

December Issue 24, 2018

HIGHLIGHTS

- Pg 2 Word from the Cabinet Secretary
- Pg 3 Kenya's Second Action Plan at a Glance
- Pg 4 Role of Counties in Strengthening Climate Change Actions
- Pg 5 Climate Change Action: Kenya's Journey
- Pg 6 Climate Smart Agriculture Implementation Framework
- Pg 7 Mangrove Conservation and Management
- Pg 8 Raising Young Climate Change Champions
- Pg 10 Life after the Plastic Bag Ban in Kenya
- Pg 11 Sustainable Industrial Innovation in Environment Protection
- Pg 12 Combating Climate Change using Geothermal Energy
- Pg 13 Energy Beyond the Megawatts
- Pg 14 Transforming Nairobi into a Sustainable City
- Pg 15 Youth Expectation on Government and Partners
- Pg 16 Kenya COP24 Side Event

About Joto Afrika

Joto Afrika is a series of printed briefings and online resources about low emission and climate change adaptation actions. The series helps people understand the issues, constraints and opportunities that they face in adapting to climate change and improving livelihoods. Joto Afrika is Swahili; it can be loosely translated to mean 'Africa is feeling the heat'.



Mangrove conservation and restoration helps to promote low carbon development ©MEF

Climate Change: It is time for Action!

Editorial

In October 2018, the Inter-Governmental Panel on Climate Change (IPCC) released a "Special Report on Global Warming of 1.5°C." The report findings show that at the end of 2017, global temperatures had risen by about 1.0 degree Celsius compared to pre-industrial times; and the world is on track to exceed the 1.5°C warming between 2030 and 2052. A more pronounced warming is expected in Africa, exceeding the global warming levels over most of the continent.

Kenya's Greenhouse Gas (GHG) emissions represent less than 1 percent of total global emissions; yet its economy is heavily dependent on climate-sensitive sectors such as agriculture, water, energy, tourism, wildlife, and health.

The Economic Survey released in 2018 reports that the economic cost of droughts is estimated to create a long-term fiscal liability equivalent to 3 percent of GDP each year. The floods in early 2018 claimed lives, displaced hundreds of thousands including children, and closed over 700 schools; destroyed roads and infrastructure; and seasonal crops and livestock swept away. Major cities and towns were not spared, with heavy consequences of increased disease burden.

The flood was preceded by the 2014-2018 drought which was declared a national emergency in February 2017 and affected 23 Arid and Semi-Arid Lands (ASAL) Counties with devastating impacts on lives and livelihoods of particularly the vulnerable and marginalized communities.

Yet, according to the "Special Report on Global Warming of 1.5°C", the impacts of a global average temperature increase of 1.5°C and of 2.0 °C above pre-industrial levels pose far greater risks than previously anticipated. The report also notes that

adaptation efforts are currently insufficient to prevent losses associated with 1.5 °C warming, but can be significantly increased to reduce the negative consequences of climate change.

Kenya has a clear roadmap on how to meet its 30 percent emission reduction target by 2030 through the five year National Climate Change Action Plans. The current Action Plan has identified priority areas for intervention. In addition to the five-year Action Plans embedded in the Climate Change Act, 2016 the country needs long – term strategies for combating these impacts in a low carbon and resilient manner.

The role of forests, in addition to deep emission cuts globally is crucial if the world is to attain carbon neutrality by 2050. Kenya has moved its target of achieving and maintaining a 10 percent tree cover from 2030 to 2022. Kenya's forest area covered 7.2% of land area in 2018 and has the highest technical mitigation potential.

This Joto Afrika issue highlights Kenya's approach to ensuring low carbon climate resilient development at all levels, by National and County Governments and other Non-State Actors.

As Kenya continues to take action in various sectors, and present our position at COP 24 at Katowice, Poland, it is our sincere hope that all Parties, particularly the "big emitters" have listened to the alarm raised by the "Special Report on Global Warming of 1.5°C." We are all sailing in one boat, we either take action now, or be the generation that sunk the Titanic!

Dr Pacifica F. Achieng' Ogola

Director Climate Change Programmes
Cordination /Ag. Climate Change Secretary
Ministry of Environment and Forestry
pacie4@yahoo.co.uk



Word from the Cabinet Secretary

Kenya like many African countries, remains highly vulnerable to climate change impacts. These concerns led to the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) at the “Rio Earth Summit” in 1992. In December 2015, the world adopted the Paris Agreement to take forward the objective of the United Nations Framework Convention on Climate Change (UNFCCC). The Paris Agreement has given a global policy direction towards which we must all aim to achieve. To date over 180 out of 197 parties to the Convention have ratified the Paris Agreement and are in the process of putting up interventions to respond to the impact of climate change towards the global target.

Kenya has taken proactive measures to reduce vulnerability and enhance resilience. It developed the National Adaptation Plan (NAP) 2015-2030, which has identified short, medium and long-term strategic actions for 20 sectors. The Climate Change Act, 2016 underscores mainstreaming of climate change in both public and private sectors with emphasis to enhancing resilience in the country. The National Climate Change Action Plan (NCCAP), which is a five-year plan was developed as a vehicle to achieve the NAP, Nationally Determined Contributions (NDCs) as well as implementing the Climate Change Act, 2016. We have finalised the NCCAP (2018-2022) and thank all partners who were involved in its development and look forward to its implementation.

The country has also developed various sector specific strategies like the Kenya Climate Smart Agriculture Strategy 2017-2026 which outlines strategies and measures to enhance agricultural production in a changing climate and Ending Drought Emergencies Common Programme Framework which commits the government to end the worst of the suffering caused by droughts by 2022 among others.

Our expectation of COP 24

Our expectation is that the Talanoa Dialogue must bring forward conclusions to COP 24 this December, that will lead to a 1.5°C pathway through revision of Nationally Determined Contributions (NDCs) that will be submitted in 2020, particularly from big emitters to close the emission gap. Therefore, the urgent need for research on climate policy instruments consistent with 1.5°C emissions pathways cannot be over emphasised.

On matters of climate finance, from a developing country’s perspective, climate finance should be ‘new and additional, predictable, adequate and easily accessible. New and additional implies over and above Official Development Assistance (ODA).

- Predictable implies that information on available finance should be availed early to allow developing country parties to include them in their planning.
- This should also be informed by national development goals, priorities and objectives such as, financial flows should respond to addressing nationally determined needs.
- Climate finance should be adequate to meet the adaptation and mitigation needs of developing countries.
- Developing country Parties should have direct and facilitated access, as opposed to the often stringent and complicated access modalities (for some of the funds) that make access almost impossible.

This is a crucial year for global action on climate change. In this session of the Conference of the Parties, we have the opportunity to adopt an inclusive and comprehensive Programme of Work to operationalize the Paris Agreement. As we work towards this objective, we need to maintain the spirit and letter of the Agreement without re-negotiating the Convention.

We will work in close collaboration with our African Negotiators and like-minded regions.

Hon Keriako Tobiko, CBS
Cabinet Secretary
Ministry of Environment and Forestry

Kenya's Second Action Plan at a Glance



The Country targets to attain a minimum 10 percent forest cover ©MEF

The National Climate Change Action Plan (NCCAP) is a five-year plan that helps Kenya adapt to climate change and reduce greenhouse gas emissions. It furthers Kenya's development goals by providing mechanisms and measures to achieve low carbon climate resilient development in a manner that prioritizes adaptation.

