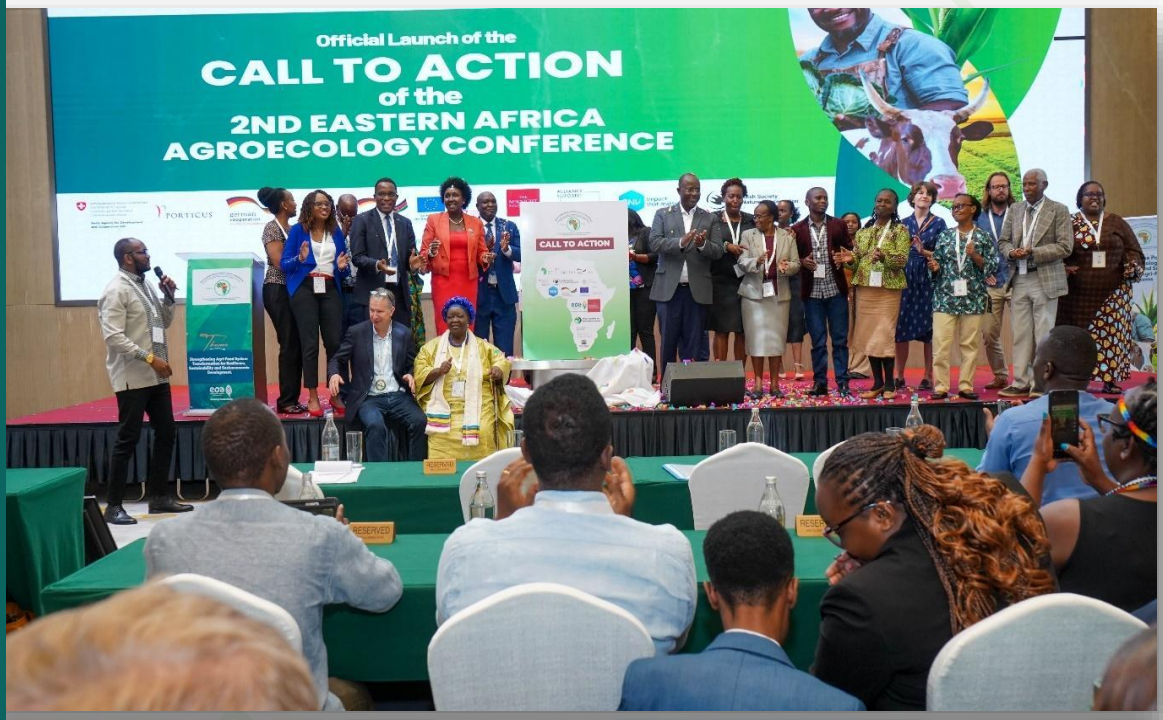
REPUBLIC OF KENYA
Ministry of Agriculture & Livestock Development

2ND EASTERN AFRICA AGROECOLOGY CONFERENCE
HARNESSING THE POTENTIAL OF AGROECOLOGY IN TRANSFORMING AND SUSTAINING RESILIENT AGRI-FOOD SYSTEMS
March 2025
Strengthening Agri-Food System Transformation for Resilience, Sustainability and Socioeconomic Development.

Biovision Africa Trust

2nd Eastern Africa Agroecology Conference

Harnessing the Potential of Agroecology in Transforming and Sustaining Resilient Agri-Food



Date:
25th- 28th March 2025

Venue:
Argyle Grand Hotel, Nairobi

Theme:

Strengthening Agri-Food System Transformation for Resilience, Sustainability and Socioeconomic Development

eoa ECOLOGICAL ORGANIC AGRICULTURE
Growing Sustainably

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CONFERENCE ORGANIZING PARTNERS

The 2nd Eastern Africa Agroecology Conference was a collaborative effort convened by Biovision Africa Trust and the Ministry of Agriculture and Livestock Development of Kenya, in close partnership with agroecology stakeholders from across the Eastern Africa region and beyond. Through the collective support and active engagement of all partners, the conference successfully brought together voices, experiences, and innovations to advance agroecological transformation.

ACRONYMS

AE	:	Agroecology
AET	:	Agroecology Transition Tool
BvAT	:	Biovision Africa Trust
CAADP	:	Comprehensive Africa Agriculture Development Programme
CECM	:	County Executive Committee Member
CIDP	:	County Integrated Development Plan
EAC	:	East African Community
EIPMA	:	Effective Integrated Pest Management Association
FCP	:	Farmer Communication Programme
G-BIACK	:	Grow Biointensive Agriculture Centre of Kenya
ICCD	:	Integrated Communication & Capacity Development
IFOAM	:	International Federation of Organic Agriculture Movements
KOAN	:	Kenya Organic Agriculture Network
PELUM	:	Participatory Ecological Land Use Management
IPM	:	Integrated Pest Management
SMEs	:	Small and Medium Enterprises

EXECUTIVE SUMMARY

The 2nd Eastern Africa Agroecology Conference, organized by Biovision Africa Trust in collaboration with the Ministry of Agriculture and Livestock Development of Kenya, along with various agroecology stakeholders from Eastern Africa and beyond, took place from March 25th to 28th, 2025, at the Argyle Grand Hotel in Nairobi, Kenya. Building on the success of the first conference in 2023, the event reaffirmed the region's dedication to transforming agri-food systems through agroecology.

Bringing together over 850 participants from 42 countries across Africa, Europe, Asia, South America, and North America, the conference served as a dynamic platform for dialogue, knowledge exchange, and collaboration. Through keynote speeches, high-level panel discussions, poster presentations, exhibitions, and case studies, delegates explored how agri-food systems can be transformed to enhance health, equity, resilience, and cultural diversity across the value chain—from production to consumption.

Themed "Strengthening Agri-Food System Transformation for Resilience, Sustainability, and Socioeconomic Development," the conference highlighted agroecology as a critical pathway to achieving climate-resilient, equitable, and sustainable food systems. Discussions underscored agroecology's role in restoring ecosystems, supporting livelihoods, and ensuring food sovereignty for communities in the face of ongoing challenges such as climate change, soil degradation, biodiversity loss, youth unemployment, and food insecurity.

The conference emphasized the critical role of women and youth as agents of change in driving sustainable agriculture and fostering food systems transformation. It also showcased innovations in regenerative agriculture, agro-biodiversity, climate-smart practices, and local agroecological enterprises.

Keynote Speakers, panelists, presenters and exhibitors alike highlighted the urgent need for systemic changes in agri-food systems and emphasized agroecology as a key driver for sustainability, resilience, and equity in agriculture.

- **Hon. Mutahi Kagwe, Cabinet Secretary Ministry Agriculture and Livestock development**, the guest speaker, officially opened the conference through his representative, Dr. Christopher Wanga. He highlighted the critical role of agroecology in enhancing Kenya's food security, economic resilience, and sustainable farming practices. This approach aligns with the country's Bottom-Up Economic Transformation Agenda (BETA) and Vision 2030.

- Dr. Paul Ronoh, Principal Secretary in the State Department of Agriculture, stressed that agroecology is essential for building resilient food systems. He called on stakeholders to take committed action in advancing Kenya's National Agroecology Strategy.
- Dr. David Amudavi, Executive Director, Biovision Africa Trust, emphasized that agroecology is crucial for tackling climate change, biodiversity loss, and food insecurity by focusing on farmer-centered, nature-positive solutions. He also noted that the conference serves as an important platform for knowledge exchange and innovation.
- Hon. Gladys Boss Shollei, Deputy Speaker of the Republic of Kenya, highlighted the urgent need to phase out harmful pesticides, stressing that if a product is banned in Europe, it should not be permitted in Kenya. She also called for enhanced collaboration between the government and researchers to scale up proven agroecological solutions.
- Markus Arbenz, Senior Consultant at FiBL Switzerland, pointed out that "Agroecology is the solution to the global food system crisis," highlighting its capacity to improve yields, boost climate resilience, and surpass conventional farming in terms of sustainability.

Emerging Issues and Insights Across Conference Sub-Themes

The 2nd Eastern Africa Agroecology Conference provided a robust platform for deep-dives into critical areas driving the agroecological transition. Discussions across the six sub-themes revealed key challenges, opportunities, and innovations shaping the future of agroecology in the region.

Under Sub-theme 1: Pathways for enhancing production, productivity and sustainability of agri-food systems with agroecological interventions - It emerged that innovations aimed at improving soil health and transforming agri-food systems are gaining momentum, especially with increasing donor interest in supporting such solutions. Among these, organic fertilizers—particularly frass-based fertilizers emerged as promising interventions. These nature-positive alternatives to chemical inputs offer a promising pathway for sustainable agricultural productivity. Participants called for intensified investment in research and innovation to further develop and scale agro-ecological solutions productivity while preserving ecosystem health. Additionally, the importance of local-level monitoring was also underscored, with tools like TAPE+ recognized for their potential to strengthen agroecology assessments and support evidence-based policymaking. A recurring theme in discussions was the pivotal role of farmers as change agents, where the integration

of indigenous knowledge with emerging technologies has been instrumental in the successful implementation of agroecological practices across various contexts.

Under the Sub-theme 2: Food security, nutrition, and health nexus: Soil health and farmer managed seed systems - Urban agroecology was recognized as a critical contributor to food security, particularly in rapidly expanding secondary cities. By shortening food supply chains and increasing access to nutritious, locally produced foods, it plays a vital role in enhancing urban resilience and nutrition outcomes. Additionally, diversified farming systems emerged as essential for enhancing food and nutrition security. However, factors such as education and income were found to have a stronger influence on nutrition outcomes.

There was a strong call for nutrition-sensitive agroecology programs that integrate health education and behavior change strategies. Key recommendations included:

- Pairing agroecology training with nutrition education to foster informed dietary choices.
- Incorporating gender-sensitive approaches to ensure equitable access and outcomes.
- Monitoring long-term health impacts, especially in relation to rising rates of non-communicable diseases (NCDs).

As Dr. Termote insightfully stated, "Agroecology gives us the seeds of change, but we must also plant the knowledge to harvest better health." This underscores the need for a holistic approach that links sustainable food systems with health and nutrition outcomes.

Under the Sub-theme 3: Women and Youth in agroecology: - There was a broad consensus that youth and women are vital catalysts of innovation and sustainability in agroecology. However, their full participation continues to be constrained by structural and financial barriers. Persistent gender inequalities hinder women's access to land and productive resources, while many youth agroecopreneurs face challenges in accessing capital and market links.

Digital platforms were highlighted as powerful tools to bridge these gaps—supporting education, advocacy, and enterprise development. Notable examples included:

- Tawi Fresh, an AI-powered digital marketplace enhancing market access.

- SowPrecise, offering pay-per-use solar-powered irrigation systems to improve productivity and sustainability.

Universities were identified as potential **hubs for agroecological learning, research, and innovation**. However, **gaps in curricula** and limited integration of agroecological principles remain key challenges.

To foster inclusion and scale impact, participants emphasized the need for:

- **Inclusive financing mechanisms** tailored to women and youth.
- **Mentorship and peer-learning networks** to build confidence and skills.
- **Supportive policy frameworks** linking education, enterprise, and advocacy.

Critical questions were also raised regarding:

- **Integrating agroecology into university curricula.**
- Enhancing **traceability and branding** of agroecological products.
- Reducing **post-harvest losses.**
- Ensuring **fair pricing and equitable market access** through innovative and transparent business models.

Under the Sub-theme 4: Trade, markets and economy: Implications for agroecological transitions - There was overwhelming consensus that **enhancing market access and increasing consumer awareness** are pivotal to realizing the full potential of agroecological products. Participants underscored the need to **promote organic and agroecology-based commodities** by effectively communicating their health, environmental, and economic benefits to the public.

One of the most promising opportunities identified was leveraging the African Continental Free Trade Area (AfCFTA) to boost intra-African trade in sustainable food products. However, this requires the development and harmonization of regional standards and protocols to ensure quality assurance, traceability, and consumer trust in agroecologically produced goods.

Stakeholders also emphasized the importance of supporting youth-driven agroecology enterprises through incubation hubs and business development programs. To scale agroecological transitions, participants called for collaborative efforts among governments, the private sector, and civil society to co-develop clear, inclusive standards and certification schemes. These should be designed to enable

agroecological products to compete in both regional and global markets, while reinforcing sustainability and equity in trade systems.

Under the Sub-theme 5: **Institutional and policy opportunities for unlocking potential of agroecology in transforming agrifood systems** - Unlocking the transformative potential of agroecology requires **robust institutional and policy frameworks**, underpinned by **targeted investments and inclusive governance**. Delegates emphasized that policies must go beyond treating farmers as passive beneficiaries, recognizing them instead as **co-creators of knowledge and innovation**.

Key recommendations included:

- **Investing in research and development** to foster **adaptive innovations** that enhance food security, climate resilience, and farmer-led knowledge systems.
- **Aligning national agroecology strategies** with global and continental frameworks such as the **SDGs**, **Africa Agenda 2063**, and **CAADP**.

The conference called for alignment of national agroecology strategies and policies with global and continental commitments such as the SDGs, Africa Agenda 2063, and the Comprehensive Africa Agriculture Development Programme (CAADP). Developing standardized performance measurement tools and integrating agroecology into national agricultural investment plans (NAIPs and RAIPs) were highlighted as urgent priorities to enable impact tracking and institutionalization.

To enable this transition, delegates called for comprehensive legal, institutional, and financial reforms, including: addressing land tenure barriers, promoting gender and youth inclusion, revising national education curricula, and establishing coordinated multi-stakeholder mechanisms. There was also a strong call to allocate at least 20% of national agriculture budgets to agroecology and to mobilize resources through innovative financing models.

Finally, enhancing partnerships, promoting knowledge sharing, and establishing incubation hubs for agroecological enterprises—particularly for youth—were identified as practical steps toward sustainable food systems transformation.

Under the Sub-theme 6: **Financing mechanisms for agroecological pathways and transitions-** Achieving scaled agroecological transitions hinges on **sustained, targeted financing mechanisms** that promote **equity, innovation, and measurable**

impact. A strong consensus emerged on the urgent need for dedicated public funding to support agroecology programs—particularly those that empower women, youth, and marginalized communities.

Participants strongly advocated for Member States to allocate at least 20% of their total agriculture budgets to agroecology, acknowledging its pivotal role in promoting soil health, enhancing food security, and supporting climate adaptation. Development and technical partners were urged to increase their financial commitments to agroecological interventions across Africa.

Additionally, stakeholders emphasized the need for innovative financing models such as blended finance, and greater support for agroecological research, mechanization, and enterprise incubation. Investment in appropriate technologies and farmer-led innovations was seen as essential not only for boosting productivity and sustainability but also for reducing labor burdens and making agroecology attractive and viable for the next generation of food system actors.

Identified Gaps and Best Practices for Advancing Agroecological Transitions

Based on the thematic discussions held during the conference, several cross-cutting gaps were identified in areas such as policy, research and innovation, trade and investment, and institutional support. These gaps continue to hinder the full realization of agroecology's transformative potential within agri-food systems across Africa. At the same time, promising best practices and innovative models emerged throughout the deliberations—offering valuable lessons that can inform targeted actions, strengthen systems, and shape future interventions to advance sustainable and inclusive agroecological transitions.

Thematic Area	Critical Gaps	Best Practices & Innovations
Policy	• Weak integration of agroecology in national plans and NAIPs. • Inadequate institutional coordination mechanisms • Limited land rights for women and youth. • Insufficient alignment with continental and global commitments, such as the African Union's Agenda 2063 and the Sustainable Development Goals (SDGs	• Adoption of national agroecology strategies in a growing number of countries offers a valuable entry point for scaling and institutionalizing agroecological transitions. • The African Union (AU) Decision on Organic Farming (2011) provides a foundational policy framework to enhance coherence and alignment across national, regional, and continental agroecology initiatives.
Research & Knowledge	• Limited farmer-led and context-specific research. • Significant gaps in nutrition-sensitive agroecology (AE) • Lack of standardized indicators and robust monitoring & evaluation (M&E) tools. • Underutilization of Indigenous knowledge systems.	• Deployment of innovative tools such as TAPE+ (Tool for Agroecology Performance Evaluation) to enable robust impact measurement and support data-driven policymaking. • Integration of nutrition education into agroecology programs, enhancing dietary diversity and linking food

		production with improved health outcomes. ● Adoption of community-based participatory research models, empowering local stakeholders and ensuring that agroecological solutions are context-specific, inclusive, and farmer-driven.
Trade & Investment	● Low product visibility due to lack of branding, traceability, and certification. ● Weak or underdeveloped regional protocols for agroecological trade, undermining efforts to scale intra-African commerce in sustainable food products. ● Persistent barriers to capital access for youth and women agroecopreneurs, restricting enterprise growth and market participation. ● Limited utilization of the African Continental Free Trade Area for agroecology trade.	● Digital marketplaces, such as Tawi Fresh in Kenya, are connecting farmers directly to buyers, enhancing market access, reducing transaction costs, and improving transparency in agroecological value chains. ● Regional certification initiatives are beginning to emerge, offering the potential to standardize quality, build consumer trust, and promote cross-border trade in agroecological products. ● Innovative service models, like SowPrecise's pay-per-use solar irrigation systems, are making sustainable technologies more accessible and affordable for smallholder

		farmers, particularly youth and women.
Institutional Support	• **Fragmented multi-stakeholder coordination**, leading to duplication of efforts, inefficiencies, and lack of coherent national strategies for agroecological transitions. • **Limited institutional capacity for resource mobilization**, constraining the ability to attract, manage, and effectively allocate funding—especially from development partners and climate finance sources. • **Absence of dedicated funding lines for agroecology** in national budgets, resulting in insufficient and inconsistent support for program implementation,	• Establish multi-stakeholder platforms for agroecology governance, fostering coordination among government, civil society, private sector, academia, and farming communities. • Promote university incubation hubs as centers for youth engagement innovation, and enterprise development, bridging the gap between research, education, and practice.. • Ensure Adequate budgetary allocation to agroecology within national and sub-national agricultural budgets, enabling long-term program implementation and scaling of context-specific solutions..

	research, and farmer outreach.	

As the Conference drew to a close, speakers and participants expressed their strong appreciation with the rich discussions and ideas shared throughout the sessions. The event offered a valuable platform to exchange **policy insights, research findings, and grassroots experiences**, deepening collective understanding of the **transformative potential of agroecology**. From enhancing soil health and food security to empowering women and youth, the conference reinforced that agroecology is not just a set of practices—but a **pathway to stronger, fairer, and more sustainable agri-food systems** across Africa and beyond.

It was made clear throughout the conference that agroecology is more than **a collection of farming techniques**. It represents a **holistic way of** – one that connects our environment, our health, our cultures, and our economies. While the principles of agroecology are rooted in long-standing traditions and knowledge systems, their transformative potential requires **renewed commitment, stronger partnerships, and broader public awareness**. Only through such collective efforts can we effectively confront the pressing challenges of **climate change, food insecurity, and social inequality**.

Participants were encouraged to take what they learned and apply it in their own work, communities, and countries. Everyone has a role to play—whether as a farmer, policymaker, researcher, youth leader, or an agroecology advocate. It was a resounding call to action—reminding us that **everyone has a role** to play in advancing agroecology, whether as a farmer, policymaker, researcher, youth leader, or advocate. The conference closed with a powerful reminder: **Agroecology offers real hope, but it needs real action. Let us carry this message forward and be the light that spreads knowledge, change, and a better future.**

Importantly, drawing from the **identified gaps, challenges,** and **emerging best practices** across the key thematic areas, conference participants came togther to craft a **unified Call to Action** aimed at guiding future efforts in advancing agroecology across Africa. This collective declaration is intended to **guide and**

inspire future efforts in advancing agroecology across Africa, with a focus on policy coherence, inclusive governance, sustainable financing, and community-led innovation.

The full detailed Communiqué and Call to Action is provided in Annex 5.

Conference call to Action:

The conference calls upon all stakeholders—governments, development partners, research institutions, civil society, farmers' organizations, and the private sector—to take coordinated and transformative action to advance agroecology across Africa. Specifically, participants urge stakeholders to:

1. Policy and Program Development: Strengthen national and local policies to support agroecology, phase out hazardous inputs, and embed sustainability in food system programs.
2. Partnership and Capacity Development: Promote multi-stakeholder collaboration and invest in building the technical capacity of farmers, institutions, and civil society to scale agroecological practices.
3. Financing Mechanisms: Reallocate public and private financing to support agroecological transitions, including subsidies, grants, and incentives for sustainable practices.
4. Trade and Markets: Improve access to fair and inclusive markets for agroecological producers, while promoting consumer awareness and demand for sustainably produced food.

DAY 1, Tuesday 25th March

Pre-plenary session

Mr. Johnson Mwakazi, The Royal Voice International - Master of Ceremony

The MC introduced the audience to the concept of agroecology through an interactive session, fostering collective reflections on its role in transforming food systems. Delegates from over 42 countries emphasized agroecology as a holistic, ecosystem-based approach that integrates ecological principles into agriculture.

Key Discussion Points

- Agroecology as a Pathway to Sustainability – Emphasized the role of agroecology in striking a balance between food production, biodiversity conservation, and ecosystem restoration, positioning it as a key strategy for long-term sustainability.
- Practical Implementation – Highlighted the urgent need for scalable, farmer-led solutions that are locally adapted, enhance agricultural resilience and productivity, and promote knowledge sharing at the grassroots level.
- Policy Alignment – Stressed the importance of mainstreaming agroecology into national and regional policy frameworks and strengthening advocacy to ensure agroecology is recognized as a cornerstone of sustainable food systems and climate action.

Welcoming Remarks: Dr. David Amudavi- Convener & Chair, Conference Organizing Committee, Executive Director, Biovision Africa Trust

Dr. David Amudavi warmly welcomed delegates expressing deep appreciation for the overwhelming turnout at the 2nd Eastern Africa Agroecology Conference, building on the momentum of the inaugural event in 2023. With over 800 participants, the conference serves as a vibrant platform for learning, networking, and showcasing agroecology-driven innovations..

Dr. Amudavi emphasized the importance of such gatherings in strengthening regional collaboration and advancing agroecology as a transformative pathway for sustainable food systems in Eastern Africa and beyond.

Key Messages:

- Why We Are Here-The conference provides a **collaborative space** for participants to **exchange knowledge, explore innovative exhibitions**, and **experience the tangible impact** of agroecological practices across the region.
- The Urgency of Agroecology-Agroecology is a **critical response** to the interconnected challenges of **climate change, biodiversity loss, and food insecurity**, offering **nature-positive, farmer-centered solutions** that are both sustainable and scalable.
- Transforming Food Systems-Agroecology represents a **systemic shift** away from input-intensive agriculture toward models that are **resilient, equitable, and regenerative**, centering ecological health and community empowerment.

These remarks **set the tone** for the conference's in-depth discussions on **scaling up agroecological transitions** in **policy, research, and practice** across Africa.

KEYNOTE ADDRESSES ON PRODUCTIVITY, PRODUCTION, SOIL HEALTH AND FARMER MANAGED SEEDS (SUB-THEME 1 AND 2)

Dr. Anne Muriuki, Chief Research Scientist, Kenya Agricultural and Livestock Research Organization (KALRO) moderated the keynote session, initiating participant engagement through *menti.com* by posing the question: "What are some significant contributions from today's presentations?" The audience responses highlighted several key themes among them;

- Strong endorsement of insect frass fertilizer for soil health and waste recycling,
- Validation of TAPE+ tools for localized agroecology monitoring, and
- Evidence of agroecology's profitability and scalability.

Notable mentions included Kilimo-hai's market differentiation strategy for agroecological products in Kenya and calls for more research on synthetic fertilizer alternatives. However, participants noted lingering confusion between terms such as agroecology, organic farming, and regenerative agriculture despite their practical synergies.

Markus Arbenz, Senior Consultant, Department of International Cooperation – FiBL Switzerland:

Evidence for Narratives – Research Contributions to Agroecology and Organic Development in Africa

Markus Arbenz highlighted the global food system crisis, emphasizing that while food production has increased, hunger, malnutrition, and environmental degradation persist. He underscored the urgency of achieving sustainable and resilient agricultural systems to feed a growing population amid climate challenges.

Key Messages:

- The Triple Burden of Malnutrition – A paradox where undernutrition, overweight, and obesity coexist, worsening global health outcomes.
- Key Challenges – Rapid population growth, shifting dietary patterns, and accelerating environmental degradation threaten food security.
- Competing Narratives on Feeding the World – Agroecological and regenerative agriculture vs. high-tech precision agriculture and biotechnology.
- Agroecology as a Solution – Guided by the 13 principles (HLPE, 2019), agroecology fosters systemic transformation in food production.
- The Case for Organic and Agroecology in the Tropics – Research debunks skepticism, showing that diverse agroecological systems;
  - Improve yields through biodiversity and ecosystem services.
  - Enhance climate resilience by reducing carbon footprints.
  - Outperform conventional farming in sustainability and productivity.
- Opportunities for Scaling Up – Policy advancements, market development, and improved farmer capacity-building are key enablers.

A Call to Action – Agroecology is not just viable—it is essential for reducing pests, restoring ecosystems, and ensuring long-term food security. Stakeholders are called upon to act with urgency and commitment to scale up agroecological transitions that promote resilience, equity, and environmental regeneration across all levels of the food system.

Dr. Chrysantus Mbi Tanga, Senior Scientist, Head of INSEFF Program, ICIPE:
Insect Frass Fertilizer Innovations for Soil Health & Agri-Food System Transformation.

Dr. Tanga underscored the transformative potential of insect frass fertilizer in advancing sustainable soil health solutions across Africa. He emphasized that

Africa's **naturally high organic soil content** presents a significant opportunity—one that can be maximized through **innovative recycling and nutrient management approaches**.

His presentation demonstrated that **frass-based fertilizers** outperform synthetic alternatives not only in **nutrient richness** and **pest suppression**, but also in delivering **economic co-benefits**, particularly through **job creation** in local production and application chains.

Moreover, Dr. Tanga highlighted the **environmental advantages** of frass fertilizers, including **enhanced soil organic matter**, improved **climate resilience**, and a **reduction in chemical dependency**. He also acknowledged the **growing donor interest and support** for scaling such nature-positive innovations, positioning frass fertilizer as a key agroecological tool for food systems transformation in Africa.

Key Messages:

- Eco-Warrior Insects for Organic Waste Recycling – Harnessing insects to convert organic waste nine times faster than conventional composting methods.
- Climate Benefits – Lower greenhouse gas emissions and minimal capital investment make insect frass a scalable solution.
- Nutrient-Rich Organic Fertilizer – Provides a 3-9x increase in micronutrients compared to synthetic fertilizers.
- Soil Health & Pest Suppression – Enhances microbial activity and enzymatic functions, reduces soil acidity and restores soil biodiversity, and suppresses soil-borne pests by 96%-100%, including nematodes.
- Water Retention & Irrigation Efficiency – Improves soil water retention, reducing irrigation costs, Enhances nutrient use efficiency by 27% and Boosts nitrogen fixation by 46%-58%.
- Higher Crop Yields – Increases perennial crop yields by 63%-74% and strengthens long-term soil fertility and food security.

➢ Potential to Enhance – Soil health, productivity, and food security.
➢ Need for Research & Innovation – To scale and refine insect-based fertilization methods.
➢ Access to Capital – Investment required to expand adoption.

- Policy & Standards – Formalizing insect frass use in agricultural frameworks.

