsustainability.

The EMCA attempts to address this by imposing an EIA for any development on land and water which include tourism development but this would be strengthened by ensuring that Kenya Tourist Development Corporation Act also emphasizes on this and is explicit about tourism carrying capacity for ecological sustainable development.

Since tourism also benefits heavily from historical and cultural sites and traditions, the policy should support pro-poor tourism policy to address socio-economic human being in rural areas where the biodiversity is based and to

promote support for traditional intellectual property rights which have always supported the ecological biodiversity on which tourism depends.

As regards addressing multi-sectoral conflicts that tend to weaken the tourism sector, it is essential that both the policy and the Act provide for conflict resolution mechanism and an element of monitoring and evaluation. The tourism policy and Act should domesticate relevant regional and international treaties, agreements and conventions to which Kenya is a signatory or ratified.

### **Institutional Structure**

The Tourism Policy (GOK/MOTW 2006) recognizes that Kenya’s tourism is nature based and that biological diversity and diversity in the cultures of the Kenya people also contribute to the tourism attraction. Thus there is need to ensure that the environment and resource base are managed well for sustainable development. To achieve this, the tourism industry is dependent on EMCA which mandates NEMA to manage the environment. As regards the management of wildlife conflicts and land use planning the tourism policy depends on the provisions of the Wildlife (Conservation and management) Act which is administered by Kenya Wildlife Service.

The tourism policy promotes community participation through CBOs and NGOs and advocates for enhancing tourism in partnership with CBOs NGOs and private sector. However, there is the policy does not provide a clear mechanisms for seed funding of community initiatives to enable them to participate before they can be self sustaining. It is generally noted that tourism is basically dependent in other sectors for its function and therefore needs a strong coordination Tourism Act (Table 12 and 13). The present Tourism bill creates further more institutions which will result in overlaps in their mandates and will still perpetuate weaknesses and inefficiency in tourism industry management and promote unsustainability.

**Table 11: List of sectors which are directly important for Tourism sector.**

<b>Issue</b>	<b>Extra-Regulatory Acts</b>
Wildlife	<ul style="list-style-type: none"> <li>• Wildlife (Conservation &amp; Management) Act</li> </ul>
Forestry	<ul style="list-style-type: none"> <li>• Forest Act</li> <li>• Antiques and Monuments</li> </ul>
Recreational or Sport Fishing	<ul style="list-style-type: none"> <li>• Fisheries Act</li> </ul>
Research	<ul style="list-style-type: none"> <li>• Science &amp; Technology Act</li> </ul>

**Table12: Institutional arrangement in the Tourism sector as per the Tourist Bill 2010.**

<b>Institution</b>	<b>Mandate</b>
Kenya Tourism Board (KTB)	Market the country as preferred tourist destination
Kenya Tourism Development Cooperation (KTDC)	Currently its function is to finance domestic tourism development. However, it will be abolished once the Tourism Bill becomes law and will be replaced by Tourism Finance Corporation which will take over its function.
Catering Training and Tourist Development Levy Trustees (CTTDLT)	Collection of training levy development of training and curricula standardization. The function of this institution will be taken over by the Tourist Regulatory Authority once the Tourist Bill becomes an Act and CTTDLT be abolished.
Kenya Utalii College	Training and establishment of hospitality standards.
Bomas of Kenya	Development and promotion of cultural tourism.
Kenyatta International Conference Centre	Development and promotion of conference tourism.
Tourist Police Unit	Safety and security in the tourism sector. This unit will be transformed into Tourism Protection Service once the Bill becomes a law.
Tourism Trust Fund	Funding of tourism diversification and sustainable development and marketing promotion. It will become Tourism Fund when the Bill becomes a law.
Kenya Tourism Research Institute	To provide statistical informations for proper tourism planning.
Tourism Tribunal	This will be created when the Tourism Bill becomes a law. Its function is to determine any complaints arising out of any act done by virtue of provisions of the Act, any conflict that may arise between tourism agencies established under the Act etc.

**Table 13 Institutions that give synergy in the management of Tourism in Kenya.**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Kenya Wildlife Service	Protect and conserve marine parks and reserves  Enforce Wildlife Act	Wildlife Conservation & Management Act
Fisheries Department	Manage & develop fisheries resources  License fishing and fish marketing activities  Promote aquaculture  Enforcement of Fisheries Act	Fisheries Act
Kenya Forest Service	Management of mangrove forests	Forest Act
Coast Development Authority	Promote sustainable economic exploitation of coastal and marine resources	Coast Development Authority Act
Research Institutes and Universities	Research and training	Science & Technology Act, University Acts
NGOs	Research community awareness	NGO Act
Kenya Maritime Authority	Manage maritime vessel standards; registration and licencing of ships; safety of navigation which includes safety of boats for tour operators and cruise ships.	Kenya Maritime Authority Act  Maritime Zone Act  Merchant Shipping Act
Kenya Ports Authority	Manage ports and harbours which includes offering facilities for cruise ships.	Kenya Ports Authority Act

## **Gaps**

The following were identified as gaps:

- The Tourism Policy (GOK/MOTW 2006) and the Tourism Bill (GOK/MOT 2010) have still created more corporate bodies in the Ministry of Tourism which still promotes administrative overlaps in their mandates and can cause conflicts. The conflicts may be aggravated further by other institutions with linkages to these increased number of tourism institutions.
- The Tourism Policy, Kenya Tourism Development Act and the Tourism Bill neither directly support ecosystem based management for sustainable development nor integrated environmental management and these been left to Environment Management and Coordination Act and the Wildlife (Management and Conservation ) Act undertaken by NEMA and KWS respectively with no supporting budget from the Tourism sector institutions to these institutions.
- The social responsibility of the tourism industry to local communities is weak and not commensurate with the level of revenue generation derived from the ecological areas and cultural zones where they operate. This is most probably because social responsibility for human well being is not fully embraced in the Tourism policy and existing Acts and in the Tourism Bill.
- The Tourism policy, existing Acts and the Tourism Bill should provide for domestication of relevant regional and international treaties and convention to which Kenya is part.

## **Recommendations and Conclusions**

- The Tourism Policy and Law should take into context its significant dependency on other sectors to thrive and not dwell mostly on its development in isolation as observed in its present state. There is therefore the need for its regulatory policy and law to mainstream it with other sectors on which it is dependent for proper integration and coordination to achieve sustainable development of tourism.
- The tourism Policy and Law should embrace ecosystem based management since Kenya's tourism is essentially anchored on nature and its resources and mostly its biodiversity.
- The terms Policy and Law should provide for multi-sectoral conflict management and share of benefits due to the many sectors in institutions depends on which are based on other mandates.
- The tourism Policy and Law should domesticate relevant regional and international treaties agreements and conventions and which Kenya is a signatory or ratified as supported by the new constitution.

## **4.OIL AND GAS**

### **Introduction**

Petroleum exploration in Kenya began in 1950's and since then thirty four wells have been drilled within the four sedimentary basins but only traces of oil and gas were encountered and none was commercially viable. Petroleum exploration along the coast began in 1954 in the Lamu Embayment where ten wells were drilled but none of the wells were fully evaluated or completed for production despite several indications of oil staining and untested zones with gas shows.