The Second National Climate Change Action Plan (NCCAP) 2018-2022 builds on the first NCCAP 2013-2017 and provides a framework for Kenya to deliver on its Nationally Determined Contribution (NDC) under the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC).

The NCCAP 2018-2022 guides the climate actions of the National and County Governments, private sector, civil society and other actors as Kenya transitions to a low carbon climate resilient development pathway. It outlines the programmes and strategies for adaptation and mitigation from 1st July 2018 to 30th June 2023.

The second Action Plan builds on the first NCCAP 2013-2017 where considerable progress was made. This includes the development of the National Adaptation Plan (NAP) 2015-2030; establishment of climate change funds to support adaptation in five counties; and expansion of geothermal, solar and wind power among others. The Act also provides for improvement of the legal and policy framework that includes Climate Change Act, 2016; National Climate Change Framework Policy; and National Climate Finance Policy.

The Climate Change Act, 2016 requires the Cabinet Secretary responsible for climate change affairs to review and update the NCCAP every five-years to guide the mainstreaming of adaptation and mitigation actions into sector functions of the National

and County Governments. It also sets out institutional structures and responsibilities that guide the oversight and management of NCCAP 2018-2022.

The National Government led and guided the process to develop the NCCAP 2018-2022 through extensive consultations with stakeholders drawn from the National and County Governments, civil society organisations, youth, women, vulnerable groups including persons with disabilities, the private sector and development partners.

performance and implementation.

The Action Plan runs in tandem with the second-generation County Integrated Development Plan (CIDP) 2018-2022, the third Medium Term Plan (MTP) 2018-2022 and the Big Four Agenda.

The Climate Change Directorate, established in the Ministry of Environment and Forestry by the Climate Change Act, 2016, is responsible for climate change affairs, coordinates the implementation of NCCAP 2018-2022, including related monitoring and reporting.

The Action Plan will be reviewed every two years as required by Section 13(7) of the Climate Change Act, 2016. The review will utilize reports from County Governments and State Departments, as well as inputs from relevant stakeholders.

Kenya has prioritized adaptation actions in the Action Plan because of the devastating impacts of droughts and floods, and the negative effects of climate change on vulnerable groups in society including women, older members of society, persons with disabilities, children, youth, and members of minority or marginalized communities.

The Plan identifies seven priority areas, which are aligned with the Government of Kenya development agenda, including the Big Four. Thirty-eight crosscutting enabling actions are required to implement the seven-priority adaptation and mitigation actions. These enabling actions equip government and stakeholders with the knowledge, skills, technologies and financing needed to deliver and report on climate actions.

Kenya's National Climate Change Action Plan 2018-2022 Priority Areas



NCCAP 2018 - 2022 priority areas ©Ecomedia

State Departments and National Public Entities are required to establish Climate Change Units to integrate NCCAP 2018-2022 into strategies and implementation plans, and to report to the National Climate Change Council on an annual basis, on

Mr. Ali Noor Ismail, CBS
Principal Secretary
Ministry of Environment and Forestry
psoffice@environment.go.ke

Role of Counties in Strengthening Climate Change Actions



Greening and beautification of highways in Meru County ©Meru County Government

The National Climate Change Action Plan (NCCAP) 2018-2022 guides climate change actions by National and County Governments, private sector, civil society and other actors as Kenya transitions to a low carbon climate resilient development pathway. County Governments have a critical role to play in the implementation of the NCCAP since most climate change sensitive sectors such as water, agriculture and forestry are devolved.

Following are excerpts from an interview with H.E Governor Kiraitu Murungi, Chairman, Water, Forestry & Mining Committee Council of Governors (CoG) and Meru County Governor on the role of County Governments in strengthening climate change actions.

What are County Governments doing to contribute to Kenya's low carbon climate resilient development pathway?

County Governments have been in the forefront in implementing global climate change frameworks such as the Paris Agreement which aim at strengthening the global response to climate change. In addition, counties are mainstreaming climate change into planning and budgeting and have adopted harmonized indicators and standards for monitoring and reporting set by the National Government.

Counties are also required to nominate a County Executive Committee (CEC) Member in charge of coordinating implementation of climate change actions. To date, 44 counties have nominated their respective climate change CEC Members and Directors.

Counties are implementing climate change actions stipulated in their respective second-generation County Integrated Development Plan (CIDPs) 2018-2022 over the next 5 years and this calls for more innovative approaches. Counties are also playing a role in the implementation of the NCCAP 2018-2022 and other frameworks which also includes reporting on progress made in the implementation of climate change actions.

What are County Governments doing

to attract climate finance and promote climate investment?

Counties have set aside a percentage of their funds for climate change programmes through enacting requisite legislations which include the County Climate Change Funds. Kitui, Garissa, Isiolo and Wajir have set aside 2 percent while Makueni County has set aside 1 percent of its development budget for climate change projects, programmes and activities. The Government and development partners are expected to match or support counties in increasing the allocation. These legislations are aligned with the Climate Change Act, 2016, NCCAP, CIDP and Public Finance policies and laws.

Counties are receiving technical support from partners to develop bankable proposals on climate change. This also includes forging partnerships on climate change between the National Government, Council of Governors, Development Partners, the private sector and Civil Society Organizations.

The Counties have also organized themselves into regional blocks to attract investments on climate change as well as leveraging on the experience of the civil society, private sector and other partners to mobilise for climate change finance.

What are some of the achievements realised as a result of enhanced coordination between the National and County Government in addressing the effects of climate change?

County Governments have mainstreamed climate change into planning processes such as their CIDPs and county sectoral plans. The enhanced coordination also facilitated the development of the second NCCAP 2018-2022 and the Climate Change Fund Regulations 2018.

Counties have also adopted harmonized indicators for monitoring and reporting by both National and County governments. This has led to harmonised reporting.

In October 2018, the Council of Governors in partnership with the Pan African Climate Justice Alliance (PACJA) and the Ministry

of Environment and Forestry organized the First National Climate Governance Conference to strengthen climate governance for enhanced implementation of Nationally Determined Contributions (NDCs) in the context of Vision 2030 with specific focus on the devolved units of governance.

The Conference brought together key stakeholders to exchange information, share experiences and perspectives on the implementation of climate actions at county level.

The COP24 is expected to provide a strong push towards the global climate change agenda. What are County Governments expecting from COP24?

County Governments expect to explore opportunities for financing climate change actions such as the Green Climate Fund (GCF) and the Adaptation Fund. Presently the procedures are stringent and have proved difficult for counties to access climate change financing.

County Governments will also use COP24 to seek for technical support from development partners and other stakeholders as well as network and learn best practices globally while also sharing lessons from Kenyan Counties.

What are some of the challenges faced by County Governments when it comes to climate adaptation and resilience building

The main hindrance faced by County Governments is inadequate finance. This limits their ability to implement initiatives that would contribute to a low carbon climate resilient development pathway.

Lack of skilled staff to effectively address the impacts of climate change as well as low institutional and technical capacities is also a challenge.

