Kenya–Sweden Bioeconomy Business and Innovation Trade Fair Report

A Kenya–Sweden Partnership for Innovation, Entrepreneurship, and Industrial Transformation Aligned with Kenya's Vision 2030

8th -9th December 2025,

Sarit Expo Center, Nairobi, Kenya

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ABBREVIATION

ABDK	Advancing Bioeconomy Development Kenya
AfCFTA	African Continental Free Trade Area
B2B	Business to Business
BETA	Bottom-Up Economic Transformation Agenda
EAC	East African Community
EU	European Union
KEPSA	Kenya Private Sector Alliance
KENIA	Kenya National Innovation Agency
LEAP	Long-range Energy Alternatives Planning system
MSEA	Micro and Small Enterprises Authority
MSMEs	Micro, Small, and Medium Enterprises
MTP IV	Fourth Medium Term Plan (2023–2027)
NACOSTI	National Commission for Science, Technology and Innovation
NEMO	Next Energy Modeling system for Optimization
MITI	Ministry of Investments, Trade and |Industry
SDGs	Sustainable Development Goals
SEI	Stockholm Environment Institute
SIDA	Swedish International Development Cooperation Agency
STI	Science, Technology and Innovation
TRACE	Tool for Rapid Assessment of City Energy
UK	United Kingdom
WEAP	Water Evaluation and Planning system

ACKNOWLEDGEMENT

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EXECUTIVE SUMMARY

Kenya's bioeconomy is moving rapidly, and biobased SMEs are at the centre of this development. Kenya's future economic growth will increasingly depend on the strength and competitiveness of its bio-based micro, small and medium-sized enterprises (MSMEs). These enterprises drive local value addition and bring forward the innovations needed for a more sustainable and circular economy. They also generate a significant share of new employment, particularly in rural and peri-urban areas, and play a central role in driving innovation, sustainable production, and green industrialisation. Their contribution is especially critical as Kenya seeks to transition towards a more circular, climate-resilient economy.

In order to advance the Kenya Bioeconomy and support bioeconomy business development this sector to strong Business to Business (B2B) partnerships become essential. Collaboration between Kenyan and Swedish biobased enterprises can accelerate technology transfer, open new markets, and strengthen the capabilities of SMEs in both countries. Sweden's long experience in biobased innovation, combined with Kenya's dynamic entrepreneurial landscape and rich biomass resources, creates a powerful foundation for joint growth.

The Kenya–Sweden Bioeconomy Business and Innovation Trade Fair 2025, held on 8–9 December 2025 at the Sarit Expo Center in Nairobi, provided a strategic platform for developing such Business to Business (B2B) partnerships. Organized by Stockholm Environment Institute (SEI) funded by the Swedish International Development Cooperation Agency (SIDA), the event brought together government agencies, private-sector actors, academic institutions, and development partners to accelerate the development of a sustainable and competitive bioeconomy.

A key highlight of the event was the active participation of 75 bio-enterprises from Kenya, Sweden, and the UK, which served as a platform for sharing cross-border expertise and showcasing diverse bio-based innovations. These enterprises presented cluster-specific roadmaps, refined from earlier workshops that identify priority value chains to guide future investment and connect actors across research, industry, and government. Another major milestone was the launch of the State of the Bioeconomy in Kenya 2025 report, which provides a comprehensive, data-driven roadmap for guiding sustainable industrial growth in alignment with Kenya Vision 2030. The plenary presentations and the discussions and outcomes of the panel discussion during the Fair reaffirmed that Kenya's bioeconomy has moved beyond theoretical potential into a phase of active implementation, positioning the country as a regional hub for green growth

and industrial transformation. The bioeconomy roadmaps of four different Kenyan bioeconomy enterprise clusters, developed as part of the ABDK project, were also presented outlining shared visions and pathways for scaling up the Kenyan bioeconomy These four strategic biobased industrial clusters are essential to Kenya's bioeconomy ambitions, and focus on driven roadmap for guiding sustainable industrial growth in alignment with Kenya Vision 2030.

- Circular Food Systems, with an emphasis on value addition of primary produce and biowaste in support of food security and job creation;
- Bio-based Agricultural Inputs, aimed at developing a trusted, local ecosystem for increased production and use of biofertilizers, biopesticides and bio stimulants;
- Biobased Industrial Development, focused on converting biowaste streams into high-value bio-based products; and
- Sustainable Bioenergy, positioned as a cornerstone of the low-carbon transition and a potential generator of over one million Kenyan green jobs by 2030.

Discussions broadened to the Eastern African Community (EAC), highlighting regional progress and opportunities for collaboration. Uganda reported that agriculture contributes 24% of its Gross Domestic Product (GDP) and employs over 80% of the population, with overall bioeconomy contributions estimated at 40–45% of GDP, demonstrating significant sectoral importance. Rwanda's cluster-based innovation model further illustrated strong regional momentum. Investment initiatives such as the Pangea Accelerator's support for African startups, alongside Swedish technology showcases, underscored the transformative potential of innovation exchange and targeted financing.

Despite this progress, participants identified key barriers to scaling the bioeconomy, these included limited access to venture capital, processes, weak or unproven business models, inadequate infrastructure and bioprocessing capacity. Participants also highlighted the need for a more enabling policy environment, including supportive predictable regulations including IP regulations, targeted government incentives and clear sector-specific compliance standards that are practical and easy to implement. The urgent need for novel financing mechanisms, to de-risk early-stage investments and improve access to capital for Kenyan MSMEs that are not yet attractive to traditional venture capital was also highlighted. This would include results-based financing, which ties public or donor funding to verified business or impact outcomes. The establishment of shared bioprocessing parks and infrastructure to reduce operational constraints was also proposed. Strengthening B2B linkages and leveraging digital platforms to connect innovators, investors, and regulators will also be essential to advance the Kenyan Bioeconomy. The Fair showcased the bioeconomy's central role in boosting East Africa's economic resilience, and industrial competitiveness and how collaboration between Kenyan and Swedish biobased enterprises can accelerate technology transfer, open new markets, and strengthen the capabilities of MSMEs in both countries. Sweden's long experience in biobased innovation, combined with Kenya's dynamic entrepreneurial landscape and rich biomass resources, creates a powerful foundation for joint growth. Overall, the Fair was a great success, it achieved its objectives by: (i) Strengthening Kenya–Sweden cooperation in advancing bio-based innovation, green industrial solutions, and mutually beneficial B2B partnerships. (ii) Providing visibility and partnership opportunities for Kenyan bioeconomy MSMEs and young innovators, enabling direct engagement with Swedish companies, investors, and support organizations. (iii) Promoting industrial transformation through evidence-based planning aligned with national and regional priorities, including Kenya Vision 2030 and emerging regional bioeconomy strategies.

