Sustainable Development in Kenya:
Stocktaking in the run up to Rio+20

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EXECUTIVE SUMMARY

During the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, Kenya endorsed and adopted Agenda 21, which provided the world with potential practical solutions to the ever-pressing problems of the environment and development. Kenya has ratified most of the international agreements, treaties, conventions, and protocols resulting from the first Rio conference, that are considered to be in harmony with the country's plans for sustainable development. The most significant outcome was that Kenya joined and ratified three international treaties, the United Nations Framework Convention on Climate Change (UNFCCC), whose aim is to cooperatively consider actions to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts which were, by then, inevitable; the United Nations Convention on Biological Diversity (UNCBD) and the UN Convention to Combat Desertification (UNCCD). As demonstration of its commitment, Kenya has actively participated in international meetings convened by these conventions and hosted the second meeting of the Parties to the Kyoto Protocol (CMP 2), in conjunction with the twelfth session of the Conference of the Parties to the UNFCCC (COP 12), in Nairobi from 6 to 17 November 2006.Endorsing the Rio and subsequent agreements meant undertaking certain activities and putting in place institutions to address climate change, biological diversity and combating desertification by each member country.

In this stocktaking report, Kenya's historical pursuit of sustainable development is traced and put in perspective from 1963 (when Kenya attained independence) to present but with emphasis on the period between 1992 and 2012, which is the focus of this report. Kenya's social, economic, political and environmental development achievements made in the last 40 years and specifically the period between 1992 and present is outlined, as well as challenges facing development.

Since 1963, Kenya has pursued development that has focused on eradicating hunger, illiteracy and diseases. Sessional paper No. 1 of 1965 marked the stepping-stone for Kenya's attempts at sustainable development. Other relevant strategies that have been put in place include; The Poverty Reduction Strategy Paper (PRSP) in 1999; The Economic Recovery Strategy for Wealth and Employment Creation (ERS); and Kenya's development blueprint Vision 2030. The new Constitution of Kenya and relevant amendments that have been incorporated over the years, reinforce the policy and legal basis of sustainable development in Kenya. The three pillars of sustainable development are embedded in the fundamental rights guaranteed by the Constitution, which lay down the framework for social justice in Kenya.

Worth noting is that in the two decades leading to the political changes in 2002, Kenya's **economy** and specifically the productive sector underwent a major decline. Thus when a new government was elected in December 2002 one of the major tasks was reversing the many years of poor economic performance and weak governance. This led to the development of the Economic Recovery Action Plan, a blueprint that was developed to guide the new government's economic policies over the following five years. The productive sectors in the context of the Economic Recovery Strategy (2003) are agriculture, tourism, trade and industry which in 2003 accounted for approximately 50 per cent of GDP, provided 628,000 formal sector jobs and 3.7 million SME sector jobs while agriculture alone in the same period provided 62% of overall employment.

On the **social political** front, Kenya has enjoyed political stability despite post-election violence witnessed after the 2007 general election. The peaceful transition of power from the second President to the third President in presidential and legislative elections in December 2002 marked the beginning of a new political era by ending almost four decades of one-party rule. The new administration embarked on policies that focused on economic development, building up the country's infrastructure, generating employment and foreign investment. The economic recovery strategy (2003 - 2007) targeted to achieve an 8% growth rate and industrial status for Kenya by 2025, creating 500,000 jobs a year in the process. The central focus of the Plan was job creation through sound macroeconomic policies, improved governance, efficient public service delivery, an enabling environment for the private sector to do business, and through public investments and policies that reduce the cost of doing business. The Plan also included an equity and social-economic agenda focusing on reducing inequalities in access to productive resources and basic goods and services.

Following the expiry of the Economic Recovery Strategy, Kenya's Development Agenda is now anchored on the Kenya Vision 2030, which aims at creating "a globally competitive and prosperous country with a high quality of life by 2030". It aims to transform Kenya into "a newly industrialized, middle-income country providing a high quality of life to all its citizens in a clean and secure environment". Simultaneously, the Vision aspires to meet the Millennium Development Goals (MDGs) for Kenyans by 2015. Vision 2030's key goal is the attainment of a 'nation living in a clean, secure and sustainable environment' driven by the principles of sustainable development. It is based on the 3 pillars of political, social and economic advancement and it aims to transform the economy and achieve sustainable growth.

Although **environment** does not feature in Vision 2030 as a pillar, the Kenyan Government has put in place a wide range of policy, institutional and legislative frameworks to address the major causes of environmental degradation and negative impacts on ecosystems emanating from industrial and economic development programmes. The Environmental Management and Coordination Act of 1999 (EMCA) was enacted to provide an appropriate legal and institutional framework for the management of the environment and for matters connected therewith and incidental thereto. Environmental considerations of development are contained within the social and economic pillars. Kenya is a member of the Convention of Biological Diversity (CBD), one of the outcomes of the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. Kenya has also been implementing other international development treaties like Agenda 21 and the MDGs that are inclined to environment protection and sustainable development.

The National Environment Management Authority (NEMA), a regulatory body of the ministry of environment and mineral resources (MEMR), handles environmental coordination in Kenya. However, environment being a multi-sectoral phenomenon, there are several other government agencies that play a role as they manage their sectors. These include: Ministry of public health and sanitation-environmental health including; Public Health, the working environment radiation control and management of hazardous wastes; Ministry of water development-through management of water resources utilization; Ministry of Local government-through management of urban environments by urban councils; Ministry of forestry and wild life-anti poaching and deforestation; and Ministry of Agriculture-Controls farming practices to prevent soil erosion in areas with sloppy land.

The main challenges in meeting sustainable development and MDGs have been outlined by government as:

- The inadequacy of resources for financing MDGs-related activities is highlighted as the main constraint in Kenya.
- The 2007/2008 post-election violence and the recent crisis such as the food and fuel crisis present new challenges to the attainment of MDGs in Kenya.
- Un-favourable international trade practices continue to reverse gains made by developing countries like Kenya.

ACRONYMS

AGRA	Alliance for a Green Revolution in Africa
APRs	Annual Progress Reports
ARH&D	Adolescent Reproductive Health and Development
ASALs	Arid and Semi Arid Lands
ASCU	Agricultural Sector Coordination Unit
ASDS	Agricultural Sector Development Strategy
BRT	Bus Rapid Transit
CBD	Convention of Biological Diversity
CDA	Coast Development Authority
CDKN	Climate and Development Knowledge Network
CDM	Clean Development Mechanism
CDMA	Code Division Multiple Access
CDTF	Community Development Trust Fund
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
CIC	Commission for Implementation of the Constitution
CIEN	Chemical Information Exchange Network
CITES	Convention on International Trade in Endangered Species
COMESA	Common Market for Eastern and Southern Africa
COP	Conference of Parties
CRA	Commission for Revenue Allocation
DASCU	District Agricultural Sector Coordination Unit
DfID	UK Department for International Development
DNA	Designated National Authority
DRR	Disaster Risk Reduction
ECCU	Environment and Climate Change Unit
ECDE	Early Childhood Development and Education
EFA	Education for All
EMCA	Environmental Management and Co-ordination Act
ENNDA	Ewaso-Nyiro North Development Authority
ENSDA	Ewaso-Nyiro South Development Authority
ERS	Economic Recovery Strategy
KKV	Kazi Kwa Vijana
KNASP	Kenya National HIV and AIDS Strategic Plan
KNBS	Kenya National Bureau of Statistics
KNBSAP	Kenya National Biodiversity Strategy and Action Plan
KP&TC	Kenya Posts and Telecommunications Corporation
KRDS	Kenya Rural Development Strategy
KTCIP	Kenya Transparency Communication Infrastructure Programme
KTDC	Kenya Tourism Development Corporation
KVDA	Kerio Valley Development Authority
KWS	Kenya Wildlife Service
LANs	Local Area Networks
LBDA	Lake Basin Development Authority
MDGs	Millennium Development Goals
MEMR	Ministry of Environment and Mineral Resources
MORDA	Ministry of Regional Development Authorities
MOYAS	Ministry of Youth Affairs and Sports
MPAs	Marine Protected Areas
MTP	Medium Term Plan
MTR	Mid-Term Review
NARC	National Rainbow Coalition
NASEP	National Agriculture Sector Extension Policy
NCCACC	National Climate Change Activities Coordination Committee
NCCRS	National Climate Change Response Strategy
NEAP	National Environment Action Plan
NEMA	National Environmental Management Authority
NEP	National Environmental Policy
NER	Net Enrolment Ratio
NFLS	Nairobi Forward Looking Strategies
NGOs	Non Governmental Organisations
NMK	National Museums of Kenya
NMT	Non-motorised Modes of Transport

ESRP	Energy Sector Recovery Project
FDSE	Free Day Secondary Education
FGM	Female Genital Mutilation
FPE	Free Primary Education
GCCN	Government Common Core Network
GDC	Government Data Centre
GDP	Gross Domestic Product
GHG	Green House Gas
GiZ	German International Cooperation
GNP	Gross National Product
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HRA	Hotels & Restaurants Act
ICT	Information Communication and Technology
IEA	International Energy Agency
IEBC	Independent Electoral and Boundaries Commission
IFAD	International Fund for Agricultural Development
IMCE	Inter-Ministerial Committee on Environment
ISP	Internet Service Providers
ITNs	Insecticide Treated Nets
JICA	Japan International Cooperation Agency
JPOI	Johannesburg Plan of Implementation
KARI	Kenya Agricultural Research Institute
KEFRI	Kenya Forestry Research Institute
KEMSA	Kenya Medical Supplies Agency
KESSP	Kenya Education Sector Support Programme
KFS	Kenya Forest Service
KHPF	Kenya's Health Policy Framework

NPEP	National Poverty Eradication Plan
NRHS	National Reproductive Health Strategy
NSPC	National Social Protection Council
NWRMS	National Water Resources Management Strategy
PPP	Public Private Partnerships
PRSP	Poverty Reduction and Strategy Paper
PwC	PricewaterhouseCoopers
RDAs	Regional Development Authorities
REMP	Rural Electrification Master Plan
REP	Rural Electrification Programme
SACCO	Savings and Credit Co-operative
SWAP	Sector Wide Approach
TARDA	Tana and Athi Rivers Development Authority
TEAMS	The East African Marine Systems
TILA	Tourist Industry Licensing Act
TJRC	Truth, Justice and Reconciliation Commission
UNCCD	UN Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
WHYCOS	World Hydrological Observation cycle
WRUAs	Water Resource Users Associations
WSSD	World Summit on Sustainable Development
WSSP	Water Sector Strategic Plan
YEDF	Youth Enterprise Development Fund

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1 HISTORICAL FRAMEWORK FOR SUSTAINABLE DEVELOPMENT IN KENYA

Sustainable development was explicitly popularized and contextualized in the Brundtland Commission (Our Common Future) where it was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”[1] The Brundtland Commission focused on three pillars of human well being which are the economic, socio-political and ecological/environmental condition. The basic concept was in support of putting in place strong measures to spur economic and social development, particularly for people in developing countries. At the same time ensuring that environmental integrity is sustained for future generations.

The United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil in 1992 was a landmark event otherwise known as the Rio Summit, at which Agenda 21[2] was adopted. It sought to build on the momentum engendered by the United Nations Conference on the Human Environment (UNCHE), which took place in Stockholm, Sweden in 1972, and which was the first global forum that sought to address the interlinked areas of environment and development.

A five-year review conducted in 1997 and ordered by UN General Assembly revealed that little progress had been made in implementing Agenda 21. It was deemed that the desired momentum for accelerated implementation and a political declaration affirming a renewed commitment were not generated. In view of this, UNGA convened the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, in 2002. The goal of WSSD was to conduct a further (10-year) review of the implementation of the outcomes of UNCED, particularly Agenda 21, and to reinvigorate global commitment to sustainable development. WSSD in 2002 resulted in the Johannesburg Plan of Implementation (JPOI) which reiterated the importance of achieving internationally agreed development goals embedded in the outcomes of the major United Nations conferences and international agreements since 1992, including those contained in the United Nations Millennium Declaration, United Nations Framework Convention on Climate Change, Convention on Biodiversity, Convention to Combat Desertification and non-binding targets of the Forestry Principles.[3]

During the UNCED in Rio de Janeiro in 1992, Kenya endorsed and adopted Agenda 21, which provided the world with potential practical solutions to the ever-pressing problems of the environment and development. Kenya has ratified most of the international agreements, treaties, conventions, and protocols resulting from the first Rio conference, that are considered to be in harmony with the country's plans for sustainable development. The most significant outcome was that member countries joined three international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), to cooperatively consider actions to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts were, by then, inevitable; the United Nations Convention on Biological Diversity (UNCBD) and the UN Convention to Combat Desertification (UNCCD).

As demonstration of its commitment, Kenya hosted the second meeting of the Parties to the Kyoto Protocol (CMP 2), in conjunction with the twelfth session of the Conference of the Parties to the UNFCCC (COP 12), in Nairobi from 6 to 17 November 2006.

Endorsing the Rio and subsequent agreements meant undertaking certain activities and putting in place institutions to address climate change, biological diversity and combating desertification by each member country. In this stocktaking report, Kenya’s historical pursuit of sustainable development is traced and put in perspective from 1963 (when Kenya attained independence)

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[1] The world commission on Environment and development, 1987,Our common Future, Oxford University Press, Oxford

[2] The Brundtland Commission, named after Norway's former prime minister, Gro Harlem Brundtland, who chaired it, was adopted at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. The documents approved at the Conference, notably the comprehensive Agenda 21, included ambitious commitments by world leaders to ensure sustainable development in many areas and on all levels of society.

[3] Ministry of Environment and Forests, Government of India, 2011: Sustainable Development in India

to present but with emphasis on the period between 1992 and 2012, which is a focus of this report. The report has attempted to show achievements made and challenges that the people of Kenya have had to face in the pursuit of Sustainable Development since Rio in 1992.

1.1 Poverty Reduction Strategy Paper

Immediately after attaining independence in 1963, Kenya pursued development that focused on eradicating hunger, illiteracy and diseases through sessional paper No. 1 of 1965. Since then a number of development plans and strategy papers have been developed in an effort to achieve sustainable development. Notable ones, which are relevant to Rio+20 achievements, include the Poverty Reduction and Strategy Paper (PRSP). In December 1999, World Bank and the IMF approved the PRSP approach to reduction of poverty in low-income countries including Kenya. Kenya's PRSP was launched in 2001 as a short-term strategy for meeting the long-term vision outlined in the National Poverty Eradication Plan (NPEP) of 1999 which had a 15-year timeframe to alleviate poverty based on the first United Nations' Millennium Development Goal (MDG) of halving poverty by 2015. The PRSP had multiple objectives directed towards the goal of reducing poverty and increasing economic growth in the country by providing crucial links between national public actions, donor support, and the development outcomes needed to meet the MDGs. By then (2000) Kenya's GDP growth rate was between 0 to 0.2% and about 60% of Kenyans were living below the poverty line.[4]

1.2 Economic Recovery Strategy for Wealth and Employment Creation

In 2003 the new NARC Government made reviving the economy its top priority and produced a new strategy and policies that abandoned the PRSP and NPEP and adopted the economic recovery strategy (ERS). The ERS, the blueprint for setting the country back on the growth path, was launched in 2003. The ERS emphasized economic growth and creation of wealth and employment as means of eradicating poverty and achieving food security. The strategy identified agriculture as the leading productive sector for economic recovery. In addition, the strategy recognized that revival of agricultural institutions and investment in agricultural research and extension were critical and essential for sustainable economic growth. The ERS was the launching pad for revitalizing the agricultural sector. ERS identified key policy actions necessary to spur the recovery of the Kenyan economy based on four pillars: Macro-economic stability; strengthening institutional governance; rehabilitation and expansion of physical infrastructure and investment in the human capital of the poor. ERS established an investment programme that provided clarity on government funding that is available for various projects and the funding required from external sources.

1.3 Vision 2030 and Medium Term Plans

The ERS was a 5-year plan that expired in the financial year 2007/08. In early 2007 the Government started developing a new strategy to take over from the ERS. In June 2008, Kenya Vision 2030 was launched as the new long-term development blueprint for the country to create a globally competitive and prosperous nation with a high quality of life by 2030, that aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment. The vision is implemented through medium term plans. The first 5-year Vision 2030 Medium Term Plan (MTP 1) covering 2008 –2012 took on board the success achieved under the Economic Recovery Strategy (ERS), 2003-2007. This First MTP has undergone a Mid-Term review based on the three pillars that Vision 2030 is anchored on:

Economic pillar: The Economic Pillar of Vision 2030 seeks to improve the prosperity of all regions of the country and all Kenyans by achieving a 10% Gross Domestic Product (GDP) growth rate by 2012. Within the Medium Term Plan 2008-2012, six priority sectors that make up the larger part of Kenya's GDP (57%) and provide for nearly half of the country's total formal

[4] Waiyaki, NN: Coherence Between Kenya's PRSP, ERS and MDGs

employment were targeted. Tourism; Agriculture; Wholesale and retail trade; Manufacturing; IT enabled services (previously known as business process off-shoring); Financial.

Progress: The Mid-Term Review [5](MTR) has highlighted economic pillar progress as below:

- Tourist arrivals peaked at 1.8 million and declined to 1.6 million arrivals in 2010 although the first half of 2011 compared to a similar period in 2010 shows continued improvement in the tourism sector with arrivals data higher by 13.6%.
- The agriculture sector in the first 2 years of the MTP recorded negative growth rates of 4.1% and 2.6% in 2008 and 2009 due to post election violence and erratic weather. However, the sector has recovered and recorded positive growth of 6.3% in 2010.
- The wholesale and Retail Trade sector grew by an average of 11% in 2006-2007 compared to an average growth of 5.5% in the first 3 years of the MTP (2008-2010).
- The financial services sector has fully recovered and has grown steadily to record 8.8% growth in 2010.

Social pillar: The objective of the Social Pillar is investing in the people of Kenya in order to improve the quality of life for all Kenyans by targeting a cross-section of human and social welfare projects and programmes, specifically: Education and training; Health, Environment, Housing and urbanisation; Gender, children and social development; Youth and sports.

Progress: According to MTR, in the first 3 years of the MTP notable progress has been achieved in the social sectors and development of the nation's human resource. This progress is manifested in the following MDGs:

- **Goal 2:** —Achieve Universal Primary Education: The primary school Net enrolment Ratio (NER) has increased from 73.7 % in 2000 to 91.4 % in 2010, with continued provision of adequate resources under free primary school programme.
- **Goal 3:** —Promote Gender Equity and Empowerment of Women: The girl to boy ratio in primary school is 0.95% indicating that gender parity in primary schools is likely to be achieved. The new constitution provides for a minimum of 30 percent female representation in Parliament, as well as a third in government appointments. Successful implementation of this commitment under the new constitution will help the country make great strides in gender parity.
- **Goal 4:** – Reduce child mortality: Considerable progress has been made with under five mortality falling from 115 in 2003 to 74 in 2009; infant mortality from 77 in 2003 to 52 in 2009; and measles immunization rising from 74% in 2003 to 86% in 2009.
- **Goal 6: -** combat HIV and AIDS, Malaria and Other Diseases: The National HIV prevalence (age 15-49 years) has declined from 7.4 % in 2007 to 6.3% in 2010 and that for youth aged (15-24 years) reduced from 3.8% in 2007 to 3.9 % in 2009. The government has issued more than 3.4 million insecticide treated nets (ITNs) for use by children and pregnant women.
- Challenges still remain as far as attaining MDG1, 5, 7 and 8.

The main challenges in meeting the MDGs have been outlined by government as:

- The inadequacy of resources for financing MDGs-related activities is the main constraint in Kenya.
- The 2007/2008 post-election violence and the recent crisis such as the food and fuel crisis present new challenges to the attainment of MDGs in Kenya.
- Un-favourable international trade practices continue to reverse gains made by developing countries like Kenya.

Political pillar: The Political Pillar objective is moving to the future as one nation and envisions a democratic system that is issue based, people centred, a result oriented and is accountable to

[5] Ministry of Planning: First Medium Term Plan Update *National Development, & Vision 2030 and* Office of the Deputy Prime Minister and Ministry of Finance, 2011

the public. The pillar is anchored on transformation of Kenya's political governance across five strategic areas; The rule of law – the Kenya Constitution 2010 Electoral and political processes; Democracy and public service delivery; Transparency and accountability; Security, peace building and conflict management.

Progress: Notable progress has been reported by the MTR in implementing the programmes and projects under the Political Pillar of the 1st MTP. During the early part of the MTP the following initiatives were to be undertaken under the political pillar:

- Establishment of a permanent Commission on National Cohesion;
- Establishment of the Commission on Post-Election Violence;
- Establishment of an Independent Truth, Justice and Reconciliation Commission (TJRC); and
- Establishment of the Public Complaints Standing Committee.