Rémi Cluset, Agroecology Advisor, FAO:

Advancing Agroecology with TAPE+: Tools for Local & National Policy Action

Rémi Cluset introduced the TAPE (Tool for Agroecology Performance Evaluation), a framework developed over the past decade to assess agroecological transitions and support sustainable agrifood systems. The tool provides evidence-based insights to guide policy and decision-making.

TAPE Overview:

TAPE is a comprehensive framework designed to evaluate agroecological transitions and their impact on food systems. It has been implemented in 58+ countries, generating over 8 million data points to support evidence-based decision-making. Notably, 70% of TAPE projects demonstrate a direct link between agroecology and soil health improvements.

The framework highlights key contributions of agroecology, including enhancing soil health, strengthening food security, improving income perception, and promoting agrobiodiversity. It is also instrumental in policy and program design, providing a structured approach to project cycle management, monitoring, evaluation, and impact assessment at both local and national levels.

To further advance accessibility and efficiency, TAPE+ has been developed as an open-access tool that simplifies implementation and empowers local partners, reducing reliance on FAO. Additionally, the TAPE National Initiative aims to generate representative national-level data to guide policy formulation and program development, ensuring a data-driven approach to agroecology adoption and sustainability.

Key Messages:

- TAPE as a Strategic Tool-; TAPE provides crucial data guide and monitor agroecological transitions, enabling evidence-based decision-making.
- TAPE+ for Greater Accessibility: TAPE+ will expand accessibility and user independence.
- Scaling up to National Level: Implementing TAPE at the National level will significantly enhance policy formulation, impact measurement and alignment with sustainable development goals.

Panel discussions

Moderator: Dr. Anne Muriuki (KALRO)

Daniel Wanaka, Executive Director, Seed Savers Network

Challenges in Farmer Managed Seeds Systems

Despite the growing recognition of agroecology, organic inputs—particularly seeds—are not reaching farmers effectively. A major barrier is the limited adoption of research outputs by farmers, stemming from weak linkages between research institutions and farming communities.

Current research on seeds remains scarce, and even the knowledge that does exist often fails to translate into practice. It is estimated that 60% of available knowledge and seed materials never reach farmers, largely due to commercial dynamics. Commercial seed companies typically lack interest in agroecological seed systems, prioritizing profit-driven models over farmer-led innovation and biodiversity.

This disconnect is slowing the progress of Farmer-Managed Seed Systems (FMSS)—an essential component of resilient, sustainable, and context-specific food systems.

Dr. Sarah Olembo, Chair, ASBPP EOA FMSS Cluster

Seeds, Soils and Women: Cornerstones of Agroecology food systems transition

Emphasis must be placed on seeds, as they are the foundation of Farmer-Managed Seed Systems (FMSS). However, it is equally important to acknowledge that without healthy soils, FMSS cannot thrive. Biodiversity must originate from the seed itself. Women play a critical role in seed preservation and sorting, making them central to maintaining and enhancing biodiversity. Therefore, efforts to preserve biodiversity must focus on empowering and supporting women in seed conservation.

Markus Arbenz

How do we handle the transition period?

We have to realize that the agricultural system is sick. Agriculture is a transitional system, and we can embrace natural farming. Evidence shows that although it may take time and patience, it eventually works.

Dr. Chrysantus Mbi Tanga:

Where do we get the raw materials for all farmers?

We produce a high percentage of waste, and we use insects to transform this waste into fertilizer. For every 10 tonnes of waste recycled, we get 400kg of frass within 5 weeks

Remi Cluset

How do we implement the National Agroecology Plan?

It has been tried in Kenya. The key is to keep it simple and work closely with partners.

Recommendations Moving Forward from the Plenary:

- Governments should take up agroecological strategies and initiatives.
- Ensure meaningful inclusion of stakeholder's participation—including farmers, youth, women, indigenous communities, researchers, and the private sector—to co-create, implement, and monitor agroecological programs.
- Agroecology should be integrated into the current agricultural policy and education systems to promote long-term sustainability, institutional support, and resource efficiency.

The session collectively underscored that successful agroecology implementation requires farmer-centered capacity building, innovation in soil health solutions, indicator-driven transitions, and inclusion of diverse stakeholders—from researchers to grassroots networks. This multidimensional dialogue set a constructive tone for addressing both the technical and human dimensions of food system transformation.

Plenary Takeaways from the Discussion

- Frass-Based Fertilizer Innovation is emerging as a promising solution for soil health and sustainable farming.
- TAPE+ for Local-Level Monitoring is strengthening agroecology assessments and guiding data-driven policymaking.
- Agroecology has the Potential to Feed the World
- Agroecological systems can be both economically viable and widely adoptable.
- Donors should engage with governments to foster agroecological policies and investments.
- There is need to explore alternative ways to enhance productivity, acknowledging that agroecology takes time to match conventional yields.

- Encouraging broader participation, including policymakers, researchers, and private sector players.
- Farmers need Support during the transition period
- Governments can use the TAPE framework to develop National Agroecology Strategies and shape country-specific agroecology policies and programs.
- Agroecology can play a key role in addressing food insecurity, environmental sustainability, and climate resilience.

KEYNOTE ADDRESS ON POLICY AND INSTITUTIONAL ARRANGEMENTS (SUB-THEME 5)

Dr. David Amudavi – Executive Director, Biovision Africa Trust: ***Welcome Remarks & Conference Purpose***

Dr. David Amudavi officially welcomed delegates to the 2nd Eastern Africa Agroecology Conference, expressing his gratitude for the strong participation and representation. He acknowledged the presence of distinguished guests and emphasized the growing importance of the event, which has expanded significantly since its inaugural edition with representation from over 42 countries.

Key Highlights from the Welcome Address:

- Conference Growth & Purpose – The conference has expanded by 1.5 times since the last edition, serving as a platform to showcase and promote agroecology as a pathway to resilient and sustainable agrifood systems.
- Evidence-Based Discussions: Participants will engage with real-world case studies showcasing how agroecology can strengthen food security, boost farmers' incomes, and enhance food safety across diverse contexts.
- Stakeholder Collaboration: The event brings together a broad spectrum of stakeholders—including farmers, researchers, policymakers, investors, and civil society—to foster partnerships that support innovation and improve market access.
- Addressing Systemic Challenges: Focused dialogues will address persistent barriers in production, market entry, and quality compliance, with an emphasis on aligning efforts with global sustainability goals.
- Commitment to Action: Attendees are called upon to contribute meaningfully to shaping policy frameworks, innovations, and research that support smallholders, involve the private sector, and empower consumers.

- A Call for Collective Responsibility: The message throughout the sessions reinforces the need for **shared accountability** in driving agroecological transitions—recognizing that sustainable agriculture is a collective endeavor with far-reaching benefits for communities and ecosystems alike.

Dr. Hans R. Herren – Board Chair & President (2005–), Millennium Institute, USA:
Political and Policy Changes for a Fair, Healthy, and Regenerative Food System

Dr. Hans R. Herren delivered a compelling address highlighting the crucial role of politics and policy in driving the transformation of food systems toward fairness, health, and regeneration. He underscored Africa's leadership in advancing agroecology initiatives, while emphasizing the pressing need for systemic change to achieve sustainable and equitable outcomes globally.

Key Messages from the Address:

- Hunger and Poverty are Political Issues – Solutions to world hunger and poverty lie more in political will and policy action than in scientific or technological innovations.
- Policy Failures, Not Research Gaps – Persistent food insecurity is rooted in **flawed policies**, particularly those prioritizing **technological fixes** over **socioeconomic equity and justice**.
- Systemic Transformation is Needed – A lasting impact demands **long-term structural change**, rather than reactive interventions that fail to address root causes.
- Decentralized Decision-Making – Empowering local communities in decision-making processes ensures food systems are more responsive and effective.
- The Food Security Paradox – Despite increased food production, food insecurity persists due to misallocation of resources, economic inequalities, and waste.
- Equitable Resource Distribution – Policies must prioritize fair land distribution, gender equality, minimum wage policies, and investment in local and international markets.
- Agroecology as a Viable, Systemic Solution – Despite being sidelined, agroecology offers a viable, systemic approach to food security and sustainability.

- Food as a Human Right – Governments have a responsibility to ensure food security as part of fundamental human rights.
- Aligning Agroecology with SDGs – Countries must integrate agroecology into their policies and strategies to achieve the Sustainable Development Goals (SDGs).
- Call to Action – The global food system must change course—from extractive and inequitable practices to resilient, inclusive, and regenerative approaches.

Dr. Ronnie Brathwaite – Senior Agriculture Officer, Plant Production and Protection Division, FAO: ***Agroecology in a Changing Geopolitical*** **Climate**

Dr. Brathwaite underscored the pivotal role of agroecology in strengthening food systems amid global challenges such as climate change and geopolitical tensions. According to Dr. Brathwaite Agroecology helps promote biodiversity, empowers local and traditional knowledge, enhances agroforestry and sustainable land use and supports climate change mitigation.

Key Messages from the Address:

- Agroecology as a Holistic Solution – It enhances biodiversity, increases productivity, and provides economic opportunities for families while promoting environmental health.
- Reducing Dependency on Harmful Inputs – Agroecology decreases reliance on synthetic fertilizers and imported seeds by prioritizing community-driven solutions.
- Food Security Amid Global Challenges – Many countries dependent on food imports face severe food insecurity; agroecology offers a sustainable alternative.

Call to Action:

- Collaboration is Essential – Governments, scientists, policymakers, and communities must work together.
- Agroecology in National Policies – Governments must integrate agroecology into policies to ensure long-term sustainability.
- Investment in Research and Innovation – More research is needed, especially in bio-based fertilizers and climate-smart practices.

- Private Sector Engagement – Increased private sector investment in agroecology is vital for scaling up sustainable solutions.
- International Cooperation – Strengthening global partnerships can enhance equitable trade and support vulnerable regions.

Ms. Joyce Mutia – CEC, Agriculture & Livestock, Makueni County: ***The Role of Sub-National in Advancing Agroecology***

Ms. Mutia emphasized the critical role of county governments in embedding agroecology within Kenya's agricultural policies and ensuring its effective implementation at the grassroots level.

Key Messages from the Address:

- Agroecology is the Future of Food and Farming – The conference plays a critical role in shaping sustainable food systems across Africa.
- Kenya's Commitment to Agroecology – The national agroecology stairway provides a guiding framework, with counties aligning their policies accordingly.
- County-Level Agroecology Initiatives – Counties are leading localized efforts to integrate agroecological principles into agriculture through enabling policies, investment, and community engagement.
- The Living Laboratory Initiative – Led by ICRAF, this initiative fosters stakeholder collaboration to test and scale agroecological solutions, generating valuable evidence for policy decisions.
- Enabling Environment for Agroecology – County governments are committed to:
  - Strengthening policies that support agroecology
  - Investing in sustainable agricultural practices
  - Building the capacity of farmers and stakeholders
  - Facilitating market linkages to scale agroecology

Call to Action: Transform commitments into concrete actions to promote resilient, climate-smart agriculture.

Bodo Imik, Kenya County Director, GIZ represented by Program Director: ***The Role of Policy and Partnerships in Agroecological Transformation***

The GIZ representative emphasized the urgent need for a holistic transformation of Africa's agrifood systems, aligning short-term gains with long-term sustainability.

Key Messages

- Agriculture's Role in Africa – 70% of the population relies on farming, making agriculture critical for economic prosperity and political stability.
- Challenges in the Current System – The system prioritizes short-term profits over long-term resilience and prosperity for future generations.
- Agroecology as a Path to Transformation – Recognized as a transformative framework, AE is already being adopted in many countries.
- Kenya's Leadership in Agroecology – The National Agroecology Strategy Plan sets a strong foundation for sustainable agricultural practices.
- GIZ's Commitment to Agroecology – With support from the EU, GIZ has partnered with organizations like Biovision Africa Trust (BvAT) to promote agroecological interventions.
- Evidence of Impact – Over the past four years, AE adoption has led to a 25% increase in productivity, proving its viability.
- Farmers as Key Change Agents – The integration of indigenous knowledge with innovation has driven agroecological success.

Essential Policy Changes for Transformation:

- Repurposing agricultural incentives to support agroecological practices
- Ensuring an enabling policy environment for farmers, communities, and the private sector
- Developing standards and procedures to attract private sector investment
- Civil society participation in co-creating legislation that supports agroecology

Call to Action: GIZ reaffirms its long-standing commitment to supporting agroecology and sustainable food systems across Africa and calls on stakeholders to seize the opportunity to push agroecological programs forward and ensure effective implementation of the Kenyan strategy.

Hon. Fred Bwino, State Minister for Agriculture, Uganda: ***Agroecology as a Science, Practice, and Movement***

Hon. Fred Bwino emphasized that agroecology must be recognized and advanced on three key fronts: as a scientific discipline, a set of sustainable farming practices, and a social movement advocating for food system transformation. Defining agroecology as "more than a concept, but a science, a practice, and a movement for sustainable food systems", Hon. Bwino ended his remarks with a Thought-Provoking Question; "Are we transitioning into the past or into the future?" – A challenge to policymakers and stakeholders to ensure agroecology is forward-looking and adaptive to modern challenges.

Uganda's Progress in Agroecology

- Uganda has made strides in integrating agroecology into national policies.
- A policy framework for agroecology was established in 2019 and is currently under review.
- The government is developing an Agroecology Strategy to operationalize the policy effectively.

Challenges and Next Steps

- Policy Implementation – The existing framework must be backed by strategic investment.
- Investment Gaps – More resources are required to support farmers and agroecological initiatives.
- Awareness and Information – Uganda has yet to harmonize agroecology-related knowledge and disseminate it widely.

Call to Action: Governments to strengthen policy frameworks, mobilize investments, and enhance awareness to ensure agroecology becomes a pillar of sustainable agriculture and food security.

Address by Dr. Cristopher Wanga – Representative of Hon. Mutahi Kagwe, EGH, Cabinet Secretary, Ministry of Agriculture & Livestock Development, Kenya

Agro-ecology is a Commitment to Environmental Conservation in Agriculture

Dr. Wanga, speaking on behalf of Hon. Mutahi Kagwe, emphasized that agriculture and environmental conservation must be integrated to build a truly sustainable food system. He stressed that agricultural development should not come at the cost of ecological degradation.

Dr. Wanga highlighted agroecology as a key approach that ensures farming practices are designed to protect, restore, and work in harmony with natural ecosystems. By aligning agricultural productivity with ecological stewardship, agroecology offers a path toward both food security and environmental sustainability.

Five Key Pillars of Agroecology:

1. Soil Health – Maintaining fertile and productive soils.
2. Biodiversity – Protecting plant and animal diversity within farming systems.
3. Animal Health – Ensuring livestock well-being through sustainable practices.
4. Ground Cover – Preventing land degradation by minimizing bare soil exposure
5. Natural Resource Conservation – Responsible use of water, forests, and ecosystems.

Kenya's National Agroecology Strategy provides a framework for collaboration among stakeholders as it aims to mainstream agroecology across all agricultural sectors.

Key Messages:

- Agriculture is the Foundation of Our Food Systems
- Kenya's food security depends on sustainable agricultural practices.

- Environmental conservation must be prioritized in all agronomic activities.

Call to Action:

- **Strengthen multi-stakeholder collaboration** to ensure the effective design, financing, and implementation of agroecology strategies at all levels.
- **Integrate agroecological principles** across **policy frameworks, scientific research, and practical farming systems**, ensuring consistency from national plans to community actions.
- **Balance productivity with ecological integrity**, making agriculture both **economically viable** and **environmentally responsible**.

Dr. Wanga reaffirmed the Kenya government's commitment to advancing agroecology as a solution for sustainable food production and environmental conservation.

Keynote address by Hon. Mutahi Kagwe, Cabinet Secretary, Ministry of Agriculture & Livestock Development

The Cabinet Secretary expressed the Ministry's strong alignment with the conference theme, emphasizing its relevance to Kenya's Bottom-Up Economic Transformation Agenda and the Vision 2030 development blueprint. He underscored the importance of leveraging agroecology to drive food security, economic resilience, and sustainable agricultural practices.

Key Highlights:

1. Strategic Direction for Agricultural Transformation

- The conference builds on key lessons from the previous edition, providing a platform for knowledge exchange.
- There is a need to develop concrete proposals that will guide national agricultural policies and interventions.
- Scaling up innovative, climate-smart technologies is crucial to positioning Kenya and East Africa as regional leaders in agroecology.

2. Prioritizing Sustainable Agricultural Practices

- **Integrated Pest Management (IPM):** Expanding the use of biological control methods to reduce dependency on chemical pesticides.

- Conservation Agriculture: Promoting soil health, biodiversity, and climate resilience in farming systems.
- Climate-Smart Agriculture: Implementing sustainable techniques to mitigate climate change impacts.

3. Enabling a Supportive Environment for Agroecology

- Encouraging private sector investment through favorable policy frameworks.
- Policy measures aligned with the Comprehensive Africa Agriculture Development Programme (CAADP) and the Sustainable Development Goals (SDGs).
- The National Agroecology Strategy serves as a guide to transform food systems and integrate long-term solutions.
- Strengthening diverse and climate-resilient agricultural value chains to support food security.

4. Livestock and Agroecology

- 80% of Kenya's landmass is arid and semi-arid, making livestock farming central to food security and rural livelihoods.
- Livestock is often linked to biodiversity loss and climate change, necessitating sustainable solutions.
- Kenya is developing a Climate-Smart Livestock Master Plan to address environmental challenges while improving productivity.

5. Consumer Role in Sustainable Food Systems

- Organic farming is gaining momentum in Kenya and East Africa.
- Consumers play a vital role in creating demand for sustainably produced food, supporting the growth of agroecological farming.
- The East African region is yet to finalize its regional agroecology strategy, highlighting the need for collaboration.

Official Opening of the Conference

The Cabinet Secretary reaffirmed the Government of Kenya's strong commitment to promoting agroecology, climate resilience, and agricultural transformation as cornerstones of sustainable development.

In his official remarks, he formally declared the conference open, urging all stakeholders—policymakers, researchers, farmers, private sector actors, and civil society—to take concrete, collaborative actions toward building a sustainable, inclusive, and food-secure future.

PARALLEL SESSIONS

Parallel Session 1: Innovative Soil and Crop Management for Agroecological Farming

Presentation

*Dr. Katrien vant Hooft – **Natural Livestock Farming (NLF)***

Dr. vant Hooft presented on the dangers of antibiotic and pesticide overuse in livestock systems, which contribute to resistance, environmental degradation, and economic losses. She introduced the Natural Livestock Farming (NLF) approach, based on the "One Health" model that blends indigenous farmer knowledge, Western veterinary science, and Ayurveda.
Case studies highlighted significant successes:

- In India, 81% disease cure rate and 87% reduction in antibiotic residues in milk.
- In Ethiopia, a 50% increase in milk production and 33% rise in farm income.
- In Uganda, increased cooperative membership and use of herbal tick control.
- In the Netherlands, expansion of herbal grasslands and initiation of an NLF veterinary course.

She concluded by emphasizing the need to expand NLF globally, push for supportive policy, and invest in further research.

*Mr. Cyrille Awuonda – **Climate Adaptation Strategies in Laikipia***

Mr. Awuonda presented a study on adaptation strategies among agropastoralist households in Laikipia County. Common strategies included farm risk reduction, sustainable agriculture, livestock and traditional practices, and diversification.

However, adoption was hindered by limited finances, land constraints, and high labor demands.
Enabling factors identified included education, access to technology, household wealth, and social group membership. Recommendations focused on reducing financial and technological barriers to encourage broader uptake of these strategies.

*Ms. Beryl Okumu – **Transitioning to Sustainable Food Systems***

Ms. Okumu critiqued industrial livestock systems, citing issues such as animal cruelty, environmental damage, public health threats, and growing inequality. She advocated for a **Just Transition** towards agroecological and humane livestock systems. Benefits include improved animal welfare, better farmer livelihoods, reduced antibiotic dependence, and environmental conservation. She called for coordinated action from stakeholders to reform policies, build capacity, and invest in ethical and sustainable farming practices

Panel Discussion

Moderator: **Hottensiah Mwangi**, Chief Research Scientist, Kenya Agricultural Livestock and Research Organization

Panelists:

i. Dr. Katrien vant Hooft – Natural Livestock Farming (NLF)
ii. Mr. Cyrille Awuonda – Kenya Agricultural & Livestock Research Organization (KALRO)
iii. Ms. Beryl Okumu – World Animal Protection

Dr. Katrien vant Hooft

What is the impact of natural livestock farming on animal and human health?

Adopting sustainable livestock and agricultural practices offers numerous benefits, including reducing antibiotic resistance in humans, improving overall environmental health, and boosting farmer income and food security. These approaches have been successfully demonstrated in diverse contexts across India, Ethiopia, Uganda, and the Netherlands, showcasing their adaptability and positive impact on both human and ecological well-being..

Mr. Cyrille Awuonda

What are the dominant adaptation strategies among agropastoralists in Laikipia?

Risk reduction, sustainable agriculture, diversification, livestock management, and the integration of traditional practices are essential strategies for building resilient livelihoods and enhancing food security, particularly in vulnerable communities. However, several barriers hinder the successful implementation of these approaches, including limited access to finance, inadequate resources, and the presence of competing development priorities. Despite these challenges, there are key enabling factors that can support progress in these areas, such as increased education and awareness, strong social networks, and improved access to credit, all of which empower communities to adopt and sustain these practices effectively.

Ms. Beryl Okumu

What are the key principles of the Just Transition from industrial animal agriculture?

The key principles of a Just Transition from industrial animal agriculture focus on creating humane, sustainable, and equitable food systems that reduce harm to people, animals, and the environment. This transition supports better nutrition, strengthens farmer livelihoods, and promotes environmental protection. Achieving these goals requires policy change and investment in humane farming practices.

Parallel Session 2: **The Economics and Adoption of Agroecology**

Presentation

*Dr. Rui Benfica, Dr. Kristin Davis, Dr. Marup Hossain, Dr. Sedi Boukaka, Dr. Carlo Azzarri – **Unraveling the True Costs of Food Production in Kenya***

The team presented an analysis of the comprehensive costs associated with food production in Kenya. The study utilized economic tools such as the TAPE tool and monetization frameworks to quantify environmental footprints, including greenhouse gas emissions. The research integrated data up to 2023, providing a baseline for monitoring and evaluation. The findings emphasize the significant economic and ecological externalities involved in conventional food production, underscoring the need for more sustainable agricultural approaches.

Dr. Shadrack Mbapila, Mr. Damian Sulumo, et al. – ***Adoption of Organic Agroecological Practices in Arusha Region, Tanzania: A Multinomial Logistic Model***

This study assessed the factors influencing the adoption of organic agroecological practices among farmers in Tanzania's Arusha region. The research identified a limited integration of agroecological principles, focusing mainly on five key practices including the use of sunflowers, legumes, and organic manure. Results indicated that while adoption is beneficial through yield increases, barriers such as limited knowledge and economic constraints persist. The study highlighted the necessity to promote a broader range of agroecological practices to maximize impacts.

Ms. Phylis Mbiu, Ms. Alice Kemunto – ***Agroecology as a Pathway to Food Security: Consumer Perspectives on Affordability and Accessibility Amid Taxation in Kenya's Agricultural Sector***

Focusing on consumer protection and sustainable consumption, this study explored how taxation policies affect agroecological food affordability and accessibility in Kenya. The 2023 Finance Act, which increased VAT and excise duties on agricultural inputs and removed subsidies for smallholder farmers, was found to elevate production costs, making food less affordable for consumers and less profitable for farmers. The research called for policy reforms to evaluate tax structures, strengthen market systems, and enhance consumer awareness of ecological products. The findings underscore agroecology's potential to safeguard food security and nutrition amid fiscal pressures.

Panel Discussion

Moderator: Dr. Matthias Geck, Agroecological Systems Scientist, CIFOR-ICRAF, Nairobi; Coordinator, Transformative Partnership Platform on Agroecology

Panelists:

i. Dr. Rui Benfica – Researcher, Food Production Economics
ii. Dr. Shadrack Mbapila – Agroecological Adoption Specialist
iii. Ms. Phylis Mbiu – Consumer Perspectives on Agroecology

Dr. Rui Benfica

Was pesticide use influenced by internal or external factors? How was climate change impact assessed?

Pesticide use was analyzed within a framework recognizing both internal farm management decisions and external market pressures. Climate change impacts were quantified using monetization conversion tables, drawing on 2023 data to estimate emissions footprints accurately. The study's baseline was established with the TAPE tool followed by ongoing monitoring and evaluation.

Dr. Shadrack Mbapila

Is there a minimum set of practices needed for a farm to qualify as agroecological? What feeds and pesticides are used?

The panel emphasized that integrating a diverse array of agroecological principles and practices maximizes benefits. Although the research focused on a limited number of practices, incorporating legumes, organic manure, and sunflowers demonstrated yield improvements and ecological benefits. Feed and pesticide use are managed to align with organic and sustainable standards.

Ms. Phylis Mbiu

Did the research examine excise duties and tax exemptions on agricultural machinery and inputs? How are consumers involved in policy?

Answer: The study primarily focused on final farm costs rather than detailed tax exemptions. While some fertilizers benefit from subsidies, more comprehensive support for agricultural machinery is needed. The study highlighted the importance of involving farmers as consumers in policy formulation to ensure that tax structures and subsidies support agroecology effectively. Plans for further research aim to broaden the policy impact and coverage.

Call to Action

The session underscored the urgency for a policy shift to support agroecological farming as a sustainable solution to Kenya's and Tanzania's food security challenges. Key recommendations include reassessing taxation policies to reduce input costs, strengthening market infrastructure, and fostering multi-stakeholder collaboration to

amplify the voices of smallholder farmers and consumers. Enhancing consumer awareness and integrating comprehensive agroecological practices will be essential to advancing equitable and environmentally sustainable food systems in the region.

Parallel Session 3: Women and youth empowerment in Agroecology

Presentations

Nancy Mugimba, the National Coordinator of ESAFF Uganda, gave a presentation on "Women and Youth: A Driving Force of Agroecological Transitions." She emphasized the critical role of youth in ensuring sustainability and facilitating knowledge transfer across generations. With their innovation, energy, and technological awareness, young people are vital to driving agroecological transitions. Nancy highlighted the importance of leveraging digital platforms and social media to sensitize and engage youth in agroecology. She also noted that agroecological businesses are more cost-effective compared to conventional agriculture, making them a practical and sustainable economic alternative.

Audience Questions

1. There's a challenge with how universities implement agroecology in the curriculum. How can this be improved?
   It's important to enhance communication about existing agroecology projects and ensure universities align research with community needs to drive relevance and impact.
2. Women often lack access to land. What strategies can help address this gaps?
   Many women are now using proceeds from their farming to lease or purchase land, creating a path toward ownership and independence.
3. Can agroecology be computerized to attract youth?
   We can digitize agroecology through mobile apps, AI tools, online learning platforms, gamification, and e-commerce. This approach modernizes the practice and makes it more appealing to the youth.

