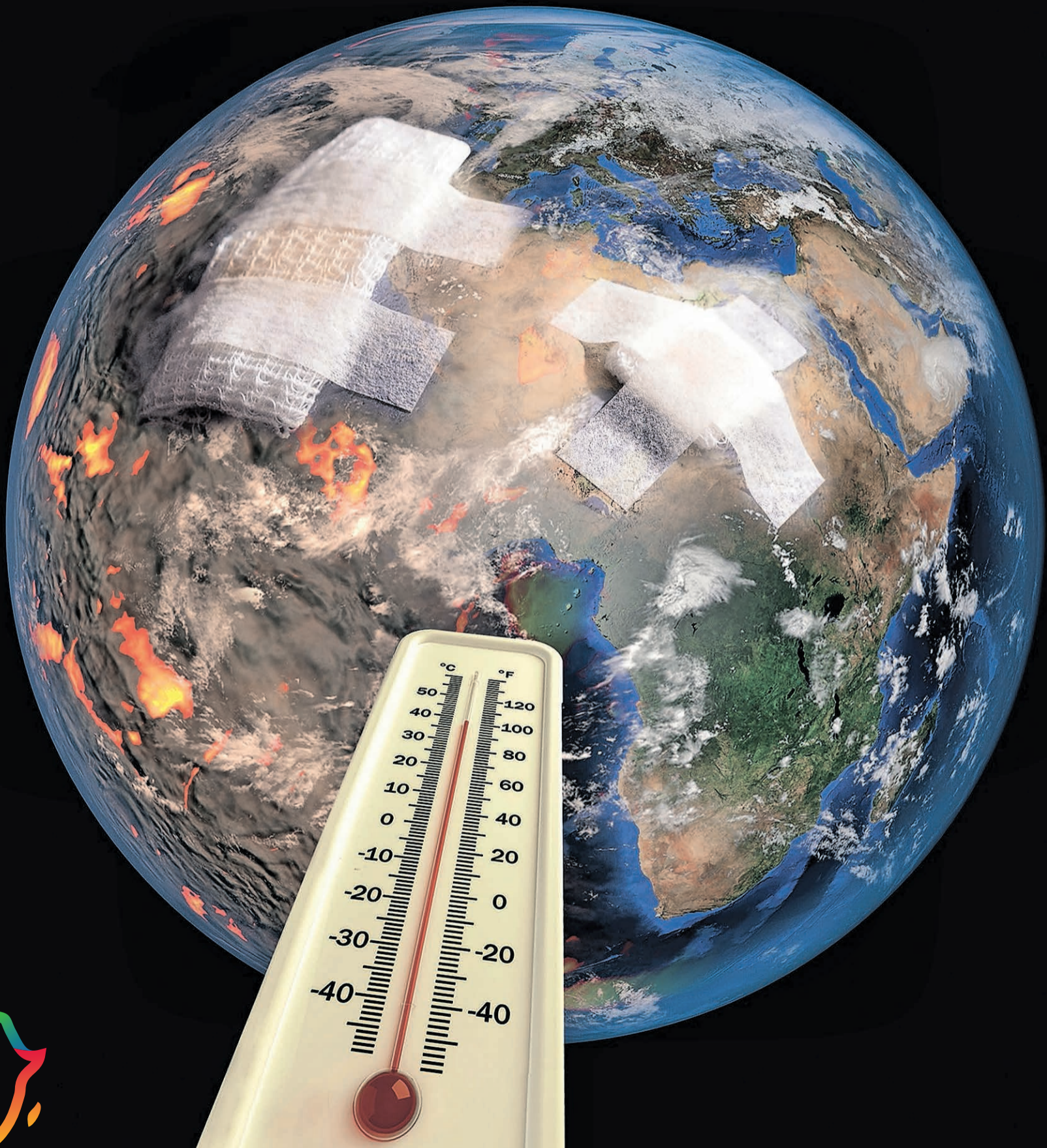


**The EastAfrican**

A PUBLICATION OF THE NATION MEDIA GROUP

DECEMBER 10 - DECEMBER 16, 2022

# Climate change: Exploring African responses and solutions



**CLIMATE CHANGE  
EXPLORING AFRICAN  
RESPONSES AND SOLUTIONS**


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# Let us all create value, empower society

## Speech of Dr Wilfred Kiboro, NMG Chairman, at the fourth edition of the Kusi Ideas Festival

Your Excellency the President of Kenya, Dr William Ruto, diplomats, distinguished panellists and participants from many parts of Africa and the world, welcome to the Fourth Edition of the Kusi Ideas Festival.

The Nation Media Group founded this Festival in 2019 to do mainly three things. First, to imagine an Africa and prepare us better to overcome its challenges and exploit its opportunities. Secondly, to catalyse pan-African conversations and ideas that help to make the best of Africa today, and generate actions to deal with its pressing problems. Thirdly, to contribute in finding and defining our continent's place in the world, and present its best face there.

It wouldn't be good manners to try and be the best judge of how well we have done, but results show that we have scored a decent grade. Our inaugural ideas festival was in Kigali, Rwanda, in 2019. Physically and online, we had tens of thousands of participants. And some of the novel ideas that came out there that we call "moonshots", have reverberated across many forums since.

Among many, we've seen the thoughtful conversations on open skies in Africa become a reality a few days ago, when 17 African nations agreed to pilot the Single African Air Transport Market. These are Kenya, Ethiopia, Rwanda, South Africa, Cape Verde, Côte d'Ivoire, Cameroon, Ghana, Morocco, Mozambique, Namibia, Nigeria, Senegal, Togo, Zambia, Niger and Gabon. The ideas then, that some of us couldn't understand, about using digital assets to monetise art, became a reality later in the form of non-fungible tokens that African artists have exploited to good effect. For the second one, in 2020, we opted to have it in Kenya, at the Victoria lakeside city of Kisumu, in early December, because of global Covid-19 lockdowns and travel restrictions.

It was a mixed virtual and in-person event, and we were delighted to have a few early travellers from countries like Rwanda and South Africa, as the world took its first tentative steps to re-opening. It was still a phenomenally successful event, by our reckoning, and easily the biggest such thought leadership event in Africa in that year. I am glad to report that a lot of the thinking about African Covid strategy, and collaboration on securing and distribution of vaccines, became the mainstay of the Africa CDC-African Union-led approach.

In 2021, we ventured further afield to Accra, the capital of Ghana, and the home to pan-Africanism, from where we reached more than 17,000 virtual participants from 401 cities and 72 countries. Again, a lot of the policy actions proposed have grown wings. On this one I would like to note the idea of embedding climate change evaluations in financing, and green standards in permits.



This has been possible because of our panellists. We have always been fortunate to attract resources and knowledgeable experts who work passionately on African issues. At this fourth festival, you have honoured our invitation and come in even larger numbers. We value you and look forward to drinking from your wisdom.

This year we are here in Karura Forest, to highlight its status as a monumental symbol of victory for an intense environmental struggle of the 1990s in Kenya. It is a perfect backdrop to the question of the climate change crisis we face. Sadly, it is also a reminder of one of the stark realities of one of the themes this festival will tackle — the spectre of disease caused by a changing climate. This festival was initially set to be held in the lakeside city of Entebbe in Uganda. However, it had to be moved at the last minute because the Ebola outbreak in Uganda presented regrettable logistic and safety problems that we couldn't overcome. Nonetheless it is our hope that Kusi will still make its appointment with Uganda, the Pearl of Africa, in the near future.

With a different set of circumstances, we wouldn't be meeting here. Karura might not have survived. We owe its survival to many brave Kenyan activists, some of whom paid the ultimate price for their action with prison, and death. Few of them stand as tall as Wangari Maathai, one of the world's and Kenya's most committed environmental and democracy activists. We lost Maathai in September 2011, seven years after she became



**Though it is a worthy journey, it won't be an easy one. As the African proverb says, "There are no shortcuts to the top of the palm tree."**

the first African woman to win the Nobel Peace Prize in 2004. I am proud to point out that the Nation Media Group answered the call of duty and offered its muscle to bolster the campaign to save Karura. NMG was a key partner in a years-long project to raise funds for fencing 440 kilometres of the Aberdares Forest to save the water towers for Nairobi. This also contributed to reducing the human-wildlife conflict.

We have been part of several other actions, including dealing with the problem of plastics waste, promoting tree planting, and providing leadership in reporting the big environmental and climate change issues of our times. It is in this regard that I wish to announce here for the first time that this year we have established the Nation Media Foundation to partner with entities such as the Government of Kenya, development partners and corporate institutions to advance value creating initiatives in the areas of education and literacy, climate change, media development, health, community development through entrepreneurship and humanitarian relief.

We call upon all the partners who are here to join us in this endeavour of creating value and empowering our society. We estimate the monetary value of these activities so far to be in the billions of shillings.

Yet, nothing in this history would have prepared us for the climate change existential crisis we face today, and which makes it an urgent subject for our conversation over these two days.

Climate change is as important a reason as any for Africa to come together. Our shared lakes and rivers are either overflowing and causing disastrous floods, or drying out and plunging tens of millions of our people in hunger.

In the Horn of Africa alone, which includes Kenya, nearly 15 million are facing starvation. Ports that serve landlocked nations are threatened by rising sea levels in the face of rising temperatures.

It was cause for joy to see that among the first series of actions of your relatively new government, Your Excellency, was the launch of an ambitious plan to increase Kenya country's forest cover from 12.13 percent to 30 percent, and a push to growing 15 billion trees on about 10.6 million hectares of land throughout the country.

This is how we win the battles to save our planet from irreparable damage by climate change. However, winning the war will need more, and the work of all of us as Kenyans, as Africans, and as global citizens.

On our part, we formed the Nation Media Foundation, a non-profit organisation, that will allow us to generate resources to bring more Africans into these important conversations. I am appealing to our partners, and everyone else, to support us on this journey.

Though it is a worthy journey, it won't be an easy one. As the African proverb says, "There are no shortcuts to the top of the palm tree."

Our hope is that Kusi 4 will offer some ideas on how we get there, and build a coalition that pushes us further up on the palm tree.

So, let's all rally to that cause.

I thank you.

# Kusi Ideas Festival sets the stage for Pan-African innovation marketplace

Speech by:  
**Prince Rahim Aga Khan**  
Kusi Ideas Festival  
December 8, 2022

**B**ismillah-ir-Rahman-ir-Rahim Excellencies, Ladies and Gentlemen,  
I would like to congratulate the Nation Media Group on holding this fourth edition of the global, award-winning, Kusi Ideas Festival.

Since it was founded by His Highness the Aga Khan in 1959, during the struggle for Independence and Pan-Africanism, the Group's path has been closely entwined with the history of Kenya, East Africa and the African continent.

Yet again, Nation Media Group has shown thought leadership in encouraging dialogue on key issues affecting not only the countries where the Group is active but also the rest of Africa.

Like the Kusi trade winds that opened new markets and enabled trade and the flow of ideas between Asia and Africa for centuries, Nation Media Group, which is a part of the Aga Khan Development Network, has sought to enable a "Pan-African ideas transaction market" to discuss the issues facing Africa and what actions the continent should consider to secure a bright future in the 21st century.

The theme of this year's Festival – Climate Change – is timely as climate breakdown is the most crucial existential threat that Africa, and indeed the world, is currently facing.

The continent has, in recent times, seen a multitude of natural disasters due to climate change, including floods, locust infestations, water scarcity, and food shortages.

Currently, some 40 million people in the Horn of Africa are facing famine as a result of the drought, which is robbing Africa, whose strength has always been her people and their resilience, of her most valuable resource.

Today, you will hear how temperatures in Africa are rising – and are set to rise faster than the global average during the 21st Century. You will also hear that while Africa has contributed negligibly to the changing climate, being responsible for only two to four per cent of global emissions, it stands out disproportionately as the most vulnera-



ble continent in the world to climate change – a vulnerability exacerbated by the continent's prevailing low levels of socioeconomic growth.

More importantly, however, you will hear from some remarkable individuals and organisations that have responded to the challenges posed by climate change.

This festival brings together some of the best minds in Africa to take this agenda forward and, most importantly, implement the ideas and solutions that will be discussed here.

The Aga Khan Development Network is also transforming its business and programmatic models to respond to this crisis.

The Network, which is present in more than 30 countries globally, and whose agencies have operated in 14 countries in Africa in the sectors of education, health, finance, media, culture, tourism, industry and infrastructure for over 100 years, is making environment and climate a core strategic priority. Our overriding principles, encapsulated in the AKDN Environment and Climate Commitment Statement, are as follows:

Prince Rahim Aga Khan. Picture: Courtesy



**This festival brings together some of the best minds in Africa to take this agenda forward**

**1.** We will exercise responsible stewardship of the environment: AKDN's operations help to restore and protect the natural environment wherever possible and do not contribute to its degradation.