All of these have been fully implemented and the recommendations of the various commissions have been implemented. Perhaps the promulgation of the Constitution on 27th August 2010—a Flagship project under the MTP political pillar—is a significant achievement in the implementation of the political pillar of Vision 2030. Since its promulgation, a framework of oversight committees for implementing the Constitution has been established as follows:

- A Cabinet Committee on implementation of the Constitution
- The Parliamentary Committee- the Constitutional Implementation Oversight Committee, established under Clause 4 Schedule Six to oversee implementation of the constitution, and
- The Commission for Implementation of the Constitution established under Clause 5 of Schedule Six.

As provided for in the Constitution, a number of institutions and offices have been established and operationalized. These include:

- The Commission for Implementation of the Constitution (CIC);
- The Judicial Service Commission;
- The Commission for Revenue Allocation (CRA);
- The Supreme Court;
- The Vetting of Judges and Magistrates Board and
- Independent Electoral and Boundaries Commission (IEBC) responsible for conducting and supervising referenda and elections to any elective body or constitutional office. It will oversee the preparation and conduct of the next general elections in 2012.

There is progress with regard to all the legislations required under the Constitution to be enacted within a period of one year and those before the next election.

1.4 The New Constitution and the Environment

Critics of Vision 2030 could point to the fact that it lacks Environment Pillar. However, environmental issues are well articulated in Environmental Management and Co-ordination Act 1999 (EMCA, 1999) where sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The new Kenyan constitution, which was promulgated in August 2010, advances this further and makes environmental protection an obligation of the government and the citizens. Proper conservation and utilization of the environment and natural resources is encouraged through Article 69 (1 and 2), which obligates the State and every person to protect and conserve the environment to ensure ecological sustainable development and use of natural resources. The Constitution encourages equitable sharing among both men and women of the accruing benefits of the sustainable exploitation, utilization, management and conservation of the environment and natural resources (Article 69 (1, a)). It compels the State to ensure the sustainable exploitation, utilization, management and conservation of the environment and natural resources and ensure equitable sharing of the accruing benefits. The constitution thus takes an ecological perspective to sustainable development; a perspective geared towards the protection of the environment for ecological reasons as well as for satisfaction of human needs, thus advancing Agenda 21 and the Brundtland Commission report.

The constitution clearly incorporates the principles of conserving options, quality and access (Article 60(1)). It also states that land shall be held in Kenya in a manner that is equitable, efficient, productive and sustainable and in accordance, inter alia, with the principles of sustainable and productive management of land resources, transparent and cost effective administration of land and sound conservation and protection of ecologically sensitive areas. Such a provision in the constitution advances the rights of the environment by ensuring that is safeguarded and enhanced for its own sake and for the benefits of the present and future generations.

Furthermore under the constitution (Article 42) the right to a clean and healthy Environment including the right to have the environment protected for the benefits of present and future generation through legislative and other measures, is emphasized by requiring the state to inter alia; ensure the sustainable exploitation, utilization, management and conservation of the environment and natural resources. And the equitable sharing of the accruing benefits. It also requires the state to strive towards achieving and maintaining a tree cover of at least ten per cent of the land area in Kenya; encourage public participation in environmental protection efforts and the elimination of activities and process likely to endanger the environment.

The PRSP, EMCA, 199, the ERS, Vision 2030 and the New Constitution promulgated in 2010 have laid the foundation for a framework for Sustainable Development in Kenya. The section below gives an outline of the achievements that have been made in the productive sectors; the economic sector; the socio-political sectors and the environmental sector.

2 PRODUCTIVE SECTOR: POLICIES, PROGRAMMES AND PROJECTS

In the two decades leading to the political changes in 2002, Kenya's economy and specifically the productive sector underwent a major decline. Thus when a new government was elected in December 2002 one of the major tasks was reversing the many years of poor economic performance and weak governance. This led to the development of the Economic Recovery Action Plan, a blueprint that was developed to guide the new government's economic policies over the following five years. The productive sectors in the context of the Economic Recovery Strategy (2003) are agriculture, tourism, trade and industry which in 2003 accounted for approximately 50 per cent of GDP, provided 628,000 formal sector jobs and 3.7 million SME sector jobs while agriculture alone in the same period provided 62% of overall employment.

2.1 Agriculture, Livestock and Fisheries

Rain-fed agriculture is the most important economic activity in Kenya, contributing about a quarter of the country's GDP even though only less than 20% of the land surface area is suitable for crop and feed production. The sector also accounts for 60% of the national employment mainly in rural areas, 60% of the export earning, and about 45% of the government revenue. The agriculture sector thus plays a critical role in addressing the national goals of poverty eradication, increasing rural incomes, creating employment and guaranteeing food security (Republic of Kenya, 2004). Only 12% of Kenya's land surface area is classified as high potential (adequate rainfall) agricultural land and about 8% is medium potential land. The rest of the land is arid or semi-arid. Furthermore, only 60% of the high potential land is devoted for crop farming and intensive livestock production while the rest is used for food and cash crop production, leaving the rest for grazing and as protected forests. Kenyan agriculture is typically small scale, employing little modern technology. This however accounts for about 75% of total production (Kabubo-Mariara and Karanja, 2006).

The fishing industry's contribution to local incomes, subsistence and nutrition is extremely important and has the potential to contribute significantly to employment and export earnings. Exports of fish products earn Kenya Kshs. 4 billion annually (Government of Kenya, 2003). However, the fisheries sub-sector has continued to perform poorly due to inability to fully exploit the resources. This has been attributed to high cost of credit, inadequate marketing outlets and inefficient technologies.

There exists a complex relationship between agriculture and the environment. While environmental degradation and associated climate effects have impacted negatively on the sector, agriculture on its part also contributes significantly to the environmental crises currently facing the country. Credible reports indicate that there has been increase in deforestation to give way to agriculture. The sector, for example, is the main consumer of water resources (65%), followed by domestic use (18%) and industry (13%). The coffee, tea and horticulture sub sectors alone account for more than three quarters of total water demand in the country (Mogaka et al., 2006). The increased use of agrochemicals has escalated water pollution and sedimentation through improper poor land management practices.

The Economic Recovery Strategy (ERS) noted that within those two decades, the agricultural sector with the exception of horticulture, experienced low and declining productivity in terms of export earnings, employment creation, food security and household farm incomes. For example, from a real growth rate of 4.4 per cent in 1996, it decelerated to 1.5 per cent in 1999 and to a negative 2.4 per cent in 2000. In 2002, the performance remained weak with a growth of only 0.7 per cent (Government of Kenya, 2003). Since agriculture is the backbone of the economy, this scenario in agriculture portends a critical challenge to the country's economic recovery even now and specifically the quality of life for Kenyans. Figure 1 shows the relationship between agriculture and overall GDP and the trends since independence in 1964 (Nyoro, 2002).

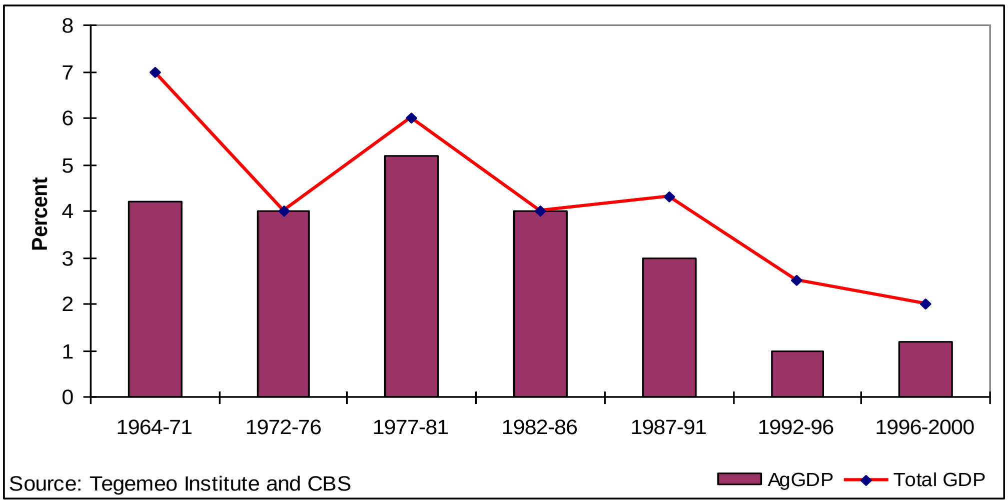


Fig 1: Trends in Kenyan Agriculture and GDP since independence up to 2000.

The ERS identified six main reasons for the decline, including:

- Poor governance in key agricultural institutions;
- Institutional failure due to lack of capacity;
- Poor access to farm credit, high cost of inputs and general insecurity;
- High HIV/AIDS prevalence in agricultural areas thus affecting productivity;
- Low level of public funding; and
- Inappropriate and unresponsive technology that takes no cognizance of differences in agro-ecological zones.

In furthering the objectives of the ERS, in 2004, the Government launched the SRA as a response and contribution to the ERS. The strategy was a sector-based approach implemented by three ministries. It was developed through consultation process with a number of stakeholders and with major support from the Development Partners. Its vision was: "*To transform Kenya's agriculture into a profitable, commercially oriented and internationally competitive economic activity*". The Mission was: "*To promote and guide sustainable development of agriculture, livestock, fisheries and agro-based production systems and strengthen related institutions now and in the future*".

It had a fairly elaborate institutional framework including:

- The National Steering Committee
- The Technical Committee
- The Agricultural Sector Coordination Unit (ASCU)
- The District Agricultural Sector Coordination Unit (DASCU)

To keep pace with changing realities, the government in 2006 launched the Vision 2030 (Government of Kenya, 2007). The *Kenya Vision 2030* is the country's new development blueprint covering the period 2008 - 2030. It aims to transform Kenya into a newly industrializing, "middle-income country providing a high quality life to all its citizens by the year 2030". The Vision was developed through an all-inclusive and participatory stakeholder consultative process. The *Kenya Vision 2030* is being implemented in successive five-year Medium-Term Plans; with the first such plan covering the period 2008 – 2012. It has three main pillars envisioned thematically as shown in figure 2 below:

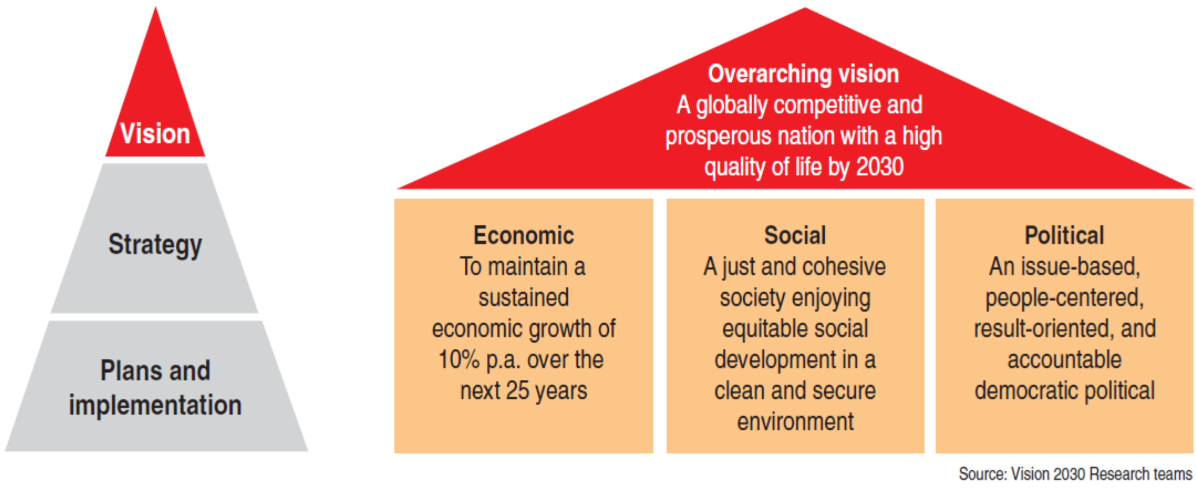


Fig 2: Thematic overview of the Kenya Vision 2030.

The first 5-year Vision 2030 Medium Term Plan (MTP 1) covering 2008 – 2012 was developed taking into account the success achieved under the Economic Recovery Strategy (ERS), 2003-2007 (Government of Kenya, 2011). The MTP has been reviewed twice through the Annual Progress Reports (APRs) while the First MTP is currently undergoing a Mid-Term review. The review shows negative growth of the agriculture sector in the first 2 years of the MTP attributed to the post -election violence of 2007/2008 and adverse weather conditions. Consequently, the sector recorded negative growth rates of 4.1% and 2.6% in 2008 and 2009. However, the sector has recovered and recorded positive growth of 6.3% in 2010.

As part of the MPT 1, the SRA was revised in 2010 through the Agricultural Sector Development Strategy (ASDS), which is the overall national policy document for the sector ministries, and all stakeholders in Kenya (Government of Kenya, 2010). The document outlines the characteristics, challenges, opportunities, vision, mission, strategic thrusts and the various interventions that the ministries will undertake to propel the agricultural sector to the future. The ASDS defined the problems in the agricultural sector, explored the possible causes of the problems and proposed possible solutions. It incorporated not only the successes but also the lessons learned from the SRA to provide the framework for stimulating, guiding and directing progressive agricultural growth and development in the next 10 years and proposed realistic policies and institutional changes necessary in contemporary Kenya for creating a vibrant and productive agricultural sector, efficiency and effectiveness in performing the duties in the agricultural sector.

The ASDS has a raft of recommendations to help agricultural sector ministries ensure that farmers, producers, processors and marketers of agricultural produce employ the most contemporary methods and technologies. These recommendations go beyond agriculture and incorporate the fisheries and livestock, lands, environment, forestry and wildlife, cooperatives and water subsectors, as well as the Arid and Semi Arid Lands.

In addition to these long-term plans, Kenya between 2009 and 2010 developed a National Climate Change Response Strategy (NCCRS). The NCCRS has wide ranging recommendations towards making Kenyan agriculture climate-resilient, including provision of downscaled weather information and farm inputs; water harvesting e.g. building of sand dams for irrigation; protection of natural resource base (soil and water conservation techniques); and research and dissemination of superior (drought tolerant, salt-tolerant, pest and disease resistant) crops (Government of Kenya, 2010). The Government of Kenya with support from the Climate and Development Knowledge Network (CDKN), the Common Market for Eastern and Southern Africa (COMESA), the UK Department for International Development (DFID), and other development partners in 2011 commenced the process of developing a comprehensive

Climate Change Action Plan to enhance the implementation of the NCCRS. This will also see climate change mainstreamed in all development plans.

As a result of the foregoing developments, intervention programmes are being implemented locally through line ministries in collaboration with development partners. Some of the most important programmes with agriculture-specific or agriculture-related interventions are illustrated in the annex in table 1. A number of significant policies have been passed since 1991. These policies are illustrated in the annex in table 2.

2.2 Forestry

Kenya's economic development is highly dependent on the natural environment. The environment underpins most sectors, including agriculture and horticulture, tourism, wildlife, and the energy. In some rural areas, for instance, forests contribute three quarters of the cash income to forest-adjacent households. Eighty percent of energy consumption comes from wood and rural dependence on wood is almost total (Republic of Kenya, 2002). Much of the non-wood energy comes from hydropower stations that are also highly dependent on the environmental functions of forests. Because of this, the management of forest resources has occupied a position of importance in government planning.

Kenya's gazetted forest reserves cover a total of some 1.24 million ha. These forests are largely confined to the semi-humid and humid parts of the country and occur in two main regions. The Western Rainforest Region has nearly 19,000 ha of forest and includes the Kakamega and Nandi forests. This is a remnant of the East African Equatorial Forest, characterised by a diversity of hardwood species. The second is the Montane Forest Region in the central highlands, which has 748,500 ha of indigenous forest and 102,800 ha of plantation. Included in the Montane Forest Region are Mt Kenya forests, the Mau forests and the Aberdares/Kikuyu escarpment. They represent an overwhelming 90% of Kenya's gazetted forests. In addition, there are the riverine and coastal forests, including mangrove forests. Of the total area of reserved forest, roughly 65% is indigenous forest, 10% is exotic plantation and one quarter is covered by other vegetation.

According to estimates provided by Kenya Forest Service, national direct use values of forests in terms of timber, fuel wood and poles are currently estimated at Ksh. 3.64 billion per year. In addition, 24 million m^3 of fuel wood materials estimated at Ksh. 4.8 billion is sourced from farmlands annually. With an annual per capita wood consumption of 1 m^3, the current demand stands at 37 million m^3. However, the estimated sustainable wood supply is about 30 million m^3 thus creating an annual deficit of 7 million m^3. Any projected increase in forest cover can only be realized after satisfying this huge internal demand. In terms of value adding, about 80,000 wood carvers spread all over the country supports about 600,000 people and this industry generates about Ksh. 1.5 billion per year.

Non-wood Forest Products, which are largely obtained from dry land forests, generate an additional Ksh. 3.2 billion per year. In the high and medium potential areas where tree growing has been internalized through forestry extension services, smallholder farmers are now able to meet their wood requirements and to supply substantial quantities to the market. In addition, the wood carving industry employs about 80,000 has an estimated turnover of about Ksh. 1.5 billion per year. According to a survey on production and marketing of non-timber forest products in Kenya carried out by Vomigal Ltd., NWFPs generate about Ksh. 3.2 billion per year.

However, a sustained period of mismanagement has threatened the survival of the forest resource resulting in more than two decades of declining total forest cover in the country (Mathu, 2007). This coupled with inconsistencies in data collection and presentation has made management particularly challenging.

Other challenges faced by the sector emanate from over reliance on the land and land resources for livelihoods among the largely rural Kenyan population. According to Kenya Forest Master Plan projections, the current annual sustainable yield stands at 30 million m^3.

However, the demand stands at 37 million m^3. Therefore, there is a deficit of 7 million m^3, which manifests in decreasing forest cover, fuel-wood shortage, reduced river flows, increased soil and water erosion, and forest and land degradation. It is important to note that over 70% of national energy demand is met by fuel wood. In the rural areas, dependence on fuel wood for cooking and lighting is almost total (MoE, 2004; KNBS, 2007).

Inadequate financial allocation to meet the Vision targets and to support ongoing reforms including drafting of forest rules and regulations; staff recruitment and programme support has also constrained development of the sector.

In attempting to stem the decline in forest resources, the Government, through its Vision 2030, Rural Development Strategy, 2001 –2016; Economic Recovery Strategy for Wealth and Employment Creation (ERS); Strategy for Revitalisation of Agriculture, 2004-2014; Forest Act, 2005, and statements on the implementation of a Green Revolution in Kenya (AGRA, 2012), has emphasised the need to manage, protect and conserve forests as a base for water, food, wood and nutritional security.

These initiatives are anchored in a number of laws and policies that together will help revitalization of the sector as envisioned in the Vision 2030. These laws and policies are illustrated in the annex in table 3.

2.3 Environment and Mineral Resources

2.3.1 Environment

The National Environmental Management Authority (NEMA), under the oversight of the newly reconstituted Ministry of Environment and Mineral Resources (MEMR), is the key government institution overseeing environmental and climate change issues in Kenya. NEMA hosts the Designated National Authority (DNA) responsible for approving Climate change mitigation projects under the Kyoto protocol. There is also an Inter-Ministerial Committee on Environment (IMCE), commonly referred to as the National Climate Change Activities Coordination Committee (NCCACC), which comprises of a cross-departmental and sector committee including key Ministries, academic and research institutes, NGOs and the private sector. NCCACC policy recommendations have the scope to reach the grassroots through institutional representatives, including the District Environment Committees. In addition to NEMA, the newly reconstituted Ministry of Environment and Mineral Resources Strategic Plan for 2006-2010 sees *"mainstreaming environmental concerns into overall plannin*g" as a key objective.

An Environment and Climate Change Unit (ECCU) has been established as a department within the Office of the Prime Minister that is mandated to harmonize the implementation of environmental and climate change activities in Kenya. The ECCU's directive is to address the issue of climate change in a national context and facilitate the Kenyan government's efforts for sustainable development initiatives at a national and county level.

2.3.2 Mineral Resources

Although Kenya is not as endowed in mineral resources as some of its neighbors, such as Tanzania, it has commercial quantities of globally significant minerals including soda ash, fluorspar, barite, gypsum, salt, dimension stones, silica sand, Kisii stone (soapstone), manganese, zinc, wollastonite, graphite, kaolin, copper, nickel, chromite, pyrite, various clays, rare earth elements and phyrochlore. Other industrial minerals produced in recent years have included barite, diatomite, feldspar, gypsum, lime, and vermiculite. Building materials produced have included cement, coral, granite, limestone, marble, and shale (Yager, 2000). There are very good indications at the moment that the country has commercial quantities of oil deposits (The Wall Street Journal, 2012). Commercial deposits of coal have already been confirmed. However, mining accounts for less than 1% of Kenya's annual GDP.

Chapter 10 of the Agenda 21 calls for integrated planning and management of land resources to facilitate allocation of land to the uses that provide the greatest sustainable benefits. Its specific objectives are “to review and develop policies to support the best possible use of the land and the sustainable management of land resources”, “to improve and strengthen institutions and coordinating systems,” and “to create mechanisms to facilitate the active involvement and participation of all concerned, particularly communities and people at the local level, in decision-making on land use and management”. This has direct relevance to mineral exploitation.

