GOVERNMENT OF KENYA

Green Economy Strategy and Implementation Plan 2016 – 2030

A low carbon, resource efficient, equitable and inclusive socio-economic transformation




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August 2016

Correct citation: Green Economy Strategy and Implementation Plan -Kenya 2016-2030

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On behalf of:
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
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Tea farm in Central Kenya. Photo: ViktorDobai (CC BY-NC)

Foreword

About forty-two per cent of Kenya's Gross Domestic Product (GDP) and seventy per cent of the overall employment is derived from natural resource-related sectors; these include, tourism, agriculture, mining, forestry and fishing. These sectors are highly sensitive to climate change and variability, making Kenya's economy highly vulnerable. To address these vulnerabilities, several low carbon and resource efficient initiatives have been adopted.

The initiatives have been guided by the constitution of Kenya, which embraces sustainable exploitation, utilization, management and conservation of the environment and natural resources, and identifies sustainable development as an important value and principle of governance. Kenya has repeatedly affirmed its commitment to sustainable development and has prioritised transition to a Green Economy as a means of its achievement; this is in line with the outcome of the Rio +20 summit held in Rio de Janeiro in 2012.

The second Medium Term Plan (MTP II, 2013-2017) identified the development of a national Green Economy strategy as one of the priorities to implement the Vision 2030. In the year 2014, the Ministry of Environment and Natural Resources and UNEP, produced a Green Economy Assessment Report which proposed alignment of Green Economy activities across the social, economic and environmental spheres of society.

In this regard, The Ministry of Environment and Natural Resources, with support from development partners, has spearheaded the development of this Green Economy Strategy and Implementation Plan (GESIP). GESIP has five thematic areas and a number of strategies aimed at accelerating a transition towards a globally competitive low carbon pathway, as well as define a road map for eliminating fiscal constraints leveraging on international financial mechanism. Through these strategies, GESIP also contributes to the implementation of the Paris Agreement on climate change and attainment of Sustainable Development Goals.

For GESIP to be a success, substantial resources are required in the form of finance, investment, technology development, innovation and transfer, and capacity building. Integration of Green Economy in the national and county planning and budgeting processes is also crucial. We therefore look forward to continued cooperation with our development partners and other stakeholders in the implementation of this strategy as we lay the foundation for Kenya's transformation to a Green Economy.

Prof. Judi W. Wakhungu, EGH
Cabinet Secretary
Ministry of Environment and Natural Resources

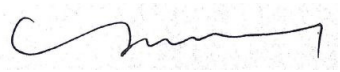
Preface and Acknowledgments

This is the first Green Economy Strategy and Implementation Plan (GESIP) for Kenya. It has been prepared through a multi-stakeholder participative and consultative approach and enriched by a rigorous technical review process. I therefore wish to thank all organizations from the government and non-state actors who contributed to this process; special thanks go to the GESIP Steering Committee and the coordination secretariat for their guidance and overall direction throughout the development process.

Development partners directly involved in the process included the United Nations Environment Programme (UNEP), The African Development Bank (AfDB), Danish International Development Agency (DANIDA), World Wide Fund for Nature (WWF), and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); they supported the GESIP stakeholder engagement, technical thematic working groups, validation workshop, printing and document launch. In addition, UNEP, through the Kenya Institute for Public Policy Research and Analysis (KIPPRA), and AfDB, through the Canada International Institute for Sustainable Development (IISD), provided technical support for this documents' development. On behalf of the Government of Kenya and the Ministry of Environment and Natural Resources, I am very grateful for their support.

GESIP is the anchor of national and local sustainable socio economic and environmental initiatives both in the public and private sector. Its transformative power is demonstrated by the fact that it has already informed some initiatives and projects in the country, including: SWITCH Africa Green Project (http://www.switchafricagreen.org); Operationalizing Green Economy Transition at sub-national level in Africa (www.giz.de/de/weltweit/32044.html); Denmark-Kenya Green Growth and Employment Program (www.environment.go.ke/?p=1722); NETFUND Green Incubation Program (www.netfund.go.ke); Green Schools Program (http://kenya.um.dk/en/danida-en/green-growth-and-employment/); and Sustainable Financing Initiative under the Kenya Bankers Association.

GESIP firmly leverages on existing strategies and plans and provides a testament to Kenya's commitment to pursue a sustainable development path in a changing climate.



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Principal Secretary
State Department of Environment
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National Steering Committee for Green Economy Strategy and Implementation Plan

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- Martha Cheruto (Vice Chairperson): Kenya Association of Manufacturers
- Dr. Alice A. Kaudia, HSC – Environment Secretary, Ministry of Environment and Natural Resources
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Freshly-picked tea leaves from the Mount Kenya region. Photo: CC © NC Viktor Dobai

Acronyms

AAK	Architectural Association of Kenya
AfDB	African Development Bank
AFIDEP	African Institute for Development Policy
BAU	Business-As-Usual
CMA	Capital Markets Authority
COTU	Central Organization of Trade Unions
CSOs	Civil Society Organisations
DANIDA	Danish International Development Agency
ECD	Early Childhood Development
EEZ	Exclusive Economic Zone
FiT	Feed-in-Tariff
FKE	Federation of Kenya Employers
GDP	Gross Domestic Product
GE	Green Economy
GESIP	Green Economy Strategy and Implementation Plan
GHGs	Greenhouse Gases
GIZ	Deutsche Gesellschaft für Internationale
GW	Gigawatt
IEK	Institution of Engineers of Kenya
ILO	International Labour Organization
KAM	Kenya Association of Manufacturers
KBA	Kenya Bankers Association
KEPSA	Kenya Private Sector Alliance
KFS	Kenya Forestry Service
KICD	Kenya Institute of Curriculum Development
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNCPC	Kenya National Cleaner Production Centre
KNBS	Kenya National Bureau of Statistics
KWS	Kenya Wildlife Service
LUP	Land Use Plan
MALF	Ministry of Agriculture, Livestock and Fisheries
MDP	Ministry of Devolution and Planning
MEACLSP	Ministry of East Africa Community, Labour and Social Protection
MEAACT	Ministry of East Africa Affairs, Commerce, and Tourism
MoEP	Ministry of Energy and Petroleum
MoE	Ministry of Education
MENR	Ministry of Environment and Natural Resources

MFA	Ministry for Foreign Affairs
MoH	Ministry of Health
MICNG	Ministry of Interior and Coordination of National Government
MICT	Ministry of Information, Communications and Technology
MITC	Ministry of Industry Trade and Cooperatives
MLHUD	Ministry of Land, Housing and Urban Development
MLPP	Ministry of Lands and Physical Planning
MLSSS	Ministry of Labour, Social Security and Services
MoM	Ministry of Mining
MPSYGA	Ministry of Public Services, Youth and Gender Affairs
MoT	Ministry of Tourism
MTIHUD	Ministry of Transport, Infrastructure, Housing and Urban Development
MWI	Ministry of Water and Irrigation
MTEF	Medium Term Expenditure Framework
MTP	Medium Term Plan
MSCA	Ministry of Sports, Culture and the Arts
MSE	Micro and Small Enterprise
MSME	Micro Small and Medium Enterprises
NAP	National Adaptation Plan
NCA	National Construction Authority
NCCAP	National Climate Change Action Plan
NEMA	National Environment Management Authority
NIMES	National Integrated Monitoring and Evaluation System
NITA	National Industrial Training Authority
NLC	National Land Commission
NRM	Natural Resource Management
NSE	Nairobi Securities Exchange
PBO	Public Benefit Organisation
PPPs	Public Private Partnerships
SAGAs	Semi-Autonomous Government Agencies
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SEZ	Special Economic Zone
SME	Small and Medium Enterprises
TNT	The National Treasury
TSC	Teachers Service Commission
TVET	Technical Vocational Education and Training
UNEP	United Nations Environment Programme
WRMA	Water Resource Management Authority
WSB	Water Services Board
WWF	World Wide Fund for Nature

Executive Summary

The Green Economy Strategy is geared towards enabling Kenya to attain a higher economic growth rate consistent with the Vision 2030, which firmly embeds the principles of sustainable development in the overall national growth strategy. This strategy builds on the achievements realised during the implementation of the first Medium Term Plan (MTP I 2008-2012) and on-going implementation of MTP II (2013-2017) for Vision 2030. The policy framework for Green Economy (GE) is designed to support a globally competitive low carbon development path through promoting economic resilience and resource efficiency, sustainable management of natural resources, development of sustainable infrastructure and providing support for social inclusion.

Formulation of the Green Economy Strategy and Implementation Plan (GESIP) was spearheaded by the Ministry of Environment and Natural Resources, through an inter-agency steering committee chaired by the Principal Secretary. The Committee comprised of experts representing key government sectors, civil society and development partners. The planning process underwent four phases, namely: inception, stakeholder engagement at national and county levels, technical review and validation. The inception phase started in January 2014 and was informed by the Green Economy (GE) assessment study (UNEP 2014), which also identified the opportunities, challenges, and risks towards transitioning to a GE.

The GESIP macro policy framework identifies enabling conditions necessary for a rapid transition to GE, namely: maintaining macroeconomic stability for green growth; human development and capacity building; prioritization of GE implementation within the devolved government system; governance and sustainable structural transformation; sustainable financing; reduction in cost of doing business; establishing a framework for extractive industries; sustainable trade regime through exploring market opportunities associated with the transition to a Green Economy; and creation of green, decent jobs. The proposed policy mix is aimed at aligning national policies towards supporting and accelerating the process of greening the economy by addressing vulnerability to shocks.

The Strategy and its Implementation plan focuses on overcoming the main binding social economic constraints towards the attainment of the Kenya Vision 2030. It targets multiple challenges including infrastructure gaps, food insecurity, environmental degradation, climate change and variability, poverty, inequality and unemployment. It will guide Kenya's transition to a sustainable path in five thematic areas, namely: sustainable infrastructure development; building resilience; sustainable natural resources management; resource efficiency; and social inclusion and sustainable livelihood. Implementation of GESIP will be guided by a set of principles meant to boost sustainable consumption and production, namely: equity and social inclusion; resource efficiency; Polluter-Pays-Principle; precautionary principle; good governance; and public participation. These will contribute to the national implementation of the Paris Agreement on climate change and the attainment of the Sustainable Development Goals.

Transitioning to a green economy requires significant resources in terms of finance, investment, technology and capacity building. Therefore, integration of GE in the planning and budgeting processes is crucial at both the national and county level for successful implementation of GESIP. An effective framework is also required to coordinate the GESIP activities both horizontally and vertically. However, these should take into account other relevant policy initiatives that are being also implemented. A results-based Monitoring and Evaluation (M&E) system linked to the National Integrated Monitoring and Evaluation System (NIMES) will track implementation progress and help inform future GESIP policy development.

Chapter one provides background information on Green Economy, highlighting Kenya's initiatives and contribution to sustainable development. An overview of the GESIP process and Guiding Principles is also given in this chapter. Details of National circumstances and greening scenarios are discussed in Chapter two. Chapter three identifies an enabling environment for transitioning towards a greener economy. GESIP's thematic areas and strategic objectives are discussed in Chapter four, whereas implementation plan is presented in Chapter 5. A detailed implementation matrix summarizing specific actions and key performance indicators is included in annex 1.

