

News Bulletin

A Bi-annual Newsletter on Science, Technology and Innovation

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Bridging the knowledge-action gap in STI

ACTS is at the forefront of generating and translating knowledge into action to spur sustainable development

The late Prof. Calestous Juma, who founded ACTS in 1988, and a renowned Harvard University professor and champion of STI in Africa, succinctly encapsulates the significance of bridging the gap between knowledge and action.

In his seminal work "Innovation and Its Enemies: Why People Resist New Technologies", he asserted:

"In the ever-evolving landscape of science, technology, and innovation, there exists a profound chasm between knowledge and action. This divide, often referred to as the "knowledge-action gap," presents a formidable challenge to progress and change".

These words resonate deeply with our mission, where we strive to translate knowledge to action, turning ideas into impactful solutions that uplift communities and foster sustainable development in Africa.

In this issue, we highlight the interplay between innovative research, policy engagement, and transformative action, emphasizing the need for collaborative efforts to achieve sustainable development. First, we highlight details of a newly formed Kenya-UK partnership that is poised to reshape the landscape of emerging technologies in Africa. There is also an interesting story about a unique artistic methodology for creating future scenarios, specifically focusing on Kenya's growing dairy sector especially in processing.

Also, we highlight how innovation in sustainable cold chain solutions are set to improve farmers' fortunes in Kenya and why a new agricultural technology will forever change the farming of fish and seaweed at the Kenyan Coast. We also tell you why it is important to build the capacity of MSMEs on environmental, social and governance safeguards including opportunities with carbon credits. Did I mention that we have a new cohort of AfricaLics 2024 Visiting Fellows? Who are they and where are they from?

Last - which could as well be first - we celebrate the legacy of Prof. Calestous Juma with a Lifetime Excellence Award he received, honoring his significant contributions to the world of Science, Technology, and Innovation (STI).

Key Highlights Kenya-UK partnership on emerging technologies A new fund to support policy engagement in Africa Creating a new researchinnovation paradigm for sustainability in Africa Creating future scenarios for circular bioeconomy in Kenya's dairy sector Exploring the intersection of green energy transition and social justice in Africa How cold chain solutions are set to transform farmers' fortunes in Kenya Kenya's coast embraces a new transformative agricultural innovation

Alfred

Kenya-UK partnership on emerging technologies

This collaboration between academic institutions and researchers from Kenya and the UK aims to establish a robust framework for AI research and innovation that will guide the creation of the Kenya Emerging Tech Institute and Action Lab

Kenya has been selected to pilot a new UK programme on emerging technologies that will pave way for mutual partnership between the two countries.

The initiative is expected to create a framework for collaboration on Al between academic institutions and researchers in the two countries; and also develop a road map to guide the establishment of the Kenya Emerging Tech Institute and Action Lab.

This follows the creation of the UK Technical Centre of Expertise (Tech CoE) which sets out UK's ambitions for driving the future of innovation and technology, which is guided by four principles - to be open, responsible, secure and resilient.

ACTS and the Alan Turing Institute (ATI) in conjunction with UK's Foreign, Commonwealth and Development Office (FCDO) organized a four day visit of Kenyan delegates - 1st week of June, 2024 - to participate in learning and knowledge exchange activities around emerging tech and Al governance in the UK.

The itinerary was deliberately structured to allow for cocreation of an impactful partnership and learning agenda. In this regard, the Kenyan delegates met with representatives from a range of partner institutions in the UK – government departments, academic & research institutions, start-ups as well as civil Society organizations (CSOs).

The visit was structured around a series of workshops and joint activities that allow representatives from UK and Kenya to interact with a view to sharing, knowledge for the purposes of sowing seeds for future collaboration and partnerships.

The Kenya-US pilot initiative seeks to partner with Kenya in a way that can elevate its voice and influence on the global stage with regard to AI governance and safety, with a particular emphasis on ensuring that African voices are being heard and that the concerns and contributions of the Global South are being taken into consideration.

It is also expected that the two countries will jointly work on the development of AI Standards and a definition of AI Safety that is appropriate to the national and regional context and



Hon. John Kiarie, Chair, Kenya Parliamentary Committee on Communication, Information and Innovation (left) and Senator Crystal Asige (second right) joined the ACTS team and other delegates who visited the UK. ACTS was represented by Dr Winston Ojenge (far right) and Sam Wanjau (Second left).

considers broader ethical issues and values around equity and inclusion.

Finally, it will support the development of Kenya's Emerging Tech Institute and Action Lab by providing input towards a robust and implementable road map, governance framework, structure and strategy and possible twinning and partnerships with UK institutions such as the Al Safety Institute and Alan Turing Institute.

Several activities have been lined up to consolidate and actualize the learning from the visit that are expected to solidify UK's commitment to equitable partnerships and core principles on science, technology and innovation (in particular a commitment to responsible, safe, secure and inclusive AI and Emerging Tech.

After the visit, the two countries will work on creating linkages between different institutions and agencies, launch new Al-related research partnerships and collaborations between UK and Kenyan stakeholders to ensure implementation and ownership of the outcomes.

Fund to support STI policy engagement in Africa

By encouraging participation from diverse stakeholders - academia, private sector, civil society and the general public - Science Granting Councils (SGCs) can tap into a wealth of knowledge, expertise and experiences, enriching the policymaking process



Heads of Science Granting Councils (SGCs) in Africa during a meeting under the umbrella of the research and innovation project which aims to strengthen their capacity to fund and manage research and innovation projects in areas aligned with their national development plans and priorities.

ACTS has initiated a new fund to support Science Granting Councils (SGCs) in Africa to convene multi-stakeholder policy events on Science, Technology and Innovation (STI).

The fund is expected to strengthen the role of the Councils in policy and decision-making processes.

Through a call for Expression of Interest (EoI), the Councils will be supported to identify, prioritize and select multi-stakeholder event themes they wish to convene. The councils will then be supported to develop knowledge products that articulates best practice as well as recommendations and action plans.

The fund will also support councils to promote and disseminate the outputs and recommendations to facilitate the implementation of the action plans at national and local levels.

Through a virtual knowledge platform, ACTS will upload the resulting knowledge products from all the Councils on the SGCI website. Four peer to peer learning virtual workshops - two in year 1 and two in year 2 - will be organized to enable Councils to share experiences, and best practices.

Depending on the stakeholder events selected by the SGCs in the different key themes, the stakeholder events convened by the SGCs will take different formats. SGCs will decide on the formats for the events that suit their needs and interests

Ultimately, this initiative expects to enable knowledge sharing, learning, and networking among SGCs and other stakeholders in the STI system.