SEI Stockholm Environment Institute

About SEI

Stockholm Environment Institute (SEI) is an international non-profit research institute that tackles climate, environment and sustainable development challenges.

We empower partners to meet these challenges through cutting-edge research, knowledge, tools and capacity building. Scientific quality and integrity are foundations of our work. Partnership is at the heart of our approach, leading to change that lasts.

Our work connects science to policy and practice, aiming to drive tangible impacts. It spans climate change, natural resources, water, air, and health, and addresses questions of governance, innovation, finance, poverty, gender equality and social equity.

We are committed to transparency and full disclosure of our funding. The Government of Sweden is our largest funder, and we also receive funds from a range of public research funders, philanthropic foundations, bilateral and multilateral development agencies, governments, NGOs and other partners.

Through SEI's HQ and seven centres around the world, we engage with policy, practice and development action for a sustainable, prosperous future for all.

SEI'S PRESENCE GLOBALLY

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Advancing Bioeconomy Development in Kenya (ABDK)

Advancing Bioeconomy Development in Kenya (ABDK), funded by the Swedish International Development Cooperation Agency (Sida), is designed to unlock Kenya's emerging bioeconomy and promote partnerships between Kenyan and Swedish private sectors. The project supports technology exchange, investment, and innovation across four priority clusters: 1) Value addition to primary produce and circular food systems, 2) Bio-based agricultural inputs, 3) Bio-based industrial development, and 4) Sustainable bioenergy.

Project overview

ABDK has three main interventions:

1. Support the development of bioeconomy pathways for different bio-based sectors through collaboration between Kenyan and Swedish bioeconomy actors.
2. Generate evidence of business opportunities in bio-based sectors targeting Micro-Small and Medium Enterprises (MSMEs)
3. Promote national and international policy engagement on bioeconomy.

Objectives

ABDK contributes towards the achievement of three objectives of the Kenya Vision 2030 fourth Medium Term Plan (MTP IV) 2023-2027, namely:

Creating on average 1.2 million new jobs annually.

Achieving inclusive growth (leaving no one behind). In doing so, the project focuses on two BETA pillars of Agriculture and Micro-Small and Medium Enterprises (MSMEs) Economy.

Eradicating hunger (zero hunger).

Additionally, the project also contributes directly towards the realization of some of the sustainability policy priorities of the Kenya government on climate change, biodiversity and pollution and waste management.

Introduction

This report documents the process that culminated in the Kenya–Sweden Bioeconomy Business and Innovation Trade Fair 2025, presenting how the fair grew out of a year-long sequence of ABDK-led activities. Throughout 2025, SEI, KEPSA, NACOSTI, MITI, Business Sweden, local enterprises, and development partners participated in structured engagements to strengthen Kenya's bioeconomy ecosystem and align it with Sweden's experience in circular and biobased industry development.

Three milestones shaped the foundation of the trade fair:

January 2025 Workshop — identified systemic challenges facing MSMEs and discussed how to unlock innovation, financing, and market opportunities.

August 2025 Cluster Formation & Roadmapping Workshop — formalized the four clusters and cocreated draft roadmaps that mapped out scaling barriers and opportunities.

November 2025 Preparatory Workshop — aligned strategies, refined the cluster materials, and prepared enterprises and institutions for engagement at the fair.

These events created an evidence base, a community of practice, and a structured roadmap process that directly informed the design and content of the December fair. The Trade Fair therefore served not merely as an exhibition, but as the public expression of a coordinated, year-long effort to advance Kenya's bioeconomy.

Background

Kenya is positioning itself as a regional frontrunner in the shift toward a resource-efficient, innovation-driven bioeconomy. This transition aligns with global recognition that biological resources and circular production systems can drive new forms of industrial development, reduce environmental pressure, and create more resilient economies. Internationally, bioeconomy strategies have become central to green growth, and East African countries are increasingly adopting similar approaches, recognizing the economic potential of agriculture, biowaste streams, natural fibres, and bio-based energy systems.

Despite these opportunities, Kenya's bioeconomy has historically been constrained by low levels of bioprocessing, fragmented innovation ecosystems, and limited access to long-term financing. These challenges and opportunities to address them were explored throughout 2025 in a series of multi-stakeholder workshops led by the Advancing Bioeconomy Development in Kenya (ABDK) project, implemented by the Stockholm Environment Institute (SEI) with support from Swedish International Development Cooperation Agency (SIDA). The workshops highlighted the need for coordinated action, improved policies, and stronger collaboration between national agencies, research institutions, and industry.

To address these gaps systematically, the ABDK project developed a cluster-based approach focused on **four key areas:**

» Circular food systems,

» Bio-based agricultural inputs,

» Bio-based industrial products, and

» Sustainable bioenergy.

These clusters were defined and refined through extensive actor mapping and dialogue, resulting in roadmaps that outline practical steps for scaling technology, improving market access, and aligning policy frameworks.

Programme and Structure

The two-day event included keynote remarks, sector analyses, panel discussions, cluster-based exhibitions, and B2B and speed-networking sessions, reflecting the blend of policy dialogue and enterprise support envisioned in the ABDK process. The agenda featured Team Sweden representatives, Business Sweden, UK partners, SEI researchers, and Kenyan government ministries, EAC representatives, bioeconomy focal points from Ethiopia; Rwanda and Tanzania and Kenyan and Swedish biobased enterprises.