Fishermen in Kilifi. Photo: © Oona Tully

1. Introduction

1.1 Background

The principles of sustainable development have continued to guide Kenya's development agenda. Consequently, the Constitution of Kenya (2010) identifies sustainable development as an important value and principle of governance and grants the right to a clean and healthy environment to all citizens (Article 42). Full adoption of sustainable development requires prudent exploitation, utilization, management and conservation of the environment and natural resources that minimize waste and pollution. This would ensure that diverse needs and interests of various groups in the society are secured. Sustainable development is entrenched in the long-term national economic blue print, the Vision 2030. Key to attainment of the Vision is a sustained economic growth of 10 per cent per annum and creation of a just, cohesive and equitable social development in a clean and secure environment. The Vision sets the foundation for Kenya's transformation to a Green Economy pathway. The second Medium Term Plan (MTP II) 2013-2017 prioritizes the development of a National Green Economy Strategy to guide Kenya's development trajectory to one characterized by high growth, cleaner environment and high productivity relative to the "business as usual" growth scenario.

The fourth and fifth Special Sessions of the African Ministerial Conference on Environment held in Bamako, Mali, 2011 and Gaborone, Botswana, 2013 respectively, endorsed Green Economy as a means to ensure effective implementation of the outcomes of the United Nations Conference on Sustainable Development (UNCSD). Cognizant of the challenges facing the country, Kenya affirmed its commitment to transition to a Green Economy in line with the outcome of the third UNCSD held in 2012 (Rio+20 summit). The outcome document of the summit, The Future We Want, highlighted transition to a Green Economy as a means towards sustainable development. The Conference regarded green economy as a tool which contributes to poverty reduction, encourages sustained economic growth, enhances social inclusion, improves human welfare and creates opportunities for employment and decent work while maintaining the healthy functioning of the Earth's ecosystems. To this end, GESIP provides a framework for action towards meeting the aspirations of the Rio + 20 summit. It integrated relevant targets of the 2030 agenda as defined by the Sustainable Development Goals (SDGs). In addition, the strategies within GESIP recognize the urgency for domestic actions as a contribution to keeping global temperatures below 2 (1.5) degrees Celsius in line with the Paris Agreement, while building resilience of the economy, social and environmental systems to external shocks.

A Green Economy Assessment Report released in 2014, confirmed that Kenya would derive long-term benefits by transitioning to a green economy. It recommended that a roadmap for moving Kenya to a globally competitive green economy by 2030, consistent with the national Vision and Constitution be developed. The road map will among other things propose policies to create youth employment; encourage participation of all stakeholders at national and county levels; align fiscal policy instruments to enhance renewable energy and encourage job creation. In addition, the road map will support Kenya leverage international financial mechanism as well as improve her response to international trade.

1.2 Formulation process

The Ministry of Environment and Natural Resources spearheaded the formulation of GESIP through a national Steering Committee, gazetted by the Cabinet Secretary. The Committee comprised of experts representing government sectors, civil society and development partners.

The process had four phases: inception, stakeholder engagement, technical review, and validation. The inception phase was informed by the Green Economy assessment study (UNEP 2014), which also identified opportunities, challenges, and risks for a green economy transition. Stakeholder engagement, technical review, and validation feedbacks identified five thematic areas for Green Economy strategic investments.

1.3 The Green Economy Strategy and Implementation Plan

GESIP focuses on the main binding social economic constraints towards the attainment of Kenya's Vision 2030. It is meant to guide both the national and county governments, the private sector, civil society and other actors adopt development pathways with higher green growth, cleaner environment and higher productivity relative to the business as usual growth scenario. It will aid Kenya's transition to sustainable path in the following five thematic areas:

Sustainable infrastructure: Encompasses designing, building and operating of the energy and infrastructure elements. This will reduce negative impacts on social, economic and ecological processes necessary for human equity, diversity and integrity of natural resources. Infrastructure management entails balancing natural and built infrastructure in optimal combinations for large and small-scale developments. Sustainable infrastructure development cuts across a number of sectors including energy, transport, agriculture and irrigation, water and sanitation and waste management.

Building resilience: Kenya's growth is vulnerable to many shocks including slowdown in global economic growth, drought, and fluctuations in global energy prices. Because the effects of these shocks are not uniformly distributed across the society, continued vulnerability exacerbates the social gap in several fronts. Green Economy is expected to strengthen the resilience of economic, social and environmental systems to the adverse effects of external shocks.

Sustainable natural resources management: Transition to Green Economy entails addressing the drivers of natural resources change and providing support for green and eco-friendly technologies and related research and innovation activities. The adoption of sustainable natural resources management also requires interventions in land management that promote a modern and more responsible regime. Further, Green Economy in natural resources entails pursuing strategies that create conditions that encourage the community to participate in the conservation and management of land based natural resources as well as benefit sharing. Investment in efficiency is a key component that can lead to increased availability of resources to invest in Green Economy transition, low emissions and less waste generation.

Resource efficiency: This encompasses all natural resources that are inputs to the economy, including physical resources and ecosystem services. Under the green economy scenario, more outputs will be realized with less natural resources, while the overall economic value will be increased through high Total Factor Productivity (TFP) or GDP to domestic material consumption ratio. Resource efficiency is applicable at different levels of the economy, including but not limited to the production supply chains.

Social inclusion and sustainable livelihood: Initiatives in education and training aims to inculcate the Green Economy tenets in all forms and levels of education, while at the same time working towards creating a more enlightened population. GESIP lays emphasis on the need to re-orient education and training as an agent for creating jobs that are decent and address the specific needs of the informal economy.

A detailed description of these thematic areas is presented in chapter four, while the implementation plan is summarized in Annex 1.

1.4 Guiding Principles

Implementation of GESIP will be guided by a set of principles for sustainable development. These principles are:

1. **Sustainable Consumption and production (SCP):** SCP principles, including eco-innovation, will be embedded in the thematic areas identified under GESIP.

2. **Equity and social inclusion:** Green economy transformation will ensure a fair and equitable allocation of benefits and cost. It will also plough back benefits in the context of the need to integrate all disadvantaged groups on the basis of vulnerabilities, responsibilities, capabilities, disparities, and inter- and intra-generational equity.

3. **Resource efficiency:** This responds to natural resource scarcities. It encompasses all natural resources that are inputs to the Kenyan economy, including physical resources and ecosystem services. Resource efficiency is a way to deliver more with less natural resources and increase overall economic value through more productive use of resources, taking their whole life cycle into account. It also includes minimizing impacts of the use of one resource on other natural resources.

4. **Polluter-Pays-Principle:** GESIP will embrace the Polluter-Pays-Principle to ensure that the environmental and social costs of unsustainable production and consumption are met by the economic agents responsible for them, in accordance with the Environmental Management and Coordination Act.

5. **Precautionary principle:** This principle is most powerful when it serves as a guide to making wiser decisions in the face of uncertainty. The principle applies to human health and the environment. Therefore, when an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established.

6. **Good governance:** The development and implementation of GESIP shall respect the national principles of governance as recognized under article 10(2) of the Constitution of Kenya and include, participation, inclusiveness, rule of law, equity, respect for human rights, transparency and accountability.

Mombasa side street. Photo: Andrew Moore (CC BY-SA)

2. Situation Analysis

2.1 Overview

It is estimated that 42 per cent of Kenya's GDP and 70 per cent of overall employment is derived from natural resource related sectors, including agriculture, mining, forestry, fishing, tourism, wildlife, water supply and energy (UNEP, 2014). These sectors are highly sensitive to climate change and variability a fact that makes Kenya's economic growth highly vulnerable. Already, these sectors are highly susceptible to shifting rain patterns and extreme climate events like drought whose frequencies and intensities are expected to increase as a result of climate change. In the agriculture and livestock sectors for example, it is projected that the resultant reductions in crop yield and livestock productivity will have devastating effects on the country's economy in the medium term.

In recent years, Kenya has discovered viable deposits of oil, natural gas, coal and other minerals whose exploitation is expected to significantly change the structure of the economy and impact on the environment and social aspects. Additionally, the rapid infrastructural development and housing construction at the national and county levels is expected to exacerbate these impacts if sustainable consumption and production approaches are not embraced to transform towards a green economy.

2.2 Context

The regulatory frameworks comprising policies, legislations and institutions are factors that will catalyse Kenya's transformation to a green economy. The adequacy of provisions of these policies and institutions in leading the country in the direction of green growth is fundamental.

Although diverse regulatory frameworks governing economic activities exists, uptake of eco-innovations in the different sectors is unlikely to induce momentum for a shift to sustainable consumption and production practices that underpin a green economy regime. Transformation requires repositioning of sustainable consumption and production practices. Consequently, all sectors of the economy need to interrogate the existing policy framework. This scrutiny should lead to the need to ecologically innovate their policies, legislations and strategies to create sustainable wealth, avail green jobs and protect the environment.

Institutions on the other hand, are characterized by duplication of roles, lack of synergy and institutional inertia. The institutions employ management and enforcement styles that do not foster discursive and consensual approaches for eco-innovation. To move towards a green economy dispensation requires institutions to innovate their implementation strategies and practices along ecological lines.

GESIP considers demographic changes, sustainable jobs and sustainable consumption and production patterns as the main drivers of the country's green economy agenda.

i. Demographic changes

Kenya's population was 38 million in 2009 but currently estimated at 44.2 million (KNBS, 2015). According to recent UN reports, Kenya's population will grow by around 1 million per year – 3,000 people every day – over the next 40 years and will reach about 60 million by 2030 with a bulging youth population. These changes in demographic structure will remain a major driver of negative environmental changes and unprecedented impact on the country's finite natural resource base, ultimately increasing the challenge of attaining sustainable development. Demographic changes therefore remain a key driver of land-cover changes with direct impacts through the acceleration and expansion of new agricultural areas, settlement by communities, infrastructural development, and the extractive activities.

Population growth and urbanisation are priority challenges for the country's development. Currently, about 24 per cent of Kenyans live in urban areas, but the country is urbanising at a rapid rate and it is projected that 45.7 per cent of Kenyans will be residing in urban areas by 2050 (AFIDEP, 2012). This will create greater demand for housing, education, water supply and sanitation, waste management, health and infrastructure. Furthermore, majority of migrants to urban areas are unskilled and work in the informal sectors with poor conditions and low wages. This factor has contributed to the rapid expansion of informal settlement in Kenya's major urban centres.

ii. Sustainable jobs

Kenya's GDP per capita is 91,738 (KNBS, 2016). Poverty levels are high with 45.9 per cent (KIHBS, 2005/2006) of the population living below the poverty line. As a result, there is great demand for sustainable job creation to support poverty alleviation and promote inclusive growth. In 2013, Kenya transitioned to a devolved system of government after the first General Election following promulgation of the Constitution of Kenya in 2010. The goal of the devolved system of government is promoting equitable growth, improve service delivery and promote economic growth across the country through the establishment of 47 counties. By promoting agricultural transformation programmes, creating a conducive business environment, infrastructure development, and access to quality and affordable healthcare and education, there has been steady progress towards creating an inclusive society. A continuous coordinated effort between national and county governments promotes inclusive growth across the country, within the green economy pathway.

iii. Sustainable consumption and production patterns and lifestyles

Sustainable Consumption and Production (SCP) is about "the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations" (UNEP 2010). This includes doing more with less as well as increasing efficiency and promoting sustainable lifestyles. SCP provides an important avenue for poverty alleviation and the transition towards low-carbon and green economy, and calls for an inclusive multi stakeholder approach.

More than ever before, shifting socio-economic and political trends is expected to lift more people into the middle class category. This shift is good for individual's prosperity and social status but will increase the demand on the already finite natural resources. To address this challenge, Kenya will appraise production phases of both services and products and adopt a complete shift of attitude to production and consumption consumption at both household and industry levels towards sustainability.