Although Kenya’s geology showed from an early date that there were economically viable mineral deposits such as copper, gold, silver, lead, iron ore, phosphate, platinum, manganese and nickel, the national development plans (1964 – 1970) did not consider mining a significant economic sector. It was not until the seventh National Development Plan of 1994-1996, titled ‘Resource Mobilization for Sustainable Development’ that the government outlined a policy on mineral resources and recognized the importance for preservation of a clean environment and the involvement of the private sector for sustainable development. Some of the policies relevant to environment and mineral resources are illustrated in the annex in table 4.

It can be concluded that Kenya has inadequate mineral exploitation policies and lacks legislation to ensure maximum exploitation of minerals and thus putting the country’s $117.3 million mining industry in jeopardy. However, according to policy director at MEMR, an elaborate draft mining policy has been formulated to facilitate a framework that would transform the minerals sector into an engine of economic growth. The development of this ‘National Minerals and Mining Policy’ was prompted by the need for an overarching policy, legislation and institutional framework for effective management of the minerals and mining sector. The policy advocates for optimal utilization of mineral resources and sound management in order to ensure sustainable development of the sector. The policy also advocates for equitable benefit sharing and addresses the issue of intergenerational equity by prescribing various measures aimed at bequeathing future generations with direct and indirect benefits from mineral wealth.

2.4 Tourism and Wildlife

Tourism is Kenya’s third largest foreign exchange earner after tea and horticulture, and a major employer, accounting for 9% of the total wage employment in 1993 (Ikiara, 2001; Ikiara and Okech, 2002). It contributes about 11% of the gross domestic product (GDP). Kenya’s tourism greatly depends on its wilderness and wildlife, which are all under threat from global climate change (Mogaka and Barrow, 2007). In nearly all the national parks, the wildlife depend on natural rivers or manmade well and dams for their survival.

Seventy-five percent of Kenya’s wildlife is found in the dry lands and 92% of Kenya’s Protected Area estate (Parks and Reserves) are found in rangelands. Rangelands also form important conservation areas of wildlife in Kenya outside protected areas. It is estimated that currently nearly 80% of all wildlife in Kenya are found outside protected areas. Presently, Kenya has 57 protected areas dispersed widely across the country that cover about 8% of the country’s land area (KWS, 1990).Most of them are located in the ASALs. These parks and reserves are the basis of Kenya’s thriving wildlife safari tourism. Other economic use of wildlife in the rangelands include the various ecotourism ventures on both community and private (company) lands and ranches. In this case, both the pastoralists and rangeland users benefit from wildlife conservation.

After impressive growth in the 1960s–1980s, the sector experienced an unprecedented decline in the 1990s (Ministry of Tourism, 2012), particularly 1995–1998 when annual tourist arrivals and receipts dropped by 1.5% and 19.5%, respectively (Ikiara, 2001). By 1987, it had become the country’s leading export sector. In the 1990s, however, the sector started experiencing problems related to the perception of the country as a mass tourist market and the associated rapid decline

in per capita tourist expenditure. Annual tourism receipts declined by -19.5% between 1995 and 1998 (ibid.).
Among the causes of this decline included: socio-economic, geo-political, environmental and technological forces of change introduced new concepts of doing business; and over reliance on the traditional beach and wildlife ‘safari’. These were compounded by challenges such as: unplanned expansion of accommodation facilities in key tourism areas; and the need for harmonization of policies & legislation.

Despite its significance, the tourism sector has relied on outdated & fragmented policy and legal instruments (Ministry of Tourism, 2012). Some of the earliest legislations on tourism are illustrated in the annex in table 5.

The tourism industry in Kenya has suffered from the issuance of travel advisories by foreign governments in recent years as these bring other security issues. The country also faces increased competition from alternative tourist destinations such as South Africa, the Far East and Asia (PwC Kenya, 2012|). Furthermore, the NCCRS (2010) postulates that the Kenyan aviation sector (which transports majority of foreign tourists to Kenya) will likely have to implement some mitigation measures as a result of these international negotiations. These measures are likely to hurt the tourism industry further.

Under the Vision 2030, tourism is considered a leading sector in achieving the goals of the Vision. Kenya aims to be among the top 10 long-haul tourist destinations in the world offering a high-end, diverse, and distinctive visitor experience that few of her competitors can offer. Specifically, Vision 2030 has the following three targets for 2012:

- Quadruple tourism’s GDP contribution to more than Kshs. 200 billion;
- Raise international visitors from 1.6 million in 2006 to 3 million in 2012, while raising average spent per visitor from the present KShs.40,000 to at least KShs.70,000; and
- Increase hotel beds from 40,000 to at least 65,000, combined with an emphasis on a high quality service.

There are seven flagship projects earmarked for actualizing these strategies, some of which are already ongoing. These are illustrated in the annex in table 6. These events have led to a change in government approach to tourism, among them the need for a tourism policy (Government of Kenya, 2006). The outcome was Sessional Paper No.1 of 2010 on Enhancing Sustainable Tourism in Kenya whose goal is “to achieve sustainable tourism that contributes to a better quality of all people.”

The key guiding principles of Sessional paper No.1 are community values; code of practice; environmental assessment; sustainable use; conservation; inter and intra-generational equity, polluter pays principle, etc. These principles aim to ensure that any tourism proceeds are shared equally amongst all stakeholders from the national stakeholders to the grass roots.

Development of appropriate complementary products in the tourism sector will increase the attractiveness of the destination and increase tourist spending in the local economy. The distribution of employment, including gender distribution, and access for local entrepreneurs from the formal and informal sectors to the tourism market are essential to poverty elimination. Infrastructural development can also be planned so as to benefit local communities through the provision of roads, telephones, piped and treated water supplies, waste disposal and recycling and sewage treatment. There is considerable scope for using this kind of planning to gain generate infrastructural benefits, which can directly benefit the poor. All tourism business should be approached with the idea of sustainability so that decisions made today will not result in depriving the following generations of a quality environment.

This development was followed almost immediately by the Tourism Act 2011. The act provides for the development, management, marketing and regulation of sustainable tourism and tourism related activities and services and for connected purposes. The act among other things provides for: a national tourism strategy; Subsidiary Legislation; Guidelines, Rules & Regulations; Guidelines & measures for sustainable tourism; Criteria for standardization and classification; Hospitality & Tourism Curriculum for training industry professionals; Code of Practice for the tourism sector; Tourism Research; Fiscal/Tax incentives and disincentives; and Prohibition & offences relating to pollution.

2.5 Marine and Coastal Ecosystems

Kenya's coastal and marine ecosystems are a repository of rich natural resources which support local and national economies and include fisheries, terrestrial forests, mangroves, sea grass beds, and coral reefs. The coastal environment and habitats supports some of the most diverse and productive resources in the country. The resources include mangrove forests, coral reefs, sea grass beds, as well as rocky, sandy and muddy shores which give home to unique species. However, these ecosystems are threatened by resource overexploitation, transformation and degradation of habitat, pollution, and now, climate change (Republic of Kenya, 2010).

Coastal and offshore ecosystems are currently under heavy harvest pressure, which may threaten not only the fisheries, but also the very existence of harvested species. Because these species are part of a larger web of feeding and other biological relationships, their depletion or loss may have significant negative consequences for the ecosystems they inhabit and the reptiles, birds and mammals that feed on them (Jackson et al., 2001).

The predicted Sea level rise scenario due to climate change is a great threat to the Kenyan economy. The most vulnerable aspects are developments on low-lying areas including agriculture; infrastructure and tourism. Tourism industry supported by the coastal infrastructure is likely to be affected by the Sea Level Rise. This is because about 50 tourist hotels which are currently operational in Kilifi District with a turnover of about Kshs 1.299 billion (i.e. 0.63% of the country's GNP), will be impacted directly or indirectly by sea level rise. Further sea level rise is likely to displace approximately 3.6% of Kilifi's District total population. The resettlement of these people requires an estimated Kshs. 1.551 billion which makes up 0.75% of the country's GNP The predicted rise will affect food security especially the production of food crops such as sugar cane, rice; coconut and potatoes. It is estimated that about 17% of Mombasa or 4600 ha of land area will be submerged with a sea level rise of only 0.3 m. Other industries prone to effects of climate change include oil refineries, fuel storage tanks and harbour facilities.

The management of the coastal environment and resources in Kenya is governed by various legislation covering different sectors and issues. However, no single policy document has been prepared specifically on conservation, development or management of the coastal zone. The National Environment Action Plan identifies 77 statutes relating to the management and conservation of the environment, most of which apply to the marine coastal environment.

2.6 Cooperative Development and Marketing

Kenya has a long history of cooperative development that has been characterized by strong growth, thus making a significant contribution to the overall economy (Wanyama, 2009). Cooperatives are recognized by the government to be a major contributor to national development, as cooperatives are found in almost all sectors of the economy. It is estimated that 63% of Kenya's population participate directly or indirectly in cooperative-based enterprises (Ministry of Cooperative Development & Marketing, 2008). Estimates also indicate that 80% of Kenya's population derives their income either directly or indirectly through cooperative activities.

Cooperatives play an important role in Kenya's economy. In the agricultural sector for example, cooperatives handled over 72 per cent of coffee sales, 95 per cent of cotton sales, 76 per cent of dairy produce sales, and 90 per cent of pyrethrum sales. However, the greatest contribution of cooperatives to Kenya's social and economic development is in the financial sector where financial cooperatives (savings and credit cooperatives hold substantial savings portfolios

(Ministry of Cooperative Development & Marketing, 2008). One of the largest cooperatives in Africa in terms of membership is Kenyan: Harambee Savings and Credit Cooperative Society in Kenya with 84,920 members, Mwalimu Savings and Credit Cooperative Society in the same country, with a membership of 44,400, probably has one of the highest annual turnover of Kshs. 711,562,812 (US$. 98,828,816) (Develtere, Pollet & Wanyama (eds.), 2008).

Cooperatives are also considered significant generators of employment opportunities in Kenya. The Ministry of Cooperative Development and Marketing estimates that the movement directly employs over 300,000 people.

The number of registered cooperatives, as well as their membership has been growing over the years. At the end of 2007, Kenya had 11,635 registered cooperatives, of which 4,414 were agricultural cooperatives; 5,122 were savings and credit cooperatives; 183 were consumer cooperatives; 572 were housing cooperatives; 89 were craftsmen's cooperatives; 49 were transporters' cooperatives; 1,107 were other non-agricultural cooperatives and 99 were cooperative unions (Republic of Kenya, 2008). A look at the trends between 2003 – 2008 shows that the movement is generally growing as shown in Table 1 below.

Fig 3: Number of cooperatives in Kenya by type (2003 – 2008)

Type of Cooperative	2003	2004	2005	2006	2007	2008
Agricultural	4,166	4,215	4,304	4,353	4,414	4,477
Savings & Credit	4,200	4,474	4,678	4,876	5,122	5,350
Other non-agricultural	1,838	1,857	1,885	1,941	2,000	2,041
Cooperative Unions	93	96	99	99	99	100
TOTAL	**10,297**	**10,642**	**10,966**	**11,269**	**11,635**	**11,968**

Source: Kenya National Bureau of Statistics, 2009: 165.

The Government of Kenya has been very supportive of the cooperative movement in Kenya. There is a whole state ministry in charge of cooperatives. The very first relevant act was the Cooperative Societies Act, Cap. 490, 1966, this was revised in 1997 into the Cooperative Societies Act Chapter 12, 1997. Sessional Paper No. 6 of 1997 on "Cooperatives in a Liberalized Economic Environment" provides the current policy framework for cooperative development in Kenya. This was revised in 2008 when the Ministry formulated a revised policy framework titled "Kenya Cooperative Development Policy 2008". The main theme of the new policy is 'expanding the economic space for sustainable cooperative growth in Kenya' and focuses mainly on restructuring, strengthening and transforming cooperatives into vibrant economic entities that can confront the challenges of wealth creation, employment creation and poverty reduction as private business ventures.

The Cooperative Societies (Amendment) Act of 2004 (Republic of Kenya, 2004a) is the current basic legislation that guides the formation and management of cooperatives in Kenya. The reforms contained in the revised Act sought to reduce the strict state supervision of cooperatives, in order to support the liberalization of cooperative enterprise.

In addition to this legislation, there is the SACCO Societies Act of 2008 that provides for the licensing, regulation, supervision and promotion of savings and credit cooperatives by the SACCO Societies Regulatory Authority.

2.7 Regional Development Authorities (RDAs)

The Ministry of Regional Development Authorities (MORDA) exists with the mandate to facilitate and coordinate RDAs in the execution of participatory, integrated basin based development programmes through policy guidance and capacity building for sustainable utilization and conservation of natural resources. It was established under the Presidential Circular No 3/2003 on the organization of government and mandated to provide policy guidance, enhance capacity building and support for Regional Development Authorities. RDAs have the mandate of promoting integrated development within their areas of jurisdiction through the implementation of integrated programmes and projects such as the provision of hydro-power, flood control, water supply for irrigation, domestic and industrial use as well as environmental conservation (MORDA). There are six RDAs under the ministry with varying mandates depending on where they are located. These are illustrated in table 7 in the annex.

In 2007, the Government of Kenya Developed A Regional Development Policy. The policy revolves around four key pillars namely; the establishment of a sound institutional framework for implementing the policy; the formulation of integrated regional plans; reforms in the legal environment in order to create a more cohesive framework for regional development and a robust monitoring framework that will develop and monitor the achievement of key indicators and milestones of regional development (Government of Kenya, 2007b).

3 SOCIAL SECTOR: POLICIES, PROGRAMMES AND PROJECTS

Kenya has enjoyed political stability despite post-election violence witnessed after the 2007 general election. The peaceful transition of power from the second President to the third President in presidential and legislative elections in December 2002 marked the beginning of a new political era by ending almost four decades of one-party rule. The new administration embarked on policies that focused on economic development, building up the country's infrastructure, generating employment and foreign investment. The economic recovery strategy (2003 - 2007) targeted to achieve an 8% growth rate and industrial status for Kenya by 2025, creating 500,000 jobs a year in the process. The central focus of the Plan was job creation through sound macroeconomic policies, improved governance, efficient public service delivery, an enabling environment for the private sector to do business, and through public investments and policies that reduce the cost of doing business. The Plan also included an equity and social-economic agenda focusing on reducing inequalities in access to productive resources and basic goods and services.

Following the expiry of the Economic Recovery Strategy, Kenya’s Development Agenda is now anchored on the Kenya Vision 2030, which aims at creating “a globally competitive and prosperous country with a high quality of life by 2030”. It aims to transform Kenya into “a newly industrialized, middle-income country providing a high quality of life to all its citizens in a clean and secure environment”. Simultaneously, the Vision aspires to meet the Millennium Development Goals (MDGs) for Kenyans by 2015.

The social pillar is supported by the following sectors; Energy Sector (inclusive of Clean Energy); Water and Irrigation; Roads (maintenance); Transport sector (Devt of Bus Rapid Transport BRT & LRT); Youth Affairs and Sports; Gender, Children & Social Development; Special Programmes (Famine and Disaster Risk Reduction-DRR); Education; Health; and ICT.

3.1 Energy

The three main sources of energy supply in Kenya are electricity, wood fuel, petroleum and renewable energy. Commercial energy in Kenya is dominated by petroleum, on-grid and off-grid electricity, charcoal and a portion of the fuel wood. Biomass including agricultural waste constitutes the non-commercial proportion of the energy sector. Kenya consumed a total of 15,108 kt of oil equivalent in 2008 (IEA, 2011) with an energy use per capita of 468 kg of oil equivalent which is less than one quarter of the world's average per capita. Solid biomass remains the dominant source of energy in Kenya meeting an estimated 77% of the energy demand as is shown in the figure below;

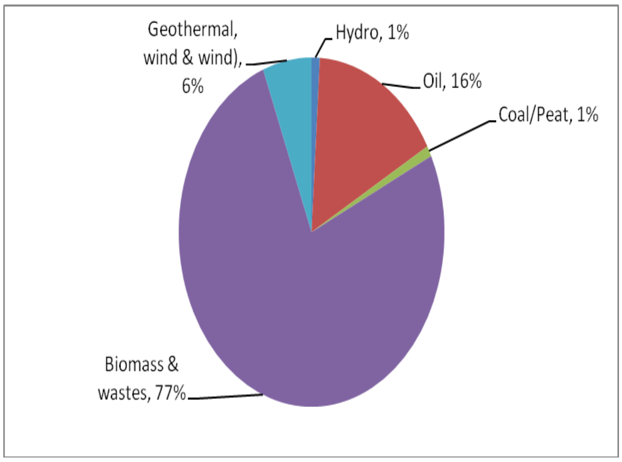


Fig 4: Source: IEA 2011.

The Kenya Vision 2030 has identified Energy as a key foundation and one of the infrastructural "enablers" upon which the economic, social and political pillars of this long-term development strategy will be built.

The successful implementation of the Flagship projects highlighted in the Vision will greatly depend on supply of adequate, reliable, clean and affordable Energy. In particular, the demand for electricity will increase since it is a prime mover of the commercial sector of the economy. The level and intensity of commercial energy use in the country is a key indicator of the degree of economic growth and development. The Energy sector is therefore expected to remain a key player in tackling such challenges as reduction of poverty by half by the year 2015 as per the Millennium Development Goals (MDGs) and overall improvement in the general welfare of the population.

With regard to the aforementioned, the Government has continued to finance initiatives that aim to boost the energy sector. As per the first medium term plan of V2030, some flagship programmes were set up, these are illustrated in the annex in table 8. Policies, legal and institutional structures that support the development of the energy sector are illustrated in the annex in table 9.

Challenges in the Energy sector

In pursuit of implementing some of the programmes and projects in the energy sector, the following bottlenecks have been encountered; over-reliance on hydro-power; long lead times in the development of energy infrastructure; inadequate specialized skills and tools required for planning and forecasting energy needs; high cost of rural electrification trough grid extension; frequent power outages and high system losses; and high and ever rising cost of imported fuels.

Opportunities Energy

Clean energy technologies such as renewable energy (focusing both on the supply side and demand side), energy efficiency, and natural gas, offer proven and effective solutions to meet Kenya's energy and GHG emissions reduction challenges. These clean energy resources will help to diversify the portfolio of Kenya's energy supply, reduce dependence on high-carbon and finite sources of fossil fuels, and create jobs and wealth for the country. The exploitation of these opportunities form the foundation of Green Economy.

Stakeholder engagement (bottom up approach and feedback); resource evaluation and allocation (financial, environmental, human and institutional resources); private sector participation (investments & feedback); alignment with other sector policies and development plans.

3.2 Water and Irrigation

As at 2007, Kenya was classified as a chronically water scarce country with a freshwater endowment of only 552 cubic meters per capita compared to the conventional universal minimum of 1,000 cubic meters. This per capita availability is projected to fall to 235 cubic meters by 2025 as the population increases, and could even be less, if the resource base continues to deplete (MEMR, 2010). Kenya's Vision 2030 has listed eight challenges for the water sector one of which is "*Increasing the amount of irrigated land".* The Agricultural Sector Development Strategy for 2009-2020 (ASD) has also listed "*improvement of water management and irrigation development*" as a strategic requirement for building a dynamic agricultural sector.

Water is becoming scarce simply because of a limited national endowment, the growing needs of rapidly increasing population, as well as serious water resources degradation. In addition to this scarcity, Kenya is highly vulnerable to rainfall variability: droughts are now endemic and floods occur quite frequently. This is despite the fact that Kenya's socio-economic development goals are highly dependent on availability of good quality and quantity water. Sustainable utilization, development and management of water resources fundamentally underpin the achievement of long-term socio-economic goals.

Agricultural production in Kenya is heavily dependent on rainfall. The main constraint to development, income generation and food security in the ASAL areas (which comprises 84% of the total land area) is inadequate water. Irrigation is especially pertinent in the face of recurrent droughts, floods and prolonged dry spells, which cause food insecurity and famines in the country and have to be mitigated. To promote all year round agriculture and enhance food security, maintenance, construction and rehabilitation of existing dams, pans, and drilling of more boreholes and development of irrigation schemes is of critical importance.

The opportunities for growth through irrigation, drainage and water storage are immense in Kenya. The country has an irrigation potential of 539,000 ha (based on surface water availability) and a drainage/flood protection potential of 600,000 ha, of which only 110,000 ha (20%) of irrigation and 30,000 ha (5%) of drainage have been developed. However, the rate of irrigation development in the country has been slow, with expansion of new irrigated/drained area attaining about 5,000 ha per year, which is equivalent to a growth rate of less than 0.5%. The arid and semi arid lands (ASALs) alone have 9.2 million hectares of land which have the potential for crop production if irrigated. This irrigable area is equivalent to the total farmland in high and medium potential areas in the country (National irrigation and drainage policy, 2009). Since the limiting factor is water, the national irrigation potential can be substantially increased through water harvesting and storage, the exploitation of ground water resources and improvement in water use efficiency. The future growth and development of the agricultural sector will heavily depend on the innovative use of the ASALs, and irrigation will increasingly play an important role in the intensification of agricultural production.