**2.** We will put people at the centre, and focus on improving the quality of life of the poorest and most vulnerable — our key stakeholders.

**3.** We will demonstrate proactive, socially responsible and values-oriented leadership: All AKDN operations, across agencies and institutions, will have net-zero emissions before 2030.

**4.** We will lead by example and share our experiences with others to influence policies, raise awareness, increase impact and effect social transformation. This includes engaging suppliers with credible and significant carbon reduction targets across their operations and value chain; educating and promoting research so future generations can engage in an informed and meaningful way with the challenges of environmental degradation and climate change and sharing with partners and stakeholders the innovations

deployed in achieving AKDN's commitment.

The following are some examples of AKDN's activities across Africa as our agencies endeavour to meet their target of net-zero emissions before 2030:

**1.** All AKDN agencies have developed activity-specific tools to measure their greenhouse gas emissions, and are working on their respective road maps and budgets toward meeting the commitment.

**2.** Each of the Serena Hotels in Kenya has maintained its Gold Eco-rating Certification recognised by the Global Sustainable Tourism Council. In the last five years, thanks to the installation of solar plants in all our properties in Kenya, we have eliminated more than 4,500 tonnes of carbon dioxide emissions and generated over six million kilowatt hours of clean energy. In addition, all our lodges actively support eco-tourism, climate resilience, water and energy conservation, re-forestation and species conservation projects.

**3.** We work with rural communities, alongside government and civil society, to strengthen climate resilience, so that in the face of major climatic changes, they not only survive but also thrive. This is achieved through developing understanding and local ownership for adaptation and mitigation measures.

**4.** We have changed agricultural practices for tens of thousands of farmers, to whom we provide a guaranteed price and market, towards more nature-based solutions, and thereby strengthened their resilience.

**5.** Through schools across East Africa, we are advancing a new concept – Play, Pluralism and Planet – to ensure the next generation of leaders are climate-aware, climate-empathetic and climate-resilient. In AKDN schools, multiple environmental projects have been active for many years, including beach clean-ups, Green Clubs, and tree planting.

**6.** Along the Kenyan Coast, we will plant more than 500 acres of mangroves with local communities, to enable carbon sequestration and encourage new forms of environmentally conscious, community-based development. In Kenya alone, we have already planted more than 12 million trees in the last few years.

**7.** As you will hear, the Nation Media Group has embarked on an ambitious digital transformation journey, which should make a marked contribution to our emissions reduction targets.

All of us here recognise that the challenge is immense, and there is much work to be done, work that can most readily be accomplished when government, the private sector and civil society institutions all work together. To this end, the Ismaili Imamat and the AKDN are committed to expanding their efforts, in partnership with others, to improve the living conditions, opportunities, and quality of life of people in Africa, underpinned by our strong ethics and values, which include concern for vulnerable people, compassion, generosity and excellence.

Thank you.



## CLIMATE CHANGE EXPLORING AFRICAN RESPONSES AND SOLUTIONS

DECEMBER 10 - DECEMBER 16, 2022

# Human needs must remain at the centre of efforts to address climate change

By Ole Thonke and Wanjira Mathai

The global community gathered in Sharm el Sheikh, Egypt, last month for the 27th United Nations Climate Change Conference (COP27) with the hope of consolidating further global efforts towards tackling one of the greatest challenges of our time – climate change.

Discussions at COP27, highly touted as the “Implementation COP” took place during a year that the world encountered devastating floods and storms, severe droughts - especially in the Horn of Africa - and unprecedented heat waves, all of which are clear signs of the unfolding climate emergency.

Due to climate change, millions of people across the globe are grappling with the impacts of simultaneous crises in food, water, and cost of living, and in some places, severe climate-induced conflicts and migrations.

Although COP27 did not fully deliver on a commitment by the world's major emitters to phase down fossil fuels, nor new commitments on climate mitigation, it will however go down in history as the UN climate change conference where the decision to create a Loss and Damage fund was agreed, a momentous victory for climate-vulnerable developing countries.

This mixed outcome also underscores the fragility of the crisis as it pertains to



H.E. Ambassador Ole Thonke, Danish Ambassador to Kenya

the most vulnerable. Indeed, the urgency for investing even more in adaptation locally should not be underestimated.

While COP27 opened a new chapter on climate financing, it also laid a potential foundation for solidarity and trust between developed and developing countries to accelerate climate action.

Climate change, just like Covid-19, is a global pandemic that is even graver, but in slow motion.

Similar swift response is needed in the climate emergency the way the world responded to Covid-19. Perhaps this is most urgent in the area of adaptation where the most vulnerable countries, who have done the least to cause the crisis in climate, are the ones most affected.



Wanjira Mathai, Managing Director, Africa and Global Partnerships at World Resources Institute.

The world has had the opportunity to act swiftly over the decades, but the window is now closing fast. Urgent action on climate still remains an issue of climate justice.

For far too long, we have known that on climate adaptation developing countries, the most vulnerable to climate, are punching well above their weight.

In Africa, we are prioritising capacity building to cushion communities against the worst impacts, already spending up to five percent of GDP on adaptation even as governments lose five to 15 percent to climate impacts. This is at a time of very tight and highly leveraged fiscal environments.

Global solidarity on adaptation de-

mands that developed countries avail their fair share of intervention.

Indeed, we need renewed ambition with respect to Adaptation Finance. For instance, Denmark is contributing more than its fair share in climate commitments, and has decided to earmark at least 60 percent of its grant-based climate finance to developing countries for adaptation efforts.

Furthermore, while Denmark only accounts for 0.1 percent of global emissions, the country has also set the goal of 70 percent emissions reductions by 2030 and climate neutrality by 2050.

Climate action must equally focus on key elements that address some of the most fundamental needs, including water security, food security, health and energy security.

The current drought in East Africa, and the associated losses of lives and livelihoods, is a strong reminder that we need to scale up our investments in adaptation, and build the capacity of our communities, ward and county governments, entrepreneurs and businesses, and the next generation to adapt.

There is also need to reduce greenhouse gas emissions but in doing so, the green transition must ensure access to renewable energy, not place undue burdens on the most vulnerable, and new green jobs to address unemployment especially among the youth.

It is commendable that despite negligible contribution to global emissions, Kenya maintains a prominent profile internationally in climate cooperation and is a respected opinion leader in Africa's climate position; and more so recently, having assumed coordination of Committee of African Heads of State and Government on Climate Change (CAHOSCC).

Through CAHOSCC, Kenya can provide leadership in Africa's quest for climate justice, set an ambitious adaptation agenda, and help to advocate for people-centered climate actions for sustainable development.

Kenya and Denmark have maintained close bilateral relations since Kenya's independence in 1963, and climate change will remain at the heart of this collaboration.

Whereas climate mitigation is a global challenge that requires global solutions, climate adaptation, on the other hand, is a local challenge calling for local solutions. It continues to be one of Kenya's top priorities and needs.

That is why, for instance, Denmark is a pioneer supporter of Kenya's nationwide Financing Locally Led Climate Action (FLLoCA) programme, expected to translate Kenya's ambitious climate agenda into scaled-up action on the ground with the leadership of and for the benefit of communities in all the counties.

As one of the first ever government-led investments in the world in locally led adaptation, FLLoCA will enhance community participation and citizen engagement on their climate action priorities, and get resources to where its needed the most. Denmark will also continue to support other climate initiatives in the country and is proud to be associated with this year's Kusi Ideas Festival.

We thank the organisers for making climate change the theme of the event and reigniting the climate debate soon after COP27.

*Ole Thonke is Danish Ambassador to Kenya and Wanjira Mathai Managing Director for Africa and Global Partnerships at World Resources Institute*

## International Trunk Roads Facilitation of regional trade and integration



Kenya National  
Highways Authority

Quality Highways, Better Connections

Kenya National Highways Authority (KeNHA) is a statutory body established under the Kenya Roads Act of 2007. It is responsible for the development, rehabilitation, management, and maintenance of all National Trunk Roads comprising Classes S, A, and B roads. The Authority, since inception, has tremendously improved and developed new trunk road network across the country with a focus to improve access to international borders. The Authority improves this access by constructing International Trunk Roads and One-Stop-Border-Posts (OSBPs). Some of the major International Trunk Roads (Class A Roads) are as highlighted herein.

### DUALLING OF KENOL - SAGANA - MARUA (A2) ROAD (Namanga, Tanzania - Moyale, Ethiopia)

The project road is approximately 84 Km in length and is part of the Great North Road linking Cape Town - Cairo, which is the A2 road corridor starting at Namanga border with Tanzania and runs through Athi River, Nairobi City Centre, Thika Road, Kenol, Sagana Marua, Nanyuki, Lewa, Isiolo, Marsabit, Turbi and terminates at Moyale border with Ethiopia. The road starts at Kenol Junction with B25 and runs northerly through the trading centres of Makutano (Junction A2/B24), Sagana, Karatina before terminating at Marua Junction with A2/B21). The project is funded by the Government of Kenya (GoK), African Development Bank (AfDB), and Africa Grow Together Fund (AGTF).

The road has been packaged into two lots:

**Lot I:** Dualling of Kenol - Sagana (A2) Road, starting at Kenol and ending immediately after Sagana Town, approximately 48Km. This project costs a total of KSh.8.4 Billion and is currently ongoing.

**Lot II:** Dualling of Sagana - Marua (A2) Road, starting after Sagana Town and ending at Marua (Junction with B21), approximately 36Km. This project costs a total of KSh.6.1 Billion and is currently ongoing.



Turbi - Moyale (A2) Road



Sagana - Marua (A2) Road

### ISEBANIA - KISII - AHERO (A1) ROAD REHABILITATION PROJECT (Siare, Tanzania - Nakodok, South Sudan)

The Isebania - Kisii - Ahero Road project is approximately 172 Kilometres and it traverses four counties; Migori, Kisii, Homa Bay and Kisumu. The project starts at Ahero junction on A12 road, meets the road to Kisii town and terminates at the Isebania/Siare border of Kenya and Tanzania.

The road project is currently implemented in two lots and is jointly financed by the Government of Kenya (GoK) and the African Development Bank (AfDB), at an advanced stage of completion.

The road project lots are:

**Lot 1:** Isebania - Kisii : 86 Kilometres with a contract sum of KShs.8.5 Billion.  
**Lot 2:** Kisii - Ahero: 84.1 Kilometres with a contract sum of KShs.9.4 Billion.



Isebania - Kisii - Ahero (A1) Road

### CONSTRUCTION OF MOMBASA - MTWAPA - KILIFI (A7) ROAD (Lunga Lungu, Tanzania - Lamu and Moyale, Ethiopia)

The Mombasa - Mtwapa - Kilifi is a part of the Mombasa - Kilifi (A7) Road and forms part of the Multinational Malindi - Lungu Lungu/Horohoro - Tanga - Bagamoyo East African Coastal Road Corridor. The project is located in Kilifi County of Coastal Kenya. The road project involves the dualling of the existing highway into four-lane dual carriageway. The project is divided into two lots. The project is financed by the African Development Bank (AfDB), European Union (EU) and the Government of Kenya (GoK).

**Lot I:** Mombasa - Mtwapa (A7) Road, an approximate length of 13.7Km. The contract has been signed and is awaiting commencement.

**Lot II:** Mtwapa - Kwa Kadzengo - Kilifi (A7) Road, an approximate length of 40.4Km, which is currently ongoing and has an approximate length of 40.4Km. This project costs KSh. 7.54 Billion.

### CONSTRUCTION OF MAKUPA BRIDGE (Mombasa - Malaba, Uganda)

The Makupa Bridge, which is part of the Northern Corridor, Mombasa Port to Malaba - border with Uganda, is located in Mombasa County. Its construction replaces a causeway which was built in 1929 to link Mombasa Island and the mainland. The Bridge now allows the free movement of water and marine life under it. It is approximately 450m in length. It is complete and open to traffic.



