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**FISCAL POLICY SCOPING STUDY  
KENYA**

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Ministry of Infrastructure and the Environment

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## List of abbreviations

BROP	Budget Review and Outlook Paper
CARPS	Capacity Assessment and Rationalization of the Public Service Programme
GDC	Geothermal Development Company
CDM	Clean Development Mechanisms
EA	Environmental Audit
EIA	Environmental Impact Assessment
EITI	Extractive Industry Transparency Initiative
ERC	Energy Regulatory Commission
EUR	Euros
FCC	Fuel Cost Charge
FERFA	Foreign Exchange Rate Fluctuation Adjustment
FiT	Feed-in-Tariff
IMF	International Monetary Fund
GER	Education Gross Enrolment Rate
GESIP	Kenya Green Economy Strategy and Implementation Plan
GDC	Geothermal Development Company
GDP	Gross Domestic Production
GFP	Green Fiscal Policy
GPOBA	World Bank Global Partnership Output Based Aid
IA	Inflation Adjustment
IBT	Increasing Block Tariff
IOC	International Oil Company
KEBS	Kenya Bureau of Standards
KFS	Kenya Forest Services
KNSB	Kenya National Bureau of Statistics
KNSWF	Kenya National Sovereign Wealth Fund
KRB	Kenya Roads Board
KPLC	Kenya Power & Lighting Company Limited
KSh.	Kenyan Shilling
kV	kilo-volt
kVA	kilo-volt-ampere
kWh	kilowatt hour
KWS	Kenya Wildlife Service
MDG	Millennium Development Goal
MEWNR	Kenya's Ministry of Environment, Water and Natural Resources
MMR	Maternal Mortality Ratio
MTEF	Medium-Term Expenditure Framework
MTP	Medium Term Plan
MW	megawatt
NEMA	National Environmental Management Authority
NER	Education Net Enrolment Rate
NTFP	Non-Timber Forest Products
NRW	Non-Revenue Water
OCOB	Office of the Controller of Budget
PES	Payment for Ecosystem Services
PPA	Power Purchase Agreement
PPP	Public Private Partnerships

PSC	Production Sharing Contract
QEBR	Kenya National Treasury
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SEA	Strategic Environmental Assessment
SST	Sustainable Structural Transformation
US\$	United States Dollars
VAT	Value-added Tax
WASREB	Kenya Water Services Regulatory Board

## Executive Summary

A recent green economy assessment report (UNEP, 2014) on Kenya reveals that the transition to a green economy can deliver important benefits, such as long-term economic growth, a cleaner environment and high productivity. The report also indicates that green fiscal policies, which include a range of tools such as taxes, subsidies, user charges and fees, and public expenditure, can be useful in supporting this transition.

Kenya is already using various green fiscal policy tools in sectors such as forestry, energy, water, wildlife, mining and fisheries. For example, key fiscal instruments in the energy sector include electricity tariffs and levies, feed-in tariffs, a road maintenance levy, excise tax, import duties, VAT exemptions and investment through the Geothermal Development Company (GDC). Kenya has a special levy on fuel which is used to finance the development of road infrastructure through the Kenya Roads Board (KRB). Kenya's electricity tariff is designed to achieve cost recovery and is based on an increasing block tariff (IBT) pricing scheme. With support from the World Bank, Kenya is connecting residents in slums and low-income rural areas to the national grid at a subsidized charge. Many private investors have also shown interest in investing in renewable energy through the feed-in-tariff scheme.

Kenya has commercially viable quantities of coal and oil, and according to the IMF (2014) Kenya could start oil production in three to five years. The Government has drafted a Sovereign Wealth Fund Bill 2014 which will establish a Kenya National Sovereign Wealth Fund (KNSWF) for recently discovered reserves of oil and other minerals. The draft bill provides for the establishment of a Stabilization Fund, Infrastructure and Development Fund, and a Future Generations Fund. The purpose of the latter is to help build savings, invest in sectoral transformation and environmental protection. Medium- and long-term investment by this fund can be useful in supporting green economy objectives.

In the water sector, key fiscal instruments include tariffs, licenses and levies. Non-Revenue Water (NRW) or water losses due to leakages, illegal connections/theft, and metering errors amount to about KSh. 11.4 billion (US\$ 131.1 million) in 2012/13. NRW, estimated at about 45 per cent of total water production in Kenya undermines the financial sustainability of water service providers and the efficiency of water delivery in the country.

Fiscal instruments in the forestry sector include forest produce fees levied on forest products, stumpage fees on certain tree species, royalties and charges for round wood harvesting, and direct budgetary support. Kenya also participates in the Reducing Emissions from Deforestation and Forest Degradation (REDD+) and the Clean Development Mechanism (CDM). There are however a number of challenges facing the forestry sector including illegal logging, revenue leakages, and weak governance in terms of accountability, transparency and participation of county governments and communities in the sustainable management of forest resources.

While there are several fiscal policy instruments in place in natural resource sectors in Kenya, there is a need to strengthen governance frameworks, including compliance and enforcement, and improve the availability of information on existing tools and associated revenue streams to support the improved design and implementation of such measures. An assessment of the distributional impact of these instruments might also be useful in certain areas such as energy. As part of efforts to mainstream the green economy in national planning processes, the medium-term expenditure framework (MTEF) provides an opportunity to integrate green fiscal policies in national and county budget planning processes to better support green economy objectives.

## 1. Introduction

A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities (UNEP 2011). Thus the green economy encompasses multiple goals including economic, social, environmental and structural transformation. The latter goal is critical for developing economies where economic transformation is considered a key aspect of the development process and advocates for a sustainable structural transformation (SST) (UNCTAD, 2012). The Kenya Green Economy Assessment Report (UNEP 2014) reveals that the transition to a green economy can deliver important benefits in Kenya, such as long-term economic growth, a cleaner environment and high productivity. The report also notes that green fiscal policy can be useful in supporting this transition and calls for a green economy fiscal policy assessment to explore this further, noting that policy design issues such as impacts on the poor, competitiveness impacts, and administrative costs need to be considered.

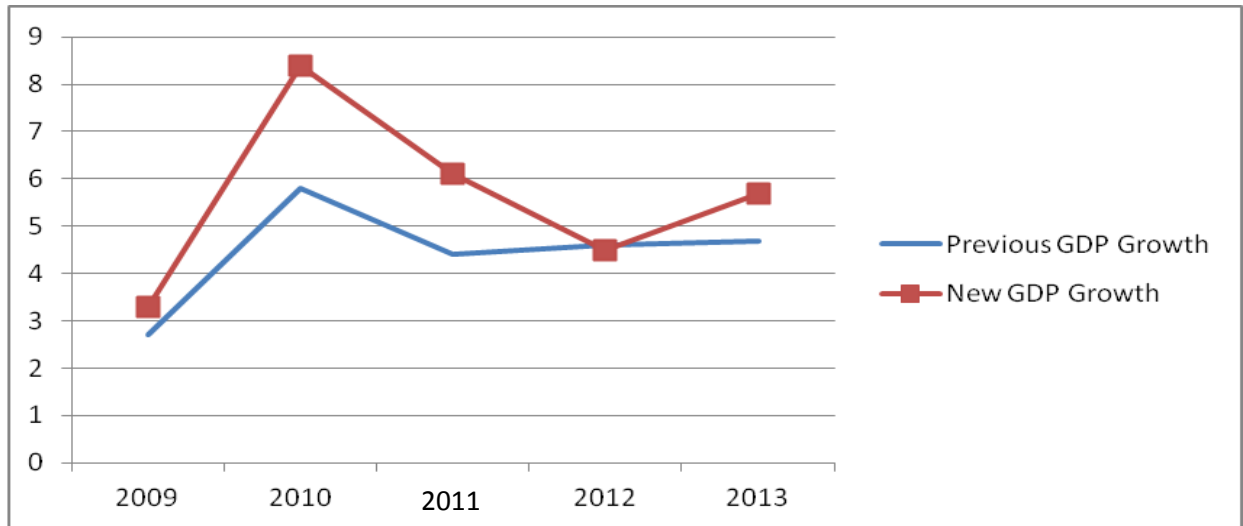
Green fiscal policy (GFP) can support the transition to a green economy by creating fiscal space for green investment, shifting private investment and consumer behaviour towards environmentally friendly and socially inclusive activities. GFP extends beyond Environmental Fiscal Reform which the OECD defines as ‘a range of taxation and pricing measures which can raise fiscal revenues while furthering environmental goals’ (OECD 2005). The package of GFP measures is wide and evolving. It includes fiscal instruments to support innovation and industrial development such as taxes and subsidies; public expenditure allocations; user charges and fees for cost recovery of basic services (e.g., water, energy, waste disposal); and pricing emissions especially carbon emissions. GFP encompasses the taxation regime applied on energy and natural resources such as oil, gas, forestry, fisheries, coal and mining, as well as the management of natural resource wealth or funds to support green economy objectives. A tax regime that is supportive of the green economy aims to discourage production and use of harmful products and promote environmentally sustainable technologies and products. At the same time, public expenditure decisions should aim to re-align public expenditure allocations and management decisions to support the green economy in areas such as sustainable infrastructure, socio-economic services, research and development, public procurement sometimes referred to as ‘green procurement’ (OECD 2013) and targeted expenditure programs for the poor and those affected through environmental reforms.

This report provides an overview of the current status of green fiscal policy in Kenya, key challenges and opportunities for further green fiscal policy reforms. The report reviews government revenues and expenditures and analyses the potential for GFP in selected key sectors of the economy, including forestry, energy, mining and oil, water fisheries and wildlife. The report is organized as follows: Section 2 reviews recent macro-economic, social and environmental performance, and the status of green economy initiatives in Kenya. Section 3 provides an overview of the current fiscal status including details on government expenditures and revenues. Section 4 explores the current sector policy context, including challenges and policy options that could be implemented in each of the key sectors. Lastly, Section 5 sets out conclusions and suggests areas for further work.

## 2. Recent Macroeconomic and Social Performance

In September 2014, the Kenya National Bureau of Statistics (KNBS) released revised national accounts data for Kenya by changing the base year from 2001 to 2009. According to the new statistics, Kenya’s Gross Domestic Product (GDP) was being under-estimated by about 25 per cent based on previous official data. Following the revision, Kenya’s per capita income is estimated at US\$ 1,269 for the year 2013, thus pushing the largest economy in East Africa to lower-middle income status. The size of GDP is estimated at about US\$ 55 billion and the revised statistics indicate that the economy has been growing relatively fast (Figure 1).