TRADE FAIR DAY 1

By leveraging **Kenya's rich biological resources and dynamic entrepreneurial base** alongside Sweden's expertise in biobased industries, both countries can jointly catalyze green industrialisation, job creation, and sustainable growth

Ambassador Håkan Åkesson

Opening Remarks by Center Director, Stockholm Environment Institute-Africa

Niall O'Connor briefly presented SEI's work on the bioeconomy in Africa and outlined the key objectives, and activities of the Advancing Bioeconomy Development in Kenya (ABDK) project. highlighting its role in strengthening Kenya's bioeconomy ecosystem He further highlighted the importance of updated regional SEI led bioeconomy reports for 2022 and 2024, which guide governments and businesses on emerging opportunities, gaps, and priority areas. These reports informed the State of the Bioeconomy in Kenya 2025 report, officially launched during the fair. Niall emphasized that bioeconomy success depends on collaboration, acknowledging key partners such as SIDA, FCDO, NACOSTI, BioInnovate Africa, the East African Science and Technology Commission, KEPSA, and Business Sweden. He underscored that the Fair provided a platform to foster innovation and investment, reinforcing the bioeconomy's central role in advancing job creation and sustainable development in Kenya .

Remarks by SEI Engagement and Impact Director

Amb. Annika Markovic presented SEI's mission as an international nonprofit, bridging academic research and practical solutions to address climate, environment, and sustainable development challenges. With eight global centers, including SEI Africa in Nairobi, SEI supports regional and global knowledge exchange. She highlighted tools such as LEAP, NEMO, TRACE, and WEAP, which support climate-smart planning and policy development, emphasizing SEI's commitment to advancing bioeconomy solutions through research, policy engagement, and industry collaboration.

Remarks by Principal Secretary, PS State Department for Investment, Trade and Industry

Dr. Juma Mukhwana underscored the importance of Kenya-Sweden collaboration to drive green growth, innovation, and sustainable industrialization. He highlighted opportunities for entrepreneurs, including access to domestic and international markets (EAC, AfCFTA, EU) and the potential of industrial parks. Dr. Mukwana stressed government support in financing, mentorship, and policy frameworks, advocating for circular economy practices and bio-based innovations as part of Kenya's industrial transformation

Remarks by Swedish Ambassador to Kenya, Head of Mission. Permanent Representative to UNEP and UN-Habitat

Ambassador Håkan Åkesson reinforced Sweden's strong and long-term commitment to Kenya's bioeconomy transformation. He emphasized that the partnership is grounded in co creation, local capacity building, and deep collaboration across research institutions, industry, and government agencies. This aligns with Sweden's broader strategy of supporting Kenya not through one off technology transfers, but through jointly developed solutions that strengthen Kenyan institutions, enable sustainable production systems, and accelerate innovation-led growth. He noted that by leveraging Kenya's rich biological resources and dynamic entrepreneurial base alongside Sweden's expertise in biobased industries, both countries can jointly catalyze green industrialisation, job creation, and sustainable growth.

Launch of the 2025 Status of Bioeconomy in Kenya Report

The State of the Bioeconomy in Kenya (2025) report developed within SEI led ABDK project was formally launched during the Kenya-Sweden Bioeconomy Business and Innovation Fair by Kenya's Principal Secretary for Industry, Dr. Juma Mukhwana and Swedish Ambassador to Kenya, Håkan Åkesson, underscoring the high-level bilateral commitment to advancing Kenya's transition toward a sustainable, innovation-driven bioeconomy. Their joint launch symbolized the alignment of Kenya's industrial transformation agenda with Sweden's global sustainability leadership, reinforcing shared ambitions around green growth, technology exchange, and capacity-building.

During the event, efforts were made to ensure broad and accessible dissemination of the report. Participants were provided with QR codes, enabling immediate digital access to the full document. This approach facilitated real-time sharing among policymakers, researchers, private sector actors, and international partners, helping accelerate adoption of the insights and strategies outlined in the report. The use of QR-based distribution aligned with the fair's emphasis on innovation, efficiency, and inclusive knowledge-sharing across the bioeconomy ecosystem

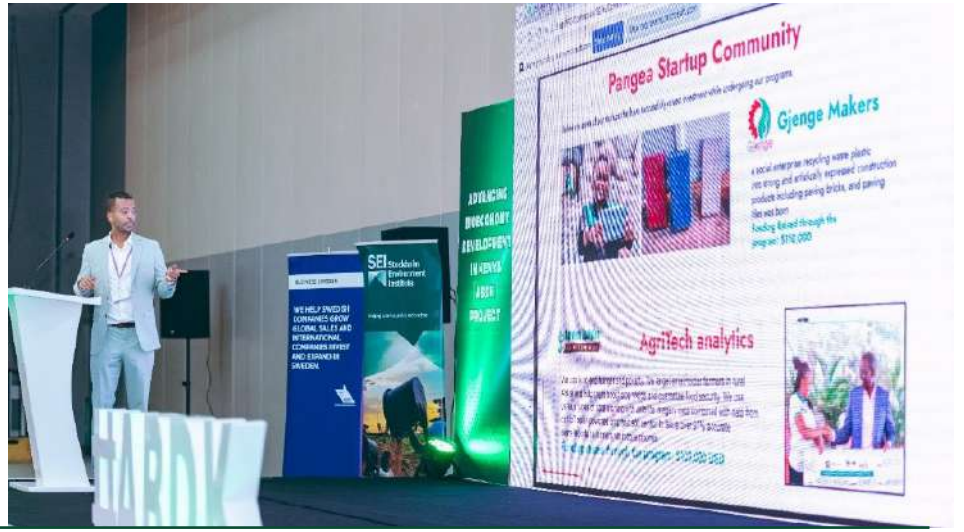
ENTREPRENEURSHIP AND INVESTMENT

Head of the East Africa Research & Innovation Hub, FCDO.

Dr. Jordan Kyongo emphasized international collaboration as critical to economic growth and sustainable development. He shared examples of Kenyan ventures such as Kijani Smile Limited, which converts black soldier flies into fertilizer and oil, and announced a UK-funded national mapping study of Kenya's bioscience sector. The mapping aims to assess innovation potential, identify high-growth subsectors, and recommend commercialization strategies.