In 1975, further explorations were made in the Lamu basins and encountered oil and gas shows in the Cretaceous rocks. An interest in offshore portion of the Lamu Basin resulted in the drilling of 3 deep wells in 1982. However there is no exploitable petroleum deposit encountered yet to date especially in 1991 to 2001 (GOK 2007a).

### **Policy and Regulation**

All un-extracted minerals under or upon any land as per the Mining Act, are vested in the Government and any right to any other person or company is subject to the provisions of the Mining Act. The law provides that royalties are paid for all minerals and the rates of royalties are negotiated within the Common wealth's rates. Petroleum exploration and production in Kenya is governed by the Petroleum (Exploration and Production) Act, Cap 308 1982 (Revised 1986) to regulate the negotiation and conclusion of petroleum agreements by the Government of Kenya.

Prior to 1981, exploration and production was carried out under a Royalty/Tax based system that was provided for under the Mining Act, Cap 306 established in 1940 and revised in 1987. However, the Government of Kenya changed to a Product Sharing Contract based system after the enactment of the Petroleum Exploration and Production Act Cap 308, revised in 1985.

The policy on mining can be followed or traced from the National Development Plans (Kariuki 2002). In the National Development Plan of 1964-1970 which is immediately after Kenya's independence in 1963, the mineral resources were regarded as insufficient to make substantial contribution to the economy of Kenya. No major mineral deposit or oil had been discovered to serve as prime movers for rapid expansion of the economy.

The scenario later changed and in the Seventh National Development Plan of 1994-1996, the government policy recognized the economic contribution of mineral wealth to the economy and at the same time the need of preservation of a clean environment for sustainable mineral utilization and management.

Although the government lacks a single and clearly defined mining policy, it has nevertheless revised its Mining Act into new Mining and Minerals Act that requires all prospecting licenses to have an initial duration of four years. Renewals are granted to up to seven years in total, plus provisions. Exploration licences are transferable.

It is noted, however, that the environmental protection aspect is dealt with under the Environmental management Coordination Act rather than in the mining Act and the Petroleum (Exploration and Production) Act. Like with the

case of the Mining Act, the petroleum (Exploration and Production) Act is by overall weak in addressing sustainability issues and does not embrace ecological sustainable development.

The law needs to address environment and social impact assessments and multisectoral issues through an integrated approach (Table 14). These include socio-economic needs of the local people around which the production occurs, especially equity issues and social responsibilities for the human well being as enshrined in the new Constitution. Other significant issues required to be addressed by the law are environmental habitat rehabilitations due to impacts of oil and gas production which can undermine the economic benefits, ecosystem sustainability and human health; and should address institutional linkages in relation to relevant conventions, treaties and agreements or economic bodies to which Kenya is party to besides the need to domesticate relevant conventions and treaties into Kenya law (Table 15).

### **Institutional Structure**

Institutionally, the Department of Mines and Geology, as mandated by the Mining Act, Cap 306 of the Laws of Kenya undertakes mineral exploration and management of mineral exploration. The Department has the responsibility of undertaking geological surveys geo-scientific research coordination and regulation of the activities of the mining sector. However, there is a need to have in place an integrated multisectoral approach (Table 16) for effective sustainable management.

The Government policy on mineral resources development is to ensure that the private sector takes the lead in the development of minerals. The government has accordingly reviewed investment potential of Kenya as the case being done by the Kenya Investment Authority. As regards the oil and gas sector, the National Oil Corporation of Kenya Limited which is a Government parastatal institution is empowered by the Petroleum (Exploration and Production) Act Cap 308 revised 1986 to manage upstream and downstream activities of the oil industry.

The Kenya Chamber of Mines (KCM) which was formed in 2001 has become an active player in the mining sector of Kenya. (Munyiri 2009) Currently, the larger mining companies in the country are still financing the Chamber's activities but it is hoped that it will become self-sustaining in the near future. The KCM in conjunction with the Geological Society of Kenya have been promoting mining activities in Kenya.

**Table 14: List of major sectors their Acts and extra-regulatory Acts which are directly or indirectly important in oil and gas management and exploitation besides the Mining Act and the Petroleum (Exploration and Production) Act.**

Issue	Regulatory and extra-Regulatory Acts
(i) Fishing and mariculture	<ul style="list-style-type: none"> <li>• Fisheries Act</li> <li>• Wildlife (Conservation &amp; Management) Act</li> <li>• Environmental Management &amp; Coordination Act</li> <li>• Forest Act</li> <li>• Public Health Act</li> <li>• Merchant Shipping Act</li> <li>• Water Act</li> <li>• Maritime Zone Act</li> </ul>
(ii) Surveillance	<ul style="list-style-type: none"> <li>• Security Act</li> <li>• Environmental Management &amp; Coordination Act</li> </ul>
(iii) Research	<ul style="list-style-type: none"> <li>• Science &amp; Technology Act</li> </ul>



**Table 15: List of multilateral agreements to which Kenya is a signatory or has ratified that are relevant to oil and gas management and exploitation (Source: UNEP-Sida, 1996).**

Category	Type of Multilateral Agreement
Environmentally based	<ul style="list-style-type: none"> <li>• Convention on the Continental Shelf (Geneva 1958)</li> <li>• Convention of the High Seas (Geneva 1958)</li> <li>• The Ramsar Convention on Wetlands of International Importance (Ramsar, Iran 1971)</li> <li>• United Nation Convention on the Law of the Sea (1982)</li> <li>• Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi 1985)</li> <li>• Convention on Biological Biodiversity (1992).</li> <li>• International Convention for the Prevention of Pollution from Ships (MARPOL), 1993</li> </ul>

**Table 16 Institutions that give synergy in the exploitation and management of oil and gas in Kenya.**

Institution	Mandate	Empowerment
Mines and Geology Department	Mineral mining	Mining Act
National Oil Corporation of Kenya	Exploration of oil and gas	The Petroleum (Exploration and production) Act
Coast Development Authority	Promote sustainable economic exploitation of coastal and marine resources	Coast Development Authority Act
Kenya Navy and Kenya Police	Surveillance and law enforcement	Security Act. Maritime Zone Act.
National Environment Management Authority	Environmental Management	Environmental Management & Coordination Act

Fisheries Department	<ul style="list-style-type: none"> <li>• Manage and develop fisheries resources</li> <li>• License fishing and fish marketing activities</li> <li>• Promote aquaculture</li> <li>• Enforcement of Fisheries Act</li> </ul>	Fisheries Act
Kenya Ports Authority	Manage ports and harbours which includes fishing ports	Kenya Ports Authority Act
Research Institutes and Universities	Research and training	Science & Technology Act, University Acts
NGOs	Research community awareness	NGO Act
Kenya Maritime Authority	Manage maritime vessel standards; Registration and licencing of ships; Safety of navigation; Maritime training management	Kenya Maritime Authority Act Maritime Zone Act Merchant Shipping Act

## Gaps

The following have been identified as gaps:

- Mining activities have a great potential in causing environmental degradation. There is therefore a need of the Mining Act and the Petroleum (Exploration and Production) Act to address these issues rather than being referred to other Institutions mandated with management of the environment without addressing capacity needs and conflict resolution arising from institutional overlaps in mandates.
- There is need to have a clearly defined Mining Policy that will adequately address the mining of minerals and exploration of gas and oils in order to promote proper investments and socio-economic prosperity given that despite the big potential in mining it currently only accounts for less than 1% of the Kenyan annual GDP, the main reason being poor policy that discourages robust investments in this industry and lacking social responsibility.
- Mining generates various transboundary issues and there is therefore a need to have an elaborate policy and laws that also address transboundary issues