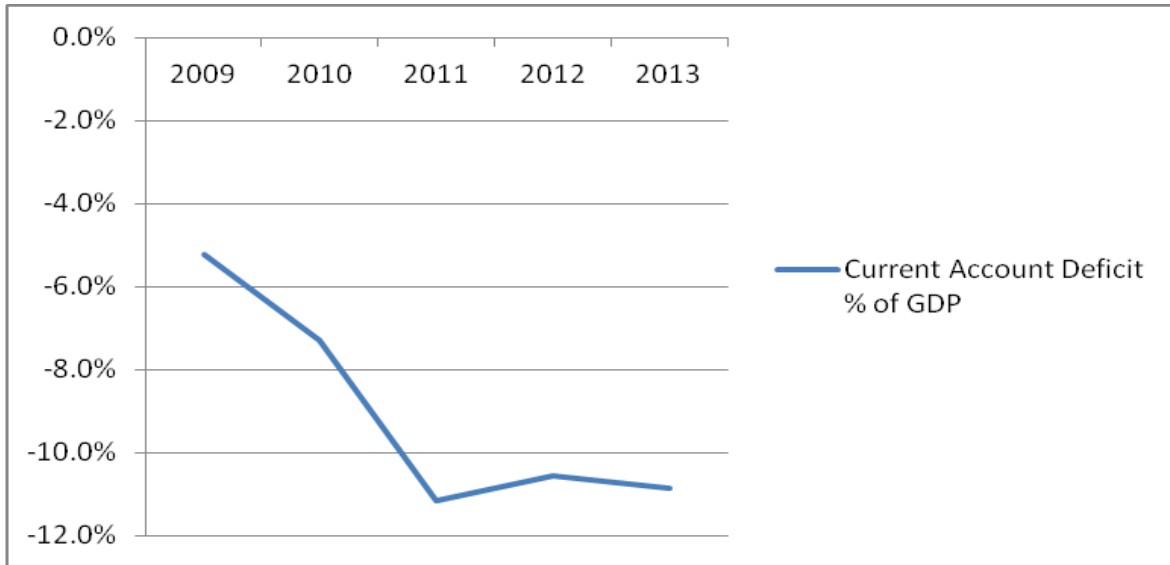
**Figure 1: GDP Growth: New and Previous GDP Series**

Source: KNBS October 2014

Since 2008, Kenya's economy has suffered multiple shocks, including a political crisis in 2007-2008, droughts, fluctuating global energy and food prices, an overall slowdown in economic growth, and terrorist attacks. Population growth has averaged about 2.6 per cent per annum with the total population estimated at 42 million in 2013. Kenya's fertility rate is estimated at 4.4 children per woman compared to the world average of about 2.5 in 2013. According to the World Bank, World Development Indicators for 2013, about 25 per cent of the population lives in urban areas, with urban population growth estimated at about 4 per cent. This growth in urbanization has been associated with challenges such as unemployment, poverty, slums, pollution, urban waste management, housing shortages and traffic congestion. Only 31 per cent of the urban population in Kenya has access to improved sanitation facilities. About 62 per cent of the population has access to improved water sources.

Kenya's external current account deficit has been widening in recent past, increasing from KSh. 124.1 billion (US\$ 1.6 billion) in 2009 to about KSh. 412.38 billion (US\$ 5.2 billion) in 2013 or from 5.2 per cent to 10.9 per cent of GDP. The widening deficit is attributed to a rapid increase in imports relative to exports. Key imports are crude oil, petroleum products, capital goods and machinery. Key exports are agricultural (mainly tea, horticultural produce and coffee), manufactured exports to regional markets are becoming increasingly significant. The government has embarked on a large-scale upgrading of infrastructure including the construction of the Mombasa-Nairobi railway, an oil pipeline, roads, geothermal plants and irrigation which are contributing to high imports of capital goods. Between 2009 and 2013, Kenya's terms of trade deteriorated by about 5.1 per cent, thus explaining observed trends in the current account deficit. The trade deficit has also widened to reach about 24 per cent of GDP in 2013 (KNBS 2014). The services account has remained in surplus largely due to strong performances in transportation services and tourism. However, tourism has suffered in the recent past due to insecurity and terrorism.

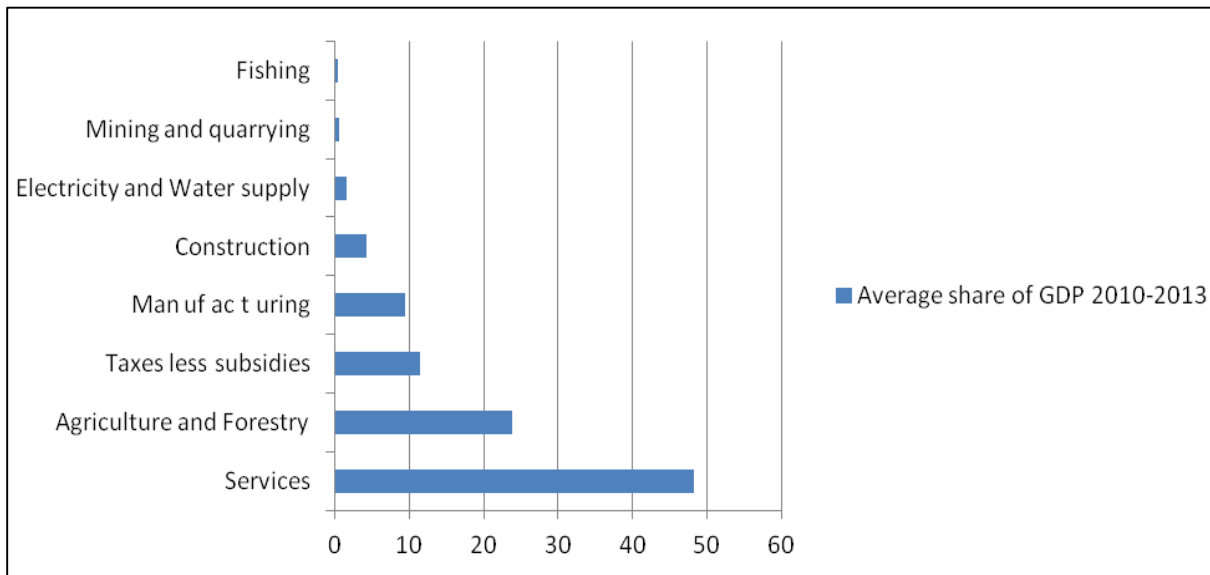
**Figure 2: Current Account Deficit, % of GDP**



Source: KNBS – Economic Survey 2014

The structure of the Kenyan economy is such that agriculture is the single leading sector, accounting for about one quarter of Kenya’s GDP (Figure 2). The growing of crops and horticulture are key subsectors of the economy. Agriculture is largely rain-fed and thus vulnerable to the vagaries of weather. The manufacturing sector is largely agro-based and the contribution to GDP has stagnated at about 10 per cent. This indicates that the rate of industrialization has been slow.

**Figure 3: Average Share of GDP 2010-2013 (%)**



Data Source: KNBS, Economic Survey 2014

The services sector, comprising wholesale and retail trade, hotels and restaurants, transport and communication, financial services, real estate and business services, public administration and defense, education, health and other services accounted for about 48 per cent of GDP between 2010 and 2013.

Wholesale and retail trade, transport and communications, each account for about 10 per cent of GDP. The contribution of the mining and quarrying sector is minimal at about 1 per cent, but this is expected to change when Kenya starts exploiting recently discovered oil, coal and other rare earth mineral reserves. In 2012, Kenya discovered commercial reserves of petroleum in Turkana County, Northern Kenya, exploration is ongoing. Kenya expects to start producing oil in 2017-2018. In addition, estimated coal reserves in the Mui Basin of Kitui County are about 400 million tons. The government expects to use coal to provide about 2,000MW of electricity generation by 2017 (Draft National Energy and Petroleum Policy, January. 2015). Recent discoveries of oil, gas, coal and other minerals underscore the significance of GFP which can be used to further green economy objectives in the exploitation oil and mineral resources (see section 3).

Poverty incidence in Kenya stood at 45.2 per cent in 2009, an improvement from 46.6 per cent in 2005 and 52.6 per cent in 1999. Poverty incidence in rural areas worsened in 2009 by 0.8 per cent compared to 2005 where it stood at 49.7 per cent. However, the situation was different in urban areas with poverty incidence levels decreasing in 2009 by 0.9 per cent from 34.4 per cent in 2005. According to the county estimates, a poverty incidence of 21.8 per cent and 87.5 per cent were recorded in Nairobi and Turkana Counties respectively. These statistics show that two in every ten people live below the poverty line in Nairobi compared to about nine in every ten in Turkana (where commercial oil deposits have been discovered). These figures reflect the high levels of disparities across the country.

Employment statistics indicate that the informal sector remains dominant in employment and job creation, accounting for close to 83 per cent of employment in 2013 while the formal sector accounted for 17 per cent in 2013. The number of people employed in the informal sector expanded from 8.6 million in 2009 to 11.1 million in 2013. A total of 625 900 new jobs were created in the informal sector in 2013 compared to 116,800 in the formal sector. While the informal sector accounts for the largest share of employment, jobs in the sector are characterized by low incomes and a lack of job security (Kenya Economic Report 2013).

The education sector has improved overall enrolment rates following the introduction of free primary education in 2003, however marked disparities across and within regions remain. While the Gross Enrolment Rate (GER) for early childhood education stood at 66.3 per cent in 2013, the Net Enrolment Rate (NER) was estimated at 53.5 per cent. Primary education enrolment rate was estimated at about 115 in 2011, while net enrolment stood at 95.7 at the end of 2011. The NER increased from 91.4 per cent in 2010 to 95.7 per cent in 2011 and 95.9 per cent in 2013. The gender parity index at primary school level is estimated at 1.01 (Kenya Economic Report 2013). The number of boys enrolled in form one (secondary school) in 2009 grew by 40.8 per cent to reach 0.327 million in 2013, while the enrolment of girls grew by 36.4 per cent to reach 0.289 million in 2013. This can be attributed to the free secondary education in addition to an increase in the number of schools. The GER for secondary schools was 49.3 per cent in 2012 while NER was 39.5 per cent in 2013. This implies that about 60.5 per cent of the secondary education school age population was not in school by 2013.

The health sector has mixed results on various indicators. The Maternal Mortality Ratio (MMR) deteriorated from 414 deaths per 100,000 live births in 2003 to 488 deaths per 100,000 live births in 2009. This is far below the Millennium Development Goal (MDG) target of 147 per 100,000 by 2015 and the second Medium Term Plan (MTP) target of 300 per 100,000 by end of 2015 and 100 per 100,000 by the end of 2017. However, remarkable achievements have been made in the reduction of under-five mortality from 115 per 100,000 live births in 2003 to 74 per 100,000 live births in 2008-2009. Infant mortality has also improved from 77 per 100,000 live births to 52 per 100,000 live births in the same period.<sup>1</sup>

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<sup>1</sup> Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.

### 3. Fiscal policy overview

A review of Kenya's fiscal policy landscape reveals that the country has recorded mixed performance on key fiscal performance indicators (Table 1). Public expenditure increased from KSh. 811.8 billion (US\$ 9.14 billion) in 2010/11 to KSh. 1,297 billion (US\$ 14.8 billion) in 2013/14. This increase is attributed to increased investment in infrastructure and other Vision 2030 Flagship projects in the First and Second Medium Term Plans. Implementation of the 2010 Constitution of Kenya has also exerted fiscal pressure, in particular the establishment of constitutional offices and the operationalization of a devolved governance system of 47 County governments. About KSh. 193.4 billion (US\$ 2.2 billion) (or 19.3 per cent of total expenditure) was transferred to County governments in 2013/14 (Table 1). The wage bill increased from KSh. 198 billion in 2010/11 to KSh. 282 billion in 2013/14 mainly catering for salary increases to teachers, health personnel, security officers and the establishment of independent commissions as required by the Constitution. Kenya is currently implementing a Capacity Assessment and Rationalization of the Public Service Programme (CARPS) aimed at addressing wage bill and public service delivery concerns.

#### 3.1 Expenditure

Between 2010/11 and 2013/14, total expenditure increased faster than receipts, thereby contributing to a worsening fiscal balance (Table 1). While total expenditure increased by 17 per cent per annum, receipts grew by 13.4 per cent per annum, over the same period. Total ordinary revenue increased from KSh. 667.5 billion in 2010/11 to KSh. 974.4 billion in 2013/14 (National Treasury, QEBR 2015). The key challenges for budget implementation include low absorption rates and shortfalls in receipts. For instance in 2013/2014, total revenue collected amounted to KSh. 974.4 billion against an original budget target of KSh. 1,027.2 billion. Similarly, external project grants amounted to KSh. 27 billion against a target of KSh. 53.7 billion (National Treasury, BROP 2014). Low absorption rates or lower-than programmed spending has been attributed to poor procurement planning, low implementation capacity and failure to secure 'No Objection' on time when implementing donor funded projects.