Ms. Maureen Obiero, alongside Ms. Cherotich Rutto and Ms. Joyce Mutuku, explored the topic "Movements for Empowerment of Women and Youth in Agroecology" through a case study of Tawifresh Kenya Ltd. They highlighted key challenges faced by smallholder farmers, including limited market access, lack of pricing transparency, overreliance on middlemen, absence of digital enablers and data systems, and

difficulties in organizing farmer groups. Tawifresh's innovative model addresses these issues through a B2B digital marketplace that connects farmers directly to buyers via a "farm-to-fork" approach, effectively eliminating intermediaries. The use of conversational AI tools like WhatsApp for farmer onboarding promotes inclusion and accessibility. Transactions are made transparent using digital invoicing and socio-economic data metrics. As a result, Tawifresh has achieved significant impact—boosting productivity tenfold and tripling farmer incomes.

Audience Questions

1. How does Tawifresh handle food waste and losses?
   At the consumer level: meal planning, proper storage, using leftovers, and portion control.
   At the production level: better harvesting techniques, efficient supply chains, and redistributing surplus food to food banks or charities.
2. How do you differentiate agroecological products from conventional ones?
   By benchmarking prices and purchasing from organic markets, ensuring traceability and transparency.
3. How is a fair price for produce determined?
   Through regional price trend analysis and benchmarking to ensure farmers receive value for their produce.
4. How do you store products in an agroecological manner?
   By using transitional inventory systems that support product integrity and reduce spoilage.
5. How do you trace farmers in your network?
   Through GPS-enabled apps that allow real-time mapping and monitoring of farmer activities.

Ms. Naisanga Sarah delivered a compelling presentation on "Agroecological Movements for Women and Youth Empowerment: A Route to Sustainable Land Governance and Food Systems Transformation." She shed light on the structural, legal, and institutional barriers that hinder progress in agroecology, alongside the persistent financial exclusion of women and youth in agriculture.

Audience Questions

1. How can agroecology influence land governance and sustainability?
   By positioning women and youth as key actors, we can promote inclusive governance and drive policy that supports sustainable land use.

2. What role can digital transformation play in overcoming structural barriers?
   Technology can open up markets, improve land records, and connect youth to training and capital, enhancing transparency and reducing exclusion.

Parallel Session 4: **Multi-Stakeholder Collaboration and Policy Influence in Agroecology**

The session on "Multi-Stakeholder Collaboration and Policy Influence in Agroecology" presented several case studies highlighting the importance of collaboration in advancing agroecology. The discussions centered on leveraging multi-stakeholder platforms and strategies to drive food system transformation.

Ms. Margaret Nabukenya presented the Rwenzori Agroecology Actors Platform (RAAP), launched in 2024, which was initiated to address food and resource depletion through a collaborative approach. RAAP brings together farmers, donors, policymakers, and other stakeholders to share knowledge and advocate for agroecology, emphasizing its potential to improve food security and national development. The platform fosters mutual understanding and collaboration, contributing to policy change.

Dr. Robert Mbeche discussed Kenya's National Agroecology Strategy (NAS) and its development through a participatory process, emphasizing the role of stakeholders like the government, development partners, and local actors. Key lessons included the importance of transparent platforms, substantive public participation, and the need for governance structures to ensure sustainability. The strategy highlights the importance of data collection, gender-responsive programs, and capacity-building to ensure the effective implementation of agroecology practices.

Dr. Frank Tchuwa focused on the challenges of low agricultural productivity, caused by factors such as soil degradation, droughts, and inequality. He pointed out the need for multi-stakeholder collaboration, especially to address power dynamics in agrifood systems. His presentation underlined that different stakeholder, from community members to technocrats, often have differing perspectives on food systems, which can affect policy outcomes. The need to recognize and address power imbalances was stressed.

Dr. Lisa Elena Fuchs discussed CGIAR's agroecological living labs (ALLs) initiative, which involves 8 African countries, with a goal of supporting agroecological transitions through co-created innovations, evidence-based assessments, and

inclusive business models. The project's focus is on engaging stakeholders, strengthening policies, and influencing behavior change. It emphasizes inclusivity, capacity building, and gradual empowerment for successful agroecological transitions.

The presentations collectively highlighted the importance of multi-stakeholder collaboration in policy-making, addressing power dynamics, and ensuring sustainability in agroecological practices. The call for inclusive, diverse, and transparent platforms was echoed throughout, aiming to build a resilient, equitable, and sustainable food system

Parallel session 5: **Special Session by McKnight Foundation: Scaling agroecology across landscapes: experiences from the Global Collaboration for Resilient Food Systems**

Moderator: Dr Sara Namirembe, McKnight CRFS Regional Representative and STEPUP

Standard, Uganda Dr. Sara Namirembe, the moderator and McKnight CRFS Regional Representative at STEPUP Standard Uganda, opened the session by outlining the purpose and goals of the Global Collaboration for Resilient Food Systems (CRFS). The initiative focuses on strengthening farmer-centered agroecological research and practice. She emphasized that scaling agroecology requires a landscape-level approach—one that goes beyond individual farms to consider environmental, social, and governance factors.

The session aimed to create a platform for sharing experiences and strategies to promote agroecological transformation at the landscape scale. Key themes included improving agricultural productivity and sustainability through agroecological methods, and addressing the link between food security, nutrition, and health—especially through soil health and farmer-managed seed systems.

Dr. Namirembe also stressed the importance of landscape approaches in understanding the interactions between farming and surrounding ecosystems such as forests and wetlands. She noted that many challenges—like soil erosion, pests, and nutrient loss—are system-wide and cannot be solved at the farm level alone. Furthermore, social issues such as land ownership, local governance, market access, and power dynamics must be addressed to support equitable and lasting agroecological change.

Presentations

Norah Asiyo – Popular Knowledge Women's Initiative (PKWI), Uganda: ***Agroecological Systems Transformation in Eastern Uganda***

Norah Asiyo from the Popular Knowledge Women's Initiative (PKWI) in Uganda presented a compelling case for transforming agroecological systems in Eastern Uganda. She began by highlighting the limitations of individual farm approaches, noting that these often result in low dietary diversity, limited income generation, and increased environmental degradation. In response to these challenges, she advocated for a shift towards a more holistic landscape approach. This includes practices such as soil restoration through agroforestry and composting, as well as collective efforts in crop diversification and community-based food sharing. Additionally, shared agricultural value chains and resources were emphasized as a means to enhance productivity and resilience. Central to this transformation is multi-stakeholder engagement, bringing together farmers, researchers, and policymakers to create a supportive ecosystem for sustainable agriculture.

She also warned against the over-reliance on chemical inputs, which can lead to serious health hazards, pest resistance, and environmental contamination. To address these risks and support sustainable transitions, she put forward several key recommendations: expanding agroecology education, strengthening farmer networks, reducing dependency on synthetic inputs, and developing inclusive markets that support agroecological produce. Her presentation underscored the urgent need for a systems-based transformation rooted in local knowledge, community collaboration, and long-term sustainability.

Prof. Wilson Ngetich – University of Eldoret, Kenya: ***A Decade of Collaborative Landscape Transformation in West Pokot***

Professor Wilson Ngetich from the University of Eldoret, Kenya, shared insights from a decade-long collaborative effort in landscape transformation in West Pokot. He began by outlining the significant challenges faced in the region, including widespread land degradation affecting nearly 40% of the area, long distances to access water, and extreme levels of poverty. In response to these issues, communities adopted a range of innovative, locally driven solutions. These included participatory planning processes that engaged residents directly in decision-making, the construction of terracing to control erosion, and the building of sand dams to enhance water access. Diversified farming practices were introduced to improve food security and resilience, while the formation of Savings and Credit Cooperative

Organizations (SACCOs) and local economic models helped boost financial inclusion and economic self-reliance.

Through this process, several important lessons emerged. One key insight was that co-created plans not only result in more relevant and effective interventions but also foster trust and a strong sense of ownership among community members. Additionally, the establishment of farmer cooperatives and the integration of circular economy models were shown to play a crucial role in ensuring the sustainability of these initiatives. Professor Ngetich's presentation highlighted how long-term, community-led efforts can drive meaningful change in even the most challenging environments.

Dr. CAPS Msukuwa – DeTAS, Malawi: ***Mobilizing Communities to Agroecologically Transform Landscapes***

Dr. CAPS Msukuwa from DeTAS in Malawi presented an inspiring account of how communities in the Misuku Hills have mobilized to agroecologically transform their landscapes. He explained that agroecology in this region emerged as a grassroots response to pressing issues of environmental degradation and chronic food insecurity. The transformation process followed a deliberate and participatory approach, beginning with community dialogues, followed by thorough analysis, and culminating in community-led actions tailored to local needs and knowledge systems.

The outcomes of this approach have been remarkable. Communities have witnessed significant improvements in biodiversity, soil health, and water conservation. Notably, there has also been a surge in youth-led agroecology initiatives, indicating growing interest and leadership among younger generations in sustainable farming. Dr. Msukuwa highlighted several innovations that have supported this transformation, including the development and use of biofertilizers derived from black soldier fly compost and urine-based solutions — both environmentally friendly and locally accessible options.

A central pillar of success in this effort, Dr. Msukuwa emphasized, has been the establishment of strong multi-stakeholder partnerships and the integration of agroecological principles into policy frameworks. His presentation underscored that true landscape transformation is both possible and scalable when communities are empowered, innovations are context-specific, and policies are aligned with grassroots action.

Profs. Charles Midega & Rebecca Nelson – PHIS Kenya & Cornell University: ***Bionutrient Circularity and Agroecological Transitions in the Lake Victoria Basin***

Professors Charles Midega (PHIS Kenya) and Rebecca Nelson (Cornell University) discussed agroecological transitions and bionutrient circularity in the Lake Victoria Basin. They noted that smallholder systems are complex and require a landscape-level approach to address overlapping challenges. Key issues include soil degradation, climate variability, poor tree cover, pest outbreaks, and limited market access.

They emphasized that social structures—such as governance, gender roles, and community networks—play a major role in the success of restoration efforts. The integration of local and scientific knowledge was highlighted as essential, with peer learning and demonstration farms helping farmers gain skills and confidence.

Importantly, they stressed that agroecological practices must be economically viable. Farmers are more likely to adopt sustainable methods when these also improve incomes. Aligning environmental goals with profitability is key to long-term success.

Audience Questions

1. When it comes to marketing agroecological products what is the incentive for farmers?
   Norah Asiyo, PKWI Chairperson, Uganda: There are agroecological business networks that support farmers by providing value addition services, enhancing both the marketability and profitability of their products. Additionally, agroecological shops are connected within these networks to ensure easy access and help farmers better understand market demands.
2. Did you consider other forms of livestock urine as pesticides?
   Dr C.A.P.S Msukuwa, DeTAS, Malawi: Animal urine can increase the emission of volatile chemicals, so its use as a pesticide requires further in-depth research. Currently, however, rabbit urine has been proven to be the most effective.

Parallel Session 6: **Special Session on Seed Systems Management**

Presentations

Seed Savers, Swissaid: ***Emergency Response on Seeds: Restoring Organic Seed Systems in Crisis Contexts***

Dominic shared insights on the Emergency Seed Response program in Turkana and Baringo Counties. Shared experiences on emergency responses to seed shortages, highlighting the critical role of community-led approaches in restoring seed systems during crises.

Seed Savers Network and Swissaid, focuses on building community resilience by reviving traditional knowledge around seeds. They emphasized the importance of reducing overreliance on external organizations by empowering communities to take the lead in managing their own seed systems. The session highlighted the participatory seed quality assurance approach, which ensures seeds meet organic standards through community-based evaluations. Additionally, they showcased the role of seed ambassadors—local individuals trained to identify, preserve, and distribute high-quality organic seeds within their communities.

Audience Questions

1. How is seed access ensured during planting seasons?
   In instances where the planting season is ongoing and farmers lack seeds, commercial seeds may be provided temporarily. However, the goal is to encourage the use of self-preserved seeds—currently, over 80% of farmers are able to use their own. Seed pools are created through farmer groups that save and share seeds among themselves.
2. How is Natural Source of Seeds guaranteed?
   Farmer groups are trained to recognize and preserve natural seeds. Notably, movement of seeds across regions is discouraged to maintain ecological adaptation. Seed ambassadors, trained in participatory quality assurance, monitor and uphold seed standards.
3. How are the youth including in Seed Systems?
   Youth are engaged through seed-related enterprises and capacity building, ensuring intergenerational continuity in agroecological practices.

Farmer Perspectives

Amina, A farmer from Baringo reported that women are central to seed preservation and family food security, noting that they are engaged in farming maize, beans, sorghum, and millet, with maize being the staple crop. She explained that the project has supported families economically by enabling the sale of surplus seeds, which helps pay school fees and meet other household needs. Amina also expressed her appreciation for the high yields from organic seeds and mentioned that she continues to plant various traditional seed varieties. She added that the training provided by

Seed Savers has significantly enhanced both productivity and knowledge among farmers.

Yohana, a farmer from Turkana raised concerns about access to water for irrigation, explaining that while canal irrigation is practiced, the nearest river, Turkwel, is 7 kilometers away. He noted that the canal constructed by the National Irrigation Program (NIP) is now silting, further limiting water access. He reported that Seed Savers officers are working closely with local farmers, providing them with drought-resistant, fast-maturing, and high-yielding seeds. Farmers have also been trained on seed preservation, community seedbank construction, and agroecological practices. Yohana stated that over 400 farmers have been trained so far, and there are ongoing efforts to fully stock a community seed bank. He emphasized that women account for 80% of the farming roles and appealed for additional partnerships to support their expanding needs.

Audience Questions

Has disease spread been an issue as seeds move between communities?

No major incidents reported due to the decentralized seed system, which limits large-scale movement and potential disease spread.

How do you ensure seeds are suitable for different regions?

Localized food systems help determine which varieties are well adapted to specific regions. Additionally, Germination testing is routinely done to ensure seed viability.

How do we differentiate traditional from conventional seeds?

Traditional seeds may take longer to mature but are more resilient and adaptive. On the other hand, conventional seeds tend to mature faster but are more fragile in the face of environmental stress.

The Seed School approach is reversing conventional roles by making seed preservation and restoration farmer-led and practical. The program emphasizes hands-on learning, building capacity within communities to preserve biodiversity and restore seed sovereignty in the face of climate and crisis challenges.

Parallel Session 7: **Community-Led Solutions for Soil Health, Climate Resilience, and Nutrition**

Moderator: Ms. Judith Libaisi, Rural Development Specialist (CSA-MSP & ISFAA)

Presentations

Ms. Gertrude Nalubinga (Farm Radio International), with contributions from Mrs. Karen Hampson, Ms. Sareme Gebre, and Mr. Charles Tah: ***Community-driven approaches to restore soil health, improve climate resilience, and enhance nutrition across Africa.***

Farm Radio International (FRI) uses participatory radio and mobile technology to empower smallholder farmers—especially women—to share knowledge and influence policy. Key points include the urgent soil degradation crisis, the innovative use of radio and mobile platforms to engage farmers in 40 countries, and the importance of gender-inclusive, nature-based solutions. The project emphasized co-created content through On-Air Dialogues and off-air feedback via Interactive Voice Response to ensure broad participation.

Policy recommendations call for integrating local farmer knowledge into policy, funding nature-based practices like composting and agroforestry, and addressing gender gaps by tailoring extension services to women's needs. The overall message stresses that effective policies must include farmer voices, with radio and mobile tech serving as powerful, low-cost advocacy tools to drive sustainable food system transformation.

A key quote: *"If policies ignore farmers' voices, they fail. Radio bridges this gap."* — Ms. Nalubinga, FRI

Dr. Céline Termote (Lead), Mr. Tosin Akingbemisilu, Ms. Lilian Aluso, Ms. Emmeline Clotuche, and Prof. Carl Lachat: ***Agroecological Pathways to Nutrition in Vihiga County, Kenya***

The presentation titled offered insights drawn from a 2022 field study conducted in Vihiga County using the Tool for Agroecology Performance Evaluation (TAPE).

The study examined 240 households, half of whom practiced agroecology (AE), while the other half did not. It aimed to evaluate how AE influences food production and consumption, with a particular focus on dietary diversity and health outcomes. One of the key findings was that agroecological practices such as crop diversification and organic farming did, in fact, increase food availability at the household level. However, this increase in production did not automatically translate into healthier or more diverse diets. Many families continued consuming limited food types, revealing a disconnect between what was produced on the farm and what was actually consumed at home.

This paradox pointed to several underlying factors. Despite having access to nutritious foods, many households did not incorporate them into their diets due to cultural preferences, lack of nutrition knowledge, economic constraints, or insufficient market access. Additionally, the study found that sociodemographic characteristics, particularly education levels, gender roles, and household income, had a stronger influence on dietary choices and nutrition outcomes than the farming method alone.

The presentation emphasized that while agroecology holds immense potential for contributing to food and nutrition security, it is not a silver bullet. For AE to fully impact nutrition, it must be accompanied by targeted interventions, such as health education, behavior change communication, and improved access to local markets. Women farmers, who often control what the family eats, should be central to these interventions.

From a policy perspective, the team recommended the development of holistic programs that integrate agroecological training with nutrition education and support for women's empowerment. Policymakers were also urged to monitor the long-term health effects of AE, particularly in reducing the burden of non-communicable diseases, using robust tools like TAPE.

Dr. Termote captured the essence of the discussion with a powerful quote: "*Agroecology gives us the seeds of change, but we must also plant the knowledge to harvest better health.*"

Overall the presentation made clear that agroecology alone is not enough. To truly transform rural food systems, we must bridge the gap between farm-level production gains and household-level consumption behaviors, ensuring that the promise of agroecology leads to real nutritional improvements for communities.

Ms. Hannah Kamau: ***Assessing Land Consolidation Options for Kenya's Smallholder Farmers***

This presentation explored land consolidation as a strategy to boost agricultural productivity among smallholder farmers in Murang'a County, Kenya. The approach proposes combining small land parcels into larger, economically viable units to enhance yields, reduce costs, and attract youth to farming, while also preventing further land fragmentation.

Research findings showed that farmers are **open to consolidation** if it leads to clear economic benefits, such as increased productivity, stable market prices, reduced production costs, and improved household incomes. However, **concerns remain** about potential disadvantages, especially around ownership and control. Farmers prefer models that maintain individual land rights while enabling collective action.

Murang'a was chosen for its high population density, small average land sizes, and strong agricultural potential—conditions ideal for testing land consolidation.

Policy recommendations include piloting land consolidation schemes with robust monitoring, developing economic models to demonstrate benefits, ensuring voluntary legal frameworks, and designing youth-targeted incentives.

As Ms. Hannah Kamau aptly stated: *"Farmers aren't resistant to change—they're resistant to risk. Our models must prove the economics first."*

Key Takeaways:

- **Farmers' acceptance is conditional** on proven economic value.
- **Local context matters**—consolidation strategies must align with regional land use realities.
- A **holistic, inclusive approach** is essential, integrating production, market access, and social dynamics.

This presentation highlighted a groundbreaking project supporting 124 smallholder farmers in Makueni County to shift from conventional to regenerative agriculture, using **resilience design methodology**. The initiative was introduced in the context of Kenya's broader food insecurity crisis—where 33% of the population faces food shortages—and sought to create **farmer-centered, sustainable support systems**.

The approach involved **lead farmers mentoring peers**, participatory needs assessments, and the use of **demonstration plots** to visualize sustainable practices. A **transition classification system** provided structured guidance for farmers at various adoption stages.

Key adoption trends showed strong uptake of low-risk practices such as avoiding chemical fertilizers (87%) and composting (76%), while practices like agroforestry (41%) and indigenous crop cultivation (23%) saw lower uptake, indicating a gradient of adoption based on perceived risk and familiarity.

Impact metrics were promising:

- Ecological gains included a 68% improvement in soil organic matter and a 43% rise in pollinator activity.
- Economic benefits included a 31% reduction in input costs.
- Resilience was enhanced, with 52% of farmers reporting capacity to recover from shocks (e.g., droughts or pests).

Policy recommendations from the project emphasized the need for:

- Scaling up the lead farmer model across counties,
- Investing in market development for regeneratively grown produce,
- Targeted research to understand low adoption of indigenous crops, and
- Subsidy programs to support vulnerable farmers through the transition.

Dr. Eveline Jansen summarized the project's ethos:

"We don't teach farmers—we learn with them. Their land speaks the truth our data merely translates."

Key Takeaways:

- Regenerative farming is feasible with structured, participatory support.
- Farmers prefer practices that minimize risk, indicating the need for phased transitions.
- A systems-level approach—linking knowledge, markets, and policy—is essential for sustainable transformation.

Panel Discussion

- Ms. Gertrude Nalubinga (Farm Radio International) addressed stakeholder roles in radio programs, emphasizing community collaboration and leader engagement to amplify impact. She highlighted how participatory radio bridges policy gaps by centering farmer voices.
- Dr. Céline Termote responded to agroecology's nutrition potential, stressing that education and training are critical but insufficient alone. She noted literacy gaps among women farmers complicate land-use decisions, urging tailored outreach.
- Ms. Hannah Kamau tackled cultural resistance to land consolidation (LC), revealing a 70–30 split in adoption rates in her study. While 30% saw

economic benefits, 70% of inherited-land farmers rejected LC due to cultural ties, underscoring the need for voluntary, incentive-based models.

- Dr. Eveline Jansen defined transition success holistically: "Beyond farm inputs, measure population health and dietary outcomes." She advocated for systemic indicators linking regenerative practices to community well-being.

SIDE EVENTS

Side Event 1: ISFAA, GIZ, ICRAF, Pelum Kenya, Porticus, Biovision Africa Trust: Kenya's National Agroecology Strategy for Food System Transformation: What Next?

Kenya's **National Agroecology Strategy (NAS)** presents a **10-year roadmap** to transition the country's agri-food systems toward **sustainability, resilience, and equity** through agroecological practices. Anchored in national priorities such as **Vision 2030**, the **2010 Constitution**, and global frameworks like the **Kunming-Montreal Biodiversity Framework**, the NAS tackles interconnected challenges including **food insecurity, biodiversity loss**, and **climate change**, while promoting inclusive development.

Challenges Addressed

1. Production Constraints:
    - Soil degradation and **water scarcity** (33.2% stress recorded in 2020).
    - Heavy reliance on **external inputs** and **monocultures** resulting in low productivity.
    - Agriculture contributes to **40% of national greenhouse gas emissions**.
2. Social Inequities:
    - Limited access to agricultural support services among **women and youth**.
    - **28% of the population faces food insecurity**, with malnutrition rates on the rise.
3. Policy and Institutional Gaps:
    - **Insufficient institutional backing**, research integration, and funding mechanisms for agroecological approaches.

Strategic Objectives

- Transform Diets: Enhance access to diverse and nutritious foods.
- Policy Integration: Mainstream agroecology into education, research, and budgeting.
- Empower the Marginalized: Promote gender and youth equity in access to land, credit, and training.
- Ecosystem Restoration: Rehabilitate degraded land and combat biodiversity loss.

Implementation Framework

- Governance: Coordinated by the Intersectoral Forum on Agrobiodiversity and Agroecology (ISFAA), with decentralized roles for county-level Technical Working Groups.
- Budget: An estimated KES 26.8 billion (USD 208 million) will be mobilized through public-private partnerships.
- Monitoring & Evaluation: Aligned with CAADP, Kenya's NDCs, and national food and nutrition security indicators.

Global & National Alignment

- International Commitments:
  - Supports the UN Food Systems Summit (2021) outcomes.
  - Contributes to COP27 climate goals for sustainable agriculture.
- National Priorities:
  - Advances the Bottom-Up Economic Transformation Agenda (BETA).
  - Upholds constitutional rights to food, education, and a clean environment (Articles 11, 43, 53).

Key Metrics & Insights

- Biodiversity Loss: Forest cover declined by 300,000 hectares between 2000 and 2020.
- Agroecology in Action (Makueni case):
  - 52% of farmers reported improved resilience to shocks.
  - 68% improvement in soil health through regenerative practices.

Next Steps

1. Stakeholder Summit: Convene actors across sectors to launch and operationalize the strategy.
2. Pilot Programs: Roll out regenerative agriculture in counties most vulnerable to climate impacts.
3. Policy Advocacy: Push for increased budget allocations and supportive legislation for agroecology.

"Agroecology isn't just farming—it's rewriting Kenya's food future." — Benson Kamau

The National Agroecology Strategy represents Kenya's bold commitment to building a climate-resilient, biodiverse, and inclusive food system. By embedding agroecology into national policy and practice, the country seeks not only to secure food sovereignty but also to set a model for sustainable rural development across Africa.

Panel Discussion

Topic: ***What are some of the actions being taken by different stakeholders and what key aspects should be considered in the implementation of the NAS?***

- Prof. Alex Awiti (ICRAF) emphasized the importance of county-level collaborations, stressing that population density and land consolidation are critical factors for NAS success. He highlighted the need to track policy implementation nationally, with social equity as a core metric.
- Mary Irungu (PELUM) shared progress on county-level adoption, noting that Vihiga and Makueni are already piloting NAS, while Murang'a has an existing agroecology policy. She underscored the resource-intensive nature of implementation, calling for pooled funding and capacity-building programs. Counties like Vihiga and Laikipia are set to begin soon, with awareness campaigns being a priority to drive wider adoption.
- Venancia Wambua (BvAT) discussed a study on county preparedness, revealing that Murang'a and Nakuru are leading in policy practice. However, challenges like knowledge gaps and financial constraints persist. To ensure uniformity, county ministers are being engaged to integrate NAS principles into local governance structures.
- Jeffery Ngari (GIZ) outlined critical success factors, including leadership capacities and grassroots stakeholder attitudes. He emphasized that NAS is a

long-term initiative, requiring sustainable programs rather than short-term projects.

- Benson Kamau (Ministry of Agriculture, MOALD) detailed the ministry's plans, including capacity-building for counties, distributing NAS documents, and leveraging support from pioneer counties. The ministry is delegating accountability to specific offices, with KALRO (Kenya Agricultural and Livestock Research Organization) leading research collaborations.

Key Takeaways

1. County-Level Action: NAS implementation is progressing in Makueni, Nakuru, and Vihiga, with Murang'a already having a policy framework.
2. Resource Mobilization: Funding and capacity-building are essential for scaling NAS nationwide.
3. Stakeholder Engagement: Grassroots attitudes, leadership training, and inter-county collaboration are pivotal.
4. Accountability Mechanisms: The ministry is assigning clear roles to ensure measurable progress.

Conclusion: The discussion reinforced that NAS success hinges on localized strategies, sustained funding, and inclusive governance, with counties serving as the primary drivers of agro ecological transformation.

Side Event 2: **ASARECA, IFAD & CAADP-XP4 Consortium Partners: Regional Policy Roundtable on Enhancing Integration of Agroecology into the Post-Malabo CAADP Process**

Welcoming remarks

Prof. Cliff Sibusio (CAADP-XP4 Advisory Committee Member/CCADRESA Executive Director)

Agroecology offers numerous social, economic, and environmental benefits. However, to fully realize its potential, it is essential to critically engage with and influence the political landscape that shapes agricultural policies and funding priorities. Strengthening the political will and creating enabling policy frameworks are key to scaling up agroecological practices

Dr. Marion Michaud (EG DG-INTPA Policy Analyst)

In his remarks, Dr. Michaud acknowledged agroecology as a unique opportunity to shape the future. He emphasized that agroecology contributes to building resilient and sustainable food systems while reducing biodiversity loss. It is a holistic approach that integrates environmental, social, and ecological dimensions of agriculture. Dr.