Policy dialogues will enable efficient and effective use of evidence to instill public confidence and strengthen the councils' efforts to make stronger arguments for increased public funding from their governments.

In addition, this initiative will enable the councils to increase their engagement with private sector actors with a view to promoting technology transfer and commercialization of research results leading to increased deployment of research results to address sustainable development challenges.

This engagement will enhance the role of councils as national STI policy champions and advisors; and increased public awareness about the role of STI in social and economic development in sub-Saharan Africa to unlock other opportunities from the government in advancement of STI.



Participants in one of the sessions of a RIM project workshop held in Senegal.

Creating a transformative research-innovation paradigm for sustainability in Africa

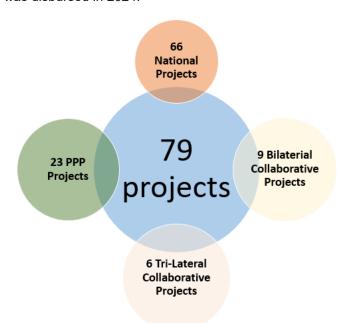
By mainstreaming gender equality and inclusivity, this initiative not only seeks to drive scientific excellence but also foster equitable and inclusive growth across the continent

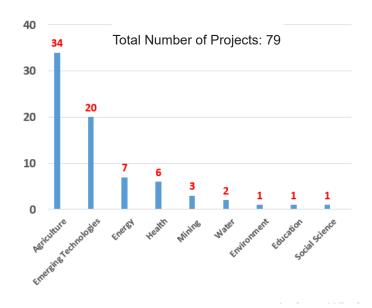
Africa holds immense potential for global scientific and technological advancements. However, unlocking this potential requires a paradigm shift - one that embraces collaboration, inclusivity, and sustainability.

For this reason, ACTS is implementing a project that aims to strengthen the capacity of Science Granting Councils (SGCs) in Sub-Sahara Africa (SSA) to fund and manage research and innovation projects in areas aligned with their national development plans that integrate inclusivity and sustainability. Specifically, this initiative aims to refine and adapt research and innovation frameworks to meet the unique needs of African countries, support the design and management of high-quality research competitions, and ensure the seamless execution of projects through robust partnerships.

By mainstreaming gender equality and inclusivity, this initiative not only seeks to drive scientific excellence but also to foster equitable and inclusive growth across the continent.

Currently, the initiative is supporting 17 SGCs to implement more than 80 research and innovation projects across the continent. The initiative has made deliberate efforts to enhance inclusion of early career researchers, private sector actors, small and medium-sized enterprises, and community actors. Interestingly, all councils have committed increased resources and surpassed their pledges (At least USD \$740,909 or 12% of total RIM project budget) which is more than 10% that most councils promised. In 2023, a total of USD\$ 1,245,655.98 was disbursed to support projects across the 17 councils while USD\$ 1,012,013.72 was disbursed in 2024.





Number of projects implemented per sector under the RIM project.

In total, councils have selected 79 research and innovation projects for funding. Out of these 66 projects are national while 15 projects are collaborative projects - 9 bilateral projects and 6 tri-lateral projects. There are also 23 public-private partnership projects. Agriculture and emerging technologies are the most preferred sectors by Councils, with energy, health and mining being amongst the five top sectors. Emerging technologies are rapidly gaining interest of the councils. Out of 79 projects selected by councils, emerging technologies account for 20 projects translating to 25 % of the total projects being funded by the councils.

Public-Private Partnerships (PPPs)

There is a steady appreciation by the councils of the need to invest public resources to stimulate collaborations between academia-industry through funding PPP projects. Working with industries to co-create and implement projects is the surest way of enhancing uptake of solutions developed by the academia by industry. Out of 79 projects selected by councils, 23 projects (29%) are Public Private Partnership Projects. At least 10 of the 16 councils (i.e. 63% of the councils) are funding PPP projects. Based on the above categorization, 9 RIM research PPP projects are at the **ideation** stage; 8 projects at the **testing** stage and 6 projects fall under the stage of **adoption and uptake**.

The private entities that form part of PPP arrangements under the RIM project are mainly private companies, Small and Medium-sized Enterprises (SMEs), Non-Governmental Organisations (NGOs), innovation hubs, science/technology parks and agricultural producer organisations.

Creating future scenarios for circular bioeconomy in Kenya's dairy sector

How can we develop shared, future scenarios for a circular bioeconomy in Kenya's dairy sector? And why is it important?



A graphic artist illustrating future scenarios for a circular bioeconomy in Kenya's dairy sector under the VALORISE project which aims to examine how principles and practices of circular bioeconomy can be leveraged in the sector.

The concept of a circular bioeconomy is gaining traction globally as an innovative approach to sustainable development, and Kenya stands at a pivotal point to harness its potential.

Embracing a circular bio-economy especially in Kenya's food sector, can address pressing issues such as waste management, resource efficiency, and environmental sustainability. However, This transformation requires a collaborative effort to envision and develop shared future scenarios that align with the unique socio-economic and environmental contexts of the country.

How, then can we develop shared future scenarios for how we can integrate CBE in Kenya, and why is it important?

It is in this context that the VALORISE project - a partnership of ACT, Roskilde University, Egerton University, Alliance of Bioversity and CIAT, East Africa Dairy Association and Arla Food Ingredients. VALORISE project is exploring the

opportunities for integrating CBE principles in the growing Kenya dairy processing industry. The project organized a roundtable workshop as first step toward developing scenarios and pathways toward CBE in the dairy sector.

The workshop was organized using participatory scenario building approach and integrating the SEEDS method. This involved stakeholders exploring initial ideas that would need to be "planted" to develop alternative future scenarios of the Kenyan dairy industry development to shift towards circularity and sustainability envisioning pathways that enhance valorisation of sidestreams.

Specifically, the workshop was designed to understand the status of processing in the dairy sector, highlighting recent trends in growth and diversity of dairy processing that are resulting in high volumes of side-streams. In addition, participants discussed optimal pathways for integrating sidestream valorisation in the industry.

Exploring the intersection of green energy transition and social justice in Africa

ACTS and partners in South Africa and Ghana are conducting a study to explore public policy interventions necessary to cement decent work and sustainable livelihoods, in the context of green energy transition, particularly for women and youth



Dr. Joel Onyango, the Director of Monitoring, Evaluation, Learning and Impact at ACTS presiding over one of the sessions at the workshop.

As the world transitions towards green energy, critical questions arise regarding who benefits, who bears the burdens, and how to ensure that the transition is inclusive and equitable.