With regard to the aforementioned, the Government has continued to finance initiatives that aim to boost agricultural production particularly by irrigation. As per the first medium term plan of V2030, some flagship programmes were set up, these are illustrated in the annex in table 10.

The policy, legal and institutional structures that are inclined to water, agriculture and irrigation are illustrated in the annex in table 11.

Challenges in Water and Irrigation sector

Currently, the irrigation and drainage sector is faced with many challenges including inadequate development of irrigation infrastructure, inadequate funding for development, operations and maintenance (O & M), poor irrigation support services, weak farmers' organizations and participation, insufficient investment by private sector and poorly developed marketing channels. The policy, legal and regulatory frameworks have not been reviewed to reflect the emerging operational and socio-economic realities, while low budgetary allocation has constrained service provision by key institutions.

3.3 Roads (Maintenance) &Transport Sector (Devt of Bus Rapid Transport Brt & Lrt)

Road transport is the predominant mode of transport in Kenya and carries about 93% of all cargo and passenger traffic in the country. Kenya's road network has been established to be 160,886 km long. About 61,945 km of these roads are classified while the remaining 98,941km are not classified (Kenya Roads Board, 2011). The scope of road transport infrastructure comprises the entire road network in Kenya and includes all road facilities upon which road transport operates, whether classified or unclassified, of regional or local importance, public or private, adopted or un-adopted, or otherwise.

The Kenya Vision 2030 aspires for a country firmly interconnected through a network of roads, railways, ports, airports, water ways and telecommunications as well as adequately provided with energy. In tandem with this, the Economic Recovery Strategy (2003-2007) identifies transport as the third pillar of the economy expected to play a catalytic role in the development of other sectors of the economy. The significance of road transport in the national economy is illustrated by the fact that during the period 1998-2002, output in road transport averaged over 25% of total output annually in the transport and communications sector. This mode accounts for over 80% of the total internal freight and passenger traffic in the country with the remainder being mainly carried by rail and air. Kenya's road network serves both domestic and regional passenger and freight transport demand. The northern corridor is important as a freight transport corridor for both import and exports for countries in the eastern and central Africa regions (Eastern Democratic republic of Congo, Rwanda, Burundi, Southern Sudan and Uganda).

The government has been making significant efforts in trying to upgrade the road transport sub-sector. During the 2003-2007 period, reforms were implemented to enhance efficiency of road transport. In October 2006, Parliament approved Sessional Paper No. 5 of 2006 on the management of the roads sub-sector for sustainable economic growth. Subsequently, in 2007, Parliament enacted the Kenya Roads Act 2007, which provided for the creation of three new agencies to be responsible for the development and maintenance of the road network.

The Government has continued to finance initiatives that aim to boost the roads sub-sector. As per the first medium term plan of V2030, the flagship programmes were set up are illustrated in the annex in table 12. In addition to these long term plans, Kenya between 2009 and 2010 developed a National Climate Change Response Strategy (NCCRS). The NCCRS has wide ranging recommendations towards making Kenyan transport sector climate-resilient. In terms of policy and legal framework, there are several policies and strategies that support the development of the road sub-sector. These are illustrated in the annex in table 13.

Challenges facing the transport sector as identified by the Integrated national transport policy of 2009 are; poor quality of transport services; inappropriate modal split; unexploited regional role of the transport system; transport system not fully integrated; urban environmental pollution; lack of an urban/rural transport policy; institutional deficiencies; inadequate human resource capacity; and lack of a vision for the transport sector.

3.4 Youth Affairs and Sports

Kenyans in the age bracket of 30 years and below constitute about 75% of the country's population, forming the largest source of human resource. However, they have remained on the periphery of the country's affairs and their status has not been accorded due recognition. They have been excluded from designing, planning and implementing programmes and policies that affect them. They are dynamic and full of energy and can play a significant role in the country's economy, politics and culture. However, due to high unemployment and low participation levels, Kenya's youth remain marginalised and unable to contribute to their full potential in national development. The realisation of Kenya Vision 2030 and the attainment of the Millennium Development Goals (MDGs) critically depend on the degree of inclusion of the youth in the development agenda.

Various laws of Kenya define rights and responsibilities in accordance with the age of the person. The National Youth Council Act, 2009, defines a youth as a person aged between 18 and 35. The Age of Majority Act (Cap 33) states that 'a person shall be of full age and cease to be under any disability by reason of age after attaining the age of 18 years'. The Children Act of 2001 also defines a child as anyone under the age of 18 implying that the transition to youth status begins at 18. According to the Marriage Act (Cap 150), a marriage license cannot be issued if one of the parties is under 18 years. The Traffic Act (Cap 403) specifies that a driving license cannot be granted to any person under the age of 18. The Kenya National Youth Policy was passed in November 2007 nearly ten years later and initially defined youth as those aged between 15 and 30 years. That has since been revised and youth is now defined as those aged between 18 and 35.

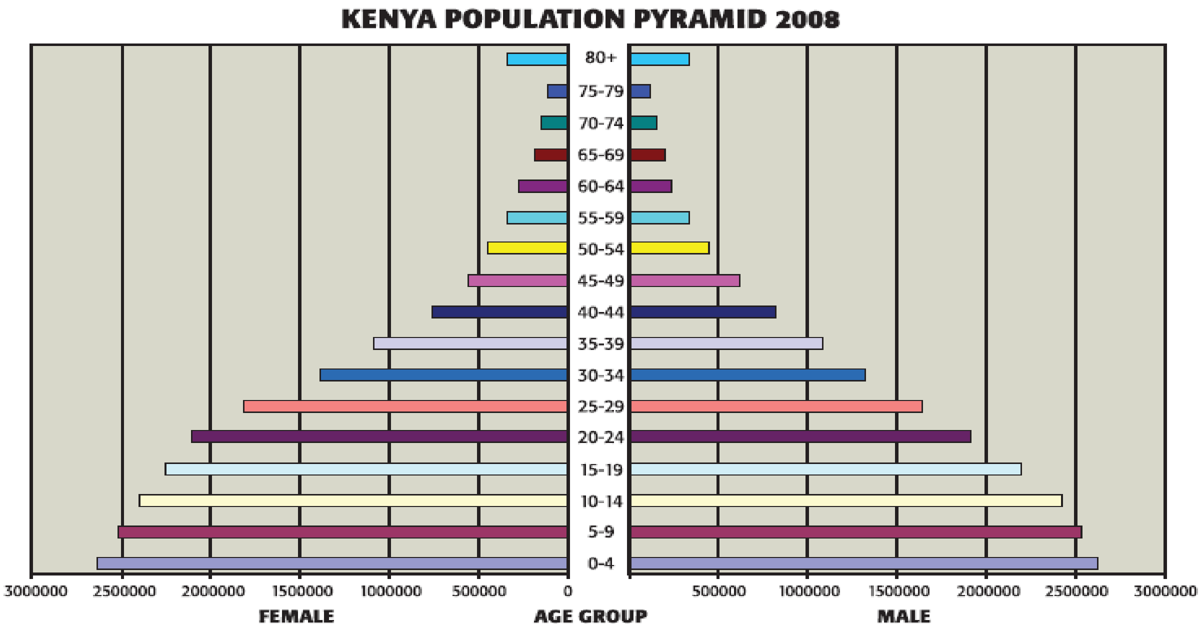


Fig 5: Kenya's Population pyramid, 2008.

Kenya's population was estimated at 34.3 million in 2008 with the youth age (18-35) constituting 35.9% of the total. Kenyan youths have put their country on the world map through their sporting and athletic prowess. For example, in the World Cross Country Championships held in Poland in March 2010, Kenya won 21 medals, 16 of which were gold. With increasing commercialisation of sporting activities and greater opportunities for professional athletes to work outside the country, many young Kenyans are engaging in sport as a way of improving their standard of living rather than simply using it as a pass-time. Much of Kenya's entertainment industry is also dominated by the youth, and expansion of this sector can lead to greater employment opportunities for young people. Information and communications technology (ICT) is the fastest growing sub-sector in Kenya with the youth forming the majority in ICT related businesses.

Widespread poverty remains a critical development challenge in Kenya. Young people are particularly affected by unemployment, lack of proper housing (particularly in the urban areas) and heath challenges. Lack of opportunity can lead to crime. Both urban and rural crime, often including extreme violence, are increasingly becoming a youth problem and more than 50% of convicted prisoners are aged 16–25 years. Poverty also affects educational levels and children from poor backgrounds are less likely to attend school than those of rich families. Poorer educational levels imply poorer chances of gainful employment.

The Kenyan informal sector usually operates on small-scale, locally and at a subsistence level it is driven by the active youth population. Kenya's informal sector is large and dynamic. About 95 % of the countries' businesses and entrepreneurs are found here but this only represents 37% of the employment for the urban population who are mostly the youth which indicates low level of skill. The Kenyan government has established a Ministry of Technical Training and Applied Technology (MTTAT) which is charged with developing training programs for youth and the overall population in the informal sector. Some of the activities that are practiced in informal employment include small artisanal jobs like vegetable selling, shoe shining, building construction works amongst many others.
In Kenya, the rate at which net jobs are created is not the same as the rate of labour force growth. This is evidenced by the fact that the informal sector has been growing at an average rate of 17.2% per annum compared to the formal sector which has been growing at an average of 2.23% per annum while the country's working age population increased by 24.5% between 1999 and 2006. This has resulted to high rates of unemployment especially among the youth.
The concept of green jobs is an attempt to look for synergies in simultaneously addressing employment, energy and environment issues. This provides an opportunity of creating employment for the youth in many faucets. Such initiatives can be rolled out through promotion of youth enterprises that are sensitive to the environment in sectors such as renewable energy and agriculture. Capacity building and skills transfer will enable the youth to participate fully in all the opportunities that are presented in green economy growth.

To address these issues the Government has been actively mainstreaming gender issues and initiatives in its development and planning strategies. The V2030 first medium term plan flagship projects and programmes dealing with youth & sports initiatives are illustrated in the annex in table 14. Policies, legal frameworks and strategies that support youth and sports initiatives in the country are illustrated in the annex in table 15.

3.5 Gender, Children & Social Development

In Kenya, over 80 % of women live in the rural areas where majority are engaged in the farming of food and cash crops, livestock keeping and in agro-based income generating activities. In many areas of the country, male migration to urban areas and large-scale farms in search of paid employment has left women in charge of the management of small scale farming activities. It is estimated that women constitute over 70% of all employees in the agricultural sector. The majority are casual or seasonal employees with no security of tenure and no employment benefits such as housing, medical scheme and pension. Their wages are low and uncertain, and they are classified as being among the poorest of the poor, with particular reference to those heading households.

According to the past four population censuses, women constitute slightly more than half of the Kenyan population. The population is also composed of over forty communities who have diverse socio-cultural traditions, norms and practices. However, despite their cultural diversities and differences, there exists a strong similarity in regard to their perception of women. Women are perceived to be dependent on men and the roles accorded to men carry a higher status compared to those of women. This means that men have more rights and privileges than women. This situation is further compounded by negative portrayal of women by the media.

The declining economic performance, poverty and erosion of cultural values have resulted in increased incidences of crime and violence against women. Since 1963, national and sectoral policies have had different impacts on Kenyan women and men, and more often than not have overlooked gender concerns. The *National Policy on Gender and Development* adopted in 2000 provides a basis for the Government to underscore its commitment to advancing the status of women. The Government of Kenya is determined to address any existing imbalances through policy formulation and implementation taking into account different needs and skills of men and women. The policy was developed after the Government's recognition that development policies do not affect Kenyans uniformly. Differences invariably arise on the basis of age, cultural practices and beliefs among others.

The Government has put tremendous efforts of spurring economic growth and thereby reducing poverty and unemployment, by considering the needs and aspirations of all Kenyan men, women, boys and girls across economic, social and cultural lines. The Government's commitment to implementing the National Plan of Action based on the Beijing Platform for Action (PFA) is another indicator of its dedication to addressing gender related concerns. The Government's position is also reflected in its commitment to the various International conventions to which Kenya is a signatory. These include the 1984 *Convention on the Elimination of all forms of Discrimination Against Women* (CEDAW) and the *Nairobi Forward Looking Strategies* for the advancement of women (NFLS).

The Government has demonstrated its commitment to achieving gender mainstreaming goals by anchoring gender equality in the Constitution.To achieve gender mainstreaming goals across the sectors, the government has established a gender focal point system which means that every sub-sector has a gender focal point and that gender indicators are integrated in the performance contracts. Most sectors have developed gender mainstreaming policies and strategies in order to make gender an integral part of sector development, programming and institutional approach. In addition to the Gender and Development Policy 2000, sub-sectors have incorporated gender within their sector policies and regulatory frameworks.

Efforts of the Kenyan Government to mainstream gender related initiatives in her decision making and planning processes have been clearly illustrated in the V2030 first medium term plan for the 2008-2012 period. Some of the programmes pointed out in the annex in table 16. Some of the policy, legal and strategy instruments that have been put in place to address gender related concerns are illustrated in the annex in table 17".

Social Protection Policy

The initiative to develop a National Social Protection Policy started in 2009, through a participatory process involving all stakeholders in the social protection arena and was completed last year (2011). The policy together with a cabinet memorandum has been forwarded for cabinet approval. A sessional paper on the policy will be forwarded to the National Assembly for debate and adoption in the first quarter of this year (2012).

The Social Protection Policy will provide for institutional arrangements and other reforms including the creation of the National Social Protection Council (NSPC) that will enhance collaboration, harmonization and coordination of activities among line Ministries, development partners and other key players. The policy proposes the establishment of a Consolidated Social Protection Fund as envisaged in Vision 2030 to be administered by the NSPC. This fund is critical to financing and sustainability of Social Protection in the country. Some of the policies being developed and their status are illustrated in the annex in table 18.

The challenge Kenya faces today is how to create an enabling environment which recognizes the potential roles and responsibilities of women and men in the development of the country and utilise strategies that will address the socio-cultural barriers that have contributed to gender disparities and inability of women to realise their full potential.

3.6 Special Programmes (Famine and Disaster Risk Reduction-DRR)

Kenya's disaster profile is dominated by droughts, fires, floods, technological accidents, diseases and epidemics that disrupt people's livelihoods, destroy infrastructure, divert planned use of resources, interrupt economic activities and retard development. Over 80% of the Kenyan land mass is arid or semi-arid and continues to suffer from recurrent droughts that cause massive food insecurity. More than one million people are in constant food insecurity in the ASAL alone and urban informal settlements. Kenya has in recent years witnessed increased incidents of floods and droughts and this has been closely linked to climate change. Climate change affects the four components of food security – food availability, food accessibility, food utilization, and food system stability in various direct and indirect ways.

Due to the frequent drought, the country's famine cycles have reduced from 20 years (1964 - 1984), to 12 years (1984 - 1996), to two years (2004 - 2006) and to yearly (2007/2008/2009). The government has distributed 528,341.77 metric tonnes (MT) of assorted foodstuffs worth Kshs. 20 billion over the last five years to feed a population of between 3.5 million and 4.5 million people annually (NCCRS,2010). The 1999/2000 La Nina droughts resulted in 4.7 million Kenyans facing starvation, while the effects of the 2006 – 2009 successive drought episodes were worse with unofficial reports indicating that nearly 10 million Kenyans faced starvation during the worst episode in 2009. A report by the Ministry of Agriculture on food security in 2009 revealed that all regions of the country expected reduced maize yield in that year. This necessitated government sponsored imports of 2.6 million bags of maize at an estimated cost of Kshs. 6.7 billion.

Owing to these recurrent disasters, Kenya has been in the forefront in trying to address disasters by putting in place legal and institutional functions in place. The Kenya V2030 which seeks to accelerate the attainment of the MDGs has also factored in disaster risk reduction. The NCCRS has also given detailed recommendations of addressing famine and relevant disaster risk reduction measures in the face of climate change. Kenya is also contributing to the implementation of the Hyogo framework for Action that seeks to build the resilience of nations and communities to disasters.

The Kenya government through the Ministry of State for Special Programmes has developed a National Policy for Disaster Management in Kenya and a National Disaster Response Plan to guide disaster risk reduction in the country. Policies in this sector are illustrated in the annex in table 19.

The following different funds for management of disasters are already in existence. They include: Humanitarian disaster fund; National drought disaster fund; and National disaster management contingency fund among others.

3.7 Education

Formal schooling in Kenya consists of eight years of primary education, four years of secondary education and four years of university education, referred to as the 8-4-4 system. Basic education is defined as 12 years of primary and secondary education. The government is committed to the provision of quality education, training and research for all Kenyans. In the recent past, the education sector has undergone accelerated reforms to address the overall goals of the Economic Recovery Strategy and Wealth Creation (ERS). The government is also committed to achieving the international development commitments such as the MDGs and Education for All (EFA). Some of the major reforms that have been experienced in this sector include: the launch and implementation of Free Primary Education (FPE) in January 2003; development of Sessional paper No. 1, of 2005 on policy framework for education, training and research; adoption of the Sector Wide Approach (SWAP) to planning and financing of education and training; development and implementation of the Kenya Education Sector Support Programme (KESSP); and the recently introduced Free Day Secondary Education (FDSE).

In 2007, enrollment of Early Childhood Development and Education (ECDE) increased from 1,672,336 in 2006 to 1,691,093 children. This level is still low and below acceptable standards. Primary school net enrollment rates increased from 86.5% in 2006 to 91.6%. The completion rate increased from 56.9% to 76.8% in 2006. Currently the country has 18,063 public primary schools and 8,041 private schools enrolling 8.2 million pupils. The major factor constraining secondary school enrollment is that growth in the number of secondary schools has not matched the growth in primary schools. For instance in 2007, there were 4,245 public secondary schools and about 2,240 private secondary schools as compared to 26,104 primary schools. The current total enrollment in secondary schools stands at 1.18 million students as compared to 3.7 million children of secondary school going age. Special needs education aims at assisting persons with special needs realize their full potential. It is estimated that 26,885 out of 1.8 million school going age population with special needs are enrolled in the few special education schools. The transition from secondary to university education stands at about 3%. The last decade witnessed substantial growth in the university sub-sector. Enrollments rose from 112,229 during the 2006/2007 academic year to 118,239 in the 2007/2008 academic year. Female students constituted 31% of the total university student population.

Under education and training, Kenya's V2030 aims to provide globally competitive quality education, training and research for development. The overall goal for 2012 is to reduce illiteracy by increasing access to education, improving the transition rate from primary to secondary schools, and raising the quality and relevance of education. Other goals include the integration of all special needs education into learning and training institutions, achieving a 80% adult literacy rate, increasing the net enrolment rate to 95%, increase the transition rates to technical institutions and universities from 3% to 8%. Kenya aims at expanding access to university education from 4.6% to 20%, with an emphasis on science and technology courses.

In support of Kenya's V2030, the government has put in place some programmes to fast track the attainment if the vision's goals. These are illustrated in the annex in table 20. In terms of policy and legal framework, some policies have been put in place to support the education sector; these are illustrated in the annex in table 21.

3.8 Health

Majority of Kenyans do not have access to affordable health care. This is further aggravated by the fact that nearly half (46%) of the population live below the poverty line. According to a Household Health Expenditure report in 2003, 44% of Kenyans who fall sick do not seek health services due to lack of finances. This indicates that low income remains a major hindrance to accessing proper health care services in the country. Mortality rates still remain high, particularly among women and children. For instance, the infant mortality rate increased from 71% per 1,000 live births in 1998 to 77% per 1,000 live births in 2003. To add to this, the under five mortality increased from 105 to 115 per 1,000 live births during the same period. Approximately 14,700 women of reproductive age die annually due to pregnancy related complications. Recent statistics indicate that 60% of births in Kenya take place outside health facilities and only 40% of deliveries are attended by skilled personnel.

Traditional sources of energy used by rural communities for lighting and cooking are characterized by inefficiency and indoor air pollution due to consumption of large amounts of tradition biomass fuels such as fuel wood, dung and fossil fuel such as kerosene oil. These results into numerous detrimental effects including open fire accidents, and respiratory diseases as a result if in-door air pollution predominant among women and children. In addition vector borne diseases influenced by climatic conditions such as temperatures, precipitation, humidity and wind patterns due to climate change are likely to create favourable conditions for the development, reproduction, longevity and spread of vector species, and therefore vector borne diseases. For instance, it has been observed that Malaria, an infectious vector borne disease, has spread into new areas previously free of the disease. In Kenya there are indications that malaria has spread to the highlands of Lake Victoria basin.

Communicable and infectious diseases, nutrition deficiency disorders and parasitic infections still dominate the morbidity profile in the country.