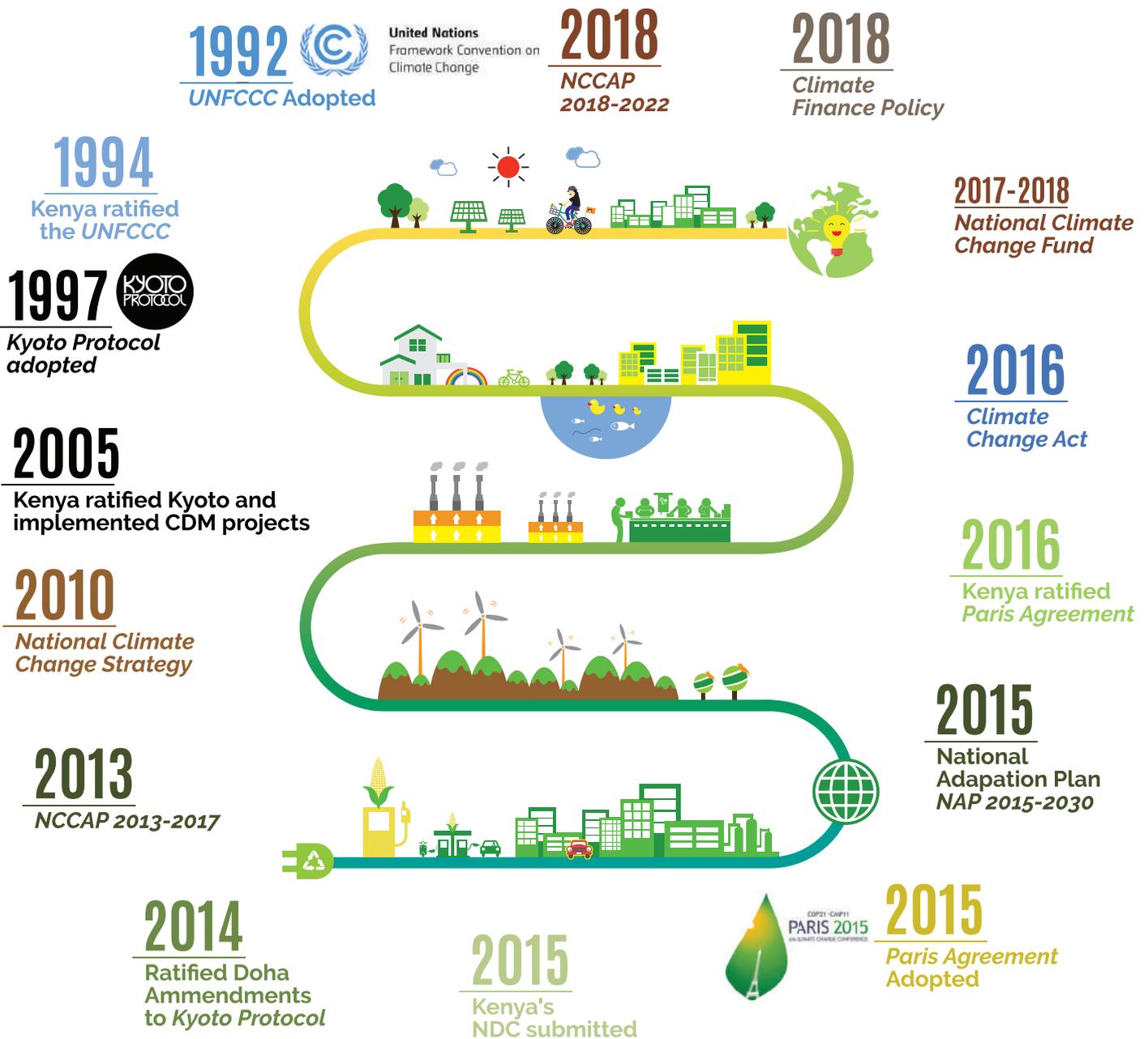
H.E Governor Kiraitu Murungi
Chairman, Water, Forestry & Mining
Committee Council of Governors (CoG)
Meru County Governor
info@cog.go.ke

Interview conducted by **Bob Aston-ALIN;**
and **Sheila Mbiru-LECRD Project**

Climate Change Action: Kenya's Journey



105 MW Olkaria 2 ©KenGen



Kenya's Climate Change Journey ©Boniface Gor

Subscribe to Joto Afrika

You can subscribe by sending an email to jotoafrika@alin.net
Please include your organisation and your full postal address.



Climate Smart Agriculture Implementation Framework



The agriculture sector is a major contributor to Kenya's economy in terms of food and nutrition security, employment creation, supply of agro-based industry raw materials and foreign exchange earnings.

However the sector is extremely vulnerable to the ever changing climate trends largely due to increasing temperatures, changing rainfall patterns and extreme weather events. About 98% of Kenya's agricultural activities are rain-fed and highly susceptible to climate change and climate variability further compromising the potential of the sector to attain both national, economic and global Sustainable Development Goals (SDGs).

Climate change can no longer be viewed as a remote future event for agricultural development in Kenya, but a reality that farmers, pastoralists and fish folk have to adjust and adapt to. Climate change impacts have led to loss of lives, diminished livelihoods, reduced crop, livestock and fish production and damaged agro based and general infrastructure. This has resulted to erosion of productive assets, weakening of coping strategies, declining resilience of farming systems further causing climate related vulnerabilities that predispose the farming communities to food and nutrition insecurity and poverty.

Prediction that climate change is likely to cause 3% loss of the national GDP by year 2030 and 5% by 2050 calls for proactive innovative and transformative initiatives to assist stakeholders across the agricultural value chains to cope with effects of current and projected change of climate patterns. For these reasons, there must be efforts to make agricultural systems more productive, resilient, sustainable and competitive in generating incomes and improving livelihoods. Kenya's agriculture sector commits to achieving this by promoting **Climate Smart Agriculture (CSA)**, an approach which provides an excellent opportunity for this transformation. The context in which CSA is to be applied in Kenya requires an integrated approach that aims to transform and re-orientate agricultural systems to sustainably;

- (i) increase productivity;

- (ii) adapt and build resilience to the likely effects of climate change and;
- (iii) reduce and/or remove GHG emissions without compromising productivity.

The Ministry of Agriculture developed the **Kenya Climate Smart Agriculture Strategy (KCSAS) 2017-2026** which was launched in April 2017. The main objective of this strategy is to build resilience of agricultural systems while minimizing emissions for enhanced food and nutrition security and improved livelihoods. To facilitate coordinated implementation of the strategy the **Kenya Climate Smart Agriculture Implementation Framework (KCSAIF) 2018-2027** was developed.

The Launch

The Kenya Climate Smart Agriculture Implementation Framework (KCSAIF) 2018-2027 was launched on 31st October, 2018 at Kilimo House, Nairobi.