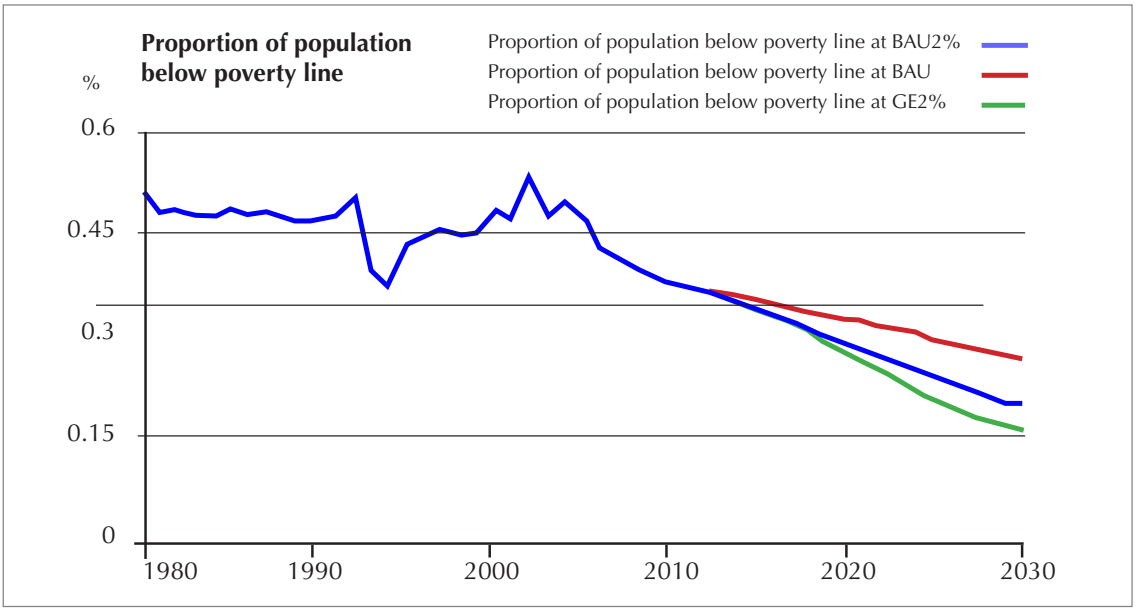
2.3 Scenario analysis

GESIP is based on a paradigm shift in the existing development model towards a green economy pathway, characterized by eco-innovation in all sectors of the economy. Scenario analyses undertaken in the green economy assessment report revealed positive dividends from an economy-wide transition within 7 to 10 years (UNEP 2014). According to the report, GDP growth in the short-term will remain the same under green economy and business-as-usual trajectory. However, the prices of goods and services, costs of operations and technology choices could create different welfare costs and benefits for different segments of the population in the short term. This requires careful attention and "social protection floors" as needed to ensure a smooth and just transition. In the long-term, transitioning to a green economy will result in faster economic growth and increased wealth creation opportunities. By 2030, the level of GDP under green economy is expected to exceed that under the BAU investment scenario by 12 per cent. For example the

assessment revealed that investing in green economy activities in the agriculture, energy, manufacturing and transport sectors could lower energy consumption and carbon emissions. While CO_2 emissions are projected to increase from 12 million tonnes per year in 2012 to 24.35 million tonnes per year in 2030 in the agriculture and energy sector alone, under a green economy scenario, emissions would be approximately nine per cent lower than BAU investment scenario (26.7 million tonnes).

The assessment shows that smart investment in agriculture is expected to increase productivity and protect natural resources. Average agricultural yield under the green economy investment scenario would exceed that of the BAU investment scenario by about 15 per cent by 2030. Similar investments in agriculture under BAU would increase yields in the short-term, increased use of chemical fertilizers and lower soil quality. The proportion of the population below the poverty line under GE 2 per cent is expected to be about two percentage points lower on average between 2015 and 2030 than that of the BAU 2 per cent (Figure 1.1).

Figure 1.1: Trends in the National Poverty in BAU, BAU 2 % and GE 2 % scenarios



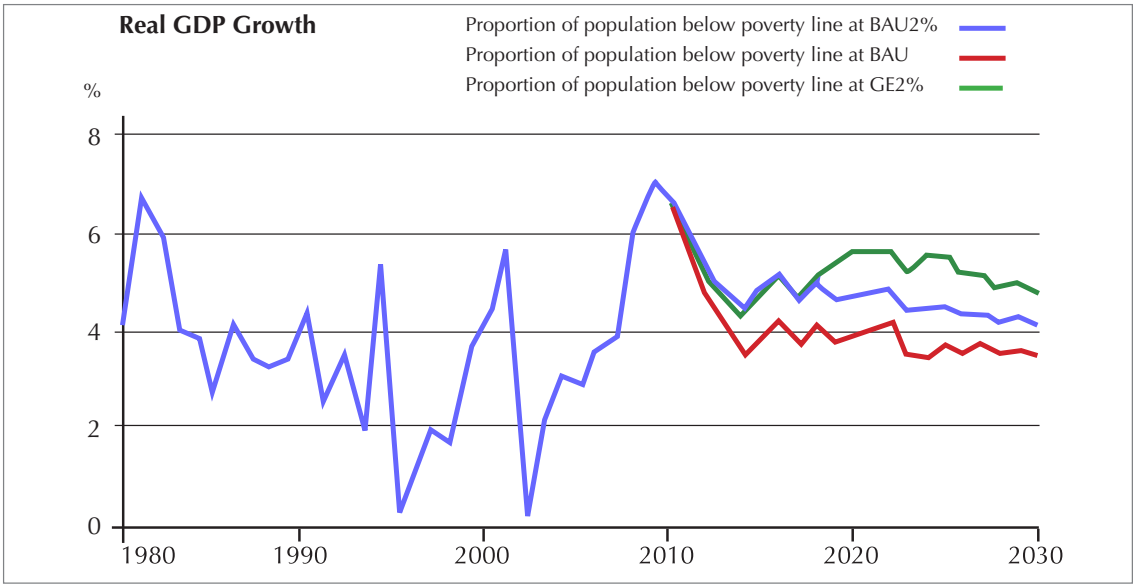
Source: UNEP, 2014

Expected changes in national GDP growth

Kenya aims to be a middle-income rapidly industrializing country by 2030, offering its citizens a higher quality of life. The sectors under the economic pillar of Vision 2030 include agriculture, manufacturing, extractive industry, tourism, wholesale and retail trade, information technology enabled services and financial services. The aim of this pillar is to move the economy up the value chain. This transformation of the economy is pegged on sustainable economic growth rates of 10 per cent per annum leveraged on a stable macro-economic environment, modernization of infrastructure and social services, diversification and commercialization of agriculture, a higher contribution of manufacturing sector, wider access to markets, and provision of better housing.

The national real GDP is projected to exceed the BAU 2 per cent by about 12 per cent by 2030; and annual real GDP growth rates with GE and BAU interventions are 5.2 per cent and 4.6 per cent, respectively, in the 2012-2030 period on average (Figure 1.2). Assuming the economy grows by at least 5.2 per cent per annum, this is projected to reach KSh 10,600 billion (US$ 120 billion) by 2030.

Figure 1.2: Trends in real GDP Growth rate in BAU, BAU 2% and GE 2% scenarios



Source: UNEP, 2014

Under the Second Medium Term Plan (MTP-II) 2013-2017 of Vision 2030 the agriculture sector envisions an innovative, commercially oriented and modern sector. The sector contributes about 24 per cent of the GDP, about 75 per cent of industrial raw materials and 60 per cent of export earnings. In addition, the sector accounts for 65 per cent of Kenya's total exports, 18 per cent and 60 per cent of the formal and total employment respectively. The sector is projected to grow from 5.1 per cent in 2013 to 7.2 per cent in 2017. Agriculture sector in a green economy would ensure that the above targets are met or even surpassed by shifting commercial and subsistence farming towards climate smart (ecologically-sound) farming practices, such as efficient use of water, extensive use of organic and natural soil nutrients, optimal tillage, integrated pest control and agroforestry.

The share of manufacturing sector to GDP has stagnated at about 10 per cent over many years, and employment growth rate on average stand at 5 per cent. Growth is constrained by high energy costs, poor infrastructure, as well as weak and fragmented policy coordination. Public policy support is needed to unlock growth in the sector and shift to green economy. These include eco-labelling, recycling and reuse, and the production of eco-friendly materials. Public policy also could go further to support resource-efficient and clean production processes; and, mandatory energy-efficiency audits for large manufacturers. To propel Kenya towards becoming Africa's industrial hub, the MTP-II envisages a robust, diversified and competitive manufacturing sector. The sector is projected to grow from 6.0 per cent in 2013 to 10.2 per cent in 2017. To achieve this target, focus will be on export-led growth strategy through the establishment of Special Economic Zones (SEZs), industrial clusters and parks. In addition, investment and beneficiation in the extractive industry will be supported through enabling policy, legal, and institutional framework.

The services sector is expected to grow from about 6.5 per cent in 2013 to about 10 per cent by 2017. The sector will benefit from sustained growth in tourism, ICT and expansion of regional trade and transport services, among others. The current growth of tourism sector and its value chain lacks area management and green rating thus resulting in environmental degradation and natural depletion.

Kenya is well endowed with energy resources, which are under-exploited. Energy has enormous potential for green economy transformation. Investing in renewable energy is projected to result in a 2 per cent reduction in energy consumption and an expanded supply of electricity from renewable sources compared to a BAU investment scenario. Renewable energy will be dominant in the energy mix with doubling of geothermal power capacity by 2030, compared to the BAU investment scenario. Solar, wind and biofuel energy will similarly experience growth and contribute 20 per cent of the total power supply. Water resources are scarce and not evenly distributed. Access to water and sanitation services is inadequate especially in rural areas. These factors have led to regional disparity in infrastructure development. The government is currently addressing these issues in partnership with neighbouring states to accelerate economic growth within the region.

Transport sector is one of the fastest sectors in the economy, and as a result, emissions are projected to triple between 2010 and 2030. Critical issues for green economy include high and growing numbers of vehicles, poor public transport and a lack of emission standards.

2.4 Key challenges to a Green Economy

There is a growing governement support for a shift towards a green economy pathway through a number of policy initiatives in the country. However, this shift is faced with challenges in effectively implementing a green economy strategy, including;

i. Inadequate compliance and weak enforcement of laws and regulations across sectors constrain Kenya's transition to sustainable development pathway. In particular, enforcement of environmental regulations is weak and ineffective.

ii. Inadequate information about green technologies is also a key challenge and has resulted in limited standards for green technologies, goods and services. This stifles technology transfer, adoption and adaptation. Progress has been made in setting minimum energy efficiency standards for certain appliances, and this will need to be extended to cover green technologies such as solar panels, food safety, and animal and crop products.

iii. Integrating natural capital into economic growth poses another challenge to transitioning to a green economy. Prices and policy regimes do not fully account for the external costs associated with technologies, products and practices that are environmentally friendly.

iv. Transitioning to a green economy requires a significant amount of financing at the initial phase of transformation, particularly in the energy sector where up-front costs for clean technologies are high. These funds will need to originate from both the international and domestic sources as well as from the private and public sector. This will require measures to overcome existing constraints in accessing the financial resources.

v. Easing the terms of access to finance is crucial for Kenya's adoption of greener technologies and investment in sustainable business practices. It is also crucial for supporting emerging entrepreneurs and their contribution to domestic green innovations. Financial constraints are especially high for capital-intensive sub-sectors associated with infrastructure. Moreover, new entrants into the innovation process or the green services economy are disadvantaged since they have no history of success and often only limited access to internal finance. Furthermore, in the case of green technology transfer, technological and market uncertainty are particularly high, raising risks.

vi. Inadequate knowledge on the costs and performance characteristics of available green technologies would constrain the pace of green transition. Many studies have shown that the costs of turning over the current fossil fuel based technology stock in transport and power supply to green alternatives are low relative to its benefits. For example, the International Energy Agency asserts that fuel savings in transport and power supply could offset the cost of green investments (IEA, 2012). However, there are entrenched policy, market and financial barriers that prevent the transition from fossil fuel-based technology to greener options. Efforts to increase awareness of energy efficiency and renewable energy technologies can improve knowledge of best practices, promote the concept of a green economy and provide needed education and outreach. Overcoming barriers to access to markets for green products at local as well as international level is also important for a successful transition.

vii. There are gaps in human capacity and skills in some aspects of green economy across the thematic areas. Both the public and private sector require bridging these gaps through collaboration with the academia and centres of excellence. Counties should pursue strategies to ensure Green Economy initiatives are embraced to the lowest level, while, at the same time scaling up best practices including indigenous knowledge.

viii. Significant achievements have been made in restoring macroeconomic stability, although recent macroeconomic performance indicators reveal that Kenya's economy remains vulnerable to external shocks such as adverse weather conditions, international oil and food prices, slowdown in global growth, and insecurity including terrorism. Other key national challenges include infrastructure deficits, unemployment and poverty.