The first and most important question is how can marginalized communities - often disproportionately affected by pollution and environmental degradation - not be left behind in the shift towards renewable energy? And secondly, how can we empower local communities to actively participate in the planning and implementation of renewable energy projects, ensuring that their voices are heard and their needs addressed?

In the realm of employment, it is critical to examine the gender dynamics within the burgeoning green energy sector, with specific regard to decent work and sustainable livelihoods for women and youth.

And now, in an attempt to answer these questions, ACTS in conjunction with the Institute for Economic Justice (IEJ), How We Adapt (HWA), the Congress of South African Trade Unions (COSATU) and the Africa Centre for Energy Policy (ACEP) is conducting a study to explore these dynamics in Kenya. Country studies are concurrently being undertaken in South Africa and Ghana by partners within the consortium, with ACTS leading the Kenyan study.

Specifically, the study aims to explore public policy interventions necessary to cement decent work and sustainable livelihoods, particularly for women and youth, through the localization of clean energy value chains that include SMMEs capability development in Kenya

The research will explore three overarching questions aimed at informing effective policies in Kenya; and empowering stakeholders to actively participate in achieving localization, decent work, and sustainable livelihoods within the clean energy value chain.

Data for this study will mainly be collected through desk review, firm level surveys and key informant interviews and findings validated through a peer review workshop. Apart from the report, other key outputs would include research summaries, policy briefs and an advocacy toolkit for trade unions. There will also be local seminar series targeting trade unions/SMMEs and a cross-country conference.

The research findings hold significant potential to shape policy and regulatory frameworks aimed at fostering a just energy transition in Kenya. For example, policymakers can utilize these insights to prioritize localization, decent work, and SMMEs capacity-building, while ensuring gender inclusivity and opportunities for the youth.

Recommendations from this study research will inform initiatives to enhance SMME capabilities in the energy sector through tailored training programs, access to financing, and technical support.

Additionally, by emphasizing gender inclusivity, the research will drive efforts to mainstream gender considerations, promote women's participation, and address barriers to their involvement in the energy sector.

Further, the research highlight opportunities for youth engagement and entrepreneurship within the energy sector, while also providing insights to inform advocacy efforts by trade unions to protect labor rights and interests, and promote descent working conditions during the energy transition.

How cold chain solutions are set to transform smallholder farmers' fortunes in Kenya

ACTS is at the centre of a pioneering sustainable cold-chain solution project that is set to exponentially increase income for smallholder farmers in Kiambu County, Kenya

Poor infrastructure, lack of proper storage facilities and limited access to markets contribute to significant losses of perishable produce in Kenya. According to FAO, in Kenya an estimated KES 72 billion (578 million USD) of food is lost annually due to limited investment across the chain.

In this context, cold chain solutions present a compelling opportunity for Kenyan farmers to increase their incomes by reducing post-harvest losses and enabling access to new markets. However, food cold chain contributes to global gas emissions through cold chain technologies. For this reason, a pioneering sustainable project seeks to demonstrate how sustainable cold chain integration can enable smallholder farmers enhance their incomes and contribute to other sustainable development goals.

In this unique model, refrigeration trucks will be deployed to collect produce from farmers ensuring optimal preservation during transit. Upon arrival at dedicated aggregation centers, the produce will undergo sorting and grading, tailored to meet the diverse demands of the market.

This initiative is anchored on a Community Cooling Hub (CCH) project, linked to Africa Centre for Excellence for Sustainable Cooling and Cold-Chain (ACES), which is a first of its kind centre established in Kigali Rwanda to address the sustainable cold chain challenge in the region. Using an innovative "hub and spoke" model, ACES seeks to work with a network of Specialized Outreach and Knowledge Establishments (SPOKEs) to develop and disseminate expertise to accelerate sustainable and resilient cooling and cold-chain solutions across Africa

Each cold storage has a pre-cooling capacity of up to 1 tonne and a storage capacity of 4 tonne. To ensure, efficient connectivity from farm to fork, the cold storage is backed by



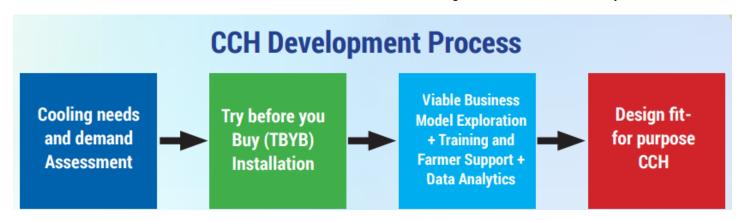
A mobile 5MT cooling unit to be installed in selected sites.

refrigerated transport ensuring cold chain linkages right to the consumer. Cold rooms will be installed at aggregation centers that will be the platform for aggregating, grading and sorting of produce for marketing.

This will not only enhance existing agricultural operations but also diversify crop portfolios, offering farmers the opportunity to cultivate high-value produce. This will be underpinned by comprehensive support mechanisms, with farmers receiving certified seeds and agronomic guidance from a consortium of esteemed companies and governmental bodies.

ACTS is engaging with farmers in Kiambu in the establishment of a horticultural cooperative society. The horticultural cooperative is the business unit that will enable farmers to collaborate, aggregate and leverage the cold chain to engage with domestic and possible export markets to enhance their incomes.

The project will also provide a traceability mechanism which is particularly important in safeguarding food safety, ensuring quality, meeting regulatory requirements, fostering consumer trust, and enhancing supply chain efficiency. By leveraging their produce as collateral, farmers will gain access to vital credit facilities, fostering a climate of entrepreneurship and sustainable growth within the community.



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Kenya's coast embraces a new transformative aquaculture innovation

ACTS, working closely with partners, is setting up an innovative technology in aquaculture that is expected to change fish and seaweed farming in Kenya's Coast



The Blue Empowerment project team join community members during the launch of the Integrated Multi-Trophic Aquaculture (IMTA) system.

The Integrated Multi-Trophic Aquaculture (IMTA) is an innovative approach to aquaculture that promotes environmental sustainability and economic efficiency. In IMTA systems, multiple species from different trophic levels are cultivated together in a synergistic manner.

With this technology, fish and seaweed can be farmed in a synergistic system that enhances the production of the two species where the waste produced by the fish provides nutrients for the seaweed, while the fish help to filter and clean the water. This interconnected system mimics natural ecosystems, reducing waste and improving water quality.