Michaud noted that supportive policies—such as subsidies and tax incentives—can promote sustainable agricultural practices. He further highlighted the importance of strengthening partnerships across governments, the private sector, academia, scientists, and financial institutions. He concluded by reaffirming that agroecology is about the future, and called for its continued integration into Africa's food systems agenda.

Mr. Fenton Reed (IFAD AR4D Senior Technical Specialist)

Mr. Reed highlighted that the roadmap to be discussed during the session would center on food security. He emphasized that agroecology offers multiple benefits and can be leveraged to design transformative programs aimed at strengthening farmers, enhancing technologies, and improving market access. He concluded by wishing the participants fruitful and successful discussions.

Presentations

Dr. Million Belay, General Coordinator, Alliance for Food Sovereignty in Africa (AFSA): ***Integrating Agroecology into CAADP***

The presentation made the case for including Agroecology in the Comprehensive Africa Agriculture Development Programme (CAADP) due to its numerous benefits, including improved yields and economic gains, enhanced ecosystem services, food security and health, and its role in climate adaptation and mitigation. AE is seen as a resilient, farmer-led system, especially through community seed systems.

The failure of the Malabo Declaration was attributed to its alignment with the Green Revolution agenda, lack of citizen participation, disregard for African cultural food systems, dominance by external actors, and weak government commitment. However, this failure presents an opportunity, as there is now a growing consensus that the Green Revolution model is inadequate, and momentum is building for a transition to healthier, sustainable food systems through agroecology.

Civil society organizations (CSOs) and African farmers have actively participated in consultations, such as the Kampala Declaration, advocating for AE.

Recommendations for Reinforcing AE in CAADP:

- Develop a standalone AE policy integrated into CAADP.
- Create national AE strategies with dedicated funding.
- Establish AE indicators to track progress.

- Set up regional AE hubs.

Conclusion and Call to Action:

Agroecology is not anti-innovation; rather, it is innovation grounded in African realities. It is seen as the pathway to achieving food sovereignty and resilience for the continent.

Prof. Charles Ssekyewa (African Centre for Excellence for Agroecology and Livelihoods): ***Economic, Social and long-term benefits of agroecology and its contributions to sustainable agriculture transformation in Africa***

Agroecology offers a holistic solution to Africa's food system challenges by addressing food and nutrition insecurity, which is often overlooked in existing policies. additionally, it promotes the production of diverse, nutrient-rich foods with medicinal value, helping to reduce the continent's growing healthcare costs. Economically, AE has the potential to stimulate innovation and value addition, allowing the development of marketable products across borders. Socially, it fosters inclusivity by engaging all community members—including youth—in advocating for healthier food systems and encouraging a shift away from unhealthy eating habits. In the context of the environment, AE contributes to improved ecosystem health and long-term sustainability. The approach promotes practices that restore biodiversity, build resilience to climate change, and support local economies.

Further, Prof. Ssekyewa emphasized the need to integrate AE assessments into national policy frameworks and called for stronger alignment across sectors to ensure agroecology becomes a central pillar in Africa's agricultural transformation agenda.

Ms. Mutinta Evelyn Nketani (Zambia Alliance for Agroecology & Biodiversity): ***Policy entry points and strategies for integrating agroecological practices in the post Malabo CAADP Strategy and Action Plan interventions at National level***

Ms. Nketani emphasized the critical opportunity to influence the design and implementation of national 10-year action plans under the post-Malabo CAADP framework. She highlighted the need to advocate for the integration of agroecology (AE) into CAADP strategies and tools, including the Biennial Review process.

She pointed to various policy entry points at national and regional levels, such as Nationally Determined Contributions (NDCs), National Adaptation Plans, and the

review of National Biodiversity Strategies and Action Plans (NBSAPs), all of which offer avenues for embedding AE principles.

Additionally, she stressed the importance of leveraging international commitments—such as outcomes from the UN Food Systems Summit—which recognize and support agroecological approaches.

To ensure the effective translation of AE objectives into policy (particularly Objective 1 of the Post-Malabo agenda), Ms. Nketani called for:

- Widespread capacity building and public awareness efforts;
- Inclusion of all voices, especially youth who make up the majority of consumers;
- Strong coordination and harmonization among CSOs and stakeholders; and
- Creation of inclusive platforms for farmers to actively participate in decision-making processes.

Mr. Chiluba Mwape, African Union Commission: ***Policy and Institutional Support for Integrating Agroecology within the Post-Malabo CAADP Strategy***

Mr. Mwape emphasized the need to align continental agroecological decisions with national-level policy frameworks. He highlighted the African Union's role in championing agroecology through the Continental Steering Committee and urged member states to mainstream continental commitments into national agricultural and development strategies.

<u>Key recommendations</u>

- Promoting **digital agricultural technologies** to attract and engage youth in agroecological practices;
- Enhancing **awareness creation** and stakeholder engagement to increase buy-in and adoption of agroecology;
- Strengthening **institutional support** for the implementation of agroecology within the broader CAADP framework.

Conclusion

Agroecological practices, when effectively supported by policy and institutional frameworks, can deliver **significant economic benefits** by improving agricultural productivity and sustainability across the continent.

Audience Questions

1. Can we investigate support Smallholder farmers in accessing markets, and is there a need to review existing agroecology policies to integrate agroecology principles?

   Mr. Chiluba Mwape: The markets are tailored to monoculture green revolution food systems. Governments need to be deliberate in creating markets for local agroecology foods. There is also need for investment in agroecology as currently there is no adequate production capacity. Consumer awareness creation on agroecology food would also support to build intentional market opportunities for agroecologically produced food. Farmers also need to aggregate as small farmers lack linkages to bigger markets. Communities also need to work in solidarity to reduce land tenure issues which limit application of agroecology.
2. Some countries were not on track for Malabo. Countries have failed to report. What are you doing to support reporting by countries?

   Mr. Chiluba Mwape: The AU support would be needed to ensure required data is collected and reported by governments.
3. On the issue of monitoring and report by the governments, what is the position for countries? Who is holding each other accountable? For AU, is there something driving the discussions instead of the community issues? We need to see the AE transition, policy review needed. Policy on land tenure systems and regimes if not addressed will curtail advancement of agroecology.

   Mr. Chiluba Mwape: The African Union needs to hold governments accountable. However, there is need to domesticate data to fit national circumstances. There is also an opportunity to align strategies with national plans. On land tenure, historical land injustices still exist, and action needs to be taken to secure land tenure for communities to encourage long term agroecology practices. Capacity building cannot be overstated and should form a critical part of all agroecology discussions.

Mr. Moses Odeke, Representative of the Technical Committee of the CADDP-XP4 Project. ***Roadmap for enhancing mainstreaming agroecology into the Implementation of Post Malabo CAADP process***

Audience Questions

1. On investment by private sector, government interventions still a missing link. What can be done to address the issue?

There is need to strengthen government commitment in investing in agroecology interventions. Heads of states have made strong commitments, but they need to reaffirm them, demonstrate action to agroecology, and put in place favourable policy environment to entice private sector involvement e.g., through favourable tax regimes.

2. Ferdinand (BIOGI): How do we increase agroecology voices?
   The panellists noted that agroecology sectors are mostly acting in silos. There is need to harmonise actions and engage with policy makers. They need to understand what needs to happen in agroecology, understand challenges and be able to step in to support.
3. Wanjiru Kamau: In view of Civil Society Organisations (CSOs) lack of centralised database, how do all the initiatives feed into the CAADP?
   A lot of research has been done, and this should be enough to inform policy without waiting any further. Political goodwill needs to be steered through proactive engagement and capacity building with the policy makers.
4. Isaac (South Sudan) On investment: We should not bank more on private sector investment; government needs to be more involved to achieve meaningful impact. Kenya is advanced and has done loads of research compared to other countries. How can we support these countries?
   The CAADP initiative started with 55 African countries, and focused on agricultural subsidies, pressure needs to be put to governments to review and implement research that has been done. Private sector is business oriented, and they can be enticed to participate if there is a business case. Agroecology interventions should be market oriented to trigger demand.
5. What is the best strategy to incorporate agroecology strategy in Post Malabo?
   Agroecology needs to be standardised to enhance acceptability by consumers. There is also a push to establish brands, but this may lead to loss of some agroecology principles if not carefully considered.
6. Most of roadmaps done in recent times have a simplified annex on roles and responsibilities to accelerate impact. Is this included in the roadmap presented?
   Yes, there is a detailed annex included with action areas and roles

Mr. Alex Mutungi, EOA Continental Secretariat Coordinator, Biovision Africa Trust

It is important to appreciate what has been achieved and focus on strategic entry points such as reviewing agroecology policies and strategies. Action plan for CAADP features agroecology, farmer managed seed systems, agroecology practices, use of

organic fertilizers and soil health issues. Mr. Mutungi stated that there are opportunities, key among them being developing implementation plans. He urged the stakeholders to Introduce as many indicators that bring out agroecology as possible and undertake capacity building from the ground to the top. Also highlighted the need to work with partnerships that build capacities, and the call to governments to enact policies that drive financing into agroecology interventions.

Dr. David Amudavi- Convener & Chair, Conference Organizing Committee, Executive Director, Biovision Africa Trust

Dr. David Amudavi stated that he was concerned that stakeholders should not be focusing on integrated agroecology into Post Malabo. Rather, there is need to dissect the document to identify the core entry points, what initiatives can be promoted, and what kind of research agendas to venture into. He encouraged the stakeholders to look at what innovations need to be promoted, and how to collect the needed data for the initiatives to be promoted under CAADP. Also rethink how to ensure the ASARECA participates.

He emphasized that there is a lot at stake, land in Africa is severely degraded, and climate change impacts are more significant in Africa. All stakeholders need to up the game and change the narrative to overcome the challenges. On collection of agroecology data, he pointed that strategic actions must integrate agroecology to enable data collection and start by identifying the gaps as a starting point.

Closing Remarks

Mr. Julian from ASARECA thanked the moderator and the keynote speakers and panellists for the insightful discussions. He noted that they would incorporate the issues raised into the roadmap and submit to BvAT for further review. Final submission of the roadmap will be made to AU and other likeminded organizations.

Side Event 3: **PELUM Association: Tapping and Channeling Youth Potential in Agroecological Businesses for Strengthening Agri-Food System Transformation in Africa**

Moderator: Valentine, VSO Kenya

Panel Discussions

Panel	Panelists	Key Questions	Summary of Responses
Panel 1: Business Opportunities & Value Chains for	1. Francis Masha Thoya	Most promising agroecological business	Youth can engage in organic farming, herbal medicine, beekeeping,

Youth in Agroecology	(Kenya) 2. Natasha 3. Chingore (Zimbabwe)	opportunities for youth?	biofertilizer production, and agroforestry. Value addition is essential.
		What business skills should young agropreneurs develop?	Entrepreneurship, financial literacy, marketing, branding, and digital skills are vital.
		Financing opportunities and access?	Opportunities include grants, microfinance, investment funds, and subsidies. Access is hindered by bureaucracy.
Panel 2: The Value Proposition of Agroecological Farming	1. Felicite (Rwanda) 2. Lynnet (Uganda)	How to make agroecology attractive to youth?	Promote awareness, include agroecology in education, mentorship, and leverage social media influencers.
		Contribution of youth-led businesses to sustainability?	They enhance biodiversity, ensure food security, create jobs, and support climate-smart innovations.
Panel 3: Opportunities for Youth in Agroecology – Networks, Platforms & Support Systems	1. Ajuna (Uganda) 2. Festus (Kenya)	Existing networks and support systems?	Youth agri-networks, cooperatives, government programs, and private sector support are available.
		Enhancing youth participation in agroecology?	Through funding, policy inclusion, capacity building, and public-private partnerships.

		Capacity development opportunities?	Includes scholarships, government and university training programs, and international grants.
Panel 4: Policies Affecting Youth Agroecological Businesses in Africa	Bernard Bwambale (Uganda)	What policies impact youth agroecology businesses?	National agricultural policies, pesticide regulations, and international trade laws (e.g., EU organic export standards).
		How to improve these policies?	Push for youth-friendly reforms, incentives, land tenure security, and organic farming support.

Key Takeaways

- Youth have immense potential in agroecology, but systemic barriers hinder their progress.
- Agroecological businesses must be made more appealing through incentives, digital innovations, and policy support.
- Multi-stakeholder collaborations are needed to unlock financing opportunities and market access.
- Strengthening youth networks and platforms will enhance knowledge-sharing and business growth.

Conclusion and Way Forward

The session underscored the urgency of integrating youth into agroecology and the need for structured support systems. Stakeholders must work together to create a conducive environment for youth-led agroecological enterprises to thrive.

Side event 4: AGRA, CIFOR ICRAF, FOLU, CGA, Farm Africa: Empowering the Next Generation: Resilient Youth Enterprises in Regenerative Agriculture and Agroecology

1. The Regenerative Agriculture Approach: Dr. Abed Kiwia, a key speaker from AGRA, provided an insightful introduction to regenerative agriculture (RA) by

breaking down its five major principles. These principles, which include minimizing soil disturbance, ensuring biodiversity, maintaining soil cover year-round, practicing agroforestry, and implementing terracing with grass strips, form the backbone of RA. The principles were explained through the tangible results observed in the field, with 635 farmers empowered to adopt RA techniques. One notable achievement was the planting of over 1.25 million trees, a testament to the potential of RA in enhancing environmental sustainability. However, challenges such as limited technology access and poor record-keeping practices were acknowledged, indicating the need for a more customized and accessible approach to RA, especially for youth in rural areas.

2. Youth Engagement in Agroecology: Throughout the panel discussion, it became clear that engaging youth in agroecology requires a multi-faceted approach. Benter Kavisa, a farmer from Kitui County, emphasized the importance of informing youths about modern farming techniques and providing them with tools that empower them to increase their income. He described how the introduction of farming machines not only improved productivity but also attracted more youth to farming, offering them a sustainable livelihood. Furthermore, training youth groups in agroforestry provided both financial independence and a deeper connection to the land. This approach has sparked a growing interest among youth in pursuing agriculture as a viable and rewarding career.

3. Barriers to Youth Involvement and Solutions: Despite the growing interest in agroecology, challenges still remain in ensuring that youth fully embrace sustainable farming practices. Dr. Virginia Mwanzia of Lukenya University pointed out that mentorship is a critical gap that needs to be filled, as young people often lack role models and guidance in the agricultural sector. She stressed that agriculture should be viewed as the future of the economy, with universities playing a pivotal role in shaping young minds through tailored training and research. Furthermore, Ms. Lydia Kiswii, an agroecologist at CGA, explained that empowering youth involves not only formal education but also providing them with access to land and financial resources. By offering opportunities for both employment and entrepreneurship, the youth can be better equipped to overcome barriers and pursue sustainable farming practices.

4. Government Support and Policy Impact: The panel discussion also highlighted the role of government in facilitating the involvement of youth in agroecology. Eng. Abraham Kova, representing the County Government of Kitui, discussed how the government's approach is context-specific, catering to the unique needs of youth in various sectors. He noted that promoting agroecology and raising awareness about its importance were vital steps in engaging youth, particularly in regions where farming traditions may need a shift toward more sustainable methods. The government's commitment to supporting youth through subsidies and policy initiatives also plays a crucial role in reducing the initial costs that can be prohibitive for many young farmers. Through these efforts, the government aims to foster a generation of youth who are both economically empowered and environmentally conscious.

5. Market Access and Agricultural Value Chains: One of the key takeaways from the session was the importance of market access for farmers. Dr. Kiwia and other panelists stressed that farmers need to be equipped with the knowledge of how to add value to their produce, such as by converting fruits into juices or other products. By encouraging prior planning for market access and promoting teamwork among farmers, the panelists suggested that farmers could significantly improve their income and integrate more effectively into the agricultural value chain. Embracing technology to market produce and meet market demands is also essential for enhancing the profitability of agroecology, especially for the youth who are more attuned to digital tools and online platforms

Side event 5: SHONA, Biovision Foundation: Launch of the East Africa Agroecology Entrepreneurship Community of Practice

Presentation by Stephanie Pondini, Co-Head Policy and Advocacy at Financiers Community of Practice (FinCoP)

The Financiers Community of Practice (FinCoP), co-led by Biovision and TIFS, is a collaborative initiative designed to bridge the financing gap for agroecological enterprises. It brings together financial institutions, investors, and development practitioners to foster dialogue, innovation, and tailored financing solutions that support sustainable agriculture.

Goals and Approach:

- Establish a **collaborative platform** for stakeholders interested in agroecological finance.
- Promote **access to capital** for agroecological enterprises.
- Operate on key principles: **needs-driven**, **action-oriented**, **actor-specific**, and **member-based**.

Key Areas of Work:

1. **Pipeline Development:** Support enterprises to become investment-ready through mentorship, financial literacy, and structuring.
2. **Strengthening the Organic Input Sector:** Increase the availability and accessibility of organic inputs such as fertilizers and biopesticides.
3. **Transition Finance:** Develop financial models to support farmers during their shift from conventional to agroecological practices.
4. **Financing Technical Assistance (TA) and Business Development:** Provide capacity-building to improve business skills, investment readiness, and agroecological practices.

Operations:

- Quarterly virtual meetings and annual in-person sessions to foster regular engagement and knowledge-sharing.

Conclusion & Recommendations:

FinCoP plays a vital role in creating a supportive financial ecosystem for agroecology. To enhance its impact, the following actions are recommended:

1. **Expand membership** across financial sectors.
2. **Develop innovative financial instruments** (e.g., blended finance, grants).
3. **Strengthen peer-learning platforms** and share best practices.
4. **Enhance advocacy efforts** to influence supportive policy environments.
5. **Improve data collection** and impact tracking.

Final Message:

FinCoP is a strategic vehicle for mobilizing finance towards sustainable, inclusive, and resilient food systems through agroecology.

Focus Group Discussion: East Africa Agroecological Entrepreneurship Community of Practice

This session brought together stakeholders in focused group discussions to explore practical strategies for advancing agroecological enterprises in East Africa. Participants examined the typical growth path of such enterprises, emphasizing the importance of diversification, creation of strong market linkages, and the establishment of designated agroecology markets. Access to emerging technologies and the integration of consumer feedback into strategic planning were also noted as essential components of enterprise development.

To expand the pipeline of investable agroecological enterprises, participants underscored the need for stronger networking, incubation programs, increased investment ticket sizes, and greater sensitization efforts. The use of living labs for product testing and support for enterprises transitioning from conventional to agroecological practices were identified as valuable steps in preparing businesses for investment.

When discussing how to attract investment, the session highlighted the importance of strengthening supply chains, ensuring investment readiness, and establishing clear standards that boost investor confidence. Lastly, in order to support the sustainable growth of agroecological enterprises, the discussion called for a multi-pronged approach that includes gender mainstreaming, financial support, enabling tax policies, continued diversification, and robust capacity building.

Overall, the session emphasized that a comprehensive and inclusive strategy is key to unlocking the full potential of agroecological entrepreneurship in the region.

Side event 6: SNV, GOGLA, Pelum Kenya: Renewable Energy - the missing link in AgroEcology?

Moderator: Judith Libaisi, Project Manager, SNV

Session Theme: "Productive Use of Renewable Energy in Agroecology: Bridging Policy, Innovation, and Farmer Needs"

This high-level panel brought together key government officials, energy experts, policy advocates, and private sector innovators to explore how renewable energy solutions can support agroecological transformation across Africa.

Key Highlights from Panelists:

1. Hon. Bwino Fred Kyakulaga (Minister of State, Ministry of Agriculture, Uganda) and
2. Eng. Stephen Nzioka (Deputy Director - Energy Efficiency, Ministry of Energy, Kenya)
   Both emphasized the need to align national agricultural and energy policies to support agroecology. Their shared message was clear: productivity and sustainability must go hand-in-hand, and policies must bridge farmers' needs with renewable energy strategies.
3. Patrick Tonui (Head of Policy, GOGLA) highlighted the need to **scale Africa's agricultural sector** through access to clean energy. He underscored the **productive use of energy** in boosting resilience and sustainability, while calling for better financing models to support farmers.
4. Mary Irungu (Senior Programme Officer, PELUM Kenya) called for **policy implementation** rather than mere development. She advocated for **equitable access to green energy**, especially for rural farmers, as a pathway to sustainable agricultural development.
5. Linda Kamau (CTO, SowPrecise) shared a practical innovation: **solar-powered irrigation systems** offered at low cost to smallholder farmers in arid and semi-arid areas. She noted **regulatory barriers and limited capital access** as major hurdles in scaling such solutions.
6. Eelco Baan (Global Lead, Inclusive Markets, SNV) pointed out the need to **break silos and connect the dots** between sectors. He proposed a "3-L Approach" to catalyze agroecological growth:

   - Learn – Share and exchange real-world experiences
   - Link – Build actionable partnerships
   - Leverage – Mobilize greater investment and impact funding

7. Martha Wakoli (Research Manager, CLASP / Efficiency for Access Coalition) Emphasized availing practical, **farmer-centric technologies** such as **solar sawmills and water pumps**, which are essential in supporting regenerative and resilient farming systems.

Emerging Challenges

- **Regulatory barriers** and fragmented policy frameworks
- **Limited financing** and capital for energy-based agricultural solutions
- **Lack of alignment** between clean energy providers and agricultural needs

Opportunities and Call to Action

- Align and implement existing policies that support agroecological energy use.
- Foster multi-sector partnerships to integrate clean energy into agriculture.
- Scale innovative technologies for smallholder farmers.
- Invest in farmer education and finance mechanisms for adoption.

This session made it clear: **renewable energy is a game-changer for agroecology**, and the future lies in cross-sector collaboration, inclusive financing, and grounded innovation tailored to Africa's smallholder farmers.

Side event 7: AFSA: Building a Case for Supporting Agroecological Entrepreneurship to Upscale Agroecology in Eastern Africa

The side event highlighted the role of agroecology in addressing climate change, biodiversity loss, and sustainable land management. Experts and entrepreneurs from Uganda, Zimbabwe, and other Eastern African countries shared their experiences in agroecological businesses, focusing on organic farming, value addition, and indigenous food systems. Discussions covered key challenges, opportunities, and strategies for scaling agroecological enterprises.

While agroecology offers sustainable solutions, businesses face hurdles such as market limitations, expensive certification processes, lack of infrastructure, and difficulties in accessing finance. The session emphasized the need for policy support, collaboration, and mindset change to make agroecological entrepreneurship viable at scale.

Key Messages

1. Agroecology as a Sustainable Solution – It is crucial for food security, biodiversity conservation, and climate resilience.
2. Challenges in Agroecological Enterprises – High costs of certification, market access difficulties, limited financing, and inadequate processing infrastructure.

3. Support Mechanisms Needed – Affordable financing, reduced certification costs, integration of agroecology into national policies, and funding from development partners.
4. Collaboration and Market Expansion – Encouraging cooperation over competition, linking small-scale farmers to markets, and leveraging industrial parks for scaling production.
5. Policy and Government Role – Tax incentives, technical support, and a favorable business environment to support agroecological entrepreneurs.
6. Consumer and Farmer Mindset Shift – Educating farmers on large-scale organic production and consumers on the health benefits of indigenous and organic products.
7. Call for Business-to-Business Engagement – AFASA was encouraged to host a B2B event in the next conference to create networking and investment opportunities.

Press Briefing

The conference convenors organized a media briefing to provide an opportunity for the press to ask questions and seek clarifications from keynote speakers, chief guests, and sector players on various agroecological topics. Media representatives from KTN, NTV, Citizen, Star Newspaper, and Observer Newspaper (Uganda) were present, and the session was moderated by media consultant Mr. Wanyama, who guided the discussion with specific questions.

What is Agroecology?

The session began with Hon. Fred Wino defining agroecology as a science, practice, or movement that emphasizes nature-friendly practices, distinguishing it from inorganic farming methods that rely heavily on chemical inputs. Dr. Amudavi further explained that agroecology focuses on increasing farm productivity without the use of chemicals, addressing the issue of soil health, particularly the acidity that limits agricultural productivity. He stressed the importance of practices like intercropping and growing drought-resistant crops to improve farm productivity. Additionally, Dr. Amudavi highlighted the significance of maximizing farm waste by converting it into organic fertilizers such as bokashi, reducing dependence on chemical fertilizers. He also emphasized the need for training farmers to produce quality organic manures for both local use and commercial purposes. Dr. Amudavi pointed out that there is considerable potential for investment in agroecology, especially in biopesticides and

other innovative products like frass fertilizer, which could boost agroecological practices. However, he noted that while there is significant research being conducted by institutions like Kenya Agricultural & Livestock Research Organization (KARLO), implementation has been hindered by insufficient investment and lack of supportive policies. He concluded by urging a holistic approach to improve soil health, which would enhance productivity and help tackle food insecurity.

Inorganic Fertilizers and Agroecology

Responding to questions about inorganic fertilizers, Dr. Wanga acknowledged that while inorganic fertilizers can be harmful, they are not inherently bad when applied correctly. He stressed that KARLO offers soil testing services to guide farmers in the proper application of fertilizers to avoid damaging the soil or food systems.

Seeds and Women's Role in Agroecology

Dr. Sarah Alembo introduced the issue of seed preservation, asserting that when seeds are damaged, life itself is endangered. She emphasized Africa's rich seed diversity and suggested that farmers could benefit from saved seeds. Dr. Alembo also highlighted the central role of women in agroecology, noting that women are often the custodians of seeds. She argued that a just agroecological system must recognize and involve women, as they are not only key to seed preservation but are also the most affected by chemical usage, which harms both soil health and women's health.

Incorporating incentives for Organic Fertilizers

The media also raised the question of how the government could support organic fertilizers similarly to how chemical fertilizers are subsidized. Dr. Wanga responded by referencing the recently published National Agroecology Strategy 2024-2033, which encourages micro and small enterprises (MSEs) to produce organic products. He called for investment in both organic and inorganic research but also pointed out the issue of undisciplined use of inorganic fertilizers, which has led to challenges in soil and food systems. He urged farmers to adhere to proper usage guidelines for both organic and inorganic fertilizers.

Policy Formulation and Stakeholder Engagement

A question was posed about the formulation process of Uganda's National Agroecology Strategy, which is in its final stages. Hon. Fred Wino responded by confirming that all necessary stages of policy formulation, including stakeholder consultations at various levels, had been followed. He invited stakeholders from

Uganda to actively participate in reviewing the document and contributing their input to ensure a comprehensive and inclusive policy.

Integrating Organic and Inorganic Fertilizers

Finally, a question was raised about the need for integrating organic and inorganic fertilizers, given that inorganic fertilizers are known to cause harm. Dr. Wanga explained that while organic fertilizers are valuable for supporting productivity up to the natural capacity of the soil, inorganic fertilizers are essential for supplementing organic inputs and ensuring maximum benefits, as they are nutrient-specific. He emphasized the importance of soil testing before fertilizer application and noted that farmers should take proper precautions when using chemical fertilizers, including wearing protective gear and adhering to withdrawal periods to ensure food safety. He concluded by advocating for public education on sustainable practices for integrating both organic and inorganic fertilizers.

The session provided an informative platform for discussing the key issues in agroecology, the role of women, the integration of organic and inorganic practices, and policy development, with a focus on improving soil health and productivity for sustainable agriculture.

PRE-PLENARY SESSION

Welcome remarks: Convener: Dr. David Amudavi Chair of the Conference Organizing Committee and Executive Director Biovision Africa Trust

The second day of the conference began with welcome remarks from Dr. Amudavi, who provided a recap of the key discussions and insights from Day One. He highlighted critical areas that emerged, emphasizing the need for concrete action to advance agroecology.