**Table 1: Fiscal Performance 2010/11 – 2013/14 (KSh. Millions)**

Description	2010/11	2011/12	2012/13	2013/14+
Total Revenue and Grants	686,308	765,102	869,461	1,001,375
Revenue	667,539	749,941	848,955	974,418
Grants	18,769	15,161	20,506	26,957
Total Expenditure and Net Lending	811,849	945,313	1,111,859	1,297,761
Recurrent	592,427	650,414	796,098	749,635
Development and Net Lending	219,422	294,899	305,978	319,312
Transfers to County Governments			9,783	193,390
Parliamentary Service				22,473
Judiciary				12,951
Deficit Including Grants	(125,541)	(180,211)	(242,398)	(296,386)
<b>FINANCING</b>				
Foreign	28,390	113,059	85,790	106,130
Domestic	90,383	63,400	169,776	202,994
of which Domestic Borrowing	90,383	63,400	169,776	201,727
<b>As percentage of GDP</b>				
Total Revenue and Grants	19.9%	19.2%	19.3%	20.1%
Revenue	19.4%	18.8%	18.8%	19.5%
Grants	0.5%	0.4%	0.5%	0.5%
Total Expenditure and Net Lending	23.5%	23.7%	24.7%	26.0%
Recurrent	17.2%	16.3%	17.7%	15.0%
Development and Net Lending	6.4%	7.4%	6.8%	6.4%
Drought Development Expenditure	0.0%	0.0%	0.0%	0.5%
Deficit Including Grants	-3.6%	-4.5%	-5.4%	-5.9%
Deficit Excluding Grants	-4.2%	-4.9%	-5.8%	-6.5%
<b>FINANCING</b>				
Foreign	0.8%	2.8%	1.9%	2.1%
Domestic	2.6%	1.6%	3.8%	4.1%
of which Domestic Borrowing	2.6%	1.6%	3.8%	4.0%
+ Preliminary				

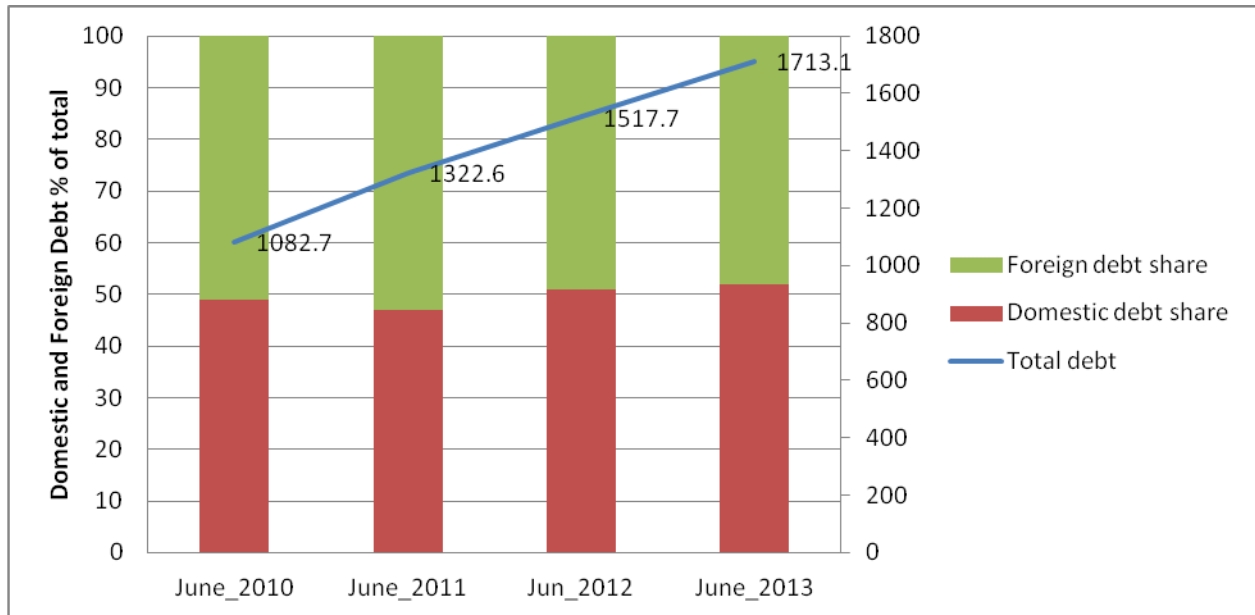
Source: National Treasury, *Quarterly Economic and Budgetary Review, February 2015 and Economic Survey 2015*

The fiscal deficit (including grants) increased from 3.6 per cent of GDP in 2010/11 to an estimated 5.9 per cent in 2013/14. Financing of the deficit has been largely achieved through domestic borrowing, which, in terms of GDP share, increased from about 1.6 per cent in 2011/12 to 4 per cent in 2013/14. However, the government is gradually leaning towards external sources to finance the fiscal deficit. For instance, in 2014, Kenya successfully issued a EUR2 billion bond, and signed a US\$3.6 billion loan with China for the construction of the Mombasa-Nairobi standard gauge railway.

Kenya's public debt stood at about 45 per cent of GDP (equivalent of KSh. 1.7 trillion), in June 2013, and remains sustainable (Figure 4). While the proportion of public debt to GDP has increased from 42 per cent

at the end of June 2010 to 45 per cent in June 2013, the proportion of domestic debt in the total debt has also increased from 49 per cent to 52 per cent. A large share of external debt is on concessional terms, with about 60 per cent of external borrowing coming from multi-lateral donors. However, the private commercial component of external debt is set to increase with issuance of the EUR 2 billion bond in 2014 (IMF, 2014).

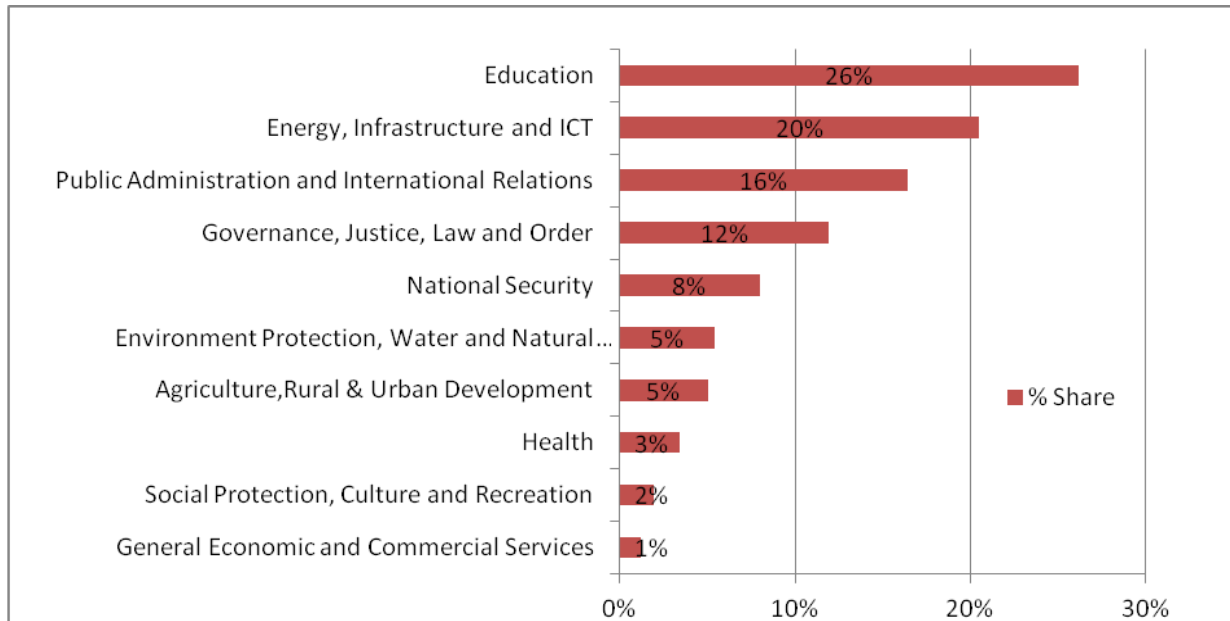
**Figure 4: Size of Public Debt 2010-2013 (KSh. million -right axis)**



Data Source: Kenya Economic Survey, 2014

The Kenyan Constitution of 2010 provides for fiscal devolution, and following a successful election in 2013, the Constitution transferred various functions to county governments. The functions are set out in the fourth schedule of the Constitution and include: agriculture; county health services; control of pollution and outdoor advertising; cultural activities; trade development and regulation; county planning and development; pre-primary education; implementation of specific national government policies on natural resources and environmental conservation; county public works and services; firefighting services and disaster management; and coordinating the participation of communities and locations in governance at the local level. The Constitution provides for a minimum of 15 per cent of national revenue to be transferred to county governments. In 2013/14, about 20 per cent of ordinary revenue was transferred to county governments. Devolution was rolled out in 2013/14 and Kenya is facing transitional challenges related to capacity and coordination (OCOB 2014).

Analysis of budgetary allocations based on the Medium Term Expenditure Framework (MTEF) sectors for 2013/14 reveals that education continues to receive the highest share of the budget (Figure 5). Some of the key programs under the sector are free primary education and subsidized secondary education. The government also continues to prioritize infrastructure, especially roads, ports, and energy. Budgetary allocations for environmental protection, water and natural resources account for about 5 per cent of budgetary allocation. This translates to about KSh. 57.1 billion in 2013/14 Budget Estimates (National Treasury, Budget Policy Statement – February 2014).

**Figure 5: MTEF Budget Estimates Ceilings for 2013/14 Budget**

Data Source: National Treasury, Budget Policy Statement, February 2014

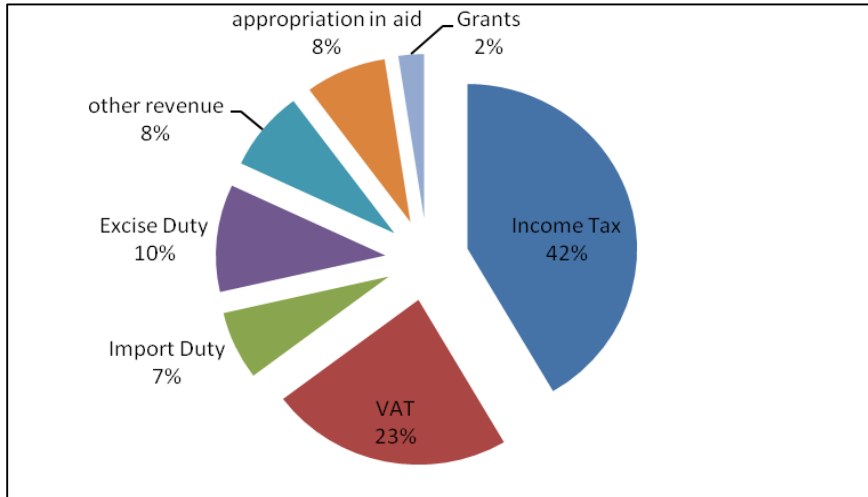
The Environmental Protection, Water and Natural Resources sector covers forest and wildlife conservation, water supply services and management, integrated regional development, drainage infrastructure, environment policy development and coordination, meteorological services, forestry development, research and management, water supply services, water resources management and mineral resources management. The Sector MTEF Report for the 2015/16-2017/18 budget, released in November 2014, reveals that over the period 2011/12-2013/14 about 65 per cent of the sector budget went to water and the integrated regional development subsector. The population that has access to safe water in Kenya is estimated at 60 per cent and 40 per cent for urban and rural areas respectively. It is estimated that only 30 per cent of the population has access to improved sanitation facilities. In this regard, water supply and sanitation remain key priorities for the sector and the country.

### 3.2 Revenue

The Constitution of Kenya 2010 assigns powers to impose taxes or raise revenue to both the national and county-level of government. Article 209(3) empowers county governments to impose property taxes, entertainment taxes, and any other tax as authorized by an Act of Parliament. Constitutionally, the national government has powers to impose income tax, value added tax, excise tax and custom/import duty.

