



PROMOTING THE IMPLEMENTATION OF THE PARIS
AGREEMENT IN EAST AFRICA

- PIPA PROJECT-

WITH A FOCUS ON PRO-POOR LOW EMISSIONS
DEVELOPMENT

KENYA NATIONAL BASELINE STUDY

MAY 2017



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ACRONYMS AND ABBREVIATIONS

AYICC	African Youth Initiative on Climate Change
AFOLU	Agriculture, Forestry, and Other Land Use
AFR 100	African Forest, Landscape restoration Initiative
BAU	Business-As-Usual
BRT	Bus Rapid Transit
CIC	Climate Innovation Center
CCLK	Climate Change Legislation in Kenya
CCD	Climate Change Directorate
CO ₂ e	Carbon Dioxide Equivalent
COP	Conference of the Parties
CH ₄	Methane
CVF	Climate Vulnerable Forum
FCPF	Forest Carbon Partnership Facility
FREL/FRL	Forest Carbon Partnership Facility
GEF	Global Environmental Facility
GESIP	Green Economy Strategy and Implementation Plan
GHG	Green House Gas
GW	Gigawatt
GDP	Gross Domestic Product
GCF	Global Climate Fund
INDC	Intended Nationally Determined Contribution
INFORCE	International Network for Sustainable Energy
IPCC	Intergovernmental Panel on Climate Change
IEWM	Institute of Environment and Water Management
JICA	Japan International Cooperation Agency
KAM	Kenya Association of Manufacturers
KFWG	Kenya Forest Working Group

KCCWG	Kenya Climate Change Working Group
KIRDI	Kenya Institute of Research Development and Innovation
LEDS	Low Emission Development Strategies
LULUCF	Land Use, Land-Use Change, and Forestry
MtCO ₂ e	Million Metric Tons of Carbon Dioxide Equivalent
MENR	Ministry of Environment and Natural Resources
MEP	Ministry of Energy and Petroleum
MTP	Medium Term Plan
MW	Megawatt
MRV	Measuring Reporting and Verification
NAP	National Adaptation Plan
NAMA	Nationally Appropriate Mitigation
NACOSTI	National Commission for Science, Technology, and Innovation
NCCRS	National Climate Change Response Strategy
NCCAP	National Climate Change Action Plan
NDC	National Determined Contribution
NIE	National Implementing Entities
NFM	National Forest Monitoring System
NRF	National Research Foundation
PA	Paris Agreement
REDD+	Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
SE	Sustainable Energy
SE4ALL	Sustainable Energy for All
SDGs	Sustainable Development Goals
SusWatch	Sustainable Environment Development Watch Kenya
TaTEDO	Tanzania Traditional Energy Development Organization
TAP	Technology Action Plan
UCSD	Uganda Coalition for Sustainable Development
UNDP	United Nation Development Programme
UON	University of Nairobi
UNFCCC	United Nations Framework Convention on Climate Change

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Executive Summary

Kenya is already feeling the effects climate change. The widespread poverty, recurrent droughts, floods, inequitable land distribution, overdependence on rain-fed agriculture, and few coping mechanisms all combine to increase people's vulnerability to climate change. For instance, the affected people have little security against intense climatic impacts. They have few resource reserves, poor housing and depend on natural resources for their livelihood. Floods and droughts have caused damage to property and loss of life, reduced business opportunities and increased the cost of transacting business in the country. In response to the challenges posed by Climate Change, Kenya has developed a [National Climate Change Response Strategy \(NCCRS 2010\)](#), [National Climate Change Action Plan \(NCCAP 2013\)](#), [Climate Change Act \(2016\)](#), and a [National Adaptation Plan \(NAP\)](#), which provides a vision for low-carbon and climate resilient development pathway. Kenya is operationalizing these policies and plans through the implementation of climate change actions in various areas such as afforestation and reforestation, geothermal and other clean energy development, energy efficiency, climate smart agriculture, and drought management.

Kenya's total greenhouse gas (GHG) emissions are relatively low, standing at 73 MtCO₂eq in 2010, out of which 75% are from the land use, land-use change and forestry (LULUCF) and agriculture sectors. This may be explained by the over-reliance on wood fuel by a large proportion of the population coupled with the increasing demand for agricultural land and urban development (INDC, 2015). The other significant emissions are from the energy and transport sectors, with the waste and industrial processes contributing negligible amounts. Kenya strives to be a newly industrialized middle-income country by 2030. This development is expected to increase emissions from the energy transport sector.

Nonetheless, the new supporting climate change instrument (Paris Agreement 2015) and the Sustainable Development Goals (SDGs 2015) rekindle hope for progress. It calls for well-developed low carbon strategies focused on pro-poor solutions to speed up poverty reduction as well as the country's development. It is in line with this vision and the context of sustainable development that Kenya and other countries amalgamated global efforts with the focus on reducing emission by promoting low emission strategies. Kenya was among the third country in sub-Saharan Africa, and the 49th party to the UNFCCC, to formally submit its Intended Nationally Determined Contribution (INDC), targeting a 30% cut in greenhouse gas emissions by 2030 compared with baseline (Development News Network, 2017). To meet this target Kenya has therefore laid mitigation strategies that aim to contribute to a low carbon, climate resilient development pathway that will benefit mostly the poor and vulnerable communities. An example of the large-scale solutions includes expansion in geothermal, solar and wind energy production, other renewables, and clean energy options. In addition, other mitigation strategies include, enhancement of energy and resource efficiency across the different sectors, making progress towards achieving a tree cover of at least 10% of the land area of Kenya, clean energy technologies to reduce overreliance on wood fuels, Low carbon and efficient transportation systems as well as Sustainable waste management systems.

Besides, the NDCs Kenya and other countries have plans to develop the “Low emissions Development strategies” (LEDs). Small scale, rural solutions play a critical role in combining poverty reduction with a low emission development hence decision makers need to comprehend and integrate them in NDCs, LEDs and implement them. Therefore, there is a need for greater awareness creation nationally by informing all relevant stakeholders especially the decision makers in order to influence the NDCs as well as the international support framework that will enable Kenya to implement more ambitious, pro-poor NDCs and longer term LEDs. It is due to this background that Sustainable Energy (SE) of Denmark and (INFORSE) partnered with organizations in East Africa namely; Tanzania Traditional Energy Development Organization (TaTEDO), Sustainable Environment Development Watch Kenya (SusWatch Kenya) and Uganda Coalition for Sustainable Development (UCSD) to promote the implementation of the Paris Agreement (PIPA) in East Africa with a focus on pro-poor low emission development. One of the initial activity of this project is to conduct a national baseline study.

The overall objective of the baseline study is to take into account the status of the Paris Agreement at the national level, CSOs capacity and involvement in the implementation of the NDCs, LEDs and Climate Finance as well as mapping relevant initiatives of different stakeholders, their actions, and mechanism of coordination between key partners. The methodology of the study included a combination literature review from reports, policy papers, and consultation from government and civil society officials amongst other stakeholders.

The study indicates that Kenya’s pledge to reduce emissions involves both mitigation and adaptation based on the country national circumstances. The proposed mitigation actions are also inadequate compared to the target due to high emission rates expected as Kenya’s economy is anticipated to grow. Therefore, for Kenya to meet the 30% target by 2030 it requires more funding to invest in low emission projects, capacity building and appropriate technologies that will bridge the gap of a fast growing economy. The study also records that National Environment Management Authority (NEMA) is the National Implementing Entity (NIE) for the US\$10 million Adaptation Fund project that assists vulnerable communities to adapt to climate change. It also states that the main stakeholders involved in NDCs, LEDs, and climate funds are CSOs, the private sector, public, academia, development partners and media.

There is still low involvement of civil societies in the development and implementation of national climate policies because only a few CSOs have been given the privilege to participate. Major obstacles to the CSOs involvement in national policy formulation and implementation are inadequate knowledge on climate change issues, poor coordination and communication among stakeholders, financial constraints and prevalent corruption in all sectors of development that affects stakeholder’s relation. Therefore, there is need for capacity building in terms of knowledge to empower CSOs on climate policies, strategies, and commitments such as the NDCs, LEDs and GCF. There is also need for inclusion and synergy for partnership amongst stakeholders in the PIPA project. PIPA project should bridge the gap of poor coordination by promoting meaningful partnership amongst different stakeholders such as the government, private sector, CSOs, academia, and media.

1.0 Introduction

Kenya is located in the greater horn of Africa region hence highly vulnerable to the impacts of climate change. In the last few years, it has come face to face with the unprecedented challenges of climate change impacts and the corresponding socio-economic losses that have affected communities significantly. Equally, Kenya's economy has a very strong dependence on the natural environment and, in particular, forestry resources. Forest supports most sectors including agriculture, horticulture, tourism, wildlife, and energy. A large rural population in the country depends on woodland and bush resources to provide firewood, charcoal, and other forest products. Kenya is categorized as a low forest cover country. Despite this, the country still faces significant forest cover losses. The major causes of these losses have been attributed to a number of activities such as settlement, conversion of forest land to agriculture, unsustainable utilization of forest products (including timber and charcoal); forest fires and poor governance.

Therefore, forestry and agriculture are the largest emitters accounting for approximately 72 percent of emission in 2010 and 65 percent in 2030, mainly due to emission from livestock and deforestation (NCCAP, 2012). Emissions from transportation and energy system have a significant contribution as well. Under the planned development baseline and population growth, emissions of greenhouse gasses in Kenya will increase. Nevertheless, the environmental and social condition resulting from the country's growth together with increased competition over resources may intensify the country's vulnerability to climate risks (NCCAP, 2013). Thus, the aim to transition to a low carbon climate resilient development pathway that will reduce the country's vulnerability to climate risk and improve Kenya's ability to prosper under a changing climate while contributing towards the global efforts to reduce greenhouse gas emissions.