Key Takeaways from Day One

- Agroecology Works – Success stories confirmed its impact on yields, soil health, and climate resilience.
- Scaling Challenges – Major barriers include market access, financing, and policy gaps.
- Youth and Women Inclusion – Greater support is needed in land access, capital, and training.
- Technology and Innovation – Digital tools and renewable energy can enhance agroecological productivity.
- Collaboration is Crucial – Multi-stakeholder partnerships are key to growth and sustainability.

Identified Research and Policy Gaps

- Economic Viability – More studies needed on the long-term financial benefits of agroecology.
- Climate Resilience – Research on how agroecology mitigates climate risks.
- Weak Policy Implementation – Existing policies are not fully enforced, and financial incentives are lacking.
- Land Access Issues – Youth and women face barriers in acquiring farmland.

Emerging Best Practices and Recommendations

- Farmer-Led Knowledge Sharing – Peer-to-peer learning and mentorship programs.
- Market-Driven Agroecology – Dedicated organic marketplaces to ensure fair pricing.

- Public-Private Partnerships (PPPs) – Leveraging partnerships for funding and infrastructure support.
- Stronger Policy Enforcement & Investment – Governments must support agroecology through policy and funding.
- Digital & Technological Integration – Expanding digital tools for market access and knowledge sharing.

KEYNOTE ADDRESSES ON MARKETS, TRADE AND FINANCING (SUB-THEMES 4 AND 6)

Ms. Stephanie Piers de Raveschoot, ***Programme Manager at the Swiss Agency for Development and Cooperation***, opened the keynote session on Markets, Trade, and Financing. She welcomed participants and emphasized that markets and financing are at the core of making agroecology not only viable but also scalable across Africa. She noted that trade creates opportunities for farmers, financing enables innovation for SMEs, and together these elements determine whether agroecology can move from vision to practice.

She introduced the three keynote speakers and highlighted their unique perspectives:

- Mr. George Muigai of Eco Fields Organics Kenya Ltd, who would present lessons from Kenya's organic avocado export as an example of unlocking Africa's organic potential.
- Mr. Thomas Obiero, Director of Programs and Enterprise Development at Agile Consulting Ltd, who would share insights from the O-Farms projects on enabling environments for SMEs in zero waste and circular economy.
- Mr. Oliver Oliveros, Coordinator of the Agroecology Coalition and head of the Coalition Secretariat, who would outline agroecology as a pathway for food systems transformation at global and systemic levels.

She encouraged participants to reflect on how these different perspectives—business experiences, SME innovation, and global coalitions—could inform inclusive and resilient markets in Africa.

Throughout the session, Ms. Piers de Raveschoot provided linkages between the presentations. After Mr. Muigai's address, she noted that his reflections demonstrated how African organic products could thrive in export markets but also raised important questions about scaling such success beyond niche markets.

George Muigai, Eco Fields Organics Kenya Ltd: ***Agroecological Trade & Market Dynamics: Unlocking Africa's Organic Potential – Lessons from Kenya's Organic Avocado Export***

George Muigai from Eco Fields Organics Kenya Ltd highlighted the significant potential of organic avocado trade in Eastern Africa, where 42,500 certified smallholder farmers contribute to a sector experiencing a 17.3% annual growth and a 23% increase in conversion applications. Kenya, Uganda, and Tanzania collectively cultivate over 11,000 hectares of organic avocado, benefiting from counter-seasonal production and a lower carbon footprint. The industry provides economic returns, social equity, and environmental sustainability, but faces key challenges, including the absence of formal organic policies, cold chain inadequacies—where only 23% of areas effectively manage post-harvest losses—high logistical costs, and limited access to credit, with only 17% of smallholders securing formal loans. To overcome these barriers, harmonizing organic standards across East Africa, introducing innovative financing options like low-interest loans, improving infrastructure, and expanding market access were recommended as crucial steps to unlock Africa's organic trade potential.

Thomas Obiero, Director Programs & Enterprise Development Agile Consulting Ltd: ***Creating Enabling Environments for Small and Medium Enterprises (SMES) in Zero Waste and Circular Economy: Lessons from the O-Farms I and II Projects by Bopinc and BvAT***

Thomas Obiero, Director of Programs & Enterprise Development at Agile Consulting Ltd, discussed the role of Small and Medium Enterprises (SMEs) in advancing zero waste and the circular economy, drawing insights from the O-Farms I and II projects by Bopinc and BvAT. These projects function as business accelerators, streamlining agribusinesses across East Africa. SMEs play a crucial role in job creation and community transformation, yet they face significant challenges such as unreliable financing, inconsistent markets, scarcity of raw materials, policy barriers, a shortage of skilled staff, and a lack of appropriate production technologies. A study of 100 SMEs (55 in Kenya and 45 in Uganda) highlighted the policy landscape's mixed impact, with both inhibitors and enablers shaping the sector. In Uganda, government awareness, public-private partnerships (PPPs), access to international climate finance, and civil society engagement support SMEs. In Kenya, government investment in infrastructure and commitment to continental declarations provide opportunities, but SMEs struggle due to unclear product standards, weak regulatory enforcement, limited access to technology and financing, a lack of structured government incentives, and policies that favor large producers. Addressing these

barriers through harmonized policies, financial support, and infrastructure investment is essential for fostering a thriving circular economy.

Oliver Oliveros, Coordinator of the Agroecology Coalition and head of the Coalition Secretariat: ***Agroecology as a Pathway for Food Systems Transformation***

Agroecology presents a viable pathway for transforming food systems by addressing interlinked crises in climate, biodiversity, land use, and nutrition. The primary objectives include spreading knowledge, shaping supportive policies, increasing investments, developing markets, and engaging key stakeholders. Evidence suggests that farms adopting agroecological practices experience positive socio-economic outcomes. Global and regional conventions play a crucial role in guiding countries to develop national agroecology strategies. However, a significant challenge remains—financing the transition, as current funding levels are inadequate, and development support is shrinking. To meet the desired transition rate, a tenfold increase in funding is necessary. Opportunities lie in supporting local communities, raising awareness, increasing yields through agroecological entrepreneurship, expanding access to credit and insurance for farmers, scaling up from pilot initiatives, fostering donor collaborations, allocating dedicated government budgets, leveraging philanthropic resources, and utilizing public procurement to drive agroecological adoption.

George Muigai, Eco Fields Organics Kenya Ltd

The transition to agroecology must strike a balance between serving international and local markets. While there is a strong demand for organic food in export markets like Europe, local awareness and consumption of organic produce remain low. This lack of awareness limits the growth of domestic markets, creating a gap between production and local demand. To bridge this gap, regulatory systems must not only establish policies but also ensure their effective implementation to support local market development. Strengthening local consumption through education, incentives, and policy enforcement will enhance market stability and create a sustainable balance between local and territorial agroecological transitions.

Sarah Page, Rockefeller Foundation

Ensuring the successful oversight and funding of agroecology transition programs requires a collaborative approach involving both public and private stakeholders. While the need for increased funding is evident, it is equally crucial that financial resources are structured, well-coordinated, and strategically allocated to achieve meaningful results. Governments, development partners, private investors, and local communities must work together to create sustainable financing mechanisms,

including dedicated government budgets, donor collaborations, impact investments, and credit access for farmers. Effective monitoring frameworks should also be established to track progress, ensure accountability, and maximize the impact of AE transition initiatives.

Tabara Ndiaye, Agroecology Fund

Agroecology continues to gain traction as a sustainable approach to transforming food systems while protecting the planet. A key success is the inclusion of South and West Africa in funding access, expanding regional operations and support. Agroecology initiatives focus on long-term sustainability, biodiversity conservation, and climate resilience, ensuring food security for future generations. However, challenges persist, including inadequate financial resources, weak policy enforcement, and limited awareness at the local level. Strengthening investment, improving policy frameworks, and fostering multi-stakeholder collaboration are essential to overcoming these barriers and scaling agroecology solutions effectively.

Janet Maro, SAT

Tanzania has undertaken an intensive process to develop a national agroecology strategy, encompassing the entire agroecology movement. While the official launch marked a significant milestone, the real work began afterward, with a dedicated task force chaired by the Ministry of Agriculture to oversee implementation and ensure accountability among key players. Successful execution of the strategy requires substantial resources, and development partners are stepping in to provide support. Strengthening local and territorial markets remains a priority, alongside collaborations on organic certification with Control Union to enhance market credibility and sustainability. Moreover, sharing experiences and exchanging knowledge with other countries is crucial in refining and scaling agroecology initiatives across regions.

In her closing remarks, Ms. Piers de Raveschoot summarized the key takeaways from the session. She noted that from Kenya's avocado case, participants had learned that Africa's organic potential was real and market ready. From the O-Farms experience, it was clear that SMEs needed stronger enabling environments to thrive in circular and zero-waste economies. And from the Agroecology Coalition, the message was that transformation required collective commitment and systems-level collaboration.

She concluded by underlining that markets, trade, and financing must work hand in hand to ensure agroecology delivers both economic opportunities and sustainable food systems for Africa. She thanked the speakers for their contributions and the

participants for their engagement, and invited continued dialogue throughout the forum.

Exhibitions Segment - SMEs

The exhibition segment featured SMEs - Nyakazi Organics, Veda Organics, Agripest Organic (known for zero-pesticide, pocket-friendly solutions), and Control Union Kenya, showcasing innovations in organic farming. A key takeaway was the growing awareness of organic agriculture; however, several challenges persist. These include inadequate seed storage facilities, limited access to critical agricultural information (such as soil management techniques), and financial constraints due to restricted credit access. Additionally, the absence of clear legal frameworks—or their poor enforcement—hinders farmers' ability to navigate the sector effectively. The lack of collaboration among stakeholders further compounds these challenges. Exhibitors emphasized the need for increased awareness and education, extending beyond farmers to include agrovets, as well as strategies for broader market access and cost reduction measures to enhance sustainability.

Parallel sessions

Parallel Session 1A: Sustainable Livestock Farming in Agroecological Systems

The session, moderated by Hottensiah Mwangi, provided an in-depth discussion on sustainable livestock farming within agroecological systems, emphasizing natural livestock health, climate adaptation strategies, and transitioning to humane and sustainable food systems. The presentations and panel discussions highlighted the challenges and opportunities in shifting away from industrial livestock farming towards a more ethical and environmentally friendly approach.

Dr. Katrien vant Hooft presented the Natural Livestock Farming (NLF) model, which integrates farmer knowledge, Western veterinary science, and Ayurveda. This approach has significantly reduced antibiotic residues in milk, improved farm incomes, and increased productivity in various regions, including India, Ethiopia, Uganda, and the Netherlands. She underscored the need for further policy support and research to scale up NLF practices globally.

Mr. Cyrille Awuonda discussed climate adaptation strategies for agropastoralist communities in Laikipia, Kenya. His research revealed that farmers adopt various strategies such as sustainable agriculture, diversification, and improved livestock management, yet financial constraints, land shortages, and labor demands hinder widespread adoption. The discussion emphasized the role of education, access to technology, and social group membership in influencing adaptation rates.

Ms. Beryl Okumu from World Animal Protection highlighted the Just Transition approach, advocating for a shift away from industrial livestock farming. She outlined the negative impacts of factory farming, including environmental degradation, economic inequality, and animal welfare concerns. A transition to agroecological and humane livestock systems would improve farmer livelihoods, protect the environment, and ensure food security while reducing antibiotic misuse.

The panel discussions further explored critical aspects of sustainable livestock farming, including the availability of alternative medicine for livestock, research on herbal treatments, the role of pastoralism in agroecology, and the importance of ethical livestock practices. Experts agreed that certification and traceability mechanisms are necessary to promote ethical livestock products, and emphasized the need for policy reforms, investment in sustainable practices, and greater knowledge-sharing among farmers and researchers.

The session concluded with a call to action urging stakeholders—including policymakers, farmers, researchers, and consumers—to advocate for sustainable livestock farming. The integration of pastoralism into agroecological discussions was particularly emphasized as crucial for shaping future policies and improving food systems.

Key Takeaways

- Sustainable livestock farming should balance productivity, animal welfare, and environmental protection.
- Natural Livestock Farming (NLF) reduces antibiotic use, enhances farm incomes, and promotes sustainable agriculture.
- Climate adaptation strategies in agropastoralist communities require financial and technological support for effective adoption.
- Industrial livestock farming has severe negative impacts, necessitating a shift towards humane and agroecological systems.
- Policy reforms, research investment, and farmer capacity-building are essential to scale up sustainable livestock practices.
- Certification and traceability mechanisms should be developed to ensure ethical livestock products.
- Integrating pastoralism into agroecological policies is crucial for food security and rural development.

- Consumer awareness and market incentives can drive demand for sustainable livestock products.

The session reinforced the urgency of transitioning towards sustainable livestock farming and called for multi-stakeholder collaboration to ensure the adoption of humane and environmentally responsible livestock practices.

Parallel Session 1B: **Insect-Based Fertilizers for Soil Health and Crop Productivity**

Moderator: Dr. Edward Karanja (PhD), Project Manager /Post-Doctoral Fellow – SysCom Project (LTE & POR), International Centre of Insect Physiology and Ecology (ICIPE)

Panelists:

1. Dr. Agnes Kiriga: Impacts of vegetable-integrated push-pull and insect frass fertilizer on the incidence of pests and performance of maize and kale crops in Kenya
2. Mr. Cyrille Awuonda (presenting author), Prof. Gideon Obare, Dr. John Olwande: Influencing factors for adoption of adaptation strategies to climate variability among agro-pastoralist households in Laikipia County, Kenya
3. Fitsum Biruk: Effect of vermicompost and blended NPS fertilizer on garlic growth, yield, and yield attributes, ETHIOPIA
4. Mrs. Judith Honfoga (presenting author), Mr. Judes S. Sefounon, Mr. Eric C. Legba,
5. Dr. Laurence Dossou, Dr. Malick N. Ba, Dr. Lukas Pawera, Dr. Srinivasan Ramasamy
6. Effects of black soldier fly (BSF) frass on Solanum macrocarpon growth, yield and soil health in Benin.

This session explored the potential of insect-based fertilizers to enhance soil health, improve crop productivity, and contribute to sustainable agriculture. The discussion featured experts presenting research findings on various organic fertilization methods, including the use of black soldier fly (BSF) frass, vermicompost, and vegetable-integrated push-pull systems (VIPP). The session aimed to highlight alternative, nature-friendly solutions to soil degradation, pest infestations, and declining crop yields caused by overreliance on synthetic fertilizers.

Key Messages from the Discussion:

- Insect frass and vermicompost contribute to improved soil pH, nutrient retention, and overall soil structure.
- Organic fertilizers enhance biodiversity, promote natural pest control, and support sustainable agroecological farming. Research from Benin showed that BSF frass improved Solanum macrocarpon (Gboma) yields while reversing soil degradation.
- VIPP (Vegetable-Integrated Push-Pull) systems enhance soil health, reduce aphid infestations, and increase maize and kale yields.
- A combination of VIPP and insect frass fertilizers is recommended for better pest control and improved income for farmers.
- Studies in Ethiopia confirmed that vermicompost enhances garlic yields by addressing soil nutrient imbalances.
- Farmers benefit economically from insect-based fertilizers due to increased yields and reduced production costs.
- The cost of transitioning to organic alternatives can be recovered through higher yields and market value.
- Although full replacement of synthetic fertilizers is not yet feasible, integrating organic and mineral fertilizers offers a balanced approach for optimal production.
- Research trials should be expanded to different regions and seasons to establish long-term trends.
- Policies should encourage the adoption of insect-based fertilizers through incentives and farmer education.
- Strengthening local markets and awareness campaigns can drive demand for organically grown produce.

Parallel Session 2A: **Seed Systems, Farmer Rights, and Gender in Agroecology**

Phytosanitary Challenges in Farmer-Managed Seed Systems (FMSS)

Presenters: Dr. Sarah Olembo, Ms. Sally Owuonda, and Ms. Leah Wangui

The presentation emphasized the critical role of seeds in agroecology (AE), asserting that **without seeds, there is no agroecology**. It explored the structure and importance of **Farmer-Managed Seed Systems (FMSS)**, which are central to sustaining agroecological practices due to farmers' deep understanding of the quality and traits of seeds suitable for their local contexts.

The presenters reviewed the International Standards for Phytosanitary Measures (ISPMs) developed under the Commission on Phytosanitary Measures (CPM), focusing on three key standards:

- ISPM 1: Outlines phytosanitary principles aimed at the protection of plant resources.
- ISPM 10: Specifies requirements for establishing pest-free areas for seed production.
- ISPM 14: Advocates the use of integrated measures for managing pest risks.

The presenters also introduced ISPM 38, which addresses the international movement of seeds and includes tools such as the Phytosanitary Capacity Evaluation (PCE). These PCE modules are designed to support phytosanitary assessment and planning, yet their implementation is constrained by weak legal and institutional frameworks in many countries.

Key phytosanitary challenges affecting FMSS include:

- Inadequate and fragmented policy frameworks,
- Limited awareness and capacity among farmers and institutions,
- Poor alignment between international standards and local seed systems.

In response, the session proposed strengthening Participatory Guarantee Systems (PGS) as a context-appropriate mechanism to ensure seed quality and phytosanitary compliance within FMSS.

Conclusion: To safeguard plant health while supporting farmer-managed seed systems, there is a need for policy reform, capacity building, and institutional support to integrate international phytosanitary standards in a manner that respects and builds upon local seed knowledge and practices.

Implementation of Farmers' Rights in Eastern Africa — A Systematic Review of National Seed Regulations

Presenters: Ms. Gladness Brush, Mr. Simon Degelo (presenting author), Mr. Kenenisa Assefa Kelele, Ms. Delia Hurliman, Ms. Arianna Devigili, Ms. Rebecca Kübler, Ms. Margaux Serratore

This session examined the **status of farmers' rights to seeds** in Eastern Africa through a **systematic review of national seed regulations**, emphasizing the fundamental importance of seed sovereignty for agroecology and smallholder resilience.

The presentation traced the **international foundations of farmers' seed rights**, highlighting legal frameworks that support the rights to save, use, exchange, and sell farm-saved seeds. However, national seed laws often fall short of these principles.

The study focused on the **evolution and characteristics of seed regulations** across regional blocs such as **ECOWAS, EAC, SADC, and COMESA**, and evaluated how these policies support or restrict agroecological seed systems. Notably, in many Eastern African countries:

- **Seed sharing and exchange are restricted**, and
- **Only certified seeds** are allowed for commercial sale.

Country-specific findings include:

- **Kenya and Tanzania**: Laws only allow the sale of certified seeds, with registration limited to varieties meeting DUS (Distinctness, Uniformity, and Stability) criteria.
- **Uganda**: Similar restrictions apply.
- **Zambia**: Allows the sale of farmers' seeds through farmer channels.
- **Ethiopia**: Provides legal exemptions for small-scale farmers to sell local seed varieties.

Conclusion:
Most Eastern African countries treat the **saving, exchange, and sale of farm-saved seeds as illegal**, primarily due to restrictive regulatory frameworks. In contrast, **Zambia and Ethiopia** stand out for their supportive legal provisions that **explicitly recognize and exempt farmers' seed practices**. In countries where such rights exist, they are often not the result of affirmative policy but rather due to **regulatory gaps**. The findings underscore the urgent need for **policy reforms** that uphold farmers' seed rights and support **agroecological transformation**.

Seed Systems and Gender Equality — A Case Study of the Impact of Kenya's Seed Regulations on Women Farmers and Seed Savers
Presenters: Ms. Anne Maina (presenting author), Dr. Ruth Segal

This presentation explored the intersection of **gender equality and seed systems** in Kenya, focusing on how **regulatory changes** have affected **women farmers and seed savers**. The case study was conducted by BIBA Kenya—a network of 52 organizations including CBOs, NGOs, FBOs, and farmer groups—in collaboration with the Catholic Relief Association in **Butula, Busia County**.

The study specifically targeted women who had been **saving seeds since the early 2000s**, a practice that emerged during the HIV/AIDS pandemic as women sought to secure **community food systems**. Despite their long-standing role in seed preservation, these women faced legal and regulatory constraints, particularly the **criminalization of seed exchange and sale**.

Despite these barriers, innovative solutions emerged:

- Women began selling **millet and sorghum to local schools**.
- They formed **table banking groups** to mobilize financial resources and start small businesses.
- They acted as **community champions**, advocating for **agroecological seed systems** and organizing **seed exchanges and seed fairs**.

A significant milestone occurred in **2017**, when a group of women attended a **global seed conference in India**, gaining exposure to international seed-saving practices. This experience inspired the expansion of seed-related initiatives in their communities.

However, challenges persist. The current **phytosanitary and sanitary standards** limit the growth and formalization of community seed systems. In response, BIBA is working closely with women seed savers to:

- **Enhance seed quality**, and
- **Advocate for more inclusive seed policies** that recognize and support the critical role of women in agroecology and biodiversity conservation.

The presentation underscored the need for **gender-responsive seed policies** and greater support for women-led seed systems to ensure **sustainable food systems** in Kenya.

Strengthening Community Seed Banks in Vihiga County — Characterization and Conservation of Farmer-Managed Seed for Agroecological Resilience
Presenter: Mr. Jeremiah Sigalla

Mr. Sigalla's presentation emphasized the critical role of **community seed banks** in preserving **agrobiodiversity** and enhancing the **agroecological resilience** of **smallholder farmers (SHFs)** in Vihiga County, Kenya. The project focused on the **characterization and conservation** of farmer-managed seeds—particularly **vegetable germplasm**—as a strategy to support climate adaptation and food security.

Key insights from the presentation include:

- Community seed banks are essential for **biodiversity conservation** and serve as a vital resource for **climate change adaptation** at the local level.
- **Vegetable germplasm diversity** is particularly important for ensuring **nutritional security** and improving crop adaptability.
- There is a **strong linkage between national gene banks and community-level seed savers**, though local farmers often lack the **technical knowledge** to identify and characterize genetic traits in seeds.

The initiative aimed to **capacitate farmers** by:

- Training them to **identify, characterize, and conserve** high-value local seed varieties.
- Encouraging **long-term seed saving practices** aligned with agroecological principles.

Findings and conclusions highlighted that:

- Vegetable genetic diversity plays a **pivotal role** in ensuring **resilient crop systems**.
- To enhance impact and sustainability, community seed banks must:
  - **Prioritize high-performing vegetable cultivars** for farmer-to-farmer sharing.
  - Receive **ongoing support and expansion efforts** to increase reach and effectiveness.

Overall, the presentation advocated for **strengthening local seed systems** as a pathway to **resilient, climate-smart agriculture**, underpinned by empowered and informed farming communities.

Feedback and Questions from the Participants:

1. Dr. Million: Who would accept application of PGS in seed saving as its mostly used on seed quality. Investment granted mostly went to support GMOs. Farmers know how to save seeds and focus should be in co-creation of knowledge.

2. Lydia Kimani (GIZ): It is important to plug seed saving into national policies. Data is lacking, BIBA to consider joining SBS committee to push seeds agenda. Value chain supporting women are strengthened but get edged out by men.

3. Seeds contribute to biodiversity. Does biopiracy exist and what can we do to protect seeds?
   Mr. Jeremiah Sigalla responded that national germplasms query source of the materials as most are sourced from farmers. They can negotiate with farmers to get the best traits while benefiting farmers. He also noted that farmers have rich knowledge and have good practices and they only need further training by experts to enhance quality of seeds, establish good conditions for seed saving, and manage seed saving diseases.

   Simon Degelo responded that some seed regulations cover the biopiracy issues. Seed registration require seeds to be new and has not been on commercial farms before. He flagged the relationship between plant treaty (100 countries involved, more participatory) and UPOV 91 (established by Western developed states for Europe). UPOV has strong implementation and members must implement before joining.

4. Dr. Sarah Olembo acknowledged BIBA in the fight against GMOs in Kenya. She stated that African countries can participate in standard setting by formulating and submitting relevant regulation. No country has submitted yet hence the call for PGS. Farmers seed are safe and not prone to diseases. Farmers can share criteria used to sort and save seed for standardisation by research parties such as KEPHIS.
5. A question was directed to Simon Degelo on the presentation as it did not include any remedies noting that declaration is soft law, have countries codefined the declaration?

   Simon Degelo responded that there are no remedies in place at the moment due to potential for violation. The declaration not binding.

6. How will the studies inform decision making at national and regional levels? What can stakeholders do on right to farmers for seeds to influence change in Africa?

   Communities are not selling seeds because its illegal. However, some seed banks have success stories in selling seeds. Stakeholders must all unite to make farmer managed systems a success not a crime.

7. Irene (Uganda): directed a question to Mr. Jeremiah Sigalla stating that she did not hear about soil and pest management which impacts on seed saving. How were these addressed in the research?
   Mr. Jeremiah Sigalla noted that they are working with partners dedicated on different biocontrol and fungal control pest control measures. On community seed banks, they are supporting farmers to address fungal infections on seeds and discourages use of synthetic chemicals for seed preservation.
8. Nancy (Uganda) expressed her dilemma when it comes to seeds. Beyond seed banking, is there any commercialisation to enable multiplication of seeds?
   Dr. Hailu Tedla noted that they have not facilitated any seed sharing to the Dutch company. Seeds belong to the farmers. Dutch were looking for materials, but farmers are alert on their varieties. There is need to support farmers so that they can contribute to the national gene banks. There is no commercialisation of seeds at the moment, seed sharing is only at community level. Additionally, it was noted that on seed movement, quality declared seed is waking. Worry on spreading diseases is taken care of and stakeholders need to strengthen in country quarantine systems to safeguard seed quality. A key recommendation is to come up with phytosanitary regulations to regulate and harmonise quality of seeds.

Final remarks

Dr. Sarah Ollembo lembo emphasized on the need to provide infrastructure for farmer managed seed systems. Communities have own customary laws, which can be utilised to support farmers and promote co-sharing to safeguard farmer rights. She pointed the need to revisit OAU law which was rejected due to FPIC and review areas that can be used to empower women in providing policy guidelines. She also called for harmonisation of standards across regional research institutions.

Ms. Anne Maina noted that seed exchanges are important, and stakeholders can work with government to revive our seeds by looking at seeds holistically. On women protection, stakeholders should create harmony between men and women in value

chains and not bring competitions. Engage men to act as champions of gender equality.

Parallel Session 2B: **Agroecology for Resilience, Livelihoods, and Food Security**

Moderator: Mr. Samson Ngugi, Coordinator, Slow Food Kenya

Presentations

Agroecology Amid Conflict – Lessons from Northern Ethiopia

Dr. Hailu Tedla presented compelling findings from a study on the role of agroecology during the conflict in Northern Ethiopia. Ethiopia, with its deep-rooted reliance on agriculture and farmers' traditional knowledge, faced massive disruptions due to war. The conflict severely affected agricultural systems, limiting access to markets, farm inputs, and extension services, while also causing the destruction of crops and loss of livestock.

In response, farmers adopted various agroecological coping mechanisms. These included enhancing soil fertility using local resources, protecting crops organically, and diversifying production to increase resilience. A major emphasis was placed on maintaining access to seeds. Ethiopia's seed system remains highly localized, and during the war, farmers often hid seeds in dense vegetation like the bele plant to preserve them. Improved seeds were generally avoided due to high costs and lack of trust, while local seeds became the most relied upon option.