## **Recommendations and Conclusions**

- Although in the Seventh National Development Plan of 1994- 1996, the government policy recognized the economic contribution of mineral wealth to the economy and at the same time the need of preservations of a clean environment for sustainable mineral utilization and management this was not embraced in the mining and minerals Act and the Petroleum (Exploration and Production) Act to embrace environmental sustainability issues and ecological sustainable development. There is therefore a need to mainstream these values into two Acts rather than depend on the Environmental Management Act from which the National Environment Management Authority (NEMA) draws its strength to coordinate environmental matters.
- To create better institutional synergies and conflict management between mining and exploration institutions and with other institutions that have inter-institutional competing needs on the environment and natural resources, there is need to review the Acts which empower their mandates to embrace ecological sustainable development.
- The Acts on mining and exploration need to address environmental and social impacts assessments and management of multi-sectoral conflicts through integrated approaches.
- The Acts on mining and exploration need to address institutional linkages in relation to relevant conventions, treaties and agreements or economic bodies to which Kenya is party to besides the need to domesticate relevant conventions and treaties into Kenya law.
- This involves domestication of relevant conventions, agreements and treaties into Kenyan laws besides putting in place appropriate mechanisms for dealing with economic partnership agreements dealing with trade in minerals, oil and gas.

## **5.PARKS AND WILDLIFE CONSERVATION**

### **Introduction**

There are 4 Marine Parks and 6 Marine reserves along the Kenya Coast. As regards the terrestrial parks and reserves, there are 2 national parks and 5 reserves. The total area under Marine National parks and reserves is 70.1 km<sup>2</sup> and 871km<sup>2</sup> respectively. Whereas the total area under terrestrial national parks and reserves is 20812km<sup>2</sup> and 2789 km<sup>2</sup> respectively (GOK- 2007b). The area covering both the national parks and reserves provides an extensive habitat for biodiversity conservation if appropriate policies and laws are in place to support appropriate management of threats and enforcement to mitigate against the threats to biodiversity conservation.

Kenya is categorized as a mega –diverse country under the convention on Biological Diversity due to its species richness, endemism and ecosystem diversity (GOK 2007b). The wildlife resources contribute directly and indirectly to the local and national economy especially through tourism and accounts to about 70% of the gross tourism earnings collected in protected areas and contributing about 25% of the GDP. Wildlife plays also a critical role in ecological functions thus loss of biological diversity is taken as a major threat in Kenya.

### **Policy and Legislation**

Both the wildlife policy and wildlife conservation and management Act are being revised and drafts of both documents, Draft of the Wildlife policy 2007 and the Wildlife conservation and management Bill 2007(GOK 2007c) are available. The Wildlife policy was reviewed to form a basis for reviewing the Wildlife (Conservation and Management) Act. Wildlife conservation in Kenya dates back to 1898 when Law controlling hunting was first enacted immediately after Kenya became British Protectorate. These laws regulated hunting and trade in wildlife and those species that were considered endangered were fully protected. The British Government in 1907 established the Game Department to administer the Game Reserves, enforce the hunting regulations and protect the property of settler farmer communities and crops from destruction by wildlife. In 1945 national parks were created following the promulgation of the Royal National Parks of Kenya Ordinance. The first wildlife policy in Kenya was the “Sessional paper No. 3 of 1975 entitled “A statement on Future Wildlife Management Policy in Kenya”. In 1976, the Wildlife (Conservation and Management) Act cap 376 was enacted. In the Government structure, the wildlife Department was mandated to manage the Parks and Wildlife until 1989 when the Kenya Wildlife Service was created and took over this mandate.

The goal of the revised policy is “to provide a framework for conserving in perpetuity, Kenya’s rich diversity of species, habitats and ecosystems for the well being of the people and global community” It is noted that its guiding principles include the following elements for adaptive management for ecosystem sustainable development:

- (i) An integrated “ecosystem approach” to conserving wildlife resources will be adopted and enhanced to ensure that wildlife conservation initiatives are based on large geographical scales,
- (ii) Wildlife will be utilized in a manner that does not impinge on culture values, compromise the quality and value of the resource, or degrade the carrying capacity if supporting ecosystems in accordance with the “principle of sustainable use”.

- (iii) Benefits accruing from wildlife will be shared “equitably” among stakeholders especially paying due regard to communities living within wildlife areas.
- (iv) A coordinated and participatory approach to wildlife conservation and management will be enhanced to include all relevant stakeholders’
- (v) The “precautionary principle” will apply to facilitate timely decisions.
- (vi) The Multilateral Environmental Agreements” (MEAs), regional and international instruments will be domesticated and implanted for better management.

Briefly, the policy strengthens wildlife conservation management in both inside and outside protected areas and sanctuaries; promotes collaborative research and monitoring human wildlife conflict resolutions and compensation, institutional mandate overlaps with other institutions and formation of committees to include such institutions besides MoU’s, human resource development and capacity building and inter-linkages with other sectors, NGO’s and CBOs, to maximize efficiency in governance (Table 17 and 18).

It is noted that the policy covers adequately all the inland geographical landscapes and coastal wetlands where MPA’s have been established. The coastal wetlands include estuaries and coral reefs as also defined in the Wetlands Policy and Integrated Coastal Zone Management Policy. The wildlife policy is weak in addressing offshore deep sea wildlife in the entire Marine Zone Act and UNCLOs and even makes no reference to Maritime Zones Act and UNCLOs.

The reviewed wildlife (conservation and management) Act which is the Wildlife Conservation and Management Bill 2007 embraces “integrated ecosystems approach to conserving wildlife resources” and that “wildlife should be utilized in a manner that does not impinge on cultural values, compromise the quality and value of the resource, or degrade the carrying capacity of supporting ecosystems” and that a “coordinated and participatory approach to wildlife conservation and management is important and must involve the government, local authorities, private sector, civil society and communities as appropriate” and that every park, reserve and conservational areas must have a management plan.

Thus the revised Act embraces adaptive management for ecological sustainable development and is also in tandem with the revised Wildlife Policy 2007. In terms of creation of synergies with other sectors and institutions, multi-institutional and multi-sector broad committees which also include appropriate stakeholders have been included in the revised Act. The committees cover regional, and district committees to reach the local representations. However, the geographical representations will need to be revised to accommodate the new governance structure that includes Counties.

However, it is noted that the revised Act covers for wildlife up to the Coastal wetlands habitats that include estuaries to the coral reefs but does not cover for offshore deep sea up to the 200 nautical miles limit of the EEZ as per the Marine Zone Act and UNCLOs which is under the jurisdiction of Kenya and that this weakness needs to be addressed. As regards regional and international agreements, the revised Act is categorical that “the progress of

Kenya’s implementation of wildlife related bilateral or multilateral environmental agreements to which Kenya is party to will be regularly reported”.

**Institutional Structure**

The parks and wildlife conservation areas in the coastal and marine area are protected areas mainly under the institutional mandate of Kenya Wildlife Service. However, other Institutions which have mandates to protect vegetation such Government gazette forests by Kenya Forest Service under the Forest Act and the Mijikenda Cultural Forests known as Kayas by the National Museums of Kenya under the Antiquities and Monuments Act 1983 indirectly protected wildlife and biodiversity in general.