Makupa Bridge

### HORN OF AFRICA GATEWAY DEVELOPMENT PROJECT (HoAGDP)

The road project passes through Isiolo, Wajir and Mandera counties and starts at Isiolo, runs in a north easterly direction through Kula Mawe, Modogashe, Wajir, Elwak, Rhamu and terminates at Mandera, a total of 764Km. Out of the entire project length of 362Km, Isiolo to Wajir, is financed by World Bank and the Government of Kenya at a cost of USD 750 million. The project is ongoing and it is being implemented in four (4) packages:

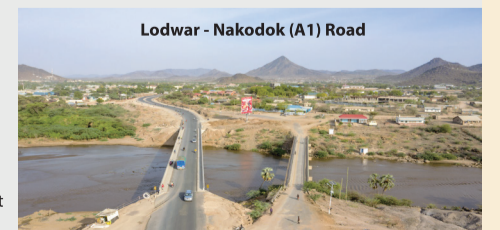
- Package 1:** Isiolo - Kulamawe - Modogashe (205Km)
- Package 2:** Modogashe - Samatar - Wajir (157Km)
- Package 3:** Wajir - Tarbaj - Kotulo - Elwak (185Km)
- Package 4:** Elwak - Rhamu - Mandera (215Km)

### REHABILITATION OF LOKICHAR - NAKODOK (A1) ROAD (Isebania, Tanzania - Nakodok, South Sudan)

Rehabilitation of the 338km long Lokichar - Nakodok border with South Sudan under the Eastern Africa Regional Transport, Trade and Development (EARTTDFP). Project is ongoing. The project is funded by the Government of Kenya (GoK) and the World Bank at a cost of KShs.37.2 Billion. The construction works on this road project are currently at an advanced stage of completion. It comprises five(5) lots of construction:

1. Lokichar - Loichangamatak - 40 Kilometres
2. Loichangamatak - Lodwar (Lot 0) - 50 Kilometres
3. Lodwar - Lokitaung Junction (Lot 1) - 80 Kilometres
4. Lokitaung Junction - Kalobeiyei (Lot 2) - 80 Kilometres
5. Kalobeiyei - Nakodok (Lot 3) - 88 Kilometres

The road project scope of works includes: reconstruction of pavements to international highway standard and replacement of the numerous drifts across seasonal rivers with bridges.



Lodwar - Nakodok (A1) Road

For all your enquiries email us on: [communication@kenha.co.ke](mailto:communication@kenha.co.ke)

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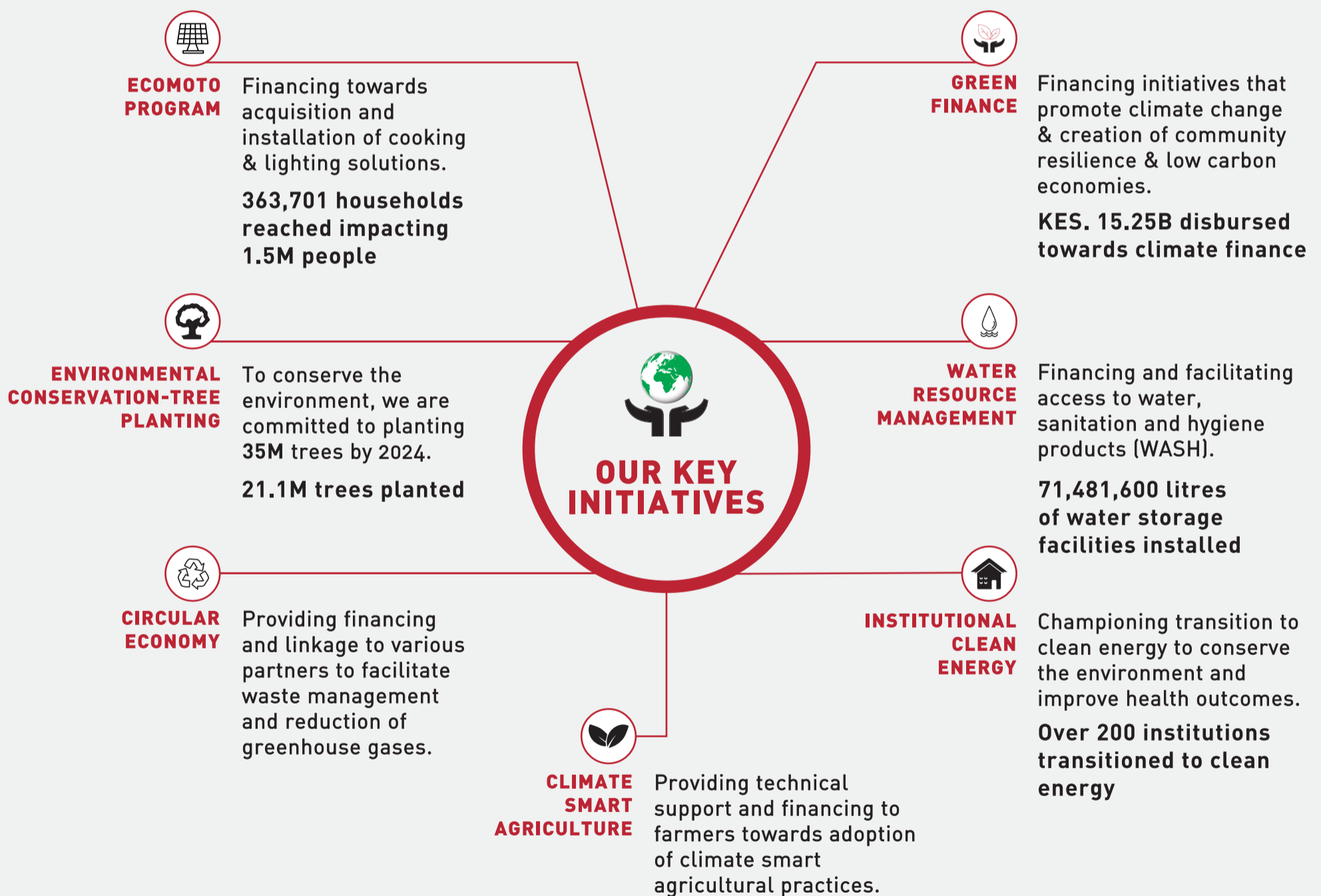
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Kenya National Highways Authority

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## CLIMATE CHANGE EXPLORING AFRICAN RESPONSES AND SOLUTIONS

DECEMBER 10 - DECEMBER 16, 2022



# Financing as an Imperative for Climate Action



By Paul Russo

African populations, economies, and ecosystems are being severely affected by water stress and dangers including severe droughts and floods.

Climate change effects are being experienced globally and the time to act by putting mitigation and adaptation measures at the heart of every decision we make is now. Climate change in Africa threatens "countries and entire regions." According to a recent assessment by the World Meteorological Organization (WMO), African populations, economies, and ecosystems are being severely affected by water stress and dangers including severe droughts and floods.

Climate finance is essential to combating climate change since considerable expenditures at a wide scale are needed to reduce emissions, particularly in industries that produce huge amounts of greenhouse gases. We therefore acknowledge the important role financial institutions play by directing capital flows to areas of impact.

To increase our efforts in this, KCB Group has set a target to increase its green finance to 25% over the next five years from 8.4 % per cent in 2021. The intention is to drive the bank's focus towards projects that directly and indirectly tackle the impacts and the aftermath of climate change ensuring we stick to the principles of Environmental, Social Governance (ESG) that the Bank has always committed to. To achieve this target, the Bank looks into leveraging on Global Climate Fund (GCF) to fund climate related investments. Partnerships will also be key to accelerate the achievement of this target. One of those strategic partnerships is with the International Finance Corporation (IFC) where we seek to assist medium and small project developers to execute climate projects.

### The Road to Net- Zero

Having committed to net zero by 2050, portfolio decarbonization through increase in green finance is one of the lending strategies the bank has in place to ensure the net-zero goal is realized by 2050. Other ways we intend to achieve this is by monitoring internal operation carbon footprint by reducing our resource consumption mainly from use of back-up generators and utility electricity. Capacity building will be key as our staff will play a crucial role in seeing the Bank achieve this ambition.

### Climate Risk Identification, Assessment and Mitigation

Climate change risk is undoubtedly a great risk to financial institutions. Coming from both physical and transitional risks, these two are now contributing to classical credit, market, liquidity, operational and reputational risks by influencing the performance of businesses exposed to climate vulnerability. A high-carbon scenario generates considerable physical risk from uncertainty brought by extreme events and adverse weather trends. For example, in a case of a severe flood, a mortgage owner might lose the house and not be able to repay the full amount to the bank leading to credit risk, while at the same time render an asset held by the Bank absolute. Policy shift towards low carbon technologies in the energy sector can negatively impact oil and gas portfolio of an exposed bank.



KCB Group is committed to creating long-term value for shared prosperity through the alignment of our strategy to sustainable practices.

### \$50M-\$250 Million

In 2020, KCB Group was accredited by the Green Climate Fund (GCF) to fund mitigation and climate adaptation projects of between \$50M and \$250M.



### \$150 Million

In 2021, KCB group acquired US\$150 million (Ksh.18 billion) loan from World Bank's International Finance Corporation (IFC) to finance climate-related projects.

### 8.4%

Proportion of climate finance portfolio to the total loan book up from 4% in 2020.



Management Policy) to integrate the new CBK guidelines on Climate-Related Risk Management.

In 2021, we revised our risk appetite to recognise climate risks that may result from our lending as a key area for consideration while making decisions on risk approach.

Secondly, we have deployed innovative initiatives across our network, and leveraged our influence and reach to champion sustainability and green finance. The incorporation of Sustainable Development Goals (SDGs) including SDG 13 on climate action into our sustainability strategy has offered us a lens for viewing our business contribution to society's needs and ambitions and therefore constantly engaging stakeholders to accelerate successful achievement of SDGs, for increased impact.

Thirdly, we have aligned our banking operations with the UNEP Finance Initiative (FI) Principles for Responsible Banking (PRB) that aims to create a sustainable banking industry alongside standardized guidelines of reporting on progress on implementation of sustainable development goals.

### More Than Just an Ethical Option

Monitoring and reporting are crucial in any organization, as they allow for the evaluation of impact created which leads to accountability and better productivity. It's in the Banks plan to transition their operations and investments to Net- Zero by 2050 and to realize this, we have committed to identify key priorities under the economic, social, and environmental pillars that have a positive impact in society. In line with these pillars we have set ambitious targets to adopt carbon accounting standards and associated methodologies that will go a long way to assess and disclose Green House Gas emissions related to our lending portfolio, including tracking and measuring performance of the nine SDGs adopted.

We have rolled out an SDG tracker to streamline, automate and collect data on indicators from each division to help in measuring progress. The Bank is also exploring adoption of other internationally accredited tools for collecting data on emissions, fuel, water, and electricity usage.

The writer is the KCB Group PLC Chief Executive Officer

**"Climate change risk is undoubtedly a great risk to financial institutions. Coming from both physical and transitional risks, these two are now contributing to classical credit, market, liquidity, operational and reputational risks by influencing the performance of businesses exposed to climate vulnerability."**

Therefore, we are subjecting every project above US\$ 50 million to environmental and social due diligence (ESDD) including mapping of climate risks. To become more objective, we are in the process of fully automating this process to increase risk identification and mitigation.

The Central Bank of Kenya (CBK) issuance of Guidelines on Climate-Related Risk Management to commercial banks and other financial institutions, has come in handy to provide climate stewardship to banks and other financial institutions. Financial institutions will be in a position to, map, measure and quantify risks and report. This will give room for informed decision making in credit lines, access, and scores.

To manage climate related risks, we have integrated sustainability in our strategy and operation. Through our 2020-2023 strategy dubbed "Beyond Banking", that stands on four pillars, which include putting the customer first, improving efficiency and productivity, integrating digital tools in our operations and achieving regional relevance at scale.

Through this strategy, we are exercising agility by integrating climate risks in our operations to improve efficiency and productivity. This is through revising Bank policies (Risk appetite policy, Credit policy, Sustainability, Social and Environmental



## CLIMATE CHANGE EXPLORING AFRICAN RESPONSES AND SOLUTIONS

DECEMBER 10 - DECEMBER 16, 2022



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# How Prudential is using its influence to promote inclusive transition to net-zero greenhouse gas emissions

## Insurer considers that managing climate risk in its portfolios is part of its fiduciary responsibility

EVANS ONGWAE  
SPECIAL CORRESPONDENT

**M**ultinational insurer Prudential Plc is pushing for a just and inclusive global transition to zero greenhouse gas (GHG) emissions to limit climate change in line with the Paris Agreement. In a recently unveiled White Paper, the insurer puts forth the case for not leaving emerging markets behind, and outlines its role and contribution towards the transition.

Prudential explains how it will use its investments, advocacy activities

and thought leadership to push this agenda. It has set itself ambitious targets to meet on the road to net-zero by 2050.

The insurer commits to reduce its investment portfolio's carbon emissions by 25 percent by 2025. Further, it has pledged to divest from all direct investments in businesses that derive more than 30 percent of their income from coal, with equities to be fully divested by the end of 2021 and fixed-income assets by the end of 2022.

Prudential is further engaging with the firms responsible for 65 percent of the absolute emissions in its investment portfolio. Its approach to decarbonisation focuses on engage-

ment – actively working with its investee companies to transition to a net-zero business model.

It is also keen to achieve a 25 percent reduction per Full Time Equivalent (FTE) in Scope 1 and 2 by 2030.

### Threefold purpose

The insurer cites the International Energy Agency, which says emerging markets “currently account for around two-thirds of global carbon emissions and would represent the largest source of future emissions growth if insufficient action were taken to transform their energy systems”.