The crisis revealed the strength of agroecological principles: reliance on local systems, resourcefulness, and community resilience. It also highlighted the importance of localized extension services and trusted seed sources. Youth were encouraged to take action rather than wait for solutions. Ultimately, the presentation stressed that while agroecology can help communities endure crises, **peace remains the essential foundation** for sustainable agriculture and development.

Nature Positive Aggregated Farms as a transformative model to enhance livelihoods, food security, and ecosystem services

Dr. Gloria Otieno and Dr. Céline Termote highlighted the urgent need to address critical challenges such as biodiversity loss, land degradation, and the dual threat of climate change and agricultural intensification. The proposed **Nature+ approach** calls for systemic change beginning at the farm and community levels. It emphasizes

five core areas: conserving agrobiodiversity, sustainably managing natural resources, restoring degraded lands, managing agro-waste, and ensuring social inclusion.

Central to this model is the idea of **aggregated farms**, where farmers voluntarily collaborate to manage their land collectively. However, successful aggregation requires intensive groundwork, including GIS mapping, stakeholder engagement, and thorough baseline assessments of biodiversity, soil health, water quality, and socioeconomic conditions.

Pilot initiatives already underway include borehole drilling with irrigation support, chicken farming, and intercropping systems. Looking ahead, the project plans to establish diverse food chains, set up operational offices, introduce agroforestry and food forests, promote beekeeping, and develop livestock facilities such as cowsheds.

Overall, the presentation underscored that **nature-positive farming offers a viable path to resilient, inclusive, and sustainable food systems**, but achieving this vision demands strong collaboration, innovation, and long-term commitment from all stakeholders.

Agroecology Practices for Food Security and Climate Resilience

Mr. Alfred Juma and Mr. Meshark Sikuku from Ripple Effect shared insights from a project that implemented a range of **agroecological (AE) practices** aimed at improving **food security and climate resilience**. The intervention incorporated soil regeneration, gender training, promotion of indigenous crops, livestock integration, agroforestry, water conservation, value addition, and nutrition education. A baseline survey was conducted before implementation to set reference points.

The project tracked outcomes across four key indicators:

1. **Soil health improvement**, which led to increased food production.
2. **Crop-livestock integration**, promoting diversification for climate resilience.
3. **Value addition**, such as processing amaranth for higher income through a dedicated unit.
4. **Training and demonstration activities** designed to shift farmers' mindsets, behaviors, and practices.

A **post-test evaluation after three years** showed strong results. Notably, the **Household Food Insecurity Access Scale (HFIAS)** scores improved significantly,

incomes rose, and **women's participation in decision-making** within households increased. A unique aspect of the model was the **"ripple effect" approach**, where each trained farmer mentored at least three others, helping scale knowledge and practice adoption.

In conclusion, the study affirmed that **agroecological practices positively impact food security, income, nutrition, and gender inclusion**. However, persistent concerns about climate change remain a barrier to full confidence among farmers.

Urban Agroecology in secondary cities for better nutrition

Ms. Sophie van den Berg and a team of co-researchers, (Mr. Pierre Ferrand, Ms. Tshering Lhamo, Dr. Mortahina Rashid, Mrs. Coumbaly Diaw, Prof. Pablo Tittonell, Mr. John Kariuki Mwangi, Dr. Helen Prytherch, Mr. Eric Ogadho, Mr. Rudolf Lüthi, Dr. Dominique Barjolle) presented findings on **Urban Agroecology in Secondary Cities for Better Nutrition**, drawn from **six global case studies**. The study emphasized the impact of **rapid urbanization** on food systems—especially how it challenges **food security, storage, and nutrition** due to extended supply chains and transport times. These pressures highlight the **growing potential of urban agroecology (AE)** as a response.

The Six Case Studies:

1. **Bambilor, Senegal** – School feeding initiatives.
2. **Argentina** – Alternative food retailing via the Union of Landworkers.
3. **Kenya** – Slow Food Earth Markets.
4. **Dinajpur, Bangladesh** – Nutrition in City Ecosystems project emphasizing rural-urban linkages.
5. **Kisumu County, Kenya** – County Food Systems Strategy.
6. **Mbeya, Tanzania** – Trans-local knowledge sharing and participatory governance.

<u>Key Insights:</u>

- **Markets are essential** in shaping sustainable urban food systems and enhancing agroecology.
- The **social dimensions of agroecology**, such as inclusion, cooperation, and equity, are especially crucial in urban contexts.

- **Situational analysis** is necessary to identify food system gaps and leverage points for interventions.
- Effective AE implementation in cities requires coordination across **multiple governance layers**, facilitated through **Multi-Stakeholder Platforms (MSPs)**.
- There is an urgent need to **improve data collection and information systems** to track AE outcomes and better inform **policy development**.

In conclusion, **urban agroecology** offers promising solutions to enhance **nutrition, equity, and resilience** in secondary cities, but requires intentional policy support and robust monitoring systems.

Audience Questions

1. A question was directed to Ripple Effect: Which part of Migori are you implementing the project? Fish value chain is also missing in presentation. Dr. Gloria Otieno; The project focused on West Kanyamkago and they have not ventured in fish farming due to overreliance on fishing to support livelihood by the target community.
2. What's the difference between Nature+ and Climate Smart Agriculture? Nature+ is more than climate smart. Its more holistic and broader and makes use of natural agroecology practices.
3. What's the end game on aggregation of the farms? Smaller farms cannot be divided, driven by farmers, have full control of their land. This is different model than commercial farming like the case of the Mumias sugar company.

Parallel session 3A: **Enhancing Soil Health and Sustainable Farm Management**

Moderator: Dr. Stephen Mbaya Kimwele, Kitui CECM

Frederick Baijukya made a presentation on **Protocols** for innovative agroecological soil, water and integrated pest management practices: Management techniques, trials establishment and monitoring. He highlighted how the CGIAR Agroecology Initiative promotes the application of contextually appropriate agroecological principles by farmers and communities in various contexts, with support from other food system actors.

Audience Questions

1. How do you determine parameters that farmers are interested to measure? **Response:** To determine which parameters are important to farmers, the team combined field research with farmer consultations to identify practical, measurable indicators relevant to their needs.

2. What was the selection procedure for the farmers?
   Response: The selection of farmers was done through a voluntary process, ensuring diversity across regions, gender, and farming experience to enrich the learning outcomes
3. Have you observed nitrogen excess in the mulching?
   Response: There have been no cases of nitrogen excess observed in the mulching process, as soil tests indicated well-balanced nutrient levels throughout the trials.

Mr. Amha Besufkad, Dr. Wubetu Bihon Legesse (presenting), Mr. Yidnekachew Zewde, and Dr. Ralph Roothaert shared findings from a soil health evaluation study comparing regenerative and conventional farming systems in Central Ethiopia, conducted under the World Vegetable Center. The study highlighted that vegetable production in Ethiopia faces serious challenges due to degraded soils, poor-quality seeds, and persistent pest and disease pressures, all of which result in low yields and poor produce quality. Smallholder farmers often rely heavily on chemical fertilizers and pesticides, further degrading soil health without adequate replenishment.

In response, the project promoted regenerative agriculture as a sustainable alternative, aiming to create jobs and income for women and youth while improving both environmental and human health. Conducted in Welmera, Ejere, and Woliso, the study used key performance indicator tracking, soil health monitoring, and a combination of soil and trend analyses to assess the impact and adoption of regenerative practices.

Key interventions included the use of compost, bio-slurry, intercropping, and bio-fertilizers, alongside integrated pest management techniques like neem-based biopesticides and tolerant crop varieties. Conservation practices such as erosion control, reduced tillage, and cover cropping were also promoted.

The findings showed that regenerative practices improved both soil health and vegetable yields. Adoption was influenced by factors such as age, education, awareness, access to biomass, rising input costs, and support through extension services and coaching. Despite the positive outcomes, challenges remain, particularly the lack of market incentives for agroecologically grown vegetables. The study emphasized the need for stronger institutional and policy support to enable a successful transition to regenerative agriculture.

Audience Questions

1. Is RA adoption in Ethiopia helping in vegetables growth and does it add any nutrition value?
   Response: It's testing across different regions and there are differences on the vegetables that do well.
2. How do you get the women to get dignified pay/ livelihood in Ethiopia?
   Response: Farming is integrated with other practices to create dignified livelihoods.
3. How do the village agroecology networks work?
   Response: Through networking among project supervisors and the local farmers.
4. Challenges in the project
   Response: - Negative attitudes and perceptions.

Dr. Isaac Bazugba in his presentation; *Judicious use of inorganic fertilizer is critical for improved crop production in South Sudan*, emphasized that the careful and informed use of inorganic fertilizers is essential for improving crop production in South Sudan. In a context marked by nutrient-poor soils, inefficient farming practices, and climate-related challenges, inorganic fertilizers can significantly enhance soil fertility and crop yields. He highlighted that essential nutrients like nitrogen, phosphorus, and potassium, when applied judiciously, help replenish depleted soils and boost agricultural productivity.

Dr. Bazugba noted that fertilizers not only increase yields of key staple crops such as maize, sorghum, and millet—critical for national food security—but also enable more efficient use of limited land and water resources. However, he cautioned against misuse or overuse, which can cause environmental harm and degrade long-term soil health. Therefore, he stressed the need for farmer education on proper nutrient management and balanced fertilizer use. While recognizing the economic benefits of improved yields, he also underscored the importance of complementing inorganic fertilizers with sustainable practices like crop rotation, use of organic inputs, and soil conservation to protect the environment and ensure long-term agricultural sustainability.

Audience Questions:

1. Is the seaweed liquid fertilizer able to control pests and diseases?
   Response Yes. Most of the seaweed fertilizer can control pest and diseases from the research done.

2. What are some of the active microbes associated with the liquid fertilizer?
   Response: Fungus is used as a biological catalyst to enable biomass release the particular ingredients.
3. What is the content of calcium in the soil with the biofertilizer?
   Response: 9.8% calcium in the soil.

Parallel Session 3B: **Victoria I Hall: Mainstreaming Agroecology into County Integrated Development Plans**

Biovision Africa Trust (BvAT) and Porticus: Mainstreaming Agroecology into County Integrated Development Plans

Moderator: Dr. David Amudavi, Executive Director, Biovision Africa Trust

Presentations

Introducing the Porticus Project: "Strengthening Agroecology Policies, Strategies, and Practices in Kenya

Presenter: **Ms. Venancia Wambua,** Head of Programmes (EOA&KCOA), Biovision Africa Trust.

Ms. Wambua introduced the Porticus Project titled "Strengthening Agroecology Policies, Strategies, and Practices in Kenya." She began by highlighting the challenges of conventional farming, such as soil degradation, loss of biodiversity, and declining productivity. Agroecology offers a promising alternative by promoting sustainable food systems, conserving ecosystems, and building climate resilience. Wambua emphasized that strong policy support is crucial for the widespread adoption of agroecological practices.

She provided an overview of progress made at continental, regional, and national levels, including frameworks like CAADP, the East African Community Agroecology Strategy, and Kenya's own National Agroecology Strategy. BvAT has played an active role in developing these policies but noted the urgent need to translate strategies into actionable policies at the county level. The project targets six counties: Makueni, Nakuru, Nyandarua, Bungoma, Busia, and Laikipia.

She further pointed to growing political will and increased awareness among policymakers as key opportunities for advancing agroecology. The recent launch of Kenya's National Agroecology Strategy in September 2024, along with the decentralized nature of agriculture under Kenya's devolved government system, offers a strong platform for faster and more effective policy implementation.

Efficacy of the Farmer Communication Programme using the Integrated Communication & Capacity Development (ICCD) Approach.

Presenter: **Mr. Fredrick Ochieng**, *Head of Former Communication Programme & Support Functions, BvAT.*

Mr. Fredrick Ochieng, Head of the Farmer Communication Programme (FCP) and Support Functions at Biovision Africa Trust, presented on the effectiveness of the Farmer Communication Programme using the Integrated Communication & Capacity Development (ICCD) approach in Kenya and Tanzania. The programme aimed to increase the interest, capacity, and ownership of both subnational and national actors in co-creating and sharing agroecology knowledge. It also sought to raise awareness and understanding of agroecological practices among target communities, leading to sustained adoption and a reduction in synthetic chemical inputs.

The core activities of the FCP included building partnerships for content packaging, producing knowledge products, disseminating information, training, and gathering feedback. The ICCD approach is a systemic method designed to expand the programme's reach while deepening the adoption of ecological agriculture. It aligns with key agroecology principles: encouraging social organization and participation in decision-making, and promoting knowledge co-creation and farmer-to-farmer exchange.

ICCD's key features are participation and inclusion, learning and innovation, capacity development, and accountability. Its process involves preparation through information gathering and stakeholder mapping, mobilization and engagement with government, followed by implementation activities such as workshops using the Agroecology Transition (AET) tool and establishing multi-stakeholder advisory teams. This approach ensures relevance to farmers' needs, raises awareness of agroecology, and improves coordination with ongoing initiatives.

Mr. Ochieng explained that ICCD fosters ownership among key stakeholders, including government, addressing gaps in knowledge and skills transfer within extension systems. He shared important lessons: co-created and collaborative processes, while challenging, are essential; the pace of adoption depends on existing farm practices, with some farmers doubling yields in one season; and structured engagement creates shared understanding, clearer roles, better targeting of farmer needs, and stronger stakeholder ownership.

Overview of County Integrated Development Plans (CIDPs)

Presenter: Dr. Stephen Mbaya Kimwele Kitui CECM

Dr. Stephen Mbaya Kimwele, the County Executive Committee Member (CECM) for Kitui, shared updates on the County Integrated Development Plans (CIDPs), which serve as strategic blueprints guiding counties in socio-economic development. The Kitui CIDP for 2023–2027 envisions the county as a prosperous area with vibrant rural and urban economies, where citizens enjoy a high quality of life.

The plan is organized around six pillars: agriculture focused on food security, water access, healthcare services, development of aggregation centers and industrial parks, nurturing human capital, and planned rural and urban development.

Dr. Kimwele highlighted the urgency of mainstreaming agroecology in Kitui County due to its semi-arid climate with low rainfall, high poverty rate of 47.5%, and the impacts of climate change causing prolonged droughts and floods. These factors contribute to severe food insecurity. To address this, the county has adopted several strategies including integrating agroecology into policy, building local capacity, engaging communities, and fostering collaborations and partnerships with development organizations to promote sustainable agricultural practices.

Roundtable Discussion (Murang'a CECM, Kisii CECM, Kakamega CECM, Busia CECM)

During the roundtable discussion with CECMs from Murang'a, Kisii, Kakamega, and Busia counties, several key points and recommendations on advancing agroecology were shared.

Dr. Anne Kuria, CECM of Makueni County, emphasized integrated soil fertility management and the importance of targeted subsidies and incentives to encourage agroecological practices. She highlighted supporting community seed systems and promoting regenerative agriculture methods like conservation farming, agroforestry, and minimum tillage. Dr. Kuria also stressed the need to align policies and legislation to support soil health and organic inputs, along with enhancing farmer training, extension services, digital knowledge sharing, and market development to strengthen sustainable farming.

Mandela Moffatt, CECM of Kakamega County, noted the county's high rainfall but ongoing soil management challenges caused by overuse of inorganic fertilizers.

Kakamega is responding by promoting organic fertilizers and running a fertilizer subsidy program. The county plans to establish an organic fertilizer plant in Mumias and encourages integrating practices such as providing dairy animals to farmers, enabling the use of organic manure to reduce soil acidity. When asked about the alignment of community-based systems with legal frameworks, he confirmed adherence to existing agricultural policies and procedures.

Emmanuel Ng'etich, representing Busia County as Minister of Agriculture and Livestock, identified soil health challenges linked to fertilizer use. As a solution, Busia is supporting cooperatives that will form a SACCO, with each cooperative receiving a startup fund of Ksh. 700,000 to support projects. This approach aims to improve farmers' access to credit facilities, empowering them to adopt better soil management practices.

Parallel Session 4A: **Special Session on Gender Transformative Agroecology**

Moderator: Mr. Chariton Namuwoza, AFRONET President

Presentations

*Ms. Anna Marwa: Gender-**Transformative Agroecology – Empowering Rural Women for Sustainable Food Systems***

In her presentation, Ms. Anna Marwa advanced the argument that **gender-transformative agroecology (GTA)** serves as a critical pathway for promoting sustainable food systems through the empowerment of rural women. Drawing on the Rural Women's Collective Centre (RWCC) as a case study, she emphasized that although women play a central role in agricultural production, they are often regarded merely as a source of labor rather than as key agents of change.

GTA, as conceptualized in the presentation, extends beyond gender-sensitive or gender-responsive frameworks by actively confronting and reshaping the structural and policy-level inequalities that perpetuate gender injustice in agriculture. It seeks to interrogate and address root causes of inequity while ensuring fair access to and control over productive resources.

Among the core outcomes of GTA initiatives are:

- Heightened awareness of agroecological principles among rural women;
- Amplification of women's voices in agricultural discourse and decision-making;

- Increased capacity of women to control and own essential agricultural resources;
- Establishment of community seed banks that safeguard local seed biodiversity and promote sovereignty.

Ms. Marwa concluded the following policy and programmatic recommendations, including:

1. Government-led review and reform of agricultural policies and laws to better support agroecology;
2. Allocation of dedicated public budgets for the training and capacity building of rural women in agroecological practices;
3. Stronger collaboration among stakeholders to ensure the long-term sustainability and institutionalization of agroecological models.

This presentation underlined that gender-transformative agroecology is not only a vehicle for social justice but also a strategic enabler for resilient, inclusive, and sustainable food systems.

Cecilia Mm'burugu and Teresia Wagura (presenting authors), Dr. Beatriz Oliver, Ms. Jacqueline Stein, Ms. Rehema Fidelis, Ms. Chebet Chirchir, Ms. Martha Nemera Woyessa, Mr. Shimelis Ejigou, Ms. Doris Munyingi, Mr. Dominic Kimani, Mr. Sylvester Mavanza, Ms. Eileen Alma, Ms. Catherine Kasimbazi - ***Gender Transformative Agroecology: A rights-based approach to women's empowerment and climate resilient food systems***

Cecilia Mm'burugu and Teresia Wagura, along with their team of authors, highlighted critical insights into the role of women and youth in advancing agroecology and food security.

Cecilia Mm'burugu emphasized that women are central to global food security due to their dedication and knowledge in agricultural work. However, women face significant barriers such as limited leadership opportunities, climate challenges, social constraints, and gender-based violence (GBV). The "Rural Women Cultivating Change" initiative, active in Kenya, Tanzania, and Ethiopia, uses agroecological approaches to address these challenges. Key burdens for women include heavy labor, lack of awareness about GBV, insufficient capacity-building, and inadequate access to GBV prevention services. Cecilia recommended involving men as allies, strengthening GBV prevention with survival-focused strategies, raising awareness,

securing women's and farmers' rights, recognizing women's contributions, and scaling successful approaches for women's empowerment.

Teresa Wagura, representing youth perspectives, identified three pillars essential for empowering rural women toward sustainable food systems. First, women's empowerment and leadership involve training on rights and gender equality, mentoring in leadership skills, and encouraging women's participation in policies. This has led to increased land ownership by women, greater confidence, improved gender equality, and enhanced decision-making roles. Second, efforts to prevent and respond to SGBV have resulted in frontline government workers supporting survivors and broader awareness campaigns. Third, building climate-resilient food systems includes training women to access land, developing security action plans, forming microfinance groups, and providing practical demonstrations on farms. These efforts have increased the use of agroecological practices and improved women's financial status.

Eileen Alma, Ms. Catherine Kasimbazi: ***Gender Transformative Agroecology: A rights-based approach to women's empowerment and climate resilient food systems***

Ms. Chebet Chirchir (presenting author), Mr. Joshua Mbai: ***Impacts of Climate Change on the livelihoods of rural women***

Rural Women Cultivating Change (RWCC) is a program focused on empowering women by breaking down cultural and structural barriers that limit their participation in agriculture and community development. It supports smallholder farmers and survivors of gender-based violence, ensuring that rural women are actively involved in multiple agricultural value chains. Through this involvement, RWCC helps build resilient food systems that can better withstand environmental and social challenges.

Climate change has had significant effects on agricultural value chains, leading to increased pest and disease outbreaks, reduced harvests, and a decline in crop diversity. These changes have also impacted household nutrition, causing malnutrition, and have reduced honey production. Furthermore, the frequency of extreme weather events has increased, making farming even more unpredictable and difficult.

At the household level, these challenges have led to increased movements as families adapt to food insecurity. Farmers have adopted various strategies to cope, such as switching to drought-resistant crops, harvesting rainwater, and seeking alternative

livelihoods. Access to timely information has become crucial in helping communities adjust their farming practices.

Crop farmers have focused on planting drought-tolerant varieties and diversifying their crops to reduce risks. Beekeepers contribute by planting native, bee-friendly plants and harvesting water to support their hives. Across the board, there is a strong emphasis on planting native species to sustain local ecosystems and improve resilience.

To support these adaptive efforts, RWCC and its partners provide resources like adaptive seeds, promote sustainable soil management practices, offer subsidies for essential agricultural inputs, and facilitate access to accurate weather forecasts. These combined efforts aim to strengthen the ability of rural women and their communities to thrive despite the challenges posed by climate change.

Sharon Ochola: ***Mentoring and Empowering Program for Young Women***

Sharon Ochola leads a mentoring and empowerment program focused on young women, encouraging them to adopt agroecology while promoting gender equality. She emphasizes the importance of placing women's leadership at the center of food systems within agroecological practices. Sharon works closely with diverse groups, including young mothers, helping them build skills and improve their livelihoods. She stresses that sustaining agroecology requires strategic investment and strong partnerships among stakeholders to support and amplify these efforts.

Audience Questions

1. What challenges when employing an approach and how do you mitigate
   Ensuring innovations that are time friendly are put in place to support women and create more awareness.
2. What are other approaches are you employing to enable women own lands and conjoined lands with their husbands
   Training women to have marriages sealed on papers to prove land ownership. Have discussion with their husbands. On communal land to have their names registered.
3. What strategies are you using to include men since the challenges are the same
   There are women led groups but the membership also has men in them

Parallel session 4B: **Policy and Governance for Agroecological Transitions**

Moderator: Josephine Akia, Country Coordinator, Participatory Ecological Land Use Management

Presentations

*Prof. Charles Ssekyewa and Dr. Stella Namanji (presenting author) - **Enablers and Silent Policy Issues in Transitioning Towards Safe, Sustainable, and Economically Viable Food Systems in Uganda***

This presentation explored the potential and policy environment for agroecology in Uganda, highlighting it as a transformative approach that merges agriculture, ecology, and social equity. Agroecology was positioned not only as an environmentally sustainable farming model but also as a business opportunity capable of increasing productivity, resilience, and reducing dependence on external inputs.

Key Concepts

- Agroecology integrates traditional knowledge with modern science to promote environmentally friendly and socially just farming.
- While Uganda has supportive policies and alignment with international frameworks (e.g., FAO, biodiversity treaties), gaps and silences in these policies impede full-scale transition.

Methodology

The study employed a robust policy analysis framework, including:

- Document review
- Agroecological principle-based theoretical frameworks
- Carol Bacchi's "What's the Problem Represented to be?" (WPR) approach
- Physical policy document examination seized

Key Findings:

- Policies acknowledge biodiversity and indigenous knowledge, but fail to outline clear strategies for biodiversity protection or reducing chemical input use.

- Soil health is not adequately addressed in most policies, including the National Organic Agriculture Policy (NOAP).
- Animal health is noted, but focuses on prevention, not comprehensive disease management.
- Marginalized stakeholders are often excluded from policy-making.
- There's inadequate funding for sustainable land management.
- The DSIP (Development Strategy and Investment Plan) continues to prioritize large-scale mechanized farming, overlooking indigenous and sustainable practices.

Recommendations

- Develop and implement comprehensive agroecological policies with clear guidelines and measurable targets.
- Harmonize agriculture and environmental goals, ensuring policies support ecological integrity alongside productivity.
- Enhance enforcement of agroecological and sustainable land use policies.
- Increase stakeholder awareness on sustainable practices and the value of agroecology.
- Elevate indigenous knowledge as a critical component of national agricultural strategies.
- Engage agroecologists in co-creating policies, plans, and strategies to foster inclusive and effective food system transformation.

Conclusion: Uganda is well-positioned for an agroecological transition, but policy gaps and silent areas need urgent attention. The shift from sustainable use to holistic resource management and the institutionalization of agroecology in policy and practice are essential for long-term food system resilience.

Mr. Robert Kubai (presenting author), Mr. Stephen Muchiri: ***Institutional and Policy Pathways for Scaling Agroecology Transitions in Africa: Strengthening Governance for Resilient, Sustainable Agriculture***

This presentation focused on the institutional and policy frameworks necessary for effectively scaling agroecology (AE) transitions across Africa. The speakers emphasized the need for strong governance, stakeholder coordination, and policy alignment to foster resilient and sustainable agri-food systems.

Focus: Implementation of the NEOAS (National Ecological Organic Agriculture Strategies)

Key priorities in advancing agroecology through NEOAS include:

- **Making inputs available:** Ensuring farmers have access to necessary organic and agroecological inputs.
- **Bringing knowledge to farmers:** Promoting awareness and understanding of agroecological practices through training and extension services.
- **Expanding market access:** Linking producers to reliable and profitable markets to encourage AE adoption.
- **Including Ecological Organic Agriculture (EOA) in village land planning:** Embedding AE in local-level development and land use planning processes.
- **Coordinating capacity building:** Creating platforms and programs for farmer training, institutional development, and continuous learning.
- **Fostering investments:** Mobilizing resources to support AE practices and institutions.

Future plans: The presenters outlined several forward-looking actions to deepen AE implementation:

- **Strengthening ITF (Implementation and Technical Framework) source mobilization:** Ensuring sustainable funding and technical support.
- **Engagement of politicians:** Increasing political will and involvement to drive policy reforms and resource allocation.
- **Advancing the agroecology sector:** Emphasizing the need for **supportive, coherent policies** and **institutional collaboration** to mainstream agroecology within national development agendas.

Conclusion

To successfully scale agroecology across Africa, there must be **deliberate institutional strengthening, political buy-in, and inclusive policy development.** Coordinated efforts through NEOAS and other regional frameworks can transform AE from a niche approach into a **mainstream pathway for sustainable agriculture** and **rural resilience.**

Raharison Tahina - ***Bridging Agroecology and Organic Agriculture: Towards a Convergent Approach for Sustainable Food Systems***

Raharison Tahina's presentation highlighted the growing recognition of agroecology as a foundational model for establishing sustainable and resilient food systems. The discussion explored the convergence of agroecology (AE) and organic agriculture (OA), two distinct yet complementary movements. Agroecology was described as a social-ecological system rooted in environmental sustainability, community knowledge, and food sovereignty, while organic agriculture was presented as a socio-technical system focused more on market value chains, certification, product realization, and export targets. Despite their differences, both approaches share the ultimate goal of promoting sustainable agriculture, making their integration not only desirable but necessary. The presentation emphasized the need for joint action towards knowledge sharing, harmonized training at various levels, and collaborative reflection on local markets and value chain systems such as GSP and TVAB. Notably, the implementation of Madagascar's national organic agriculture strategy (SNABIO) by the Ministry of Agriculture (MINAE) was cited as a concrete step in this direction. Additionally, ongoing efforts by GSDM and SYMABIO, including the training of master trainers and building partnerships with private sector actors, underscore the importance of coordinated actions and multi-stakeholder collaboration in accelerating agroecological transitions and ensuring food system sustainability.