This Implementation Framework has been developed to provide guidance in mainstreaming Climate Smart Agriculture (CSA) in the sector. The overall goal of the Framework is to achieve a long-term national low carbon climate resilient development pathway, while realizing the development goals of Kenya's Vision 2030. It has outlined summary non-prescriptive actions that can be adopted and customised for implementation by all sector actors based on their circumstances and priorities. The framework gives guiding actions for the sector to:

- Develop a sustainable system that will achieve a coordinated, coherent and cooperative governance in Climate Smart Agriculture
- Reduce vulnerability of agriculture systems by cushioning them against the impacts of climate change and aim to reduce greenhouse gases emissions where possible
- Mainstream Climate Smart Agriculture to support the transformation of Kenya's agricultural sector into an innovative, commercially oriented, competitive and modern sector
- Strengthen communication systems

Agriculture is extremely vulnerable to the changing climate trends ©Bob Aston

on CSA extension and agro-weather issues

It is hoped that the Framework will be a useful guide to County Governments, development partners, private sector, CSOs, researchers and academia and any other actors towards successful implementation of Climate Smart Agriculture in Kenya.

Next Steps

The Ministry plans to conduct sensitization, awareness and capacity building programmes to ensure counties and other actors in the sector understand the issues in the strategy and the implementation framework. Two pilot sensitization and awareness missions have been planned for Nyeri and Busia Counties to aid in developing a comprehensive awareness and capacity building programme to be rolled out to all counties thereafter.

The sector encourages development partners to identify appropriate areas to support in the strategy and the implementation framework in order to strengthen communities' resilience capacity. By implementing the Framework alongside the CSA Strategy, agriculture sector stakeholders will be contributing to the implementation of the National Climate Change Action Plan and the Nationally Determined Contributions to the United Nations Framework Convention on Climate Change (UNFCCC).

Further, successful implementation will augment the national development goals as outlined in the Vision 2030 and the "Big Four Agenda" of ensuring 100% food and nutrition security for all.

The development of the implementation framework was supported by United Nations Food and Agriculture Organization (FAO) and the United Nations Development Programme (UNDP) with funds provided by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment and Nature Conservation, through Integrating Agriculture into National Adaptation Plans project among others.

Dr. Lucy W. Ng'ang'a

Agriculture and Climate Change Expert
Ministry of Agriculture
lucynganga09@gmail.com

Mangrove Conservation and Management



Conservation and restoration of mangroves
©Mikoko Pamoja Carbon Project

According to the fifth assessment report (AR5) of the Intergovernmental Panel on Climate Change (IPCC), tropical deforestation contributes to almost 20 percent of greenhouse gas (GHG) emissions into the atmosphere; leading to global warming.

While a lot of attention has been placed on restoration of terrestrial forests, less focus has been directed to mangrove forests. This is despite essential roles played by mangroves in community development, biodiversity conservation and climate regulation. In the context of climate change, for example, mangroves capture and store huge stocks of carbon in both above and below ground components.

In Kenya, carbon stored in mangroves is estimated to be 1500tC/ha; which is 10-15 times higher than the average recorded in terrestrial forests in the country. This carbon risks being released back into the atmosphere when mangroves are degraded or their land is converted for other land uses.

Restoring and protecting mangroves is one way carbon dioxide in the atmosphere can be captured to mitigate effects of climate change, improve livelihood, and conserve biodiversity.

Under the Paris Agreement on Climate Change, nations are striving for low-carbon development pathways using innovation in technology, energy, finance, and conservation sectors. One of the important elements of the Paris Agreement is that countries can independently decide how to lower emissions through its Nationally Determined Contributions (NDCs).

As a carbon rich ecosystem, mangroves can make important contributions to countries' NDCs despite their limited spatial extent. Kenya has not included blue carbon in its NDCs and thus there is a great opportunity to influence this policy decision so that mangrove carbon can be included in periodic NDCs revisions. Conservation and restoration of mangroves is an excellent example of nature-based solutions for climate change mitigation and adaptation.

Marketing mangrove ecosystem services

Kenya Marine and Fisheries Research Institute (KMFRI) has partnered with Edinburgh Napier University and other agencies to pilot natural climate solutions in mangrove forests.

Our innovation solution, dubbed Mikoko Pamoja (or mangrove together) aims to restore and protect mangroves through sale of carbon credits.

The project is certified by Plan Vivo System and Standards to sell 3000 tonnes CO₂ per annual over a crediting period of 20 years (beginning 2013). Annual sale amounting to US\$ 15000 (or KSh. 1.5 million) generated through sale of the carbon credits is reinvested into the community to fund local development projects in water and sanitation, education, and environmental conservation.

Mikoko Pamoja aims to restore and protects mangroves through sale of carbon credits. The carbon offset by Mikoko Pamoja since 2013 12000t Co₂.

Currently the initiative conserves 117ha of mangroves forest in Gazi in Kilifi county out of the 610ha of mangroves in the bay.

Mikoko Pamoja received the coveted UN's Equator Prize (2017) in recognition for its outstanding success in promoting local sustainable development solution for people, nature and resilient communities.

Monitoring and reporting of mangrove carbon

Mikoko Pamoja activities include replanting mangroves; community surveillance; monitoring and reporting of carbon stocks and sale of carbon credits. Square

plots equivalent to 100m², common for forest studies, are used during carbon assessment. Inside the plots all mangrove trees are identified, marked, and their stem diameter taken.

The branch samples of each major mangrove species in the study areas and the soil/sediment cores are brought to laboratory for analysis. The organic matter content of soil samples is used to determine soil organic carbon. The result of biomass carbon fraction analysis is used to convert the biomass value to its carbon equivalent.

Vegetation carbon is estimated using appropriate allometric equations for the species and compared with previous estimates. In the same plots, a meter depth sediment cores are made for analysis of soil organic carbon. Normally in mangrove ecosystem, 60-80 percent of the organic carbon is buried in the sediment. This is contrary to the terrestrial forests where most of the carbon will be found in the above ground vegetation.

Future plans

There is a lot of interest to replicate activities of Mikoko Pamoja to other mangrove areas suffering similar human induced threats; as well as expanding to other marine ecosystems. Given the level of success in demonstrating sustainable mangrove management, there is need to further influence national and regional policies on integrating mangroves and blue carbon ecosystems development in the climate change agenda.

More at: www.aces-org.co.uk

Dr James Kairo

Chief Scientist
Kenya Marine & Fisheries Research Institute
gkairo@yahoo.com

Anne Wanjiru

Social Impacts Officer
Mikoko Pamoja Carbon Project
Wanjiruanne31@yahoo.com



Raising Young Climate Change Champions

Children represent the largest group of people affected by climate change ©KCCAEC

Access to relevant quality information and knowledge on climate change adaptation and mitigation actions is imperative for people to understand the ever-changing climate and what they can do about it.

A survey undertaken during the development of the first National Climate Change Action Plan (NCCAP) 2013-2017 confirmed the National Climate Change Response Strategy (NCCRRS) findings that public awareness about climate change in Kenya is low.

However, Kenya realized tremendous improvement in promoting climate information and knowledge management during the implementation of the first NCCAP 2013-2017.

Part of the Country's achievement has been the construction, equipping and operationalization of the National Climate Change Resource Centre (NCCRC).

The Centre provides a one-stop repository of climate change-related information and is equipped with an online climate change portal dubbed Kenya Climate Change Knowledge Portal (KCCCKP) <http://www.kccckp.go.ke/>. The portal has sections for youth and children.

The focus is now on creating awareness

about climate change among young people. Although children represent the largest group of the population affected by climate change, they do not have a platform to share their perspectives and proposed actions on climate change.