In terms of creation of synergies with other sectors and institutions, multi-institutional and multi-sector broad committees which also include appropriate stakeholders have been included in the revised Act. The committees cover regional, and district committees to reach the local representations. However, the geographical representations will need to be revised to accommodate the new governance structure that includes Counties.

**Table 17: List of extra-regulatory Kenyan Acts which are directly or indirectly Important for Parks and Wildlife Management besides the Wildlife (Conservation and Management Act).**

Sector	Extra-Regulatory Acts
Fishing and Mariculture	<ul style="list-style-type: none"> <li>• Wildlife (Conservation &amp; Management Act)</li> <li>• Environmental Management &amp; Coordination Act</li> <li>• Forest Act</li> <li>• Public Health Act</li> <li>• Merchant Shipping Act</li> <li>• Water Act</li> <li>• Maritime Zone Act</li> </ul>
Surveillance	<ul style="list-style-type: none"> <li>• Maritime Zone Act.</li> <li>• Security Act</li> <li>• Environmental Management &amp; Coordination Act</li> </ul>
Research	<ul style="list-style-type: none"> <li>• Science &amp; Technology Act</li> </ul>

**Table 18: List of multilateral agreements to which Kenya is a signatory or has ratified that are relevant to management of Parks and Wildlife (Source: UNEP-Sida, 1996).**

Category	Type of Multilateral Agreement
Resource-based	<ul style="list-style-type: none"> <li>• Convention on Fishing &amp; Conservation of the Living Resources of the High Seas (Geneva 1958).</li> <li>• The African Convention for the Conservation of Nature &amp; Natural Resources (Algiers 1968).</li> <li>• Convention on International Trade in Endangered species of Wild Fauna &amp; Flora (Washington, 1973).</li> <li>• Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna &amp; Flora (1994).</li> <li>• Agreement on Technical Barriers to Trade (1994).</li> </ul>
Environmentally based	<ul style="list-style-type: none"> <li>• Convention on the Continental Shelf (Geneva 1958)</li> <li>• Convention of the High Seas (Geneva 1958)</li> <li>• The Ramsar Convention on Wetlands of International Importance (Ramsar, Iran 1971)</li> <li>• United Nation Convention on the Law of the Sea (1982)</li> <li>• Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi 1985)</li> <li>• Convention on Biological Biodiversity (1992).</li> <li>• International Convention for the Prevention of Pollution from Ships (MARPOL), 1993</li> </ul>

**Table 19 Institutions with mandate for involvement in management of policy and Wildlife in Kenya**

Institution	Mandate	Empowerment
Fisheries Department	Manage & develop fisheries resources  License fishing and fish marketing activities  Promote aquaculture  Enforcement of Fisheries Act	Fisheries Act
Kenya Wildlife Service	Protect and conserve marine parks and reserves  Enforce Wildlife Act	Wildlife Conservation & Management Act
Coast Development Authority	Promote sustainable economic exploitation of coastal and marine resources	Coast Development Authority Act

**Table 20: Institutions that give synergy in management of Parks and Wildlife in Kenya.**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Kenya Navy and Kenya Police	Surveillance and law enforcement	Security Act, Maritime Zone Act,
National Environment Management Authority	Environmental Management	Environmental Management & Coordination Act
Kenya Forest Service	Management of mangrove forests	Forest Act
National Museums of Kenya	Management of traditional Kaya forests	Antiques and Monuments
Research Institutes and Universities	Research and training	Science & Technology Act, University Acts
NGOs	Research community awareness	NGO Act
Kenya Maritime Authority	Manage maritime vessel standards; registration and licencing of ships; safety of navigation; maritime training management	Kenya Maritime Authority Act Maritime Zone Act Merchant Shipping Act

### Gaps

The following are the identified gaps:

- Accurate knowledge of the threat to biological diversity of wildlife due to natural and human accelerated induced factors e.g. climate change, human-wildlife conflicts and managing the right carrying capacity to manage human wildlife conflict is inadequate.
- Land use conflicts leading to encroachment into the wildlife protected areas which arise from poor local and national land use planning.
- Equitable distribution of earnings from wildlife conservation to riparian communities living in the neighborhood of wildlife protected area is wanting.
- Inadequate capacity in terms of financial capability, infrastructure and manpower to enforce wildlife protection and integrated ecosystem based management.
- The need of innovative approaches e.g. devolved participatory wildlife management to enlist support from private sector, NGOs and CBOs.
- The need to domesticate relevant international and regional wildlife related conventions and treaties that Kenya is party to.



## **Recommendations and Conclusions**

- Biodiversity resources in Parks are national resources, but to address new emerging issues from the devolved governance in the new Constitution there will be a need to review the policy and Act to accommodate the new governance structure that includes Counties.
- Presently the Parks cover the shallow marine water wetlands including coral reefs but there is a need to create deep sea offshore parks for protection and conservation of deep sea offshore parks for protection and conservation of deep sea biodiversity. This will require review of the policy and Act to cover for the management of the deep sea ocean parks.
- There is need of strengthening Capacity for marine monitoring, control and surveillance to mitigate against poaching and piracy strengthen capacity for marine monitoring, control and surveillance to mitigate against poaching and piracy and strengthen sustainable ecosystem based management.

## **6. COASTAL ZONE MANAGEMENT**

### **Introduction**

Various coastal marine and land based activities require specific policies to manage their competing needs (GOK-MENR 2010). Basically, the Integrated Coastal Zone Management (ICZM) policy takes into consideration to integrate the following policies: The National oceans and fisheries policy (2008); the Water policy (1999); Draft Wetland policy (2009); Draft National land policy (2009); Draft Forest policy (2009); Draft Wildlife policy (2009); Tourism policy; and the Environmental policy to manage the activities which crosscut through various sectors. Following the completion of the draft policy, there is underway a formulation of ICZM National Action Plan for the implementation of the ICZM policy. There is no specific law for the ICZM but it is anchored in Section 55 of the EMCA which also provides for practice of Environment Impact Assessment to be undertaken before development projects are undertaken to ensure environmentally sustainable development. The policy provides for a coordinated multi-sectoral approach which deviates from the traditional sectoral approach which resulted in numerous conflicts due to many unharmonized competing needs or functions. The policy also seeks to promote domestication of Multi-lateral Environmental Agreements (MEAs) and implementation to foster international and regional cooperation for better management of transboundary issues through the National Plan of Action.

### **Policy and Legislation**

Kenya has developed a policy on Integrated Coastal Zone Management (GOK-MENR 2010). It is noted that it was developed through a participatory process involving a large spectrum of different categories stakeholders that include NGOs and CBOs in different sectors (table 21 and 22). The policy addresses the following:-

- 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;
- Institutional and legal frameworks to guide the implementation of the ICZM policy.

The policy is interlinked with Vision 2030 and that it will be implemented through a National Plan of Action. It is further noted that the policy seeks to promote the domestication of Multilateral Environmental Agreements (MEA's) and imploration to foster international and regional cooperation for better management of transboundary issues. Whereas the policy is adequate in addressing environmental socio-economic impacts aspects of human and environment well being, there is need for a more holistic expansion to fully embrace ecological sustainable development by including integrated planning that considered management plans for the natural resources being exploited and developing appropriate indicators for monitoring and evaluation.