Consequently, it is due to this reason that Kenya continues to play an active role in the global climate change discourse and response, including the signing of the world's binding universal climate agreement during COP-21. Further, Kenya had enthusiastically participated in COP 22 deliberations in Marrakesh Morocco, contributing to meaningful steps required to operationalize and implement the Paris Agreement. The government, through the Ministry of Environment and Natural resources, has also put in place measures to respond to the climate change effects. These include the National Climate Change Response Strategy (NCCRS 2010), National Climate Change Action Plan (NCCAP 2013-2017) that charts a low carbon climate resilient development pathway and National Adaptation Plan (NAP) that mainstreams adaptation across all sectors in the national planning, budgeting, and implementation processes. In addition, Kenya has a [Climate Change Act 2016](#) as well as submitted its [Intended National Determined Contribution \(INDC\)](#). Further, for Kenya to make a progressive step in achieving more ambitious, pro-poor NDCs and longer term LEDSS that would lead to a transformation in carbon-intensive sectors there is need to incorporate small-scale adaptation and mitigation solutions, which are effective and efficient to help uplift the most vulnerable out of poverty. Therefore, the decision makers need to comprehend these solutions, integrate them in the NDCs and LEDSS for implementation.

1.1 Objective of the Baseline Study

The overall objective of the study is to report on the Paris Agreement implementation status at the national level as well as mapping relevant CSOs to influence ambitious NDCs and LEDSS. The specific objective of the study are:

- To assess the current situation of the NDCs, LEDs and Climate Finance programme areas, including how they are included in national legal and policy instruments.
- To assess the CSO capacity and involvement in implementation of the NDCs, LEDSS and Climate Finance.
- To map out similar/relevant initiatives of different stakeholders, their actions, and mechanisms of coordination between key partners.

2.0 Methodology of the study

The methodology of the study incorporated stakeholder consultations, interviews with key informants and literature review.

2.1 Desk review

The desk-study involved available written national information such as (reports, policy, strategies, plans, papers, decision from parliament and government, NGO positions and others).

2.2 Key Informants interviews

Interviews and consultations with a selected number of key stakeholders involved in the implementations of strategies and actions on NDCs, LEDSS and climate finance in Kenya were conducted.

2.3 Summary of current NDC

Intended Nationally Determined Contribution (INDCs) are the actions and targets that countries have signaled they will undertake to help keep global temperatures from rising more than 2 degrees Celsius. The INDCs are not legally binding commitments, however; they ultimately play a critical part in determining whether the world achieves an ambitious 2015 agreement thus it is put on a path toward a low carbon, climate-resilient future.

Kenya submitted its Intended Nationally Determined Contribution (INDC) in 2015 as part of its obligations as a signatory and party to the United Nations Framework Convention on Climate Change (UNFCCC). Following the unexpected early entry into force of the Paris Agreement (PA) in November 2016, all INDCs became anchored in the PA as five-year NDC iterative cycles. When Kenya submitted its ratification instruments in December 2016, it confirmed its earlier submitted INDC to be its NDC. As such all, the information contained in its now Nationally Determined Contribution (NDC) remain current, which reiterates that adaptation is Kenya's priority response to climate change. The specific NDC sectors are based on the IPCC guidelines: energy, transportation, industrial processes, waste, agriculture, forestry and other land use (AFOLU). The greenhouse gasses (GHGs) Kenya priorities are Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O) (King'uyu, CC Directorate, Ministry of Environment and Natural Resources).

In Kenya, the phenomena of climate change is already unmistakable and intensifying at an alarming rate, as is evidence in the countrywide temperature increases and rainfall irregularity and intensification. Climate shocks in Kenya such as floods and drought have increased in frequency over the last decade they contribute to economic losses estimated at 3% of the country's Gross Domestic Product (GDP). The two rains known to commence within the same weeks every year are now unpredictable (NCCRS, 2010). Consequently, these extreme events have had negative socio-economic impacts on almost all sectors such as health, agriculture, livestock, environment, hydropower generation and tourism. Drought is the prime recurrent natural disaster in Kenya where more than 80% of the country's landmass is arid and semi-arid land (ASAL) with poor infrastructure, and other developmental challenges (CCLK, 2016).

Kenya's pledge to reduce emissions involves both mitigation and adaptation based on the country national circumstances. With Kenya bearing the brunt of climate change impacts and the associated socio-economic losses, the INDC represents Kenya's aspiration to increase the resilience to climate change by introducing a comprehensive program for adaptation action across sectors in support of livelihoods and economic well-being of the Kenyan people.

2.3.1 Greenhouse gas emissions and other mitigation-related targets

Kenya's total greenhouse gas (GHG) emissions are relatively low, standing at 73 MtCO₂eq in 2010 out of which 75% are from the land use, land-use change and forestry (LULUCF) and agriculture sectors (Kenya INDC, 2015). This may be explained by the reliance on wood fuel by a large proportion of the population coupled with the increasing demand for agricultural land and urban development. The other significant emissions are from the energy and transport sectors, with the waste and industrial processes contributing negligible amounts.

Therefore, in conducting mitigation measures, Kenya aims at achieving a low carbon climate resilient development pathway. As a result, it seeks to abate its greenhouse gas emissions by 30% by 2030 relative to the BAU scenario of 143 MtCO₂eq (Kenya INDC, 2015). The NDCs also propose reducing vulnerability and addressing adaptation in different priority sectors, including agriculture, infrastructure, waste, transport, and energy. To achieve this target Kenya aims to produce 5,530MW of geothermal power or 26% of total capacity. Making it Kenya's largest source of clean energy by 2030. Other options includes expansion of solar and wind production and other renewables. GHG emissions from transport are projected to grow significantly from 6 MtCO₂e in 2010 to almost 18 MtCO₂e in 2030 (NCCAP, 2013). Other projections are as shown in the table below.

Table 1: Emission reduction potential by sector: Technical potential and NDC 30% GHG emission reduction targets

Sector	2015			2030		
	SNC BAU Baseline	Revised Baseline	% Change	SNC BAU Baseline	Revised Baseline	% Change
Energy Demand	6.6	6.9	4.5%	9.9	10.9	10.2%
Transportation	9.1	10.6	15.5%	21.0	24.2	15.6%
Electricity Generation	1.2	1.1	-10.9%	41.6	35.5	-14.6%
Industrial Processes	3.1	3.5	12.4%	5.5	6.3	13.1%
Agriculture	31.6	32.6	3.1%	38.7	39.6	2.2%
Waste	2.4	2.4	-0.7%	4.8	4.8	-1.0%
LULUCF	26.0	26.0	0.0%	22.1	22.1	0.0%
TOTAL	80.1	83.0	3.7%	143.6	143.3	-0.2%

Source: Government of Kenya (2015), Second National Communication, page 172

2.3.2 Main policies and measures proposed to realize mitigation targets

Kenya’s mitigation NDC is based on its National Climate Change Action Plan, 2013-2017 (NCCAP), which sets out a low carbon development pathway that supports efforts towards the attainment of Vision 2030. Kenya’s NDC “seeks to abate its GHG emissions by 30% by 2030 relative to the BAU scenario of 143 MtCO₂eq, and in line with its sustainable development agenda. This is also subject to international support in the form of finance, investment, technology development and transfer, and capacity building.” The 30% emissions reduction target means that Kenya’s GHG emissions in 2030 are expected to be 30% lower than the projected emissions or business as usual (BAU) scenario as the emission baseline.

Other policies and measures proposed to realize mitigation targets apart from the NCCAP (2013-2017) are the [Green Economy Strategy](#), [National Land Policy](#) and the Kenya [Climate Change Act \(2016\)](#). The REDD+ process is also a measure that presents a great opportunity to reduce forest sector emissions by providing innovative approaches, including incentives that support the implementation of a comprehensive sustainable forest management and conservation strategies. Hence, Kenya participation in the REDD+ process is premised on the conviction that the process holds great potential in supporting a number of development goals in the country. Including realization of the constitution objective of increasing forest cover to a minimum of 10%, access to international carbon finance to support investment in the forestry sector, design policies and measures to protect and improve forest resources (Gichu, 2017). This is in the realization of the national climate change goals and contribution to global climate change mitigation and adaptation efforts. In addition, REDD+ is connected to a number of policies with the same objective such as the National Forest program and Climate Change Action Plan, among others.

Table 2: Mitigation Sector Strategic Actions

Strategic Action	Sector
Expansion in geothermal, solar and wind energy production, other renewables, and clean energy options	Energy
Enhancement of Energy and resource efficiency across the different sectors	Energy
Clean energy technologies to reduce overreliance on wood fuels.	Energy and Forestry
Make progress towards achieving a tree cover of at least 10% of the land area of Kenya.	Forestry
Low carbon and efficient transportation systems	Energy and transport

Climate smart agriculture (CSA) in line with the National CSA Framework	Agriculture
Sustainable waste management systems	Waste

Source: [\(INDC, 2015\)](#)

2.3.3 Nationally Appropriate Mitigation Actions (NAMAs)

The Low Emission Capacity (LECB) programme, European Commission, Federal Ministry of Environment, Nature Conservation, United Nations Development Programme (UNDP), Building and Nuclear Safety (BMUB) are implementing a project in Kenya. The project has played a key role in helping Kenya prioritize and develop concepts of six Nationally Appropriate Mitigation Actions (NAMAs) in the energy and the waste sectors respectively. In supporting mitigation actions in Kenya the project is working towards identifying opportunities for Nationally Appropriate Mitigation Actions (NAMAs) and designing low-emission Development Strategies (LEDS) in the context of national priorities. Besides, it is also designing systems for measuring, reporting, and verification (MRV) of proposed actions and means to reduce GHG emissions (Climate Change Adaptation, 2017).