Young people constitute the generation that will be required to deal with the future impacts of climate change. Their exposure to climate change issues through both formal and informal education will help them appreciate the associated dangers and the necessity of preserving our environment.

The second NCCAP 2018-2022 will engage young people through schools, post-secondary institutions and youth-focused organizations. The Action Plan takes into

cognizant that young people are agents of change and have an influence on the broader community through their parents, relatives and families.

Mainstreaming Climate Change into Education Curriculum

Kenya has already made strides in having an enlightened younger population as the Ministry of Education has introduced a new subject in the competency-based curriculum called "Environmental Activities." The subject integrates concepts of Agriculture, Social Studies, Science and Climate Change and is an integral part of the aspects learnt.

This is part of what was envisaged by the National Climate Change Framework Policy and the Climate Change Act, 2016, which stipulates the integration of climate change into national education curricula at all levels to inculcate climate change awareness among children and youth.

Kenya Climate Change Art and Essay Competition

Young people have a unique perspective and understanding of climate change. This was evidenced when the Ministry of Environment and Forestry and the Ministry of Education with support from the USAID-UNDP funded Low Emission and Climate Resilient Development (LECRD) Project organized the Kenya Climate Change Art and Essay Competition 2018, Nairobi County Edition.

The inaugural Competition targeted learners from ages 6 to 19 in all public, private and Alternative Provision of Basic Education and Training (APBET) schools in Nairobi County with a category dedicated to learners with special needs.

The inaugural Competition received 4,678 entries from 112 schools drawn from Nairobi County. More than 150 young learners won various awards after expressing themselves through creative works of arts and essays in

The inaugural Competition received 4,678 entries from 112 schools among them 9 Special Needs Learners (SNL) Schools drawn from Nairobi County



Young people have a unique perspective and understanding of climate change ©KCCAEC

 <https://twitter.com/jotoafrika>

Raising Young Climate Change Champions



Launch of the Kenya Climate Change Art and Essay Competition ©KCCAEC

both English and Swahili. The Competition enabled Nairobi County, to involve young learners in contributing to the questions of “how we deal and cope with climate change” and “how climate change affects our lives and that of the environment we live in”.

The Competition has shown that having an enlightened younger population is pivotal in inculcating environmental stewardship. Young people now have an opportunity to share ideas on how to improve their lives, and that of their environment and secure their future. This is the first step towards bringing up young climate change ambassadors in Kenya, who are passionate about the environment and are ready to have their voices heard.

The National Framework Policy on Climate Change envisages that the generation of climate change information and knowledge, combined with effective communication strategies, can enhance public participation and awareness. The Kenya Climate Change Art and Essay Competition is showing that enhancing awareness, knowledge, skills and understanding of climate change can start with young people. Strong understanding of climate change in terms of “how it happens”, “why” and ‘how to respond’ will instil important early life skills and ensure our future preparedness to deal with climate change.

Kenya has embarked on a journey to empower young learners to shape their future. This is a journey which the Ministry of Environment and Forestry and the Ministry of Education cannot accomplish without the support of other Kenyans. Write to ccartcompetition@environment.go.ke to be part of this important journey.

Sheila Shefo Mbiru
Project Officer-Knowledge Management and Capacity Development
LECRD Project
sheilambiru@gmail.com

Bob Aston
Arid Lands Information Network (ALIN)
baston@alin.net



Climate Change Competition winners with senior Ministry of Environment & Forestry officials ©MEF

The competition has shown that having an enlightened younger population is pivotal in inculcating environmental stewardship



Young learners can share ideas on improving their environment and securing their future ©Steve Muhanji

Life after the Plastic Bag Ban in Kenya



World Clean up Day Celebrations at Kenyatta public beach, Mombasa ©NEMA

The Kenyan Government through the Cabinet Secretary, Ministry of Environment and Forestry on 28th August 2017, banned the use, manufacture and importation of plastic bags; both carrier and flats bags used for commercial and household packaging.

Many Kenyans applauding the move as they were tired of the dirt that was seen on the roadside and clogging drains resulting in constant flooding, especially in urban areas. Consumers adjusted quickly to the ban and the uptake of reusable bags was a pleasant surprise for retailers.

A study conducted by the Retail Trade Association of Kenya (RETRAK), which represents more than 600 supermarkets, furniture stores, fashion and apparels shops, eateries, bookshops among others shows that shoppers have gone through a drastic behavioural change where they now must bring along their own bags on every shopping trip. The alternative to this is incurring an extra cost, as done in other parts of the world, of buying bags provided by retailers for as little as KSh 10.

RETRAK study established that about 40 percent of retail consumers, were positively affected by the ban. These are mainly the consumers who were aware of the coming ban and those who are aware of the impact of the plastics on the environment. Driving consumers were more receptive of the ban.

Fifteen (15) percent of the consumers were negatively affected and term the cost of the bag as an unnecessary increase to their shopping budget. Walking consumers also stated it led to a decrease in the value of their shopping basket in cases of unplanned shopping, to avoid the purchase of a shopping bag while 45 percent of retail consumers were indifferent.

Retail outlets and the effect of the ban

The largest retailers in this country are supermarkets. They were the most affected by the ban but positively. In the pre-ban era, the *carrier bag* was the third largest

expense on their profit and loss, and in some cases the second. It was comparable to rent and the payroll. These bags were given out for free and in large numbers, as it was also viewed as an advertising tool. The ban minimized this cost and has allowed supermarkets to be more innovative.

The greatest challenge for this sector was the ban of *flat bags*. As supermarkets expanded to meet customer demands, they ventured into selling meat, fruits and vegetables. These were packed in the flat bags. The onset of the ban came with no approved alternative available.

Kenya's National Environment Management Authority (NEMA) did not approve the use of biodegradable packaging. The alternative that has then emerged is the mesh bag being used in both formal and informal sectors. Meat is now being packaged in styrofoam plates and cling film.

18 percent of shoppers now carry a bag when they go shopping. There is an opportunity to make baskets from sea weed and hyacinth, creating new cottage industries

Generally, the packing of food has moved to safer plastic options which are microwave safe and reusable. Khaki bags are also in use for fresh produce and fruits. In the informal sector where people used to buy their cut "sukuma wiki" (kale) packed in flat bags, they now use safer, reusable plastic containers.

For retail outside the supermarkets, the impact was not so pronounced after the initial confusion around things such as whether to unwrap shirts', beddings, sports items, books etc. Many of these outlets

dealing in these items moved to using non-woven bags.

Alternative Bags

Cost efficient alternatives have been developed to fill the gap left by the plastic bags. Many retail outlets now provide their customers with reusable bags. A few of the supermarkets have schemes that once a consumer buys a bag, it becomes a bag for life and the retailer will replace the bag at no cost in future.

Entrepreneurs have seized the opportunity to design and produce packaging materials. The "Kiondo" (woven bag) industry which was very big and supported many women groups has been revived. They make bags using sisal or banana fibre. There is an opportunity to make baskets from sea weed and hyacinth, creating new cottage industries.

The alternative bag that was quickly adopted is the non-woven bag. However, there has been no standard to guide the quality of these bags. If this is not done quickly, bearing in mind that they are made from the same material as plastic carrier bags, they will become another environmental menace.