The policy is further inter-linked with some national laws and policies regional and international conventions and treaties but not with the new Constitution and the EMCA. Since the policy does not indicate that it will be followed by enactment of a law, but will be implemented through a National Plan of Action, it is necessary to anchor it into an existing law especially the EMCA as provided in Section 55 of EMCA.

### **Institutional Structure**

Section 55 of EMCA (1999) mandates the National Environment Management Authority (NEMA) to coordinate and implement the ICZM policy. However this should be done in cooperation with other institutions whose policies and mandates directly or indirectly offer synergy in promoting ICZM policy as given in Table 23 for appropriate integrated management approach to promote sustainability.

**Table 21: List of extra-regulatory Kenyan Acts which are directly or indirectly important for coastal resources management.**

Sector	Extra-Regulatory Acts
Land	<ul style="list-style-type: none"> <li>• Land Act</li> </ul>
Fisheries and Mariculture	<ul style="list-style-type: none"> <li>• Fisheries Act</li> </ul>
Wildlife	<ul style="list-style-type: none"> <li>• Wildlife (Conservation &amp; Management) Act</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Water Act</li> <li>• Lakes and Rivers Act</li> <li>• Maritime Zones Act</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Environmental Management &amp; Coordination Act</li> </ul>
Forestry	<ul style="list-style-type: none"> <li>• Forestry Act</li> </ul>
Surveillance	<ul style="list-style-type: none"> <li>• Security Act</li> <li>• Maritime Zones Act</li> <li>• Environmental Management &amp; Coordination Act</li> </ul>
Research	<ul style="list-style-type: none"> <li>• Science &amp; Technology Act</li> </ul>

**Table 22: List of multilateral agreements to which Kenya is a signatory or has ratified that are relevant to coastal management in Kenya (Source: UNEP-SIDA, 1996).**

Category	Type of Multilateral Agreement
(a) Resource-based	<ul style="list-style-type: none"> <li>• Convention on Fishing &amp; Conservation of the Living Resources of the High Seas (Geneva 1958).</li> <li>• The African Convention for the Conservation of Nature &amp; Natural Resources (Algiers 1968).</li> <li>• Convention on International Trade in Endangered species of Wild Fauna &amp; Flora (Washington, 1973).</li> <li>• Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna &amp; Flora (1994).</li> <li>• Agreement on Technical Barriers to Trade (1994).</li> </ul>
(b) Environmentally based	<ul style="list-style-type: none"> <li>• Convention on the Continental Shelf (Geneva 1958)</li> <li>• Convention of the High Seas (Geneva 1958)</li> <li>• The Ramsar Convention on Wetlands of International Importance (Ramsar, Iran 1971)</li> <li>• United Nation Convention on the Law of the Sea (1982)</li> <li>• Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi 1985)</li> <li>• Convention on Biological Biodiversity (1992).</li> <li>• International Convention for the Prevention of Pollution from Ships (MARPOL), 1993</li> </ul>

**Table 23: Institutions that give synergy in the Coastal Zone management.**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Fisheries Department	Manage & develop fisheries resources  License fishing and fish marketing activities  Promote aquaculture  Enforcement of Fisheries Act	Fisheries Act
Kenya Wildlife Service	Protect and conserve marine parks and reserves  Enforce Wildlife Act	Wildlife Conservation & Management Act
Coast Development Authority	Promote sustainable economic exploitation of coastal and marine resources	Coast Development Authority Act
Kenya Navy and Kenya Police	Surveillance and law enforcement	Security Act,  Maritime Zone Act,
National Environment Management Authority	Environmental Management	Environmental Management & Coordination Act
Kenya Forestry Service	Management of mangrove forests	Forest Act
Water Department	Management of water as a resource	Water Act
Research Institutes and Universities	Research and training	Science & Technology Act
NGOs	Research community awareness	NGO Act
Kenya Maritime Authority	Manage maritime vessel standards; registration and licencing of ships; safety of navigation; maritime training management	Kenya Maritime Authority Act  Maritime Zone Act  Merchant Shipping Act
Kenya Ports Authority	Manage ports and harbours which includes fishing ports	Kenya Ports Authority Act

## **Gaps**

EMCA (1999) provides for a broad crosscutting framework for environmental issues. Therefore to have in place a strong implementation platform there is need to provide a specific legislation to provide a legal framework for integration and coordination of the sectors that directly or indirectly have stake in use of coastal and marine resources. Thus, according to the draft ICZM policy, 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 framework to address policy overlaps and gaps.

## **Recommendations and Conclusions**

- The Coastal Zone management policy is broad enough to support ecosystem based management .However, there is a need to have in place an Integrated Ocean Policy that will strengthen the Coastal Zone management policy without overshadowing it in the Integrated Ocean Policy.
- As argued for the Integrated Ocean policy, there is need to have in place coastal zone management Act rather than the policy to be nested in the Maritime zone Act and the Environmental management Coordination Act.

## **7. PORTS AND COASTAL TRANSPORT**

### **Introduction**

The Kenya maritime zone is part of a global busy maritime highway and besides the Mombasa harbor is not only the major national port but also a major East African regional port serving landlocked countries. About 50 ships of various types ply in the major shipping lanes in the Kenyan maritime zone and that 10 out of these are likely to be oil tankers with displacements ranging from 50,000 to 250,000 tons.

According to Kenya's Vision 2030, major port expansions are envisaged with a new harbor being planned for Lamu in Northern Kenya which will be linked to other landlocked IGAD countries. This linkage will also involve major transport infrastructure development through the vast Tana River Drainage Basin which is a major wetland of significant ecological significance. As required by EMCA, Environmental Impact Assessment will have to be undertaken to ensure that any impacts that may arise there are mechanisms in place to mitigate against such impacts.

### **Policy and Legislation**

Kenya is in a state of developing a comprehensive maritime policy; however as regards transport the Ministry of Transport has already developed a comprehensive Sessional Paper on Integrated National Transport Policy (GOK 2010b). The latter is a transport chain link system of integrated road, rail, aviation, pipeline and maritime transport that includes, cruise tourism and ferry services for efficient handling of cargo and providing human transport. It is

noted that the policy considers the environmental effects in transport and the importance of integrating environmental issues in transport development (GOK 2010 b).

The following legislation is directly relevant to ports and coastal transport: The Maritime Zones Act 1989 Cap 371; the Merchant Shipping Act, 1967 Cap 389; and specific agency related Acts which are: The Kenya Maritime Authority Act, 2006; and Kenya Ports Authority Act, 1978 Others are indirectly related and are linked with environment, research and development (Table 24). Kenya is a signatory to various agreements concerning ports and coastal transport and are these given in Table 25.

Internationally, Kenya is a member of the International Maritime Organization (IMO) and is a signatory to its agreements and regulations. Nationally, according to the new Constitution, all ports and maritime transport activities are under the National Government and therefore institutions mandated by Acts of Parliament to manage ports are under the National Government.

The major challenge in the expansion of the ports and maritime transport is environmental and critical habitat perturbations, pollution invasive species besides increased conflicts due to competition in use of coastal areas for multiple diverse economic activities. Efforts are in place to strengthen implementation of integrated coastal zone policy and enforcement of EMCA besides IMO conventions. However, monitoring, control and surveillance is still a major challenge.