2.5 Rationale for the GESIP

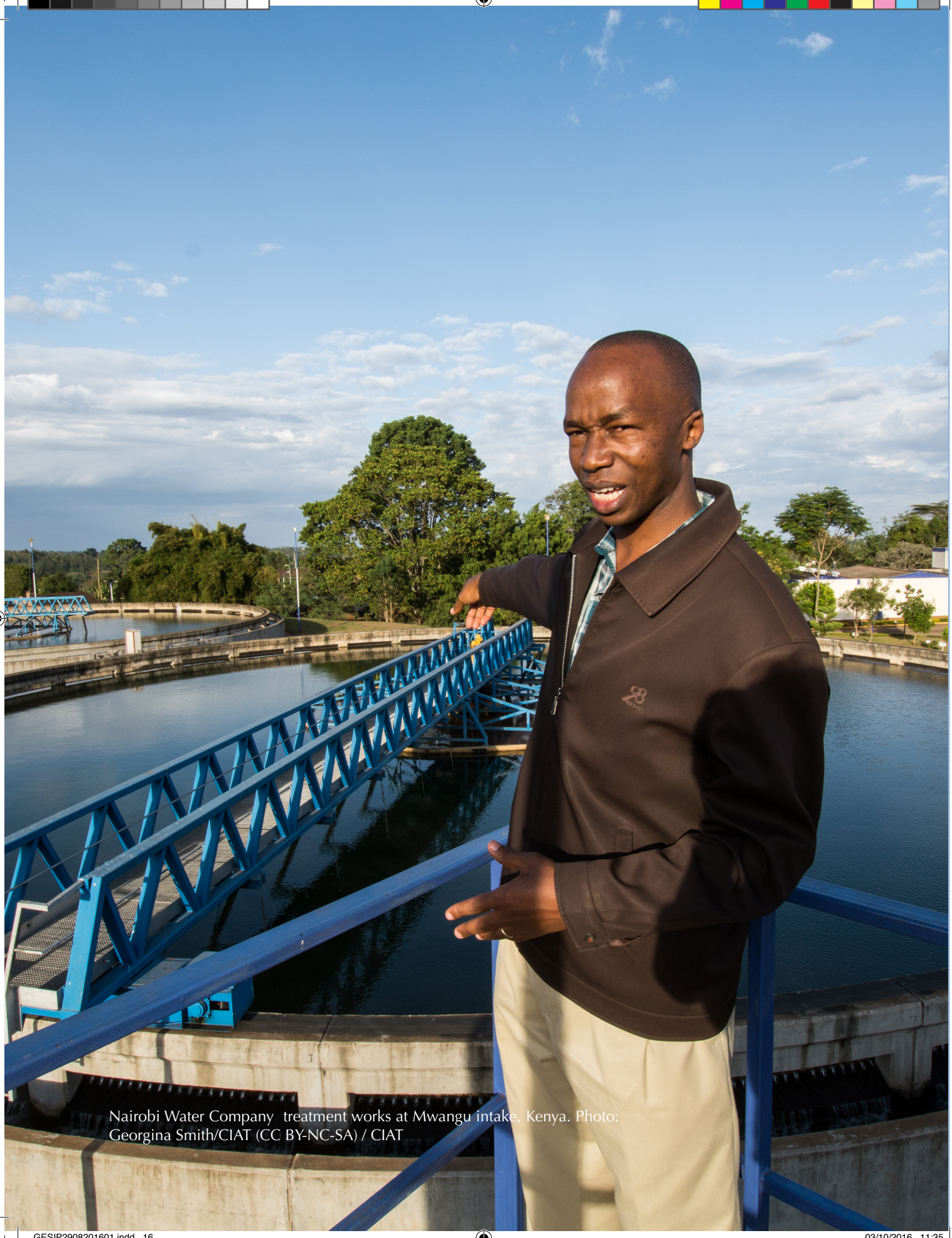
Since independence, Kenya's socio-economic transformation has had mixed results. The country had a steady period of fast economic growth in the first two decades after its independence, followed by high fluctuations after the 1980s. Despite the progress made, economic performance has failed to meet the country's development targets. In particular, economic growth has not translated into better livelihoods. It has often helped create inequality among social groups. Further, despite the recognition of the environment; economic growth compromised the country's environment through pollution and indiscriminate use of natural resources.

GESIP is expected to propel Kenya on a new economic trajectory characterized by low emissions, resource efficiency and higher economic growth. The strategies proposed in GESIP supports key development priorities, namely: rapid economic growth, infrastructure development, diversification and commercialization of agriculture, food security, wider access to better quality education and health care, youth employment, provision of better housing, and provision of improved water sources and sanitation.

The 10 per cent annual GDP growth rate target in Vision 2030 and its projections show that under a Green Economy scenario, Kenya will realize faster economic growth in the long run; the national real GDP is projected to exceed the baseline by 6 to 19 per cent by 2030. In addition, carbon dioxide emissions are projected to be 15 per cent lower than under the conventional business as usual growth scenario. In agriculture, policy simulations indicate that sustainable agricultural practices are expected to result in higher yields than the conventional BAU model. The green growth path offers opportunities for investment, employment creation and poverty reduction.

There are several positive forward-looking elements to a green transition, but they also must be considered in the framework of existing opportunities and challenges. GESIP will consolidate, re-focus and prioritize policy initiatives to address existing challenges and provide a framework to domesticate the Rio+20 outcome, "The Future We Want".

Parliament Buildings and Uhuru Park, Nairobi. Photo: Ninara (CC BY)



Nairobi Water Company treatment works at Mwangu intake, Kenya. Photo: Georgina Smith/CIAT (CC BY-NC-SA) / CIAT

3. Enabling environment for Green Economy transition

The Green Economy Strategy is geared towards enabling Kenya to attain a higher economic growth rate consistent with the Vision 2030, which firmly embeds the principles of sustainable development in the overall growth strategy. The framework builds on the achievements realised during the implementation of the First Medium Term Plan (MTP I) and on-going implementation of MTP II for the Vision 2030. Major achievements include restoring growth, maintaining macroeconomic stability, re-aligning public expenditure towards energy and infrastructure development and provision of social economic services, structural reforms as part of the implementation of the Constitution of Kenya 2010 and financial sector deepening.

The policy framework for green economy is designed to support a globally competitive low carbon development path through promoting economic resilience and resource efficiency, sustainable management of natural resources, development of sustainable infrastructure, and providing support for social inclusion. The policy mix is aimed at aligning national policies towards supporting and accelerating the process of greening the economy by addressing vulnerabilities to shocks.

The macro policy framework identifies various key enabling conditions necessary for a rapid transition to green economy;

i. **Maintaining macroeconomic stability for green growth:** Macroeconomic stability is one of the key foundations of a sound economic environment for private and public sector investments. In line with the Vision 2030, the government will continue to pursue prudent fiscal and monetary policies to foster fiscal discipline to achieve price and exchange rate stability. The measures will enhance macroeconomic resilience including capacity to respond to external shocks. The government will review and explore the use of fiscal instruments such as taxation, guarantees and expenditure tools such as 'green procurement' to promote Green Economy. Public investments and public private partnerships (PPPs) directed at promoting renewable energy sources and an efficient transport system including road, railway, air and water transport will be prioritized.

ii. **Human development and capacity building:** The national and county governments will invest in health and education sectors towards enhanced human capacity to support green growth. The focus in the public health sector will be improvement in access to clean potable water, housing, sanitation and food security. Investing in education targeting skills enhancement, innovation, research and development for all sectors will assist in developing new technologies and harnessing existing green technologies. Integrating green economy concepts, programmes and actions requires building capacity at all levels to support the transition.

iii. **Devolution:** As counties take on an increased role in governance, there will be need for prioritisation of green economy in County Integrated Development Plans and budgeting processes. Sound inter-governmental coordination is critical for creating synergies.

iv. **Governance and sustainable structural transformation**: Good governance and implementation of structural reforms underpinned by the principles of the Constitution of Kenya will be prioritised. Structural reforms will focus on strengthening management of public resources and eradication of corruption. Consistent with Vision 2030, the national and county governments will promote diversification and transformation to ensure high levels of resource efficiency.

v. **Sustainable financing:** Deepening financial inclusion is expected to enhance economic resilience and support Green Economy transition. The government will explore diversification of policy and financial instruments that support green economy such as green bonds and eco-taxes. Domestic capacity will be enhanced to enable access to national and international funding opportunities.

vi. **Cost of doing business:** The national and county governments will facilitate a competitive business environment by removing barriers in administrative requirements and regulations governing the business operations, such as business taxation, registration, utility costs, litigation process, environmental approvals and protection of intellectual property rights.

vii. **Framework for extractive industries:** The recent discovery of underground resources (oil, gas, coal and other rare minerals), point to the great potential of the sector in driving the Kenyan economy. A strong governance framework will be established to enhance sustainable extraction, transparent and accountable sharing and utilization of accruing benefits. There will be emphasis on the use of cleaner technologies in the exploitation of natural resources. The government will promote compliance with and strengthen enforcement of environmental laws and regulations.

viii. **Sustainable trade regime:** Globally, the number of environmental and social standards meant to protect the environment and health is increasing rapidly. These include sanitary and phytosanitary measures, as well as technical and eco-labelling standards covering various products. The policy concerns related to developing relevant infrastructure and human capacity to take advantage of sustainable trade opportunities at the national, regional and international level. In this regard, the government will collaborate with the private sector to explore market opportunities associated with the transition to a green economy.

ix. **Green jobs:** Creation of one million green jobs annually is a key policy concern for the government. To reduce poverty and sustain Kenya's ecological foundation, GESIP endeavours to expand decent work by providing innovations aimed at improving the safety of the work environment, expanding social protection and health programmes and social dialogue. To achieve this, the strategy pursues a suit of social policy tools and targeted investment in green enterprises.

These preconditions are embedded across the thematic strategies presented in section 4.

A solar light agent in Kericho.
Photo: SolarAid Photos (CC BY)

Olkaria Geothermal Power Plant, Great Rift Valley. Photo: © UNEP

4. Thematic areas and strategies

4.1 Introduction

The strategy is developed around five thematic areas, which align with Kenya Vision 2030 and other development efforts and plans. The thematic areas inform future policy direction and form the foundation of GESIP. They are intended to support the continued transition to a Green Economy development pathway. The thematic areas were derived from the Green Economy assessment and several stakeholder consultations. These thematic areas are: promoting sustainable infrastructure, building resilience, sustainable natural resource management, promoting resource efficiency, and social inclusion and sustainable livelihoods.