This technology is part of wider research project dubbed the Blue Empowerment that brings together KIRDI (Kenya Industrial Research and Development Institute), KMFRI (Kenya Marine and Fisheries Research Institute), Kenyatta University, Bahari CBO, Sea Moss Corporation LTD, and the communities of Kwale and Kilifi. The partners held a series of activities that culminated in a colorful launch.

It is a product of wide consultations among experts, researcher, and government official and extensive community engagement sessions have been conducted to ensure local stakeholders were well-informed and actively involved in the project.

These consultations and capacity building initiatives emphasized the importance of agency in the context of IMTA system in Kwale and Kilifi Counties. This collaboration focused on women and community empowerment through a series of activities aimed at fostering inclusivity and sustainable development.

One of the notable outcomes from the training sessions was the positive impact on women regarding gender and inclusion. The training significantly boosted the confidence of many women, empowering them and giving them the

courage to participate actively in sea and ocean-related activities. This newfound confidence underscores the critical role of agency in development projects. By fostering a sense of agency, individuals - especially women - are empowered to make decisions, take initiative, and contribute meaningfully to their communities. This empowerment not only enhances personal growth but also drives collective progress towards sustainable development goals.

The IMTA system represents a significant advancement in sustainable aquaculture practices. By integrating multiple species that utilize different resources, IMTA creates a balanced ecosystem that enhances productivity and environmental health. This system not only supports economic growth but also helps communities build resilience against the adverse effects of climate change.

The Blue Empowerment project's efforts are poised to make a profound impact on the local communities by providing new opportunities for economic development and sustainable resource management. The integration of women and marginalized groups into the project underscores the commitment to inclusivity and equitable growth.

IMTA not only enhances resource utilization but also offers economic benefits by diversifying products and reducing the risks associated with monoculture farming. By integrating various species, IMTA creates a more resilient and sustainable aquaculture practice, contributing to healthier marine environments and more stable food production systems.

Building the Capacity of Kenya's MSMEs on environmental, social and governance safeguards

The ACTS-led Green and Digital Invocation Hub (gDIH) conducted training for MSMES to strengthen their capacity in environmental, social and governance (ESG) and carbon credits



Gender Youth and Inclusive Development (GYID) programme lead at ACTS, Dr Caroline Mbaya, presiding over one of the sessions during the training.

Investors are increasingly becoming conscious of environmental, social and governance (ESG) safeguards as a prerequisite for funding micro, small and medium enterprises (MSMEs).

For this reason, MSMEs in Kenya need to position themselves strategically by adopting and integrating ESG standards in their business operations to stand in good stead for attracting investment.

Cognizance of the value of ESG, the ACTS-led Green and Digital Invocation Hub (gDIH) conducted training for MSMES to strengthen their capacity in ESG and carbon credits.

The training also covered key aspects of carbon credits, including carbon markets and their role in combating climate change with an emphasis on 'Carbon Credit Projects,' ranging from reforestation to renewable energy, and the importance of selecting viable projects.

Apart from helping businesses manage risks, ESG is also used to evaluate a company's sustainability and ethical impact. It promotes operational efficiency, positive social impact making companies/businesses more resilient and competitive in today's market.

The first training focusing Training of Trainers (TOT) was held from 27 – 30 May 2024, saw trainers from the hub trained on key issues on ESG and Carbon Credits. The training for MSMES took place at the EKA Hotel, Nairobi, Kenya from 10 -14 June 2024. This two-phase approach ensured effective dissemination of critical information.

"As sole business owners, we are involved in decision making that can make or break our companies. Having an independent board means we can run to them to get their views and improve decision-making for the betterment of the company." – Eliud, participant during the ESG training.

"Once you understand the basic concepts ESG, you can align your operations with practices that earn or utilize carbon credits." – Julius Macharia, Carbon Credits Expert, GFA.

Discussions emphasized how companies can generate revenue by incentivizing emission reductions and adopting sustainable practices, attracting eco-conscious consumers and investors.

The carbon credits training covered carbon markets and their role in combating climate change with an emphasis on 'Carbon Credit Projects,' ranging from reforestation to renewable energy, and the importance of selecting viable projects.

"Once you understand the basic concepts, you can align your operations with practices that earn or utilize carbon credits." – Julius Macharia, carbon credits expert.

Bootcamp for Kenyan innovators to access Flat6Labs' US\$95 million Seed Fund

The bootcamp was meant to enable Kenyan innovators to access Flat6Labs' US\$95 million Seed Fund. The fund aims to nurture the growth and development of early-stage tech startups in Africa



Participants of the Tech Startup Bootcamp hosted by the ACTS-led Green and Digital Innovation Hub Kenya (gDIH) to enable Kenyan innovators access Flat6Labs' US\$95 million Seed Fund.

The ACTS-led Green and Digital Innovation Hub Kenya (gDIH) hosted a Tech Startup Bootcamp to enable Kenyan innovators access Flat6Labs' US\$95 million Seed Fund.

The fund aims to nurture the growth and development of early-stage tech startups on the African continent.

Flat6Labs has a proven track record in carefully vetting out and investing in promising startups in North Africa since it was founded 12 years ago, with more than US\$16M invested in startups, and over US\$191M raised in followon funding while creating more than 2,500 direct jobs and 80,000 indirect jobs through its first two funds in Egypt and Tunisia.

Generally, the bootcamp was designed to enhance the capabilities of tech startups and entrepreneurs in 'Investment Readiness,' focusing on key areas such as market research, pitch refinement, and strategic growth strategies.

The boot camp also dedicated significant time to perfecting the art of pitching. Participants learned the essentials of crafting compelling elevator pitches and developing comprehensive pitch decks. They also had the opportunity to deliver live pitches.

The bootcamp was structured to cover essential aspects of startup development through presentations and panel discussions.

A central focus of the bootcamp was understanding the current landscape of the innovation ecosystem in Kenya, the Middle East and North Africa (MENA) region and the critical factors for investor readiness.

"Participating in the Tech Startup Bootcamp has been an eye-opening experience. This boot camp has not only equipped us with the tools we need to secure investment but also given us the courage to work on perfecting our pitches through the constructive criticism by the experts and our fellow founders," said a participant.

The ACTS-led gDIH consortium partners include Konza Technopolis Development Authority, Kenya Agricultural and Livestock Research Organization (KALRO), Kenya National Innovation Agency (KeNIA), Kenya Industrial Research and Development Institute (KIRDI) and Jomo Kenyatta University of Agriculture and Technology (JKUAT).

The hub is supported by GIZ Kenya, GFA Consulting Group GmbH, Digital Transformation Centre Kenya, and the European Union.