Despite the discouraging statistics, Kenya's health services have improved considerably in recent years. This can be attributed to an increase in budgetary allocation of financial resources as well as better governance and management of health delivery systems. Recurrent and development funding for health services has increased from 7% in 2003/2004 to 7.9% in 2006/2007. The per capita expenditure on health also rose from USD 6.4 in 2003/2004 to USD 10.9 in 2006/2007. However, the expenditure is still skewed towards curative services. The immunisation coverage increased 595 IN 2003 TO 735 by 2007 (against the set target of 70%).

The Kenya V2030 goal for the health sector is to provide equitable and affordable quality health services to all Kenyans. This was adopted after the government realised that good health and nutrition boosts human capacity to be productive. This would eventually enhance economic growth; contribute to poverty eradication and realisation of the visions social goals. The government has showed its concerted efforts in improving health services by the formulation of the national health sector strategic plan (2005 - 2010) which was formulated with the aim of reversing the downward trends in the health sector during the 1990s. Many more strategies have since been put in place to fast track improvement in the health sector.

The government also recognises the important role of the private sector in improving the delivery of health services by partnering with the private sector. Accordingly, fostering partnership in the health sector has been one of the goals of health reforms. In July 2005, the Ministry of Health embarked on a Kenya Heath SWAP design process to enhance the coordination and harmonisation of government and partner efforts (service delivery and funds). This was intended to achieve greater effectiveness and efficiency through the adoption of a country-led plan for service delivery, a single monitoring and evaluation framework. This would additionally; this would strengthen and use the country's systems of financial management and procurement.

The Kenya V2030 has developed some programmes for its first midterm plans for the 2008 – 2012 period for the health sector as is illustrated in the annex in table 22.

The legal framework of the health sector in Kenya is governed primarily by Kenya's Health Policy Framework (KHPF) of 1994. The document in its agenda for reform identified the strengthening of the central public policy role of the Ministry of Health in all matters pertaining to health as a key priority. In terms of regulation and enforcement, the government asserted its commitment to continue regulating the health sector by enforcing the Acts of Parliament which it identified as pertaining to the health sector. They are illustrated in the annex in table 23.

3.9 ICT

Introduction of telecommunication services in the country up to 1977 saw the services in Kenya being managed as part of a regional network with neighbouring Tanzania and Uganda. In 1977, the East African Community under which the regional telecommunications services operated collapsed and as a result, the Government of Kenya established Kenya Posts and Telecommunications Corporation (KP&TC) to run the services. A telecommunications policy statement was issued in 1997 that set out the government's vision on telecommunications development to the year 2015. The challenge at that time was to transform the existing policy structure from one designed for a monopoly to a policy managing a liberalised telecommunication market. The government separated the functions and management of the sector. This clarified roles for the policy, regulatory and operational responsibilities with the government and specifically the Ministry of Transport and Communications retaining policy guidance.

Since the launch of the telecommunication sector reform, Kenya has made great strides in the expansion of telecommunications services. Between 1999 to-date, the government has implemented policy reforms that have resulted in a number of structural changes. The main structural changes are – redefinition and clarification of roles for policymaking, market regulation, dispute resolution and operation of services among multiple players. In the operation of services, multiple operators are competing in various market segments based on a policy of the private sector operating in a competitive environment that also safeguards consumer interest.

While the growth of the ICT sector in Kenya has been significantly influenced by global trends, ICT can be evaluated in terms of number of fixed and mobile telephone lines; the tele-density; the number of computers and services; Internet Service Providers (ISPs), the number of Internet users; broadcasting stations; and market share of each one of them.

By September 2004, there were 240,000 fixed telephone line subscribers and 2.8 million cellular mobile subscribers. This translates into fixed tele-density of 0.75 per hundred inhabitants for fixed and 9.75 per hundred inhabitants for mobile against the world average of 19 and 21 respectively. It is also lower than that of many African countries like Tunisia (11.3% and 16.9%) and Egypt (10.8% and 17.7%) respectively. There are about 121,000 applicants on the fixed telephone waiting list. There were approximately 11,500 public phones installed throughout the country by the year 2003.

As part of the on-going public sector reforms, the government has liberalized the mobile cellular market and currently there are four licensed mobile operators. In an effort to reduce cost in the ICT sector, the government is investing in both terrestrial and undersea fibre optic cable. There has also been a rollout of broadband wireless connectivity in rural areas through various wireless technologies including Code Division Multiple Access (CDMA and WIMAX.) To accelerate the flow and exchange of information, Local Area Networks (LANs) have been installed in all ministries/departments headquarters in addition to acquisition of ICT hardware and software. The government has also established a web portal http://www.kenya.go.ke and created websites for all ministries as well as mainstreaming the use of emails within the Civil service. In July 2005, the Kenya Film Commission was established to market Kenya as a major filming destination in the region.

Some of the government flagship programmes that were set out in the country's development blue print V2030 for the first MTP are illustrated in the annex in table 24. Some of the policy and legal framework strategies that support the ICT sector are illustrated in the annex in table 25.

4 ENVIRONMENT SECTOR: POLICIES, PROGRAMMES AND PROJECTS

The environment sector in Kenya is a cross-sectoral and cross-cutting pillar that involves all natural resources their exploitation, management and conservation. Some of the sectors include water resources, forestry & wildlife, marine & fisheries, tourism, agriculture & livestock, and mineral resources amongst other sectors. These sectors are responsible for most of the country's GDP (more than 60%) and employ a majority of the population. The environment is also the main source of livelihood for most of the human population in the country. Hence, the environment is a pivotal pillar for economic and sustainable development in the country.

Recognizing the importance of natural resources and the environment in general, the Kenyan Government has put in place a wide range of policy, institutional and legislative frameworks to address the major causes of environmental degradation and negative impacts on ecosystems emanating from industrial and economic development programmes.

The Environmental Management and Coordination Act of 1999 (EMCA) was enacted to provide an appropriate legal and institutional framework for the management of the environmental and for matters connected therewith and incidental thereto. Vision 2030 is a government development strategy that is aimed at steering Kenya to a middle income country by the year 2030. The Vision's key goal is the attainment of a 'nation living in a clean, secure and sustainable environment' driven by the principles of sustainable development. It is based on the 3 pillars of political, social and economic advancement and it aims to transform the economy and achieve sustainable growth. Environmental considerations of development are contained within the social and economic pillar. Kenya is a member of the Convention of Biological Diversity (CBD), one of the outcomes of the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. Kenya has also been implementing other international development treaties like Agenda 21 and the MDGs that are inclined to environment protection and sustainable development.

Majority of environmental coordination in Kenya is handled by the National Environment Management Authority (NEMA), a parastatal within the ministry of environment and mineral resources. However environment being a multi-sectoral phenomenon, there are several other government agencies that play a role as they manage their sectors. These include: Ministry of public health and sanitation-environmental health including; Public Health, the working environment radiation control and management of hazardous wastes; Ministry of water development-through management of water resources utilization; Ministry of Local government-through management of urban environments by urban councils; Ministry of forestry and wild life-anti poaching and deforestation; and Ministry of Agriculture-Controls farming practices to prevent soil erosion in areas with sloppy land.

4.1 Forestry

Kenya currently has approximately 1.24 million hectares of closed canopy indigenous forest (KIFCON). The majority of these forests are managed by the Kenya Forest Service, whilst the Kenya Wildlife Service (KWS) manages other forests in National Parks and Nature Reserves.

Coastal forests play an important role in shoreline protection (particularly mangroves) whilst the five water towers (Cherangani Hills, Mount Elgon, Mount Kenya, Aberdares, and Mau Forest Complex) play an essential role in water management both nationally and internationally. The montane forests of Kenya's five water towers are surrounded by some of the most densely populated areas of Kenya and are therefore under significant pressure for new settlements and the supply of timber and non timber products to those communities despite their designation as protected areas. Approximately 5% of the remaining forest area was lost between 1990 and 2005 (UNEP, 2006). The most threatened forests currently include Kakamega, the Mau Forest Complex and coastal forests. There are also currently approximately 165,000 hectares of plantation forestry in Kenya, which are generally poorly managed. One of the key identified drivers of deforestation and land degradation in Kenya is the demand for fuel wood which accounts for 70% of all energy consumed (90% in rural areas).

Most of Kenya's forests are determined by rainfall[6]. Since rainfall is one of the most affected climatic elements, this is likely to impact severely on the survival of Kenya's forest resources. Although Omenda (1997) theorizes that increased CO_2 levels have a positive effect on tree growth, the accompanying increase in temperature and reduced rainfall will have an overall reduced impact on forest resource growth. The result will be a species shift and possible extinction of some, leading to reduced supply of forest products. The reduced carbon sink will in turn lead to more atmospheric CO_2 levels which lead to further climate change. Kenya's forest resource is made even more vulnerable as result of forest and land cover depletion due to the rapid increase in population and the demand for human settlements and agricultural land, grazing, sources of construction materials, food, fuel wood, essential oils and herbal medicines (Igad, 2007).

In Kenya the enactment of the Forest Act 2005 has led to dynamic reform of the forestry sector. The formation of the semi-autonomous Kenya Forest Service (KFS) and other institutional changes, have meant that KFS can now determine their own direction, vision and mission including mobilizing finance to achieve their stated goals. Already KFS is actively seeking partnership with a myriad of likeminded stakeholders in the forestry sector including community organisations, NGOs, the private sector and other government organisations and parastatals in order to come up with a shared way forward.

In order to achieve the goals set for Vision 2030 Kenya needs to maintain the natural systems that support agriculture, energy, rural livelihoods and tourism e.g. Kenya has set the target of increasing forest cover to 4% by 2012. Kenya is also a signatory to the UN Convention to Combat Desertification. Unsustainable land use systems, exacerbated by climate change have resulted in serious land degradation in ASALs in Kenya and these processes are closely linked to poverty and threatening food security.

4.2 Biodiversity

Biodiversity directly and indirectly affects human development. It is estimated that up to 40% of the global market of goods and services are sustained by biodiversity (Lusweti, 2011).

Kenya is endowed with a wide range of biodiversity with over 35,000 species of flora and fauna dominated by insects (Government of Kenya, 2000). This diversity is resides in the variable ecosystems ranging from marine, mountains, tropical, dry lands, forests and arid lands as well as some 467 inland lake and wetland habitats covering about 2.5% of the total area. Some of the species endemic to the forest habitats are found nowhere else in the world. Kakamega Forest has the richest plant diversity in Kenya. Kenya's biodiversity is thus mainly in forests and wildlife parks and reserves.

Kenya's biodiversity is mostly exploited through primary industry including food, tourism and ecosystem services and supports many livelihoods by providing genetic reserves and sustaining ecosystems upon which these livelihoods and lifestyles depend. More potential for the application of local biodiversity exists through industrial processes led by further research in

[6] *Kenya's First National Communication to the UNFCCC. June 2002*

bioprospecting[7]. Table 26 in the annex illustrates the institutional structures for the management and protection of biodiversity.

4.2.1 Pollution control

In addition to the management and utilisation of natural resources challenges, pollution from industrial and domestic sources and related public health problems is increasingly becoming a menace in Kenya (Kamau, 2011). Water and air pollution and domestic and industrial wastes are some of the negative outcomes from the process of industrial expansion and social transformation in the country. Basic infrastructures i.e., clean water, sewage and drainage systems, sanitation and waste disposal facilities are virtually non-existent.

According to the Chemical Information Exchange Network (CIEN), a network of people involved in the management of chemicals, the current environmental issues of concern in Kenya related to pollution include:

1. Water pollution from urban and industrial water which affects major urban areas like Nairobi, Kisumu, and Mombasa etc
2. Degradation of water quality from increased use of pesticides and fertilizers-this affects the agricultural areas and upsets ecosystems of local water systems.
3. Solid waste management and disposal which is a major challenge for the major urban areas.

Although a number of positive changes have taken place over the years, Kenya still lacks a comprehensive legal and institutional mechanism to deal with, among others, issues of environmental standards. A UNEP/UNDP DUTCH Joint Project Report (1999) observed that most of the environmental laws under which pollution is controlled in Kenya, are vague.

Since pollution is a multi-sectoral phenomenon, there are several government ministries and agencies that play a role in pollution control as they manage their sectors. Some of these institutions are illustrated in the annex in table 27.

The Vision 2030 states that Kenya aims to be a nation that has a clean, secure and sustainable environment by 2030. The goals for 2012 (i.e., in the MTP 1) are: (i) to increase forest cover from less than 3% at present to 4%; and (ii) to lessen by half all environment-related diseases. The strategies for achieving this as outlined in the first MTP and are illustrated in the annex in table 28. As part of this initiative, five (5) flagship projects have been earmarked for 2012 and are illustrated in the annex in table 29.

The main legal instruments for control of water pollution are the Water Act, the Public Health Act (PHA), and the Merchant Shipping Act. Air pollution is controlled through the PHA and the Factories Act. There is a distinct variation in the polluting behaviour of industries; a few have put in place admirable measures while the majority have a problem even complying with the basic statutes.

4.3 Land degradation

Kenya has a total surface area of 59,195,800 hectares. Water bodies form a surface area of 1,123,000 hectares, while land makes up approximately 58,072,800 hectares. Total agricultural land stands at 56,914,000 hectares. However, the proportion that is classified as high and medium potential land suitable for arable agriculture forms a meagre 17.5%. The rest (82.5%) is suitable for extensive livestock production, wildlife and irrigated farming. Rapid population growth (from 5.4 million in 1948 to an estimated 36 million in 2007) means that in the last 60 years, the per capita land availability has decreased from 11 hectares to a mere 1.7 hectares. It is estimated that this will decrease further to less than 1 hectare by 2030, when the Kenya population is projected to have reached 60 million.

[7] According to Wikipedia, bioprospecting involves searching for, collecting, and deriving genetic material from samples of biodiversity that can be used in commercialized pharmaceutical, agricultural, industrial, or chemical processing end products. Biodiversity itself refers to the range of organisms present in a particular ecological community or system.

Land degradation is defined as the long-term loss of ecosystem function and productivity caused by disturbances from which the land cannot recover unaided. Land degradation occurs slowly and cumulatively and has long lasting impacts on rural people who become increasingly vulnerable. The UN Convention to Combat Desertification (CCD), of which Kenya is a signatory, recognizes land degradation as a global development and environment issue. Desertification is the most severe form of land degradation. The CCD defines desertification as land degradation in arid, semi-arid, and dry sub-humid areas (also referred to as dry lands) resulting from various factors, including climatic variations and human activities.

The quality of land in the country is generally declining due to unsustainable farming practices, effects of climate change, soil erosion, pollution and toxicity from agro-chemicals and alien and invasive species. Soil erosion is the main form of land degradation and is most prevalent in the ASALs. Land scarcity and population pressure is responsible for the conversion of marginal lands into farm lands by the poor. This situation further increases their vulnerability and aggravates environmental damage. Industrialisation has also been a contributor to land degradation because most of the industries do not follow the recommended waste disposal guidelines and this leads to harmful wastes accumulating on land that eventually leads to land degradation. Land degradation has huge economic costs. It is estimated that the losses at the national scale amount to USD 390 million annually or about 3% of GDP.

The dry lands have been neglected for generations. Most investment in development has gone into what is considered high potential areas. Yet dry lands have high resilient species, well adapted to seasonal rainfall and recurrent droughts; are home to a rich biodiversity pool whose potential remains untapped. Beyond pastoralism, the dry lands offer great potential for tourism, eco-tourism and game ranching and high value honey production. Trees in dry lands such as acacia, commiphora produce gum resin of which bio fuels are extracted from. Jatropha and plants such as aloe and others have many therapeutic uses.

To address these emerging issues, the government is developing and plans to implement policies on security of land tenure, land use and development, and unsustainable environmental conservation. A draft National Land Use policy was initiated in 2004, with a view to addressing a number of land-based challenges such as the proliferation of informal settlements, inadequate infrastructural services, environmental degradation, unplanned urban centres, and land conflicts. The government had pledged to give first priority to finalisation of this policy in this sector.

In efforts to address land degradation, the government set out some flagship programmes and projects to be rolled out in the 2008-2102 period. They are illustrated in the annex in table 30. Policy and legal instruments that guide the land degradation sector are illustrated in the annex in table 31.

4.4 Water management

The National Development Plan 2002-2008 recognizes Kenya as a water scarce country whereby the water demand exceeds renewable freshwater sources. It is also clear from the National Water Master Plan of 1992 that out of 164 sub-basins with perennial river flows, 90 will suffer from surface water deficit by 2010 while already 33 sub-basins without perennial river flow have an apparent water shortage. Kenya suffers from water scarcity since demand outstrips the stock of renewable freshwater. The current water supply is inadequate with only 57% of households using water from sources considered safe. There are disparities in urban water access with informal settlements recording lower levels. Surface water resources account for 86% while ground water accounts for 14%. Trans-boundary waters constitute 54% of water resources in the country.

The renewable fresh water per capita stands at 647 cubic meters and is projected to fall to 235 cubic meters by 2025 if supply does not keep up with population increase. There are also regional imbalances in water availability and utilisation that must be addressed. Inadequate water harvesting is responsible for the regional imbalance in water security with some parts of the country having a lot of water during rainy seasons and little or no water during dry periods.

The challenges are further compounded by extreme climatic changes that cause flooding and immense negative impact on both the social and economic fronts.

Agriculture is the main user of water in the country and currently consumes about 80% of the available water, while domestic and commercial use accounts for the rest. There are approximately 1,800 domestic water supply schemes, out of which 700 are managed by the Ministry of Water while the communities manage the rest. There are approximately 9,000 boreholes, most of which require rehabilitation. As a result of the skewed water distribution, water use conflicts among irrigation, livestock, wildlife, and environmental conservation is quite common.

The available water is often inadequate for industrial, commercial, domestic as well as livestock and wildlife use. This scarcity has intensified competition among various users and often results to conflicts. Involvement of local communities in the management of water resources through formation of Water Resource Users Association (WRUAs) has resulted in reduced illegal abstractions, reduced catchments encroachment, rehabilitation of catchment areas and river bank protection.

Water is also a vital requirement in hydro-power generation as hydro-power accounts for 72% of the country's electrical power generation. The government has implemented far reaching reforms in the Water sector within the legal framework provided by the Water Act 2002. Various water institutions have been established effectively separating the functions of policy formulation, service delivery and regulation of the water supply and sanitation and resources.

The government has been actively involved in improving water management in the country. This has particularly been achieved through the formation of WRUAs and the grass roots level. Other sector improvement initiatives have been spelled out in the country's V2030 first MTPs in the 2008-2012 period. Some of the flagship programmes aimed at improving water management in the country are illustrated in the annex in table 32. Policy and regulatory frameworks that have been put in place by government to support good water management in the country are illustrated in the annex in table 33.

As presented in the Kenya Water Act 2002, a comprehensive institutional framework for the water sector meant to provide for participation of all stakeholders in management and development of the water sector is established and operational. The Institutional framework is pyramidal with the following institutions:

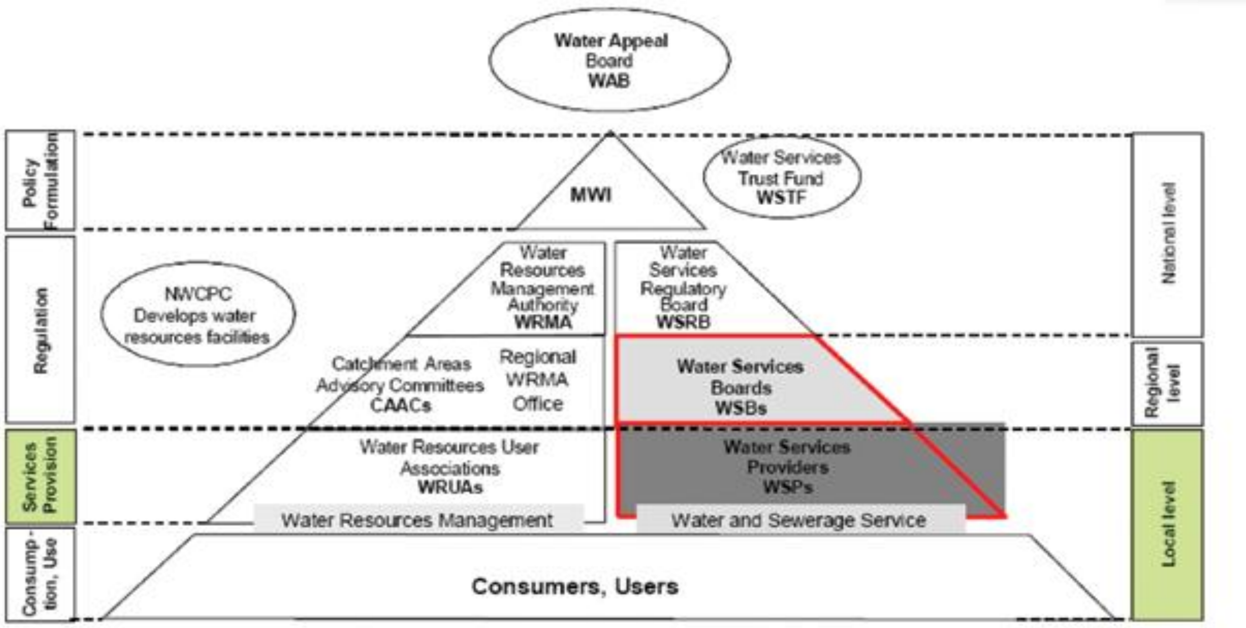


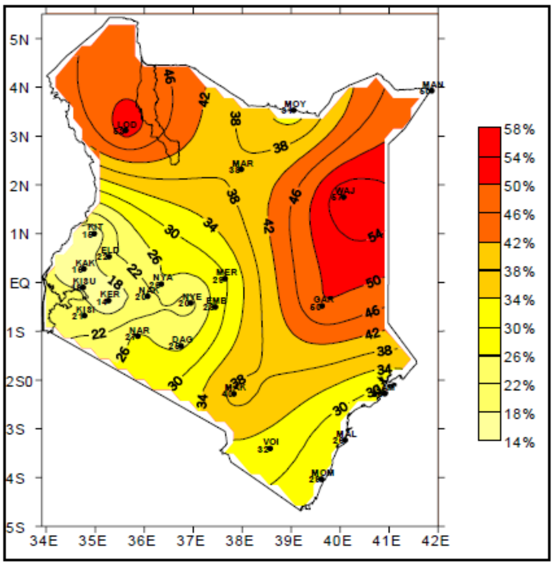
Fig 6: Institutional framework for water management in Kenya

4.5 Climate change

Climate variability and change add to Kenya's complex development picture through their impact on key sectors of the economy, or important drivers of growth, including agriculture and natural resources, water, health and infrastructure. Coupled with the country's low adaptive capacity to climate change, the country experiences a high level of vulnerability.