Co-Founder and CEO of Pangea Accelerator

Jonas Tesfu shared insights on investment and entrepreneurship, highlighting Pangea Accelerator's impact on nearly 400 startups across Africa, channeling $35 million into initiatives tracking KPIs such as CO_2 absorption, job creation, and waste upcycling. He showcased successful ventures including Gjenge Makers, AgriTech Analytics, and Grower-Geek. Tesfu stressed the urgency of cross-border collaboration, innovative financing, and knowledge exchange to accelerate Africa's green and bioeconomy sectors.



Co-founder and the CEO of Renetech

Tom Walsh discussed practical challenges for startups in the bioeconomy, emphasizing financing as a primary constraint. He highlighted Renite Tech's work in converting agricultural residues into value-added products, including cookstoves. Key recommendations included patient capital, local engagement, R&D collaborations, and incremental scaling of innovations.

Business Sweden

Michelle Wang and Winnie Kiarie of Business Sweden highlighted Sweden's ongoing commitment to strengthening Kenya–Sweden bioeconomy partnerships by curating and presenting a portfolio of cutting edge Swedish enterprises with high potential for collaboration with Kenyan MSMEs, research institutions, county governments, and industrial actors. Integrated directly into the matchmaking and pitching sessions, this showcase featured companies offering innovations in clean energy, circular agriculture, biotechnology, and sustainable materials, enabling targeted dialogue on co creation opportunities, technology transfer, joint ventures, and investment pathways to advance a more robust and interconnected bioeconomy ecosystem between the two countries.

SWEDISH COMPANY PITCHES

GrowPipes – Modular & Scalable Vertical Farming Systems

GrowPipes is a Swedish agritech company offering highly modular, patented vertical hydroponic systems designed for both smallholder and commercial growers, with low maintenance, leak proof units that ensure consistent water and nutrient distribution for reliable crop performance. Building on its demonstrated commitment most recently showcased at the Kenya–Sweden Bioeconomy Fair, where it highlighted solutions tailored to Kenya's urban food production and greenhouse sectors the company is pursuing an ambitious growth strategy centered on establishing regional manufacturing hubs in Africa and Asia, expanding turnkey smart farming solutions through strategic partnerships, and supporting climate resilient community farming initiatives. GrowPipes seeks to collaborate on advanced technology integration, including IoT, automation, and climate control systems, while also partnering with greenhouse, renewable energy, and research institutions to accelerate innovation in sustainable agriculture. With existing operations across Europe, India, and North America, the company aims to increase production capacity and training centers to enhance reach and efficiency. Its target customers include commercial growers, system developers, and organizations driving food security and climate adaptation, supported by its pursuit of investment, B2B partnerships, and initiatives focused on training, local assembly, and capacity building particularly across Africa.

Echobarge – Mobile, Digitalized Pyrolysis for Circular Bioenergy

ECOBARGE Group is a Swedish company deploying containerized, digitized pyrolysis systems that convert agricultural residues such as maize stalks, coffee husks, and coconut shells into biochar, bio-oil, and renewable energy, creating climate-smart waste-to-energy solutions that improve soil health and support rural industrialization by turning farm waste into high-value products. With fully developed mobile thermolysis technology ready for on-farm deployment, the company aims to scale its units across key agricultural regions in Sweden, South Africa, and other markets, increasing biochar and renewable-energy production while building a network of climate-positive farms. ECOBARGE seeks collaborations with farmers, cooperatives, carbon-market stakeholders, agri-processors, and research institutions, and is pursuing foreign investment, international joint ventures, and B2B partnerships to expand operations, strengthen commercialization, and overcome challenges such as limited awareness of on-farm thermolysis and financing constraints.

IRRIOT – Solar-Powered Smart Irrigation Automation

IRRIOT is a Swedish provider of wireless, solar-powered precision-irrigation automation designed for water-scarce and off-grid regions, offering solutions that reduce water use, optimize irrigation scheduling, and enable remote farm management through wireless sensors. Its technology dramatically cuts water waste, lowers energy consumption, and boosts crop performance, while supporting maintenance-free, data-driven irrigation for farms, landscapes, and municipal systems. IRRIOT aims to scale globally by tripling annual installations, expanding into new markets, integrating advanced AI/ML-driven irrigation automation, and broadening its hardware and software ecosystem to support larger, more complex irrigation networks. These capabilities make IRRIOT especially relevant for Kenyan dryland farmers and horticulture exporters who require reliable, efficient irrigation systems to enhance water productivity and improve yields.