**Table 24 : List of extra-regulatory Kenyan Acts which are directly or indirectly important for ports and maritime transport management, besides the Merchant Shipping Act and the Maritime Zone Act.**

Issue	Extra-Regulatory Acts
(ii) Mariculture	<ul style="list-style-type: none"> <li>• Fisheries Act</li> <li>• Maritime Zones Act</li> <li>• Wildlife (Conservation &amp; Management) Act</li> <li>• Forest Act</li> <li>• Environmental &amp; Management Coordination Act</li> <li>• Land Act</li> </ul>
(iii) Fishing	<ul style="list-style-type: none"> <li>• Fisheries Act</li> <li>• Wildlife (Conservation &amp; Management Act)</li> <li>• Environmental Management &amp; Coordination Act</li> <li>• Forest Act</li> <li>• Merchant Shipping Act</li> <li>• Maritime Zone Act</li> </ul>
(iv) Surveillance	<ul style="list-style-type: none"> <li>• Maritime Zone Act</li> <li>• Security Act</li> <li>• Environmental Management &amp; Coordination Act</li> </ul>
(v) Research	<ul style="list-style-type: none"> <li>• Science &amp; Technology Act</li> <li>• Maritime Zones Act</li> </ul>

**Table 25: List of multilateral agreement to which Kenya is a signatory or has ratified that are relevant to the management of ports and coastal transport in Kenya (source: UNEP- Sida, 1996**

Category	Type of Multilateral Agreement
Environmentally based	<ul style="list-style-type: none"> <li>• Convention on the Continental Shelf (Geneva 1958)</li> <li>• Convention of the High Seas (Geneva 1958)</li> <li>• The Ramsar Convention on Wetlands of International Importance (Ramsar, Iran 1971)</li> <li>• United Nation Convention on the Law of the Sea (1982)</li> <li>• Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi 1985)</li> <li>• Convention on Biological Biodiversity (1992).</li> <li>• International Convention for the Prevention of Pollution from Ships (MARPOL), 1993</li> </ul>

### **Institutional Structure**

Two agencies play a crucial role in the port and coastal maritime transport. These are: The Kenya Ports Authority and Kenya Maritime Authority while others play peripheral roles important (Table 26). The Kenya Ports Authority was established in 1978 and is responsible for all national port development and operations as per the Kenya Ports Authority Act . Kenya Ports Authority was enlarged in 1986 when it merged with the autonomous state organization Kenya Cargo Handling Limited to form a single body responsible for all aspects of national port development and operations. With the rapid increase in container traffic through Mombasa, the Kenya Ports Authority extended the container handling operation upcountry and set up inland container depots at Embakasi in Nairobi in 1984 and in Kisumu in 1994 (KPA 2011).

The Kenya Maritime Authority was created in 2004 with a mandate spelt out in the Kenya Maritime Authority Act, to regulate and coordinate maritime affairs both at sea and inland waters (K M A 2006). Its operations are also guided by the Merchant Shipping Act (Cap 389) and implement IMO Regulations that Kenya is signatory to. Thus it is mandated to enforce an effective regulatory regime on all waters under the jurisdiction for security and safety, protection against pollution and promotion of local participation. In particular it regulates Flag State Implementation and Port State Control including ship surveying and inspection; implementation of maritime conventions with emphasis e.g on the SOLAS, MARPOL,



**Table 26: Institutions whose mandates are relevant for inter-sectoral management of ports and coastal transport.**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Fisheries Department	Manage & develop fisheries resources License fishing and fish marketing activities Promote aquaculture Enforcement of Fisheries Act	Fisheries Act
Kenya Wildlife Service	Protect and conserve marine parks and reserves  Enforce Wildlife Act	Wildlife Conservation & Management Act
Coast Development Authority	Promote sustainable economic exploitation of coastal and marine resources	Coast Development Authority Act
Kenya Navy and Kenya Police	Surveillance and law enforcement	Security Act, Maritime Zone Act,
National Environment Management Authority	Environmental Management	Environmental Management & Coordination Act
Forest Department	Management of mangrove forests	Forest Act
Research Institutes and Universities	Research and training	Science & Technology Act, University Acts
NGOs	Research community awareness	NGO Act
Kenya Maritime Authority	Manage maritime vessel standards; registration and licencing of ships; safety of navigation; maritime training management	Kenya Maritime Authority Act Territorial Waters Act Maritime Zone Act Merchant Shipping Act
Kenya Ports Authority	Manage ports and harbours which includes fishing ports	Kenya Ports Authority Act

### **Gaps**

- The regulatory and coordination role of the Kenya Maritime Authority is challenged by various overlapping mandates of other institutions which have similar roles as contained in the Acts that established them. Therefore there is need of harmonization and establish clear regulatory and coordination roles especially, for example, the roles of Kenya Maritime Authority, Kenya Ports Authority and the National Environment Management Authority in managing the environmental issues in port areas.

- Policies and laws governing ports and maritime transport should take into consideration other sector economic development activities and be explicit to provide guidelines for compensation as regards to disruption and damage of such sector activities due to ports and maritime activities.
- There is need to undertake a comprehensive review of policies and laws to domesticate the international conventions into Kenyan Law for the desired effectiveness of the conventions as provided for by the new Constitution.

### **Recommendations and Conclusions**

- Growths of commerce in the East African region have necessitated expansion of port and maritime transport facilities not only to serve the country but also neighboring landlocked states in the region. There is therefore need to strengthen implementation of the integrated coastal zone policy enforcement of EMCA besides IMO conventions for effective environmental management supported by effective monitoring, control and surveillance.
- Policies and Acts created to have in place appropriate mandates for institutions to manage maritime transport and ports should be broad enough to facilitate creation of synergy with other supportive policies and Acts for sustainable management that will promote healthy environment and economic growth both at national and regional levels.

## **8. COASTAL AGRICULTURE AND FORESTRY**

### **Introduction**

Optimal agriculture production is known to be related to healthy forest cover. The Kenyan Government recognizes the importance of forest conservation not only for attracting tourism which is nature based and that the tropical forests support high biodiversity but also for the ecological roles that forests support besides regulation of soil conditions for optimal agricultural productivity. Forest destruction promotes soil erosion and consequently loss of soil fertility leading to decreased agricultural production. Besides, soil loss leading to siltation of critical coastal marine habitats leads to pollution of such habitats and eventual loss of biodiversity. Thus the Government has policies and laws or statutes in place to ensure sustainable agriculture in coexistence with good practices for forest utilization and conservation that will also support agricultural production which is also in line with MDG 7 and the National Food Policy (Sessional Paper No. 2 of 1994; GOK 1994) which promotes good land use for self-sufficiency in food and stoppage of further destruction of coastal forests especially through shift cultivation.

## **Policy and Legislation**

### **(a) Coastal Agriculture**

The coastal region is a variably and semi-arid area with conditions aggravating during drought conditions. The agricultural policy should therefore be focused towards development of appropriate technology for farming and developing seeds variety or plants that are suitable for agricultural production in the prevailing conditions. Coupled by the extreme poverty levels in the region such technologies should either be economically or cheaply adaptable by the local communities and if not the policies should support partnerships with sponsors of such technologies to enable the local communities to practice the technology. The technologies should include promotion and development of use of salt tolerant seeds and plants capable of growing and yielding in saline water irrigation systems during drought.