This section defines the scope of each thematic area and outlines objectives and a set of strategies to guide Kenya's journey to a green economy. Since GESIP cuts across various sectors and extends beyond the public sector, the strategies are meant to guide the sectors and GESIP stakeholders on programmes and plans that contribute to the GESIP objectives. On-going green economy practices and initiatives informed the selection of priority strategies. Establishing centres of excellence in the counties will be an important strategy in implementing GESIP where green economy innovation in various thematic areas will be incubated.

Specific actions under these thematic areas and key performance indicators are summarized in the implementation matrix in Annex 1.

4.2 Thematic Area 1: Promote sustainable infrastructure

Infrastructure is fundamental in creating a healthy and thriving economic climate for transformation and expansion of economic activities and enhancing sustainability. Infrastructure development is a key foundation of Vision 2030; the government is already implementing major projects; developing, upgrading and expanding them. Sustainable infrastructure development cuts across a number of sectors including energy, transport, agriculture and irrigation, water and sanitation, waste management, housing and construction; these development programmes have the potential to positively impact the economy. However, they can result in unintended environmental consequences.

The aim of this thematic area is to promote sustainable infrastructure, which encompasses the designing, building and operating of infrastructure elements. This will reduce negative impacts on social, economic and ecological processes necessary for human equity, diversity and integrity of natural resources. Infrastructure management also involves balancing natural and built infrastructure in optimal combinations for large and small-scale developments.

Below are strategies for the six objectives under the thematic area.

Objective 1.1: Enhance sustainable mobility

i. Establish Bus Rapid Transit in major urban areas especially Nairobi, Mombasa and Kisumu cities;
ii. Integrate non-motorized transport in the design and construction of roads in all county headquarters;
iii. Reduce vehicular emissions through legal and fiscal measures;
iv. Incorporate climate proofing into infrastructural design, construction and maintenance.

Objective 1.2: Enhance water and sanitation services at National and County level

i. Construct and upgrade sewerage infrastructure;
ii. Design, construct and rehabilitate drainage systems in urban centres;
iii. Promote use of eco-toilets in rural and urban areas;
iv. Expand and upgrade water supply services

Objective 1.3: Increase the share of renewable energy in the energy mix

v. Increase the share of renewable energy (geothermal, wind and solar) in the national grid to at least 70 per cent;
vi. Review Feed-in-Tariff (FiT) policy to include more off- grid generation and net-metering;
vii. Promote use of bio energy at household, public institutions and commercial enterprises.

Objective 1.4: Promote sustainable design, construction and maintenance of buildings

i. Ensure 75 percent of new and renovated public (national and county) and private large scale buildings are green by 2030;
ii. Capacity build architects, engineers and contractors and other stakeholders on integrated green technologies in design and construction;
iii. Develop and implement certification standards for green buildings.

Objective 1.5: Mobilize financial resources from capital markets and other financial instruments for Green investments

i. Re-orient and develop innovative financial instruments, including debt financing (bonds), to direct capital to sustainable infrastructure;
ii. Enhance flow of capital towards sustainable infrastructure through legal and fiscal measures, capacity building, and awareness creation.

Objective 1.6: Develop and enhance agricultural Infrastructure

i. Increase irrigation using appropriate technologies for enhanced food production;
ii. Reduce post-harvest losses by improving efficiency along the value chain (transportation, storage, processing and marketing)
iii. Expand roads and other transport infrastructure network in agricultural areas

4.3 Thematic Area 2: Building resilience

Kenya's resilience building efforts will ensure that the economy and livelihoods are less vulnerable to risks and challenges of climate change and growth dynamics. In recent years, Kenya's growth has been adversely affected by external shocks including slump in global economic growth, drought, and fluctuations in global energy prices. Resilience in growth strategy is not a new concept as part of this strategy is to deepen relevant actions and programmes.

At the macroeconomic level, priority areas include good governance, stable macroeconomic environment underpinned by stable prices as a result of low inflation rate, stable interest and exchange rates as well as sustainable management of public finances. Resilience building reduces vulnerability by integrating emerging climate change and variability actions into sectoral development strategies. Another key priority area involves continued use of social safety net protection measures such as cash transfers, livelihood diversification schemes and pension reforms. This will complement the work done under the National Climate Change Action Plan (NCCAP 2013-2017), National Adaptation Plan (NAP 2016-2030) and National Climate Change Act (2016) on issues of resilience to climate change. Below are strategies for the three objectives under the thematic area.

Objective 2.1: Promote efficient management of public finances

i. Build capacities for national and county institutions on effective public finance management in planning and implementation of resilient building projects;
ii. Mobilize resources for building resilience;
iii. Develop and implement green fiscal policies;

Objective 2.2: Promote livelihood diversification for vulnerable communities

i. Create access to the market and to relevant infrastructure
ii. Technology development and transfer including promotion of locally available knowledge technologies
iii. Grow fast-maturing, high value trees that have multiple commercial uses;
iv. Promote drought-tolerant food crops;
v. Enhance social protection mechanisms to cushion vulnerable members of the society.

Objective 2.3: Enhance disaster risk reduction measures

i. Mainstream disaster risk management and climate change in sectoral development strategies;
ii. Strengthen coordination mechanisms for disaster risk management;
iii. Establish an integrated national early warning for early action system for disaster risk management
iv. Enhance sustainable management of natural ecosystems.

4.4 Thematic Area 3: Sustainable Natural Resource Management

This thematic area focuses on the economy-environment nexus to optimize the contribution of Kenya's natural resources to the economy, industrialization and livelihoods. It encompasses agriculture, forestry, water, fisheries, wildlife, land use, and extractive industries. Through this thematic area, GESIP seeks to address the drivers of change in both the biological and physical aspects of natural resources emphasizing the need for decoupling development from sustainable natural resources management and conservation of Kenya's natural capital. Kenya's natural capital is under intense pressure from global and local drivers, such as population increase, over extraction of natural resources, poaching of wildlife, urbanization, change in consumption patterns, climate change and use of chemicals.

Kenya's key blue-print development guiding documents—the Constitution, Vision 2030 and the Medium-term Plan (2013-2017), have articulated the importance of natural resources management. Further amplification in the context of sustainable development goals provides opportunity for engaging in Green Economy initiatives and investments. These can enhance sustainable land management, ecosystems restoration, food security, availability of quality water and energy resources.

However, extensive degradation of natural resources is a persistent threat to sustainable development. In order to address this, tools and processes such as: spatial planning and targeted continuous periodic valuation on natural capital, payment for ecosystems services and environmental accounting should be scaled up with active involvement of local communities and county governments.

In addition, an enabling environment for effective stakeholders' participation and engagement in conservation and management of land-based, aquatic and marine resources including benefits sharing frameworks should be created. Sustainable exploitation of these resources, therefore, will open up new opportunities such as green jobs, enhance food security and improved livelihoods.

Strategic application of green economy principles will ensure that resources-efficiency in exploitation and management of under-ground water, oil, gas, coal and other minerals. In addition, natural resources governance will be strengthened thereby ensuring a fair and transparent sharing of accrued benefits, improving natural capital accounting, supporting standards and certification of natural resource products, and promoting sustainable land and other natural resource management practices. In essence, economic assessment of the natural capital is an important measure in establishing a system to monitor stock levels and utilization.

The following are objectives and strategies for this thematic area:

Objective 3.1: Promote application of market based instruments and entrepreneurship in natural resources management

i. Develop a natural resources accounting system;
ii. Pursue application of environmental policy measures including Payment for Ecosystem Services, watershed management, biodiversity, conservation, carbon sequestration and storage;
iii. Promote establishment of nature-based enterprises including eco-tourism and community conservancies especially by youth and women groups and people with special needs;
iv. Develop and apply tools on benefit-sharing to support Payment for Ecosystem Services.

Objective 3.2: Promote sustainable natural resources restoration

i. Move towards a 10 per cent tree cover;
ii. Increase per-capita water availability;
iii. Promote wildlife conservation programmes;
iv. Invest in conservation of marine and aquatic resources while advancing benefits of a blue economy.

Objective 3.3: Promote sustainable extractive Industry

i. Adopt global best practices such as Extractive Industry Transparency Initiative (EITI);
ii. Emphasize on local content in extractive industry;
iii. Embrace Value addition at source of raw materials

Objective 3.4: Expand opportunities in aquatic and marine resources

i. Strengthen coastal communities' and other stakeholders' capacities to exploit marine resources;
ii. Ensure policing of marine parks and resources.

Objective 3.5: Promote sustainable land management

i. Promote application of strategic environmental assessment (SEA) in integrated land use plans (LUP) at national, and county level;
ii. Promote community participation in conservation and sustainable land management practices

4.5 Thematic Area 4: Promoting resource efficiency

Promoting resource efficiency is an important pillar for the strategy that seeks to identify ways in which resource usage can be optimized, minimizing costs and impacts. Increasing resource productivity in all sectors requires that over time, higher output is realized per unit of resource inputs. Transition to Green Economy also entails support for green and eco-friendly technologies and related research and innovation activities. Investment in efficiency can lead to increased resources available to invest in Green Economy transition, fewer harmful emissions and less waste generation. Resource efficiency is applicable at different levels of the economy including the production supply chains. Specific opportunities and activities related to resource efficiency are identified in the relevant sector strategies.

Resource efficiency encompasses all natural resources that are inputs to the Kenyan economy, including physical resources and ecosystem services. It delivers more with less natural resources and increase overall economic value through more productive use of resources, taking their whole life cycle into account. At the macroeconomic level, Green Economy should support high Total Factor Productivity (TFP) or GDP to domestic material consumption ratio. At the sector level, respective measures of efficiency and productivity apply. To support green growth, the government will develop efficiency and productivity targets and indicators. Resource efficiency will minimize negative impacts of the use of resource on the ecosystem.

The challenge for Kenya is to drive forward its resource efficiency agenda, reduce the environmental impact of production and consumption while addressing the policy and technical capacity challenges in waste management. This is exacerbated by the lack of a national resource efficiency action plan and indicators. Development of a national resource efficiency action plan and indicators across all sectors of the economy can address this challenge on one hand. It can also encourage self-regulation and application of voluntary environmental approaches to ensure that economic, social and environmental benefits are realized more efficiently. Energy, water and waste have been singled out in many policy discussions as key areas where the country can recoup quick wins in resource efficiency.

The aim of energy efficiency is to reduce energy consumption without compromising productivity or increasing cost. Energy conservation and efficiency measures yield direct savings and reduces greenhouse gas emission. It can also significantly reduce the foreign exchange costs of oil imports and of deferred additional investment in power generation capacity. The country lacks a national energy efficiency target and action plan. The current energy legislative framework provides for energy efficiency and conservation. Achieving an energy efficiency target of 30 per cent is equivalent to displacing one hydro-power dam. Introducing efficient and cost-effective technologies faces challenges including: lack of awareness, inadequate fiscal incentives, inappropriate and limited credit and financing mechanisms.

Access to clean water and sanitation services in Kenya is 52 per cent and 69 per cent respectively. Key challenges include high non-revenue water (45 per cent), slow progress in coverage, financing gaps (despite the financing levels reaching over two per cent of GDP), low demand-side water efficiency and effectiveness of investments. Ensuring seamless devolution of the sector presents additional challenge. The sector target is to have 80 per cent urban water coverage by 2015. Coverage levels in urban low-income and rural areas remain unsatisfactory. Efforts to increase access need to be reinforced by translating investments into outcomes and ensure value for money. Thus, overall water efficiency on the supply and demand-side and reduction of non-revenue water including its pollution becomes imperative. On non-revenue water the target is to reduce non-revenue water to 25 per cent by 2015.