New cohort of AfricaLics 2024 visiting fellows

Four PhD students - One female and three male - have been selected to take part in this year's AfricaLics Visiting Fellowship Programme (VFP).

The successful candidates were selected from a pool of 84 applicants by a distinguished committee comprising of members of the AfricaLics Scientific Board and the Secretariat. They represent a diverse range of African countries (Ethiopia, Uganda and Kenya).

The 2024 cohort will get the opportunity to participate in a one-year fellowship programme combining online preand post-activities with a study period of 3 months at the University of Johannesburg, South Africa.

Mentoring will be provided by a range of African and international scholars in innovation and development studies who are research active in AfricaLics and Globelics.

The aim of the programme and the scholarships is to help African PhD students working in the field of innovation and development to strengthen their academic/research qualifications, improve the quality of their dissertations and prepare for a career in innovation and development either within academia or outside (e.g. in the private sector or in government/policy making).

The programme does this by increasing the mobility and level of exposure of the PhD students to international knowledge in the field of innovation and development. It forms part of the efforts by AfricaLics to contribute to the development of a vibrant research community in Africa in this emerging and highly multidisciplinary field.

During phase I and II of the Research Capacity Development Programme (2011-16 and 2017-22 respectively), the visiting fellows had the opportunity to visit Aalborg University as part of the programme. However, from 2022, the VFP fellows have been hosted by African universities.

The Swedish International Development Agency, Sida (Stockholm), has so far provided funding for the visiting scholarships as part of the project Enhancing research capacity on Innovation and Development in Africa.

The AfricaLics secretariat (hosted by ACTS) is responsible for the project with the AfricaLics Scientific Board providing advice on scientific matters and issues of strategic importance.



Molla Tadesse Haramaya University, Ethiopia

PhD Research Title: The Role of Indigenous Informal Local institutions in enhancing Social Capital for Adoption of Agricultural innovation: A special emphasis in Ethiopia



Liza Awino Onyango-Abuje

Jaramogi Oginga Odinga University of Science and Technology, Kenya

PhD Research Title: Galvanizing System Change Through Youth-Led Digital Innovation: The Case Of Kenya



Bekele Hundessa

Adama Science and Technology University, Ethiopia

PhD Research Title: Research and Development(R&D), Innovation and Performance of Enterprises in the Case of Resource-rich Developing Country: Evidence from Ethiopia



Bashir Kagere

Makerere University, Uganda

PhD Research Title: Firm Innovation Behaviour and Performance

Powering transition to sustainable energy systems in Kenya: perspectives of stakeholders about Feed-in Tariffs (FiTs) and Renewable Energy Auctions (REA) policies



Participants of the stakeholder workshop held on March 19, 2024 at Maanzoni Lodge, Kenya. It attracted over 35 participants.

Kenya has made significant strides in its renewable energy sector, with an estimated 88% of its grid mix in 2022 derived from renewable sources such as geothermal, wind, and solar power. This growth is attributed to favorable policies, international treaty obligations, and regulatory improvements. Despite this progress, solar and wind energy accounted for only 16% of the total generation mix in the 2022/23 financial year, highlighting the untapped potential for expanding these resources.

To address the barriers hindering the full potential of renewable energy (RE) in Kenya, ACTS and the Stockholm Environment Institute (SEI), supported by the Climate Compatible Growth (CCG) consortium, launched a comprehensive Energy Policy project. This project examines the implementation challenges and opportunities related to Feed-in Tariffs (FiTs) and Renewable Energy Auctions (REA) policies.

On March 19, 2024, a stakeholder workshop was held at Maanzoni Lodge, Kenya, bringing together over 35 participants from government, academia, the private sector, and policy-making bodies. The workshop aimed to validate the project's findings and foster a collaborative approach to enhancing Kenya's renewable energy policies.

Participants of the stakeholder workshop at Maanzoni Lodge, Kenya. Key Insights from the workshop were: FiTs guarantee a fixed price per kWh generated from renewable sources, while REAs involve competitive bidding for projects, with the lowest bid typically winning. Both mechanisms aim to promote renewable energy but face different implementation challenges in Kenya's unique political and economic context.

Challenges Identified: Slow transition to auction policies and lack of stakeholder engagement; grid integration and energy storage deficiencies, financing deficits and unclear regulatory frameworks and inadequate resource assessment and high energy costs.

Proposed Solutions: Digitalizing power systems and investing in renewable energy storage infrastructure; clear regulatory

frameworks and economic incentives; renewable energy resource mapping and rethinking least-cost development plans; establishing industrial parks to boost demand for renewable energy and enhanced stakeholder engagement and multidisciplinary committees for policy formulation.

Literature review highlights

Athorough review of policies and academic articles from 2008 to 2023 revealed significant opportunities and constraints in Kenya's renewable energy sector. Key opportunities include technological advancements, increased local and global investment in RE, and supportive government policies. Major constraints include financial limitations, market factors, and policy challenges.

Stakeholder survey findings

An online survey conducted in July 2023 highlighted active engagement in the renewable energy sector but identified weaknesses in the involvement of academia and research institutions. Policy and institutional challenges were noted as major obstacles to implementing FiTs and REA policies effectively.

Future pathways and policy recommendations

Participants in the workshop discussed practical strategies for a smooth transition to REAs, emphasizing the need for clear responsibilities, grassroots involvement, and alignment with broader energy goals. Key recommendations included: developing clear regulatory guidelines; strengthening capacity across all stakeholder groups; addressing market and infrastructural challenges; enhancing public-private partnerships and revising timeframes for policy implementation.

Conclusion

Kenya's journey towards a fully renewable energy grid requires concerted efforts from all stakeholders. Effective engagement, robust regulatory frameworks, and innovative solutions to existing challenges are crucial for achieving sustainable energy goals. The insights from the workshop provide a roadmap for future policy interventions, ensuring Kenya can harness its renewable energy potential fully.

Acknowledgement

This project was implemented by the African Centre for Technology Studies (ACTS) led by Dr Ann Kingiri, Josephat Okemwa and Yvonne Gitu and the Stockholm Environment Institute (SEI) led by Dr Anderson Khebila, Mbeo Ogeya, Moses Kirimi and Cynthia Sitati with technical support from the Climate Compatible Growth (CCG) consortium led by Julia Tomei (University College London, UCL, UK) and Stephanie Hirmer (Oxford University, UK). It was supported through the CCG - Flexible Research Fund (FRF), advanced by the Foreign and Commonwealth Development Office (FCDO) and delivered by Loughborough University, UK. The project team from ACTS and SEI also acknowledges the great support from the project participants (during the fieldwork or during the workshop).