Kenya's Six Nationally Mitigation Actions

1. Biogas Market Development for low-carbon Energy Access in Kenya

The purpose of this NAMA is to promote the use of biogas technology as a low-cost greenhouse mitigation technology through the development of a commercial small-scale biogas sector in Kenya. The NAMA aims to install 60,000 bio-digesters over six years through a coordinated market development approach that reduces financing barriers and improve the reliability of the technology.

2. Accelerated Geothermal Electricity Development in Kenya

This NAMA purpose to accelerate geothermal resource development in Kenya by scaling up private sector investment and participation. The NAMA aims to target an estimated installed capacity of 820 Megawatts (MW) of geothermal development, over half of the 1500 MW outlined in the Government's 5000 MW+plan.

3. Clean Energy Cook Stoves and Solar Lighting

The purpose of the NAMA is to increase access to clean energy technologies, specifically renewable energy and clean cooking in rural households. The NAMA also enables the private sector to participate actively in the manufacture and distribution of the clean energy technologies; and create an enabling market environment that encourages distribution of the clean energy technologies to end-users supported by an appropriate financing model.

4. Circular Economy Solid Waste Management Approach for Urban Areas in Kenya

This NAMA aims to improve Municipal Solid Waste management in the major urban areas of Kenya through a circular model of waste management in the greater Nairobi metropolitan region. In this respect, the NAMA facilitates the diversion of at least ninety percent of collected waste away from disposal sites to various recycling practices.

5. Bus Rapid Transit (BRT) Plus System for the Nairobi Metropolitan Region

The purpose of the NAMA is to support the development of a Bus Rapid Transit plus (BRT+) system for greater Nairobi by incorporating a single route for an electric bus rapid transit system (eBRT). The NAMA aims to improve access to clean, efficient, and safe public transport.

6. Mass Rapid Transit System for Nairobi

The purpose of the NAMA is to support a transformational change towards lower energy consumption (i.e., increase fuel efficiency) and fewer greenhouse gas emissions per passenger per kilometer from urban passenger transport. The NAMA aims to shift a significant share of individual travel to commuter rail and a new Bus Rapid Transit (BRT) system.

2.3.4 Gaps between targets and mitigation potential of the proposed actions

As a growing economy, Kenya's economy greatly depends on its natural resource base making it susceptible to the impacts of climate change. According to the report from the second National Communication to the UNFCCC, with the growth of the economy and increase in population, high emission rates are being recorded in various sectors with agriculture (41%) and LULUCF (37%) taking the lead. The proposed mitigation actions are inadequate compared to the targets due to high emission rates and low implementation potential. Therefore, for Kenya to meet the 30% target by 2030 it requires more funding to invest in low emission projects, capacity building and appropriate technologies that will bridge the gap of a fast growing economy (Dr. Ogola, Director Climate Change Programmes Coordination, Ministry of Environment and Natural Resources).

2.3.5 Adaptation targets, policies, and measures

Kenya's capacity to undertake strong mitigation actions relies on the support vested in the NDCs for the implementation of the adaptation actions. Kenya has the mandate to ensure enhanced resilience to climate change towards the attainment of vision 2030 by mainstreaming climate change into Medium Term Plans (MTP) and implementing adaptation actions. As a result, Kenya has developed a series of adaptation plans and programs such as the National Climate Change Action Plan and the National Adaptation Plan. The priority adaptation action occurs in 17 Medium Term Plan (MTP) sectors, which include, but are not limited to the following:

Table 3: Proposed adaptation measures in priority sectors

No	MTP SECTOR	PRIORITY ADAPTATION ACTIONS
1	Public Sector Reforms	Integrate climate change adaptation into the public sector reforms
2	Human Resource Development, Labour, and Employment	Enhance adaptive capacity and resilience of the informal private sector.
3	Infrastructure	Climate proofing of infrastructure (energy, transport, buildings, ICT)
4	Land Reforms	Mainstream climate change adaptation in land reforms.
5	Education and Training	Enhance education, training, public awareness, public participation, public access to information on climate change adaptation across public and private sectors.
6	Health	Strengthen integration of climate change adaptation into the health sector.
7	Environment	Enhance climate information services.
		Enhance the resilience of ecosystems to climate variability and change.
8	Water and Irrigation	Mainstream of climate change adaptation in the water sector by implementing the National Water Master Plan (2014)
9	Population, urbanization, and housing	Enhance the adaptive capacity of the population, urbanization and housing sector.
10	Gender, Vulnerable Groups, and Youth	Strengthen the adaptive capacity of the most vulnerable groups and communities through social safety nets and insurance schemes.
11	Tourism	Enhance the resilience of the tourism value chain
12	Agriculture, Vulnerable Groups, and Youth	Enhance the resilience of the agriculture, livestock and fisheries value chains by promoting climate-smart agriculture and livestock development

13	Private Sector/Trade; Manufacturing; Business process outsourcing, financial Services	Create enabling environment for the resilience of private sector investment, demonstrate an operational business case
14	Oil and mineral resources	Integrate climate change adaptation into the extractive sector
15	Devolution	Mainstream climate change adaptation into county integrated development plans and implement the Ending Drought Emergencies Strategy.

To meet the 30% target of GHG emissions reduction by 2030 according to the NDC, Kenya has made notable progress in adaptation through;

- Development of the [National Adaptation plan \(NAP 2015-2030\)](#). It is a critical response to the climate challenge facing Kenya. The NAP is Kenya's first plan on adaptation and demonstrates its commitment to operationalize the National Climate Change Action Plan by mainstreaming adaptation across all sectors in the national planning, budgeting, and implementation process. The NAP sets out Kenya's national circumstances, focusing on current and future climate trends, and describes the country's vulnerability to climate change. It also elaborates institutional arrangements, including monitoring and evaluation processes. The NAP comprehensive because in its preparation it involved an extensive consultation process that cuts across stakeholders from the Government and non-state actors like civil society, academia and the private sector at both national and county level.
- Development of the Kenya [Climate Change Act \(2016\)](#), which provides a framework for promoting climate resilient low carbon economic development.
- Development of the [Green Economy Strategy and Implementation plan \(2016-2030\)](#). It is the first green strategy in Kenya prepared through a multi-stakeholder participative and consultative approach and enriched by a rigorous technical review process. The Green Economy Strategy is geared towards enabling Kenya to attain a higher economic growth rate consistent with vision 2030, which firmly embeds on the principles of sustainable development on the overall national growth strategy. The policy is specifically 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 main stakeholders involved in the formulation of the Green Economy Strategy Plan (GESIP) are the Ministry of Environment and Natural Resources, through an inter-agency steering committee chaired by the principal secretary. The committee comprised of experts from key government sectors, civil society and development partners.
- Development of [Kenya Climate-Smart Agriculture Programme \(2015-2030\)](#).

- Mainstreaming Climate Change into National and County Policy, Planning and Budgetary Processes, which is anchored in the Climate Change Act 2016. The Ministry of Environment and Natural resources (MENR), through the Climate Change Directorate, in partnership with the Kenya School of Government (KSG) and the Kenya Institute of Curriculum development are developing a short course to mainstream climate change into national and county policy, planning and budgetary processes. The process is funded by USAID-UNDP. The curriculum development has engaged a wide range of stakeholder with experts drawn from Kenya School of Government, Kenya Institute of Curriculum development, Ministry of Devolution and Planning, National treasury, University of Nairobi- Institute of Climate Change and Adaptation, Kenya Meteorological Department, National Youth Green Growth Secretariat and Care international (jotoafrica, 2016).
- Kenya has also put in place a [National Disaster Management Policy \(2010\)](#) that contributes immensely to disaster risk reduction and by extension to poverty reduction and sustainable development in the country. The Policy creates a safe, responsive and disaster resilient society in achievements of Vision 2030.
- Kenya has also conducted specific activities on the ground to increase resilience in different sectors such as Forestry, Water, Agriculture, Energy and Urban Planning etc.

2.4 Main National Strategies and Policies that are basis for the NDC

The main National strategies and policies that form a basis of the National determined contribution (NDC) in Kenya include the National Climate Change response strategy (NCCRS (2010) that acts as a guide to strengthen and focus nationwide action towards climate change adaptation and mitigation. The National climate change Action plan (NCCAP 2013-2017) that was developed to implement the National Climate Change Response Strategy and the National adaptation plan (NAP) which provides a vision for low-carbon and climate resilient development pathway. The National Climate Change framework policy is also a key document that facilitates an effective response to climate change. This policies and plans are harmoniously working towards implementation of climate change actions in Kenya in various areas such as afforestation and reforestation, geothermal and other clean energy development, energy, climate, smart agriculture and drought management.

2.4.1 Analysis of National strategies and policy implementation to influence the NDC

The Kenyan experience in tackling climate change has its policy decisions guided by the National Climate Change Response Strategy (NCCRS), which in turn is operationalized by the National Climate Change Action Plan (NCCAP) 2013-2017. The NCCRS has played a critical role in the following areas;

- Assessing the evidence and impacts of climate change in Kenya
- Recommended adaptation and mitigation measures by giving guidelines
- Developed a conducive and enabling policy, legal and institutional framework
- Provided a concrete action plan combined with resource mobilization plan

The Kenya Climate Change Action Plan also takes adaptation and mitigation efforts to the next stage of implementation to take decisive action in responding to the challenges faced in Kenya. It encourages people-centered development, ensuring that climate change actions support Kenya's achievements of development goals. The action plan provides for an overall low-carbon, climate resilient development pathway for Kenya and key actions to be undertaken to deliver the path.