Kenya's National Solid Waste Management Strategy of 2014 has a guiding principle of "zero waste" (waste is a resource that can be harnessed to create wealth, employment and reduce pollution to the environment). Currently, only eight per cent of recyclable waste and five per cent compostable waste are recovered. In the long-term, 2030, the aim is to achieve over 50 per cent waste recovery (17 per cent recycling and 32

per cent compositing) whilst in the short-term 30 per cent waste recovery (15 per cent recycling and 15 per cent composting). This will be done though capacity building, new regulatory and financial instruments as well as strengthened entrepreneurial activities in SMEs in agriculture and manufacturing. Below are strategies for the three objectives under the thematic area.

Objective 4.1: Increase national energy efficien y

i. Develop sector-specific energy efficiency indicators and benchmarks
ii. Roll out demand-side energy efficiency programmes in urban residential, commercial and industrial establishments;
iii. Roll out supply side energy efficiency programmes through system reinforcement, efficient transformers, grid extension projects;
iv. Adopt minimum energy efficiency performance standards for lighting and industrial products;
v. Develop technical and infrastructural capacity for energy efficient audits, equipment testing and certification;
vi. Continually review national and county policies and legal frameworks to respond to new technology and innovation;
vii. Enhance application of voluntary management approaches to energy efficiency, clean and renewable energy.

Objective 4.2: Enhance water use efficien y in urban and rural areas

i. Develop water footprint sustainability assessment guidelines at national, county, basin and sector level;
ii. Develop and diversify voluntary environmental tools to reduce water footprints;
iii. Reduce non-revenue water to at least 10 per cent on the supply side;
iv. Review consumption based water pricing to induce a culture of efficiency and conservation;
v. Streamline water sector coordination challenges between national and county governments;
vi. Roll out demand-side water efficiency programmes in urban residential, commercial and industrial establishments.

Objective 4.3: Manage waste as a resource

i. Promote voluntary resource efficient and cleaner production instruments for source reduction of waste and industrial symbiosis;
ii. Develop and implement a landfill policy that eliminates land-filling of all recyclable waste
iii. Provide financial incentives to limit waste energy recovery to non-recyclable materials;
iv. Build infrastructure and technical capacity for waste prevention, segregation, recycling and industrial symbiosis;
v. Develop functional markets for secondary raw materials and recycled products through end-of-waste criteria and recycled content;
vi. Develop and implement legislation on extended producer responsibility for sustainable management of emerging waste streams including e-waste and plastics.

4.6 Thematic Area 5: Social Inclusion and sustainable livelihoods

This thematic area emphasizes the need for all members of the society and groups to participate and benefit equitably towards the green economy. It recognizes the critical role of an informed, educated, trained and healthy population in catalysing the transition to a green economy; and one prepared to embrace sustainable livelihoods through sustainable lifestyles, education, green skills development and behaviour change; and enterprise development to create green jobs.

Initiatives in education and training should aim to inculcate the green economy principles in all forms and levels of education, while at the same time working towards creating a population enlightened to promote green growth. GESIP lays emphasis on the need to re-orient the education and training to instil knowledge, skills, attitude and values to promote sustainable production and consumption for sustainable lifestyle. The strategy will prioritize Technical Vocational and Education Training (TVET) to promote employability in the green economy.

GESIP emphasizes harnessing innovation and creation of enterprises that will accelerate opportunities for decent jobs[1] presented in the form of sustainable natural resource management, resource efficiency and resilience building. GESIP strives to include the participation of all segments of society in all regions (youth, women and persons with special needs), to be part of the transition process for green growth.

This strategy endeavours to reduce environmental health risks. This will enhance clean rural and urban areas, sound waste management practices, cleaner production, safe working and living environment. Below are strategies for the four objectives under the thematic area.

1 According to the International Labour Organization, "Decent Work" involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men.

Objective 5.1: Mainstream green economy into all forms of education and training

i. Institutionalize policy on Education for Sustainable Development (ESD);
ii. Strengthen gender responsive green economy training pedagogy and andragogy;
iii. Strengthen institutions to enhance green economy transformation;
iv. Catalyse behavioural change and promote skill-oriented training necessary for a green economy.

Objective 5.2: Accelerate creation of green jobs

i. Revamp training in TVET including apprenticeship schemes and entrepreneurship training;
ii. Promote creation of work hours through intensive public infrastructure works;
iii. Embrace measures to increase attractiveness of green jobs;
iv. Establish schemes to support green business.

Objective 5.3: Promote green innovation and technology development

i. Promote research in all aspects to inform opportunities in green economy
ii. Support green technology start-ups including business incubation centres;
iii. Promote green management practices in established enterprises;
iv. Facilitate establishment of green Micro Small and Medium Enterprises (MSMEs) financing mechanisms;
v. Promote green MSMEs procurement incentives;
vi. Pursue measures to promote innovation including indigenous knowledge.

Objective 5.4: Reduce environmental health risks

i. Strengthen consumer protection;
ii. Promote compliance and enforcement of environmental laws and standards relating to all aspects of environment;
iii. Promote application of Strategic Environmental Assessment (SEA) Environmental Impact Assessment (EIA) and audits and adoption of environmental standards;
iv. Build capacity on environmental management;
v. Promote use of indigenous knowledge systems.

Working together. Photo: © MYSA/Shootback

Implementing new technologies. Photo: © Alex Ndegwa

5. Implementation arrangement

5.1 Governance and coordination

In order for green economy implementation to be successful, it must be mainstreamed in policy planning and budgeting processes both at the National and County level. This entails embedding green economy policies and initiatives in County Integrated Development Plans (CIDPs) as well as Sector plans linked to the annual budget process. The national government has been implementing the multi-year medium term expenditure framework (MTEF) since 2000/01. This provides the framework for linking the green economy strategy, planning, policies and the budget process. MTEF Sector Working Groups should be allowed to mainstream green economy initiatives in sector plans and linked to the budgets. The Sector Working Groups (SWG) will play an important role in prioritization of green economy initiatives in the sector plans and budgets.

The mainstreaming of green economy implementation must take into account other relevant policy initiatives that are being implemented. Some of the relevant initiatives include the National Climate Change Action Plan 2013-2017 that aims to build a low carbon resilient economy, Energy Policy, Climate Change Policy, Master Plan for Conservation and Sustainable Management of Water Catchment Areas in Kenya, and Environment Policy. Ensuring that these policy initiatives and processes are complementary and not in conflict or duplicated is essential to success. Synergies will ensure smooth implementation, reduce the potential for conflict, and generate efficiencies.

There are a wide range of sectors and stakeholders that will be involved in the implementation of the initiatives that have been identified in this strategy. It will be essential for the national government to play a prominent role given the need for leadership and coordination between different layers of government and other stakeholders including private sector and civil society.

5.2 Role of different actors

Responsibility for transitioning to a green economy rests with many stakeholders operating at different levels and scale. This makes co-ordination a big challenge. The specific roles of different stakeholders in facilitating, synergising and supporting the transition process need to be defined and nurtured. The government will play a facilitative role and provide an enabling environment (institutional, legal, infrastructure etc.) upon which green economy will be based. Already a few players are actively engaged in green economy initiates in limited scale but this is expected to change as more players come on board.

Counties will be key implementation bodies for actions under the GESIP. Addressing intra-and inter-governmental policy coordination is important in building synergies and avoiding duplications that lead to waste. Following implementation of devolution, various such challenges have been reported in various counties.

A key aspect of implementation going forward will be the integration of green economy actions into County Integrated Development Plans and sector plans that are linked to the annual budget process. There are many opportunities for green economy at the county level but effective coordination between levels of government and required support for implementation activities at the county level will be a prerequisite for success.

Private sector will play an important role in implementing this through adoption on green economy technologies and practices in a self-sustaining way.

Public Benefit Organizations have a comparative advantage and capacity over the public or private sector in catalysing action at the local level. They will be required to participate in information dissemination to towards green economy practices at the local level and in linking national/county level to the local level. Research and innovation is essential in facilitating green economy. To this end, research institutes will be called upon to reorient their research, innovation and training towards activities that target priority green economy initiatives. It is especially important to ensure that innovations are actually reaching practitioners to be transformed from research results into something functional.

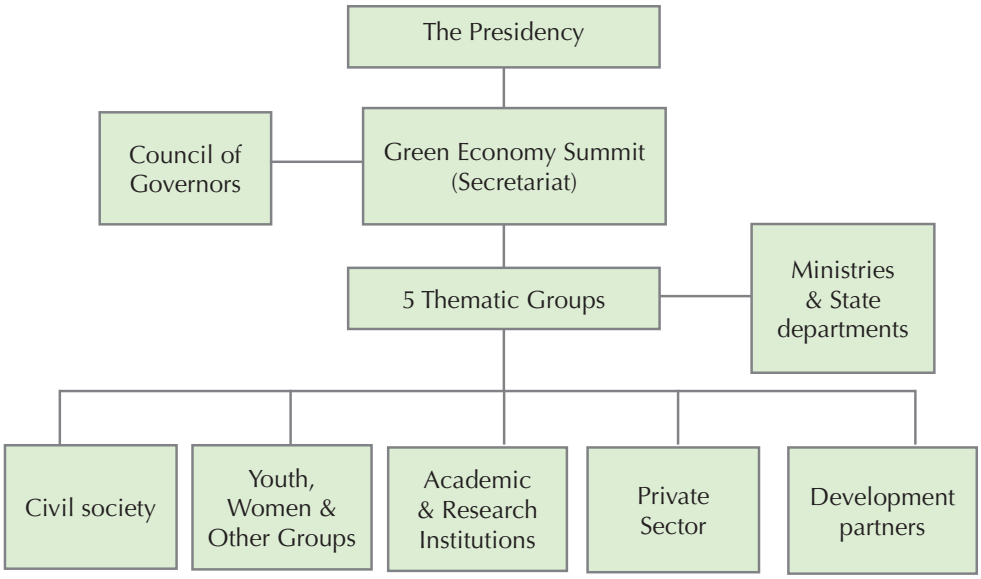
Banks and financial institutions including insurance companies, savings and credit co-operative organisations and microfinance institutes will be required to develop and provide innovative products and services that support green economy. Such facilities will be critical in encouraging green economy entrepreneurs and enterprises.

Media and Information and Communication Technology will also play a crucial role in awareness raising on green economy. This will bring about the much needed behaviour and attitudes towards green economy particularly on green employment opportunities.

5.3 GESIP organizational structure

Green economy is not confined to a single sector and extends beyond the government to include the public, private sector as well as civil society. Ideally, non-state actors are expected to lead the transition process as the government provides suitable condition for this transition to happen. The county governments are regarded as critical agents for mobilizing local green economy activities. Thus, an effective framework is required to coordinate the GESIP activities both horizontally and vertically. The proposed GESIP organogram presented in figure 5.1 is informed by the need for a functional, legal, and cost-effective setup.

Figure 5.1: Proposed GESIP Implementation Organogram



The Green Economy Summit will be a highly technical body that will provide policy direction on implementation of all the five thematic areas. The summit provides the link between the national and county government and will comprise of the following members:

1. The Cabinet Secretary responsible for devolution and planning
2. The Cabinet Secretary responsible for the National Treasury
3. The Cabinet Secretary responsible for environment
4. The Cabinet Secretary responsible for water
5. The Cabinet Secretary responsible for energy and petroleum
6. The Cabinet Secretary responsible for transport
7. The Cabinet Secretary responsible for agriculture
8. The Cabinet Secretary responsible for industrialization
9. Council of Governors – member responsible for environment
10. Civil Society Organizations – members
11. Kenya Private Sector Alliance

The summit will be served by a lean secretariat headed by a Director.