The objective of Kenya's National food policy is to ensure that there is food self-sufficient and food security (GOK 1994). However, the coastal region has been a food deficient area since independence although there have been efforts to create regional authorities e.g. Coast Development Authority (CDA) and the National Irrigation Board to promote irrigation farming technology.

Efficient and economic irrigation farming technology is yet to be established and address competing needs for water with other sectors e.g. the energy sector for production of hydropower which emphasis on the need for developing such efficient irrigation systems so that irrigation water is available and even during drought seasons. Along the lines of addressing competing needs for water with other sectors, there is need for a multi-sectoral policy approach to infrastructure development in the farming zones to ensure that production does not get wasted through rotting because it cannot reach the markets as is the present case when there is a good harvest in good rainy seasons when water is availability is sufficient.

The policies should promote implementation and evaluation of modern farming technologies based on proper cost-benefit analysis that will yield profits and be affordable to local communities. Otherwise coastal farming will remain basically of subsistence in nature for majority of the local communities. In tandem with these policies, considerations, land tenure, proper legal land planning, proper extension and awareness services and empowerment of local communities for self sufficient should be strengthened.

It is noted that the present land policy and land use policy is geared to address some of these issues but needs to be expedited and especially to be in line with the new Constitution. It is further noted that there is a policy on addressing climate change; however, it should be emphasized that without a firm agriculture foundation based on suitable successful practices on the basis of which emerging issues can be tackled, the challenges will continue to be over whelming hence the need of firmness in executing the food policy with intergrated approaches involving various sectors and stakeholders (Table 27 and 28).

### **(b) Coastal Forestry**

The land tenure system presents a major challenge to the utilization, conservation and management of coastal forests and this scenario is also true for the whole country. There is therefore the need to implement the new land policy and

land use policy (GOK/MOL 2010) in tandem with the requirements of the new Constitution regarding land. Coastal forests are variously faced by threats due to over-exploitation, loss due to alternative use of land and climate change which has led to biodiversity loss, sectoral conflicts and violation of regional international agreements treaties and conventions. These are especially e.g.: CBD, Ramsar Convention, CITES, UNFCCC, UNCCD, etc.

Remnants of remaining forests are those protected through institutional mandates of Kenya Wildlife Services as empowered by the Wildlife (Conservation and Management) Act in use of National Parks and Reserves, the National Museums of Kenya (1983) as empowered by the Antiquities and Monuments Act (1983) in case of Kaya Forests and the Kenya Forest Service for gazetted forests. However, according to Vision 2030 the national forest cover is targeted to 20% cover of the total national land area through afforestation and protection of existing forest cover. These initiatives require appropriate integrated approach involved various sectors and stakeholders (Table 27 and 28)

### **Institutional Arrangements**

Although agriculture and forestry production are interdependent they are both managed by different Government Ministries and Institutions with different Mandates. Over 38 government departments and 77 statute manage forests alone. The new Forest Policy takes into cognizance existing policies that are related to land use, environment, agriculture, energy, and industry among others. The Agriculture policy also considers the latter policies including the forestry policy. This indicates how complex the institutional arrangement can be for agriculture and forests if dealt together in terms of institutional mandate overlaps. Be that as it may, the essential institutional arrangement is given in Table:29

From these institutional overlaps in mandates, conflicts occur but can however be managed through inter-institutional Memorandum of understanding (MoUs). This is necessary not only in addressing national issues but also regional and international conventions and treaties so that the latter can suitably be domesticated in the relevant laws or Acts.

**Table 27: List of extra-regulatory Kenyan Acts which are directly or indirectly Important for coastal resource management**

<b>Issue</b>	<b>Extra-Regulatory Acts</b>
(i) Agricultural Production	<ul style="list-style-type: none"> <li>• Water Act</li> <li>• Lakes &amp; Rivers Act</li> <li>• Crop Production &amp; Livestock Development Act</li> <li>• Fertilizer &amp; Animal Foodstuffs Act</li> <li>• Pest Control Products Act</li> <li>• Wildlife (Conservation &amp; Management) Act</li> <li>• Forest Act</li> <li>• Environmental &amp; Management Coordination Act</li> <li>• Land Act</li> <li>• Plant Protection Act</li> </ul>
(ii) Coastal Forests	<ul style="list-style-type: none"> <li>• Wildlife (Conservation &amp; Management Act)</li> <li>• Environmental Management &amp; Coordination Act</li> <li>• Forest Act</li> <li>• Land Act</li> <li>• Water Act</li> </ul>
(iii) Research	<ul style="list-style-type: none"> <li>• Science &amp; Technology Act</li> <li>• Wildlife (Conservation &amp; Management) Act</li> <li>• Agricultural Act</li> <li>• Lakes &amp; Rivers Act</li> <li>• Forest Act</li> <li>• Environmental Management &amp; Coordination Act</li> <li>• Water Act</li> <li>• Plant Protection Act</li> </ul>

**Table 28: List of multilateral agreements to which Kenya is a signatory or has ratified that are relevant to management of coastal natural resources in Kenya (Source: UNEP-Sida, 1996).**

Category	Type of Multilateral Agreement
(a) Resource-based	<ul style="list-style-type: none"> <li>• The African Convention for the Conservation of Nature &amp; Natural Resources (Algiers 1968).</li> <li>• Convention on International Trade in Endangered species of Wild Fauna &amp; Flora (Washington, 1973).</li> <li>• Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna &amp; Flora (1994).</li> <li>• Agreement on Technical Barriers to Trade (1994).</li> </ul>
(b) Environmentally based	<ul style="list-style-type: none"> <li>• The Ramsar Convention on Wetlands of International Importance (Ramsar, Iran 1971)</li> <li>• Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi 1985)</li> <li>• Convention on Biological Biodiversity (1992).</li> <li>• International Convention for the Prevention of Pollution from Ships (MARPOL), 1993</li> <li>• UNFCC</li> <li>• UNCCD</li> </ul>

**Table 29: Institutions with mandates for involvement in management of coastal natural resources in Kenya.**

<b>Institution</b>	<b>Mandate</b>	<b>Empowerment</b>
Agriculture Department	Manage & develop agricultural production resources	Agriculture Act
Kenya Wildlife Service	Protect and conserve marine parks and reserves  Enforce Wildlife Act	Wildlife Conservation & Management Act
Coast Development Authority	Promote sustainable economic exploitation of coastal and marine resources	Coast Development Authority Act
National Museums of Kenya	Management of traditional Kaya forests	Antiques and Monuments Act
National Environment Management Authority	Environmental Management	Environmental Management & Coordination Act
Kaya Forest Service	Management of Coastal forests	Forest Act
Water Department	Management of water as a resource	Water Act

## **Gaps**

- The Forest Policy does not give much cognizance to farm forestry but to redeeming and protection of natural forests and the issue of sustainable use of biodiversity in forests is largely ignored.
- The agricultural policy should therefore be focused towards development of appropriate technology for farming and developing seeds variety or animals that are suitable for agricultural production in the prevailing conditions
- Policy addressing climate change towards food security is essential; however, it should be emphasized that without a firm agriculture foundation based on successful practices on the basis of which emerging issues can be tackled, the challenges will continue to be over whelming hence the need of firmness in executing the food policy.
- Biodiversity loss, sectoral conflicts and violation of regional international agreements treaties and conventions be addressed. These are especially e.g.: CBD, Ramsar Convention, CITES, UNFCCC, UNCCD,etc.