News Briefs

ACTS Newsletter, July 2024

AFNS hosts farmers' business forum for SPOKE Project

The AFNS Programmes and Kiriita Dairy Cooperative hosted the farmers' business forum in Lari Sub-County, Kiambu County on 14 May 2023. The event aimed to address critical challenges faced by local farmers.

The discussions primarily focused on issues such as storage and post-harvest losses, and the potential of cold chain investments to mitigate these challenges.

Throughout the forum, farmers underscored the significance of high-quality farming inputs in achieving high yields and promoting sustainable farming practices. The event highlighted a crucial takeaway from all stakeholders: not only are quality farming inputs vital for superior yields and sustainable practices, but the establishment of cold chain infrastructure is also essential. This infrastructure is key to preserving the freshness of perishable goods, expanding market access, and ensuring food safety by preventing the growth of harmful bacteria and pathogens, thus safeguarding public health.

The forum was graced by notable participants of broader stakeholders including Tigoni Grown, Mama Layla Solar, and Kathy's Fresh. Charles from Tigoni Grown delivered an inspiring address, emphasizing the importance of collaboration for farmer prosperity.

"We want to practice responsible profitable farming. We can do this when we work together. High costs for farming inputs can be tackled through collaboration," he noted.



Farmers registering for the business forum held in Lari, Kiambu County.

A fun fact shared during the event was the process of grading farm produce, which categorizes products based on quality, ensuring consistency from farm to table. Attendees were particularly impressed by the Grade A Potato showcased at the forum, exemplifying the potential of quality produce.

The Forum was a remarkable opportunity for farmers, stakeholders, and businesses to come together, exchange knowledge, and foster partnerships aimed at advancing agricultural development.

Lacuna Fund 2024 Calls for Proposals: ACTS to Serve as Regional Hub

ACTS is pleased to announce its partnership with Lacuna Fund as a regional hub supporting the Antimicrobial Resistance track for its 2024 <u>Calls for Proposals</u>. ACTS, together with <u>Centro Nacional de Inteligencia Artificial</u> (CENIA), have been selected to serve as the first two regional hubs in line with Lacuna Fund's <u>Guiding Principles</u> of equity and participatory approach, and as part of its strategy to share leadership with institutions in the regions.

Lacuna Fund is the world's first collaborative effort to provide data scientists, researchers, and social entrepreneurs in low- and middle-income contexts globally with the resources they need to produce labeled datasets that address urgent problems in their communities.

In 2024, Lacuna Fund seeks proposals to develop open and accessible machine learning (ML) datasets in two domains: **Language** (Natural Language Processing) and **Health** (Antimicrobial Resistance). These two calls are funded by Google.org (Language) and Wellcome Trust (Health).

Visit Lacuna Fund's <u>Apply page</u> to learn more and submit a proposal. The deadline for proposal submissions is **August 23, 2024.** You can Apply in French, Spanish, or Portuguese on the Lacuna Fund website.

ACTS and CENIA will manage regional and global grantmaking, disseminating requests for proposals and resulting datasets, facilitating <u>Technical Advisory Panel</u> review and selection, and providing technical assistance and capacity building to grantees.

If you have questions regarding Lacuna Fund's 2024 Request for Proposals, please email secretariat@lacunafund.org.

News Briefs

ACTS Newsletter, July 2024

Bridging the climate research-action gap

Despite a wealth of data and insights from climate scientists, translating these findings into tangible steps remains a daunting challenge



Participants engage in a group discussions during the knowledge brokering workshop focusing on bridging the gap between climate research and action.

As the climate crisis intensifies, the gap between scientific research and action becomes increasingly apparent.

Despite a wealth of data and insights from climate scientists, translating these findings into tangible steps remains a daunting challenge.

In light of the above challenge, the Climate Adaptation and Resilience Programme (CLARE), a collaborative UK-Canada research initiative, held a Knowledge brokering workshop focusing on strategies to bridge the ever increasing gap between climate research and action.

The workshop featured dynamic discussions and collaborative efforts among experts, practitioners, and stakeholders. Participants delved into critical topics,

including the integration of indigenous knowledge into early warning systems, strategies for social inclusion, and effective collaboration with the private sector.

These conversations were crucial for developing comprehensive and inclusive climate adaptation strategies.

Knowledge brokers play a vital role in this process by acting as intermediaries who translate complex scientific findings into actionable insights. They facilitate dialogue, foster partnerships, enhance co-creation and ensure that diverse perspectives are included in climate resilience efforts. By enhancing decision-making and promoting innovative solutions, knowledge brokers help drive real-world impact and foster a sustainable future.

Cold-chain foundation course held at ICIPE

The inaugural cold-chain foundation course was held on May 20th - 24th at ICIPE campus.

The training program aimed to contribute to capacity strengthening on cold-chain logistics in the agri-food and health sectors. The course attracted participants from government agencies, farmer cooperatives, food industries, refrigeration professionals, and more, highlighting the critical importance of sustainable cold-chain solutions.

The training covered fundamentals and importance of cold-chain, environmental impacts and risk management, postharvest management techniques. Other topics covered include Cold-chain and refrigeration technologies, market logistics, connectivity, and telemetrics and Regulatory compliance for food and pharma storage.

ACTS, in collaboration with ACES, is implementing the Specialized Outreach and Knowledge Establishment (SPOKE) model in Kenya, demonstrating real-world applications of sustainable cold-chain solutions.



A cross-section of participants during of the session in the Cold-chain foundation course held on May 20th - 24th at ICIPE campus.

News Briefs ACTS Newsletter, July 2024

Lifetime Excellence Award for Prof. Calestous Juma

Prof. Calestous Juma, who founded ACTS in 1988, has been honored with a Lifetime Excellence Award.

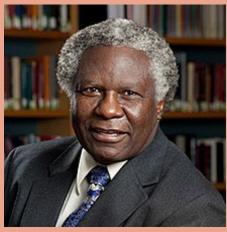
He was among key visionaries who were honored for making significant contributions to the world of Science, Technology, and Innovation (STI) as a tool for driving global prosperity and promoting public welfare.

He was feted during the multi-sectoral Conference on Research, Science, Technology & Innovation held in Nairobi.

While receiving the posthumous award on behalf Calestous Juma Calestous Juma Legacy Foundation, ACTS Executive Director, Prof. Tom Ogada, highlighted Prof. Juma's contribution and the relevance & importance of Science, Technology and Innovation for sustainable development in Africa.

"Thank you for honoring the great African STI guru, Prof. Calestous Juma. We are very delighted that we are continuing with his legacy that he bestowed on us over 36 years ago." ~ACTS Executive Director, Prof. Tom Ogada.