An example of NCCAP implementation is the Kenya Forest Service, which is working tremendously to have low carbon development actions by mainly restoring forests on degraded lands and reforestation of degraded forests. Tree planting of indigenous/ natural forests is highly encouraged by the service. The National Climate Change Action Plan can help meet vision 2030's goal through action that addresses both sustainable development and climate change. The Government of Kenya (GOK) is taking climate change and its impact on development seriously. Between 2005 and 2015, the GOK has committed approximately KSH. 37 Billion (USD 2.29 billion equivalent) to programmes that they classified as having a significant or principal climate change component.

The National Adaptation Plan contributes to the realization of the Kenyan NDC through setting out Kenya's national circumstances, focusing on current and future climate trends, and describes the country's vulnerability to climate change. The NAP identifies priority in 20 planning sectors that is the short term, medium and long term. The actions proposed in the NAP are meant to compliment or upscale adaptation actions that are going through various projects and programmes being implemented by the national and county governments, civil society, the private sector and academia; and not duplicate ongoing efforts.

Some of the ongoing/accomplished projects and programmes in Kenya geared towards the realization of the NDC in various sectors are as follows;

Devolution

Adaptation consortium under the Strengthening Adaptation and Resilience to Climate Change in Kenya Plus (stARCK+) programme. The intended outcome is that the programme leads to the rapid scale-up of innovation and investment in low-carbon and adaptation/resilience products, services and assets (IPE GLOBAL, 2017). The gaps experienced in the projects are awareness, capacity building, and financing.

Energy

Geothermal power development in Olkaria, Menengai, Morendat Malewa; coal development in Lamu, Dongo-Kundu, Kilifi, Kwale, Meru/Isiolo; Lake Turkana Wind Power Project; installation of wind energy storage facility in Marsabit; connection of electricity to public institutions; Reforestation of Upper Tana and Sondu Miriu river catchments; Sustainable Energy for All. The challenges the project is experiencing is on financing, technology, capacity building and research.

Science Technology and Innovation

Prototype and innovation testing by the Kenya Climate Innovation Centre and African Enterprise Challenge Fund, UNDP Low Emissions, Climate Resilient Development Project. The project is facing challenges on capacity building, financing, and knowledge on climate smart technologies.

Public Sector Reforms

Kenya Integrated Climate Risk Management Project, capacity building of civil servants on climate change through various projects from bilateral and multilateral development partners

Infrastructure

Improvement of shipping and maritime facilities programme, Roads 2000 programme, standard gauge railway, improvement of living and working conditions in government buildings, development and maintenance of coastline infrastructure, Research in Appropriate Building Technology Capacity Building Programme. The gaps experienced in this project are technology, finance and capacity building.

Land Reforms

Kenya is on the process of preparing Land Use Policy, National Spatial Plan concept, Revision of Kenya National Atlas, Development of Community Land Bill, County Spatial Plans. The gaps experienced include financing, capacity building, and awareness.

Education and Training

Kenya Global Partnership for Education, Primary Education Development project targeting the arid and semi-arid areas, Digital Learning Programme, Education Reforms, Education for Sustainable Development

Health

Piloting Climate Change Adaptation to Protect Human Health in Kenya Project. The project was implemented in the highlands of Kenya specifically Kericho, Nandi, Trans-nzoia and Kisii. The time frame of the project was 2010 to 2014. The gaps experienced in the project were capacity building, finance, and technology (World Health Organization, 2017)

Environment

Implementing a resilience framework to support climate change adaptation in the Mt. Elgon Region of the Lake Victoria Basin Project; Lake Victoria Environment Management Programme (LVEMP); Planning for Resilience in East Africa through policy, adaptation, research and economic development programme (PREPARED); Climate for Development in Africa Programme; Catalysing Forest and Landscape; rehabilitation for climate resilience and biodiversity conservation in East Africa; Global Early Warning System for Climate Change project. These projects have experienced gaps in capacity building, technology and financing.

Water and Sanitation

Implementation of the National Water Master Plan (2014), Kenya Water Security and Climate Resilience Project, Adaptation to Climate Change in Arid and Semi-Arid Lands (KACCAL), Adaptation Consortium, Western Kenya Community Driven and Flood Mitigation Project, Capacity Development for Effective Flood Management Project, Water Infrastructure Solutions from Ecosystem Services Underpinning Climate Resilient Policies and Programme. The aim of implementing this projects was to mainstream climate change adaptation in the water sector. Challenges experienced include finance, capacity building, and awareness creation.

Population, Urbanization, and Housing

UNDP, UNEP, UN-HABITAT Support to low carbon climate resilient development for poverty reduction in Kenya, Shauri Moyo Housing Project, Kenya Informal Settlements Improvement Project, Kisumu Housing Project. The aim of the project is to enhance the adaptive capacity of the population, urbanization, and housing sector. The gaps in this project are lack of enabling policy, awareness and capacity building.

Gender, Vulnerable Groups, and Youths

The main action of this group is to strengthen the capacity of vulnerable groups i.e. women, orphans and vulnerable children, the elderly and person with a disability. The projects and programmes implemented in Kenya include;

Hunger Safety Net Programme; Adaptation Consortium; Ending Drought Emergencies; National Drought and Disaster Contingency Fund; African Risk Capacity; Kenya Coastal Development Project; Integrated Programme to build resilience to climate change and adaptive capacity of vulnerable communities in Kenya; Arid Lands Support Programme; Rural livelihoods adaptation to climate change in the Horn of Africa Project; Adaptation Learning Programme for Africa; Women and Youth Enterprise Fund.

Agriculture

To increase the resilience of the agricultural value chain Kenya has implemented several programmes and projects such as;

Kenya Climate Smart Agriculture Programme; Mitigation of Climate Change in Agriculture Programme; Climate Smart Agriculture, STARCK+; Building climate change resilience and food security programme; Economic Stimulus Programme: Agriculture, Kenya Agricultural Productivity, and Agribusiness Project Kenya: Adaptation to Climate Change in Arid Lands. The major gaps identified in this programmes and projects are technology, awareness, capacity building and financing.

Livestock development

The adaptation action is to enhance the resilience of the livestock value chain. Kenya has made strides to undertake the following programmes and project in the livestock sector;

UNDP, Sustainable Land Management - Agro-Pastoral Kenya (2010-2015); Risk Insurance, Index Based Livestock and Crop Insurance, Complementary livestock redistribution, production, and animal health interventions support to improve pastoralists livelihood project, Dairy NAMA, Regional Pastoral Resilience Project. The gaps identified in this programmes and projects include financing, awareness, technology and capacity building.

Fisheries

The action in this sector is to enhance the resilience of the fisheries value chain. The projects Kenya is implementing in this sector include;

Livelihood diversification, (Economic Stimulus Programme), Cage fishing projects.

Oil and Mineral Resources

This sector aims to integrate Climate Change adaptation into the oil and mineral resources. Kenya has made steps in developing of the Mining bill and facilitated a Magadi siltation project at Lake Magadi (Ministry of Environment and Natural Resources , 2017).

The climate change policies and strategies remain instrumental in influencing the development of NDC hence without them there is limited development expected.

2.5 Current plans for revision of NDC

The implementation of NDC in Kenya is anchored on the Country's policies, programmes, visions, strategies and actions that are subject to be reviewed regularly. Besides, COP 21 of December 2015 outcome proposes the review of NDC in each country by 2023 beginning from 2018. In Kenya, the review of NDCs has not begun yet. Currently, efforts are being channeled towards implementation (Mr. Kinguyu).

2.5.1 LEDS/Low Carbon Development Strategies

Low emission development strategies (LEDS) are development frameworks that promote sustainable social and economic development while reducing greenhouse gas emissions over the medium to long term. Kenya has developed policies that align with these LEDS outcomes. For example, Kenya Vision 2030 includes a National Climate Change Action Plan highlighting the importance of developing a secure, climate resilient national grid that can support Kenya's development ambitions. Kenya has a 5 years domestic planning and implementation timeframe for this initiative. In addition, Kenya's Draft National Energy and Petroleum Policy (2015) aims to ensure an affordable, competitive, sustainable, and reliable supply of energy to meet national development needs at the lowest cost, while protecting and conserving the environment (MEP, 2015). Kenya's Climate Change Act emphasizes the need to reduce greenhouse gas emissions and encourage the use of renewable energy as a mitigation measure.

Further, to having a tremendous endowment of hydropower and geothermal energy accessed in past decades, Kenya has examined the resource base and is now building a power mix that, if accelerated, will position the nation to have minimal, if any, need for imported fuels, and will

enable the nation to claim a major leadership place in the coming clean energy economy. Other plans include expansion of the geothermal production at the Olkaria site in Hell’s Gate National park from just over 500 MW to over 3,000 MW in just a few years MEP (2015). This transition will liberate planning, decision-making and international investment that will make this process, if properly managed, achievable and profitable. The energy expansion plan for Kenya illustrates its high potential for a clean-energy future. Kenya can now not only realistically plan to achieve generation levels of over 33 GW of capacity (and peak demands of ~ 25 GW) in 2030, but can as well do so with a power mix forecast to be more than 75% carbon free. The geothermal expansion will also benefit the pro-poor by lowering down the prices of energy as well as increasing energy accessibility to the rural areas.

Kenya through its NAMA also aims to increase access to clean energy technologies, specifically renewable energy and clean cooking in rural households. It also supports the manufacture and distribution of one million improved biomass cook stoves and one million solar lanterns through both supply side and demands side intervention. The NAMA will achieve direct GHG emission reduction by decreasing the amount of wood fuel used through improved efficiencies in cook stoves and replacing kerosene based lighting devices with solar reductions of 5.6 million tonnes of carbon dioxide equivalent through the adoption of solar power lanterns.