Scania East Africa – Clean Transport through Biodiesel & Biogas

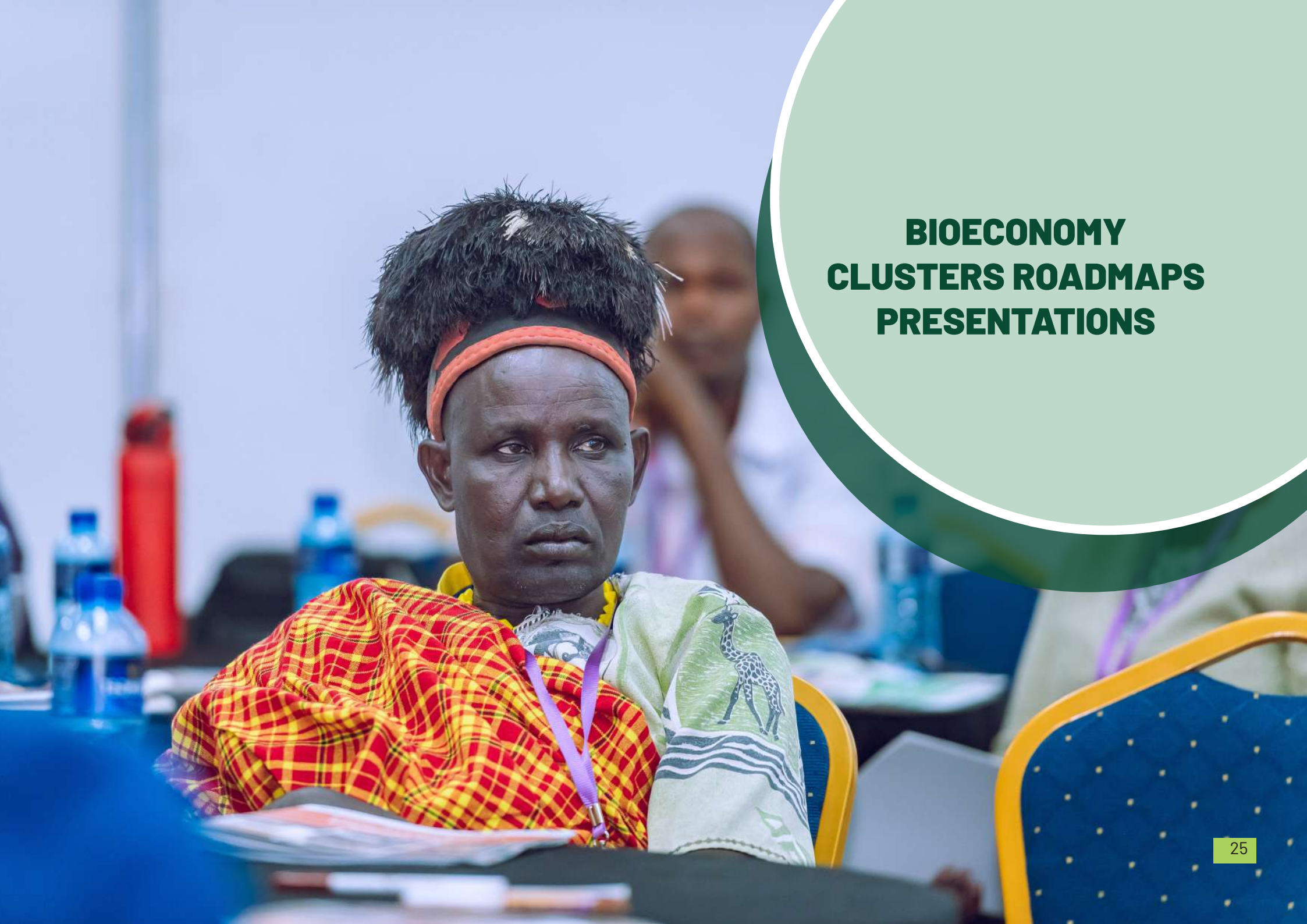
Scania East Africa is promoting clean, circular, and low emission mobility in Kenya by deploying biofuel ready transport solutions that link agriculture, waste management, and sustainable transport into closed loop value chains. Its portfolio includes biogas powered buses and trucks integrated with organic waste–to energy systems, enabling municipalities and agribusinesses to convert food waste, sewage sludge, and farm residues into fuel for public and commercial fleets. Scania also supports biodiesel compatible engines widely used in agricultural, logistics, and municipal operations, helping reduce carbon emissions while strengthening local biofuel markets. Together, these solutions advance Kenya's transition to cleaner transport, create new value from waste streams, and foster a more resilient and circular bioeconomy.

PANEL DISCUSSION: ADVANCING THE BIOECONOMY IN KENYA

Moderated Dr. Ivar Virgin, Senior Research Fellow – Stockholm Environment Institute

The panel emphasized the critical role of business-to-business collaboration and knowledge co-creation in accelerating bioeconomy solutions, highlighting how private-sector leadership and youth-driven innovations are already shaping practical circular models across agriculture, waste management, and clean energy. Speakers stressed that the successful adoption of these technologies depends on context-sensitive adaptation ensuring solutions fit local farming systems, resource availability, and market realities alongside predictable policy and regulatory frameworks that give innovators and investors the confidence to scale. The discussion also underscored the need for sustained public awareness and capacity-building campaigns to help communities, enterprises, and county governments understand the economic and environmental value of circular approaches and to encourage wider uptake of emerging bio-based solutions.

The session highlighted a dynamic cross-section of Kenya's emerging bioeconomy ecosystem, with Linda Davis of Giraffe Bioenergy showcasing how cassava-to-ethanol clean-cooking fuel can link rural smallholder producers to urban consumers while creating new income streams and reducing reliance on charcoal. Lucy from KEPSA emphasized the importance of awareness, education, and capacity-building programs to enable households, farmers, SMEs, and county governments to adopt new technologies confidently. Madeleine Fries Martinell and Adam from Business Sweden underscored the need for sector-specific policies, strong ESG standards, and measurable performance targets to guide investment and ensure accountability across the value chain. KEPSA representatives also highlighted Kenya's clean-cooking transition strategy, emphasizing incentives and policy mechanisms that encourage private-sector participation. Across the discussion, participants acknowledged key challenges including financing gaps, technology adaptation needs, infrastructure limitations, and persistent misconceptions such as the "food vs. fuel" debate while also pointing to significant opportunities in circular bioeconomy models, small-scale pilots that demonstrate viability, results-based financing frameworks, and collaborative clusters like Team Sweden and KEPSA that can accelerate innovation, market uptake, and ecosystem strengthening.



BIOECONOMY CLUSTERS ROADMAPS PRESENTATIONS

CLUSTER 1:

Kenyan Biobased Value addition to primary produce and circular food systems

Presented by Mary Karoki from Onja Foods, and Judy Mutunga from Ustawi Nutritional Care Limited Company

Cluster 1's roadmap centers on strengthening nutrition, food security, and circular economy practices by improving the connectivity between farmers, processors, and markets while reducing post harvest losses across key value chains. It highlights structural constraints such as limited access to affordable financing, costly and complex certification requirements for food safety and export markets, gaps in appropriate processing and storage technologies, and widespread skills shortages in agribusiness management, quality assurance, and climate smart production. To address these challenges, the roadmap proposes establishing shared agro processing parks equipped with common user facilities to lower production costs for SMEs, integrating renewable energy solutions such as biogas, solar, and biomass to reduce operational expenses and increase sustainability, and implementing coordinated, multi agency skills development programs that strengthen farmer capacity, youth technical training, and SME upgrading. Together, these interventions aim to build a more resilient, efficient, and inclusive food system that enhances competitiveness while promoting circular economy principles.