The composition of government revenue is such that tax revenue accounts for about 90 per cent of total recurrent revenue (i.e. tax revenue, appropriations-in-aid and grants). Between 2010/11 and 2013/14 grants accounted for about 2.4 per cent of total recurrent revenue (Figure 6). Income taxes and VAT are two key components of tax revenue. There is an increasing trend in the share of income tax in total tax revenue.

**Figure 6: Composition of Government Revenue**



Data Source: National Treasury, *Quarterly Economic and Budgetary Review*, February 2015

### 3.3 Environmental and Natural Resource Taxes, Charges and Fees

There are several environmental- and natural resources-related fiscal instruments applied in Kenya. These include transport and fuel taxes, subsidies, and charges and fees on natural resources (Table 2). About KSh. 61.6 billion (US\$ 708.2 million) was collected from fuel taxes, equivalent to about 7.3 per cent of total revenue.

**Table 2: Key Environment and Natural Resources Taxes and Tariffs**

Tax Base	Instrument
Transport fuels	<ul style="list-style-type: none"> <li>Levy to finance road maintenance- KSh 24.4 billion raised through Road Maintenance Levy Fund in 2012/13</li> <li>Excise tax (on gasoline, jet fuel, diesel) about KSh. 34.932 billion in 2012/13</li> <li>VAT on lubricating greases about KSh. 2.3 billion in 2012/13</li> </ul>
Motor Vehicles	<ul style="list-style-type: none"> <li>Import duty at 25%, excise duty at 20% and VAT at 16%</li> <li>The age limit is 8 years from year of manufacture</li> </ul>
Solid Waste collection and Management	<ul style="list-style-type: none"> <li>User charges</li> <li>Licensing fees</li> </ul> <p>There is scarce information on the application of these instruments. A large share of waste collection in cities is undertaken by private companies</p>
Electricity	Tariffs based on consumption, also includes other charges (water levy, fuel cost, electricity regulatory, and rural electrification program) - see Table 5. Feed-in-Tariff (KSh. 1,282 million raised through Rural Electrification Levy in 2012/13 - see Table 3 and Table 4
Water provision	<ul style="list-style-type: none"> <li>User charges/tariff</li> <li>Water regulatory levy</li> <li>KSh. 15.3 billion in 2012/13 – NRW losses estimated at KSh. 11.4 billion</li> </ul>
Fisheries	<ul style="list-style-type: none"> <li>Export fee (royalty)</li> <li>Licenses</li> <li>County levies</li> </ul>
Forestry	<ul style="list-style-type: none"> <li>Royalties – See Annex II</li> </ul>



Tax Base	Instrument
	<ul style="list-style-type: none"> <li>• Licenses - See Annex I</li> </ul>
Wildlife	<ul style="list-style-type: none"> <li>• Park entry fees</li> <li>• Permits (sport hunting, filming, trade in species)</li> <li>• KSh. 3.95 billion raised through park entry fees in 2012/13</li> </ul>
Mining and oil	<ul style="list-style-type: none"> <li>• Royalties</li> <li>• Production Sharing Contract</li> </ul>

Environmental tax instruments on fuels, water, electricity, and wildlife have a significant revenue impact. Kenya has a special levy on fuel which is used to finance road infrastructure development through the Kenya Roads Board (KRB). In 2012/13, the Road Maintenance Fund disbursed KSh. 24.4 billion (US\$ 280.5 million) for road development. With regard to electricity, the power utility company, Kenya Power & Lighting Company Limited (KPLC), purchases electric power capacity and/or energy from power generating companies and sells it to consumers.

## 4. Green Fiscal Policy Reform in Kenya

Kenya's natural resources impact on the welfare of society through employment, food, water, energy, revenue generation and wealth creation from productive economic activities including agriculture, fishing, forestry, mining and quarrying, manufacturing, trade and tourism. These activities account for a large share of Kenya's GDP and employment directly and through linkages with other sectors of the economy. While demographic changes, urbanization, economic growth and industrialization provide opportunities to enhance standards of living, these changes exert pressure on natural capital and demand for social and economic services such as education, infrastructure, transport, health, housing and waste management. The associated environmental challenges include pollution, traffic congestion, land degradation, over-grazing, dumping of substandard and toxic products, deforestation, proliferation of informal settlements, waste generation (including household and industrial), human-wildlife conflicts, over-fishing and loss of biodiversity. Green fiscal policy combined with an appropriate institutional framework, including the legal and regulatory regime, can help address these environmental challenges.

This section reviews existing and potential green fiscal policy instruments in key sectors of the economy, namely: forestry, fishing, energy, wildlife, water and sanitation, mining and oil. These sectors are among those identified as key for leading the green transition in the Kenya Green Economy Strategy and Implementation Plan (GESIP).

### 4.1 Forestry

As of 2014, Kenya had a forest cover of 6.99 per cent of its total land area, although this is still below the Constitutional requirement of 10 per cent forest cover (MEWNR, 2014). The forestry subsector contributes about 0.7 per cent of Kenya's GDP directly (KNBS 2014) and provides intermediate inputs for the construction industry (timber), manufacture of wood and cork, paper and paper products, and the chemicals industry. It also supports most productive and service sectors in the country, particularly agriculture, fisheries, livestock, energy, wildlife, water, tourism, trade and industry that together contribute between 33 per cent and 39 per cent of GDP (MEWNR 2014). Forest biomass comprises about 80 per cent of all energy used in the country, while also providing a variety of goods which support the subsistence livelihoods of many communities. There is significant potential to produce non-timber forest products (NTFPs) including indigenous fruits, aloe, honey, gums and resins for the pharmaceutical, food and cosmetics industry. However, exploitation is hampered by various challenges including lack of information, and relevant technologies for processing.

The governance of forestry in Kenya is enshrined in the Constitution of Kenya 2010 and Acts of Parliament and articulated in various policy documents. Article 60 of the Constitution of Kenya 2010 outlines various obligations towards the environment, key among them being the maintenance of 10 per cent forest cover. The Forests Act of 2005 Cap 385 aims to preserve, protect and sustainably exploit forests in Kenya. The government is in the process of developing new legislation to align with the Constitution of Kenya 2010. The Kenya Vision 2030, which is being implemented through five-year rolling Medium Term Plans, prioritizes restoration of forest ecosystems through rehabilitation and protection of five water towers (Mau escarpment, Mt. Kenya, Aberdares range, Cherengani hills and Mt. Elgon). The Agriculture (Farm Forest) Rules of 2009 provide for the promotion and maintenance of farm forest cover of at least 10 per cent of every agricultural land holding, and for preserving and sustaining the environment in combating climate change and global warming. The Forest (harvest) Regulation of 2009 governs sustainable harvesting of timber for commercial purposes.

Environmental Impact Assessment (EIA) and Environmental Audit (EA) regulations of 2003 impose restrictions on concession processes for public forests, obligating environmental impact assessments prior to granting concession processes. Finally, the Forest Policy of 2014 has an objective of promoting investments in commercial tree growing, forest industry and trade, and the enhanced management of forest reserves for the conservation of soil, water, biodiversity and environmental stability.

The main environmental challenges facing the forest subsector include deforestation, competing land use such as human settlement, illegal logging, grazing of livestock and cutting of trees for fuel wood and charcoal. Other problems facing the sector include invasive alien species, weak compliance and the lack of enforcement of conservation measures resulting in illicit forest activities and inadequate community participation.

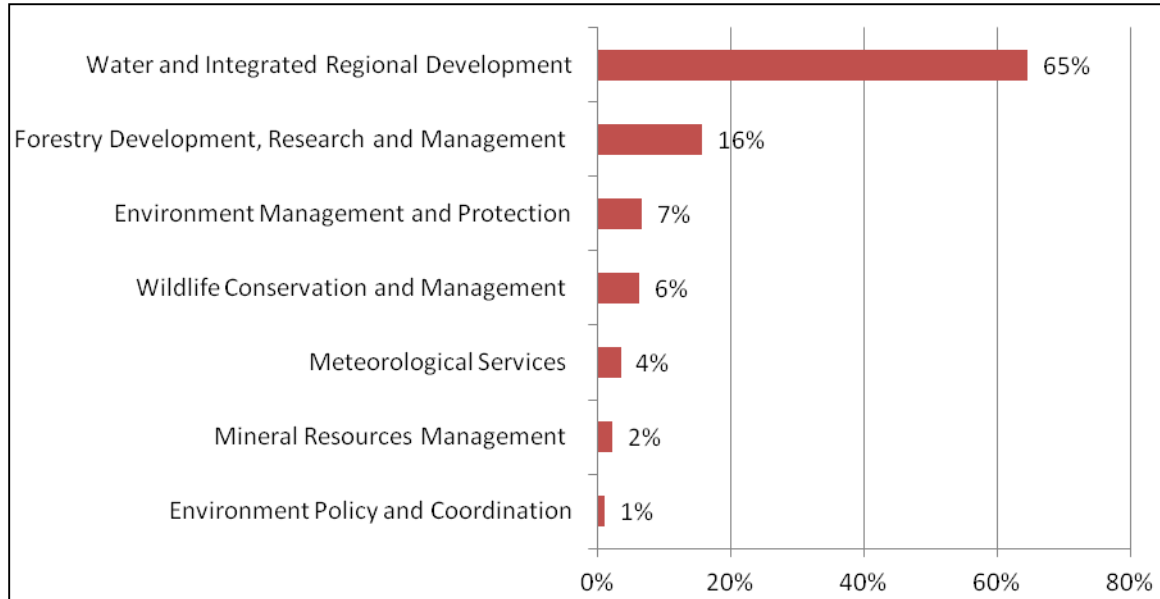
### **Fiscal Instruments**

Legal notice number 104 of the Forests Act of 2005 sets out policy instruments for managing the forestry sector. These include fees levied on forest products, stumpage fees on certain tree species, royalties and charges for round wood harvesting in forest plantations and natural forests. There are other levies such as forest recreation entry fees, research permits, annual licenses, timber and charcoal movement permits. The sector also receives direct funding from the government and aid from development partners. This revenue stream provides resources to Forest Services (KFS) for the sustainable development of forest resources. The various charges and fees applied in the forestry sector are summarized in Appendix II.

The Kenya Forestry Services collected about KSh. 1.95 billion (US\$ 22.4 million) in 2012/13. Key revenue sources include the sale of timber products from state forests, movement permits, fuel licenses, grazing fees, and leases. Revenues generated from the sale of timber products constitute the major source of internal funds accounting for about three quarters of revenue. An assessment of revenue streams, which was conducted in the context of the Strategic Environmental Assessment (SEA) of the Kenya Forests Act 2005 (World Bank, 2007), concluded that KFS could become financially sustainable and more effective under a sound policy environment. The recommendations included increasing royalties, smooth transition from the Forest Department to the Kenya Forest Service (KFS) as required under the Forests Act 2005, increased accountability and transparency, and stopping revenue leakages. Revenues were projected to rise to KSh. 4.29 billion (US\$ 49.3 million) in 2014/15 thus enhancing financial sustainability.

As indicated above, the Environment Protection, Water and Natural Resources sector receives about 5 per cent of the total government budget. Between 2011/12 and 2013/14, the average annual expenditure for the sector was KSh. 42.9 billion allocated across different subsectors - see Figure 7. The forestry subsector had the second largest share of expenditure (16 per cent or about KSh. 6.9 billion) of expenditure in this sector.