One of the climate change indicators that are easiest to measure is rainfall. Rain-fed agriculture is one of the main sectors of the country's economy. Additionally, livestock production is central to livelihoods and food security in the arid and semi-arid lands (ASALs). Weather-related hazards therefore present a serious threat to the socio-economic development of the country. Both instrumental and proxy records have shown significant variations in the space-time patterns of climate in Kenya (Birkett *et al*., 1999). Figure 1 shows the coefficient of variation in rainfall patterns; the degree of variability is highest in the ASALs.

Fig 7: The coefficient of variation of annual rainfall in Kenya (higher values in areas with large intra-annual variability) [**Source:** Birkett *et al*. (1999)].



4.5.1 From Rio 1992 to the Present

During the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, Kenya endorsed and adopted Agenda 21 which provided the world with potential practical solutions to the ever-pressing problems of the environment and development. Kenya has ratified most of the international agreements, treaties, conventions, and protocols resulting from the first Rio conference, that are considered to be in harmony with the country's plans for sustainable development. The most significant outcome was that member countries joined an international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), to cooperatively consider actions to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts were, by then, inevitable.

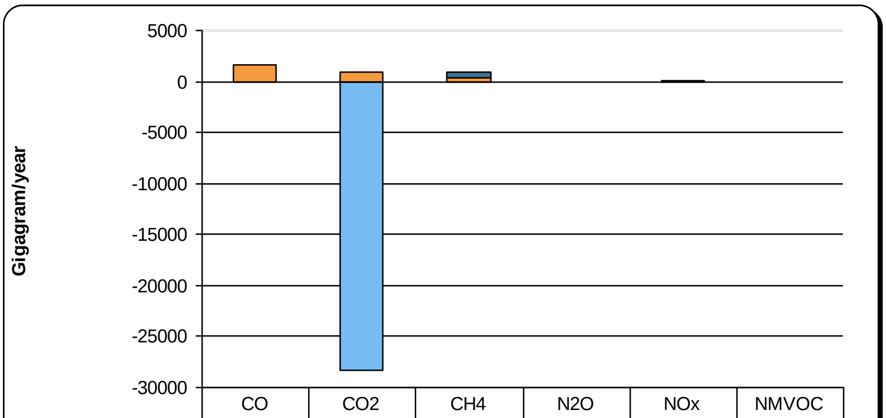
As demonstration of its commitment, Kenya hosted the second meeting of the Parties to the Kyoto Protocol (CMP 2), in conjunction with the twelfth session of the Conference of the Parties to the UNFCCC (COP 12), in Nairobi from 6 to 17 November 2006.

Endorsing the Rio and subsequent agreements meant undertaking certain activities and putting in place institutions to address climate change by each member country. For instance, following the adoption of Kenya's National Environment Action Plan (NEAP) in 1994, whose underlying objective is the integration of environmental concerns into the planning process, various sectoral action plans and strategies have since been adopted. The enactment of *The Environmental Management and Co-ordination Act (1999)* is one of such outcomes. This was a key cornerstone of Kenya's efforts to conserve and sustainably utilize its environmental resources.

Two greenhouse gas (GHG) inventories have so far been undertaken for Kenya: the US studies on Climate Change used the years 1989 to 1992 as a base-year, while 1990 to 1995 informed the UNDP/GEF-funded Capacity Building in Sub-Saharan Africa to respond to UNFCCC, respectively[8]. Results from the latter are presented in Kenya's First National Communication to the United Nations. This is a basic requirement[9] for Parties as indicated in Paragraph 1 of Article 4 of the United Nations Framework Convention on Climate Change (UNFCCC). However, no follow-on inventory has been done since then.

The 1990/1995 GHG inventories focused on five major sectors in Kenya (see Figure 1) namely:

1. Energy (fossil fuels, lubricants and woody biomass);
2. Industrial processes (cement production, lime use and soda ash production);
3. Agriculture (rice cultivation and livestock production);
4. Land use change and forestry (forest clearing, biomass harvest, abandoned managed lands and burning of savannah including grasslands); and
5. Waste (urban solid waste and wastewater).



	CO	CO2	CH4	N2O	NOx	NMVOC
Waste	0	0	15.185	0	0	0
LULUF	9.4	-28261	11	0.1	0.1	0
Agriculture	0.048	0	575.632	0	0	0
Industrial Processes	2.04	0	0	0	0.55	5.997
Energy	1645.3	990.1	344.8	2.61	46.7	0

Fig 8: Kenya's GHG emissions in 1994 by GHG and sector (**Sourced:** Kenya's First National Communication (GoK, 2002)

4.5.2 Taking it Further: Building Climate Change Institutions

In order to enhance investment that aims to reduce vulnerability and build resilience of the society, and in line with the provisions of the United Nations Framework Convention on Climate Change (UNFCCC) and its implementing instrument – the Kyoto Protocol, the Government of Kenya launched the National Climate Change Response Strategy (NCCRS) in April 2010.

To address the challenges posed by climate change in a systematic manner, the Government of Kenya formulated and published a National Climate Change Response Strategy (NCCRS, 2010). The NCCRS was developed with support from bilateral donors led by the Danish and

[8] *1ST National Communication of Kenya to the Conference of Parties to the UNFCCC. (GOK, 2002)*

[9] *Ibid*

Swedish Governments. To operationalize the NCCRS, the Government of Kenya, through the Ministry of Environment and Mineral Resources, has initiated an ambitious process to develop a National Climate Change Action Plan. The action plan put emphasis on three key messages as follows;

1. There is a close link between development and climate change adaptation and mitigation actions.
2. Both adaptation and mitigation response options need to be implemented by a variety of actors at local, national, regional and global levels.
3. The effective planning and implementation of climate change adaptation and mitigation actions require engagement and support of climate-related line ministries, private sector, civil society organizations and development partners.

The process of developing a comprehensive Climate Change Action Plan is also funded by bilateral donor support led by Danish Government; the Common Market for Eastern and Southern Africa (COMESA) and others. This Action Plan will help the Government put in place mechanisms to enhance the implementation of the NCCRS.

As a direct outcome of the NCCRS, a Climate Change Secretariat (CCS) has been established at MEMR which works very closely with the Environment and Climate Change Unit (ECCU) of the Office of the Prime Minster that is mandated to harmonize the implementation of environmental and climate change activities in Kenya. The CCS mandate is to coordinate climate change activities countrywide and works through climate change focal points based at every ministry. The CCS is enhanced by the ECCU whose mandate is to address the issue of climate change in a national context and facilitate the Kenyan government's efforts for sustainable development initiatives at a national and county level.

4.6 Marine and coastal environment

The coastal zone includes closely connected terrestrial and marine environment. It consists of distinctively rich, diverse and productive ecosystems, habitats and resources. For example: coastal wetlands, coastal forests, mangrove swamps, coral reefs, tidal flats, beach/dunes, and fishery resources. The coastal zone is essential for the well being of Kenyans. The zone has considerably contributed towards the economic and social benefits of Kenya.

The Kenyan coastline is about 600 kilometers in length and forms part of the western border of the Indian Ocean. Its most distinctive feature is the almost continuous fringing coral reef usually running parallel to the coast. Other features include the Lamu Archipelago with its extensive mangrove forests; the Tana River, Kenya's longest, which discharges through a complex wetland system into Ungwana Bay; the Sabaki River which incorporates the Athi and Galana rivers and discharges just north of Malindi; Mombasa Island at the entrance to the most extensive embayment on the coast, with Mombasa Harbour on one side and Kilindini Harbour on the other, the former leading to Port Tudor and the latter to Port Reitz; and, the southern complex of Gazi Bay, Chale Island, Funzi Bay and Funzi Island, Wasini Island and a number of smaller coral islands. The coastal zone provides life support systems for wildlife population. They provide key habitat for migratory birds, fish and a great many invertebrates, reptiles, amphibians and plants. Some of the wildlife species have been identified as endangered, threatened or rare.

The Kenyan coast features a diverse marine environment including estuaries, mangroves, sea grass beds and intertidal reef platforms and coral reefs which are vital for the diversity and reproduction of marine organisms. These are some of Kenya's most valuable ecosystems and are protected by 6 marine national reserves and parks. A large number of Kenyans derive their livelihoods from the coastal region and it is also a large contributor to the GDP through earnings due to the thriving tourism industry. This important ecosystem faces various threats from the ever increasing human population pressure through tourism, industrial pollution, over fishing, destructive fishing, mangrove logging and other unsustainable use of marine resources.

The highly productive systems in the coastal area play a crucial role in the socio-economic development of the country. The coastal economy depends heavily on tourism and the tourism sector is dependent on Kenya's coastal and marine resources, but the visitors to the coast are not the only pressure on the Kenyan Coast. The coastal environment is also at risk from marine transportation activities at the port and shipping along the coastline. It is estimated that at any given time, there are 50 ships on the, major shipping lanes off the Kenyan coast, approximately 9 are oil tankers with capacities ranging from 50,000 to 250,000 tons. Most of this coastal tanker traffic passes 250 nautical miles off shore, Kenya serving as the major port for Kenya as well as Uganda, Rwanda, Burundi, Ethiopia, Southern Sudan, North Eastern Tanzania and Somalia makes the threat for oil spill obvious. Oil pollution may result from normal activities such as ship to shore transfers and upland tank storage at the port.

Marine Protected Areas (MPAs) are defined as 'Areas set aside by law to protect and conserve the marine and coastal biodiversity and the related ecotones for posterity by enhancing the regeneration and ecological integrity of the mangroves, coral reefs, sea grass beds, sand beaches and their associated resources which are vital for sustainable development through scientific research, education, recreation and other compatible resource utilization.

The government's effort in comprehensively managing Kenyan marine and coastal resources is evident through the integrated coastal zone management policy which provides for the development of the coastal zone in Kenya. The framework is intended to guide actions and policies related to the use and management of Kenya's coastal zone resources, including their protection and restoration. The Kenya NCCRS has laid out some measures that could be put in place to ensure adequate coastal and marine resources management such as;

i) Developing country-wide maps depicting areas that will require shore protection and those to be left to adapt naturally.
ii) Establishing a biodiversity monitoring network to identify species that will be affected by climate change and those could be used as biological indicators
iii) Establishing networks of marine protected regions
iv) Providing economic incentives to diversify livelihood options to reduce over dependence on coastal resources

In terms of legal and regulatory frameworks, the government has made efforts by putting in place the following legal instruments; Kenya Maritime Authority Act, Cap 5 of 2006; and Merchant Shipping Act, Cap 4 of 2009.

5 VALIDATION OF STOCKTAKING REPORT AND CONCLUSION

As per the terms of reference (TOR), a national stakeholders' validation workshop was convened to discuss and validate the findings of the consultant specifically the stocktaking report. The occasion was also used to inform participants, government delegates and negotiators, the country's final position during Rio+20 on the twin objective of International Environment Governance (IEG) and Green Economy so as to sharpen skills of the negotiation team, and to affirm group interest of the different groups that shall be attending the conference.

The following are highlights of the suggestions and comments that were made by participants:-

- The Ministry of Environment and Mineral Resources (MEMR) noted that though V2030 lacked environmental pillar, the government was making effort to ensure that the second medium term plan 2013 to 2018 shall have environmental pillar. They recommended that each county should develop a mandatory baseline survey of their unique social, environmental and economic issues. Notably, the Kenya Institute of Administration (KIA) established in 1961 and whose purpose is to build human resource capacity and enhance management Skills. This in turn will ensure Kenyans get the results they expect from the public service, has prepared a plan/curriculum for environmental governance in each county.

- The need to highlight the role played by development partners in some of the on-going programmes in relation to Green Economy and Sustainable Development initiatives in Kenya in the report.
- Highlight the V2030 achievements for all the sectors from the just finalised 1st Medium Term Plan (2008-2012) progress report.
- Highlight issues on sustainable development arising from the flagship projects in V2030 that will be flagged during the conference.
- Illustrate the linkages between the different MEAs in Kenya and their effectiveness.
- Illustrate Kenya's attempts at eradicating poverty and integrated planning.
- Highlight institutional framework for climate change initiatives in Kenya.
- Update the legal and Policy Framework sections since there are new developments in the different sectors and there are new bills in parliament that are awaiting approval.
- Illustrations on how the private sector and the civil society organisations are being encouraged to participate in sustainable development.
- Highlight benefits that are associated with Kenya's new constitution.

To ensure informed feedback, participants were divided in discussion groups in line with the themes of the Rio+20 Conference, on sustainable development, green economy in the context of sustainable development and IEG. Each group was given one hour to discuss the four questions assigned to them and ten minutes to present their comments and findings. Below is an overview of the group findings

5.1 Group Discussion1: Sustainable Development

The assigned questions were:

a) *What message do you recommend that Kenya should take to the Rio +20 Conference regarding the link between economic growth and environmental sustainability?*
b) *On scale of 1 to 5 (1= least successful and 5= most successful), how successful is the integration of the three pillars (economic, social and environment) of sustainable development in Kenya's governance and national development frameworks? What are the indicators of success?*
c) *With the devolved system of government, what strategies can be suggested to address the need to eradicate poverty, increase equity, promote sustainable development and address environmental problems at county level?*
d) *Does the country need an integrated National Sustainable Development Strategy? Which institution of government should undertake the development of such a strategy?*

The findings of this exercise were that Kenya should be cautious about adopting 'green economy' in the context of development. This is due to the fact that Kenya's Position Paper emphasizes that green economy must foster accelerated economic development, address poverty eradication and improvement of social welfare.[10] However, this may not be in line with

[10] *Rio +20 – Summit – The Kenya Position*

the universal definition of ‘green economy’. In which case we should develop a broad definition of what ‘green economy’ means for Kenya

In the context of developing an integrated National Sustainable Development Strategy, the stakeholders were split in discussion. Some stakeholders were of the opinion that Vision 2030 is the existing sustainable development strategy for Kenya, and an alternative view was that Kenya needs to develop a new strategy to guide Kenya’s sustainable development, even though Vision 2030 exists. This new strategy will provide an overarching guide to counties in implementing sustainable development activities. There are merits in the two options, such as: (i) integrating an environment pillar in the existing Vision 2030, will ensure that there is no need to start from scratch in the development of a blue-print. This will limit costs incurred due to loss of time or resources; and (ii) developing a separate parallel document will ensure a more focused strategy towards sustainable development. Furthermore, the Minister of Environment is the chair of National Environment Council (NEC) whereas the President chairs National Economic and Social Council (NESC). It may be beneficial to give both councils the sufficient authority to undertake their objectives, by ensuring the President chairs both councils. It was further proposed that an overview of the NESC and NEC is required to determine what their efforts are in addressing environmental issues. As environmental issues are crosscutting it was recommended that NEC and NESC merge to integrate economic, social and environment issues.

5.2 Group Discussion2: Green Economy in the context of Sustainable Development

The assigned questions were:

a) *On a scale of 1 to 5 (1=least successful and 5=most successful), how integrated is ‘Green Economy’ in Vision 2030 and Medium-Term plan? What are the indicators of success?*
b) *On a scale of 1 to 5(1=least successful and 5=most successful) how successful would the existing funds (e.g. Green Climate Fund etc.) and / or finances be in driving ‘Green Economy’ in the context of sustainable development? What are the indicators of success?*
c) *With a devolved system of government, how can county governments integrate ‘Green Economy into sustainable development?*
d) *How can public private sector partnerships enhance ‘Green Economy’ in Kenya? What can the government do to provide an enabling environment?*

The findings of this exercise were that, Kenya recognizes that there is no universal definition of green economy…However domestically it’s conceptualized to include activities that are “green”, “clean” and “carbon neutral” in character.[11] The group believed that green economy was integrated in Vision 2030 and First Medium Term plan (MTP1) and provided indicators to substantiate the same. The indicators rightfully identified renewable energy sources, including but not limited to wind, solar and biofuels that are in the pipeline. However, some stakeholders felt the contrary stating that Vision 2030 and MTP1 did not provide for green economy in the blue print and that green economy concept is fairly new. That said, there is a need for crystal clear definition of green economy. There was general consensus that indicators such as ICT and greening of institutions were important in the context of sustainable development in encouraging reduction of carbon emissions due to minimise transportation costs e.g. due to MPesa, ATM machines, etc., there is reduction of paper use and emission associated with sending money in the countryside and other hitherto remote destinations. In addition in ‘greening’, through growing trees, suitable and appropriate species composition should be considered in such activities. Other green initiatives were identified as energy efficient buildings,

[11] *Rio +20 – Summit – The Kenya Position*

use of motor bikes and bicycles (*boda boda*) in the cities, etc The stakeholders suggested that more illustrations are necessary to illustrate greening of institutions and cities. The apparent conclusion was that stakeholders had different perspectives on the definition for green economy and greening. Kenya will need to develop country specific definitions to allow for information dissemination at national and county level.

5.3 Group Discussion3. Institutional Framework for Sustainable Development (IFSD)

The assigned questions were:

a) *What international governance system do we need to address 21st century challenges to sustainable development in Kenya? (For example, World Sustainable Development Organization, United Nations Environmental Organization, etc)*
b) *What national institutional framework should be enhanced or established to ensure that major stakeholders can play their role in the country's path to sustainable development?*
c) *How can we devolve the national institutional framework to enhance sustainable development at county level?*
d) *How can we enhance the role of non-state actors (such as, private sector, civil society etc) in questions 1 to 3 above?*

The findings of this exercise were that Kenya's need to weigh the different proposals of either upgrading United Nations Environmental Programme (UNEP) to United Nations Environmental Organisation (UNEO) or establishing the World Sustainable Development Organisation. It is important to understand the risks or opportunities that may impact on Kenya. It is also significant to understand that Kenya's global perception is not bad as we assume. For example, when bidding against India, France and Germany among others to host an environmental and sustainability research panel, Kenya did not lose the bid to Germany due to insecurity issues. In fact, Kenya scored high in the technical criterion and lost during the financials assessment. We should therefore be confident when addressing the transformation of UNEP argument. We also need to continue investing in diplomatic lobbying aspects, to gather sufficient support and allow other African states speak on our behalf.

Pursuant to Kenya's position paper the stakeholders agreed that Kenya has an interest in transforming UNEP to UNEO. The new body would be an appropriate and overarching in its responsibility to deal with environmental integration which is poor globally; not just in Kenya.. There are two processes for upgrading UNEP, namely:(i) upgrading UNEP to UNEO as a specialized agency, which would be an autonomous intergovernmental organisation, with universal membership, decisions making powers and core funding from member contributions. Specialised agencies are generally incorporated into the UN system by the UN Economic and Social Council in accordance with Articles 57 and 63 of the UN Charter. This process shall require ratification under the UN Charter and may prove to be lengthy; or (ii) strengthening and enhancing UNEP to UNEO, by way of formal agreement within the parties. This would allow for a revision of UNEP's mandate to encompass universal membership, implementation support and decision making powers through a UNEO General Council and elected Director General. The universal membership requirement will also allow for increased and predictable funding. This process shall not require ratification.