Table 4: Examples of LED projects initiated in Kenya include;

NAME	Agency/Company/ Organization	Sector	Focus Area	Program Start and End
Kenya-Enhancing Capacity for Low Emission Development Strategies	United States Agency for International Development, United States Environmental Protection Agency, United States Department of Energy, United States Department of Agriculture, United States Department of State	Climate, Energy, Land	Renewable Energy, Buildings, Energy Efficiency	2014-2017
The project aims to support Kenya’s effort to pursue long-term transformative development and accelerate sustainable climate resilient economic growth while slowing the growth of greenhouse gas (GHG) emissions. Therefore, the project correspondingly contributes to the implementation of National Climate Change Action Plan (NCCAP) that has the overarching goal of enhancing low carbon climate resilient development in Kenya.				
Promoting Low Emission Urban Development Strategies in Emerging Economy Countries (Urban LEDS Project)	European Commission and UN-HABITAT	Climate	Energy efficiency	2015-2017

The Project further explores vertical integration, addressing climate change between different levels of government, and includes advocacy and support activities at the global level

The REDD+ process is one of the key strategies that aims to promote conservation, sustainable management of forests and enhancement of forest carbon stocks. Therefore, this presents a great opportunity to reduce forest sector emissions by provision innovative approaches, including incentives that support the implementation of a comprehensive forest management and conservation strategies. To ensure the REDD+ strategy meets its main objective guided by the United Nation Framework Convention on climate change (UNFCCC), Kenya is in the process of developing a country driven and participatory process that delivers the following pillars of REDD+; Forest Reference Levels (FREL/FRL), REDD+ strategy and implementation framework, National Forest Monitoring System (NFMS) and Safeguards Information System (SIS). The development of the above documents has shown Kenya's REDD+ readiness efforts. Therefore, in support of this process Kenya has received technical and financial support from a number of development partners including the United Nations program on REDD+ (UN-REDD), the Forest Carbon Partnership Facility (FCPF), Japan (JICA) and the Clinton Climate initiative (Gichu, National REDD+ Coordinator).

The Kenyan Government through the Kenya forest service is conducting two projects geared towards emission reduction. **Chyulu hills REDD+ project that covers 400,000 ha** with an **annual emission reduction of 200,000 tons** and the **Kasigau Wildlife works project that covers 200,000 ha** with an **annual emission reduction of 1.2 million tons** (Gichu, 2017). Besides, there are negotiations going on for other projects in the North, part of Kenya.

Kenya's interventions to reduce air pollution levels through emission testing for land, air and sea-based transport is also in the process of developing a National Air Quality Management and Coordination Strategy. Implementation of this will feed into actualizing a low carbon development path (Dr. Ogola).

2.5.2 Long-term targets on climate, energy, and deforestation

An interview with Dr. Ogola, Director Climate Change Programmes Coordination, Ministry of Environment and Natural Resources highlights the long-term climate targets for Kenya as well as how Kenya is transitioning to a low carbon economy. Kenya has embraced a low emission and climate resilient development pathway through its INDC. Therefore, the country aims to undertake ambitious mitigation that will reduce its greenhouse gas emissions by 30 percent by 2030. Besides, Kenya is a member of the Climate Vulnerable Forum (CVF) a 48-country platform who during COP22 committed to 100% renewable energy by 2050.

In regard to deforestation, the government of Kenya is targeting 5.1 million hectares of degraded and deforested landscapes for restoration by 2030, as a contribution to the [African Forest and Landscape Restoration initiative \(AFR 100\)](#). The 100 million hectares of the deforested and degraded landscape was Kenya's contribution to the Bonn challenge, New York declaration on forests and the CBD AICHI targets. The indication here was that the African Forest, Landscape Restoration Initiative (AFR100) aimed to restore 100 million hectares of the deforested and

degraded landscape, the Bonn challenge, and the New York Declaration aimed to restore 150 million hectares by 2020 and 350 million hectares by 2030. The low carbon option therefore for restoration forests on degraded lands is to abate 32.6 MtCO₂e by 2030 contributing to constitutional 10% tree cover goal, biodiversity benefits and improved livelihoods from sustainable forest products (Ministry of Environment & Natural Resources, 2017). Meanwhile, Kenya has conducted a [national assessment of forest and landscape restoration opportunities](#) including multi-stakeholder engagement throughout the process of mapping national landscape restoration in Kenya. The restoration commitment is an opportunity to improve quality of life for Kenya people, especially the poor. The most direct benefit is to improve soil fertility and food security, boost access to clean water, increase natural forest cover for ecosystem services, combat desertification, create green jobs, and bolster economic growth and livelihoods, while at the same time making a substantial contribution to climate change mitigation.

The growth projected in Kenya’s Vision 2030 implies an increased energy demand with a mission to facilitate Provision of Clean, Sustainable, affordable, Competitive, Reliable and Secure Energy Services at Least Cost while Protecting the Environment. As required under SE4All Initiative Kenya has set quantitative targets for each of the three goals of the initiative depicted in Table 5 below.

Table 5: Kenya SE4ALL Target until 2030 under each SE4ALL goal

Universal access to modern energy services		Doubling global rate of improvement of energy efficiency	Doubling share of renewable energy in global energy mix	
Percentage of population with electricity access	Percentage of population with access to modern cooking solutions	Rate of improvement in energy intensity	Renewable energy share in Total Final Energy Consumption	
			Power	Heat
100% ⁴¹	100%	-2.785% ⁴² /year	80%	80%

Source: SE4ALL Action Agenda (2016)

Kenya installed generation capacity is projected to increase from 1,645 MW in 2012 to about 14,67673 MW by 2030 basing on the reference scenario. The strategy is to diversify the base-load from hydro to other sources of energy mainly geothermal. The expected power supply from various sources will be composed of 80.11% renewable energy by 2030 increasing energy solutions to all Kenyans especially the poor (Ministry of Energy and Petroleum, 2016)

Table 6: Kenya Targets for Renewable Energy Mix in Power Generation

Sources of Electric Power Generation	Capacity 2012		Capacity 2014		Capacity 2017		Capacity 2022		Capacity 2027		Capacity 2030		
	MW	%	MW	%	MW	%	MW	%	MW	%	MW	%	
Hydro	16.30	46.21	821.00	37.78	900	27.33	1,500	24.80	2,500	23.35	3,000.0	20.44	
Geothermal	250.40	14.17	593.50	37.78	800	24.30	2,000	33.07	4,000	37.36	5,450.0	37.13	
Wind	5.90	0.33	25.00	1.15	500	15.19	900	14.88	1,200	11.21	1,500.0	10.22	
Renewable Energy	Cogeneration/gasification	26.00	1.47	38.00	1.75	50.0	1.52	100	1.65	300	2.80	600.0	4.08
	Biogas	0.00	0.00	0.155	0.01	2.0	0.06	5.0	0.06	6.00	0.06	10.00	0.07
	Solar PV	0.50	0.03	1.68	0.78	40.00	1.22	300.0	4.96	700	6.54	1,200.0	8.17
	Total	1,099.10	62.21	1,478.18	68.01	2,292	69.62	4,805	79.45	8,706	81.32	11,760.0	80.11
Non-Renewable	667.40	37.79	695.3	31.99	1000	30.38	1243	20.55	2,000	18.68	2916.0	19.89	
Grand total	1,766.50	100.0	2,173.48	31.99	3,292	100	6,048	100	10,706	100	14,676.0	100.	

Source: SE4ALL Action Agenda (2016)

2.5.3 Low emission strategy by Academia

The Academia, CSO and International institutions in the country have no LED strategies yet but they participate by offering technical support to the Kenyan government in the development of low emission strategies (Prof. Wandiga, University of Nairobi, Institute of Climate Change and Adaptation). The Kenyan government in partnership with United Nations Environment programme and the [Africa LEDS project](#) team conducted a modeling- scoping mission on 22nd February 2017 at the National Climate Change Resource Centre Amphitheatre, Nairobi Kenya. The objective of the meeting, designed as a Focus Group Discussion (FGD), was to clarify entry points for project intervention to ensure alignment with Kenya climate objectives & socio-economic priorities as stipulated in the NDCs & LEDS plans and the National Development blueprint, the Kenya vision 2030 respectively. The academia was among the stakeholders that participated actively in the Africa LEDS scoping meeting to offer technical expertise.

The University of Nairobi through its Institute of Climate Change also played a role in the formulation of the Kenya NDCs and gave input to the Climate Change Act and Disaster Risk Reduction Strategies. The institute is involved in the Green Growth Programme currently being implemented in Nakuru and Mombasa counties. The programme is being supported by UNDP and Giz and it seeks to identify green growth initiatives, which need to be incorporated into the County Integrated Development Plans of the 2 counties.

Besides technical expertise, academic institutions in Kenya conducts projects that are geared towards poverty reduction. For example, Strathmore University is generating solar power and contributing to the main grid while Egerton University in Njoro is running a large-scale biogas digester project. The digester is a huge fixed dome type that produces energy to cater for the students, workers and the surrounding community (Prof. Mutua, Egerton University, Dean, Faculty of Engineering and Technology).

The University of Nairobi Environmental Committee is also conducting a project that involves changing bulbs to save energy as well as offering degree and masters programs on renewable energy to empower students to come up with practical technologies and innovations that will provide energy solutions (Dr. Ouma, UON Meteorology Dept.).