## **Recommendations and Conclusions**

- To support agricultural production in line with addressing the MDG7 and the National Food Policy which advocates for good land use for self sufficiency in food production, an integrated ecosystem based management supported by especially the integrated Coastal zone management Wetlands Policy, land Policy and Forest Policy and their corresponding Acts have to be enforced. This is essential noting also the fragile nature of the coastal areas being variably arid to semi arid in nature and that poor management can lead to collapsed agricultural production.
- Policies and Acts to support appropriate technological advances in sustainable agricultural production and environment management in the prevailing environments conditions and climate variability required and appropriate monitoring, control and surveillance are enforced.



## REFERENCES

GOK 1989. Maritime Zones Act 1989 Laws of Kenya.

Source: [www.un.org/Depats/los/-----/PDF FILES /KEN\\_1989\\_maritime.pdf](http://www.un.org/Depats/los/-----/PDF FILES /KEN_1989_maritime.pdf).

Accessed on: 30/12/2010.

GOK 1991. Fisheries (General) Regulations Chapter 378- Fisheries .

Source: [http://www.kenyalaw.org/kenyalaw/klr\\_app/print.php](http://www.kenyalaw.org/kenyalaw/klr_app/print.php)

GOK 1992. The Constitution of Kenya Government of Kenya, Published by the Government Printer , Nairobi  
(Revised 1998)

GOK 1994. National Food Policy. Sessional Paper No.2 (1994) Nairobi Government Printer .56p.

GOK 2003. Overview of Tourism Industry. 15 pp.

Source: [www.tradeindustry.go.ke/document/di\\_sector\\_tourism.pdf](http://www.tradeindustry.go.ke/document/di_sector_tourism.pdf). Accessed on 30/12/2010.

GOK 2005. Draft Sessional Paper or Forest Policy. Ministry of Environment and Natural Resources, Nairobi,  
Kenya. 24pp.

Source: [www.reconcile-ea.org/wkelc/Kenya\\_Draft\\_Environment\\_Policy.pdf](http://www.reconcile-ea.org/wkelc/Kenya_Draft_Environment_Policy.pdf)

Accessed on:24/9/2010

GOK 2007a Vision 2030: A globally and Prosperous Kenya Government of Kenya, Nairobi 180p.

GOK 2007b. The Wildlife Conservation and Management Bill 2007. Ministry of Tourism and Wildlife 68 pp.

Source: [www.fankenya.org/...../wildlife-conservation\\_and\\_managementbill2007.pdf](http://www.fankenya.org/...../wildlife-conservation_and_managementbill2007.pdf)

Accessed on 25/10/2010.

GOK 2007c. Draft Wildlife Policy. Ministry of Tourism and Wildlife 36 pp.

Source: [www.tourism.go.ke/ministry...../DRAFT\\_WILDLIFE\\_POLICY.pdf](http://www.tourism.go.ke/ministry...../DRAFT_WILDLIFE_POLICY.pdf).

Accessed on: 30/12/2010.

GOK 2009. The Fisheries Management bill, 2009. Government of Kenya , Nairobi , Kenya. 26pp.

Accessed on: 25/10/2010

GOK 2010a. The Constitution of Kenya Government of Kenya . Published by the Attorney General in  
accordance with Section 34 of the Constitution of Kenya Review Act (No.9 of 2008). Promulgated on 27<sup>th</sup>  
August 2010. Printed by the Government Printer , Nairobi.

GOK 2010b. Sessional Paper on: Intergrated National Transport Policy Government of Kenya, Ministry of transport  
, Nairobi.93p.

GOK/MEMR 2010. Integrated coastal zone management policy (Draft). Ministry for

Environment and Mineral Resources, Government of Kenya. 40p.

GOK/MOFD 2008 National Oceans and Fisheries Policy 2008. Government of Kenya, Ministry of Fisheries  
Development 41p.

GOK/MOT 2010 The Tourism Bill 2010. Government of Kenya, Ministry of Tourism, Nairobi 106p.

GOK /MOTW 2006 National Tourism Policy Ministry of Tourism and Wildlife , Government of Kenya ,  
43p.

Source : [www.tourism.go.ke/...Tourism..../Final\\_Draft\\_National\\_Tourism\\_Policy.pdf](http://www.tourism.go.ke/...Tourism..../Final_Draft_National_Tourism_Policy.pdf) Date27/2/2011.

- GOK 1992 The Constitution of Kenya Government of Kenya, Published by the Government Printer , Nairobi (Revised 1998)
- GOK 2010 The Constitution of Kenya Government of Kenya . Published by the Attorney General in accordance with Section 34 of the Constitution of Kenya Review Act (No.9 of 2008). Promulgated on 27<sup>th</sup> August 2010. Printed by the Government Printer , Nairobi.
- GOK/UNDP/GOF 2005 MDGs Status Report for Kenya 2005. Government of Kenya, UNDP, Kenya and Government of Finland.39p.
- Kibiwot, R. 2008. Towards the formulation of Kenya integrated ocean management policy including institutional framework. Division for Ocean Affairs and the Law of theSea (DOALOS), UN, New York USA. 109p.
- KMA 2006 Kenya Maritime Authority Five year Strategic Plan (2006-2015)Kenya maritime Authority , Mombasa, 37p.
- KPA (2011). History of Kenya Ports Authority.
- Source: <http://www.kpa.co.ke/AboutUs/Pages/History.aspx>  
 Accessed on: 2/1/2011.
- McClanahan, T.R. and Kaunda –Arara, B. 1996 Creation of a Coral Reef Marine Park:  
 Recovery of fishes and its effect on the adjacent fishery. Conservation Biology 10: 1187-1199.  
 Accessed on: 22/9/2010
- Munyiri, S. K. (2009) Policy position paper on the processed amendments of the mining and minerals bill 2009. Kenya Chamber of Mines, Nairobi, Kenya. 28pp  
 Source: Minerals. usgs. gov/minerals/pubs/country 1999/9219099.pdf  
 Accessed on: 25/10/2010
- Mwikya, S.M. 2006.Fisheries Access Agreements, Trade and Development issues. International Centre for Trade and Sustainable Development (ICTSD). Issue paper No.2 (2006) Geneva, Switzerland. 46p.
- Olsen, S.B.J.G Sutinen, L. Juda, T.M. Hanessey and T.A Grigalunas 2006. A handbook on governance and socio-economics of Large Marine Ecosystems. Published by Coastal Resources Center, University of Rhode Island, US. 94pp.
- Ruwa, R.K., Kulmiye, M.K.W.Osore, D.O.Obura, D.Mutoro, J.P.Shunula, J.Ochiewo, S.Mwaguni and S.Misana 2004. Assessment of the Somali Coastal Current Sub-region. GIWA Sub-regional Report, Kalmar Sweden, 231p.
- UN 2002 Johannesburg WSSD Sumill 2002: Kenya Country Profile
- UNEP-Sida 1996 Multilateral Environmental Agreements: Relevance, Implications and Benefits to African States AMCEN/SUBREG/CONVENTION/1/146p.
- UNESCO 2010. UNESCO Country Programming Document – Kenya.  
 BSP/2010/P1/H/5. 30P.