The upgrade of UNEP to UNEO is slowly gaining momentum as Kenya lobbies for its transformation. This is clear from Nation newspaper articles which showed that "Vice President (VP) Kalonzo Musyoka left for China on a three-nation diplomatic charm offensive to seek international support for Kenya's bid to have the UNEP offices in Nairobi upgraded. The Vice-President is carrying three letters from President Kibaki and has already delivered the first to the Obama Administration in Washington. The other two will be delivered to the Chinese and Indian governments. In China, Mr .Musyoka is expected to meet top government officials including Chinese Vice-President and senior Communist Party officials and the President of Exim Bank of China which finances key projects in Kenya. The Kibaki Administration wants the status of UNEP in Nairobi upgraded from "programme" to "headquarters" status, an agenda which will come up next month at the Rio +20 United Nations Conference on Sustainable Development in Brazil. VP Musyoka was also in the USA for talks with the recently appointed World Bank Vice-President for Africa, Mokhtar Diop in Washington".[12] The gains of upgrading UNEP to UNEO include: (i) assisting to mainstream environment issues at an international level; (ii) providing coherent handling of substantive global environmental issues; and (iii) allowing Kenya to benefit from conference tourism. Nevertheless, even if Kenya does not meet standard of physical qualifications for hosting UNEO, the substantive issue of mainstreaming environment issues is the biggest driving force.

Stakeholders believed that there is no need to develop a national institutional framework to enhance sustainable development at county level. In fact NEMA's mandate should be strengthened to make provision for such activities possible. The stakeholders further believed that non-state actors should be given a more active role and not merely act as observers. They could potential feature as thematic representatives and/or watchdogs in the reinforcement of IFSD.

From the foregoing it is clear that the country has made major strides as far as the implementation of Agenda 21, the MDGs as well as the implementation of the three pillars of Sustainable Development. Pivotal to this achievement, has been the enactment of ERS, EMCA 1999, Vision 2030 and the new Constitution. These achievements would not have been possible without support of development partners (both multilateral and bilateral) as evidenced by the many programmes in relation to Green Economy and Sustainable Development initiatives outlined in this report.

The stocktaking exercise has provided valuable information on Kenya's achievement from Rio 1992 to date. It is also very clear from the report that there are areas where very little achievements have been made. The gaps and challenges identified can be turned into opportunities in the future. Rio+20 Conference is an opportunity for Kenya to reflect on what has been achieved, to review the challenges and to internalise sustainable development concepts for further implementation in our country. The crucial message for Kenya to take to Rio, is to articulate the need for new finance, technology development and transfer, and capacity building needed for poverty eradication and narrowing the increasing divide between the rich and the poor.

Whereas it has been noted that Vision 2030 is Kenya's socio-econo-political blue print, it lacks an environmental pillar. There is need to mainstream environment and ecological issues into Vision 2030 to make it in line with Agenda 21. In light of the new Constitution obligating every citizen's constitutional rights to a clean and secure environment, merging the National Environment Council (NEC), the highest decision making organ created by EMCA1999 and chaired by the Minister of Environment, with the National Economic and Social Council (NESC), Vision 2030 highest decision-making organ chaired by the President could result to '*the National Economic, Environmental and Social Council (NEESC)*' which will have sufficient authority to undertake integrated sustainable development objectives, as it will be chaired by the President of the Republic of Kenya.

[12] Source: Nation newspaper article dated 26th May 2012 - http://www.nation.co.ke/News/VP+in+China+to+lobby+for+Unep+office+upgrade+/-/1056/1414282/-/view/printVersion/-/122ktayz/-/index.html

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7 ANNEX

Table 1: Programmes in Agriculture sector

Programme	Year
Kenya-Denmark Natural Resources Management Programme	2010-2014
Kenya-World Bank Arid Lands Resources Management Project (ALRMP)	1996-2011
EU Community Development Trust Fund (CDTF)	1996-2014
Kenya GIZ Programme	2003-2013
Kenya-IFAD Kenya Programme	2007-2012
Kenya- JICA Programme	
National Environment Action Plan (NEAP)	2009 - 2013
Ministry of Agriculture Strategic Plan	
Strategy to Revitalize Agriculture	2004 – 2014
Kenya Rural Development Strategy (KRDS)	2002-2015
Agriculture Sector Development Strategy (ASDS)	2010-2020
National Water Resources Management Strategy (NWSS)	
National Climate Change Response Strategy	2009

Table 2: Policies in Agriculture sector

Policy	Year
National Food Policy	1991
National Food and Nutrition Policy	1994
National Agriculture Sector Extension Policy (NASEP)	2001
Potato Policy	2005
Pyrethrum Policy	2005
Cotton Policy	2006
Sugar Policy	2006
Oil Crop Policy	2006
Nuts and Cassava Policy	

Table 3: Laws and policies in Forestry sector

Laws and Policies	
Forests Act, 2005	The Forests Act, 2005 makes provision for the establishment, development and sustainable management, including conservation and rational utilization of forest resources for the socio-economic development of the country. The main elements of the Law include: • Integrated approach to forest management, conservation and development (including sustainability concerns, ecological values and social interests) • Management to entail sustainable multiple forest uses and benefits (including timber, fuel, food and other forest products, as well as biological diversity and resources, protection of ecosystems and watersheds, recreation and tourism, and other environmental services such as carbon sequestration) • Existence of adequate planning tools (in particular management plans); • Existence of environmental and social impact assessments/audits (e.g. certification schemes); • Transparent forest concessions and other contractual arrangements, with provisions for accountability; • Community-based arrangements, decentralization of responsibilities and devolution of powers to local actors. Commitment to inter-sectoral development sustainable use of forest resources and international conventions and other agreements to promote sustainable management, conservation and utilization of forests and biological diversity.
The Forest Policy 2007	The Sessional Paper Number 1 of 2007 on Forest Policy was formulated to address the challenges obtaining in the forest sector in the country. The Policy outlines the following specific objectives: • Contribute to poverty reduction, employment creation and improvement of livelihoods through sustainable use, conservation and management of forests and trees; • Contribute to sustainable land use through soil, water and biodiversity conservation, and tree planting through the sustainable management of forests and trees; • Promote the participation of the private sector, communities

	and other stakeholders in forest management to conserve water catchment areas, create employment, reduce poverty and ensure the sustainability of the forest sector; • Promote farm forestry to produce timber, wood fuel and other forest products; • Promote dry land forestry to produce wood fuel and to supply wood and non-wood forest products; and Promote forest extension to enable farmers and other forest stakeholders to benefit from forest management approaches and technologies.
The Draft ASAL Development Policy	The objective of the draft ASAL strategy is to improve the standard of living of the ASAL population by appropriately integrating ASALs into the mainstream national economy and social development in an environmentally sustainable manner. This Policy is largely supportive to sustainable utilization of fuel wood materials for charcoal especially in areas that are currently under communal land ownership.
Draft National Land Policy	The Draft National Land Policy provides a platform for addressing current issues such as access to land, land use planning, restitution of historical injustices, environmental degradation, conflicts, unplanned proliferation of informal settlements, outdated legal framework, institutional framework and information management.
The Energy Policy (2005)	The energy policy seeks to ensure to ensure adequate, quality, cost-effective and affordable supply of energy to meet development needs, while protecting and conserving the environment. It recognizes environmental protection as one of the biggest challenge. It proposes several policy responses with the following being relevant to forest conservation: • Enforcing protection of catchment areas, • Reforestation and afforestation, and Encouraging agro forestry practices.
The Water Policy	The main objective of the water policy is to provide for the supply and distribution of water resources throughout Kenya. It recognises the fact that increased human activities in catchment areas have reduced forest cover and is hence a threat to water availability. This policy is applicable to river basin management and can therefore be applied in the management of river deltas, riverine forests and adjacent catchments. Its holistic approach to catchment protection provides room for synergies between forestry and water sectors in terms of resource mobilization.
National Food Policy	This policy summarizes the land use situation and the intensity of land use required for self-sufficiency in food. The biggest threat facing Kenya's forests is agricultural land expansion especially through the short-term shifting cultivation. The policy advocates for stoppage of further destruction of forests in both gazetted and trust land forests. Its emphasis on increased food production may be at the expense of forests. It is an important policy to reconcile land use given the stiff competition forestry is facing from

	agriculture.
The Environmental Management and Co-ordination Act (EMCA) of 1999	This Act provides a framework for integrating environmental considerations into the country's overall economic and social development. It aims at harmonising the various sector specific legislations that impact on environment to ensure greater protection of the physical and social environment. Implementation of this Act is guided by the principle of public participation in the development of policies, plans and processes for environmental management. It also recognises the cultural and social dimensions applied in the management of natural resources.
The Water Act, 2002	The Act provides for catchment protection and protection of wells and springs that occurs in the forest and further support community involvement in management of these catchments. It is also useful in riverine vegetation protection including other smaller rivers that flow into the ocean. The Act supports the user-pay principle that is also supported by the Forests Act 2005. Kenya Forest Service can therefore work with water user groups (consumers), service providers and water service boards to conserve catchment forests.
The Wildlife (Conservation and Management) Act, Cap 376	The Act was enacted after Kenya ratified the CITES and therefore strongly provides for the protection of endangered flora and Fauna. As provided for in the Act, the process of gazettement and de-gazettement of protected areas under KWS jurisdiction requires parliamentary approval. This level of decision-making and legitimacy of the whole process ensures protection of these areas.
The Agriculture Act, Cap 318	This Act provides for soil and water conservation and prevents the destruction of vegetation. Its effective implementation can help address short term shifting cultivation or the slash/burn agriculture, which is the main force behind forest degradation. The Act provides for rules to prohibit, regulate, and control clearing of land for cultivation and grazing of livestock thus complementing the Forests Act. Enforcement of the Act has been the biggest problem especially on protection of riverbanks that have been cultivated resulting in soil erosion and heavy silt load on rivers.
The Antiques and Monuments Act, Cap 215	The Act has been used for gazettement of areas of historical importance and threatened heritage e.g. the Kayas at the coast. Most of the Kayas are now under threat from cultivation, charcoal burning and mining.
The Local Government Act	This Act empowers County Councils to make by-laws used to control cutting of timber, destruction of trees and shrubs and afforestation. It also authorizes local authorities to take measures necessary to control bush fires, quarrying for minerals, sand, gravel, clay or stones. The Act is applicable in trust lands where resource exploitation needs control. Fires have been listed as major threat to our forests so an opportunity is available for engaging communities in fire fighting and control. The trust lands under the control of the local authorities have witnessed massive destruction of forest resources through

	charcoal burning and other illegal forest activities.
The Fisheries Act	The Act regulates trout fishing in the forests and protects fish breeding areas and is relevant to mangrove management at the coast.
Chiefs' Authority Act	The Act empowers Chiefs to enforce implementation of various environmental and conservation provisions within the local limits of their jurisdiction, including controlled use of tree resources on private land. This act is important because it checks the activities at grassroots level but its implementation has been weak.

Table 4: Policies relevant to Environment and Mineral resources sector

Policies and Acts	
Draft National Environmental Policy	The Draft National Environmental Policy (NEP), 2008 treats climate change and disaster management as an emerging environmental issue and states that the government will adopt two approaches in combating climate change – mitigation and adaptation. The policy recognizes that many of the natural disasters in Kenya are climate related, e.g. floods, drought, occasional landslides, increased disease episodes, etc, and that the economic impact of these disasters cut across the key sectors of the economy. With agricultural production, industrial processing, manufacturing, tourism, infrastructure and public health being the most impacted. The policy anticipates that with climate change the frequency and intensity of extreme weather events such as floods and droughts will increase. In order to deal with Climate Change, NEP suggests following staged measures:- 1. Develop and implement a National Climate Change Strategy, 2. Identify and raise awareness of opportunities for adaptation measures through promotion of appropriate technology transfer and capacity building, 3. Develop and implement under the Kyoto Protocol's Clean Development Mechanism (CDM) programmes and projects that encourage significant levels of investment and technology transfer for sustainable development, 4. Develop an integrated, improved early warning and response systems for climate and disaster risks with a clear strategy for dissemination of information to the grassroots, Build and strengthen research capacity on climate change and related environmental issues

The Environmental Management and Coordination Act (1999)	The legal framework for environmental concerns within Kenya is the Environmental Management and Coordination Act No. 8 (EMCA) of 1999. However, the EMCA has minimal content relating explicitly to either adaptation or mitigation of climate change. The EMCA institutionalizes a committee mandated to produce a National Environment Action Plan every 5 years. Yet no plans have emerged since 1994 (and even then climate change was not mentioned). This leaves the legitimacy of the NCCACC in serious question and the issue of climate change vastly underrepresented. Whilst there are provisions within EMCA 1999 for the Minister to issue regulations around coastal erosion or mangrove conservation – that may be of use in adaptation to climate change – a comprehensive approach and understanding around adaptation which tackles vulnerable pastoral and agricultural communities, for instance, is lacking entirely. Although there are opportunities for mitigation through use of incentives/disincentives in section 57 of EMCA, and reduction of emissions through proposed Air Quality Regulations in section 78, there is need to amend the EMCA in light of the shortcoming and the fact that a new Environmental Policy is soon to be established.
The Mining Act	Prospecting and exploitation of mineral resources in Kenya is regulated by the Mining Act Cap. 306, 1940 and revised in 1987, and the Environmental Management and Co-ordination Act, 1999. Ownership of the minerals is vested in the Government of Kenya and includes minerals found within Kenya's Continental Shelf, Territorial waters and the Exclusive Economic Zone. The act excludes petroleum and oil resources which are regulated under a separate act. The Ministry of Environment and Natural Resources is in charge of mining activities in Kenya. The Kenya Chamber of Mines is the Ministry's body which regulates mining in Kenya. Kenya is in the process of revising its Mining Act which dates back to 1940. The Mining and Minerals Bill 2011 is awaiting parliamentary approval. The present operational Act, promulgated in 1940, has been reviewed to match contemporary international mining practice. The reviewed draft mineral law is to provide for lesser discretionary powers to the licensing authorities and hence provide for greater security of tenure. It also aims to provide for greater environmental protection, as embodied in the 1999 Environment Management and Coordination Act, from the undesirable effects of mining activities. Together with the review of the Act, the Government is also in the process of formulating a mineral policy for Kenya. The draft policy and legislation have now being finalised (MEMR, 2012).
The petroleum (Exploration and Production) Act (Revised 1986)	This is contained in Chapter 308 of the Laws of Kenya and regulates the negotiation and conclusion by the Government of petroleum agreements relating to the exploration for, development, production and transportation of, petroleum and for connected purposes.

Table 5: Policies relevant to Tourism and Wildlife sector

Policies
Sessional Paper No. 8 of 1969 on Development of Tourism in Kenya

Tourist Industry Licensing Act (TILA) Cap 381 of 1968
Hotels & Restaurants Act (HRA) Cap 494 of 1972
The Kenya Tourism Development Corporation (KTDC) Act,1967
The Wildlife Act Cap 376

Table 6: V2030 Flagship projects in Tourism and Wildlife sector

Flagship projects	
Development of three (3) resort cities	To be developed in Isiolo, Diani and Kilifi.
Better marketing of little-visited parks	The aim is to bring more tourists to game parks that have not been receiving many visitors, and which are located in all parts of the country.
The premium parks initiative	This will provide more high-end tourists with a unique experience in popular destinations.
The under-utilized parks initiative	Aims to upgrade the standards of attractive but seldom visited parks.
The niche products initiative	This will provide 3,000 beds in high-cost accommodation for tourists interested in cultural and eco-tourism, as well as in water-based sports and related activities.
Certification of 1,000 home-stay sites	The aim of this is to promote cultural tourism in Kenyan homes.
The business visitors' initiative	This is expected to attract five additional international hotels to Nairobi, Mombasa and Kisumu, and also leverage Isiolo as a new high-end tourist destination.

Table 7: RDAs under the ministry of Regional Development Authorities (RDAs)

Regional Development Authorities
Tana and Athi Rivers Development Authority (TARDA)
Kerio Valley Development Authority (KVDA)
Lake Basin Development Authority (LBDA)
Ewaso-Nyiro North Development Authority (ENNDA)
Ewaso-Nyiro South Development Authority (ENSDA)
Coast Development Authority (CDA)

Table 8: V2030 Flagship programmes in the Energy sector

Flagship programmes	
Rural Electrification programme (REP)	A Rural Electrification Programme financed to the tune of Kshs. 2.7 billion to cover various parts of the country. Upon completion the project will facilitate connection of power to 460 trading centres and 110 secondary schools, among other public amenities.
Energy Access Scale-up Programme	Through this programme, the government aims to connect one million households with electricity over a five year period

	at an estimated cost of Kshs. 84 billion targeting major trading centres, secondary and primary schools, community water supply works and health centres. Also two common user LPG handling facilities will be constructed in Mombasa and Nairobi with capacities of 6,000 ton and 2,000 ton respectively.
Olkaria IV appraisal drilling of 6 wells	This is expected to produce 70 MW of electricity. The project targets to commercially exploit steam available in this field.
Wind Power generation by IPPs at various sites	Targets exploitation of about 150MW of wind power/ Power generation from sugar processing will be exploited. It is envisaged that the potential of about 120MW will be exploited using sugar factories as a base through Public Private Partnerships (PPP).
The Energy Sector Recovery Project (ESRP)	This is a World Bank and other bilateral donor funded project with a major component on "Distribution Reinforcement and Upgrade" to be implemented in a period of four years. It will improve the quality and reliability of supply; reduce system losses and incr5ease access to electricity service especially in urban and peri-urban areas.
National Electricity Supply Master Plan	The plan will identify new generation and supply sources to ensure that the national electricity supply dependable energy is tripled in the next ten years from the current 1, 050MW (in 2008) to 3,000MW by 2018.

Table 9: Policies in the Energy sector

Policies
Electricity Power Act No. 11 of 1997
Sessional Paper No. 4 of 2004 on Energy
Energy Act No. 12 of 2006
The Kenya Electricity Access Investment Programme Prospectus: 2009 – 2014
Least-Cost Power Development Program (LCPDP) 2009 – 2029
Rural Electrification Master Plan (REMP)
Renewable Energy Feed in Tariff (FiT)
The Energy (Solar Water Heating) Regulations, 2010
Strategy for the Development of the Bio-Diesel Industry in Kenya (2008-2012)
The Grid Code
Green energy fund

Table 10: V2030 Flagship programmes in Water and Irrigation sector

Flagship projects (2008-2012)	
ASAL Development Project	Implemented in the Tana and Athi River basins targeting increase in land under irrigation between 600,000 – 1,000,000 Ha.

One year recovery programmes	Broad based covering all aspects of agricultural production i.e. seedlings, fertilizers, equipment, agricultural-based institutions, pastoralist communities, machinery, policy and legal framework, grain reserves amongst others.
Land Use Master Plan	The National Land Use Master Plan aimed to be developed with the Agricultural Land Use Master Plan as part of it. The master plan will enable effort targeted at efficient utilization of all forms of land.

Table 11: Policies relevant to Water and Irrigation sector

Policies
Irrigation and Drainage i) National Irrigation and Drainage Policy, 2009 ii) National Water Policy, 1999 iii) The Irrigation Act, Cap 347
Water Resources i) Natural Water Resource Management Strategy (NWRMS), 2006 ii) The Water Act, 2002 iii) Water Sector Strategic Plan (WSSP) 2010 iv) National Water Services Strategy (NWSS) – 2007 v) The Territorial Waters Act, Cap 371 vi) The Lakes and Rivers Act, Cap 409

Agriculture i) Agriculture Sector Development Strategy, 2010-2020 ii) National Food Policy (1991) iii) National Food and Nutrition Policy (1994) iv) National Agriculture Sector Extension Policy (NASEP) (2001) v) The Agriculture Act, Cap 318 (as amended by 11 of 1993 and 2 of 2002) vi) The Agriculture Act (Cap 318) the Horticultural Crops Development Authority Order, 1995 (Sub. Leg repealed Orders of 1967 and 1986) vii) The Agriculture Produce (Export) Act, Cap 319 viii) The Plant Protection Act, Cap 324 ix) The Cereals and Sugar Finance Corporation Act, Cap 329 x) The Coffee Act, 2001 (No.9 of 2001) (Cap 333 repealed) xi) The Sugar Act, 2001 (No. 10 of 2001) (KSA Order of 1973 repealed) xii) The Cotton Act, Cap 335 xiii) The National Cereals and Produce Board Act, Cap 338 xiv) The Pyrethrum Act, Cap 340 xv) The Tea Act, Cap 343 (as amended by No. 6 of 1999) xvi) The Fertilizers and Annual Foodstuffs Act, Cap 345

Table 12: V2030 Flagship projects in the Transport sector

Flagship projects (2008-2012)	
National Integrated Transport Master Plan	Its aim was ensuring that investment and location of transport infrastructure and services are consistent with public policies while ensuring optimal transport infrastructure investment to position Kenya as a transport hub of the East and Central African region.
National Road Safety Programme	Objective of programme was to fast-track implementation of the National Road Safety Action Plan to achieve the targets of reducing the incidence of road crashes and their impact on the Kenyan economy.
Road Network Expansion	The aim was to construct 2,950 km of new roads by 2010 by developing and effectively managing a robust road system that will require minimum maintenance.
Development of a new transport corridor to Southern Sudan an Ethiopia	The project involved the development of a new transport corridor from the new port at Lamu through Garissa Isiolo, Maralal, Lodwar, and Lokichogio.
Nairobi Metropolitan Region Bus Rapid Transit System	The Government has laid down plans for the development of a rapid bus transport system, starting with the following three transport corridors: Athi River Town to Kikuyu Town; Thika town to the central business district; and the Jomo Kenyatta International Airport to the central business district.