2.6 Climate financing:

2.6.1 Green Climate Fund (GCF)

The Green Climate Fund (GCF) is a fund set as a mechanism to assist developing countries in adaptation and mitigation practices to counter climate change. The Fund is a unique global initiative to respond to climate change by investing into low-emission and climate resilient development. GCF was established by 194 governments to limit or reduce greenhouse gas emissions in developing countries, and to help adapt vulnerable societies to the unavoidable impacts of climate change. Given the urgency and seriousness of the challenge, the Fund is mandated to make an ambitious contribution to the united global response to climate change. The Green Climate Fund supports projects, programmes, policies and other activities in developing countries using thematic funding windows. It is intended to be the centerpiece of efforts to raise Climate Finance of \$100 billion each year up to the period 2020.

GCF Access Modalities

- Accredited national and sub-national implementing entities that meet the Fund's standards – in case of Kenya NEMA
- Accredited international and regional entities under international access. African Development Bank and Development Bank of Southern Africa
- Accredited UN bodies. The UN bodies accredited so far are UNDP, UNEP, WMO, WFP, World Bank
- Accredited private sector entities e.g. Acumen Fund, HSBC, Deutsche Bank, Credit Agricole, Africa Finance Corporation AFC

2.6.2 Status of GCF Funding in Kenya

In Kenya National Environment Management Authority (NEMA) is the National Implementing Entity (NIE) for the US\$10 million Adaptation Fund project that assists vulnerable communities to adapt to climate change. Thus, NEMA-Kenya is now one of the 33 institutions globally authorized to carry out GCF projects. The National Treasury is the National Designated Authority (NDA), or the national focal point, for the GCF.

GCF Mitigation Result Areas

- Energy access and power generation (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)
- Low emission transport (E.g. high-speed rail, rapid bus system, etc.)
- Buildings, cities, industries, and appliances (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)

- Forestry and land use (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment, and management, etc.)

GCF Adaptation Result areas

- Most vulnerable people and communities (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)
- Health and well-being, and food and water security (E.g. climate-resilient crops, efficient irrigation systems, etc.)
- Infrastructure and built environment (E.g. sea walls, resilient road networks, etc.)
- Ecosystems and ecosystem services (E.g. ecosystem conservation and management, ecotourism, etc)

NEMA Accreditation Credentials

- Micro-scale, project size of US\$ 10 million irrespective of the size of the GCF contribution
- Project management
- Full grants; No conditional need for co-finance or leveraged finance

NEMA GCF Proposal design process

- GCF Programme design process in Kenya, steered by National Treasury and in their role as NDA and NEMA as the Accredited Entity.
- Process conceived through a consultative process mainly with NDA, NIE - NEMA, and MENR, with and technical support from CDKN, WRI, UNEP.
- Overall objective is to enhance direct flow of climate finance into Kenya with a focus on GCF

Observers of the GCF in Kenya

The institutions accredited to observe the NEMA GCF process in Kenya include;

- Transparency International (TI)
- Pan African Climate Justice Alliance (PACJA)
- Indigenous Peoples Network of Kenya

The call for proposal received so far in the NEMA phase two programs are about 200 proposals. The projects approved by the GCF board that also targets Kenya are the Universal Green Energy Access Program and KawiSafi Ventures

The Universal Green Energy Access Program

A Sub-Saharan African programme aiming to implement projects in five countries Benin, Kenya, Namibia, Nigeria and Tanzania. The overall program development objective is to contribute to

universal access to electricity in Sub-Saharan Africa by scaling up investments in renewable energy from local financial markets and the international private sector.

More specifically, the program targets are to:

- To reduce the emission of CO₂ through increased access to clean electrical energy for predominantly rural population in the Target Region of UGEAP
- reduce the emission of CO₂ by replacing fossil fuel based energy production (on- or off-grid) with renewables, supplying clean energy for expanding energy demand and/or contributing to the stabilization of the national grid with an additional capacity
- To work with and through local financial institutions in an innovative structure to enable, local banks to provide long-term loans in local currency or USD for businesses that provide clean electricity solutions.
- As a public-private partnership instrument, multiply the amount of public capital through private investment by at least 2 times, thereby significantly increasing impact.

The project begins on 30/06/2017 and end in 30/09/2032. The Universal Green Energy Access Program is to be managed by Deutsche Bank group entities and its total budget is 500 million. The projects target beneficiaries are medium enterprises (SMEs) and households. In Kenya, the UGEAP is a 24 months programme equivalent to 2 years. The total budget of the cost is US \$ 20 million.

KawiSafi Ventures Fund in East Africa

The project is ongoing currently implemented in Kenya and Rwanda. The project focuses on the off-grid energy sector in East Africa to provide universal access to energy to people located beyond the foreseeable grid connection and at the bottom of the economic pyramid. It also addresses issues to do with lack of electricity and high kerosene use through offering affordable clean household solar energy solutions such as solar lanterns, solar home systems and solar mini-grids (60-70% of investment). The project targets 15,000,000 beneficiaries with a total budget of \$110.0m. Acumen is the implementing entity of this project.

2.6.3 Funding (mitigation and adaptation) from other external sources

a) Menengai geothermal development project: Green energy in motion

The project was approved in 2011 and it was to end in 03/05/2016. The project aimed at providing reliable, clean and affordable electricity to thousands of households and industries in Kenya. The project received a funding of US \$502.9 million from African Development Bank Group (AFRICAN DEVELOPMENT BANK GROUP, 2017). The specific objectives of this project were;

- To increase geothermal energy production capacity by 400 MW.
- To provide a reliable, clean and affordable electricity supply to 500,000 households and 300,000 micro-enterprises.

- To accelerate the energy transition of the Kenyan economy through increasing the proportion of geothermal in the national energy mix.
- To reduce the frequency of power outages caused by the volatility of hydroelectric production.

The expected outcomes from the project were:

- Rate of access to electricity increased by **20%**.
- Geothermal energy production capacity increased by **26%**.
- CO2 emissions reduced by **2 million tonnes**.
- Cost per kilowatt reduced by **22%**.
- Accelerated energy transition.

b) Kenya Climate Smart Agriculture Project

It is a 5 years project 2017-2021 funded by the World Bank. The project aims to increase agricultural productivity and build resilience to climate change risks in the targeted smallholder farming and pastoral communities in the country. The total budget for the project is sh25.9 billion.

c) Lake Turkana Wind Power Project

The Project is ongoing and is expected to be complete by mid-2017. The total project cost is estimated at USD 680 million and includes the cost of the envisaged 400 km transmission line from Lake Turkana to the Susua sub-station near Nairobi, as well as the cost of upgrading 200 km of roads and various bridges. The project will benefit Kenya by providing clean and affordable energy that will reduce the overall energy cost to end consumers. Furthermore, the project will allow the landlocked Great Rift Valley region to be connected to the rest of the country through the improved infrastructure linked to the wind farm, including a road, fiber-optic cable, and electrification. This zero-emission project will also contribute to filling the energy gap in the country, enhancing energy diversification and saving 16 million tons of CO2 emission compared to a fossil fuel-fired power plant.

The main objective of the project is to provide clean, reliable, low-cost power by increasing Kenya's national power generation capacity to approximately 17%.

Expected Outputs:

- 300 MW wind farm comprising 365 turbines
- A 33 kV electrical collector network
- 428 km transmission line from Lake Turkana to Susua sub-station

The project is financed through the equity debt (25%), mezzanine debt (5%) and senior debt (70%). African Development Bank is expected to provide a long-term senior loan of USD 150 million.

2.6.3 Climate Technology Development and Transfer

Kenya has undertaken a technology needs assessment. Several institutions handle different aspects of technology and research matters: The National Commission for Science, Technology and Innovation (NACOSTI), National Research Fund (NRF), Kenya Innovation Agency (KENIA) and the Kenya Institute of Research Development and Innovation (KIRDI). KIRDI is Kenya's UNFCCC Designated National Authority (DNA) on Technology. Kenya has also developed Technology Action Plan (TAP) with support from Global Environment Facility (GEF), United Nations Environment Programme (UNEP) and the UNEP Risoe Centre (URC) in collaboration with Environmental Development Action in the Third World (ENDA Senegal). The TAP focus is to assess the technology needs for climate change mitigation and adaptation in Kenya.

In Kenya, the Climate Innovation Centre (CIC) is housed at the Strathmore University. The University of Nairobi (UoN) Kenyatta University, Jomo Kenyatta University of Agriculture and Technology (JKUAT) and all the rest of the public and private universities hold regular innovation and/or engineering exhibitions and a variety of platforms (Wandera, Climate Change Focal Point, SusWatch Kenya).

2.6.4 Stakeholders Involved in NDC, LEDS and Climate Finance

The main stakeholders in the NDC development and implementation include development partners, people/public, the private sector, Academia, Government, Media, and CSOs. The institutional arrangements areas were conceptualized in the NCCAP. The development partners play a various role such as financing potential projects aimed at climate resilience, design programs and offer technical expertise where necessary. Kenya, for example, has received technical and financial support from a number of development partners including the United Nations Program on REDD+ (UN-REDD), the forest Carbon Partnership Facility (FCPF), Japan (JICA) and the Clinton Climate Initiative (Ministry of Environment & Natural Resources, 2016)

The private sectors play a critical role in mobilizing financial resources and technical capacities, influence government efforts, engage CSOs and community efforts in climate adaptation projects. An example of private sectors that have engaged CSOs and community efforts include GIZ, which has funded projects such as; adapting to climate change by adopting risk management strategies. Besides, the private sector also develops innovative climate services and adaptation technologies. In Kenya, the Kenya Association of the manufacturer (KAM) has been instrumental in influencing Environmental laws and Energy Environmental policies. The Kenya Industrial research and development Institute (KIRDI) has conducted environmental research and consultancy work for industry, community organizations and government agencies in line with vision 2030.