A heartfelt congratulations also to Prof. Wangari Maathai and Prof. Thomas Odhiambo, founder of ICIPE - International Centre of Insect Physiology and Ecology for



Prof. Calestous Juma founded ACTS in 1988.

their outstanding contributions to the field.

The late Prof. Juma was a prominent Kenyan scientist, a c a d e m i c, and policy advisor known for his work in sustainable development, innovation, and technology in Africa

A passionate advocate for education and development, he was instrumental in advancing policies that integrate science and technology into sustainable development strategies. His legacy continues to inspire efforts toward leveraging science and innovation for global development.

The conference focused on the crucial role of Science, Technology, and Innovation (STI) in driving global prosperity and promoting public welfare.

ACTS and FAO jointly organise a regional workshop on scaling up climate action in the livestock sector



Participants of the regional workshop jointly organised by ACTS and FAO to support countries in Eastern and Southern Africa in scaling up climate action in the livestock sector by identifying opportunities to address methane in the livestock sector in the context of the Global Methane Pledge. It was held on 3-5 July 2024 in Naivasha, Kenya.

Picture Stories

ACTS Newsletter, July 2024



Members of the a task force on Science, Technology and Innovation Strategy for Africa, STISA 2034 posed for a photo after it was launched in Addis Ababa, Ethiopia. The task force is an important initiative for Africa, aiming to transform the continent through strategic investments in science, technology, and innovation. The task force, which will oversee development of the STISA Science, Strategy for Africa for the next decade was successfully. It was launched at the African Union Commission in Addis Ababa. ACTS is represented by ACTS Executive Director, Prof. Tom Ogada. This initiative is crucial for driving Africa's growth and sustainability through innovative science and technology.



ACTS, in partnership with European Think Tanks Group European Think Tanks Group ETTG, IDDRI, Open Society Foundations, held a workshop on Leveraging Opportunities for Green Industrialization and Fulfilling the Ambitions of a "Just Transition" across Africa and Europe. The workshop focused on how enhance the strategic relations between Africa and Europe by providing policy-relevant recommendations on sustainable development and green industrialization: access to affordable clean energy, greening the agro-food industries and the importance of tailoring industrial policies to prioritize sustainable development, job creation, and poverty alleviation. It was held on 28 May 2024.

Picture Stories

ACTS Newsletter, July 2024



ACTS Executive Director, Prof. Tom Ogada holds the posthumous Lifetime Excellence Award for Prof. Calestous Juma. He received the award on behalf of Calestous Juma Legacy Fondation (CJLF during the Multisectoral Conference on Research, Science, Technology & Innovation.



A delegation from Mendel University, Czech Republic, visited our Konza offices to discuss possibilities of collaboration in agriculture, and emerging technologies.



Community members hold a Blue Empowerment T-shirt during the Community Knowledge Translation Workshop in Kilifi. The project is supporting women in Kilifi and Kwale counties through adoption of climate-smart integrated multi-trophic aquaculture (IMTA) of seaweeds and fish for improved livelihoods and resilience.



Members of the ACTS-led Consortium for the Green Digital Innovation Hub (GDIH) after a meeting at ACTS offices in Konza. The hub aims to help Kenyan Micro, Small and Medium Enterprises (MSMEs) achieve sustainability through digital innovation by facilitating access to technology and innovation resources.



Participants of a workshop on ESG and carbon credits Training of Trainers (TOT) held from 27 – 30 May 2024. Discussions emphasized how companies can generate revenue by incentivizing emission reductions and adopting sustainable practices, attracting eco-conscious consumers and investors.



A group discussion during a half day roundtable workshop as a first step towards creating future scenarios for a circular bioeconomy in Kenya's dairy sector under the VALORISE project which aims to examine how principles and practices of circular bioeconomy can be leveraged in the sector.

Publications ACTS Newsletter, July 2024

Foresight Africa blogs

TransCIIT on the move: scaling out and up of a student-entrepreneur matchmaking service: https://www.acts-net.org/blogs/fore-sight-africa-blog/transciit-on-the-move-scaling-out-and-up-of-a-student-entrepreneur-matchmaking-service

Reflections on the Showcase event – Transforming Climate Innovation Ecosystems through Inclusive Transdisciplinarity phase 3 (TransCIIT 3) project: https://www.acts-net.org/blogs/foresight-af-rica-blog/reflections-on-the-showcase-event-transforming-climate-innovation-ecosystems-through-inclusive-transdisciplinarity-phase-3-transciit-3-project

The 'RoadMap' to sustainable cooling and cold chain systems in Africa and Beyond: https://www.acts-net.org/blogs/foresight-africa-blog/the-roadmap-to-sustainable-cooling-and-cold-chain-systems-in-africa-and-beyond

Promoting climate change awareness and action: https://www.acts-net.org/blogs/foresight-africa-blog/promoting-climate-change-awareness-and-action

The wonders of wetlands: https://www.acts-net.org/blogs/fore-sight-africa-blog/the-wonders-of-wetlands

Navigating Climate Resilience: Kenya's Battle with Recent Flooding: https://www.acts-net.org/blogs/foresight-africa-blog/navigat-inq-climate-resilience-kenya-s-battle-with-recent-flooding

Harmony in Action: Climate Initiatives Propelling Sustainable Development and the SDGs: https://www.acts-net.org/blogs/foresight-africa-blog/harmony-in-action-climate-initiatives-propelling-sustainable-development-and-the-sdgs

Revolutionizing Climate Innovation: https://www.acts-net.org/blogs/foresight-africa-blog/revolutionizing-climate-innovation

Reflections on Institutionalization of Matchmaking Service at JOOUST: https://www.acts-net.org/blogs/foresight-africa-blog/re-flections-on-institutionalization-of-matchmaking-service-at-jooust

Transforming Climate Innovation Ecosystems: Reflecting on TransCIIT Phase 3 Outcomes and Lessons Learnt: https://www.acts-net.org/blogs/foresight-africa-blog/transforming-climate-innovation-ecosystems-reflecting-on-transciit-phase-3-outcomes-and-lessons-learnt

Using T-Labs to find transformative pathways to equitable and sustainable utilisation of Kenya's Yala and Kingwal wetlands: https://www.acts-net.org/blogs/foresight-africa-blog/us-ing-t-labs-to-find-transformative-pathways-to-equitable-and-sus-tainable-utilisation-of-kenya-s-yala-and-kingwal-wetlands