**Figure 7: Percentage Share of Actual Environment Protection, Water and Natural Resources Sector Budget 2011/12-2013/14**



*Data Source: Environment Protection, Water and Natural Resources Sector Report 2014*

According to the Kenya Green Economy Assessment Report (UNEP 2014), there are opportunities to access international funding sources to support greening the forestry sector, in particular through participation in international climate finance mechanisms. Kenya already participates in Reducing Emissions from Deforestation and Forest Degradation (REDD+), and the Clean Development Mechanism (CDM). Kenya's Kasigau Corridor Project is a pioneer REDD+ project (UNEP 2013, UNEP 2014) which uses carbon finance to support trees, wildlife and the people living on the land with alternative income<sup>2</sup>. Kenya had 19 CDM projects registered of February 2014<sup>3</sup>, of which five are in the forestry sector.

### Policy Options

Based on a review of the existing forestry policy framework, coupled with the overall policy environment, Kenya needs to fast-track efforts to develop new forestry legislation that aligns the framework to the Constitution of Kenya 2010. The legal framework should strengthen governance in terms of accountability, transparency and participation, recognize the role of county governments and stop revenue leakages. There is a need to establish a clear and transparent mechanism for benefit sharing between the national government, county governments and communities that could include grazing rights and revenue sharing.

In terms of fiscal instruments, there is need to provide a framework that accommodates new instruments such as payment for ecosystem services (PES), REDD+ and CDM. There is also a need for a framework that enhances reporting and monitoring of revenue streams from the forestry subsector. Existing instruments

<sup>2</sup> <http://www.carbonneutral.com/carbon-offsets/kasigau-corridor-redd-forestry/>

<sup>3</sup> National Environment Management Authority  
[http://www.nema.go.ke/index.php?option=com\\_content&view=article&id=241:status-of-cdm-projects-in-kenya&catid=100&Itemid=598](http://www.nema.go.ke/index.php?option=com_content&view=article&id=241:status-of-cdm-projects-in-kenya&catid=100&Itemid=598)

will need to be reviewed, in particular in terms of enhancing current royalties and other charges and improving penalties and enforcement mechanisms.

The Non-Timber Forest Products (NTFPs) subsector is an emerging subsector with significant potential for export trade. Kenya could put in place a framework for the development of NTFPs such as indigenous fruits, aloe, gums and resins and essential oils that are increasingly used in pharmaceuticals, food industry (dietary supplements) and cosmetics. This could include fiscal incentives for NTFP enterprises targeting technical and business inputs as well as providing information on the resource base.

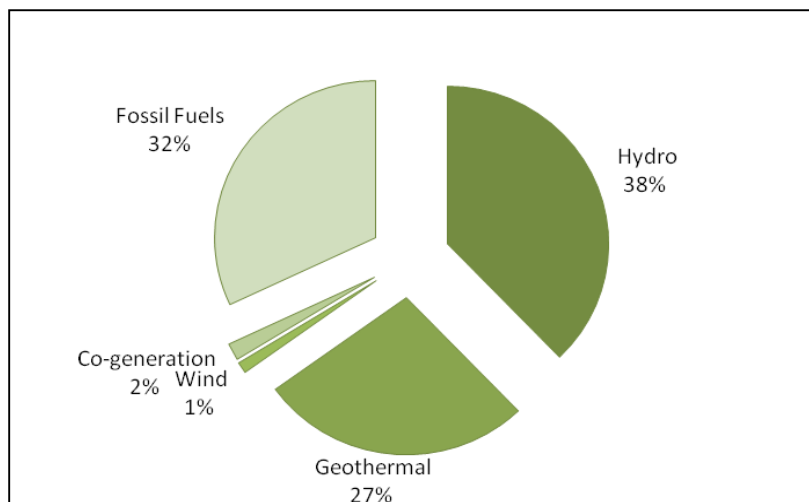
## 4.2 Energy

Energy is obtained from a variety of renewable and non-renewable sources including hydropower, wind, solar, geothermal, petroleum, biomass, wood fuel or charcoal fuel. About 80 per cent of Kenya's population depends on wood fuel for domestic energy (cooking and heating) and for rural informal industries, while paraffin is the leading source for cooking used by 44.6 per cent of urban dwellers.

Recent trends show strong growth in hydro and geothermal energy supply to the national grid, which can be attributed to diversification from thermal energy to other environmentally friendly, cheap energy sources. Over-reliance on wood fuel has a negative effect on the environment through the felling of trees and is also associated with respiratory complications due to effects on indoor air quality. Over three quarters of households use paraffin lamps while electricity is used by 15.6 per cent of Kenyans. The adoption of solar energy has been slow due to high initial installation costs with only about 1.6 per cent of Kenyan households using solar energy (NEMA, 2009). The exploitation of recently discovered oil, coal and gas reserves will have important implications for the environment.

By December 2014, renewable energy accounted for 68 per cent of the 2,173MW of total installed electric power generation capacity, made up of hydro power (821MW), geothermal (594 MW), wind (25 MW) and co-generation (38 MW) (Ministry of Energy, 2014) – see Figure 8. The potential for geothermal and hydro is estimated at more than 10,000MW and 6,000MW respectively. There is also potential for bio-gas production in the floriculture and sisal industry.

**Figure 8: Electric Power Generation Installed Capacity - December 2014**



Data Source: Ministry of Energy and Petroleum, Draft National Energy and Petroleum Policy, January 2015

### Fiscal Policy Instruments

Key fiscal instruments in the energy sector include electricity tariffs and levies, feed-in tariffs, road maintenance levy, excise tax, import duties, VAT exemptions and investment through the Geothermal Development Company (GDC). Excise tax is levied at different rates depending on the fuel type. Gasoline premium, jet fuel and aviation spirit is taxed at KSh. 19,895 per 1000 litres at 200°C. Gas oil is taxed at KSh. 10,305 per 1000 litres at 200°C. Excise tax on fuels raised KSh. 34,392 billion (US\$ 395.4 million). In 2012/13, the total revenue from excise taxes, VAT on lubricating greases and the road maintenance levy is equivalent to about KSh. 61.6 billion (US\$ 694.4 million) or about 7.3 per cent of total revenue.

The GDC is a state-owned company that focuses on the development of geothermal resources in the country. Geothermal is an abundant indigenous resource that is a source of cheaper green power. In geothermal power generation, upfront costs and capital risks are high and unattractive to private sector investors. Thus, the GDC meets upfront costs by undertaking surface exploration and appraisal drilling. Once commercial viability has been established, the project becomes attractive for investment by Independent Power Producers (IPPs). In 2011, the government also introduced a zero-rated (0 per cent) import duty on renewable energy equipment and accessories.

Import duties on fuels have increased from KSh. 0.52 billion in 2007 to KSh. 1.02 billion by 2013. Road maintenance funds have also grown from KSh. 18 billion in 2007 to KSh. 25 billion in 2013 representing a 38 per cent increment over the period. The rural electrification levy is used by the Rural Electrification Authority to support rural electrification programme.

The Feed-in-Tariff (FiT) Policy, introduced in 2008 (and revised in 2010 and 2012), promotes investment in renewable energy. The policy allows producers of electricity from renewable sources to sell to a grid distributor at a pre-determined fixed tariff for a given period of time under a Power Purchase Agreement (PPA). The existing tariff has two structures: for projects up to 10 MW (Table 3); and for projects above 10 MW of installed capacity (Table 4). By December 2014, according to the Draft Energy and Petroleum Policy, investors have shown interest in investing in generation of 1,781 MW under the FiT policy.

**Table 3: Tariffs for small renewable energy projects (up to 10MW of installed capacity)**

<b>Feed-in-Tariffs for small renewable energy projects (up to 10MW of installed capacity) connected to the grid</b>					
	Installed Capacity (MW)	Standard FiT (US\$/kWh)	Percentage escalable portion of the tariff	Min Capacity (MW)	Max Capacity (MW)
Wind	0.5-10	0.11	12	0.5	10
Hydro*	0.5	0.105	8	0.5	10
	10	0.0825			
Biomass	0.5-10	0.1	15	0.5	10
Biogas	0.2-10	0.1	15	0.2	10
Solar (Grid)	0.5-10	0.12	8	0.5	10
Solar (Off Grid)	0.5-10	0.2	8	0.5	1

Source: Draft National Energy Policy, Ministry of Energy and Petroleum, 2014

**Table 4: Feed in Tariff values for renewable energy projects above 10 MW of installed capacity**

<b>Feed-in-Tariff values for renewable energy projects above 10MW of installed capacity</b>						
	Installed Capacity (MW)	Standard FiT (US\$/kWh)	Percentage escalable portion of the tariff	Min Capacity (MW)	Max Capacity (MW)	Max Cumulative Capacity (MW)
Wind	10.1-50	0.11	12	10.1	50	500
Geothermal	35-70	0.088	20 % for first 12 years and 15% after	35	70	500
Hydro	10.1-20	0.0825	8	10.1	20	200
Biomass	10.1-40	0.1	15	10.1	40	200
Solar (Grid)	10.1-40	0.12	12	10.1	40	100

Source: Draft National Energy Policy, Ministry of Energy and Petroleum, 2014

Kenya's electricity tariff is based on an increasing block tariff (IBT)-pricing scheme, where the unit price per kWh is fixed within a predetermined range of power consumption. It is complemented by a fixed monthly charge (Briceño-Garmendia C. and Shkaratan, M. (2011)) and is designed to achieve cost recovery. In addition, there are surcharges, namely a water levy, fuel cost adjustment, inflation adjustment, foreign exchange rate fluctuation adjustment, electricity regulatory levy, rural electrification and VAT. Tariffs are reviewed and approved by the Energy Regulatory Commission (ERC). The current tariff rates took effect from December 2013, following a request by KPLC for upward revision to cater for increased cost of labour, materials and transport. The rates will stabilise after July 2015 as per the current schedule until another review is undertaken (Table 5). According to the KPLC Annual Report for 2013/14, the Company recorded improved financial performance registering a growth of 87 per cent in after tax profit of KSh. 6.5 billion compared to KSh. 3.4 billion the previous year. This performance is attributed partly to the enhanced tariffs that took effect from December 2013<sup>4</sup>.

**Table 5: Electricity Tariffs for 2012/13-2014/15**

<b>ELECTRICITY COSTING</b>									
<b>CORE TARIFFS</b>				1st Dec 2013 - 30th June 2014			1st July 2014 - 30th June 2015		
	CHARGES KSh.			CHARGES KSh.			CHARGES KSh.		
TARIFF	Fixed charge	Energy charges (per kWh)	Domestic charges (per kVA)	Fixed charge	Energy charges (per kWh)	Domestic charges (per kVA)	Fixed charge	Energy charges (per kWh)	Domestic charges (per kVA)
Domestic Consumers (DC)		First 50kWh 2.00	n/a		First 50kWh 2.50	n/a		First 50kWh 2.50	n/a
		50 to 1500kWh 8.10			50 to 1500kWh 11.62			50 to 1500kWh 12.75	
	120	Thereafter 18.57		120	Thereafter 19.57		150	Thereafter 20.57	
Small commercials	120	8.96	n/a	150	12.00	n/a	150	13.5	n/a

<sup>4</sup> KPLC Annual Report for 2013/14, <http://www.kplc.co.ke/content/item/40/Annual-Reports>

CI1 (Commercial, 415V)	800	5.75	600	2000	8.70	800	2500	9.50	800
CI2 (Commercial, 11kV)	2500	4.73	400	4500	7.50	520	4500	8.00	520
CI3 (Commercial, 33kV)	2900	4.49	200	5500	7.00	270	5500	7.50	270
CI4 (Commercial, 66kV)	4200	4.25	170	n6500	6.80	220	6500	7.30	220
CI5 (Commercial, 415V)	11000	4.10	170	17000	6.60	220	17000	7.10	220
IT (Domestic water heating)	120	4.85	n/a	120	13.00	n/a	150	13.50	n/a
<b>SURCHARGES</b>									
Fuel Cost Charge (FCC)	Variable rate per kWh			Variable rate per kWh			Variable rate per kWh		
Foreign Exchange Rate Fluctuation Adjustment (FERFA)	Variable rate per kWh			Variable rate per kWh			Variable rate per kWh		
Inflation Adjustment (IA)	Variable rate per kWh			Variable rate per kWh			Variable rate per kWh		
Water Levy	n/a			Variable rate per kWh			Variable rate per kWh		
	n/a			variable rate per kWh			Variable rate per kWh		
ERC Levy	3 cents per kWh			3 cents per kWh			3 cents per kWh		
REP Levy	5% of the base rate			5% of the base rate			5% of the base rate		
VAT	12% on everything except the ERC and REP levies and Inflation Adjustment			16% on everything except the ERC and REP levies and Inflation Adjustment			16% on everything except the ERC and REP levies and Inflation Adjustment		

Source: Energy Regulatory Commission- Schedule of Tariffs 2013

To obtain an electricity connection for a newly constructed building, one pays a fee as capital contribution charges for network reinforcement (Table 6). In 2013, KPLC's bid to double connection charges to KSh.70,000 from KSh.32,480 for households was rejected by the government as connection charges were considered a barrier to access to electricity. Kenya Power with support from the World Bank Global Partnership Output Based Aid (GPOBA) Programme is implementing a Slum Electrification Programme that aims to connect residents in slums and low income rural areas to the national grid at a subsidized charge

of KSh.1,160 per connection. Under the subsidy program, GPOBA and KPLC contribute US\$ 225 (KSh.19,350) and KSh.11,970 per connection, making up the standard capital contribution of KSh. 32,480 (Table 6).