RETRAK set out to achieve a culture of reduce, reuse, recycle. It is now estimated that approximately 18 percent of shoppers are now bringing in a bag when they go shopping! More often than not you can find Naivas in Carrefour, Tuskys in Chandarana, Carrefour in Quickmart, referring to the bags used, of course, something that would never have happened in the pre ban era!

Wambui Mbarire

Chief Executive Officer
Retail Trade Association of Kenya -
RETRAK
ceo@retrak.co.ke

Sustainable Industrial Innovation in Environment Protection



Eco-friendly classrooms made from sustainable building materials ©FunKidz

The Government of Kenya has prioritized manufacturing and affordable housing as key pillars of the Big Four Agenda towards uplifting the standards of Kenyans on the path of becoming an upper middle-income country by 2030. Over the next five years, the Government plans to build over 500,000 affordable houses across the country to meet the ever-growing housing demand.

The Big Four Agenda relies on the availability of raw material that would guarantee the production of products that are sustainable and affordable.

In Kenya, timber is one of the main drivers of both the manufacturing and housing industries. The industry is now embracing the circular economy which is powered by enhanced resource use efficiency and the adoption of the 3R philosophy of reducing, reusing and recycling wastes before engaging industrial symbiosis to deal with the inevitable residual wastes and by-products. The circular economy is part of

Sustainable Development Goal (SDG) 12 on responsible consumption and production.

The circular economy is different from the linear economy which is a 'take, make dispose of' model of production. To achieve models that are economically and environmentally sustainable, the circular economy focuses on areas such as design thinking, systems thinking, product life extension and recycling.

We are surrounded by tons of waste from the farmlands, industries, offices and our homes. We need to take a step back, re-

evaluate the amount of waste generated every day and realize that the waste is potential raw material for products. Re-looking at waste as raw material will unlock a whole sector of the economy from product innovation, the much-needed job creation, and growth of industries.

Funkidz Innovative Circular Economy Solutions

Funkidz has adopted the circular economy model from ideation to designs and manufacture of children furniture and accessories. Funkidz uses "waste" from farmlands, schools, offices, and homes. Then buys them at a nominal or no fee and repurposes them into new products that are then sold to the end users. This necessitated a complete mind and culture shift as an organization, and the outcome of this has brought in a new way of thinking right from the design team to the production team.

Funkidz uses "waste" from farmlands, schools, offices, and homes to make functional innovative furniture for children

This is a first for a Kenyan company and the entire Funkidz Team is proud to be contributing positively to protecting the environment by being an environmentally and resource conscience business. Funkidz new sustainable products have been embraced positively by the consumers and are setting the pace for other businesses in Kenya to follow.

The second National Climate Change Action Plan (NCCAP) 2018-2022 has laid emphasis on the promotion of non-timber forest products to reduce cutting down of trees and increase the County's forest cover by 10% of the land area as stipulated in the Constitution.

Ciiru Waweru Waitthaka
Funkidz
ciiru@funkidz.co.ke



Children making innovative products from waste wood ©FunKidz



Combating Climate Change using Geothermal Energy



105 MW Olkaria 2 ©KenGen

The effects of climate change have been shown to contribute to decreased hydro-power generations and widespread increase in the risk of flooding in many human settlements due to increased heavy precipitation.

In the energy sector, increase of renewable energy for electricity generation that is climate resilient as well as climate proofing energy infrastructure are some of the key priorities in the National Climate Change Action Plan 2018-2022.

Geothermal being one of Kenya's key renewable energy resources has an estimated potential of between 7,000MW to 10,000MW.

The numerous advantages over other sources of power include climate sensitivity; high availability (capacity factor); insignificant impacts on the environment; and high untapped potential in Kenya. As a result, geothermal energy provides baseload electricity for power generation.

KenGen pioneered the development of Geothermal Energy in Kenya from 15MW in 1981 to about 600MW in 2018 and continues to invest in the development of the geothermal resources in Kenya and the region in partnership with other stakeholders.

Exploitation of geothermal energy gained momentum from the year 2008 when KenGen adopted its capacity expansion



2.5 Megawatt well head generator at Olkaria ©KenGen

strategy. As a result, over 78 percent of the total generation from geothermal energy came on board from 2010 after implementation of its geothermal expansion pillar as part of the implementation of its strategy.

To accelerate the development of the resource, KenGen has employed an innovative wellhead technology that has seen early generation. This technology has seen the company commission 81.1MW of electricity accounting to over 15 percent of total geothermal capacity.

The development in the geothermal energy sector, largely by KenGen has seen Kenya ranked No. 8 worldwide in the development and utilization of geothermal energy.

Kenya is ranked 8th in the world in the development and utilisation of geothermal energy

Geothermal energy is resilient to climate change unlike hydro development and in addition, is low carbon development compared to thermal sources of energy. Although, KenGen's energy mix consist of 50 percent hydro, 33 percent geothermal, 15 percent thermal and 2 percent wind; geothermal contributes to over 50 percent in household utilization based on the energy dispatch by the offtaker into the grid.

This demonstrates its importance to the country's energy supply. Three of KenGen's Geothermal power plants are registered as a Clean Development Mechanism (CDM). Ten percent (10%) of the additional revenue generated by CDM projects have gone to the development of Community Benefit Programs (CBPs) near KenGen facilities.

The development of geothermal energy resources by KenGen has not been a walk in the park. One of the biggest challenges faced by KenGen is the fact that some of

the geothermal energy resources currently being exploited lie within a national park.

This requires adoption and implementation of strategies that create as little an ecological footprint in the park as possible. Such strategies at some point would lead to increased initial project costs as well as the Operation and Maintenance costs (O&M).

KenGen has an ambitious strategy of expanding its green geothermal energy by developing new geothermal capacities and gain access to new geothermal fields with geothermal potential. Steps have already been taken to achieve the strategy by the ongoing construction of 158MW Olkaria IV. Other projects in the pipeline are 50.7MW Olkaria I rehabilitation, 83.3MW Olkaria I Additional Unit 6, 61MW Modular Power Plant, 50MW Wellhead Leasing, 140MW Olkaria VI, 140MW Olkaria VII PPP among others. This will enable KenGen to maintain market leadership by undertaking least cost and environmentally friendly capacity expansion.

Implementing geothermal development has enabled KenGen to reduce dependence on traditional operations which are affected by climate change challenges including erratic and unpredictable rains; excessive siltation in hydro dams which lead to reduced generating capacity from hydro power.

KenGen, therefore, plays a major role in climate mitigation by reducing emissions from the energy sector by implementing green and/or low carbon energy sources. This in extension will lead to a reduction in emission of the country through more use of clean electric energy by the households and industrial players and as a result, contribute to achieving Kenya's Nationally Determined Contributions (NDCs).

Stanley Kirakou
Environmental Office CDM, KenGen
skirakou@kengen.co.ke

James Metto
Chief Engineer-CDM, KenGen
jmetto@kengen.co.ke

Energy Beyond the Megawatts



Green geothermal energy is important in reducing emissions ©James Ochweri

Kenya was among the pilot countries for the Sustainable Energy for All (SEforAll) initiative and in March 2012 a high level mission from New York to Kenya established the need to launch an ambitious scale-up programme in the energy sector.