Prudential states in its White Paper: “As a significant investor and asset owner with long-term investment horizons and liabilities, Prudential is in a position to support the just transition within emerging markets.”

The paper has a threefold purpose.

One is to define the case for a just and inclusive transition and its place in meeting the Paris Agreement. Secondly, it highlights the importance that Prudential places on ensuring the transition to a low-carbon economy is just and inclusive. Thirdly, it explores case studies and further actions required, both from Prudential and the wider market.

Prudential believes that by using its influence to limit the impact of climate change, “our policyholders will benefit; both through reduced impact on their daily lives and through limiting financial impact on the portfolios we manage for them.”

The insurer considers that managing climate risk in its portfolios is part of its fiduciary responsibility, “as the financial and health risks of climate are significant, especially if the world does not meet the Paris Agreement goals”.

Prudential further explains: “We recognise that our responsibilities as an insurance company go beyond finance, and we want to support communities, companies and governments during this transition. We therefore take a holistic approach and consider how other parts of the business can contribute to a just and inclusive transition.”

### Raising awareness

The insurance company is busy raising awareness on the challenges for emerging markets in the energy transition, and seeking to contribute towards holistic solutions. It is actively considering the impact on emerging markets in all activities on climate change.

Prudential commits to continue to work with other like-minded organisations to raise awareness about the unique challenges faced by emerging and developing economies in meeting their needs for climate transition and other sustainable investments.

The insurer observes that in addition to the financing needed for the energy transition, emerging markets also face the greatest unfinanced basic development needs. The Sustainable Development Goals of the United Nations reflect these needs.

### Call to action

Prudential's White Paper is essentially a “call to action to asset owners, asset managers, companies, and governments, to actively integrate the needs and specific circumstances for emerging markets into their approach regarding climate change.”

Prudential argues that the world cannot meet global climate goals and ultimately reach net-zero if emerging markets are left behind, hence its call for an inclusive transition, of which it says it is playing “a small part”. An inclusive transition, the insurer argues, will require both public and private investments, and the mainstreaming of investments in the energy transition.

### About Prudential

Prudential Plc provides life and health insurance and asset management in Asia and Africa. The business helps people get the most out of life by making healthcare affordable and accessible, and by promoting financial inclusion.

Prudential protects people's wealth, helps them grow their assets, and empowers them to save for their goals. The business has more than 19 million life customers and is listed on stock exchanges in London (PRU), Hong Kong (2378), Singapore (K6S), and New York (PUK).

In Africa, Prudential operates in Kenya, Uganda, and Zambia, and in several West African nations.

Prudential Life Assurance Kenya Limited is a wholly-owned subsidiary of Prudential Plc.

## A snapshot of Prudential's road to net-zero by 2050



### AGENDA VISION

A just and inclusive transition to **low-carbon economies** that considers the challenges and needs of emerging markets.



### STRATEGIC ACTIVITIES

- Investment in **holistic solutions**
- Advocacy on **justice** and **inclusivity**
- Thought leadership
- Awareness creation

### TARGETS

- Reduce its investment portfolio's carbon emissions by **25 percent** by **2025**.
- Divest from all direct investments in businesses that derive more than **30 percent** of their income from coal, by end of 2022.
- Help investee companies to transition to a **net-zero** business model.
- Push for a **25 percent** reduction per Full Time Equivalent (FTE) in Scope **1** and **2** emissions by **2030**.



### PARTNERS

- Policyholders
- Communities
- Companies
- Governments



### BIG CALL TO ACTION

All asset owners, asset managers, companies, and governments should actively integrate the needs and specific circumstances of emerging markets into their climate change solutions.

# Continent's responsibility in protecting biodiversity

African leaders should overcome divisions and seize this opportunity to defend the continent's common natural heritage and capital for posterity



HAILEMARIAM DESALEGN

Africa is among the world's most biodiverse regions. At least 50,000 plant species inhabit our biomes. Around 1,100 mammal and 2,500 bird species, and between 3,000 and 5,500 freshwater fish species, make their homes on our lands and in our air and waters. Our living organisms represent one-quarter of all biodiversity on Earth. We have a responsibility to protect them.

Africa has big development ambitions. Taking advantage of our significant human and natural resources, together with our massive market and robust trade links, Africans aim to achieve strong, inclusive growth that improves the lives of millions of people. Achieving this goal will require comprehensive economic modernisation – a process that, historically, has tended to cause significant environmental harm.

Already, rapid population growth, agricultural expansion, exploitation of wildlife, unsustainable fishing practices, deforestation and land degradation, urbanisation, and infrastructure development have put Africa's biodiversity under heavy strain. Add to that the effects of climate change – to which Africa is particularly vulnerable – and the continent could lose more than half of its bird and mammal species by the end of this century.

But we do not have to choose between environmental conservation and economic development. On the contrary, key economic sectors – including agriculture, forestry, and fishing, which account for large shares of African countries' gross domestic product (GDP) – depend on ecosystem services. The agricultural sector alone generates at least 50 per cent of jobs in the continent.

With sound strategies for managing our natural resources, we can build a future in which healthy ecosystems, and the biodiversity they support, are leading drivers of growth and development. Africa's wildlife resources, for example, can yield significant economic value and opportunities.



David Sheldrick Wildlife Trust rescue centre in Voi, Tsavo Conservation Area, Kenya. Picture: AFP

A strategy for harnessing conservation to drive sustainable economic growth would be transformative. But the obstacles are formidable. Africa's natural assets transcend legal, geographic, and political boundaries. Birds have no interest in politics; they care about natural shelter. Elephants don't stop at borders; they seek fresh water.

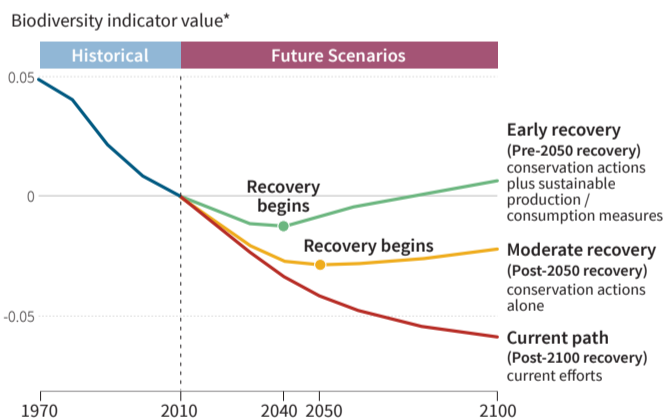
Just as we share a network of rich ecosystems and natural assets, African countries also share the challenge of devising a viable strategy for protecting and preserving them. We will also share in the spoils of success – or the costs of failure. This understanding must underpin a common outlook that facilitates the concessions and expenditure needed in order to bring vast benefits for our people and the planet.

African countries will have to build a consensus that bridges the gaps between our diverse approaches to environmental governance, without losing sight of local needs and demands. Any such agenda must be aligned with science-based global goals – such as the "30x30" goal of designating 30 per cent the planet's land and ocean area as protected areas by 2030 – and consider Africa's development aspirations.

We cannot reach our goals for either development or conservation if we do not act in concert – first on our own continent, and then on the global stage. On December 7, representatives of governments from around the world convened in Montreal for the 15th Conference of the Parties (COP15) of the United Nations Convention on Biological Diversity to agree on a new set of goals for the next decade and beyond. African leaders must overcome divisions and seize this opportunity to defend our common natural heritage and capital.

## Bending the curve of biodiversity loss

Drastic action needed to start reversing biodiversity loss earlier



\*Mean Species Abundance for one biodiversity model, averaged across four land use models  
Source: WWF (2022) Living Planet Report 2022



Women take part in a tree planting project in Malamawa village, Zinder Region, Niger. Picture: AFP

This means pushing for a global agreement that includes the 30x30 goal, which studies show would increase economic output globally. African countries – including Ethiopia, Nigeria, Rwanda, and Senegal – were among the first to champion this goal, and the continent as a whole can now ensure its adoption. To this end, we must highlight the importance of biodiversity conservation in ensuring our food supply, combating climate change, and sustaining inclusive long-term growth and employment creation.

The stage is set for us to demonstrate at COP15 that we can own our conservation agenda and lay the groundwork for a prosperous future. This is a critical opportunity for us to position ourselves as leaders in advancing an economic-development model that has conservation, sustainability, and respect for natural heritage at its heart.

Acting as one, we can establish ourselves as a strong negotiating partner, capable of securing the needed financial support to preserve our continent's biodiversity. We have already demonstrated such leadership potential, by advocating that all countries commit to earmarking one per cent of GDP to close the biodiversity financing gap and protect our planet's natural assets.

We owe it to our local and indigenous communities, to current and future generations, and to the thousands of unique species of fauna and flora that depend on our ecosystems to advance viable, long-term solutions to the biodiversity crisis. And as the stewards of some of the world's richest, most biodiverse ecosystems, we owe it to the entire global population.

Hailemariam Desalegn is a former prime minister of Ethiopia. (c) Project Syndicate



# Africa's heritage sites in peril as planet heats up

Extreme weather threatens to condemn cultural and natural heritage sites to history books as continent grapples with funding woes and expertise dearth



**NITA BHALLA**

From the snow-capped peak of Mt Kilimanjaro to the ruins of the ancient Tunisian city of Carthage and Senegal's slave island of Gorée, Africa has a wealth of iconic cultural and natural heritage sites.

But climate change impacts, from higher temperatures to worsening floods, now threaten to condemn these and dozens more African landmarks to history books.

As rich nations scramble to protect their cultural landmarks from extreme weather and rising seas, African countries face additional hurdles such as funding shortages and a dearth of archaeological expertise, conservationists and researchers.

"These sites are places that we learned about at school – they are our identity and history. They are irreplaceable. If we lose them, we will never get them back," said Nick Simpson, research associate at the African Climate and Development Initiative at the University of Cape Town.

"Africa has already experienced widespread losses and damages attributable to human-induced climate change: biodiversity loss, water shortages, food losses, loss of lives, and reduced economic growth. We can't afford to lose our heritage also," he added.

Some historical landmarks have already succumbed.

For visitors to the historic colonial slave forts scattered along West Africa's coastline, an important ritual is to pass through the "Door of No Return" – a centuries-old doorway that leads directly from the citadel to the shore. The custom pays homage to the millions of Africans who were forcibly taken from their homeland during the transatlantic slave trade, retracing their final steps as they were led from the dungeons through the door to slave ships – never to return.

But at Ghana's 18th-century Danish slave-holding post, Fort Prinzenstein, the

original metal doorway and an adjoining passageway are now missing.

"The main 'Door of No Return' has been washed away by the tidal waves," James Ocloo Akorli, caretaker of the UNESCO World Heritage site, told Context.

Africa has about a fifth of the world's population but produces less than four per cent of global carbon dioxide emissions, the major driver of climate change.

Despite this, the continent is disproportionately affected by climate impacts such as droughts and floods, underlining the need for countries to invest in projects that protect infrastructure and improve resilience.

At the COP27 UN climate summit in Egypt, which started on November 6, world leaders debated how much financial assistance rich countries should provide to developing nations to help them cope with the effects of global warming.

There is no comprehensive data on the total number of African heritage spots at risk, but research co-led by Simpson on coastal sites found that 56 locations are already facing flooding and erosion exacerbated by rising sea levels.

By 2050, if greenhouse gas emissions continue on their current trajectory, this number could more than triple to 198 sites, said the study, published in the scientific journal *Nature Climate Change* in February. Places at risk include the imposing ruins of the Numidian-Roman port of Sabratha in Libya, Algeria's ancient Punic-Roman trading post of Tipasa and Egypt's North Sinai archaeological sites, the study found.

Kunta Kinteh Island in Gambia, and the Togolese village of Aného-Glidji – both tied to Africa's slave trade history – are also in danger, it said. A vast array of sites of exceptional natural value are also extremely vulnerable as higher temperatures melt glaciers, raising sea levels and bringing more coastal erosion. These include rich biodiversity hubs such as Cape Verde's Curral Velho wetland with its unique vegetation and migratory birds and Aldabra in Seychelles, one of the world's largest raised coral atolls, and home to the Aldabra giant tortoise.

"African sites are really, really in danger because of climate disruptions," said Lazare Eloundou Assomo, director of the UNESCO World Heritage Centre.

"We see typhoons, we see floods, we see erosion, we see fires. I would say cli-



Unesco World Heritage sites, such as Lamu old town, are at risk. Picture: Pool

mate change is one of the major challenges that world heritage is facing now – and in the future."

Assomo said he was particularly concerned about sites such as Africa's tallest peak, Mt Kilimanjaro, in Tanzania, which is expected to lose its glaciers by 2040 and is experiencing increased outbreaks of wildfires.