CLUSTER 2:

Kenyan Bio-based agricultural inputs

Presented by Christopher Mwendwa from BiG Organics and Naturals Limited

The roadmap for the bio-inputs cluster prioritizes the development of a certified, trusted, and locally driven market for biofertilizers, biopesticides, and biostimulants, positioning these inputs as core enablers of soil restoration, climate-smart agriculture, and reduced reliance on synthetic chemicals. It identifies major barriers including fragmented and overlapping regulations that slow product approval, low farmer awareness and limited extension services to demonstrate efficacy, weak domestic manufacturing capacity, and underfunded R&D that limits innovation and local strain development. To overcome these constraints, the roadmap calls for streamlined and harmonized regulatory pathways, strengthened public-sector support through subsidies, demonstration trials, and county-level awareness campaigns, as well as investment in research institutions and private-sector labs to enhance domestic production. It sets medium- to long-term milestones running toward 2030–2040, including building regional centers of excellence, establishing quality-assurance and certification infrastructure, scaling local manufacturing, and creating strong farmer-led distribution networks to ensure widespread adoption and trust in bio-inputs across Kenya's agricultural landscape.

CLUSTER 3:

Kenyan Biobased industrial development

Presented by Kylie Muthoni from Ecobana Limited

Cluster 3 focuses on transforming Kenya's local biomass resources and waste streams such as agricultural residues, food waste, and industrial by products into high value bio-based products including biodegradable packaging, bio composites, sustainable construction materials, and other circular alternatives that can replace plastics and carbon intensive inputs. The cluster faces several persistent challenges, including limited access to affordable capital for scaling manufacturing, bureaucratic hurdles in approvals and business licensing, shortages of skilled technicians and product designers, and weak quality control systems that hinder competitiveness in regional and export markets. To address these gaps, the roadmap prioritizes expanding market access through procurement incentives and buyer–supplier linkages, accelerating technology adaptation for small and medium manufacturers, strengthening certification and standards infrastructure for bio-based materials, and developing supportive policies that reduce regulatory bottlenecks and attract private investment. By building strong innovation ecosystems, upgrading skills, and expanding demonstration pilots, Cluster 3 aims to position Kenya as a regional leader in bio based materials and circular manufacturing by 2030.

CLUSTER 4:

Kenyan Biobased Sustainable bioenergy

Presented by Gilbert Mato from Rangeland Reseedings Solutions Limited

The roadmap positions bioenergy as a cornerstone of Kenya's low-carbon and climate-resilient transition, drawing lessons from the rapid expansion of solar energy particularly how clear policies, de-risked financing instruments, technology transfer, and strong private-sector participation enabled scale. It highlights major opportunities to grow domestic bioenergy markets through increased access to affordable financing for biogas, biomass, and bioethanol projects; strengthened certification systems to ensure quality and consumer trust; improved access to efficient conversion technologies; and expanded rural infrastructure for feedstock handling, product distribution, and grid or mini-grid integration. With sustained public and private investment, the bioenergy sector could generate over one million direct green jobs by 2030 across feedstock supply chains, equipment manufacturing, installation, operations, and maintenance. However, the roadmap also underscores several persistent challenges, including limited access to appropriate machinery for small and medium producers, high operating costs for decentralized systems, unreliable feedstock logistics, and low consumer awareness of modern bioenergy solutions relative to traditional fuels. Addressing these gaps through targeted incentives, skills development, technology partnerships, and coordinated county-level deployment strategies will be essential for Kenya to realize a vibrant, inclusive, and competitive bioenergy economy.

TRADE FAIR
DAY 2

Scientists must translate **complex research into messages understandable** by policymakers and the public.

Mr. Fortunate Muyambi

Opening Remarks by Stockholm Environment Institute (SEI)

Dr. Alphayo Lutta moderated the session and also highlighted the strong momentum from Day One, citing positive feedback from the Principal Secretary and SIDA on the energy of the fair and the quality of bioeconomy ventures showcased. Progress across the four clusters demonstrated significant achievements within one year of the project's launch. While this marked a successful first phase, the speaker emphasized the need to deepen partnerships, strengthen industry linkages, and mobilize financing to scale businesses, positioning Day Two as a hands-on opportunity for networking, problem-solving, and investor engagement.

Key Message and Conclusions

Dr. Jamila Ahmed provided a comprehensive summary of Day One, noting the strong and clear commitments expressed by the Governments of Kenya, Sweden, and the United Kingdom to advance Kenya's emerging bioeconomy. She highlighted how these governments emphasized the importance of enabling policy environments, strategic partnerships, and well-structured investment frameworks as essential pillars for accelerating sustainable bio-based growth.

She underscored SEI's central role in this landscape, particularly its mandate to generate evidence-based research that can guide policy formulation, derisk investments, and support the creation of new livelihood and employment opportunities across bio-based value chains. Jamila also emphasized that the private sector signaled strong readiness to innovate and invest, noting growing confidence in Kenya's capacity to serve as a regional hub for scaling bioeconomy solutions across East Africa.

A key milestone of the day was the launch of the State of the Bioeconomy in Kenya report, which consolidates the status, opportunities, and strategic pathways for growth. Jamila highlighted that this milestone marks a critical transition point, signaling that Kenya's bioeconomy is now moving beyond theoretical potential toward concrete implementation, with coordinated action from government, research institutions, private sector actors, and development partners.

EASTECO, Bioeconomy Representative

Mr. Fortunate Muyambi presented a detailed overview of key elements for advancing the bioeconomy in East Africa. He emphasized the need for appropriate financing to support strategic interventions, as well as capacity building through universities offering bioeconomy courses at Master's and PhD levels. He highlighted the importance of partnerships and collaborations within the East African Community (EAC) to strengthen research, entrepreneurship, and business involvement. He also stressed effective communication, noting that scientists must translate complex research into messages understandable by policymakers and the public. Other initiatives mentioned included the bioeconomy observatory, regional conferences, status reports, and policy dialogues to support national bioeconomy strategies, enhance stakeholder awareness, and disseminate scientific information. He concluded by stressing the bright future of bioeconomy in the region, with opportunities for market expansion, R&D funding, and sustainable development, particularly in addressing climate change and promoting alternative bio-resources.