The decision to take part in the SEforAll initiative was informed by the low access to clean energy services in the rural areas and households, as well as the review of the Energy Policy, 2004 and the Energy Act, 2006. This was followed by a rapid gap analysis which was completed in June 2013.

Support for developing the Country Action Agenda and Investment Prospectus (AA & IP) came from NEPAD, UNDP and the EU Biz-Clim Initiative.

Additional support came from the SEforAll Hub based in Abidjan, Cote D'Ivoire, which was set up to: assist African countries in developing their respective AAs & IPs; strengthen capacities of Regional Economic Communities and relevant bodies in establishing a favourable environment to attract private sector participation in development projects; and promote National and Regional Indicative programmes within the framework of SEforAll.

Preparation of the Kenya SEforAll Action Agenda (AA) and Investment Prospectuses (IP) was an all-inclusive process which incorporated representatives from the government, development partners, private sector, civil society and academia.

Validation of the AA & IP was done through a stake-holders' workshop (1st December, 2015), and it laid the framework for implementing Sustainable Development Goal (SDG) 7 of the Sustainable Development Agenda. It is a roadmap for ensuring that all Kenyans access clean forms of energy by 2030.

The national response to the global goal of Universal Access to modern energy services is elaborated in three national goals: 100% access to electricity by 2022; 100% access to modern cooking solutions by 2030; and doubling the rate of improvement in energy intensity from 0.25 TOE/\$ 2005 PPP in

2012 to 0.125 TOE/\$ 2005 PPP in 2030 for energy efficiency.

A target of 80% renewable energy share of Total Final Energy Consumption (both power generation and process heat) by 2030 has been set to facilitate national contribution to the global goal of doubling the share of renewable energy in the energy mix.

High Impact Opportunities under SEforAll in Kenya

1. Renewable energy

- Clean Energy Mini-Grids to accelerate access to off-grid power
- Tap into the unexploited large and small hydro-electric potential (1240 MW and 600 MW respectively)
- Tap into over 4,000MW wind potential spanning over 73% of the total country area

Kenya was among the pilot countries for the Sustainable Energy for All (SEforAll) initiative

- Enhanced use of renewable energy sources through capture and recycling waste heat for industrial and agricultural processes
- Promote industrial utilization of process heat from geothermal steam
- Design and retrofit of buildings incorporating solar water heating systems & integrated solar PV
- Biogas development for electricity generation and household use
- Promoting energy efficiency through efficient lighting & other appliances
- Promote blending of biofuels with fossil fuels for emission reduction

2. Strengthening the Water, Food and Energy nexus

- Energy and Women's health
- Universal adoption of clean cooking solutions and consumer education on the relationship between health, environment and gender in

collaboration with various partners

- Expand the irrigated area through use of appropriate energy technologies (352, 400 hectares)

3. Other key initiatives

- Last mile Connectivity Programme
- The distribution expansion plan development projects (2013-2017)
- Network management
- The Kenya Electricity Modernization Programme
- M-Kopa Solar PV Initiative
- Accelerate electricity access in off-grid areas (KOSAP programme)
- Innovative financing to close gaps to enhance access to clean energy services, cooking solutions and sustainable biomass development
- Improvement of off-grid lighting and charging
- Leverage onto the devolution framework through capacity building to accelerate access to clean energy services

The SEforAll framework recognizes that the problems posed by climate change are global in nature but require local action to mitigate their effects.

The signing and launch of the SEforAll AA & IP in December, 2016 is a strong sign of national commitment to reducing greenhouse gas (GHG) emissions to which the energy sector is a major contributor.

The SEforAll Secretariat is based in the Ministry of Energy (Nyayo / Kawi House) and is responsible for mobilizing financial resources from Government, private sector and development partners for implementation, in addition to coordinating; implementation of the AA & IP; monitoring progress; and reporting to the SEforAll Global Facilitation Team in line with the provisions of the Global Tracking Framework. Arrangements to launch the SEforAll website are underway.

Faith Hamala Wandera-Odongo (Mrs)

Deputy Director - Ministry of Energy & National SEforAll Focal Point
fahamala@yahoo.com

Transforming Nairobi into a Sustainable City



Nairobi is on track towards becoming a green city ©MEF

Cities are particularly vulnerable to the impacts of climate change and Nairobi city will need to do a lot more to work towards becoming a climate resilient and climate smart sustainable city that can stand the test of climate change challenges.

With an estimated current population of 3.5 million people which is projected to rise to about 14 million by 2050 and an annual GDP contribution of more than 60% to the country; it is critical that the city's climate action planning is customized and aggressively pursued to promote the well-being of citizens and residents.

Climate proofed infrastructure, climate smart systems, sustainable waste systems, a robust food system strategy are some of the gains the city aims to achieve with support from C40 City advisers who are the on-ground technical staff working closely with the city in the Environment, Food and Agriculture sectors.

C40 Cities is a global network of the world's megacities committed to tackling climate change and driving urban action to reduce greenhouse gas (GHG) emissions and climate risks while increasing health, well-being and economic opportunities of urban citizens. It connects over 96 global cities, 11 of which are in Africa.

C40 Cities is providing Nairobi City County with technical support and various resource tools to develop a GHG Inventory and a Climate Action Plan for the city by 2020; the first of its kind.

According to UN Environment, cities are responsible for 75 percent of global carbon dioxide (CO₂) emissions, with transport and buildings being among the largest contributors.

Nairobi's GHG Inventory will focus on these key sectors including stationary energy (from buildings and industries) and the waste sector. This will provide an evidence base on emissions across these sectors and inform priority climate actions to reduce or avoid GHG emissions.

The Climate Action Plan will be developed through an all-inclusive, collaborative multi-stakeholder process linking the national and county government, research and academia institutions, private sector, civil society, community organizations, vulnerable groups and citizens.

C40 Cities has a rich network across and with other partner cities to create conversations which will enable cities tailor their own actions to their unique circumstances, and band together to use their collective power to access partnership resources, including technical and financial support.

This means that climate actions by cities to reduce GHGs and climate risks; become bolder, have greater impact, are implemented faster and at a lower cost utilizing less resources than if they were to go at it alone.

Nairobi City is on track towards becoming the 'green city in the sun'

Nairobi is part of various C40 networks that includes; Transport and Urban Planning, Food, Water and Waste, Energy and Buildings, Air Quality and Adaptation Implementation Networks.

These networks seek to address climate risks including urban Flooding Network that aims to assist Nairobi address the impacts of floods. The Waste Network is supporting Nairobi to deliver a holistic approach to waste management operations via improved collection, disposal and utilization of waste.

Nairobi produces approximately 2,400 tones of waste per day, 1,500 tones are collected daily and about 900 tones dumped illegally. These account for GHG emissions of close to 15 percent which provides a great opportunity to reduce emissions in this sector through a sustainable approach and the city is currently pursuing efforts for a waste to energy process that will not

only reduce on emissions but also provide energy for the city.

Buildings offer a great opportunity to advance energy efficiency standards and lock in emissions reduction while saving costs and promoting energy security, green buildings and better air quality.