The Academia role is to conduct research in regard to climate change issues and provide technical support to the government and CSOs on Climate project and policies. The University of Nairobi Prof. Daniel Olago, for example, is leading a consortium that is carrying out a research related to

DFID funded programme termed “Improving water security for the poor”. The programme aims to increase water security for 2.5-5 million poor people by 2021 and to develop and test an interdisciplinary risk-based framework (Prof. Wandiga). Egerton University in Kenya has also made strides in the implementation of the NDC by conducting a project on Enhancing Biogas Energy Contribution in Kenya a project that was conducted 2012-2014 with support from National Council for science and technology (NCST)

The government in collaboration with other stakeholders participate in developing relevant policies and strategies geared towards climate resilience such as the National Climate Change Action Plan (NCCAP 2013-2017). It also plays an active role in the global climate change discourse and response including the signing of the climate agreements such as the Paris Agreement, which happens to be the world’s first binding universal agreement during COP-21. The government through the Ministry of Environment and Natural Resources and in particular the state department of Environment in partnership with other stakeholders have a role to play in the full implementation of the Climate Change Act 2016.

Civil society equally plays key roles in pushing for new laws, programmes, policies or strategies on climate change, in holding governments to account on their commitments; in identifying the lack of joined-up government responses to climate change; and in ensuring that national policy making does not forget the poor and vulnerable. Media also performs an active role in reporting and raising awareness on NDCs as well as providing the public with media briefs on climate proceedings. Some of the media stations that have a soft spot for climate change issues in Kenya include KTN, NTV, K24 and Citizen TV. Ordinary people as one of the stakeholders that play a significant role in reaching the targets set in reducing emissions by sharing information on concrete tools and lifestyle choices that make biggest impacts. Nonetheless, they report on environmental challenges that require urgent solutions.

Public sector – national line ministries and their agencies, the Council of Governors (CoG), research and academia, civil society and development partners are represented at all levels in the conceptualization and development of LEDS and climate finance.

2.7 CSO in the PIPA project

There are organizations in Kenya participating in the PIPA project through the activities they undertake. Some of these organizations include:

The Kenya Forest Working Group that aims at increasing the forest cover to meet 10% national target through sound forest management and conservation practices in Kenya. Therefore, it promotes sustainable forest management in the country through research, advocacy, networking, and partnership development for improved livelihood for all Kenyans. However, its strongest function is to provide a watchdog role through its forest monitoring activities and related advocacy actions, as well as influencing policy and preparing communities for participatory forest management. Currently, in collaboration with Kenya Forest Service, they are implementing a project dubbed “*Miti Mingi Maisha Bora Project*”. It is a 5-year project supported by the Government of Kenya. The overall objective of the project is “A reduction in

poverty by ensuring that the forest sector contributes effectively and sustainably to improve the lives of the poor, restoring the environment, and aiding the economic recovery and growth of Kenya, within the context of Vision 2030' (Jack Bamboo, KFWG).

The Green Belt Movement is also undertaking activities geared towards low emission development such as tree planting, advocacy, and networking, environmental conservation and women for change (capacity building). The Green Belt Movement has had a long working relationship with like-minded stakeholders including the Government of Kenya in climate change programs and REDD+ activities. Some of the REDD+ activities that the organization partners with the government are: carbon projects in Aberdare forest, Mt. Kenya forest and the Mau forest. The organization has also been contributing to the development of the National REDD+ process as a partner including the development of System for Land Emission Estimation for Kenya (SLEEK) at a technical level (Green Belt Movement, 2017).

Green Africa foundation is also one of the CSOs in Kenya that has played a critical role in supporting low emission development through conducting a project on enhancing environmental sustainability and climate change through low carbon emission and the project was carried out between 2015-2017. The project's target is to enhance resilience to climate change and environmental sustainability by vulnerable communities in Kenya. The project idea to be implemented in Kitui, Nakuru and Garissa Counties where 5,000 households will be provided with the solar lanterns and the rocket stove based model jikos. The project goal is “to anchor Kenya into the international carbon credit trading through a pragmatic programme which ensures direct benefits to the rural households and ensures their resilience to climate change impacts” (John Kioli, Green Africa Foundation).

Kenya Climate Working Group (KCCWG) - They are currently implementing advocacy projects in Climate Change and Energy in Kitui and Kajiado County. The timelines of the projects is 2016-2017 with a possibility of extension. They involve;

- Capacity building women groups through training on alternative livelihoods and clean energy-related enterprises.
- Supporting county governments to mainstream sustainable energy into their county actions and plans
- Review of County Integrated Development Plans to assess the level of gender and climate change mainstreaming.
- Piloting establishment of county-specific climate change bill

Anglican Development Services- is a religious based organization working on a water project to increase water security to the poor. They are also working with the county government of Kitui to set up county climate change fund.

Transparency International (Kenya) - It is a non-profit organization in Kenya with the aim of developing a transparent and corruption free society through good governance and social

justice initiatives. Currently, the organization is developing a tool with indicators to track INDC progress in the country.

Caritas Kitui- They are currently implementing projects in water, food security, livelihoods and disaster risk reduction, justice and peace, environmental management, promotion of renewable energy and alternative income generating projects for the poor. They are also conducting a project in providing cookstoves to schools and households.

Global Alliance of Clean Cook Stoves is a partnership with countries and CSOs working with national partners, such as the Clean Cookstoves Association of Kenya (CCAK), and Kenya's Ministry of Environment, Water, and Natural Resources, and the Ministry of Health to promote the adoption of clean cookstoves and fuels among 5 million households by 2020.

2.7.1 CSO-networks and main CSOs involved in climate policy in the country

Kenya Climate Working Group (KCCWG) - is a forum that brings together Civil Society Organizations in Kenya and donor partners, government departments and agencies working on climate change and for climate justice. They aid in creating synergies, harmonizing and strengthening of efforts in the design and implementation of activities that address Climate Change lobbying and advocating for favorable national policies in the promotion of climate justice for all, especially the most vulnerable. The main objective of this Network is to advocate and campaign for a positive policy and legislative framework that puts into account the effects of climate change on human (Kenya's) development. It also, support and coordinate civil society organizations, and the Government of Kenya to participate meaningfully in the climate change debates at the local, national, regional and international level, including Subsidiary bodies and Conferences of Parties (COP) (Wanja, Programmes officer KCCWG).

Climate Change Network Kenya (CCN Kenya)

The organization aims to influence and participate in the development and implementation of appropriate sustainable development, climate change sensitive policies, projects and activities to minimize the vulnerability of peoples due to climate change; and work collectively with other actors towards inclusive sustainable development.

Southern Voices on Adaptation is a coalition of climate networks and partners in the Global South. It supports 14 partner networks from Asia, Africa and Latin America in developing and testing the Joint Principles for Adaptation as a benchmark for good national adaptation policies. The Southern Voices on adaptation dates back to COP15 in Copenhagen and has been strengthening partner networks in the Global South to advocate for climate change policies, nationally and globally, benefiting poor and vulnerable people.

The Pan African Climate Justice Alliance (PACJA) is an African coalition of civil society organizations that promotes and advocates for climate-friendly and equity-based development. It comprises of over 300 non-governmental organizations, community-based organization, foundations, trusts, Faith-Based Organization, national and regional networks. The core mandate of PACJA is climate change advocacy across Africa with Kenya hosting the continental secretariat while running various projects nationally. PACJA is currently running a project called ‘

Implementing the Paris Climate Change Agreement' and the main goal of the project is to support the implementation of the Paris agreement by enhancing transparency and accountability on the national commitments towards a zero carbon and climate resilient future. PACJA has also a project in the pipeline to develop a tool that will monitor the implementation of Kenya's climate policy such as the NCCAP, NAP, NDC and the Climate fund.

2.7.2 Major CSOs active in climate issues but not involved in national climate policy

- **The Kenya Water and Sanitation Network (KEWASNET)** whose vision is a society with access to safe water and sanitation, and their mission is to promote good governance in the water and sanitation sector thereby increasing access to services. They work to influence the policy environment to ensure Kenyans have access to affordable and safe water and sanitation services in a sustainable context. They also strengthen Civil Societies for effective engagement in the sector and enhance institutional development and sustainability.
- **Environmental Liaison Center International** envisages societies living in ecological abundance. The organization aims to strengthen the capacity of civil society organizations to sustainably manage environmental resources, support governance and enhance livelihood and economic opportunities for communities. Previously the organization has held different projects in relation to the NDC and LED. Some of the projects include enhancing community environmental stewardship with a focus on resource conservation, environment energy and people program that ended in the year 2016. The activities under this project comprised of energy production, eco-stoves, and biogas production. Currently, ELCI is implementing a program on climate change and energy based on the 2015 Paris conference outcome that aims at emission reduction. The program objective is to provide effective tools and leadership for communities, CSOs and private sector to adapt to and mitigate the effects of climate change. Besides, it aims at Promoting access to clean energy in line with SDG no. 7 and in consideration of SDG no. 8, as well as the United Nations Sustainable Energy for All Initiative (SE4ALL).
- **The African Youth Initiative on Climate Change (AYICC)** is a network of African based youth's organization. It brings on board rural youth groups, university groups, schools and like-minded individuals. The initiative was formed in 2006 in Nairobi, Kenya during the second International Conference of Youth preceding the UNFCCC, COP 12. The initiative performs a climate change advocacy role; linking climate change with key development challenges, such as poverty alleviation, agriculture, health, education, economic growth, urbanization and migrations, governance among others. Besides, they also develop and increase the capacity of youth in climate change mitigation and adaptation as well as influencing policy dialogues related to youth and sustainable development (from national to international levels).
- **Kenya Climate Finance Network** hosted by Transparency International aims at developing a transparent and corruption free society through good governance and social justice initiatives. In the five-year period of 2012-2017, TI-Kenya priority is on addressing

corruption in the following sectors, climate finance governance, water, education and humanitarian aid.