As climate change threatens the future of Africa's natural and cultural riches, jobs and tourism linked to the heritage sites are also being jeopardised. This could spell disaster for attractions such as Ghana's slave forts, Namibia's indigenous rock art, and the wildebeest migration in Kenya's Maasai Mara, which together draw droves of visitors and millions of dollars in annual tourism revenues.

In Ghana, for example, the castles have not only shaped the country's history but have also become pilgrimage sites for the African diaspora looking to reconnect with their roots and honour their forefathers. Events such as Ghana's "Year of Return" in 2019, to mark 400

years since the first recorded African slaves arrived in the Americas, saw record numbers of African-Americans and European Africans visiting the country for heritage tours.

In Namibia, tens of thousands of visitors arrive each year to see some of Africa's largest collections of rock art, generating much-needed income for local communities in the sparsely populated southern African nation. The ancient rock paintings and engravings, including the Unesco World Heritage Site, Twyfelfontein, were created by San hunter-gatherers long before Damara herders and European colonialists arrived. But archaeologists fear climate-linked flash floods, dust, vegetation growth, fungus and desert animals seeking water close to these sites pose a threat to the art's survival.

In Kenya, one of the world's most famous natural heritage attractions – the mass migration of the wildebeest – is also at risk, say wildlife conservationists. The migration, one of the greatest spectacles of animal movement on earth,



In Kenya, one of the world's most famous natural heritage attractions – the mass migration of the wildebeest – is also at risk, thanks to climate change. Picture: AFP

sees hundreds of thousands of wildebeest, zebra and gazelle on their annual trek from Tanzania's Serengeti National Park across the Maasai Mara in Kenya. The hordes of safari-goers flock to witness the iconic savanna scene of wildebeest that run the length of the Nile crocodiles as they cross the Mara River.

Tourism – much of it from Kenya safaris – is a key economic driver for Kenya, providing millions of jobs and about 10 per cent of the country's gross domestic product. But conservation experts warn that the migration is under threat from droughts and floods in the Mara ecosystem, which is depleting the number of wildebeest of grazing land in the Maasai Mara, and the period of the migration.

"The wildebeest migration is opening later and they are in a short time," said Yussuf Mwangi, programme manager of the non-profit WWF Kenya. "Because the rain has delayed in the Mara, or the rainfall is prolonged, they do not cross the Mara as they have sufficient water on the other side."

Despite the potential consequences of climate change and damage to Africa's heritage, threats have gained momentum over risks for other cultural landmarks in rich countries. A study estimates that the impact of research on the impact of climate change on heritage is even though the continent is at the frontlines of global climate change.

"We need more natural scientists," said David Pleuro, professor at France's National Museum of Natural History in the environment department. "Archaeological team in the Maasai Mara of Namibia."



ousands of wildebeest making their way from Tanzania's Serengeti to the border into the Maasai Mara. The sight attracts thousands of tourists every year, eager to witness the annual migration. The sight attracts thousands of tourists every year, eager to witness the annual migration. The sight attracts thousands of tourists every year, eager to witness the annual migration.

centred on Maasai culture, which is a key economic pillar for the region. More than two million tourists visit the Mara annually, contributing to the East African region's GDP. But the migration is being threatened by climate change. This has affected the Maasai's traditional way of life, leading to increased migration to other parts of the region.

Migration is happening in many parts of the world. In Kenya, the migration of wildebeest is a key economic pillar for the region. More than two million tourists visit the Mara annually, contributing to the East African region's GDP. But the migration is being threatened by climate change. This has affected the Maasai's traditional way of life, leading to increased migration to other parts of the region.

ally far-reaching climate-related loss of cultural heritage sites, the much less attention given to cultural and natural heritage sites. One of the main impacts of climate change is the loss of cultural and natural heritage sites. One of the main impacts of climate change is the loss of cultural and natural heritage sites.

ional archaeologist Pleurdeau, an assistant director at the National Museum of Kenya, said the human and environmental impact of climate change is leading to an increase in the number of people migrating to other parts of the region.

#### ARTWORK DETERIORATING

From Indonesia to Australia, archaeologists have found climate change impacts such as more variable temperatures, flooding and wildfires are causing blistering, peeling, and even rock explosions at important sites of ancient art.

Independent Namibian archaeologist Alma Mekondjo Nankela fears the same lies in store for her nation's rock art heritage.

"We can really see that the artwork is deteriorating and it's deteriorating actually very fast," she said, adding that most of the factors causing the deterioration were "likely linked to climate change."

She adds that urgent funding and resources were needed to further understand and track long-term climate changes over the years.

"We need more training for Namibian students, funding, and for the Namibian Heritage Council to employ more archaeologists," said Pleurdeau, who works with Namibian archaeologist Nankela.

Some countries such as Ghana and Egypt have made heavy investments in the construction of sea defence walls and groins to protect their coastal sites.

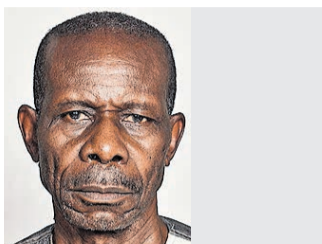
But Simpson said such "hard protection" strategies often do not take into account future sea levels and can distort the site's natural ecological equilibrium.

Hybrid protections that include natural infrastructure such as rock walls combined with salt marshes, seagrasses or restored mangroves to slow the action of waves, can be more effective.

It is also essential to improve governance around threatened sites and ensure local communities are involved in preservation and protection efforts, he added.

Nita Bhalla writes for Thomson Reuters Foundation

# COP27 turning point for continent after reality dawns on rich nations



OTULA OWUOR

For more than three and a half decades, the narrative on climate change, especially in the mass media, the global political arena and among some scientists, has been "us versus them."

This narrative was depicted as a struggle between highly industrialised nations against technologically deficient nations that are not effectively entrenching science, technology and innovation into socio-economic development leading to home-grown industrialisation.

As Africa reviews the challenges and achievements in curbing the life-threatening impact of climate change, it has to be noted that temperature and rainfall are the key indicators of these impacts.

However, the above narrative based on stereotypes seems to have reached a dead-end during COP27 held in Sharm el-Sheikh in Egypt from November 6-18.

Egyptian top officials led by President Abdel Fattah el-Sisi boldly started beating the drums of "our one world against devastating impacts of climate change" even before the official opening of the global meeting.

Even more, the recent harsh realities – including dry riverbeds – linked to the impact of climate change in Europe, North America and Asia are a humbling experience that has thrown developed world and poor nations into the same basket.

Still, historic floods in Saudi Arabia, Pakistan and Chad are among indicators of climate change being real and none is spared. Still riverbeds of China's River Yangtze with a rich history spanning thousands of years also appeared in the Mississippi River in the US while the Rhine in Europe had dead fish on the riverbed.

It is no mere coincidence that COP27's success included the sudden willingness of developed nations to focus on the need for climate finance as the world plunges into the era of climate economy.

Kenya, a country with an ambitious plan to grow 15 billion trees, is making efforts to have more clean energy – solar, wind, geothermal and hydroelectric power.

President Sisi opened the recent COP27 meeting remarkably stating, "I believe that the COP27 is an opportunity to showcase unity against existential threat that we can only overcome through concerted action and effective implementation."

He also made it clear that climate finance was at the centre of COP27.

#### Africa's narrative

Africa's Congo Basin serves as one of the planet's two "lungs" serving as a large-scale carbon sink while also emitting oxygen from the process of photosynthesis. The Amazon Basin is the other.

Africa has various national and regional organisations or institutions at the centre of global efforts, including timely data exchanges that help the tame extreme impact of climate change.

Trees are at the centre of the war on global warming and climate change, especial-

ly when it comes to carbon emissions. In terms of conservation, Gabon in West Africa has the world's highest percentage of forest cover, estimated at 85 per cent.

The continent's forest experts 2000-member African Forest Forum deserve more support and attention in helping the continent cope with the impacts of climate change.

African narrative must include policy formulation and homegrown technical guidance. In Kenya, the cutting, sale and transport of trees in forests used to be placed under administrators with minimal training in forestry.

However, apart from the Kenya Forestry Research Institute (KEFRI), the country also harbours various regional and global organisations including NGOs dealing with various aspects of forestry and agroforestry.

KEFRI can play a key role in helping revive indigenous trees and shrubs. Kenya currently has too much focus on Eucalyptus and Gravieria. The late Prof Wangari Maathai – Nobel Prize Winner – founded the Greenbelt Movement which, popularised and protected tree growing in various parts of the country.

Apart from efforts to curb the emission of carbon dioxide, there are collaborative research activities in Kenya by Institutions like the International Livestock Research In-

stitute that aim at curbing the emission of other greenhouse gases like methane associated with livestock.

Kenya also has an active meteorological service that has branches in all 47 Counties and provides detailed weather reports, including people impact. It links forecasts to socio-economic and health impacts including agriculture and transport. However, there is a need to constantly update equipment and related technical inputs.

#### Weather forecast

The country also hosts the Intergovernmental Authority on Development's (Igad) Climate Prediction and Application Center (ICPAC), which supplies regional weather forecasts for 11 countries in the Horn of Africa. These are Rwanda, Burundi, Tanzania, Kenya, Uganda, South Sudan, Somalia, Eritrea, Djibouti, Ethiopia and Sudan. The ICPAC provides weekly, monthly, and seasonal forecasts, weather monitoring and food security.

Seven countries in central, western and northern Africa – Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Gabon and Sao Tome and Principe – have regional meteorological service the Severe Weather Forecasting Programme also associated with the World Meteorological Organisation.

In conclusion, there is much going on in the continent despite what seems to be minimal allocation of resources and the need for African nations to keep their promises of allocating at least one per cent of their budgets for research and development while Kenya went further to promise two per cent and needs to revive the much needed Ministry of Science, Technology and Innovation.

Above all Africa needs to give extra attention to the conservation of water resources. In Kenya, a few counties in the arid and semi-arid regions are allocating more money for water conservation including dams and boreholes.



Governments agencies can help revive indigenous trees and shrubs through planting of trees. Picture: AFP

Otula Owuor is the founding editor of ScienceAfrica



## CLIMATE CHANGE EXPLORING AFRICAN RESPONSES AND SOLUTIONS

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Mangrove tree planting: KPC team, led by the then Foundation Manager, Bernice Lemedeket, during a mangrove tree planting exercise at Jomvu, Mombasa, where the company planted mangrove seedlings together with Kenya Forest Service.

# KPC domesticates Environmental, Social, and Governance values

Sustainability requires organisations to prioritise increased and high-level accountability and transparency, not only to the key shareholders, but the community at large

**T**oday, as environmental, social, and governance (ESG) questions are imposed upon corporate plans, companies are best positioned to pivot away from treating ESG as merely a compliance, philanthropic, or corporate social responsibility tool. The ESG imperative requires organisations to define their mandate's, social and environmental impact on their operations and the publics they serve. This is because stakeholders, cus-

tomers, shareholders, regulators, and the society, are now focused on sustainability than just pure profitability.

In line with this, Kenya Pipeline Company (KPC) recognises its responsibility to ensure all reasonable steps are taken to protect and preserve the environment in which it operates. In so doing, hazards are removed and controlled, health preservation and injury protection of its employees ensured, and contractor workers, customers and all its

stakeholders guided on safety.

KPC complies with legislative sanctions such as provided in the Environment Management and Coordination Act 1999, Cap 387; Occupational Safety and Health Act 2012, Cap 514; Energy Act 2012, Cap 314; and Water Act 2016, among other relevant legal instruments.

KPC has equally committed to international certification in Health Safety and Environment (HSE) management for ISO 14001:2015 Environmental Management standard and the 45001:2015 on Occupational Health and Safety; ISO 17025 on Laboratory Management and ISO 9001:2015 on Quality Assurance. These international certifications ensure that KPC standards exceed local legislative

requirements as required in HSE Management.

ESG demands a critical appreciation and understanding of the key issues that affect communities within which organisations operate, and offer solutions that generate hope. Corporates must thus meaningfully engage as they direct their social investments sustainably in line with their strategic config-



**"KPC has consistently set aside one percent of its Profit Before Tax in support of Corporate Social Investment activities, annually"**

urations. The impact on education, health, and infrastructure, among others, should be key considerations in an organisation's strategic vision. Creating a pipeline of a healthy, connected and well skilled future workforce creates more positive and lasting impact on society, more than profits for profit's sake.

Under the United Nation's (UN) Sustainable Development Goals target 12.6, countries are required to facilitate and encourage companies to adopt sustainable practices by integrating them in their reporting cycles.

Through Corporate Social Investment (CSI), organisations can achieve sustainable development in Kenya. CSI is a business concept that continues to inform corporate strategies in terms of sustainable development. KPC has consistently set aside one percent of its Profit Before Tax in support of Corporate Social Investment activities, annually. The organisation has set aside resources, not only to the communities along our pipeline easement, but also to commu-

■ CONTINUED NEXT PAGE



## CLIMATE CHANGE EXPLORING AFRICAN RESPONSES AND SOLUTIONS

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Sample sprit tank with dome roofing.