Youth and Entrepreneurs

Entrepreneur: Asked about intellectual property (IP) and patenting, requesting clarification on the process and cost for innovators in East Africa. The main presenter responded that each EAC partner state has patent offices, and there are regional and international registration options. He noted that the process is tedious, requiring extensive documentation and verification, but organizations like EASTECO support innovators through IP training, patent registration, and guidance on copyrights.

Youth: Raised a concern about youth innovators lacking IP knowledge. The main presenter agreed and explained that capacity-building programs, such as bootcamps and online mentorship, already train youth on entrepreneurship and IP, with over 1,600 youth innovators having benefited so far.

BIOECONOMY STATUS AND PERSPECTIVES IN EASTERN AFRICA

Tanzania Bioeconomy Status and Perspectives

The Tanzania Bioeconomy Focal Point presented a comprehensive overview of Tanzania's emerging bioeconomy, emphasizing the country's rich biodiversity, strong agricultural base, and increasing value addition in bio-based products. He highlighted practical examples such as Tanzania Biotech Products Limited, which is scaling locally produced biopesticides; Veridium, which manufactures biomass briquettes for clean energy; Katani Limited, which converts sisal waste into biogas and organic fertilizer; and a growing cohort of enterprises developing biodegradable packaging from agro-residues. He underscored the importance of innovation clusters, university-driven research, and the operationalization of the triple-helix model that links government, industry, and academia in driving industrialization. Despite this momentum, he noted persistent constraints including fragmented initiatives, weak commercialization pathways, regulatory and intellectual-property bottlenecks, poor standardization frameworks, low market trust in bio-based products, and financing and infrastructure gaps that slow scale-up. Responding from a private-sector perspective, he reaffirmed Tanzania's national commitment under Vision 2050, emphasizing the country's shift toward competency-based education that prioritizes hands-on training in bio-based production from the primary level through university. He acknowledged remaining challenges in cross-sector collaboration, sustainability planning, market visibility, and digital integration, while stressing the need to deepen regional partnerships, accelerate the commercialization of research outputs, strengthen quality standards, and expand market development efforts to position Tanzania as a regional bioeconomy leader.

Uganda Bioeconomy Status and Innovations

The Uganda National Council for Science and Technology provided an overview of Uganda's bioeconomy landscape, aligning it with Vision 2040, which seeks to transition the country toward a knowledge-based economy anchored in science, technology, and innovation. With agriculture contributing 24% of GDP and employing over 80% of the population, Uganda's bioeconomy already accounts for an estimated 40–45% of national economic activity, driven by high-potential value chains such as coffee, bananas, cassava, shea nut products, veterinary vaccines, edible insects, and biofuels. Despite more than 60% of the country's research output being bioeconomy-related, the translation of innovations into industrial application remains below 5% due to infrastructure limitations, fragmented policies, regulatory bottlenecks, weak standards, and restricted access to financing for innovators and SMEs. Responding to audience questions, Dr. Martin highlighted Uganda's emerging work on banana waste valorization including mulching, biofertilizer production, biogas generation, fiber extraction, and pharmaceutical applications while underscoring the need for stronger technical training, incubation support, and technology development to unlock these opportunities. He also emphasized the promise of Technomat, a national digital platform designed to link innovators, regulators, and businesses, which aims to streamline coordination, strengthen compliance processes, and accelerate the commercialization of research outputs across Uganda's growing bioeconomy.

Rwanda Bioeconomy Status and Institutional Leadership

Rwanda Bioeconomy Focal Point presented Rwanda's structured bioeconomy framework organized around five strategic clusters agriculture and food systems, bioenergy, biotechnology, circular bioeconomy, and ecosystem services positioning the sector as central to the country's goals for economic transformation, job creation, food and nutrition security, public health advancement, and climate resilience. He demonstrated how national policies such as Vision 2050, the National Strategy for Transformation (NST1), and the Green Growth and Climate Resilience Strategy collectively anchor Rwanda's ambition to transition toward a high-value, knowledge-driven, and climate-smart economy. In a complementary presentation, Albert from the University of Rwanda's College of Science and Technology highlighted the institution's pivotal role in workforce development, applied research, and innovation through academic programs, incubation labs, and partnerships with international agencies, industry players, and regional networks. He pointed to emerging opportunities in biopharmaceutical and vaccine development, sustainable agriculture, organic fertilizers, green manufacturing, bioenergy solutions, carbon markets, and biodiversity conservation, noting that Rwanda's strong governance structures and digital infrastructure create enabling conditions for innovation. Nonetheless, he acknowledged ongoing challenges, including limited venture capital access, financing constraints for early-stage innovators, skills gaps in advanced biotechnology and engineering, inadequate research and industrial infrastructure, and fragmented policy implementation. Rwanda aims to overcome these constraints through targeted investment, strengthened regional collaboration, harmonized standards, and coordinated cross-sector action to position the country as a competitive regional hub for bioeconomy development.

South Sudan Bioeconomy Status

The South Sudan Bioeconomy Focal Point from the Ministry of East African Community Affairs presented an overview of the country's bioeconomy status, underscoring South Sudan's significant natural resource base including vast forests, wetlands, fisheries, grasslands, and diverse biodiversity contrasted with very low levels of industrialization and a heavy dependence on oil as the primary economic driver. He highlighted that although agriculture employs more than 80% of the population, its contribution to national exports remains minimal due to limited value addition, weak agro-processing capacities, inadequate market integration, and the impacts of recurring climate and security shocks. While South Sudan does not yet have a standalone national bioeconomy policy, the Focal Point noted that existing biodiversity strategies, climate frameworks, and ongoing regional commitments under the East African Community provide strategic entry points for shaping an inclusive bioeconomy agenda. Proposed national priorities include scaling climate-smart agriculture to boost productivity and resilience; promoting biofertilizers, biopesticides, and improved seeds to rehabilitate degraded soils; expanding water-harvesting and irrigation technologies to address drought vulnerability; and developing bio-based industries such as biomass briquettes, natural fibers, herbal medicines, and other value-added products derived from local ecosystems. The Focal Point emphasized that strengthening food and health systems, improving rural livelihoods, and reducing oil dependency will require investment in green industrialization, youth and women employment programs, improved research and innovation capacity, and regulatory reforms. He concluded that with strategic investment, peace stability, and coordinated implementation, South Sudan has strong potential to build a resilient bioeconomy anchored in sustainable resource use and inclusive green growth.