- **Institute of Environment and Water Management (IEWM)**
Contributes to Kenya Gender & Climate Change Working Group, intervening to support inclusion of gender in climate policy
- **Care International** focuses on community climate change adaptation strategies in Africa,
- **Clean Cookstoves association of Kenya** is a non- government organization whose mission is to facilitate the increased innovations in design, testing, production, marketing & use of clean cookstoves and fuels through better government policies increased public awareness and capacity building programs.
- **Community Action for Nature Conservation** is a non-governmental organization legally registered in Kenya subscribing to the universal values and practices of good governance. The organization also played a key role in training African legislators on climate policy, including six Kenyan ministries with a reference on Kenyan CC strategy. It has also conducted Climate Finance Budget Review for United Nations Development Programme UNDP.
- **ONKARU WRUA**-The main mission of this organization is to mobilize communities to protect water and wetlands by building ownership. It also works with regional water bodies and promotes climate change awareness.
- **Lighting Africa** project by World Bank that empowers lives through offering off-grid energy as a sustainable solution to energy-poverty in Sub-Saharan Africa
- **Umande Trust organization** is actively involved in water supply, sanitation, and environmental services in close partnership with communities in Kenya's Urban Centers.
- **The Kenya Climate Justice Women Champions (KCJWC)** is a woman led institution advancing climate justice for all in Kenya with a special focus on gender-responsive approaches to adaptation and mitigation of climate change.

2.7.3 CSOs involvement in NDC process and Implementation

Kenya developed and submitted its INDC in 2015 as part of its obligations as a signatory and party to the United Nations Framework Convention on Climate Change (UNFCCC). The process of its development was spearheaded by a task force that was constituted by the Ministry of Environment and Natural Resources. It had a representation from all stakeholders across key government ministries, departments and agencies, civil society and the private sector. Precisely, Kenya Climate Change Working Group (KCCWG) and Pan African Climate Justice Alliance (PACJA) represented the CSOs throughout the whole process (Koringo, programmes Officer, PACJA). However, during the validation process, it was open for other CSOs to come in and share their inputs. It is also important to note that the CSOs have been involved in the formulation of the National Climate Action Plan (NCCAP), National Climate Change Response Strategy (NCCRS) and National Adaptation Plan that feeds to the INDC.

The process of NDC adjustment is already on in Kenya so far experts have done reviews in six sectors energy, transportation, industrial processes, waste, agriculture, forestry and other land use (AFOLU). The CSOs involvement is expected during the validation process.

The government of Kenya is also advocating for civil society engagement in the implementation of INDCs, for example, the [Climate Change Agriculture and Food Security \(CCAFS\)](#) has been working with the Kenyan government to develop tools and evidence for upscaling climate-smart agriculture. CCAFS is already working with the Kenya Agriculture Research Institute (KARI) and the Ministry of Agriculture to empower farmers to manage climate risk through a combination of crop diversification and improved practices.

Even though the government has tried to involve the CSOs in Kenya, there is still a gap because only a few CSOs are selected from the climate change thematic area neglecting other thematic areas such as energy, forestry, health, agriculture and water that can add value to the processes and implementation of policies.

2.7.4 Main barriers for CSO involvement in national climate policy

- Inadequate knowledge on climate change policies related issues amongst the CSOs. Technical knowledge limits CSOs to participate in meaningful policy discussions to share their views.
- Poor coordination and communication among government ministries and other relevant institutions leading to confusion affecting the flow of information
- Inadequate inclusion and synergy for partnership with CSOs where the government prefers to conduct other climate processes in isolation and involves civil societies in the later stages.
- Inadequate involvement of CSOs in the policy formulation and Implementation. Only about 35% of CSOs are involved in policy issues and implementation.
- Underfunding/ inadequate funding in climate change related courses despite the emerging issues and trends that arise
- Data capture not harmonized thus hindering smooth climate information flow. The universities are hubs for research and knowledge sharing, same as CSOs and research institute. Despite the rich information database, there isn't a common pool for the data, which makes it inaccessible or not useful.
- Prevalent corruption in all sectors of the economy thus affecting relations among stakeholders.
- Poor working relationship between government and CSOs. Most CSOs play a watchdog role in implementation and formulation of policies and activities by the government, which more often doesn't arguer well with the government thus creating hostility. To counter this challenge, most entities have adopted a participatory approach in project implementation.
- Inadequate policy enforcement of laws and policies to secure sustainable management of the environment and natural resources. Kenya has various policies and acts related to

climate change, some have already been approved while others are being drafted but despite this, enforcement is very low.

- Financial constraints, government and CSOs/NGOs overdependence on donor/grants to implement climate change interventions.

2.7.5 Possible role of capacity building and other support to increase CSO-involvement in climate policies

To overcome these challenges there is need to initiate capacity-building programs and other support to increase the CSO involvement in climate policy. Therefore, there is a call for:

- More awareness creation on climate change challenges and options.
- Build capacity of CSOs to generate data that will influence climate change policies
- Build capacity of journalists to improve reporting on climate change matters.
- Grassroots organizations need capacity building especially to improve advocacy skills and resource mobilization.
- Build capacity of CSOs to improve research methods needed to provide more evidence.
- Build capacity of CSOs to enable them tap the resources that are available but require specific skills and knowledge to tap into, for example from GEF & GCF.
- Awareness creation on the Paris Agreement (PA)
- There is need for policies and legal instrument harmonization
- Need for clear understanding of NDCs, LEDS and climate finance
- Train people to comprehend climate change issues for them to make meaningful decisions in the climate process.

2.8 PIPA project Recommendations and Conclusion

The PIPA project strives for inclusion of CSO viewpoints in the LEDS development and the development of more ambitious NDCs as there exists different skills, knowledge, and experience in the field of climate change within the civil society groups that have not been adequately harnessed. The majority of civil societies in Kenya are trying to familiarize themselves with the NDCs, LEDS, and GCF because they appear as new concepts to them, though interesting. There is still low involvement of civil societies in the development and implementation of national climate policies because only a few CSOs have been given the privilege to participate.

Major obstacles to the CSOs involvement in national policy formulation and implementation are inadequate knowledge on climate change issues, poor coordination and communication among stakeholders, financial constraints and prevalent corruption in all sectors of development that affects stakeholder's relation. Therefore, there is need for capacity building in terms of knowledge to empower CSOs on climate policies, strategies, and commitments such as the

NDCs, LEDS and GCF. There is also need for inclusion and synergy for partnership amongst stakeholders and bridging of the gap of poor coordination by promoting meaningful partnership amongst different stakeholders such as the government, private sector, CSOs, academia, and media.

2.9 References

Analysis of Intended Nationally Determined Contribution (INDC), June 2016

AFRICAN DEVELOPMENT BANK GROUP. (2017, March 23). Retrieved from Menengai Project: <https://www.afdb.org/en/projects-and-operations/selected-projects/menengai-project-green-energy-in-motion/>

Climate Change Adaptation. (2017, March 24). Retrieved from Kenya NAMA: <http://adaptation-undp.org/projects/bf-kenya-nama>

Development News Network. (2017, February 14). Retrieved from Kenya Submits Its INDCs Targeting 30% Emission Cuts: <http://dnnafrika.com/kenya-submits-its-indcs-targeting-30-emission-cuts/>

Enhancing Capacity for Low Emission Development Strategies. (2017, February 21). Retrieved from KENYA: <https://www.ec-leds.org/countries/kenya>

Government of the Republic of Kenya (2007) Kenya Vision 2030

GOK. Ministry of Environment and Natural Resources; Kenya's Intended Nationally Determined Contribution (INDC) 23 July 2015

GOK (2010b). National Climate Change Action Plan 2011-2012. Published by the Ministry of Environment and Mineral Resources, Nairobi, Kenya

GOK (2010c). National Climate Change Response Strategy. Published by the Government Press, Nairobi, Kenya.

Green Belt Movement. (2017, February 14). Retrieved from Green Belt Activities: <http://www.greenbeltmovement.org/what-we-do>

IPE GLOBAL. (2017, March 28). Retrieved from Supporting DFID for Strengthening Adaptation and Climate Resilience in Kenya - See more at: <http://www.ipeglobal.com/news/strengthening-adaptation-climate-resilience-in-kenya-561.php#sthash.o6k4SfVz.dpuf>: <http://www.ipeglobal.com/news/strengthening-adaptation-climate-resilience-in-kenya-561.php>

jotoafrica. (2016). Low emission and climatechangeadaptation actions, 11.

Ministry of Energy and Petroleum. (2016). Sustainable Energy for All . Nairobi: Government of Kenya.

Ministry of Environment & Natural Resources. (2016). Low emission and climate change adaptation actions. jotoafrica, 5.

Ministry of Environment & Natural Resources. (2017, March 14). Retrieved from Kenya to restore 5.1 Million Hectares of Degraded Land: <http://www.environment.go.ke/?p=3024>

Ministry of Environment and Natural Resources . (2017, March 28). Retrieved from Human Activities Upstream Hurting Lake Magadi: <http://www.environment.go.ke/?p=2517>

Urban Low Emission Development Strategies. (2017, February 12). Retrieved from At a glance: <http://urbanleds.iclei.org/index.php?id=108>

World Health Organization. (2017, March 28). Retrieved from Climate change and human health: <http://www.who.int/globalchange/projects/adaptation/en/index6.html>

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