Ms. Akware Doreen: ***The East African Legal, Institutional and Policy opportunities for unlocking Agroecology's potential in Agri-Food Systems***

The presentation emphasized that agroecology integrates economic inclusivity and climate resilience to promote a sustainable and safe food system. However, this approach faces significant challenges, including industrial practices that threaten ecological balance. Legal and institutional frameworks are critical in supporting sustainable agrifood systems by advocating for policies that prioritize smallholder farmers and address systemic gaps. A multidisciplinary methodology was applied, incorporating data analysis, policy reviews, and case study evaluations. The key objectives were to identify policy enablers, examine institutional and governance mechanisms, and explore legal and policy opportunities that can unlock agroecology's full potential. The presentation also highlighted ongoing efforts in public interest litigation and emphasized that now is the time for action. Innovative policy reforms are urgently needed to support and lead agroecological food systems;

failure to act could result in the collapse of the ecological foundation necessary for sustainable agriculture.

Audience Questions

1. What do we want when it comes to the integration of our policies and features of agroecology

   Response (Dr. Stella) We need to integrated policies before the implementation, they should be part of the process to bring out their usefulness and necessity
2. What can we do to ensure these agroecological policies are included in vision 20230?

   Response: We need to work on the existing procedures to see that these policies are included at the EAC level. A vision is a vision, Uganda chose a30 years vision which is divided into 3 ten-year plans which are the subdivide into 6 5year plans, from these budgets are drafted on annual basis hence there are rooms to include any emerging issues on national frameworks.

Parallel Session 5A: **Innovative Agroecological Practices for Resilient Livelihoods and Seed Systems**

Moderator: Dr. David Ojwang, Sector Leader - Agri-food Systems for SNV Kenya and Burundi.

Presentations

Dr. Mark Otieno: ***Development of agroecological strategies for managing emerging animal and crop pests and diseases in Kenya***

Dr. Mark Otieno's presentation focused on the development of agroecological strategies to manage emerging pests and diseases affecting crops and livestock in Kenya. He outlined the growing challenges facing sustainable farming, particularly due to climate change, overuse of synthetic pesticides, and limited awareness of alternative solutions. His talk emphasized the need for a shift from chemical-based control to integrated pest management (IPM), which combines biological, cultural, and mechanical methods.

Dr. Otieno explained how agroecological approaches—such as the use of natural predators, botanical pesticides like neem, crop rotation, and intercropping—enhance biodiversity and improve pest resistance. He presented research showing that farms

with diverse cropping systems experience fewer pest outbreaks and benefit from healthier soils, which contribute to stronger plant resilience.

To scale up these practices, he recommended farmer training through field schools, increased production and use of bio-pesticides, stronger policy support for agroecological transitions, collaborative research between scientists and farmers, and better market incentives for agroecological products. He concluded that sustainable pest management is a cornerstone of resilient food systems and that nature-based solutions not only protect the environment but also improve productivity and farmer livelihoods.

Prof. Thomas Rewe and Team: ***Regenerative Agricultural Practices for Livelihoods and Markets in Western Kenya***

Prof. Thomas Rewe, alongside Ms. Judith Libaisi, Mr. Patrick Sigei, Mrs. Mercy Kamau-Rewe, and Dr. David Ojwang, delivered a compelling presentation on the importance of regenerative agriculture (RA) in enhancing soil health, livelihoods, and market access in Western Kenya. Rewe's vivid metaphor—*"Soil is like a donkey, a beast of burden..."*—underscored the urgent need to continuously nourish soil to prevent agricultural collapse.

<u>Key Highlights:</u>

1. The "Sick Donkey" Effect: Soil degradation leads to reduced yields, higher input costs, and heightened food insecurity—clear signs of an overburdened and neglected soil system.
2. Regenerative Agriculture (RA) as a Solution: RA focuses on restoring soil health rather than maximizing short-term outputs. Its benefits include:
    - Increased biodiversity and ecosystem resilience
    - Reduced dependency on chemical inputs
    - Enhanced soil structure, nutrient retention, and water-holding capacity
3. The REALMS Project (Kenya & Rwanda): Aiming to directly impact 10,000 and indirectly benefit 30,000 smallholder farmers, this project promotes stakeholder collaboration—from governments to agribusinesses—to support sustainable land management.
4. Study Findings – Uasin Gishu & Kakamega Counties
    - Soil Chemistry: Organic and integrated fertilizer treatments outperformed inorganic ones in terms of improving phosphorus (P), potassium (K), and cation exchange capacity (CEC).

- Crop Performance: Organic fertilizers significantly improved germination rates (e.g., beans: 86% organic vs. 34% inorganic in Uasin Gishu). Though inorganic fertilizers sometimes gave higher yields (e.g., Irish potatoes), integrated approaches often provided the best balance between germination and yield consistency.

5. Striga Weed Control: RA methods using biofertilizers proved effective in managing the invasive Striga weed, highlighting the potential of biological inputs in pest control.
6. Recommendations
    - Conduct long-term cost-benefit studies on RA vs. conventional farming
    - Promote combined use of organic and inorganic fertilizers during the transition period
    - Establish farmer networks for knowledge dissemination
    - Include biological indicators, such as microbial activity, in soil health assessments

Conclusion

The team advocated for regenerative agriculture as a viable pathway to sustainable farming in Kenya. Their research showed that RA not only boosts soil and crop health but also strengthens livelihoods and market opportunities. They urged policymakers to invest in RA-based strategies to secure agricultural resilience for future generations.

*Mr. Edward Makoni: **Agroecology and Traditional Seed Systems Nexus***

Mr. Edward Makoni, Resilience and Sustainable Livelihoods Advisor at Trócaire Zimbabwe, delivered a compelling presentation that highlighted the critical relationship between agroecology and traditional seed systems. Drawing from his experience working with rural communities, Makoni emphasized that sustainable food systems, particularly in the context of increasing climate disruptions, cannot be achieved without acknowledging and revitalizing the farmer-managed seed systems that have sustained generations.

Agroecology, as Makoni explained, is not just a set of farming practices but a holistic and systemic approach that integrates ecological, cultural, social, and economic dimensions of agriculture. It places farmers—especially smallholders—at the center of food production, emphasizing resilience, biodiversity, and sustainability. Through

agroecology, food systems are designed to be locally rooted, healthy for consumers, and fair to farmers.

A major focus of Makoni's presentation was the urgent need to recover and protect traditional seed systems. These systems, often referred to as informal or farmer-managed seed networks, are based on practices where farmers save, select, exchange, and distribute seeds among themselves. Such systems are deeply embedded in indigenous knowledge and are essential for maintaining genetic diversity, ensuring food sovereignty, and enhancing resilience in the face of climate change. According to Makoni, these seed systems are under threat from several modern challenges—including climate variability, seed shortages, rising input costs, market instability, and the increasing loss of farmer autonomy due to the spread of commercial seed markets and monoculture farming.

Makoni underscored the pivotal role that traditional seed systems play in agroecology. These seeds are not only genetically diverse and well adapted to local conditions, but they also thrive under low-input, biodiverse farming systems. He noted that women, in particular, serve as custodians of seed diversity, playing key roles in seed selection, preservation, and knowledge transfer. Community-based solutions such as household and communal seed banks were highlighted as essential to ensuring seed security, especially after harvest failures or in times of climate-induced stress.

The presentation stressed that agroecology and traditional seed systems are inherently interlinked. Agroecological principles empower farmers to innovate locally and strengthen traditional knowledge, while traditional seed systems provide the biodiversity required for agroecological farming to flourish. Together, they minimize dependency on external inputs, enhance local economies, and support food sovereignty by challenging the corporate control of seeds.

Makoni concluded by delivering strong key messages. He noted that traditional seeds are more resilient to pests, diseases, and climate stresses. They support low-input, sustainable farming systems and offer a practical solution to reducing dependence on synthetic fertilizers and pesticides. He called for the recognition of farmers' rights to save, exchange, and sell seeds, and stressed the importance of community cooperatives and seed banks in preserving these systems. Finally, he urged governments, civil society organizations, and policymakers to support agroecological transitions through enabling policies that prioritize farmer autonomy and environmental sustainability.

In his final call to action, Makoni asserted that the future of food security lies in seed security. Protecting traditional seed systems, he argued, is not only a matter of preserving heritage but also a strategic imperative for building resilient, sustainable, and self-reliant food systems in the face of a changing climate.

Audience Questions

1. How do you ensure the sustainability of traditional seed systems?
   Mr. Edward Makoni:
   - Policy: The creation and implementation of policies that advocate for traditional seed systems are essential. This allows farmers to operate without limitations or infringements from governments. For instance, in Kenya, sharing seeds is illegal, which does not benefit the farmer.
   - Empowering Farmers: Farmers are the custodians and guardians of seeds in traditional seed systems. To ensure sustainability, they must be empowered, educated, and sensitized to understand that their systems work.
   - Commercialization: It is difficult for farmers to continue practicing traditional seed practices if they are not able to commercialize and earn an income from them.
2. How can we achieve a balance between policy and commercialization?
   Mr. Edward Makoni:
   - We need to provide proof of concept. Currently, there are policies that hinder the upscaling of traditional seed systems, making commercialization difficult.
   - To develop enabling policies, there must be evidence that traditional seed systems are more sustainable than conventional ones.
   - Once we have supportive policies from governments and other stakeholders, it will be easier to commercialize traditional seed systems.
3. Mwarubaini" is a cultural pest controller. Can we classify and use it as a biological pest control for livestock?
   Dr. Mark Otieno:
   - Cultural remedies for pests such as worms may exist and may be effective, but there has not been sufficient study and research to classify them as biological pesticides.
4. Can we use salt as an alternative to chemical pesticides?
   Dr. Mark Otieno:

- It is not advisable. While salt may have some benefits, without proper research, we cannot determine the extent of its safe and effective usage.

Parallel Session 5B: **Agroecological Transformation and Food Security: Evidence, Tools and Approaches**

Moderator: Dr Ann Muruiki, Environment & Natural Resource Systems, KALRO Secretariat

Presentation

Dr. Lisa Elena Fuchs (Presenting Author), Dr. Sarah Freed: ***Supporting Locally Driven Agroecological Transformation through Agroecological Living Landscapes (ALLs): A Practical Toolkit for Implementation***

Dr. Lisa Elena Fuchs, a Social and Agroecological Systems *Scientist* at the Alliance Bioversity-CIAT in Nairobi, recently presented on the topic *"Supporting Locally Driven Agroecological Transformation through Agroecological Living Landscapes (ALLs): A Practical Toolkit for Implementation."* This work, co-authored by Rachel C. Voss, Sarah Freed, Bernard Triomphe, Nadia Bergamini, Chris Dickens, and Marcela Quintero, introduces an innovative approach to supporting agroecology through localized, stakeholder-driven platforms.

At the heart of their presentation is the concept of Agroecological Living Landscapes (ALLs), which serve as dynamic, functional territories for agroecological transformation. Unlike traditional development models bound by administrative or geographical lines, ALLs are defined by their functional coherence and community participation. They bring together a wide range of actors—including local farmers, researchers, policymakers, and NGOs—to collectively co-design and implement context-appropriate agroecological innovations. The aim is to foster equitable food systems and promote sustainable farming practices rooted in local knowledge and shared responsibility.

One of the key challenges identified in advancing agroecological transitions is the absence of structured support for community-led efforts. There is a pressing need for transdisciplinary research that bridges the gap between scientific knowledge, policy-making, and farmers' lived experiences. Furthermore, the lack of viable business models, insufficient funding, and unsupportive policy environments continue to hinder the scalability and sustainability of agroecological practices.

To address these issues, the team developed a practical toolkit designed to guide the implementation of ALLs. This toolkit is organized into five interconnected work packages. The first focuses on transdisciplinary co-creation, emphasizing collaborative innovation across stakeholders. The second package involves evidence-based assessments to evaluate trade-offs between agroecological and conventional approaches. The third supports the creation of inclusive and sustainable business models and financing strategies. The fourth aims to strengthen the policy and institutional landscape to support agroecology. Finally, the fifth work package centers on behavior change and knowledge sharing to ensure broad adoption and long-term impact.

The toolkit includes several key methodologies. Among them are the *Engagement Principles* (M2), which provide a framework for inclusive stakeholder participation, and the *Vision-to-Action (V2A) Framework* (M4), which guides the transformation process from research to implementation. These tools, developed and refined through extensive fieldwork and collaboration, enable stakeholders to collectively envision, plan, and act on agroecological goals.

In her concluding reflections, Dr. Fuchs emphasized that agroecology must be deeply rooted in principles and tailored to the specific local context. Transdisciplinary approaches should include both outward-facing tools that empower communities and inward-facing methods that encourage reflection and adaptability among practitioners and institutions. The ALLs approach, she noted, fosters strategic partnerships, supports the development of alternative business models, and engages policymakers at multiple levels to drive lasting change.

Ultimately, the Agroecological Living Landscapes framework offers a scalable, structured, and inclusive pathway for communities and stakeholders to achieve meaningful agroecological transformation. Its success depends on active collaboration, shared ownership, and aligned support from governments, donors, and development partners.

Ms. Veronica Massawe, Mr. Francesco Maria Ajena, Mr. Joe Alpuerto, Mr. Simon Degelo, Ms. Celia del Campo Aragone, and Mr. Remi Cluset: ***Seeds Systems and Agroecology; A TAPE Analysis of the Food Security Nexus in Smallholder Farming Systems in Southern Tanzania***

Presented by Ms. Veronica Massawe and a multidisciplinary team including Mr. Francesco Maria Ajena, Mr. Joe Alpuerto, Mr. Simon Degelo, Ms. Celia del Campo

Aragone, and Mr. Remi Cluset, this study explored the interrelationship between farmer-managed seed systems (FMSS), agroecological transition, and food security among smallholder farmers in Southern Tanzania. Despite its vast agricultural potential, Southern Tanzania continues to face persistent food security challenges. The study sought to examine how seed systems—particularly those rooted in traditional knowledge—can drive a transition toward resilient and sustainable food systems, with a specific focus on the contributions of agroecology.

At the heart of the study was the FAO's Tool for Agroecological Performance Evaluation (TAPE), which was applied to over 250 households participating in the SWISSAID CROPS4HD project. TAPE measured three main dimensions: the structure and characteristics of seed systems, the extent of agroecological transition, and resulting food security outcomes. Through the Core Agroecology Transition Score (CAET), researchers were able to categorize farming systems based on their agroecological maturity. Results indicated that program beneficiaries scored significantly higher (58%) on CAET compared to the control group (38%). This positioned many participating farmers in the early stages of agroecological transition, with dietary diversity improving for 65% of beneficiaries.

A critical finding of the study was the role of traditional seeds in accelerating agroecological transition. Farmers who utilized local or traditional seed varieties progressed more rapidly in adopting agroecological practices. The study developed a grading scale (from 0 to 4) to reflect the extent of traditional seed and knowledge use, with higher scores corresponding to greater use of local varieties and indigenous practices. Although traditional seed use was positively associated with agroecological transition, it did not directly correlate with immediate improvements in food security based on Food Insecurity Experience Scale (FIES) scores.

To investigate further, the researchers employed mediation analysis to explore the indirect effects of traditional seed systems on food security. The findings revealed that traditional seeds improve food security by first enhancing agroecological practices (reflected in higher CAET scores), which then contribute to reduced food insecurity. In essence, while traditional seeds alone do not directly lower food insecurity, their value lies in enabling agroecological systems that sustainably address food and nutritional needs.

The study's conclusions were also reinforced by a wide body of scientific literature from across Africa—including Ghana, Nigeria, Ethiopia, Kenya, and Zimbabwe—demonstrating that traditional seeds and indigenous crops are linked to improved

child nutrition, greater household dietary diversity, and higher resilience to climate-induced shocks such as droughts.

Among the key takeaways was the insight that farmers who integrated both traditional seeds and mixed marketing strategies (growing for both consumption and sale) had the highest CAET scores and better nutrition outcomes. These farmers displayed a strong ability to balance household food security with income generation. However, the study acknowledged that early stages of agroecological transition may initially experience challenges, including lower yields, increased labor demands, and delayed benefits from ecosystem services, which can temporarily heighten food insecurity.

In terms of policy and research implications, the study called for an integrated approach. No single input or practice, such as seed variety alone, was found to be sufficient. Instead, the authors advocated for embedding traditional seed systems within broader agroecological food systems that are supported by policy, market access, and nutrition education. Systems-thinking was emphasized as essential to understanding and supporting these complex and dynamic farming environments.

The presentation concluded with a strong call to action: traditional seeds are vital to ensuring long-term food security and resilience, but their impact depends heavily on broader agroecological transitions. Governments and development partners must therefore support farmer-led seed systems, create enabling policies, and invest in strategies that simultaneously enhance food production, empower rural communities, and open up sustainable market opportunities.

Stellamaris Mulaeh (presenting author), Melanie Brantschen, Mr. Rashid Byarushengo, Dr. Douglas Machuchu, Dr. Maurice Tschopp, Dr. Johanna Jacob, Thomas Gass: **Impact of the Adoption of Agroecological Practices on Food Security – An Assessment of Household Survey Data from the Sufosec Alliance**

The research draws from the Sufosec Household Survey conducted between 2021 and 2024, covering over 46,000 households in 17 to 19 countries. The survey, led by a coalition of six Swiss international development organizations co-funded by the Swiss Agency for Development and Cooperation (SDC), aimed to assess progress toward the right to food and the impact of climate-resilient farming systems. Using the Food Insecurity Experience Scale (FIES)—a globally recognized metric aligned with SDG 2 (Zero Hunger)—the study evaluated how the adoption of agroecological (AE) practices influenced food insecurity.

Households were asked about their experiences over the previous 12 months, including whether they had worried about running out of food, had to eat less, skipped meals, or went an entire day without food. A mixed-effects statistical model was employed to account for regional differences and isolate the effects of AE adoption. The results were striking: for each agroecological practice adopted, the odds of experiencing moderate food insecurity decreased by 5%, and the odds of severe food insecurity decreased by 7%. Households implementing at least three practices—such as improving soil health, integrating livestock, or enhancing biodiversity—saw reductions of 20% and 34% in moderate and severe food insecurity, respectively.

The findings were reinforced by a case study from Kenya, specifically the Diocese of Nyahururu, where Fastenaktion has been working. Here, households engaged in diverse agroecological systems consistently reported better food security outcomes. These local results mirrored the broader cross-country evidence, underscoring the strength of the approach.

Importantly, the presenters noted that agroecology's benefits are amplified in more diversified systems. The research aligns with previous studies, including those by Bezner Kerr et al. (2021), and confirms that agroecology not only enhances food availability but also supports nutritional diversity and resilience. However, the team emphasized that data collection tools must be adapted to local contexts, including the use of local languages and culturally relevant indicators.

Looking ahead, the Sufosec Alliance plans to expand the study between 2025 and 2026. This next phase aims to refine measurement tools and deepen understanding of how agroecological transitions can be scaled for broader impact.

In conclusion, the presenters issued a strong call to action: agroecological practices have proven their potential to reduce food insecurity significantly. Governments, donors, and development organizations must invest in and support diversified AE systems—not just for environmental sustainability, but as a powerful pathway to achieving global food security and resilience in the face of climate change. Long-term commitment and policy support are essential to scale these solutions and realize the vision of zero hunger.

Audience Questions

1. At which level were the landscape transformation projects implemented, and what were the facilitating entities

   Dr. Lisa Elena: Integration was done at both local and national levels. We mapped stakeholders at both the national and local levels.
2. What were the decision-making tools at the local level?

   Dr. Lisa Elena: We mainly used studies and research to inform decisions during the project. Additionally, there were locally designed farm trials that served as practical tools for final decision-making.
3. How do you define a project as locally made?

   Dr. Lisa Elena: The project fostered locally led action. This means that initiatives were started by the local farmers, were centered around them, and continued even in the absence of researchers.
4. When will we have tools for farmers that optimize crop yield, preserve soil, and increase income?

   Dr. Lisa Elena: This is a collective call to action through agroecology. To get there, we need to simplify the parameters and support individual farmers in identifying their specific needs.
5. To what degree do politics and social issues—often referred to as 'noise'—impact your research?

   Stellamaris Muleah: The study period from 2020 to 2022 was peaceful, with no issues from pastoralist communities. The political environment was also calm. It is safe to say the project ran successfully without external interference.
6. Other than questionnaires, what other data collection methods were used?

   Stellamaris Muleah: Participatory evaluations, Annual surveys, and External surveys conducted by other stakeholders and organizations
7. Could you provide irrigation materials to support small-scale farmers in kitchen gardens?

   Melanie Brantschen: Kitchen gardens are primarily for household sustenance and generally do not require much investment. They have shown higher returns, especially when women took the lead in managing them.
8. Was the Seed System and Agroecology Project affected by external factors like climate?

   Mr. Francesco Maria Ajena: Following the project findings, we have not conducted further research to determine the reasons. However, it has been proven that local fertilizers yield better outcomes.

Parallel Session 6A: Special Session on Measuring Agroecological Transition

The session focused on the measurement of agroecological transition through various tools, frameworks, and case studies from different regions. The presentations showcased the multidimensional benefits of agroecology, its role in improving food security, farm productivity, and soil health, as well as the need for tailored assessment tools to track progress.

Key insights emerged from TAPE results in Kenya, experiences from Ethiopia, and various global initiatives aimed at assessing agroecology's impact. The discussions emphasized the importance of co-learning, knowledge sharing, and ensuring tools are context-specific to support farmers effectively.

Key Findings from Presentations:

Presentation	Presenter	Findings
TAPE Results in Kenya	Beatrice Adoyo, CIFOR-ICRAF, Kenya	• Agroecology fosters holistic food systems and enhances farm productivity. • Most farms are at an early transition stage, requiring more localized resource optimization. • While agroecology improves soil health and biodiversity, youth participation remains low.
Ethiopia's Experience	Endalkachew Woldemeskel, CIFOR-ICRAF, Ethiopia	• Agroecological interventions focusing on soil health and biofertilizers showed positive outcomes. • Farmers implementing these practices are more resilient, but adoption varies across districts.
MAP Project &	Matthias Geck, CIFOR-ICRAF, Kenya	• The Measuring Agroecology and its Performance (MAP)

Agroecology Measurement		Project studied agroecology across four countries. • The Holistic Localized Performance Assessment (HOLPA) tool helps inform global and local indicators. • Emphasized the need for multi-stakeholder platforms for information exchange
Agroecology Finance Assessment Tool	Oliver Oliveros, Agroecology Coalition	• Developed to track agroecology's evolution and its financing landscape. • Helps identify red flags in funding decisions and ensures alignment with agroecological principles.
Business Agroecology Criteria Tool (B-ACT)	Stefanie Pondini, Biovision Foundation	• Targets investors, donors, enterprises, and policymakers. • Ensures agroecological enterprises align with 13 core principles for positive impact.
Farmer Perspective from Kenya	David Kimani, CSHEP	• Farmers are key to agroecology's success, playing multiple roles as producers and biodiversity stewards. • Emphasized knowledge-sharing and the need for financial and technical support. • Youth engagement in agroecology remains a challenge.
Women & Youth Inclusion in Agroecology	Monica Yator, Indigenous Women & Girls Initiative	• Women are more engaged in agroecology than youth. • Youth need financial incentives and easier transition pathways.

		• Farm demonstration programs in schools can encourage young farmers

<u>Key Takeaways from the Session</u>

1. Agroecology has a multidimensional impact: Enhances food security, soil health, and biodiversity while reducing reliance on external inputs, Supports holistic and sustainable food system transformation.
2. Farmers need practical, low-cost solutions: Reducing the cost of ecological farm inputs is critical, Localized, farmer-centered assessment tools should be combined with scientific analysis.
3. The role of financial tools in agroecology adoption: Investors and donors require better data to support agroecological transitions. The Agroecology Finance Assessment Tool helps guide grant-making decisions.
4. Bridging the knowledge gap: Co-learning and knowledge-sharing platforms are crucial for success. Farmers need access to the latest agroecology research and training.
5. Youth engagement remains a challenge: Youth are less involved in agroecology due to financial uncertainties. Engagement strategies should align with SDGs and reduce labor burdens.
6. The importance of inclusive policy and practice: Policymakers and communities should integrate agroecology into broader sustainability efforts, strengthening social mechanisms can help reduce vulnerabilities.
7. Need for robust assessment tools, Tools like HOLPA, MAP, and TAPE help measure agroecology's impact. Decision-making should be informed by both global and local performance data.
8. Strengthening extension services: Capacity building for extension officers is needed to improve agroecology outreach., Digital platforms could enhance farmer-to-expert knowledge transfer.
9. Women's critical role in agroecology: Women are more involved than youth but still face barriers to full participation, Financial and policy support should prioritize women-led agroecological enterprises.

10. **Building stronger networks and platforms**: Agroecology requires multi-stakeholder collaboration beyond just production and consumption. Platforms should facilitate best practice exchange and localized adaptation.

Parallel Session 6B: **Special Session on Measuring Agroecological Transition**

Seedsavers Network, Hivos, Seed Change, WeAction, PELUM Tanzania, TGLP, GROOTS, ISD and Coady: ***Rural Women Cultivating Change (RWCC): Gender Transformative Agroecology, a rights-based approach to women's empowerment and climate resilient food systems.***

The session, focused on the critical role of women in agroecology and how gender transformation can catalyze change in food systems and rural livelihoods in Africa. The discussion highlighted food insecurity, climate change, gender disparities, and challenges facing smallholder farmers, particularly women.

Key speakers and panelists shared insights on successful projects that empower women in agroecology, fostering climate resilience, gender justice, and food system transformation. The event also featured the launch of the Harvesting Equality knowledge product, which examines gender, governance, and decolonial futures in Kenyan agriculture.

Key Takeaways

1. Challenges in Food Systems & Women's Role
    - 1 in 5 people in Africa faces starvation.
    - Declining agricultural productivity and unfavorable market systems for smallholder farmers.
    - Gender-based violence and social inequalities hinder women's ability to provide food.
    - Addressing climate resilience and gender justice is key to equitable food distribution.
2. Impact of Agroecology & Women's Empowerment
    - The Rural Women Cultivating Change Project (funded by Global Affairs Canada) empowers women in agroecology across Africa.
    - Women are turning farms into training centers and leading advocacy efforts.

- Successful cases from **Kenya, Tanzania, and Ethiopia** show how access to land, seeds, and leadership roles enhances food security.
- Women-led cooperatives improve market access and financial independence.

3. Panel Discussions – Women's Stories & Leadership
    - **Farmers from Kenya & Ethiopia** shared experiences of overcoming gender-based challenges through agroecology, self-help groups, and financial empowerment.
    - **Women entrepreneurs** demonstrated how small investments in poultry and vegetable farming transformed their lives and influenced their communities.
    - **Community health volunteers & seed banks** emphasized the need for indigenous seed preservation and sustainable food production.
    - **Leadership insights:** Women exhibit inclusive leadership that benefits all members of society, including vulnerable groups.
4. Policy & Systemic Change Needed
    - Need for gender-responsive budgeting and policies that promote agroecology and sustainable food systems.
    - Strengthening collaboration between policymakers, stakeholders, and grassroots women leaders.
    - Encouraging **farmer-to-farmer learning**, collective financial models (SACCOs, cooperatives), and indigenous knowledge integration in pest and disease management.
    - Engaging men as allies in gender transformation for sustainable food systems.
5. Call to Action for Policymakers
    - Develop and implement policies that promote **gender equity, agroecology, and sustainable seed systems.**
    - Increase **women's representation in decision-making and leadership** at local and national levels.