Regional Panel Discussion and Bio Innovate Africa

The panel discussion underscored a set of shared regional challenges across East Africa's emerging bioeconomy landscape, including persistent financing gaps for early stage innovators, weak commercialization pathways that prevent research from reaching the market, fragmented and sometimes contradictory policy frameworks, and limited cross border integration that slows technology transfer and scale up. Panelists emphasized the need to balance sustainability goals with economic resilience by building stronger digital, institutional, and trade linkages among East African countries, and by aligning national strategies to enable coherent regional value chains. The representative from BioInnovate Africa introduced the BioInnovate platform as a catalytic mechanism that connects science, business, and government to jointly develop sustainable bio based products. He highlighted its role in providing competitive grants, mentorship, and technical capacity building for researchers, startups, and youth innovators across eight East African countries, with an emphasis on agro value addition, waste to value technologies, clean bioenergy solutions, and emerging bio based healthcare products. The session concluded with broad recognition of East Africa's growing leadership in the continental bioeconomy transition and a call to action for deeper partnerships, expanded and blended financing models, improved regional market access, harmonized standards, and strengthened collaboration to accelerate inclusive and commercially viable bioeconomy development across the region.

ANNEX:

Photos of Ambassador and PS interacting with exhibitors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We support bioeconomy policies development

Kenya-Sweden Bioeconomy Business and Innovation Fair

December 8 - 9, 2025 | **Sarit Expo Center, Kenya**

Objective To present pathways and ideas for advancing the Kenyan bioeconomy through the development of bioeconomy cluster roadmaps and to foster partnerships between Swedish and Kenyan actors in support of industrialization, modernization, and scaling up of Kenya's bioeconomy.

DAY 1: December 8

Time	Agenda	Responsible
09:00-09:15	Welcome and introduction to the event	**Niall O'Connor** - Centre Director, SEI Africa
09:15-09:30	SEI's role in development research	**Annika Markovic** - Engagement and Impact Director, SEI
09:30-09:45	The role of Sweden and Sida/Team Sweden in building the Kenyan bioeconomy and in supporting partnership building between Swedish and Kenyan biobased business actors	**Håkan Åkesson** – Swedish ambassador to Kenya, Head of Mission. Permanent Representative to UNEP and UN-Habitat
09:45-10:00	Opening remarks	PS State Department for Investment, Trade and Industry
10:00-10:15	Photo session	**Henry Nerious Dieto,** SEI
10:15-10:30	Coffee and tea	
10:30-10:45	UK market landscape for circular economy	**Dr. Jordan Kyongo,** Head of the East Africa Research & Innovation Hub, FCDO.
10:45-11:00	East Africa's bioeconomic potential and growth sectors: WhyKenya is an attractive Market for bio-Companies	**Jonas Tesfu,** Pangea
11:00-11:15	Potential and opportunities for linking Swedish and Kenyan business actors	**Winfred Kiarie,** Business Sweden
11:15 -11:30	Investing in Kenya, a Swedish private sector perspective	**Tom Walsh,** CEO Renetech AB
11:30-11:50	Q&A	All participants
11.50-12.50	Session Panel Moving forward, building the Kenyan bioeconomy, supporting bioeconomy cluster development and building partnership platforms.	Chair: **Dr. Ivar Virgin** - SEI • **Linda Davis,** Giraffe Bioenergy • Representative from TEAM SWEDEN/Sida • **Madeleine Fries Martinell,** Business Sweden • Representative from KEPSA • Director, state department of Industry, MITI • **Dr. Emmeline Skinner,** UK high commission
12:50-13:20	Q&A	• All participants
13:20-14:00	Lunch networking, mingling and visiting the exhibition	All participants

Day 1: Afternoon

14.00-15.00	Presenting the cluster roadmaps, and short overview presentation of company profiles. • Kenyan Biobased Cluster 1 Value addition to primary produce and circular food systems • Kenyan Biobased Cluster 2 Bio-based agricultural inputs • Kenyan Biobased Cluster 3, Biobased industrial development • Kenyan Biobased Cluster 4 Sustainable bioenergy Short presentations by Swedish and UK companies present at the Fair	Cluster champions
15.00 -17:00	B2B interaction and speed Networking (A separate Agenda will be presented at the fair)	

DAY 2: December 9

Time	Agenda	Responsible
0900-0905	Welcome and introduction to Day 2	**Niall O´Connor** - Centre Director, SEI Africa
0905:0915	Key messages and conclusions from day 1	**Jamila Ahmed** - SEI
09.15-09.30	Presentation of the The Kenyan State of the Bioeconomy 2025 report	**Rael Adhiambo** - National Commission for Science, Technology and Innovation
0930-10.30	Advancing Bioscience Innovation and Biobusiness Growth in Kenya • Advancing the Bioeconomy in East Africa - **Dr. Julius Ecuru,** BioInnovate Africa • Mapping the bioscience landscape in Kenya and role of actor clusters - **Dr. Emmeline Skinner,** Foreign, Commonwealth & Development Office, FCDO, UK • Enabling Innovation for Socio-economic Development, Kenya National Innovation Agency (KeNIA) • Questions and Answers	Chair: **Romanus Opiyo** - SEI
10:30-11:00	Coffee and tea	
11:00-12:00	Status of the EAC Regional bioeconomy	**Fortunate Muyambi,** EASTECO and presentations from countries in East Africa
12:00-13:00	Lunch networking, mingling and visiting the exhibition	All participants
13:00-17:00	B2B interaction, one-one meeting	All participants
13.00-17:00	Exhibition and Networking	All participants