KPC Managing Director Dr Macharia Irungu, planting a tree during a medical camp in Nyeri.



KPC Managing Director Dr Macharia Irungu led staff in a tree planting exercise at the company's headquarters on World Environment Day (June 5).

### ■ FROM PREVIOUS PAGE

nities across the entire country, as a way of co-dependence with the society that hosts the Company's infrastructure. KPC has aligned its strategy and CSI programmes with the government's agenda borne in Vision 2030.

Sustainability compels organisations to prioritise increased and high-level accountability and transparency, not only to the key shareholders, but the community at large. Such openness makes it easier for an organisation to appropriately, in partnership with the community and stakeholders, respond consistently to potential environmental and health hazards associated with the business, since it is much easier to communicate the impact of the business to the society, without having to justify its existence in times of a crisis.

KPC management has ensured involvement of all its staff in annual safety reporting cycles by instituting feedback mechanisms for near miss incidents, unsafe conditions and acts, and all potential hazards, company-

wide. This has enhanced safety at the workplace and mitigated harm to the neighbouring ecosystem of people and environment.

Sustainable growth also encompasses the use of environmentally responsible and efficient operational practices that preserve environmental resources crucial for long-term business performance.

Over the years, KPC has partnered with various stakeholders such as Kenya Forest Service, to help fight climate change through planting of nearly 300,000 trees in various counties across the country. It has also supported conservation efforts amongst communities adjacent to the wayleave or pipeline easement.

Guided by the National Climate Change Action Plan 2018-2022, KPC has aligned its adaptation and mitigation programmes on climate change to meet the nationally determined contributions (NDC) whose aim is reduction of the national emission of Greenhouse Gases (GHG) as espoused in the Paris Agreement of 2015. As such,

KPC is installing a 150kw solar plant at its headquarters in Nairobi to provide clean energy. The project is envisaged to be completed by December 2022.

To further mitigate against operational GHG emissions, KPC has been retrofitting its spirit product tanks from single floating roof type, to dome roof with floating roof, conversions which began in 2021. Plans are underway to retrofit three more tanks within the financial years running from 2022-23. In addition, all tanks constructed since 2016 after the enactment of the Climate Change Act have been dome-roofed with higher efficiency in curbing fugitive emissions from the storage tanks.

KPC has also invested in low-carbon energy efficiency technologies through installations of Variable Frequency Drive (VFD) that limit the energy consumption of the main-line pump, i.e., energy efficiency meters whose investment costs will be recouped overtime through green climate funding grants and carbon credit sales for GHGs avoidance, under the Kyoto Protocol.

The latest Energy Audit of KPC facilities returned an enviable energy saving record of 97,194,359.26kwh per annum, resulting in reduction of 52,1933 CO2 emission and cost-saving of Ksh875,999,807.43 per annum.

These actions clearly show that KPC is an industry leader in the implementation of the country's climate change policies and a pillar in the United Nations Framework Convention on Climate Change (UNFCCC).

Having been invigorated through its annual participation in the climate change negotiation processes that occurred this year at COP27, KPC is committed to further the national government's sustainability and clean energy adaptation agenda by continuing to operate in a mutually beneficial paradigm to both society and its business stakeholders.



**"KPC has aligned its adaptation and mitigation programmes on climate change to meet the nationally determined contributions whose aim is reduction of the national emission of Greenhouse Gases as espoused in the Paris Agreement of 2015"**

# Africa needs green funding urgently in race to mitigate global warming impact

Climate cash flows in the continent are only \$30 billion every year, far below the \$277 billion needed annually to meet its commitment to limit global warming to 1.5 degrees Celsius


**MOHAMED ADOW**

**B**uilding low-carbon economies that can withstand climate shocks would bring priceless benefits. Africa requires \$2.8 trillion, roughly the size of the continent's gross domestic product, by 2030 to meet its commitment to limit global warming to 1.5 degrees Celsius and adapt to the effects of climate change, according to the Climate Policy Initiative (CPI).

Yet, climate cash flows in Africa are only \$30 billion every year, far below the \$277 billion needed annually. Bridging this gap is crucial for a better tomorrow.

The socio-economic, ecological, and developmental benefits of climate investments far outweigh the costs of implementing them. Inaction will prove costlier.

Kenya, for instance, has committed to a low-carbon development pathway, pledging to cut greenhouse gas emissions by nearly a third by 2030. During this period, the country also wants to strengthen its infrastructure to withstand weather-related disasters. Kenya requires \$62 billion or double its annual budget to meet these goals outlined in its climate blueprint — the nationally determined contribution (NDC).

There is, however, a real risk of African countries falling deeper into debt in their quest to implement climate actions.

## Vulnerable countries

Most international financial support is promised in the form of loans, loading vulnerable countries with debt. According to new research by Oxfam, loans comprise more than 70 percent (\$48.6 billion) of public climate finance. What an irony that countries that have done almost nothing to cause the climate crisis are being pushed into debt to help solve it! This is unacceptable.

Things are no better with the private sector. Africa receives less than four percent of private climate finance, just because vulnerable countries are perceived as risky investment destinations. Yet, the continent boasts rich endowments of resources, from vast potential



Workers at a seawater desalination system in Strandfontein, Cape Town. The socio-economic, ecological, and developmental benefits of climate investments far outweigh the costs of implementing them. Picture: AFP

renewable energy to mineral reserves crucial for powering low-carbon technologies.

At the recently concluded 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) in Egypt, new pledges totalling \$230 billion were made to the Adaptation Fund to help communities adapt to climate change. For the first time, a new fund addressing 'loss and damage' was also adopted as the third line of defence in the fight against climate change after mitigation and adaptation. This fund is expected to compensate communities that have suffered climate losses, which cannot be adapted to.



**Africa receives less than four percent of private climate finance, just because vulnerable countries are perceived as risky**

While this is a welcome step, a lot more ground remains uncovered. Previous pledges by developed countries, the biggest carbon emitters, to channel \$100 billion a year by 2020 towards helping vulnerable nations adapt to climate change have gone unfulfilled.

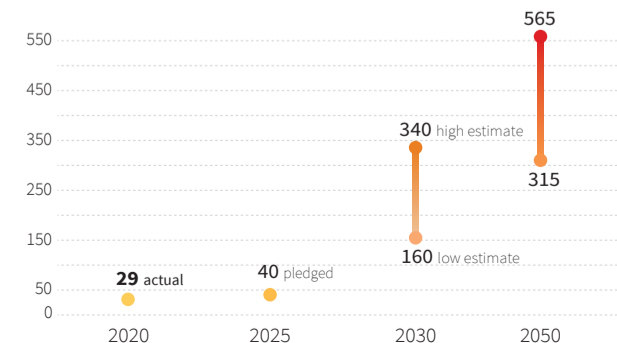
An important development from COP27 that didn't get enough attention is that, for the first time, countries sent a clear signal calling for the reforms of the multinational investment banks to support climate-compatible development. This should help de-risk investments, make capital affordable and unlock trillions in climate finance for the developing world.

## CLIMATE ADAPTATION PROMISES

Kenya has committed to cutting greenhouse gas emissions by nearly a third by 2030. At the recent COP27 in Egypt, \$230 million in new pledges were made to boost the Adaptation Fund to help communities adapt to climate change. According to new research by Oxfam, loans comprise more than 70 per cent (\$48.6 billion) of public climate finance. Promises by developed countries to channel \$100 billion a year by 2020 to help vulnerable nations adapt to climate change have gone unfulfilled.

## The Adaptation Finance Gap (COP27)

Annual funding to help developing countries adapt to climate change and estimated annual future needs, in \$US billions



Source: UNEP adaptation gap report 2022

Besides financial support from the international community, African governments could use the public-private partnership avenue to attract private-sector investments in projects that promote climate resilience and energy transition.

Finance from development institutions could also help de-risk the investment environment and spark private sector investments.

Data tracking is crucial. Not only for private investors but also for governments in implementing their green budgeting frameworks and policies.

## Cue green bonds

Likewise, capital markets can support the greening of economies through climate financing instruments such as green bonds. In 2019, Acorn Holdings raised \$41 million through a green bond towards building sustainable student accommodation units in Kenya.

Commercial banks have a role to play, too, in expanding their green financing portfolios, with support from development partners.

In a nutshell, delivering green funding at scale and speed calls for the transformation of the financial system, its structures and processes, engaging governments, central banks, commercial banks, institutional investors, development finance institutions and other financial actors.

This financing will enable mass afforestation and reforestation, the adoption of clean and sustainable energy, energy efficiency technologies, low-carbon transportation and climate-smart agriculture.

Others are sustainable waste management, the adoption of green buildings that are more resilient and resource-efficient, alongside drought and flood early warning, preparedness and response, water harvesting, sustainable blue economy and climate-proofed infrastructure such as roads and bridges.

## Homegrown solutions

Africa has demonstrated an unmatched zeal to be part of the solution. For instance, the African Union-affiliated African Risk Capacity (ARC) was set up to provide disaster insurance products to African countries and help them plan, prepare and respond to natural disasters such as droughts, floods and tropical cyclones.

In 2020, for example, ARC paid out \$23 million to Senegal for drought relief. Similar payouts have gone to Madagascar.

Meanwhile, Africa's rich endowment in minerals such as lithium, cobalt and copper, which are crucial for clean energy technologies, position the continent as a key player in the global energy transition. If mining is done sustainably, this mineral wealth could support the continent's economic development.

Increased cash flows and investments will enable the continent to meet its development goals in a changing climate.

Mohamed Adow is a climate justice advocate and director of the energy and climate think tank, Power Shift Africa



**CLIMATE CHANGE  
EXPLORING AFRICAN  
RESPONSES AND SOLUTIONS**

DECEMBER 10 - DECEMBER 16, 2022



**Thika  
Cloth Mills  
Limited**

# Investing in efficiency to safeguard the environment

Tejal Dodhia, the Managing Director of Thika Cloth Mills, spoke to The EastAfrican on the company's efforts to ensure sustainability in an environment adversely affected by climate change. Here are excerpts.

**Q. How do you assess the textile industry in Kenya at the moment?**

**T**hika Cloth Mills are more in the uniform market of the textile industry because the general market is already competing with mitumba (second-hand clothes). We're also getting certificates for export, like the Cotton Made in Africa Certificate that we've already applied for, alongside the health and safety ones. Once we get them, we'll be able to export more, as we are already exporting.

We are further pursuing better cotton initiative and fair trade certification, even as we work on giving transparency in our processes from cotton to garment. These are improvements that will elevate our industry.

Even then, the local industry is competing with China and India, and our costs are already up. This is an important discussion for us because the utility costs in China and India are not as high as it is here.

**Q. What's the solution to this challenge?**

The solution is to champion the "Buy Kenya, Build Kenya" mantra by deed; that is, to en-

courage not only the local consumers but also government agencies to buy from local manufacturers, because we are the ones employing several Kenyans directly and indirectly.

**Q. Speaking of building Kenya, how much is Thika Cloth Mills doing in this regard?**

In the last two years, we have invested \$5 million in the factory and most of it went into improving the efficiency of our production to benefit more local farmers and our employees.

For instance, we changed our boiler to make it more efficient and reduce production costs. The investment also reduced our energy consumption in efforts to minimise our emissions, which will help slow down climate change that is already adversely affecting Kenyans.

We have also installed 1MW of solar energy, which is also good for the environment because it is a greener source of energy, and it has also reduced our power costs. However, we are afraid our gains might be reversed if the price of electricity continues to rise.

The investment also enabled us to install a new spinning machine that is bigger and helps us to deliver the best quality, especially

of the camouflaged material.

Additionally, we are putting in place a digital sewing machine for the local fashion market; a machine that can do as little as two meters, because we don't want to be dealing with large volumes only.

By the way, going back to the issue of power, we are happy that Kenya gets much of its power from renewable sources, and our CO2 emissions are much lower than those in other textile firms in many parts of the world. In essence, therefore, when other markets buy textile from East Africa, they are buying 'greener' products. Hence, we don't contribute as much to climate change problems. We manufacture responsibly, which is a great thing for us as a company.

**Q. What are you doing to encourage Kenyans to buy locally?**

Well, we lead by example. For instance, we buy cotton from farmers all over the country - from Homa Bay, Siaya, Busia, Bungoma, Mpeketoni, Kwale and Malindi. We have also bought for these farmers, the BT seeds, and now most of them who were producing just about 300 kilos of cotton are harvesting up to 1,000 kilos.

This has actually encouraged more farmers to grow cotton. There are currently about 1,600 families depending on cotton farming, and we'd like to support up to 10,000 families through cotton farming by next year.