**Table 6: Electricity Connection Costs**

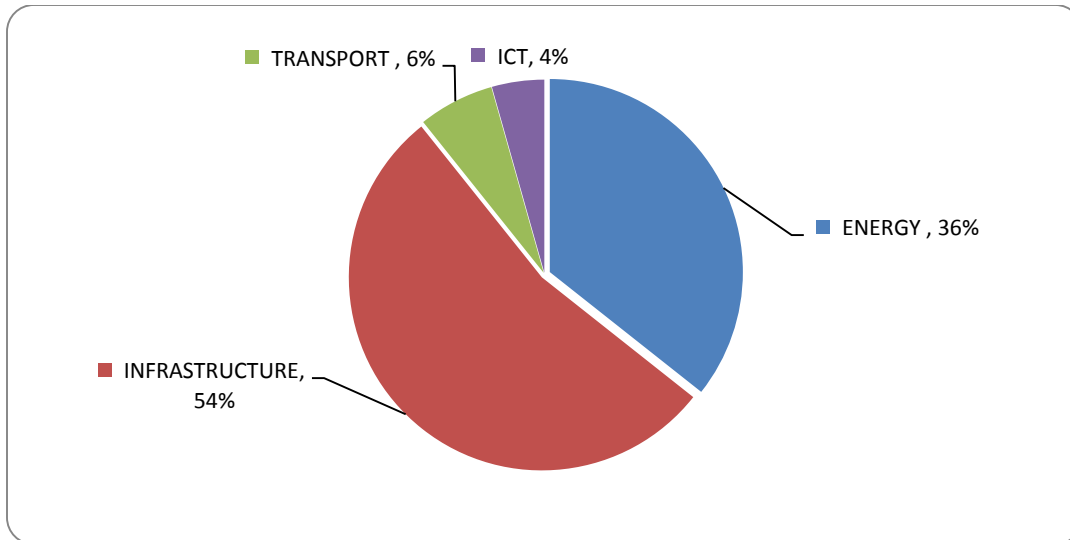
<b>ELECTRICITY CONNECTION COSTS</b>		
<b>Facility</b>	<b>Connection Type</b>	<b>Connection Fees KSh. (VAT inclusive)</b>
Market Centres	Single Phase	17,400.00
	Three Phase	46,400.00
Health centres & Dispensaries	Single Phase	23,200.00
	Three Phase	46,400.00
Schools, Polytechnics & water Schemes	Single Phase	32,480.00
	Three Phase	46,400.00
Tea & Coffee factories, Buying centres & Milk cooling facilities	Three Phase	52,200.00
Police stations, posts, Chief camps & DO offices	Single Phase	29,000.00
	Three Phase	46,400.00
Domestic households next to the above facilities	Single Phase	32,480.00
	Three Phase	44,080.00

Source: Rural Electrification Authority Website ([www.rea.co.ke](http://www.rea.co.ke))

The government supports the energy sector with budgetary allocations in the national budget through the MTEF process. As discussed above, the Energy, Infrastructure and ICT Sector receives the second largest share of budgetary allocation, at about 20 per cent (Figure 5). The actual annual average expenditure for the sector during 2011/12-2013/14 was KSh. 162.3 billion of which KSh. 57 billion or 36 per cent was spent on energy (Figure 9). Key expenditure areas are national electrification, renewable energy and petroleum exploration. About 2 per cent of the energy and petroleum subsector expenditure went to petroleum exploration. On average, about 95 per cent of the energy sector expenditure went to expansion of the national grid, rural electrification and expansion in geo-thermal power generation (Energy, Infrastructure and ICT Sector MTEF Report – October 2014).

**Figure 9: Energy, Infrastructure and ICT Sector: Average Expenditure Shares 2011/12-2013/14**





Data Source: *Energy, Infrastructure and ICT Sector Report – October 2014*

During the MTEF period 2014/15-2016/17, the government has set a target of generating an additional 5,000MW from geothermal, wind, and coal by involving the private sector through Public Private Partnerships (PPP). Prioritized green energy projects under PPP include Menengai Phase I Geothermal Development Project (400 MW), Menengai Phase 2 Geothermal Development Project (800 MW), and Bogoria-Silali Phase 1 (800MW).

### Policy Options

The government has deployed various green fiscal policy tools to promote clean energy. These include Feed-in-Tariffs (FiT), subsidized electricity connection rates, VAT exemptions and public investment. The FiT allows renewable energy producers to sell power at an attractive pre-determined price. As the country shifts more to geothermal energy, the final price of electricity is expected to continue declining. The draft Energy and Petroleum Policy indicates that several investors have shown increased interest in renewable energy investment as a result of the attractive FiT. It may be important for the government to start evaluating the fiscal implications of the FiT.

Kenya also plans to start producing electricity from coal and oil in the next one to three years which requires careful examination to ensure that environmental impacts are minimized. The government can put in place an emission tax system which requires establishing emission standards so that emissions above the threshold are taxed. This can encourage the adoption of more efficient, less polluting technologies. Innovatively, the government is continuously involving the private sector in the generation of renewable energy. However, the other important policy concern is how the private sector can develop capacity to produce renewable energy equipment and components, so as to deepen the manufacturing sector, and forward and backward linkages with other sectors of the economy. Currently, Kenya has not imposed VAT on fuel pump prices. The prevailing global low oil prices may offer an opportunity to introduce VAT without seriously impacting the pump price.

## 4.3 Water

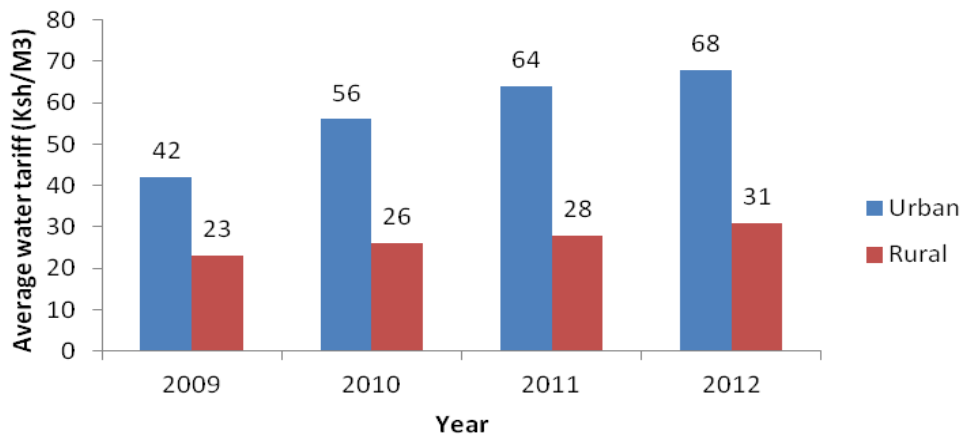
Kenya is a water-scarce country with 400m<sup>3</sup> in renewable freshwater resources, which falls short of the UN recommended 1000m<sup>3</sup> per capita per annum (MEMR, 2012). Access to safe water in urban areas is about 54 per cent while in rural areas it is 51 per cent. This is below the Vision 2030 target of 100 per cent access and the MDG target of 80 per cent.

The main challenges facing the water sector include: soil erosion and siltation, degradation of water catchment areas, weak compliance with water quality regulations, and a weak framework for the management of trans-boundary waters. Climate change and rainfall variability compound water challenges, in particular contributing to water scarcity during periods of drought.

### Fiscal Policy Instruments

Fiscal instruments used in promoting and protecting water resources include water tariffs, licenses, penalties, levies and government expenditure. Water companies provide water in line with regulated tariffs according to the Water Act 2002. These tariffs are important for the financial sustainability and viability of water service providers, which are public utility companies. Average water tariffs have been rising over time (Figure 10). Turnover improved between 2011/2012 and 2012/13, from KSh. 13.1 billion to KSh. 15.3 billion. However, non-revenue water (NRW) is significant. NRW is associated with technical and commercial losses resulting from the difference between the amount of water produced and the amount billed to customers. Losses can derive from leakages, illegal connections, theft, and metering errors. In 2012/13, the loss was estimated at about KSh. 11.4 billion (US\$ 127 million) (WASREB 2014). The percentage loss in rural areas is higher, where NRW is estimated at 55 per cent compared to 42 per cent in urban areas. Therefore, NRW remains a major challenge to the sustainability of water service providers and in the efficient delivery of water in Kenya.

Figure 10: Average Water Tariffs, 2009-2012



Source: WASREB 2014, Impact Report

There is a Water Regulatory Levy which is set at 1 per cent of all sales of water services to consumers by each water service provider operating under the Water Act. Revenue from this levy has grown from KSh. 56 million in FY2008/09 to KSh. 133 million in FY2012/13 (Table 7). In addition, the government charges excise tax on mineral water, which at the end of 2013, raised about KSh. 2 billion in revenue.

Table 7: Water Regulatory Levy 2009-2013

					Ksh in Millions
Item	2008/09	2009/10	2010/11	2011/12	2012/13
Regulatory Levy	56.40	65.71	123.85	131.33	133.42
Source: WASREB, Annual Statements 2008-2013					

In terms of public budget allocation, as noted above, the water subsector is a priority sector receiving about 65 per cent of the sector budget allocation (Figure 7). On average, between 2011/12-2013/14, about KSh. 27.6 billion (65 per cent of the sector budget) was spent within the water subsector. Key areas of expenditure include water supply infrastructure, construction of small water dams and water pans, boreholes and sanitation.

### Policy Options

Most indicators reveal that the performance of Water Service Providers has improved significantly (WASREB 2014). However, NRW remains a major challenge for their financial sustainability. The 2010 Constitution of Kenya devolved responsibilities for water services to county governments, thus there is a need to fast-track current efforts to establishing the relevant legal and regulatory framework to support the transition to devolved systems. In the new framework, a proper separation of operation, oversight functions and enforcement mechanisms will help to enhance performance. The level of sanitation coverage remains low and the government could consider introducing a cost recovery levy for sanitation so as to support the development of needed sewage infrastructure. In addition, capacity building is required to enhance management and professionalism in the management of national water resources.

## 4.4 Wildlife

National parks and reserves currently occupy 8 per cent of Kenya's land area with a total of 428 parks. Kenya is known globally for its wildlife conservation especially for large mammals such elephants, lions, leopards and rhinos. Wildlife resources contribute directly and indirectly to local and national development through tourism services and employment. Wildlife also has socio-cultural and aesthetic values. Kenya is largely defined by its rich and diversified wildlife. Wildlife is a major product of tourism accounting for 90 per cent of safari tourism and 75 per cent of total national tourism earnings<sup>5</sup>.