Table 13: Policies in Transport sector

Policies

Integrated National Transport Policy, 2009
Kenya roads board (1999) Act
The Traffic Act
Public Roads and Roads of Access Act
The Transport Licensing Act
The Insurance (Motor Vehicles Third Party Risks) Act
The Public Roads Toll Act
Annual Public Roads Programme (APRP)

Table 14: V2030 Flagship Programmes Youth Affairs and Sports

Programme	Details
Affirmative Action Policy	The policy aims to ensure that the youth have a 30% representation in appointment to public service, management and development committees, political, social and economic sectors.
Revision of education and training curriculum	This will be conducted at all levels of learning to improve the production of skills that are demand-driven. The curriculum will further teach behavioural and life skills in order to impart positive character traits that will help the youth to make appropriate and informed choices in life.
Revitalisation of Youth Polytechniques	To facilitate the training of young people in technical, vocational and entrepreneurial skills in an effort to increase their productivity and equip them with skills to participate fully in productive activities.
Increase of allocation to secondary and tertiary level bursary programmes	This will increase the opportunities particularly for destitute young people to continue with education irrespective of their poor background.
Youth Empowerment Centre	Centres will be rehabilitated or established in every constituency countrywide. The purpose of these will be to creatively engage young people with a view to tap young talent and create opportunities for them.
International Academy of Sports	This Academy will be set up at Moi International Sports Centre Kasarani where land has already been earmarked for development. This will be an institution for advanced training in all areas of sports.
Regional Sports Stadia	The government seeks to establish 30 regional stadia around the country to promote the development of sports within each of the regions as well as tap the immense talent of the youth.
Establishment of a Sports Lottery Fund	The fund will provide a tool for raising funds targeting sports development. It is estimated that the lottery fund will have the potential to inject more than Kshs. 500 million into the sport budget annually.
International Centre for Arts and Culture	The Centre will be located at Moi International Sports Centre, Kasarani. It will house a National Hall of Fame to honour contributions and recognize the special talent of Kenyans from all walks of life in the areas of sports, film, music, culture, and other areas.
One billion tree planting	**":** This campaign will be implemented in order to engage the

campaign under the "Trees for Jobs Programme	youth, address the global campaign on environmental conservation ad help increase the forest cover of the country.

Table 15: Policies and Legal Framework supporting Youth Affairs and Sports sector

Policies and legal framework	
National Youth Policy, 2007	The National Youth Policy is a framework for youth development across the country. It endeavours to ensure that all young women and men are given meaningful opportunities to reach their full potential, both as individuals and as active participants in society. The Policy addresses the major concerns and issues critical to young men and women and gives direction to youth programmes and services provided by government and non-government organizations. Through the National Youth Policy, the government declares the importance of the active involvement of young people in national development, demonstrating the distinctive and complementary roles of all government ministries, the non-government sector and youth groups in youth development; providing a framework with common goals for development and promoting a spirit of co-operation and co-ordination.
Adolescent Reproductive Health Development Policy (ARH&D)	ARH&D responds to concerns about adolescents raised in the National Population Policy for Sustainable Development (NPPSD), the National Reproductive Health Strategy (NRHS), the Children's Act (2001), and other national and international declarations and conventions on the health and development of adolescents and youth. The policy intends to bring adolescent health issues into the mainstream of health and development. The policy examines the prevailing social, economic, cultural and demographic context of adolescent sexual and reproductive health, its implications and consequences to their health and development. As a complement to sector-specific policies and programs the policy defines the structures and key target areas for ensuring that adolescent health concerns are mainstreamed in all planning activities.
The Youth Employment Marshall Plan	The government, through Ministry of Youth Affairs and Sports (MOYAS), aspired to create 500,000 new jobs annually in both the formal and informal sectors, beginning January 2009. The Marshall Plan includes the following; a) Kazi Kwa Vijana – KKV (Jobs for the youth) b) The Trees for Jobs Initiative Programme c) Roads 2000 Project d) Youth Enterprise Development Fund (YEDF) Technical Industrial Vocational Education and Training (TIVET)

Table 16: V2030 Flagship programmes Gender, Children & Social Development

Programme	Details
Gender mainstreaming	This will ensure inclusion of gender related issues in all

	government policies, plans and programmes to ensure that the needs and interests of each gender (i.e. women and men, girls and boys) are addressed.
Gender disaggregated data	This information that accurately portrays the gender balance in all sections of the country will be availed to form basis for developing gender-sensitive policies, plans and programmes.
Affirmative Action Policy	Once this policy is instituted, it will ensure that women have at least 30% representation in recruitment, promotion and appointment at all decision making levels.
The Women Enterprise Fund	The fund will continue to provide Kenyan women with access to alternative financial services and to increase earned incomes (purchasing power parity).

Table 17: Policies and Legal Framework Gender, Children & Social Development

Policy	Year
National Gender and Development Policy	2000
Strategic plan	2008-2012
Gender Policy in Education	2007
National Policy for the Abandonment of FGM	
Social welfare policy	1964
The Children Act	2001
National Community Development Plan	1964

Table 18: Policies being developed and their status, Gender, Children & Social Development

Policy	Status
The National policy on older persons and Ageing Status	On draft form awaiting cabinet approval
National Policy on Social Protection Status:	Still in progress
National Policy on Female Genital Mutilation (FGM)	Still in progress
National Policy on Community Development	Still in progress

Table 19: Policies in Special Programmes sector

Policy	Details
National Disaster Management Policy, 2009	The policy views disaster management as a full continuum from prevention, preparedness, relief and rehabilitation, back to mitigation and prevention. The Policy aims to increase and sustain resilience of vulnerable communities to hazards. This entails a shift from the short term relief responses to sustainable development and continual risk reduction and preparedness. The Policy will go a long way in preserving life and minimising suffering by providing sufficient and timely early warning information on potential hazards that may result in disasters. It will also aim to alleviate suffering by providing timely and

	appropriate response mechanisms for disaster victims.
National Disaster Response Plan, 2008	The Aim of this Plan is to establish an understanding of the structure and operating procedures for addressing all aspects of disaster preparedness and response in Kenya. This plan seeks to ensure that disaster preparedness for response is carried in a coordinated and collaborative manner, ensuring the greatest protection of life, property, health and environment. Food Security and Nutrition Policy: One of the proposals I the policy is the development of a strategic food reserve which will expand the current strategic grain reserve to include other food commodities such as powder milk, rice, pulses meat and a reserve (cash) fund.
Disaster Preparedness Programme, 2008 - 2012	The V2030 first medium term plans indicates that the government will aim to secure funding from global funding mechanisms to implement adaptation programmes in ASALs and high-risk zones. This will be accompanied by an improved disaster-preparedness strategy, including an early warning system and environmental monitoring covering climatic events (e.g. droughts, floods, pestilences, seismic occurrences etc.) as well as initiation of public awareness, avoidance and preparedness campaigns.

Table 20: Flagship Programmes Education sector

Programme	Details
Construction of new schools	To build and fully equip 560 new secondary schools to accommodate the increasing number of students graduating from primary schools.
Recruitment of more teachers	The sector plans to recruit more teachers both at the primary and secondary level to address the acute shortage and improve the pupil to teacher ratio. An additional 28,000 teachers are to be recruited (for primary and secondary education). These will be distributed over the first four years of the plan period, with 6,000 teachers being recruited annually.
Computer supply programme	In efforts to streamline information technology in schools, the sector plans to establish a computer supply programme to schools in order to equip students with modern ICT skills. The programme targets 20,000 public primary schools, 4,000 public secondary schools, and 31 other specialized institutions.
Construction of boarding primary schools in ASAL areas	To build at least one boarding primary school in each constituency in the pastoral districts to ensure that learning is not disrupted as people move from one place to the other
Establishment of the voucher system	This will be accomplished by rolling out the voucher system for the learners from poor households and children rescued from early marriages and child abuse, consistent with the voucher system being implemented by the ministries of health and home affairs.

Establishment of centres of specialization	Create "Centres of Specialization" for each of Vision 2030's economic growth sectors.

Table 21: Policies in Education sector

Policy
Free Primary Education Policy, 2003
Early Childhood Policy
8-4-4 Education Policy, 1985
Kenya Literature Bureau Act (Cap 209)
Science and Technology Act (Cap 250)
Higher Education Loan Board (Cap 213A)
Kenya National Examinations Council Act (Cap 225A)

Table 22: Flagship programmes in the Health sector

Programme	Details
Rehabilitation of health facilities	Objective of this strategy is to provide a functional, efficient and sustainable health infrastructure network in the country.
Strengthening KEMSA	Since drugs and other medical supplies are paramount in the delivery of quality health care, there is need to strengthen KEMSA to be a strategic procurement agency for the entire health sector.
Community based information systems	A community strategy has been developed in order to enhance communities' awareness of the health preventive and promotive aspects of health, in order for them to adopt positive health seeking behaviour.
De-linking the Ministry of Health from service delivery	It is necessary to separate the roles of the ministry by establishing a Health sector Service Commission which is separate from the Ministry of Health.
Human Resource Strategy	There is a need to develop a human resources strategy to balance the supply and demand for human resources in the entire public health sector in the country.
Equitable financing mechanism	An equitable financing mechanism will be developed through the introduction of a system to channel funds directly to health care facilities to ensure that funds allocated are utilised for their intended purpose.

Table 23: Acts of Parliament in support of the Health sector

Act of Parliament
Kenya National HIV and AIDS Strategic Plan III (KNASP III) 2009/ 2010- 2012/2013.
National Health Sector Strategic Plan II

Legal Framework for Health particularly KHSPF, 1994
Public Health Act cap 242
Radiation Protection Act cap 243
Pharmacy and Poisons Act cap 244
Dangerous Drugs Act cap 245
Malaria Prevention Act cap 246
Mental Health Act cap 248
Medical Practitioners and Dentist Act cap 253
Nurses Act cap 257
Clinical Officers (Training, Registration and Licensing) Act cap 260
National Hospital Insurance Fund Act cap 255
Food, Drugs and Chemical Substances Act cap 254
Animal Diseases Act cap 364.

Table 24: Flagship Programmes in ICT sector

Programme	Details
The East African Marine Systems (TEAMS)	This is a submarine cable that will extend from Mombasa to Fujairah in the UAE, thus providing Kenya with an affordable high-capacity bandwidth.
National Terrestrial Fibre Optic Network Project	Is intended to compliment the TEAMS project by ensuring maximum utilization of capacity and connectivity in all districts in the country.
Government Common Core Network (GCCN)	Is intended to function as a shared and secure interoperable government-wide ICT architecture. The system will not only integrate work processes and information flow, but will also improve inter-ministerial sharing of databases and exchange of information.
Local and Wide Area Networks	Local Area Networks (LANS) have been installed in all government ministry headquarters. This will be extended to the provinces and districts.
Kenya Transparency Communication Infrastructure Programme (KTCIP)	This programme aims to ensure equity in the provision of ICT services. The programme will incorporate establishment of digital villages and bandwidth subsidies.
Data Centre/Data Recovery Centre	The government Data Centre (GDC) will be established to provide storage for all government data bases. The Neutral Data Centre will provide world-class services to government ministries, departments and agencies, private sector operators and businesses.

Table 25: Policies in the ICT sector

Policy	Year
National Information & Communications Technology (ICT) Policy	2006
The Science and Technology Act, Cap. 250	1977
The Kenya Broadcasting Corporation Act	1988
The Kenya Communications Act	1998

Table 26: Institutional Structures for the Management and Protection of Biodiversity

Institutions
Biodiversity policy in Kenya was for a long time coordinated by the National Environment Secretariat (NES) but with little statutory legal status, making enforcement difficulty (Manek, 2001). This led to fragmented legislation, policies and implementation mechanisms largely influenced by the interests of the major lead agencies such as the Kenya Wildlife Service (KWS), the Kenya Agricultural Research Institute (KARI), the Kenya Forest Department (now Kenya Forest Service – KFS), Kenya Forestry Research Institute (KEFRI) and the National Museums of Kenya (NMK).
The enactment of the EMCA (1999) brought some progress in this area. This act stipulates that the National Environmental Management Authority-NEMA coordinates the management of biodiversity resources in Kenya.
In 2000, the then Ministry of Environment and Natural Resources (MENR) developed the Kenya National Biodiversity Strategy and Action Plan (KNBSAP). The KNBSAP recognized that the government's plan to industrialize in the 21st century was also dependent to a large extent on national biodiversity resources. It was developed to facilitate the achievement of the national vision and aspirations. It described issues that threatened biodiversity and what needs to be done, how it would be done, and the time-frame within which it should be done. The vision as stated then was to maintain a clean and healthy environment with abundant biodiversity resources, to be achieved through sensitization and empowerment of communities through participatory management practices and use of environmentally friendly techniques and technologies. I t emphasized that best practices in biodiversity management would be integrated into national development planning. It also placed emphasis on the need to sustainably utilize biodiversity resources, while ensuring that benefits from them are used to equitably improve social, cultural and economic well-being of the people
It is therefore instructive that Kenya's vision 2030 has identified biodiversity as one of the important resources in attaining this vision. Kenya is also a signatory to many International environment agreements that have a bearing on biodiversity: Party to Biodiversity, Climate Change, Desertification, Endangered Species, Law of the Sea, Marine Dumping, Marine Life Conservation, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Wetlands, and Whaling.
Worthy of particular notice are the following current efforts towards biodiversity protection:
1. **Convention on Biological Diversity (CBD):** Kenya has ratified the Convention on Biological Diversity, the negotiated biodiversity agreement committed to sustainable use of biodiversity. Since then, Kenya has made significant progress in putting in place the proposed measures for biodiversity use and conservation. In addition, Kenya also participates in the CBD's international programmes of work in agricultural biodiversity, dry and sub-humid lands biodiversity, forest biodiversity, inland waters biodiversity,

island biodiversity, mountain biodiversity and marine and coastal biodiversity. Kenya is also party to the Convention on International Trade in Endangered Species (CITES).
2. National Practice and Policy Framework: there are protected areas to protect specific sites of biodiversity and cultural interest, with significance ranging from local to global.
3. Joint Biodiversity Management: Some currently existing initiatives for the joint management of biodiversity resources include medicinal plants networks, management of forest reserves, coastal forests and some sacred sites. This joint management is achieved through partnerships with local communities, businesses, multilateral institutions and not-for-profit organizations.
4. **In-situ conservation efforts and strategies:** These are achieved through National Parks, National Reserves, Sanctuaries; Marine Reserves and Forest Reserves managed in-situ.
5. **Ex-Situ Conservation Efforts and Strategies:** Ex-situ conservation facilities in Kenya are mainly for plant species conservation. The National Gene bank undertakes ex-situ conservation of cultivated species and wild species of economic value such as medicinal plants and wild relatives of crops. The Kenya Forestry Research Institute (KEFRI) supports forestry research and also maintains ex-situ seed.
6. **Botanical and Zoological Gardens:** The Nairobi Botanic Garden at the Nairobi National Museum holds plants collections for research, education, conservation and recreation. Some institutions of learning and private institutions also maintain their own facilities.
7. **Arboreta and Parks:** Urban centers and Municipalities are also served by gardens and parks. Examples include Uhuru Park and City Park in Nairobi.
8. **Rangeland Management:** In Kenya, rangelands occupy about 70% of the land area and are home to large populations of wild animals and plants. Rangelands have a high value for leisure, pastoral livelihoods and scientific studies.
9. **Integrated Land-Use Planning:** Land-use planning as envisaged in the New Land Policy and the new constitution has opportunities that can help ensure that each part of the landscape is used for those purposes for which it is best suited for biodiversity conservation.
10. **Specialized programmes:** These programmes are mainly centered on large, critical ecosystems or specific groups of critically endangered species. Examples include the KWS programmes for biodiversity audits, fencing off wildlife parks and reserves to stem human-wildlife conflict, the Save the Mau integrated project for catchments protection, the Lake Victoria Ecosystem Management Program that addresses challenges of dwindling inland fisheries, etc.

Table 27: Institutions in charge of Pollution Control

Institution
Ministry of Environment and Mineral Resources is the ministry responsible for the wide environmental management in Kenya through it parastatal, the National Environment Management Authority (NEMA).
Ministry of public health and sanitation-environmental health including; Public Health, the working environment radiation control and management of hazardous wastes.
Ministry of water development-through management of water resources utilization.

Ministry of Local government-through management of urban environments by urban councils.
Ministry of forestry and wild life-anti poaching and deforestation
Ministry of Agriculture-Controls farming practices to prevent soil erosion in areas with sloppy land.

Table 28: Strategies in V2030 for the Health sector

Strategy
Promoting environmental conservation in order to provide better support to the economic pillar flagship projects and for the purposes of achieving the Millennium Development Goals (MDGs)
Improving pollution and waste management through the design and application of economic incentives
Commissioning of public-private partnerships (PPPs) for improved efficiency in water and sanitation delivery
Enhancing disaster preparedness in all disaster-prone areas and improve the capacity for adaptation to global climatic change
Harmonizing environment-related laws for better environmental planning and governance

Table 29: Flagship programmes for Pollution Control sector

V2030 Flagship programmes
The Water Catchment Management Initiative
Securing the Wildlife Corridors and Migratory Routes Initiative
The Solid Waste Management System Initiative
The Plastic Bags Initiative which will require tightening regulations in order to limit production and usage of environmentally-detrimental plastic bags
The Land Cover and Land Use Mapping Initiative

Table 30: Flagship programmes in the Land Degradation sector

V2030 flagship programmes	
Programme	Details
Land Use Master Plan	This will involve collecting accurate and continuously updated mapping of land use patterns in Kenya and of tracking developments. This project will also entail undertaking both livestock and wildlife censuses and zooming of land in rural and urban areas that are currently unmapped.
Waste management system	This will entail preparation of a waste management strategy aimed at involving mainly the youth groups. Particularly, the Dandora dump site in Nairobi and the establishment of a solid waste management system for the city of Nairobi on a

	public private partnership basis.
Urban sewerage programme	This will aim to improve sanitation and hygiene and reduce environmental pollution of towns located on shared water basins. Pilot projects will be based in Malaba, Lagdera, Wajir/Elwak and Liboi.
Land Information Management system	This intervention will contribute to poverty reduction, good governance and improved security of land tenure. The system will also enable the capture, management and analysis of geographically referenced land-related data in order to produce land information for decision-making in land administration and management.

Table 31: Policies in the Land Degradation sector

Policy
The Draft ASAL Development Policy
Draft National Land Policy
The Environmental Management and Co-ordination Act (EMCA) of 1999
Agriculture Sector Development Strategy, (ASDS), 2010-2020
Draft Land Use Master Plan

Table 32: V2030 Flagship programmes in the Water sector

Programme	Details
Rehabilitation and protection of indigenous forests in the 5 water towers	This project entails full rehabilitation of the 5 water towers of Mau Escarpment, Mt. Kenya, Aberdare Ranges, Cherangany Hills and Mt. Elgon.
Rehabilitation, Regeneration & Restoration of Nairobi Rivers	The aim of the programme is to fully rehabilitate the catchment basin of the Nairobi River in order to make it a recreation site. Other rivers like Ngong will also be covered under this programme.
Water resources information management	This will entail rehabilitation and acquisition of new hydro-metric data which will be installed in strategic and vulnerable water resources (surface and groundwater) country-wide, and be linked to World Hydrological Observation cycle (WHYCOS); rehabilitate 600 hydro meteorological stations; capacities of WRUAs will be built in Turkana and Marsabit for purposes of planning groundwater development in the two districts and replicated in other ASAL districts.
Water harvesting and storage programme	The recurrent floods of Western Kenya will be managed through construction of large multi-purpose dams along Rivers Nzoia and Nyando. Water dykes will also be constructed along the lower reaches of Nzoia and Nyando rivers.
Water storage and harvesting:	The government aimed to construct two multi-purpose dams with a total storage capacity of 2.4 billion cubic meters along Rivers Nzoia and Nyando. An additional 24 medium-sized multi-purpose dams with a total capacity of 2 billion cubic

	meters will be undertaken to supply water for domestic, livestock and irrigation use in the ASAL areas.
National water supply and sanitation	The projects aim at expanding the Mzima pipeline to meet the current demands of the coastal towns including additional proposed resort cities of Lodwar and Isiolo.

Table 33: Policies supporting the water sector

Policy	Year
National Water Policy	1999
Water Act, Cap 372	
Water Act	2002
National Water Master Plan	1974
National Water Services Strategy (NWSS)	2007-2015
National Water Resources Management Strategy (NWRMS)	2007-2009
Tana and Lake Victoria North Catchment Management Strategies	