In addition to this, we produce quality products that are suitable for local and well as export markets.



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- Fast delivery

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## CLIMATE CHANGE EXPLORING AFRICAN RESPONSES AND SOLUTIONS

DECEMBER 10 - DECEMBER 16, 2022

# Co-op Bank's commitment to sustainable development

Co-operative Bank emerged as the overall winner in the 2022 Sustainable Finance Catalyst awards by the Kenya Bankers Association (KBA).

**T**he Co-operative Bank was formed by Co-operators through their Co-operative societies in 1968 with sustainability as the backbone of delivering affordable financial services to the co-operative movement for maximum benefit of the societies' members. This is underpinned in the belief of transforming lives and being a responsible corporate citizen by seeing sustainable development and sustainable profit growth as complementary to each other and helping to create a positive impact on the economy, society, and environment.

Co-op Bank's ESG policy states that the Bank is committed to sustainable development and to achieve positive social and environmental outcomes with good governance. The Bank has in place formal governance processes for managing environmental, and social risks affecting the Bank's ability to successfully implement business strategy. The Board, ESG committee, ESG champions and ESG Team are

responsible for ensuring that sustainability issues are addressed at a strategic and operational level.

As a Bank we are committed to assist in the transition to a low carbon economy and to support Kenya's contribution to the Paris Agreement's target of limiting global temperature to well below 2 Degrees Centigrade in comparison to pre-industrial times by understanding the impact of climate change on its business and the important role of its financing activities in contributing to the transition.

The Bank deploys financing towards climate mitigation and adaptation. We have partnered with development financial institutions for up to KES 42.9 billion in December 2021 to provide special credit lines that promote environmental and social sustainability. The Bank has funded various entities undertaking projects in wind power generation, solar power installation and acquiring/upgrading to green energy efficient machinery.

The bank has also partnered with



Nation Media Group (NMG) Group CEO Stephen Gitagama, Ministry of Environment and Forestry Cabinet Secretary Soipan Tuyu, Council of Governors Chair H.E Anne Waiguru and Principal Secretary Environment Festus Ng'eno arrive at Karura Forest for the 4th edition of the Kusi Ideas Fest held on December 08, 2022. Picture | Francis Nderitu

the Kenya Govt., the EU, IFAD and ASAP in the Kenya Cereal Enhancement Program Climate Resilient Agricultural Livelihood (KCEP-KRAL) to fulfil amongst other objectives a crop insurance program to stabilize farmers income against losses caused by crop failure.

In 2022, Co-operative Bank screened loans worth KES 118B for environmental and social risks as laid out in its environmental and social governance (ESG) policy framework.

Co-operative Bank has adopted

various resource efficiency mechanisms and has achieved significant milestones from the various energy efficiency and conservation projects, this includes lighting and water efficiency usage projects, green energy adoption, staff and stakeholder's sensitization on energy management which has realized up to 46% reduction in energy costs at facilities where the projects were undertaken. Additionally, the Bank is leading in the ongoing rehabilitation of 259.5Ha in Laikipia, having planted over 5,000 trees which is

in line with the current emerging global concerns of sustainability in green energy adoption, energy conservation, and reduction of the Bank's carbon footprint.

We are supporting the guidance from our regulators (CBK CBK's guidance on climate-related risks management and the NSE ESG disclosure guidelines) in ensuring that as a country we limit the impact of climate change and its impact on financial flows, economic activities, and resources allocation

Co-operative Bank's commitment to sustainability development has been recognized in the industry, with Co-operative Bank emerging as the overall winner in the 2022 Sustainable Finance Catalyst awards by the Kenya Bankers Association (KBA). The Bank also was also recognized for its significant achievements in implementing various energy efficiency measures that resulted in reduced carbon emissions and won three (3) Energy Management Awards (EMA,2022) awards.

Looking ahead, Co-op Bank will be increasing its involvement in climate related opportunities to adapt its business and develop relevant products and solutions for a carbon-constrained world.

## Rainforest Alliance :Building an alliance to protect forests and biodiversity

The Rainforest Alliance, a non-profit organization, is working with a diverse range of stakeholders to enable farmers across East Africa achieve sustainable production. In a wide ranging interview, Rainforest Alliance Country Director Michael Orangi explained how the organisation's programmes are promoting sustainable farming.

The Rainforest Alliance has been working to protect the world's forests for more than 30 years.

Mr Orangi points out that in several critically important tropical landscapes, commodity production threatens ecosystem health and the well-being of rural communities.

To tackle this challenge, the Rainforest Alliance adopts an integrated landscape management approach. Instead of focusing on a single farm, the alliance targets a wider geographical area. This requires working with producers, companies, communities, local governments, and non-governmental organisations.

Says Mr Orangi: "We are building an alliance to protect forests, improve the livelihoods of farmers and forest communities, promote their human rights, and help them mitigate and adapt to the climate crisis."

He further explains: "By involving a diverse range of stakeholders – or allies – in our landscape management programmes, we bring all land users together to discuss common interests and determine collective actions."

Mr Orangi adds: "Together, we work to protect forests and biodiversity, take

action on climate, promote human rights and improve the livelihoods of rural people."

In Kenya, the Rainforest Alliance works in the Mount Kenya Landscape.

Mount Kenya is a biodiversity reservoir, an important agricultural area, and a national water tower. The landscape has been impacted by increasingly frequent extreme climate events with direct consequences to agricultural production and food security, illegal deforestation, land degradation and commodity markets, resulting in farmland extending up the fertile slopes of the mountain and encroaching into protected forests, further threatening the water supply.

However, as Mr Orangi observes, "Ex-

isting initiatives working to address land use issues are operating in silos, missing opportunities for exchanging learnings and building synergies to optimise the efficiency of resources and sustainability of efforts."

To mitigate these challenges, the Rainforest Alliance is advancing five strategic interventions that interlace to deliver conservation and efficient management of resources and ecosystem services, along with improved rural livelihoods in a vibrant, more equitable rural economy.

In Mt Kenya, the alliance works with 50,000 coffee and tea farmers; 1,000 community forest association members; 250,000 farmers cultivating a mix of food crops, tea, and coffee. Of

these, 30 percent are women and 10 percent, youth. The Alliance has also spearheaded formation of a landscape management board within the Mount Kenya landscape that incorporates

### HIGHLIGHT

- In Mt Kenya, Rainforest alliance works with 50,000 coffee and tea farmers; 1,000 community forest association members; 250,000 farmers
- More than two million farmers follow Rainforest Alliance agricultural standards in 70 countries
- The Rainforest Alliance has been working to protect the world's forests for more than 30 years



Julius Ng'angá Senior Director, Rainforest Alliance East & Southern Africa during the MsuLLi Landscape management board inauguration ceremony in the Mount Kenya landscape.



From Left Peter Quest Head of Youth Programmes-Kenya School of Government, Zachary Kinuthia Chairman of the Technical Committee of the WSPU, Pamela Njoki-Embu County Women Representative and Michael Orangi Country Director- Rainforest Alliance, Kenya and Tanzania during a partnership with World Scouts Parliamentary Union(WSPU) towards landscape restoration drive.

stakeholders within the region working towards restoration to facilitate collaborations and avoid duplication of effort.

Mr Orangi says these farmers will benefit indirectly in the broader Landscape through capacity building on climate smart agriculture, entrepreneurial approach to farming, use of renewable energy options and improved environmental management.

"The Rainforest Alliance is a global leader in sustainability certification. Farms, forest communities, and businesses that participate in our certification programme are audited against rigorous sustainability standards based on the triple bottom line: environmental, economic, and social well-being. More than two million farmers follow our sustainable agriculture standard in 70 countries around the globe. Our programmes focus on coffee, cocoa, tea, bananas, and many other important commodity sectors facing urgent environmental and social challenges."

The Alliance provides customised support to help companies define and achieve their sustainability commitments within certification and beyond.

It works with governments, companies, and local and international civil society organisations to advance far-reaching policies that support rural producers who invest substantial time, labour, and financial resources in sustainability transformation. The alliance's work with both public and private-sector stakeholders aims to raise awareness and influence decision makers to support change.

For more information about our organization and perhaps join the Alliance please reach us through our website; [www.rainforest-alliance.org](http://www.rainforest-alliance.org)

# Climate change means farmers need more ways to fight fresh pest threats

Innovative and eco-friendly strategies key to winning battle against emerging insect species



**LOKO YÉINOU LAURA ESTELLE**

**T**he link between climate change and the spread of crop pests has been established by research and evidence.

Farmers are noticing the link themselves, alongside higher temperatures and greater variability in rainfall. All these changes are having an impact on harvests across Africa.

Changing conditions sometimes allow insects and diseases to spread and thrive in new places.

The threat is greatest when there are no natural predators to keep pests in check, and when human control strategies are limited to the use of unsuitable synthetic insecticides.

Invasive pests can take hold in a new environment and cause very costly damage before national authorities and researchers are able to devise and fund ways to protect crops, harvests and livelihoods.

Early research into biological control methods (use of other organisms to control pests) shows promise for safeguarding harvests and food security.

Rapid climate change, however, means researchers are racing against time to develop the full range of tools needed for a growing threat.

The most notable of recent invasive pests to arrive in Africa was the fall armyworm, which spread to the continent from the Americas in 2016.

Since then, 78 countries have reported the caterpillar, which attacks a range of crops including staples like maize and has caused an estimated US\$9.4 billion in losses a year.

African farmers are still struggling to contain the larger grain borer, or *Prostephanus truncatus* Horn, which reached the continent in the 1970s. It can destroy up to 40 per cent of stored maize in just four months. In Benin, it is a particular threat to cassava chips, and can cause losses of up to 50 percent in three months.

It's expected that the larger grain borer will continue to spread as climatic conditions become more favourable.

African countries urgently need more support and research into different control strategies, including the use of natural enemies, varietal resistance and biopesticides.

My research work is at the interface



Predatory mites are used as a biological control against thrips. Picture: AFP

between plants, insects and genetics. It's intended to contribute to more productive agriculture that respects the environment and human health by controlling insect pests with innovative biological methods.

For example, we have demonstrated that a species of insect called *Alloeocranum biannulipes* eats some crop pests. Certain kinds of fungi (*Metarhizium anisopliae* and *Beauveria bassiana*), too, can kill these pests. They are potential biological control agents of the larger grain borer and other pests.

## Pest control

Improved pest control is especially important for women farmers, who make up a significant share of the agricultural workforce.

In Benin, for example, around 70 percent of production is carried out by women, yet high rates of illiteracy mean many are unable to read the labels of synthetic pesticides.

This can result in misuse or overuse of chemical crop protection products, which poses a risk to the health of the farmers applying the product and a risk of environmental pollution.

Moreover, the unsuitable and intensive use of synthetic insecticides could lead to the development of insecticide resistance and a proliferation of resistant insects.

Various studies have shown that the use of the following biological alternatives would not only benefit food security but would also help farmers who have limited formal education:

## INVASIVE INSECTS WREAK HAVOC IN AFRICA

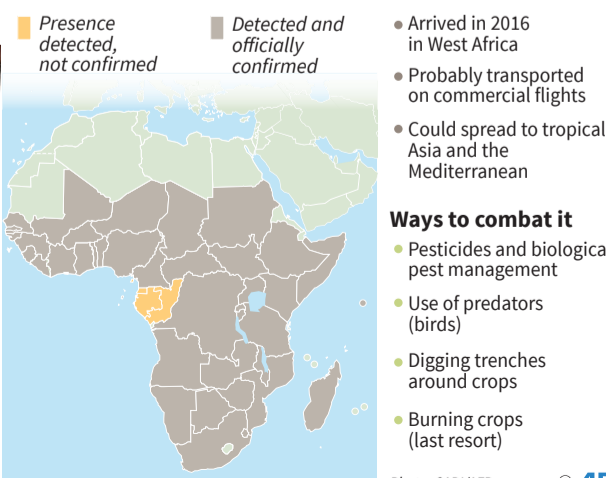
The most notable of recent invasive pests to arrive in Africa was the fall armyworm, which spread to the continent from the Americas in 2016.

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### Fall Armyworm, scourge of African crops

Originally from the Americas, the species is spreading in Africa and destroying staple crops



1. Natural predators like other insects can be effective in controlling pests. For example, I found that the predator *Alloeocranum biannulipes* is an effective biological control agent against a beetle called *Dinoderus porcellus* Lesne in stored yam chips and the larger grain borer in stored cassava chips. Under farm storage conditions, the release of this predator in infested yam chips significantly reduced the numbers of pests and the weight loss. In Benin, yams are a staple food and important cash crop. The tubers are dried into chips to prevent them from rotting.