Each of the five GESIP thematic areas will be coordinated by a Thematic Working Group (TWG) made of technical members and drawn from sectors relevant to each TWG from the public, private and CSO. Lead ministry in the TWG will serve as the chair of the TWG. CSOs, institutions of higher learning, Think tanks/ research institutions and development partners will work directly with the TWG to identify critical green economy issues and build capacity of all sectors to effectively implement GE projects. In order to ensure full participation of Counties in greening the economy, 47 green economy forums will be established to catalyze green economy activities at the local level.

5.4 Resource Mobilization

Both costing and financing of the implementation plan for Kenya's Green Economy Strategy have been considered. In the recent past, Kenya has produced various policy documents that provide indicative budgetary requirements for implementing a green economy strategy. The Green Economy Assessment Report uses an estimate of about 2 per cent of GDP per annum to investments in green economy scenarios. The total investment cost identified was approximately Ksh. 1.2 trillion between 2012 and 2030 or roughly KSh.70 billion annually.

The results indicate that such levels of investment in green economy would generate higher growth than the case of business as usual. The projections given in the implementation matrix (**Annex 1**) indicate that implementation of GESIP is estimated at **Ksh.2.4 Trillion**.

Costing and development of a feasible financing framework on nationwide scale as in the case of GESIP is usually hampered by various challenges. Simplifying assumptions have to be made regarding the sources, supply and availability of funds, as well as the capacity to implement and absorb planned financial allocations. In addition, the feasibility of the underlying macroeconomic framework is usually not considered. In this regard, in-depth costing associated with prioritisation needs to be considered within the MTEF budget process. The GESIP provides high-level information on costing. The next step will be sectoral costing of specific green economy initiatives taking into account already completed costing exercises. In addition, relevant institutions can develop thematic strategies, each with their own detailed costing exercises and financing analysis.

Combinations of various financing options have been identified. However, the key channel of financing green economy initiatives will remain the MTEF budget process both at national and county government level. Other financing tools include concessional grants and loans; public private partnerships, government-led investment, as well as mobilizing international sources of funding. The strategy also will require significant private sector investments through appropriate tools and fiscal policy reforms.

Other innovative financing options include establishing green funds or sovereign wealth funds; developing stronger partnerships with emerging economies; co-financing with other funds and banks; and stronger focus on leveraging existing funds to new opportunities. The financing windows that could be open to Kenya are wide especially climate change related funds. Access to international climate financing will entail continued Kenyan engagement in international climate financing mechanisms; demonstrating transparency and sound fiscal management. This underscores the need for close integration of green economy and climate change plans. Given the diverse nature of funding opportunities, which may have different requirements, it is important that Kenya adopts a clear strategy on resource mobilisation and funding.

The relevant sector ministries and county governments will be active in mobilizing resources for actions under the GESIP. In addition, the National Treasury will play a coordinating role in coding and tracking finance.

5.5 Monitoring, Evaluation and Knowledge Management

A result based monitoring and evaluation system linked to the National Integrated Monitoring and Evaluation System (NIMES) will ensure that tracking of progress takes place and help inform future GESIP policy development**.** Clear targets and Key Performance Indicators already identified and listed in Annex 1 will be used to measure progress. Implementers will be required to develop a set of economic, social, and environmental indicators to apply according to their annual work plans. These indicators will be a combination of traditional sustainable development indicators such as poverty, employment and emissions, as well as more complex indicators such as emissions per unit of GDP, representing a decoupling of economic growth and GHG emissions.

Knowledge Management

Effective knowledge management is key in ensuring a low carbon resource efficient and inclusive economic and social transformation. This plan will therefore generate, manage and share information for engagement with stakeholders and application of its objectives. Key options to be considered include:

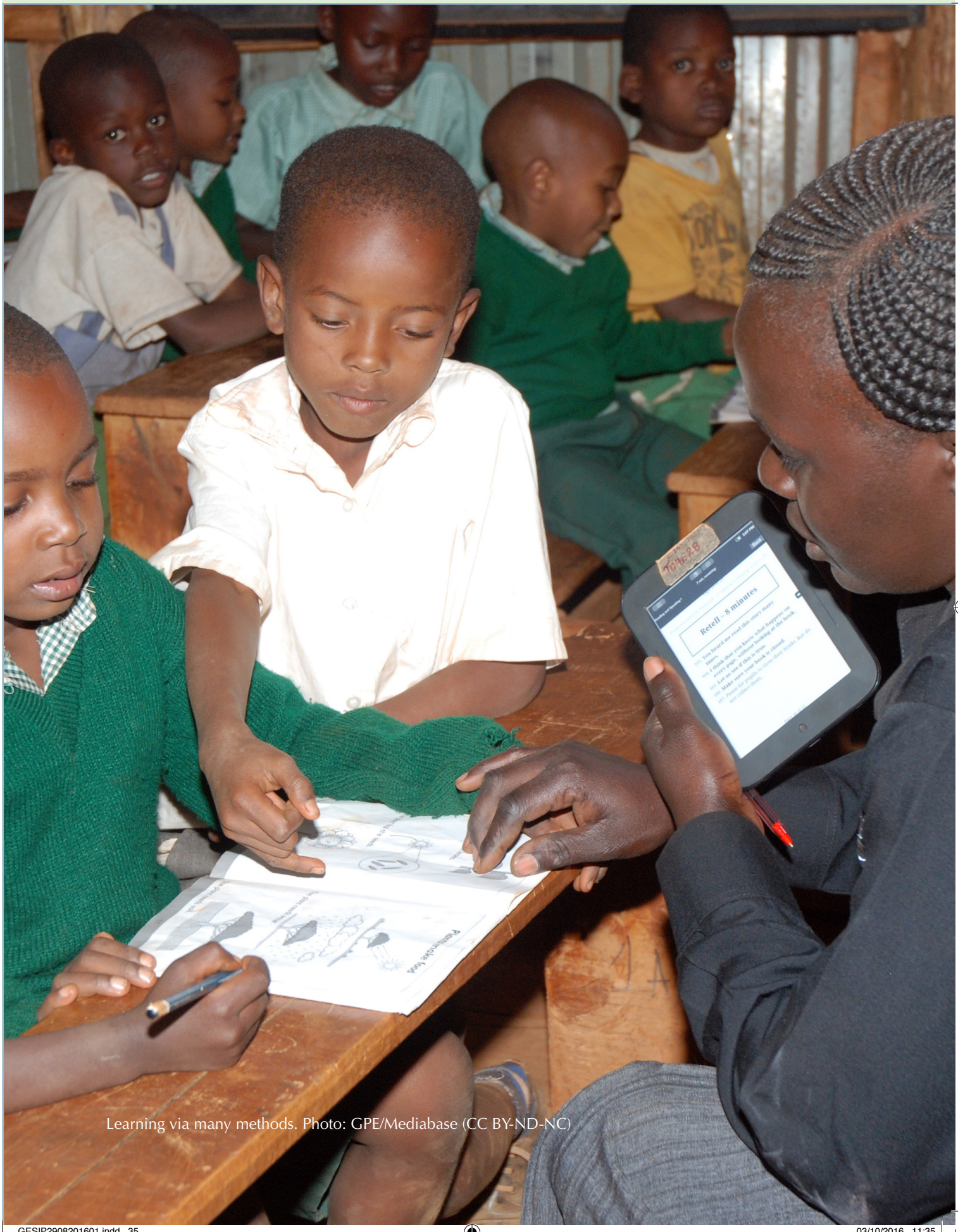
Online knowledge platforms: One of the best ways to develop a strong information distribution network is to build a GESIP portal for public information and its associated policies and actions. This platform can also be used to communicate incentive programmes, educational information (for both informal use and potentially for the formal education system), and public actions that can be taken to spur green transition. This should help bring together communities on green economy including relevant non-state actors.

Public awareness campaigns: An aggressive public awareness campaign will be mounted to ensure that the widest possible audience is reached. The campaign will incorporate both traditional media platforms and new media, including use of social media platforms to promote the GESIP, its benefits, and why a transition to a green economy is the preferred national development approach.

Access to, and distribution of, information: This will be done through various levels of public representation and communications tools: Central to this is the cooperation of both the national government, as well as counties in the promotion and distribution of information about the GESIP.

Engagement forums between the national and county governments: The MENR&RDA has developed an engagement framework to facilitate exchange of knowledge and information that brings together key stakeholders.

Targeted policy dialogue: To target private sector, CSOs, community members, development partners, and academia and green champions.



Learning via many methods. Photo: GPE/Mediabase (CC BY-ND-NC)

Construction of a mass transit train line in progress with heavy infrastructure. Photo: © Shutterstock

Annex 1: Green Economy Strategy Implementation Matrix

Implementation of GESIP is estimated to cost **Ksh 2.4 trillion (US$ 24 billion)** as per the detailed implementation matrix below:

Objectives	Outcomes	Strategies	Key Performance Indicators	Timeframe (Years)	Actors	Costs (KSh)
Thematic Area 1: Promoting sustainable Infrastructure						
To enhance sustainable mobility	Shift in transport model towards low carbon	• Establish Bus Rapid Transit in major urban areas especially Nairobi, Mombasa and Kisumu cities • Integrate non-motorized transport in the design and construction of roads at least 50% of the towns hosting county headquarters. • Reduce vehicular emissions • Incorporate climate proofing into road and design construction and maintenance	• No of passengers using Bus Rapid Transit • No of kilometres of bicycle lanes & footpaths constructed • % reduction in vehicular emissions • Kilometres of roads integrating climate change	2016-2030	MTIHUD; MLPP; Nairobi County Mombasa county and Kisumu County KEPSA National land commission (NLC)	200B
Enhance water and sanitation services at national and county level	Improved access to water and sanitation services	• Construct and upgrade sewerage infrastructure • Design, construct and rehabilitate drainage systems in urban centres; • Promote use of eco-toilets in rural and urban areas. • Expand and upgrade water supply services	• Percentage of households connected to sewer line • No. of new drainage systems installed • No. of eco-toilets built • Percent of population with access to water & sanitation services	2016-2030	Lead institutions: MWI; WRMAs; WSBs; county governments; NEMA; MENR	300 bn
Increase the share of renewable energy in the energy mix	• Reduced emissions from the electricity sector • Reduced pollution from fossil fuel plants • Reliable and affordable energy;	• Increase the share of renewable energy (geothermal, wind and solar) in the national grid to at least 70 per cent • Review Feed-in-Tariff (FiT) policy to include more off- grid generation and net-metering • Promote use of bio energy at household, public institutions and commercial enterprises	• Percentage of renewable energy in the energy mix • Percentage increase in off-grid and net-metering	2016-2030	Lead institution- MoEP; Treasury; Energy sector SAGAs, County governments; private sector	1535 bn