The 2013 Wildlife Conservation and Management Act provides the legal framework for the protection, conservation, sustainable use and management of wildlife in Kenya. The Act establishes the Kenya Wildlife Service (KWS) and the Wildlife Regulatory Council. The main functions of KWS are to manage and conserve wildlife as well as provide security for both wildlife and visitors in reservation areas. The Wildlife Regulatory Council identifies and determines wildlife user rights and issues permits and licenses.

Management of the country's wildlife is constrained by human-wildlife conflict in areas bordering the national parks, game reserves, forests and wildlife corridors, poaching and human settlements. Another challenge is represented by the management of trans-boundary wildlife resources, such as the Maasai Mara game reserve that is shared with the Republic of Tanzania. In recent years, the number of international visitors to parks has declined largely due to concerns about security and international travel advisories.

### Fiscal Instruments

<sup>5</sup> Kenya Wildlife Service Strategy 2012 -2017.

The fiscal instruments used in promoting and protecting wildlife include entrance fees to parks and reserves, fees on camping, fishing, cycling, horse- and bicycle-riding in national parks, licensing fees and permits for sport hunting, trade in wildlife species, and filming in national parks. The park entry fees vary depending on whether one is a resident or non-resident. These fees are collected by the Kenya Wildlife Services (KWS). Aggregate revenue flows from the various fees are summarized in Table 8. Government budgetary allocations to wildlife conservation and management increased from KSh. 1.8 billion in 2011/12 to KSh. 3.2 billion in 2013/14.

**Table 8: Wildlife Fees 2007/14**

KSh. Millions							
Item	2007	2008	2009	2010	2011	2012	2013
Park entry Fees	2,226.75	1,581.29	1,877.34	2,706.26	3,659.63	4,216.76	3,694.39
Accommodation	110.89	98.16	94.26	98.88	115.60	70.14	48.53
<b>Total</b>	<b>2,337.63</b>	<b>1,679.45</b>	<b>1,971.60</b>	<b>2,805.13</b>	<b>3,775.24</b>	<b>4,286.89</b>	<b>3,742.92</b>

*Source: Kenya Wildlife Service Annual Reports 2008-2013*

Park entry fees account for more than 90 per cent of income with an upward growth trend despite a slight decline in 2013. Following increased security concerns and travel advisories, the number of international visitors to Kenya has declined. According to the KWS Annual Report 2013, 60 per cent of visits in 2013 were domestic visitors. Chargeable accommodation fees in reserves and parks have declined by 56 per cent from KSh. 110.9 million 2007 to KSh. 48.53 million in 2013. The budget allocation to wildlife conservation and management has averaged about KSh. 2.6 billion or 6 per cent of the sector budget, over the last three years (Figure 7).

Penalties for wildlife crimes have been significantly enhanced, for instance the penalty for poaching and dealing in endangered species is a fine of KSh. 20 million or life imprisonment. With effective enforcement, this should help curb poaching.

### Policy Options

The Wildlife Conservation and Management Act 2013 was enacted to enhance the legal and regulatory framework for protection, conservation, sustainable use and management of wildlife. The Act enhances the governance framework in line with the Constitution of Kenya 2010. The establishment of County Wildlife Conservation Committees and County Compensation Committees allows counties to actively participate in the conservation and management of wildlife. It also allows counties to participate in issues related to compensation for damage arising from wildlife and thus is expected to help address human-wildlife conflicts. It is critical that capacity issues are taken into account when operationalizing these committees.

The Act provides for the Cabinet Secretary to develop guidelines on incentives and benefit sharing. This offers an important opportunity to review the current incentive framework to enhance wildlife conservation. The government could introduce the sharing of benefits with communities such as park entry fees and the development of public utilities through budgetary allocations.

## 4.5 Mining and Oil

The mining and oil sector has received significant attention in light of recent discoveries of oil, gas and rare earth mineral deposits (of soda ash, fluorspar, titanium, gold and iron ore) which have immense potential to contribute to national growth and development. Under Kenyan environmental laws, mining operations are subjected to environmental impact assessments before a license is issued by the National Environmental Management Authority (NEMA). The major environmental challenges associated with mining include air and water pollution, land degradation, deforestation and loss of biodiversity.

Legal notices 220 and 221 of 2013 of the Mining Act of 1940 stipulates various royalties and charges on minerals obtained whether for prospecting or mining operations. Kenya is in the process of revising the legal and regulatory framework for the sector in view of the 2010 Kenya Constitution that provides for devolution, and the need to modernize the governance framework. In this regard, the Mining Bill (2014) and the Energy and Petroleum Bill (2014) are before Parliament and will provide the governance framework for minerals and fossil fuels.

### **Fiscal Instruments**

Fiscal instruments used in the sector are royalties, charges, taxes and levies. The national government levies corporate income tax on mining companies, withholding tax on the transfer of property and royalties on minerals extracted based on their value.

With regard to oil, licensing of petroleum exploration is governed by the Petroleum (Exploration and Production) Act Chapter 308 of the Laws of Kenya. Exploration and production is based on a model production sharing contract (PSC) regime. According to the PSC, the sharing of oil profit is based solely on the volumes extracted with the highest proposition achieved when the production is over 100,000 barrels per day. The contractors are also required to pay a signature bonus which is a one-time payment, surface fees applied on an annual basis and calculated per square kilometre of blocks during exploration, and a training levy applied on an annual basis. Sub-contractors are also required to remit a petroleum service tax to the national government. Under production sharing, the state engages an International Oil Company (IOC) to find and extract the resource for a share in the production. The investor is allowed to recover the exploration, development and production costs incurred in their operations before sharing the remainder of production with the government. The state retains ownership of petroleum extracted.

The Government has drafted the Sovereign Wealth Fund Bill 2014 to establish the Kenya National Sovereign Wealth Fund (KNSWF). The draft bill provides for the establishment of three funds: a Stabilization Fund, an Infrastructure and Development Fund, and a Future Generations Fund. The purpose of the latter is to help build savings, invest in sectoral transformation and environmental protection. According to the draft Bill, seed capital of US\$114.9 million will be provided in the national budget. Budget allocation to the mineral resource management subsector is about 2 per cent of the sector budget or about KSh. 1 billion (Figure 7).

### **Policy Options**

The governance framework for the extractive sector is undergoing major changes as outlined in the Energy and Petroleum Bill 2014 and the Mining Bill 2014. The legal framework provides for licensing and equitable sharing of proceeds between the national government, county governments and local communities. It is worth noting that the Energy and Petroleum Bill provides for the establishment of the Energy Efficiency and Conservation Agency to coordinate the development and updating of the national energy efficiency and conservation action plan, including setting energy efficiency standards.

The Extractive Industry Transparency Initiative (EITI) principles are embedded in the framework and should help enhance overall accountability and transparency in the use of natural resource rents. As noted above, Kenya is planning to establish the Kenya National Sovereign Wealth Fund. It is critical to explore

the best framework for the establishment of the SWF and how investment of resources can be directed towards supporting green economy objectives.

## 4.6 Fisheries

The fisheries subsector is an important source of livelihoods in Kenya. It contributed an average of 0.5 per cent of the GDP over the period 2009-2013. The quantity of fish caught has maintained a steady growth since 2009. In 2013, a total of 161,800 metric tons of fish worth over KSh. 20.9 billion was produced. Between 2011 and 2013, Kenya's export earnings from fish and fish preparations averaged about KSh. 4.6 billion per year.

### Fiscal Components

The fisheries subsector is managed by the State Department of Fisheries under the Ministry of Agriculture, Livestock and Fisheries through the Fisheries Act (Cap 378). The Fisheries Act Cap 378 provides for the development, management, exploitation, utilization, and conservation of fisheries and for connected purposes. The Act provides conditions for licensing foreign fishing vessels and local fishing vessels. The Kenya Bureau of Standards (KEBS) ensures safety standards are set and maintained.

In terms of budgetary resource allocation, the subsector belongs to the Agriculture, Rural and Urban Development sector (Figure 5). The sector received about KSh. 50 billion per year over the period 2011/12-2013/14. About KSh. 3 billion or 6 per cent of the sector expenditure went to fisheries development and management (Agriculture, Rural and Urban Development MTEF Sector Report, November 2014). Focus areas for public policy include strengthening monitoring, control and surveillance to curb illegal fishing, support to aquaculture development, and development of the legal and regulatory framework that governs the fisheries subsector through formulation of the Fisheries Development and Management Bill 2014.

The Kenyan government enhanced support for fish farming as part of the Economic Stimulus Package initiated in 2009. The support included the construction of ponds and setting up of training facilities. Since 2009, the contribution of aquaculture to total fish output has been growing rapidly. The share of aquaculture in total fish output has increased from 4 per cent in 2009 to 15 per cent in 2013 (Table 9).

**Table 9: Quantity Fish Landed, 2009 -2013 (tons)**

	2009	2010	2011	2012	2013
<b>Freshwater fish</b>	120,779	120,192	121,209	123,663	129,210
<b>Fish Farming</b>	4,895	12,153	19,265	21,487	23,501
<b>Marine Sources</b>	7,926	8,406	8,572	8,865	9,138
<b>Total</b>	133,600	140,751	149,046	154,015	161,849
<b>Share of Fish Farming</b>	<b>4%</b>	<b>9%</b>	<b>13%</b>	<b>14%</b>	<b>15%</b>

*Data Source: Economic Survey 2014*

The government generates revenue through the issuance of licenses for local and foreign fishing vessels, dealing in aquarium fish, sport fishing and fish processing. The government also charges fish export fees (royalties) of 0.5 per cent of the market price.

### Policy Options

The government is already taking measures to curb illegal, unreported and unregulated fishing and support fish farming. However, there are several challenges that need to be addressed which include addressing

post-harvest losses by developing appropriate infrastructure; involvement of local communities in fish conservation and management; support for certification, providing incentives and clear policies to support the sustainable exploitation of marine water fisheries that remain untapped.

#### 4.7 Waste Management

The challenge of waste management is growing as the population in Nairobi and other urban centres increases. While there are no national estimates on waste generation, Nairobi alone generates 876,000 tons and disposes of 59 per cent in environmentally sound landfills or controlled disposal sites (UN-Habitat 2010). Total reuse and recycling of waste, including paper, glass, metal and plastic is equivalent to 5 per cent of total waste generated (Munguti, J. M., Kim, J.D and Ogello, E. O., 2014).

Some of the key challenges identified in the waste sector include lack of adequate funding and institutional weaknesses including capacity and lack of policy coherence, and weak collaboration with civil society. The government has prioritized solid waste management in Nairobi, Mombasa and Nakuru under priority Public Private Partnerships (PPP)<sup>6</sup>.

#### Fiscal Components

A large number of regulations on waste management have been brought forth by the National Environment Management Authority (NEMA). The Environmental Management and Co-ordination (Waste Management) Regulations of 2006 set out licenses, permits, and fees which constitute the main fiscal instruments used to generate revenue from waste management and promote a clean environment (Table 10).

**Table 10: Waste Management Fees**

Item	Amount in Kes.
<b>1. Application Fees for a Licence/Permit</b>	
For Transportation of waste	3000
To own/operate a waste processing plant/site	3000
To own/operate a waste disposal plant/site	3000
To export/transit waste	3000
<b>2. Licence/Permit Fees</b>	
Transport waste	5000 (Valid for 1 year)
Own/operate a waste processing plant/site	40,000 (Valid for 1 year)
Own/operate a waste disposal plant/site	75000 (Valid for 1 year)
To export/transit waste	30,000 (Valid for the specific transaction)
Source: Waste Management Regulations, 2006	

The regulations outline guidelines on treatment and disposal of industrial waste, hazardous waste, pesticide and toxic substances, biomedical waste and radioactive substances. In addition, the regulations require an Environmental Impact Assessment study to be conducted before engaging in any activities likely to generate hazardous waste, biomedical and radioactive substances. Every licensed waste disposal site operator is required to carry out an environmental audit on an annual basis.