2. Strains of fungi such as *Metarhizium anisopliae* and *Beauveria bassiana* also showed their effectiveness as biological control agents against some pests. For example, isolate Bb115 of *B. bassiana* significantly reduced *D. porcellus* populations and weight loss of yam chips. The fungus also had an effect on the survival of an insect species, *Helicoverpa armigera* (Hübner), known as the cotton bollworm. It did this by invading the tissues of crop plants that the insect larva eats. The larvae then ate less of those plants.

3. The use of botanical extracts and powdered plant parts is another biological alternative to the use of harmful synthetic pesticides. For example, I found that botanical extracts of plants grown in Benin, *Bridelia ferruginea*, *Blighia sapida* and *Khaya senegalensis*, have insecticidal, repellent and antifeedant activities against *D. porcellus* and can also be used in powder form to protect yam chips.

4. My research also found that essential oils of certain leaves can be used as a natural way to stop *D. porcellus* feeding on yam chips.

5. I've done research on varietal (genetic) resistance too and found five varieties of yam (Gaboubaba, Boniwouré, Alahina, Yakanougo and Womangou) were resistant to the *D. porcellus* beetle.

To develop efficient integrated pest management strategies, researchers need support and funding. They need to test these potential biocontrol methods and their combinations with other eco-friendly methods in farm conditions.

Investing in further research would help to bolster the African Union's 2021–2030 Strategy for Managing Invasive Species, and protect farmers, countries and economies from more devastating losses as climate change brings new threats.

Initiatives like the One Planet Fellowship, coordinated by African Women in Agricultural Research and Development, have helped further the research and leadership of early-career scientists in this area, where climate and gender overlap.

But much more is needed to unlock the full expertise of women and men across the continent to equip farmers with next generation tools for next generation threats.

Loko Yéinou Laura Estelle, Professor of Zoology and Genetics, National University of Sciences, Technologies, Engineering and Mathematics. The Conversation



# Climate change adaptation should be Africa's priority

Countries that have 'shovel-ready' projects that build resilience will be first in line for global climate finance, creating green jobs and laying the foundations for a more prosperous future



PATRICK VERKOOIJEN

The annual UN climate talks in Egypt last month were a breakthrough for the developing world. For the first time, participants agreed to create a "loss and damage fund" to compensate poor countries for the harm caused by global warming.

The idea that rich countries should compensate poorer ones for a problem created by the industrialised world is not new. The tiny island state of Vanuatu first mooted such a scheme in 1991. But the clamour for climate reparations has grown louder as devastation has swept around the world.

Climate change is wrecking the lives of more and more people. In Africa alone, 52 million people – four per cent of the population – have suffered either drought or floods over the past two years, deeply affecting their livelihoods, according to the State and Trends in Adaptation in Africa 2022 report. After four failed rainy seasons, 37 million people today face starvation in the Horn of Africa.

Earlier this year, one-third of Pakistan – an area larger than of Uganda – was under water and half a million people were homeless after torrential monsoon rains. Island states such as the Maldives and Vanuatu risk disappearing altogether under rising seas caused by the melting of polar ice caps. Their calls for climate justice are both urgent and irrefutable.

## Climate finance

But compensation is not enough. A fund to pay for loss and damage is essential, but it is not the whole solution. As UN Secretary-General Antonio Guterres said, climate justice should mean both handing over the \$100 billion a year in climate finance promised to the developing countries back in 2009 and doubling the flow of finance for climate adaptation.

It is adapting to climate change that



should be Africa's priority. First, the damage inflicted by climate change is already happening and will only get worse. Second, because adapting to climate change and building resilience will speed the development of African economies. Investing to harness technology will create jobs for young people. It will provide long-term solutions rather than short-term fixes for successive waves of climate disasters. And last, preparing countries well for climate change means there will be fewer loss and damage claims in the future.

For a country like Kenya, widescale, effective adaptation makes the country less vulnerable to climate shocks, reduces poverty and provides new opportunities for economic growth. But right now, despite well-articulated strategies to fight climate change, Kenya's farms, water, tourism and wildlife are dangerously exposed to global warming. Climate disasters are costing 2-2.8 per cent of its gross domestic product yearly, dramatically undermining economic growth.

Today, Kenya invests about Ksh243 billion (\$2.4 billion) a year in climate ac-

tion. That's a huge effort for a developing country. But it is only one-third of what is needed to combat the damage being caused by global warming. And data shows that most climate finance is going into renewable energy. Yes, this is important to reduce carbon emissions, but it doesn't address the urgent need for agriculture, forestry, transport and water management to adapt to climate change.

## Closing the funding gap

Across the continent, the Global Center on Adaptation (GCA) estimates that countries need to invest another \$41 billion a year to adapt effectively to climate change. That's almost four times the \$11.4 billion invested in adaptation projects in 2019-20.

This means two things: African countries need to become savvier at accessing climate finance and need a much stronger portfolio of climate-adaptation projects that qualify for funding.

Today, a bold initiative to build resilience and close the funding gap, the Africa Adaptation Acceleration Programme

(AAAP) initiated by the Global Centre on Adaptation and African Development Bank is under way. It has been endorsed by the African Union and plans to mobilise \$25 billion for climate adaptation on the continent by 2025.

The GCA supports African countries and financing institutions by bringing the best knowledge, science and solutions for adaptation projects on the ground through the AAAP Upstream Financing Facility.

In Kenya, GCA works with the University of Nairobi on adaptation solutions for transport, power, information technology and water infrastructure.

The focus is not only on the design of climate-resilient infrastructure but also on developing partnerships that will enrich local knowledge, increase trade, drive economic growth and deliver jobs for young people.

The GCA is also working with Senegalese financial institutions to unlock \$1 billion in global climate finance for investments in food security, resilient infrastructure, jobs and entrepreneurship. In Côte d'Ivoire, the GCA is helping the government identify adaptation projects that could be funded from the proceeds of an upcoming Sustainable Sovereign Bond issue.

Africa is the continent hardest hit by climate change. It is also where effective large-scale climate adaptation promises to deliver the greatest lifesaving and life-changing benefits. But the time to act is now. As President William Ruto has said, "Africa can lead the world" in climate action.

Patrick Verkooijen is the chief executive of the Global Centre on Adaptation

Activists outside the International Monetary Fund headquarters in Washington, DC, on April 21, 2022, advocating financial support for low-income and middle-income countries to tackle climate change. Picture: AFP



The clamour for climate reparations has grown louder as devastation has swept around the world

## CLIMATE JUSTICE FOR DEVELOPING COUNTRIES

The idea that rich countries should compensate poorer ones for a problem created by the industrialised world is not new.

The tiny island state of Vanuatu first mooted such a scheme in 1991. Climate change is wrecking the lives of more and more people.

In Africa alone, 52 million people – four percent of the population – have suffered either drought or floods over

the past two years, according to the State and Trends in Adaptation in Africa 2022 report. Climate justice means handing over \$100 billion a year in financing pledged to developing countries in 2009 and doubling climate adaptation funds. Countries need to invest \$41bn a year to adapt effectively to climate change, estimates the Global Center on Adaptation.



Members of the Turkana community walk next to an irrigation canal to provide water to their sorghum crops in the arid area of Nanyee, near Lodwar, Turkana County, Kenya. Turkana is a vast, dry area in northwest Kenya that is on the frontline of climate change. Picture: AFP

# Strengthening grassroots initiatives key to addressing climate change disasters

## Marginalised communities face the brunt of extreme weather but lack resources to cushion themselves

**A**frican grassroots solutions need to be amplified to address the global climate crisis because they are alive to three unique value propositions: resilience, diversity, and impact. Africa is the most vulnerable region to the effects of climate change – six of the 10 countries that are most affected by the climate crisis are on the continent.

These countries are exposed to extreme droughts and floods due to their low capacity to adapt to and mitigate climate risks efficiently.

Marginalised communities in the continent disproportionately face the brunt of the climate change crisis. They lack enough resources to afford basic needs that could help them cushion themselves and recover from the prevailing risks. They have demonstrated a truly innovative spirit by utilising locally available resources to create impactful solutions that merge culture, local nuances, and technology, to address the most acute effects of climate change.

However, various local leaders spearheading innovative adaptation and mitigation efforts require effective climate financing to amplify their solutions. The loss and damage fund, which was launched at COP27, intends to support these marginalised communities. For such a fund to be effective, it must reflect the realities, contexts, and solutions that exist at the community level.

Among the marginalised, refugees have increasingly taken leadership in climate-related issues in the agriculture



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sector by addressing deforestation, food insecurity, and access to energy.

In Minawao, Cameroon, a refugee-led reforestation project turned more than 100 hectares of desert land into forest land. The project utilises “cocoon technology”, where a doughnut-shaped water tank made from recycled cartons, is buried to surround a plant’s roots to feed it. The trees now provide shade and natural compost from dead leaves, which has enabled the neighbouring community to grow crops. The forest has retained moisture and has increased rainfall levels – improving the ecological environment of the area.

In Kakuma Camp, Kenya, a youth group led by Luundo Dieu Merci, a refugee, operates a fish pond and utilises innovative irrigation methods to plant crops in the semi-desert conditions of Kakuma. This helps the refugee communities combat food insecurity, especially because aid is not a sustainable source of food. Luundo supplies catfish and tilapia to the area at an affordable price in a remote area where there is a constrained supply of food, which is costly.

The initiative facilitates access to alternative sources of nutrition for a population that had recorded 10.6 per cent acute malnutrition levels in 2017. Furthermore, the project propagates sustainability by reusing plastic to build fish ponds. Luundo’s initiative also relies on solar-powered refrigeration to preserve products and reduce wastage.

Within the same camp, Vasco Amisi, a refugee and the founder of Okapi Green, provides solar energy to around 200 businesses and many households in the area through its 20KW solar mini-grid. 80 per cent of the displaced population globally is still not able to have access to energy, a huge gap that Amisi is striving to reduce. Okapi Green bridges the energy need gap in the area, where only 13 per cent of refugees have access to electricity from solar home systems or mini-grid diesel generators. The green energy alternative mitigates climate change by reducing dependency on fossil fuel-generated power.

In addition to the refugee initiatives, Colrernd Nkosi, a self-taught hydroelectric power producer, began producing electricity using an old maize shelter to make a powerful turbine near the Yobe Nkosi village in Northern Malawi. Now, through Kasangazi Hydro-Electrical Power Plant, he provides power to 21 houses and nine businesses in the village. He charges around \$1 a month for maintenance making energy quite affordable in this rural community.

As African countries commit to eliminating single-use plastics, the continent has great examples of environmental leaders reusing and recycling waste plastic. Africa is estimated to have 17 million tonnes of plastic waste in its seas and coasts by the end of 2022. Plas-

# 17

million tonnes of plastic waste that Africa will have in its seas and coasts by the end of 2022, according to estimates



**Amplifying local solutions requires an increased amount of funding that to local climate initiatives**

tic pollution contributes to the rise of greenhouse gas emissions and the destruction of animal ecosystems. One example is Faith Aweko’s recycling factory, which is making waterproof bags using plastic waste. She sells these bags locally in Uganda and has expanded internationally to the Netherlands, Germany, Britain, and the US. Similarly, Chisomo Life in Malawi converts waste paper and plastic to wildlife artwork. In Kenya, Nzami Matee founded Gjenje Makers Ltd in 2017, a firm that had turned an estimated 100 tonnes of plastic into 200,000 paving tiles by June 2022. In Senegal, Leila Meroe is championing the use of upcycled materials such as worn tires in the building of schools and homes.

What cuts across these grassroots initiatives is that they demonstrate the innovative nature of many local actors despite lacking the needed technical expertise, or funding. These initiatives highlight the rich diversity of local solutions that are resilient in helping the continent withstand the effects of climate change and are positively impacting the households within these communities.

### Decentralised funding

Amplifying local solutions requires an increased amount of funding to local climate initiatives because currently, only around 10 per cent of bilateral climate finance flows to the grassroots level. The loss and damage fund that was launched at COP27 is a crucial opportunity to avail funds for local actors to lead climate action and support those affected by climate change. When establishing the fund, local communities, that are most affected by climate change, should participate in setting priorities for climate policy and funding. To be completely effective, the fund can be structured as participatory funds, to serve as a linkage between grassroots initiatives and climate finance donors who can provide long-term grants. The fund should also provide technical aid to the various innovative leaders to build knowledge, network, and skills to scale their solutions. As such, local heroes championing technology and innovation will access funds required in addressing the climate change mitigation and adaptation efforts across the continent.

Development partners, public, and private sector organisations must collaborate to scale and enhance the impact of local solutions. Development partners ought to assess the impact of their climate change interventions from a local community standpoint. Featuring more local solutions in high-level events such as COP28 is also needed to help contextualise the highly technical discussions within actual communities and grassroots initiatives. Private sector organisations can partner with these initiatives by providing technical knowledge, and building intellectual property. Finally, the public sector can support these efforts by enacting policies that create a stable regulatory environment for local solutions to thrive.

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