The Future of Global Environmental Policy: Key Takeaways from UNEA-6:https://www.acts-net.org/blogs/foresight-africa-blog/the-future-of-global-environmental-policy-key-takeaways-from-unea-6

How Kenya is Transitioning to Electric Cooking: Insights from the Monthly Dialogue on eCooking Solutions: https://www.acts-net.org/blogs/foresight-africa-blog/how-kenya-is-transitioning-to-electric-cooking-insights-from-the-monthly-dialogue-on-ecooking-solutions

Shaping a fair and clean energy future: The essence of a just transition: https://www.acts-net.org/blogs/foresight-africa-blog/shaping-a-fair-and-clean-energy-future-the-essence-of-a-just-transition

Leadership for climate change: Insights from the ACTS Pathways Academy webinar series: https://www.acts-net.org/blogs/fore-sight-africa-blog/leadership-for-climate-change-insights-from-the-acts-pathways-academy-webinar-series

Appraising Technology, Policy, and Governance Options to optimize women empowerment using a Multi-criteria Mapping Approach: https://www.acts-net.org/blogs/foresight-africa-blog/

appraising-technology-policy-and-governance-options-to-optimize-women-empowerment-using-a-multi-criteria-mapping-approach

Powering transition to sustainable energy systems in Kenya: Perspectives of stakeholders about Feed-In Tariffs (FITs) and Renewable Energy Auctions (REAs) policies: https://www.acts-net.org/blogs/foresight-africa-blog/powering-transition-to-sus-tainable-energy-systems-in-kenya-perspectives-of-stakehold-ers-about-fits-and-reas-policies

Challenging the narrative blogs

Challenging the Narrative: Shifting Perspectives and Embracing Openness: https://www.acts-net.org/blogs/challenging-the-narrative-shifting-perspectives-and-embracing-openness

Language, learning and technological advancement: Are we getting it right?: https://www.acts-net.org/blogs/challenging-the-narrative/language-learning-and-technological-advancement-are-we-getting-it-right

Adapting to Climate Change Together: A Collective Responsibility: https://www.acts-net.org/blogs/challenging-the-narrative/adapting-to-climate-change-together-a-collective-responsibility

Decolonizing the mind to change the narrative: https://www.acts-net.org/blogs/challenging-the-narrative/decoloniz-ing-the-mind-to-change-the-narrative

Exploring Pathways to Sustainable Development: https://www.acts-net.org/blogs/challenging-the-narrative/exploring-path-ways-to-sustainable-development

The transformative role of art in nurturing a sustainable future: How creative expression can propel climate change: https://www.acts-net.org/blogs/challenging-the-narrative/the-transformative-role-of-art-in-nurturing-a-sustainable-future

Understanding IMTA Systems in the Context of the Blue Empowerment Project: The Case of Aquaculture of Fish and Seaweed in Kwale and Kilifi Counties

https://blueeconomy.acts-net.org/images/publications/Info_Briefs/Understanding-IMTA-Systems.pdf

Blue Empowerment Project: Transformative Gender Training for Sustainable Development

https://blueeconomy.acts-net.org/images/publications/Info_Briefs/ Transformative-Gender-Training-for-Sustainable-Devt.pdf

Socio-Technical Perspectives for Enabling Adoption and Scaling of Sustainable and Gender-Transformative Mariculture Development: The Case of IMTA in Coastal Kenya https://blueeconomy.acts-net.org/images/publications/InfoBriefs/The-Case-of-IMTA-in-Coastal-Kenya.pdf

Business Canvas Model: Inclusive Business Training Models for Coastal Fisher Women in Kwale and Kilifi County https://blueeconomy.acts-net.org/images/publications/InfoBriefs/Business-Canvas-Model.pdf

Setting Up of the IMTA Cage at Kijiweni: Cage Assembly at Changai and Setting at Kijiweni in Kwale County https://blueeconomy.acts-net.org/images/publications/Info_Briefs/Setting-Up-of-the-IMTA-Cage-at-Kijiweni.pdf

Catalysing Women's agency: Peer to Peer Learning Enhancing Women's Agency, Advocacy and Enterprise in Kilifi and Kwale https://blueeconomy.acts-net.org/blog/catalysing-womens-agency-peer-to-peer-learning-enhancing-womens-agency-advoca-cy-and-enterprise-in-kilifi-and-kwale

Publications ACTS Newsletter, July 2024

Technical Reports

Status of technology transfer and commercialization of R&D outputs in AI4D Africa participating universities ai4d.acts-net.org/wp-content/uploads/2024/02/Technology-Transfer-Report-2023.pdf

Research and Application of Artificial Intelligence and Machine Learning in Africa: A Compendium of Research Projects Al4D-Africa-Research-Compendium-2023.pdf (acts-net.org)

Nurturing well-being: How African researchers are using artificial intelligence and machine learning to address health challenges Al4D-Africa-Research-Projects-in-Health-2023.pdf (acts-net.org)

Transforming Africa's Agriculture through artificial intelligence and machine learning

Al4D-Africa-Synthesis-Report-on-Agriculture-2023.pdf (acts-net.

Cross-cutting lessons and strategies for prioritising climate action in Africa: Synthesis report of projects under the Climate Resilient Economies programme: https://www.acts-net.org/images/Publications/Reports/CRE-Synthesis-Report.pdf

ACTS in the Media



Why the livestock sector is critical in climate agenda

Business By Linda Akwabi | Jul 06, 2024















Bernard Kimoro, Head of Climate Change and Livestock Sustainability, State Department of Livestock Development addresses participants during a regional workshop organised by FAO and African **Centre for Technology Studies in Naivasha.** [Courtesy]

https://www.standardmedia.co.ke/health/business/article/2001498480/ why-the-livestock-sector-is-critical-in-climate-agenda







GREENHOUSE GASES

FAO: Raise climate ambitions to cut livestock methane emissions to curb global warming

Says almost 600 million tonnes of the gas are emitted into the atmosphere each year.

In Summary

- Agriculture contributes to nearly half of the global anthropogenic methane production, followed by fossil fuels and waste.
- Methane is a highly potent greenhouse gas that increases global temperature.

https://www.the-star.co.ke/counties/north-eastern/2024-07-05-faowants-methane-emission-cut-by-30-to-curb-global-warming/



Makundi ya kina mama yanayojihusisha na uvuvi yanataka sera mpya za kuwalinda







https://youtu.be/SB3KslakaSk?si=23aE-S71ig01YfGv



The government has launched blue economy project that will benefit women in Kilifi

https://youtu.be/b8Bv9NcoQXM?si=cUqLc2F7CGY6RdfK

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