Objectives	Outcomes	Strategies	Key Performance Indicators	Timeframe (Years)	Actors	Costs (KSh)
Sustainable design, construction and maintenance of buildings	• Decrease of energy and water use in buildings • Greener and more efficient buildings	• Ensure 75 per cent of new and renovated public (national and county) and private large scale buildings are green. • Capacity build architects, engineers and contractors and other stakeholders on integrated green technologies in design and construction. • Develop and implement certification standards for green buildings	• Percentage increase in green buildings • No. of green technology training programmes implemented • No. of green building standards adopted	2016-2030	Lead institution - MLPP; MTIHUD; county governments; universities, NCA, private sector, IEK, AAK	5 bn
Mobilize financial resources from capital markets and other financial instruments for green investments	• Increased private investment in sustainable infrastructure	• Re-orient and develop innovative financial instruments, including debt financing (bonds), to direct capital to sustainable infrastructure ; • Enhance flow of capital towards sustainable infrastructure, through capacity building, legal and fiscal measures, and awareness creation	• No. of legal and fiscal measures implemented • Amount of resources raised from innovative financial instruments	2016-2030	Lead institution TNT; CMA; NSE; KBA; private sector	5 bn
Develop and enhance agricultural infrastructure	• Improved food security and nutrition; • Increased rural incomes • Reduced poverty levels	• Increased irrigation using appropriate technologies for enhanced food production; • Reduce post-harvest losses by improving efficiency along the value chain (transportation, storage, processing and marketing) • Expansion of road and other transport infrastructure network in agricultural areas	• Percentage increase in acreage under irrigation • Percentage reduction in post-harvest losses • Quantity of strategic grain reserve • Length of new roads and other transport infrastructure constructed	2016-2021	Lead institution –MALF MWI; county governments	150 bn

Objectives	Outcomes	Strategies	Key Performance Indicators	Timeframe (Years)	Actors	Costs (KSh)
Thematic Area 2: Building resilience						
Promote prudent management of public finances for Green Economy	• Changed attitude towards finance management • Improved savings in sectors/ additional resources for GE • New technologies/ methods of public resource management • Capacity enhanced/ built	• Build capacities for national and county institutions on effective public finance management • Mobilization of resources for building resilience • Develop and implement green fiscal policies	• Increased No. of investment in GE • Reduced duplication of activities • No. of new technologies in public resource management deployed • No. of green fiscal policies developed and implemented • No. of national and county financial institutions' capacity built	2016-2030	TNT; MENR; MDP; KEPSA; County Governments	23 bn
Promote livelihood diversification for vulnerable communities	• Enhanced adaptive capacity of vulnerable communities • Reduced poverty level • Application of alternative livelihood support systems • Improved healthcare for the vulnerable communities • Increased technology development and transfer	• Expand social protection mechanisms to cushion vulnerable groups • Create access to the market and relevant infrastructure • Enhance awareness and communication through collection of data and information on sustainable livelihood systems • Access to safe water and sanitation facilities • Develop medical, livestock and weather-based index insurance scheme for vulnerable communities in both urban and rural areas • Technology development and transfer including promotion of locally available knowledge technologies • Grow fast-maturing, high value trees that have multiple commercial uses; • Promote drought-tolerant food crops	• Percentage of vulnerable groups/ people/ beneficiaries covered • Percentage of communities with market access for their products • Percentage of community members informed on livelihood support systems • Percentage of population with access to clean and safe water • Percentage of population with access to medical, livestock and weather-based index insurance • No. of technologies locally available, promoted, transferred and up-scaled • Increase in yield for drought-resistance food crops	2016-2030	MDP; line ministries; CSOs; county governments; private sectors; research and academic institutions; media; MALF	50 bn

Objectives	Outcomes	Strategies	Key Performance Indicators	Timeframe (Years)	Actors	Costs (KSh)
Enhance disaster risk management	• Strengthened coordination of Disaster Risk Management	• Review and Enact a national disaster management law and policy • Strengthen the national disaster management and coordination / institution framework • Mainstream disaster management and climate change in sectoral development strategies • Establish an integrated national early warning system for disaster risk management • Expansion and climate proofing of communication infrastructure in vulnerable areas. • Loss and damage mechanism – insurance schemes • Application of indigenous communication channels • Enhance sustainable management of natural ecosystems	• Percentage reduction in disaster-related losses. • Percentage of communication infrastructure integrating climate change in vulnerable areas • Amount disbursed from loss and damage mechanism	2016-2030	MICNG; MENR	10 bn
Thematic Area 3: Sustainable Natural Resource Management						
Promote application of market based instruments and entrepreneurship in Natural Resources Management	• Increased value of NRM in GDP • Equity in NRM benefits Enhanced soil and water conservation	• Adopt Natural Resources accounting system • Establish nature-based enterprises including eco-tourism • Upscale Payment for ecosystem services in water towers	• Value of NRM-GDP contribution • Adoption of Satellite account of SNA 03 • No. of PES schemes established	2015-2020	County governments; KNBS; Private sector; PBO-CBOs; MENR; NEMA	50 m
Promoting sustainable natural resources restoration	• Percentage change in tree cover • Improved quality of the environment • Improved water, household energy, food, biodiversity and livelihood security	• Moving towards a ten per cent tree cover • Increase per-capita water availability • Promote Wildlife conservation programmes • Invest in conservation of marine and aquatic resources while advancing benefits of a blue economy	• Acreage under trees for pay programme • Acreage of reforested lands • Capacity on water harvested and stored • No. and acreage of conservancies	2015-2020	MENR-KFS; county governments; PBO-CBOs; TNT; Private sector; KFS; KWS	50 bn
Promote sustainable extractive industry	• Minimized externalities on extractives • Improved standards of living for communities in mining areas	• Adoption of industry best practices and standards • Emphasize on local content in extractive industry • Embrace value addition at source of raw materials	• Standards developed and enforced • Efficiency in water and energy use • Proportion of value addition	2015-2025	MoEP; NEMA; MoWI; TNT; KAM; KEPSA; KEBS; KNCPC; NEMA	30 bn

Objectives	Outcomes	Strategies	Key Performance Indicators	Timeframe (Years)	Actors	Costs (KSh)
Expanding opportunities in marine and aquatic resources	• Enhance resilience of aquatic and marine resources • Improved benefits accrued to communities from exploitation of marine and aquatic resources	• Strengthen coastal communities' and other stakeholders' capacity to exploit marine resources • Effective policing of marine parks and resources	• Value of marine resources exploited by coastal communities and other stakeholders • Capacity of communities and other stakeholders	2015-2020	MALF; local communities; research institutions; KEFRI; KEMFRI; National and County governments, KWS	500 m
Promote sustainable land management	• Increased land productivity	• Support development of integrated SEA-LUP at national and county levels • Promote community participation in conservation and management of NRs	• No. of land use plans implemented by counties • Percentage change in communities benefits from NRs	2015-2020	NLC; country governments; private sector; CSOs; NEMA; National governments	300 m
Thematic Area 4: Promoting resource efficiency						
Increase national energy efficiency	• Rise in proportion of population with access to sustainable energy	• Promote voluntary environmental agreements for energy efficiency, clean and renewable energy • Roll out demand-side energy efficiency programmes in urban residential, commercial and industrial establishments • Roll out supply side energy efficiency programmes through system reinforcement, efficient transformers, grid extension projects • Adopt minimum energy efficiency performance standards for lighting and industrial products • Develop technical and infrastructural capacity for energy efficient audits, equipment testing and certification • Review national and county policies and legal frameworks to respond to new technology and innovation	• No. of energy management voluntary agreements • Percentage of population adopting energy efficient technologies • Percentage of energy saved • No. of energy audits carried out • No. of energy performance standards developed	2016-20130	MoE and its SAGAs, private sector, KNCPC, county governments	250 m

Objectives	Outcomes	Strategies	Key Performance Indicators	Timeframe (Years)	Actors	Costs (KSh)
Enhance water use efficiency in urban and rural areas	• Increased access to water in urban and rural areas	• Periodically undertake national, county, basin-wide and sector-specific water footprint sustainability assessment to identify efficiency opportunities • Develop sector-specific water footprint indicators and benchmarks • Enhance and incentivise the application of voluntary water footprint reduction schemes • Reduce non-revenue water to at least 10 per cent on the supply side • Review consumption based water pricing to induce a culture of efficiency and conservation • Streamline water sector coordination challenges between national and county governments • Roll out demand-side water efficiency programmes in urban residential, commercial and industrial establishments	• No. of water footprint reduction schemes • Percentage reduction in water consumption • Percentage reduction of wastewater effluent discharges • Improved levels of the quality of surface and ground water	2016-2030	MoWI, WRMA, private sector, KNCPC, County Governments	50 bn
Manage waste as a resource	• Reduction in environmental related health risks	• Promote voluntary resource efficient and cleaner production approaches for waste prevention at source and promoting industrial symbiosis • Develop and implement a landfill policy that eliminates land-filling of all recyclable waste • Develop and implement extended producer responsibility for sustainable management of emerging waste streams including e-waste and plastics	• Percentage reduction in recyclable waste disposed in landfill • Enhanced resource recovery from waste • No. of new businesses created in waste management sector	2016-2030	MENR, NEMA, county governments, KNCPC	10 bn
Thematic Area 5: Social Inclusion and sustainable livelihoods						
Mainstream green economy into all forms of education and training	• Adequate provision of human sustainable livelihoods	• Develop and institutionalize policy on Education for Sustainable Development (ESD) • Strengthen gender responsive Green Economy training pedagogy and andragogy • Strengthen institutions to enhance Green Economy transformation • Catalyse behavioural change and promote skill oriented training necessary for a Green Economy	• Kenya ESD policy in place • Percentage of educators trained on GE • No. of training programmes that incorporate gender sensitive Green Economy • Percentage of population embracing Green Economy practices • Percentage of youth going through Green Economy – related entrepreneurship training • Percentage of people with special needs trained	2016-2019	MoE; universities; colleges; high schools; primary schools; ECD; TSC; KICD; research institutions; CSO; PSD; development partners	20 m

Objectives	Outcomes	Strategies	Key Performance Indicators	Timeframe (Years)	Actors	Costs (KSh)
Accelerate creation of green jobs	• Increased revenues from green jobs	• Revamp training in TVET including apprenticeship schemes and entrepreneurship training • Promote creation of work hours through Intensive public infrastructure works • Embrace measures to increase attractiveness of green jobs • Establish schemes to support green business	• No. and types of green jobs developed for especially youth, women and People with special needs (PWSN) • No. of workdays/ work hours created and programmes developed • Percentage of formalised MSMEs • No. of green jobs created	2016-2026	MPSYGA; MoE; NITA; MDP; MEACLSP COTU; FKE; KAM; KEPSA; Directorate of Youth; MENR	100 m
Promote Green Innovation and Technology Development	• Increased uptake of GE innovations and technologies	• Promote research in all aspects to inform opportunities in green economy • Support green-technology start-ups including business incubation centers • Promote green management practices in established enterprises • Facilitate establishment of green Micro Small and Medium Enterprises (MSMEs) financing mechanisms • Promote green MSMEs procurement incentives • Pursue measures to promote innovation including indigenous knowledge	• Proportion of public financial resources dedicated for GE research • Proportion of centers of excellence championing GE • Percentage increase in value and volume of financing targeting green MSMEs • No. of Green Economy innovations adopted • No. of institutions implementing Green e-procurement	2016- 2030	The National Treasury; MDP; MPYSGA; ILO; FKE; financial institutions; MITC; county governments	200 m
Reduce environmental related health risks	• Reduction in environmental – related illnesses	• Strengthen consumer protection related to consumer product safety • Promote compliance and enforcement of environmental laws and standards relating to all aspects of environment • Build capacity on environmental management • Promote use of indigenous knowledge systems	• Institutional framework to deal with food and drug safety established • Percentage reduction in food and environmental -related diseases • Institutional framework for regulation of alternative medicine in place • Percentage of hospitals on e-records • No. of environmental regulations and standards developed and enforced • No. of institutions with capacity building programmes on environmental management	2016-2025	MoEP; MoH; MENR; NEMA; development partners; MITC; county governments	100m
TOTAL	**KSh. 2,419,520 million**					

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