<sup>6</sup> The Government has approved 59 projects for PPP of which, 3 are focusing on addressing Solid Waste Management (see <http://pppunit.go.ke/index.php/news/download/30>)

Other regulations in the sector include the Waste Tyre Management Regulations of 2013 which establishes a Waste Tyre Management Unit within the National Environment Management Authority (NEMA) whose main function it to issue licenses for the collection, transportation, storage and disposal of waste tyres. It also determines the percentage of the market price of the tyre that will be charged as a waste management levy and outlines penalties to be paid for defaulting on levy payments. In addition, draft E-Waste Regulations of 2013 provide a list of products that qualify as e-waste and set out requirements and procedures for the registration of producers who engage in new and used electrical and electronic equipment. Producers are issued with a registration certificate by NEMA which requires producers to declare the weight of the electrical and electronic equipment they introduce in the market, provide an evidence note and a contractual agreement with a licensed treatment facility before being issued with a compliance certificate on an annual basis. Additionally, anyone intending to establish an E-waste recycling facility is required to obtain an Environmental Impact Assessment license before being issued an operating license.

### **Policy Options**

The planned involvement of the private sector in developing infrastructure through PPP will help ease fiscal pressure. However, these efforts need to be anchored in a clear policy framework to address institutional weaknesses related to capacity and oversight. It is also critical to provide an enabling environment to promote recycling. County governments could start encouraging separation of waste at source to reduce the cost of downstream recovery.

## **6. Conclusion**

There are a wide range of fiscal policy instruments that can be deployed to support the transition to a green economy. The design and implementation of these instruments should take into account political and economic realities, in particular impacts on the poor and on the competitiveness of the economy. It is thus important to understand the implications of applying cost recovery measures or pricing in areas such as water and energy for different segments of the society.

As discussed in this study, there are various green fiscal policy instruments deployed across different sectors of the economy in Kenya. An important cross-cutting policy challenge relates to the governance framework for natural resources which needs to be aligned with the 2010 Constitution of Kenya. In most sectors the legal and regulatory framework is currently being revised. This provides an opportunity to review the various policy instruments in place, support increased participation of communities and county governments in the sustainable management of natural resources and ensure equitable sharing of benefits between different levels.

Within the context of on-going reforms, it is important to strengthen accountability and transparency, in particular with regard to revenue streams and how they are utilized. Such information is currently not easily available which makes it difficult to track and distinguish associated revenue streams. It would also be useful to have more information on the impact of key instruments on socio-economic development and related environmental benefits. There are also concerns that the number of levies by county governments have increased tremendously. The implication of such fees and charges needs to be understood especially in the context of supporting environmental development goals.

In addition, weak compliance and lack of enforcement of the existing legal and regulatory frameworks governing the management of natural resources appear to be a challenge across many sectors analysed in this study. Thus, green fiscal policies need to be complemented by a strong governance framework.



As the green economy is mainstreamed in national planning, there is a need to integrate green fiscal policy in the context of the national budget process. The Medium-Term Expenditure Framework (MTEF) budget process provides an avenue where stakeholders can review and integrate such tools as part of the Sector MTEF budgets. In addition, there is need to capture reliable information on policy tools and revenue streams so as to support the improved design and implementation of green fiscal policies so that they can better support the green economy transition.

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## Annex 1: Access to Forests for Recreational Purposes

<b>Access to forests for recreational purposes:</b>				
<b>Group</b>	Kenya and EAC Citizens (KSh.)	Kenyan Residents (KSh.)	Non-Residents (KSh.)	
<b>Adult per day</b>	200	400	600	
<b>Child per day</b>	50	100	150	
<b>School party, per person per day</b>	20	50	150	
<b>Camping:</b>				
<b>Group</b>	Kenya Citizens (KSh.)	Kenyan Residents (KSh.)	Non-Residents (KSh.)	
<b>Adult per night</b>	650	650	650	
<b>Child per night</b>	100	100	100	
<b>Guest House Rental:</b>				
<b>Group</b>	Kenya Citizens (KSh.)	Kenyan Residents (KSh.)	Non-Residents (KSh.)	
<b>Ordinary, per person per night</b>	500	500	500	
<b>Medium, per person per night</b>	850	850	850	
<b>Premium, per person per night</b>	1,000	1,000	1,000	
<b>Kenya Forestry College Guest House, per person per night</b>	1,500	1,500	1,500	
<b>Hire of grounds:</b>				
<b>Group</b>	Amount (KSh.)			
<b>Urban (cities) per day</b>	10,000			
<b>Urban (municipalities) per day</b>	3,000			
<b>Others per day</b>	2,500			
<b>Filming rights</b>	20,000 per day.			

Source: Legal Notice No. 104 of the Forests Act 2005

## Annex 2: Royalties for Minor Forest Products

ROYALTIES FOR MINOR FOREST PRODUCTS		
Produce	Units	Price (KSh.)
(1) Bamboo	Per piece	55
(2) Withies	Per piece < 5 cm. diameter	10
(3) Firewood	Per cubic meter (commercial-clear-fell)	1,200
	Per cubic meter (Salvaging)	400
	Monthly Fuel Licence (M.F.L.)	100
(4) Cut Stone	Cut Stone Licence (annual)	12,000
	20 m by 20 m plot	30000
(5) Limestone	Per metric ton	90
(6) Crushed stone	Per metric ton	220
(7) Quarry waste	Per metric ton	100
(8) Sand	Ordinary per metric ton	200
	Silica per metric ton	350
(9) Murram	Per metric ton	300
(10) Soil	Per metric ton	300
(11) Grass	Gunny bag or Headload	50
(12) Moss	Gunny Bag or Headload	120
(13) Asparagus Fern	Per Kg.	30
(14) Bamboo Tips	Per Kg.	33
(15) Gum Copal resin	Per Kg.	8
(16) Honey	Per group per year (Community)	1,500
	Per year (Commercial)	10,000
(17) Red ochre	Per headload of 25 kg.	22
(18) Camping fee	Adult per night	650
	Child per night	100
(19) Guest House	Guest House per night-Ordinary	500
	Guest House per night-Medium	850
	Guest House per night-Premium	1,000
	Kenya Forestry College Guest House	1,500
(20) Forest land rent	For cultivation per acre/year	500
	Urban (Cities, Municipalities)	20,000
	For commercial purposes per acre per year(other areas)	10,000
	Mangrove areas per acre	20,000
(21) Building Poles	(a) Hardwoods	
	Between 5-10cm. Butt diam. per piece	60

<b>ROYALTIES FOR MINOR FOREST PRODUCTS</b>		
<b>Produce</b>	<b>Units</b>	<b>Price (KSh.)</b>
	10-15cm. Butt diam. per piece	350
	(b) Exotic Softwoods	
	Between 5-10cm. Butt diam. per piece.	50
	10-15cm. Butt diam. per piece.	300
	* All other sizes to be sold at respective timber price per cubic metre	
(22) Transmission Poles	Extra Light	2,806
	Light	2,906
	Medium	3,006
	Stout	3,106
(23) Cedar Poles	Less than 15cm. diam. per m.	30
	15-20cm. diam. per m.	55
	* Sizes above 20 cm diameter to be sold at respective timber rates	
(24) Mangroves	More than 35cm diameter butt per metre	700
	Banaa (20.1-35cm.) diameter butt per metre	750
	Per piece	70
	Nguzo (13.1-20.0) diameter butt per score	600
	Per piece	60
	Boriti (9.1-13.0) diameter butt per score	500
	Per piece	50
	Mazio (6.1-9.0) diameter butt per score	400
	Per piece	40
	Pau (4.1-6.0) diameter per score	200
	Per piece	30
	Fitos (less 4.0) diameter per score	60
	Per piece	20
(25) Facilities within Mangrove Areas	Docking (annual)	150,000
	Boat Repair Yard (annual)	100,000
	Jetty -for commercial use (annual)	35,000
	Jetty -non-commercial use (annual)	5,000
	Board walk -Commercial (annual)	15,000
	Board walk -Community/groups (annual)	2,000
	Salt works (annual)	500,000
(26) Christmas trees	Potted	
	Less than 1metre per tree	300
	1-2 metres per tree	600
	Above 2 metres per tree	700

<b>ROYALTIES FOR MINOR FOREST PRODUCTS</b>		
<b>Produce</b>	<b>Units</b>	<b>Price (KSh.)</b>
	Cuttings per metre	200
(27) Plants	(a) Single plants in less than 15 cm. diameter of polythene tube per plant	
	Exotic	10
	Indigenous	15
	(b) Single plants in more than 15 cm. diameter of polythene tubes per plant	
	Exotic	50
	Indigenous	75
	(c) Plants lifted from Swaziland beds per plant	
	Exotic	4
	Indigenous	5
	(d) Plants in boxes of approximately 55 seedlings per box	250
(28) Croton Seeds	Croton Megalocarpus seed for bio-diesel per kg	4
	Licence fee for Seed collection -bio-diesel(annual)	100,000
(29) Barks	Green (stacked) Wattle Barks per cubic m.	345
	Other barks per kg.	45
(30) Water Reservoirs	For commercial consumption -Large (annual)	50,000
	For commercial consumption -Small (annual)	20,000
	Dam-Small up to 1million cum. (annual)	350,000
	Dam-Large more than 1million cum.(annual)	1,000,000
	Water tank-Small-up to diameter of 6m (annual)	5,000
	Water tank-Large-more than diameter of 6m (annual)	10,000
(31) Water abstraction	Water easement (Once)	15,000
	Wayleave-Small-up to 1 m. diameter (annual) per Km	5,000
	Wayleave-Large-more than 1 m. diameter (annual) per Km	20,000
	Borehole (Annual)	50,000
(32) Fish-farming	Fish-farming (fresh water)-Small-annual	30,000
	Fish-farming (fresh water)-Large-annual	100,000
(33) Aquaculture	Aquaculture (Marine)-Large annual	75,000
	Aquaculture (Marine)-Small annual	20,000
(34) Grazing	Cattle per animal per month	50
	Sheep per animal per month	20
(35) Transmitters and Transceivers	Mobile phone firms (annual)	250,000



<b>ROYALTIES FOR MINOR FOREST PRODUCTS</b>		
<b>Produce</b>	<b>Units</b>	<b>Price (KSh.)</b>
	Radio Stations (annual)	150,000
	TV Stations (annual)	250,000
	Data logging mast -Wind energy (annual)	50,000
(36) Licences (Annual)	General Forest Licence (GFL)	10,000
	Small sawmills (<10 cubic m. timber/day)	30,000
	Medium s/mills (11-20 cubic m. timber/day)	45,000
	Large scales/mill (>20 cubic m. timber/day)	80,000
	Pulp and Paper	200,000
	Plywood	150,000
	Pole treatment plant	60,000
	Resin Extraction	60,000
	Quarrying	50,000
	Commercial fuelwood	30,000
	Prospecting	50,000
(37) Timber Movement Permit	2 -4 tons	1,000
	5 -7 tons	1,500
	Over 7 tons	2,000
(38) Charcoal Movement Permit	Per bag	20
(39) Forest Recreational Areas		
(a) Kenya and EAC citizens	Adults per day	200
	Child per day	50
	School parties per day	20
(b) Residents	Adults per day	400
	Child per day	100
	School parties per day	50
(c) Non-residents	Adults per day	600
	Child per day	150
(40) Hire of grounds	Urban (Cities) per day	10,000
	Urban (Municipalities) per day	3,000
	Others per day	2,500
(41) Filming rights	per day	20,000

Source: Legal Notice No. 104 of the Forests Act 2005