The Climate Action Planning programme for Nairobi seeks to align to the Paris Agreement that the country committed to limit global temperature increase to below 1.5 degrees. The approach aims to position Nairobi City as the lead in driving its climate agenda. The complementarity of the national processes and commitments is key in understanding Nairobi's per capita emissions.

Currently under the programme, a strategic appraisal is being conducted to set the baseline on Nairobi specific data across key category sectors and an understanding on climate targets, plans, strategies and policies for Nairobi.

This will be completed by February 2019 and transition towards development of the GHG Inventory and subsequent development of the Climate Action Plan which are the two key deliverables by the year 2020.

The Plan will incorporate priority actions from all relevant sectors as the pillar towards transforming Nairobi into a low carbon climate resilient city.

A collaborative approach and continued support from different partners to provide resources and enhance capacity would ensure Nairobi is on the right path towards delivering its first Climate Action Plan.

Cities have a great responsibility and role to play in championing climate action and Nairobi City is on track towards becoming the 'green city in the sun.'

Phillip Dinga
City Adviser, Nairobi
C40 Climate Leadership Group
pdinga@c40.org

Youth Expectation on Government and Partners



Youth are involved in increasing the country tree cover ©MEF

The youth represent most at risk of climate change. However, the youth are often disenfranchised from policy and decision making. This is despite them having innovative ideas and huge potential that can be harnessed for the successful implementation of the Nationally Determined Contributions (NDCs).

Implementation of Article 12 of the Paris Agreement on enhancing climate change education, training, public awareness, public participation and public access to information is important as it would ensure the skills, talents, energy and innovative ideas by the youth are tapped towards addressing the impacts of climate change.

Youth participation in the UN Climate Change Conference of Parties (COP) has steadily grown over the years. Youth NGO (YOUNGO) became fully recognized at COP17 in Durban, South Africa. YOUNGO has since served as both the official conduit for young participation in the UN Climate talks and as a global network of youth and youth focused organizations that work on climate change and engage with UN Climate Change.

The National Climate Change Framework Policy highlights the importance of policies and laws accounting for the youth when planning and executing climate change responses because the youth represents a crossover between the future generations and play a critical role in socio-economic development.

The policy notes the importance of carving out specific roles and opportunities for youth participation in decision making, in climate change governance and to pursue opportunities that arise through climate change actions.

The Kenya youth working under the platforms of African Youth Initiative on Climate Change (AYICC) and the Kenya CSO Platform on Climate Change Governance (KPCG) in partnership with the Pan African Climate Justice Alliance (PACJA) on November 19-

20, 2018 at African Nazarene University (ANU) came up with a youth position to be presented at the United Nations Climate Change Conference of Parties (COP24) in Katowice, Poland.

The youth called on National Governments and partners to:

1. Invest in capacity building of Youth in research and policy engagement on climate change adaptation, mitigation, renewable energy, climate smart agriculture, waste Management, and disaster risk reduction;
2. Integrate youth in climate-related policies, plans, projects and programs at national and county levels;
3. Build capacity of youth on climate science and negotiations in order to increase their participation and influence on climate governance;
4. Identify youth best practices on climate change, waste management and climate smart agriculture that can be replicated across the globe using eco-friendly technology;
5. Provide incentives to encourage youth to identify and document innovative ideas, exchange climate smart ideas and best practices in climate change;
6. Integrate, capacity build and finance youth participation in climate change negotiation processes at national, regional and international levels;
7. Enforce policies to safeguard finances in climate change and make climate change funds more accessible to the youth;

8. Advocate for the support of innovative and creative campaigns for and by the youth who are walking the talk on action against climate change such as the Arts and Media for Climate Campaign;
9. Incorporate climate change in the education curriculum;
10. Invest in clean energy by using solar cars, encourage innovations through creation of incubators and policies that limit the usage of public cars on weekdays and encourage the use of public transport;
11. Involve the private sector through severe taxation on environmental pollution, stronger policies on waste management and directives for the private sector to be involved in climate change mitigation and adaptation in their Corporate Social Responsibility activities;
12. Encourage tree planting by involving Kenyan citizens, institutions and stakeholders in planting trees and enforcing policies that ensure one plants a certain number of trees before they can be cleared to cut down a tree for whatever purpose i.e. charcoal burners;
13. Embrace alternative fuel and energy sources;
14. Support innovation through financing projects geared towards solving climate change issues;
15. Take an active role in civic education;
16. Package climate change jargon and climate change policies in simpler understandable language

Youth participation in the UN Climate Change Conference of Parties (COP) has steadily grown over the years

Isaac Oindo
Deputy National Coordinator
African Youth Initiative on Climate Change (AYICC)
isaacoindoh@gmail.com

Kenya COP24 Side Event



COP24 • KATOWICE 2018
UNITED NATIONS CLIMATE CHANGE CONFERENCE

COP24 is taking place in Katowice, Poland
from 3rd - 14th December

Kenya Side Event COP24

Objective:

- Share Kenya's experiences in developing the National Climate Change Action Plan (NCCAP) 2018-2022.
- Kenya's National Climate Change Action Plan (NCCAP) as a road-map for NDC implementation.
- Identify opportunities and best practices for Kenya to better leverage support for implementing the NCCAP.

Keynote Speaker

Hon. Keriako Tobiko, CBS, SC
Cabinet Secretary,
Ministry of Environment
and Forestry

Panelists

- **Dr. Charles Mutai** (Moderator)
- **Ms. Ingrid-Gabriela Hoven** (BMZ), Germany
- **Dr. Pablo Vieira**, Global Director, NDC Partnership Support Unit
- **Ms. Rebecca Carman**, Technical specialist, NDC Support Programme, UNDP

Representatives from the Kenyan Government

- **Dr. Pacifica Achieng Ogola**
- **Mr. Peter Odhengo**

December 10, 2018 13:00-14:00

NDC Partnership Pavilion

This edition is produced as a joint effort between ALIN and the Ministry of Environment and Forestry (MEF), through the Low Emission and Climate Resilient Development (LECRD) Project. The Project is implemented by the Ministry of Environment and Forestry with funding by USAID through UNDP.

This edition is supported by the LECRD Project. Articles from this edition of Joto Afrika may be re-used, provided the materials are distributed free of charge and the author(s) are credited. Please send copies to ALIN and LECRD.

Views expressed in Joto Afrika do not necessarily reflect the views of the editors or Ministry of Environment and Forestry, ALIN, LECRD, or their supporters.

Design & Layout
John Ngugi

Guest Editor
Dr Pacifica F. Achieng
pacie4@yahoo.co.uk

Editorial Team
James Nguo - Chief Editor ALIN
Bob Aston - Editorial Coordinator
ALIN
Noah Lusaka - ALIN
Harun Warui (PhD) - LECRD Project
Sheila Shefo Mbiru - Editorial
Coordinator, LECRD Project

The Principal Secretary,
Ministry of Environment and Forestry

P. O. Box 30216-00100
Nairobi, Kenya
Email: psoffice@environment.go.ke

Arid Lands Information Network
P.O. BOX 10098-00100 G.P.O.
Nairobi, Kenya
Tel: +254 20 2731557
Email: jotoafrika@alin.net
www.alin.net
ISSN 2075-5562