- Support women's access to land, financing, and climate-resilient farming techniques.

This session emphasized that women must move from being beneficiaries to becoming architects of food system transformation in Africa. Investing in women's leadership and agroecology is a sustainable solution for tackling climate change, food insecurity, and gender inequalities in rural communities.

Parallel Session 7: Strengthening Resilient Agri-food systems: Enhancing Soils and Agroecology for resilient agri-food systems in Kenya

The session focused on enhancing soils and agroecological (AE) practices to build resilient agri-food systems in Kenya. Discussions emphasized the importance of soil health, organic fertilizers, sustainable farming practices, and farmer-led research in addressing food security challenges. Speakers highlighted the role of policy advocacy, indigenous knowledge, and multi-stakeholder collaboration in promoting agroecological transformation. The need for market access, private sector incentives, and youth engagement were also key points.

Key Messages

- Soil Health & Agroecology – Integrated soil management, adaptive practices (e.g., crop rotation, agroforestry), and reduction of chemical inputs are essential for sustainable food production.
- Organic Fertilizers & Input Maximization – Using sugar mill byproducts, composting, and indigenous seed management can enhance productivity while maintaining soil integrity.
- Farmer-Led Research & Knowledge Sharing – Community-driven research, extension training, and citizen science should be promoted to ensure locally adapted solutions.
- Policy & Market Support – Government policies should support AE practices through subsidies, capacity building, and creating markets for organic produce.
- Multi-Sectoral Collaboration – Government, private sector, NGOs, and communities must work together to drive agroecological transformation and food security.

Side event 1: KCOA, KHEA: The Contribution of the Knowledge Center for Organic Agriculture Initiative to the Agroecology Sector in Africa: The Past, Present and the Future.

Organizers: *Knowledge Centre for Organic Agriculture and Agroecology in Africa (KCOA),*
and Knowledge Hub for Organic Agriculture and Agroecology in Eastern Africa (KHEA).

Moderator: Francis Nsanga, KHEA Project Manager

Presentations

Lennox Ouma, KHEA M&E officer: ***KHEA Phase II Impact***

In his presentation on the impact of KHEA Phase II, Lennox Ouma, the Monitoring and Evaluation Officer, shared key achievements and lessons learned across the program's strategic focus areas—knowledge collection, capacity building (CB), and advocacy—as the initiative continues to strengthen agroecological transitions in Eastern Africa.

KHEA Phase II was implemented across five countries, with a notable achievement of reaching 30% youth among its target groups. Through robust collaboration with 121 member organizations, the program has deepened regional partnerships, expanded its research outreach to potential users—particularly smallholder farmers—and strengthened local market systems.

One major milestone was in training dissemination: multipliers trained by the International Potato Center (CIP) successfully cascaded agroecological knowledge to farmers in their communities. Additionally, the program reported success in its support for Participatory Guarantee Systems (PGS)—a local certification mechanism critical to market access for agroecological producers. With 19 farmer groups supported against a target of 18, this area recorded a 106% achievement rate.

KHEA also invested significantly in developing and sharing knowledge products, which are now being used to drive local learning, awareness, and practice

improvements. On the **advocacy front**, the program facilitated 21 exchange and dialogue events (EDEs) across the region, including **Kenya (2), Uganda (4), Rwanda (10), Madagascar (2), and Tanzania (5)**—bringing farmers, trainers, and policymakers together to reflect, share, and strategize.

During the Q&A session, participants sought clarifications and shared perspectives. A concern was raised about Uganda having only **two validated EDEs**, despite many being reviewed. It was explained that although many events were reviewed at the regional level, only two had been **fully approved**, with the **validation process still ongoing**.

Participants also inquired about the **challenges and learnings** from the study. Key takeaways included:

- Farmers already possess substantial agroecological knowledge—interventions should **build on this foundation**.
- Knowledge must be **paired with practical inputs** to improve adoption rates.
- Networks of **multipliers and farmer-to-farmer exchanges** are proving effective in spreading positive results.
- There is a need to **update standards and quality assurance mechanisms** to align with local certification systems such as PGS.
- Training delivery should be **improved through local languages**, adapted content, and enhanced facilitation methods.
- The success of **master trainer networks**, such as those in Rwanda's agroforestry systems, was cited as a best practice.

Questions also emerged about **market certification**. The panel clarified that while no overarching **market certification** currently exists, the emphasis has been on **product quality**. However, one PGS group in Tanzania has achieved certification and is **exporting agroecological products abroad**, using consistent standards.

A further question addressed the **sustainability of PGS groups**. Ms. Ratemo confirmed that most groups remain functional and sustainable, with farmers covering their own subscription fees beyond initial registration. Ms. Esther Kagai added that some PGS groups had developed **independent market linkages**, including home deliveries to local customers. Still, she emphasized the **need to raise consumer awareness** about agroecology and food safety.

Margaret, a participant from **Cameroon**, praised the exhibition and fieldwork by community groups and expressed interest in learning more from Eastern Africa's experiences. She noted that **few products have been validated**, to which panelists responded that the validation committee is independent and encouraged the **documentation of field data** to support this process.

Finally, another participant from Cameroon inquired about the **structure of the 128 PGS groups** and whether there was a **regional body overseeing them**. It was clarified that **no single regional certification body** exists for PGS, as the model is meant for **local-level verification**. However, Kilimo Hai—Africa's leading organic movement custodian—is collaborating with other stakeholders to develop a **regional East African standard**. This would allow a **common trademark to be used across five countries**, creating a **dual pathway for product certification**—either through the traditional **ICS (Internal Control Systems)** for export crops like coffee, or **PGS for local markets**.

Panel Discussion

Panelists:

i. **Sharon Bundi** - KHEA Organic Farmer & Multiplier (Kenya)-
ii. **Julius Echodu** - KHEA Multiplier (Uganda): multiplier,
iii. **Emmanuel Paul Nyange** - KHEA Multiplier (Tanzania): produce organic and biofertilisers and local seeds
iv. **Albert Nkundabagenzi** - KHEA Multiplier (Rwanda): multiplier working in an agroecological farm
v. **RAOELINARIVO Holy Harinoro** - KHEA Multiplier (Madagascar)

Panel Questions

1. In what ways has the KHEA project facilitated the communities to adopt agroecology practices?

   Julius Echodu stated that they have witnessed improved health education and awareness: for crops and animals, and farmers. There is also economic sustainability due to improved livelihoods. Climate change impacts are being address as they develop climate adaptation practices to cope. They also have developed bioanimate booster to boost livestock production. This is made from plant extracts such as neem and sisal and spider plant and is used for tick control.
2. What are the most effective approaches you have used to disseminate ecological knowledge to farmers?

Mr. Albert Nkundabagenzi responded that they use different methods such as demo visits to farms to learn, participatory methods for farmers to learn by doing, imitative methods where farmers are asked to go and copy what they learn from the farms and share the same knowledge with neighbours. They also do learn journeys where farmers organise themselves in groups and go to visit other farms.

3. How have you managed to work with farmers especially where there are technology or language barriers?

   Mr. Emmanuel Nyange explained that the community-based trainings use local languages. They conduct farmer to farmer extension to share knowledge and experiences. He noted that farmers have appreciated agroecology as part of our health and environment. They also make use of agroecology products such as biocaps, which is a pesticide to prevent insects attacking crops and fruit trees, also used for household use as it has no residues hence safe to use. They also use calcium booster for plants to avoid fruit loss.

4. How are farmers in Laikipia adjusting to the challenges faced in the areas?

   Ms. Sharon Bundi explained that erratic rainfall and persistent droughts greatly impacts on the community as most of community are in pastoralism. They face a critical challenge of limited pastureland and water access. They focus their efforts on water reservoirs and conservation efforts such as Zai pit, mulching, drought resistant crops, and promoting alternative livelihoods. They also train the Maasai community in their local language on how to practice agroecology, promote access to water through rock water harvesting for agriculture, practise agroforestry and establish kitchen gardens. They also teach them how to plant drought resistant crops to understand plants and ensure sustainability.

5. What have you learnt from the KHEA project and what recommendation do you have to make sure farmers adopt agroecology practices?

   Ms. Holy Harinoro stated that she was a trainer before agroecology, working in the industrial sector. She has been able to advance trainings on value chain and landscape approach and noted that a holistic approach for farmers training on agroecology is needed. She pointed out that the Training of Teams of Facilitators (ToToF) approach can be adopted. Promoting market access is also critical as market is the same for agroecology and conventional products.

6. Farmers face challenges transitioning from conventional to organic, how do you address this?

   Julius explained that they promote practical learning to understanding organic farming. He pointed out they face challenges during product certification

process, and there is need to develop a way forward to prioritise and simplify certification at grassroot levels.

7. How can we improve farmer to farmer exchange?
   Albert explained that some of the approaches may include undertaking public gatherings, farmer field approach, collective meetings for farmers. He stated that Rwanda holds monthly public works, and the gathering can be used to discuss agroecology. Mass and social media platforms can also be used to enhance access to information, while at the same time learning from other case studies from other countries and using mass media to share information.
8. What have you heard farmers say about organic agriculture in the community?
   Mr. Emmanuel stated that there is need to talk about environmental benefits due to use of organic manure and biopesticides and tree planting. They have witnessed increased market demand for the organic agriculture products which have numerous benefits. There is also improved soil health due to agroecology practices such as organic compositing and reduced chemical dependence. This is proof that agroecology is good for the environment and the market is growing.
9. What have you done as an individual, and what innovations do you have?
   Ms. Sharon noted that they use nature-based products such as Aloe vera which is drought resistant and also used for pastoralists. They use invasive cactus which is eliminated through value added products such as cactus juice, jam, and wine. They use moringa to regenerate land, and produce value added products. There is need to establish market for the products to promote sustainability.
   They engage women to plant the aloe vera and the women export the leaves, and use it to make soaps aloe, gel, and lotions. They also encourage use of plants using less water such as resurrection plant tea and promote alternative livelihoods such as beekeeping. Other products include dragon fruit jam and blackjack powder which have high medicinal value. She challenged the multipliers to multiply the effects to reach out to more people.
10. What are the misconceptions among farmers about agroecology?
    Ms. Holy explained that agroecology has been perceived as waste of time as there are more competing activities. It's also perceived a shame to put all crops into one farm and planting one crop in a farm is seen as a privilege. Further, approaching farmers to change the mindset and uptake agroecology is challenging. Efforts are put to show farmers how to intercrop and the benefits that come with it.

Agroecology has also been perceived to produce bad quality products compared to conventional agriculture. Farmers are afraid that agroecology products have low market acceptability. They are helping farmers to produce organic products such as B-nimo which is a biopesticide that works like chemical pesticides. Farmers can produce organic value-added products such as pepper and moringa products, but the challenge is on getting the products certified.

Dr. Amudavi closing comments

Dr. Amudavi appreciated GIZ for the support to implement the project in the 5 knowledge hubs. He stated he was proud of the initiative and appreciated all parties involved in the project. He shared his experience from a conference he attended a workshop in Europe on what innovations and research should be promoted in agroecology. He has witnessed real impacts through the real products generated from agroecology. Dr. Amudavi expressed that if we can generate knowledge products from the consumable products, this will support to accelerate market demand. The rate of generating knowledge products should be commensurate to the impacts being achieved. Agroecology has great potential to transform food systems and make it sustainable. He emphasized that the next big thing is to scale up the works being done and urged the stakeholders to scale up, out and deeper to create lasting impact. In addition, stakeholders can catalyse impact with the little things they do best e.g knowledge sharing using existing technologies, and link with consumer grassroot associations to create more demand for agroecology products and increase appetite for people who can participate in the same.

Side event 2: **Actionaid: Agroecology for Sustainable Food Systems**

Keynote Adress by Margaret Malongo Actionaid Tanzania

Through action aid Tanzania, they have trained Youth and women how to curb food losses to increase food production and ensure proper markets of farm products. They also have a farmer's radio program to sensitize farmers on agroecology farming practices.
In conclusion, she called upon the government to increase public funds for implementing agroecological practices.

The role of youth and women in agroecology: Youth in Agroecology

Youth are often seen as the future of agriculture, and their engagement in agroecology can drive innovation and sustainability. Their role includes:

- Innovation and Technology Adoption: Youth are more likely to adopt new technologies and innovative practices. In agroecology, this could include the use of sustainable farming tools, smart irrigation systems, and organic farming techniques. By embracing technology, youth can help increase productivity while reducing the environmental impact of conventional farming.
- Environmental Stewardship: Young people tend to be more environmentally conscious and are passionate about sustainability. They are advocates for climate change awareness, biodiversity conservation, and sustainable farming practices that reduce land degradation and promote the restoration of ecosystems.
- Advocacy and Education: Youth can be powerful advocates for agroecological practices in their communities. They can influence change by educating their peers and older generations on the benefits of agroecology, from improving soil health to diversifying crops and reducing reliance on harmful chemicals.
- Entrepreneurship and Business Development: Agroecology opens up opportunities for young people to venture into agro-business, such as producing and selling organic products, eco-tourism, or value-added products like jams, dried fruits, and organic fertilizers. This not only provides economic opportunities but also strengthens local food systems.

Women in Agroecology

Women have long been central to agricultural activities in many parts of the world, including South Sudan. Their involvement in agroecology is especially important for promoting inclusive and sustainable agriculture. How women contribute:

- Labor Force: Women are often the primary labor force in agriculture, from planting and harvesting to processing and marketing. In agroecology, women can be pivotal in practicing and promoting sustainable farming methods like crop rotation, intercropping, and organic pest management.
- Knowledge and Traditions: Women have a deep connection to traditional agricultural knowledge and practices, which are essential to agroecology. They often hold valuable knowledge about local plant varieties, seed saving, and the use of organic fertilizers and natural pesticides, which are crucial for agroecological systems.
- Leadership and Community Building: Women often serve as community leaders and decision-makers in agricultural activities, especially in rural areas.

Their leadership is vital in promoting collective action around agroecology practices, such as communal composting, water management, and seed exchanges. They can influence other women and entire communities to adopt more sustainable and resilient farming practices.

- Economic Empowerment: Agroecology can provide women with opportunities for economic empowerment by improving their access to markets for organic products, enhancing food security, and diversifying income streams. Through agroecological methods, women can improve both household nutrition and their income, leading to greater economic stability.
- Health and Nutrition: Women are often responsible for household food preparation and nutrition. By promoting agroecology, women can ensure that their families have access to more diverse, nutritious, and healthy food. This is particularly important for improving the health of children and the elderly in rural areas.

Synergy between Youth and Women in Agroecology

When youth and women work together in agroecology, they create a powerful force for change:

- Knowledge Sharing: Youth can learn from the traditional knowledge of women, while women can benefit from the new ideas and technological innovations brought by youth. This exchange of knowledge enhances the adoption of agroecological practices.
- Collaborative Solutions: Youth and women working together can find innovative solutions to agricultural challenges. For instance, they may develop local initiatives for seed saving, water conservation, or pest management that are both culturally relevant and environmentally sustainable.
- Social and Economic Impact: Empowering both youth and women in agroecology not only strengthens food systems but also fosters social and economic resilience in communities. It creates a more inclusive agricultural system, reduces poverty, and promotes greater equality in rural areas.

Side event 3: Agroecology Fund: Grassroots Evidence for Agroecology (GEA): A methodology to build and communicate evidence-based cases for agroecology

In this session, the speakers emphasized a recurring challenge: the persistent demand for convincing, context-relevant evidence that demonstrates agroecology's impact.

While evidence is often perceived as the domain of academics and professional institutions, the session challenged this notion by showcasing the power and potential of grassroots organizations to generate their own credible cases. The discussion explored what constitutes strong evidence and how grassroots actors can be empowered to generate, package, and share that evidence effectively.

The session opened by asserting that credible evidence must speak directly to the interests and realities of the intended audience—often farmers, policymakers, or local investors. A compelling case was presented where farmers were encouraged to preserve and plant their own seeds. This allowed them to plant on time, improve their productivity, and reduce dependency on external seed providers. Commercial farmers who adopted this practice also saw an increase in produce. The case highlighted a critical point: for evidence to be convincing, it must include a clear call to action, demonstrate tangible benefits, and be grounded in real-world contexts that farmers can relate to.

Samson Kirui Ngungi of Slow Food Kenya offered another powerful example. His work centers on enhancing access to healthy, locally produced food by promoting biodiversity and farmer-managed systems. Through the Slow Food Youth Academy, young people are trained in agroecology and mentored to replicate what they've learned within their communities. These youth-led efforts incorporated practical techniques like mulching to reduce pest infestations and boost nutrient intake in soils. Education also played a pivotal role in this approach, raising awareness across both public and private sectors. The project demonstrated that when evidence is relevant and rooted in lived experiences, it resonates more effectively with its audience.

Another innovative project explored the use of human urine as a pesticide and fertilizer. This idea initially met with skepticism due to cultural taboos and concerns about hygiene. However, through well-structured outreach that addressed environmental, sociocultural, and economic dimensions, farmers came to appreciate the benefits. They reported increased yields and a better understanding of resource efficiency. The project illustrated the importance of aligning evidence with local realities and demonstrating practical results.

A final case from the Kenyan Peasants' Movement focused on seeds and legal frameworks. By aligning agroecological principles with government policies and existing laws, the movement sought to generate evidence that could be used in advocacy and legal discourse. The initiative trained local actors to differentiate between data and information, thereby enhancing their capacity to argue effectively

and persuasively. Although the project faced challenges, including a lack of technical skills and resources, it ultimately resulted in greater knowledge-sharing and engagement both regionally and internationally.

Across all cases, the **common thread** was clear: effective evidence for agroecology must be practical, people-centered, and rooted in the lived experiences of farmers and communities. It must go beyond numbers and graphs to tell stories of transformation, empowerment, and resilience. To meet this need, the session called for greater investment in **capacity-building for grassroots organizations**, enabling them to identify, generate, and disseminate their own evidence. This approach not only strengthens the credibility of agroecological movements but also ensures that the people closest to the land—and the challenges it faces—lead the change.

Audience Questions

Responses by Rashida

1. What is the extent you researched to have nutritional component?
   Had three plots that showed the results from using human urine as a pesticide and fertilizer
2. How has culture affected the innovation of using human urine as a fertilizer and pesticide?
   During urine collection in terms of mixing urines, different collecting times etc,
3. Are there steps taken to make the farmers understand the need for massive intake of urine as a fertilizer in place of the existing ones?
   Working with scientist to provide data analysis and scientific facts to support the use of urine
4. Do you have an SOP to monitor and manage seeds?
   We build on the traditional ways farmers have been using to manage seeds by building their ideas into broader perspectives
6. Where do we confidently support our evidence and position of the gathered science?
   Carry trainings and demos for farmers to see and replicate in their farms

Side event 4: Both Ends: **Embedding Agroecology in Trade Policy - Why Trade Policy Matters for Agroecology**

Moderators: Ivan Orosa and Janna Fleuren (Both ENDS)

Panelists:

i. Manei Naanyu (PELUM-Kenya), Jonathan Lubega (SEATINI Uganda),
ii. David Kabanda (CEFROHT Uganda), Anne Meina (BIBA Kenya)

Issues Discussed

The Impact of Trade Agreements on Agroecology

Trade agreements continue to favor large-scale industrial agriculture, pushing agroecological farmers to the margins. Global frameworks like UPOV-91 limit seed sovereignty by restricting indigenous seed sharing, making it harder for smallholder farmers to sustain traditional systems. In addition, agroecological producers often lack regulatory support and face difficulties accessing competitive markets.

The African Continental Free Trade Area (AfCFTA) and Agroecology

AfCFTA, covering 55 countries and 8 regional blocs, represents a major economic integration effort supported by a $42 billion World Bank investment. While it aims to achieve Agenda 2063 and the SDGs, it falls short for agroecology. Differences in certification standards across countries create entry barriers for agroecological products. Its focus on intellectual property rights, high compliance costs, and a competition policy designed for industrial agriculture all disadvantage smallholder farmers.

Policy Recommendations for Fair Trade and Agroecology

Panelists recommended reorienting trade policies to support local food systems and smallholders. Governments should provide financial incentives, improve infrastructure, and harmonize trade standards regionally to ensure agroecological products gain fair market access.

Breakout Group Discussions and Findings

1. Gender Inclusion in Agroecology Trade Policies

   Participants highlighted that many women do not own land and often lack access to agricultural subsidies. This limits their ability to benefit from trade. They proposed involving women in trade decision-making, offering targeted funding, and introducing tax equity to address structural gender imbalances.

2. Market Access for Agroecological Farmers

Agreements like AGOA, Kenya-EU EPA, SPS, and CODEX affect agroecological farmers unequally. Participants suggested that countries adopt unified risk assessments and mutual recognition agreements to simplify trade processes. They also called for formalized organic standards and regional certification frameworks.

3. Decent Work Conditions and Fair Trade

   There are gaps in labor protections for agroecological workers, and many trade policies lack gender-sensitive labor provisions. To address this, participants recommended securing fair prices and premiums for agroecological products and aligning national labor policies with CAADP strategies to enhance working conditions.

4. Biodiversity and Environmental Sustainability in Trade

   The integration of UPOV clauses limits traditional seed practices. NBSAPs are often disconnected from trade dialogues, and carbon market policies are underdeveloped. Participants proposed advocacy against UPOV in Europe, better organic certification policies, subsidized organic inputs, and increased benefits for farmers in carbon trading schemes.

Question & Answer Session Analysis and Responses

1. What is the AfCFTA, and how does it impact agri-food systems based on agroecology?
   Jonathan Lubega: AfCFTA, while expansive and backed by major funding, heavily favors industrial agriculture. Agroecological producers face disadvantages due to non-uniform certification standards, restrictive IP laws, and costly legal requirements. Its competition policies further tip the scales in favor of large agribusinesses.
2. How is AfCFTA different from trade agreements with the Global North?
   David Kabanda: AfCFTA replicates the same priorities as prior agreements with the Global North. It does not diverge from the conventional model that privileges industrial agriculture and marginalizes smallholder systems.
3. How can regional harmonization under AfCFTA be aligned with national policies?
   Manei Naanyu emphasized the need for government investment in agroecology. She proposed online reporting systems to monitor trade

impacts and called for monetary committees within each member state to track implementation and ensure benefits reach smallholder farmers.

4. What are current trends and developments in trade policy in East Africa and Kenya?

   Anne Meina pointed out that current trade policies in Kenya emphasize certification systems that prioritize industrial inputs like synthetic fertilizers, which are heavily subsidized. In contrast, bio-fertilizers and indigenous seed systems lack support, despite offering more sustainable alternatives.

5. How does AfCFTA support agroecology?

   Jonathan Lubega reiterated that AfCFTA lacks any real framework to promote agroecology. Its current structure is incompatible with principles like food sovereignty, biodiversity conservation, and local seed systems.

Side Event 5: **AU, APD, CGIAR, WWF: Growing Resilient Futures in Africa: Advancing Nature-Positive Agrifood Systems Transformation**

Moderator: Charles Mulozi Olweny, *MSc. Human rights Makerere University.*

Presentation

Ms. Nancy Rapando, WWF Leader for Africa's Food Systems Initiative: ***Nature-Positive Food Systems Transformation in Africa***

Ms. Nancy Rapando laid bare the intersecting crises of food insecurity and environmental degradation that are gripping Africa's landscapes. Speaking on behalf of the **WWF Africa Food Systems Initiative**, she offered a powerful case for **agroecology (AE)** as a transformational approach—one that restores nature while securing the livelihoods of millions across the continent. Her message was deeply aligned with African policy frameworks such as the **CAADP Kampala Declaration**, which recognizes the urgent need to regenerate food systems in harmony with nature.

Ms. Rapando identified **two major drivers** of the food system challenges facing the continent:

1. **Environmental Pressures**: Climate change, biodiversity loss, and increasing water scarcity are all exacerbated by unsustainable land-use practices, such as **deforestation** and the widespread **conversion of rangelands**.

2. Socioeconomic Factors: Rapid urbanization, a growing shift toward **export-driven agriculture**, and weak policy enforcement continue to place mounting pressure on Africa's natural ecosystems.

She emphasized that **soil health** forms the critical foundation of biodiversity and food production. However, citing WWF data, she warned that **65% of Africa's arable land is already degraded**. In response, she championed the priorities laid out in the **Kampala Agenda**, which calls for urgent investment in **soil restoration, water management, and agroforestry** as key pathways to climate resilience.

Turning to **policy levers for change**, Ms. Rapando urged governments to **restructure agricultural subsidies**, moving away from chemically intensive approaches and instead directing support toward **nature-positive solutions** such as agroecological farming. She called for **landscape-wide restoration efforts**, combining **reforestation, sustainable water use, and community-led farming innovations**.

Her **call to action** was bold and inclusive:

- **Governments** must secure **land tenure rights** for smallholder farmers and create enabling environments for agroecological transitions.
- **Investors** are encouraged to fund innovations in **green technologies**, such as **drought-resistant seeds, organic inputs**, and **value chains rooted in agroecology**.
- **Communities** have a central role to play in driving awareness around the links between **nutrition, biodiversity, and traditional food systems**.

Closing with a resonant statement, Ms. Rapando reminded the audience of the intrinsic relationship between people and planet:

"We cannot secure livelihoods by destroying nature—the very resource our food systems depend on."

Her message was a clear rallying cry for multisectoral collaboration to build **resilient, equitable, and nature-positive food systems** in Africa.

Panel Discussion: Policy Pathways for Sustainable Food Systems in Africa
Moderator: Charles Mulozi Olweny, MSc. Human rights Makerere University.
This high-level panel brought together experts from the FAO, farmer associations, research institutions, and environmental organizations to discuss actionable policies

for transforming Africa's food systems. The discussion centered on nutrition security, water management, inclusive policymaking, and gender equity, with cross-cutting themes of agro ecology (AE) and nature-positive solutions.

Key Interventions

Dr. Ronnie Brathwaite (FAO) emphasized the critical link between food waste reduction and nutrition security, citing awareness campaigns as a first step. On land consolidation, he shared lessons from Barbados, where clear policies and stakeholder engagement led to successful implementation. He highlighted Brazil's school feeding programs—which prioritize agro ecological produce—as a model for Africa, stressing that policies must be locally adapted yet globally informed. His call for technocratic involvement in policymaking resonated as a strategy to depoliticize food system reforms.

Mary Kageni (KENAFF) tackled water scarcity, a defining challenge for African farmers. While rainwater harvesting initiatives exist, she noted scaling limitations and warned of cascading impacts: "Poor water quality doesn't just kill fish—it degrades soils and endangers consumers."* Her solutions focused on climate-smart practices like agroforestry and controlled irrigation, urging governments to subsidize water-efficient technologies.

Dr. Rui Benfica (IFPRI) championed farmer-inclusive research, arguing that transitions to sustainable systems fail without grassroots participation. He introduced True Cost Accounting (TCA) to quantify hidden environmental and social impacts of agriculture, citing gender wage gaps as a socio-cultural barrier often overlooked in policy design. "Awareness bridges the gap between policy and practice," he asserted, advocating for behavioral change campaigns.

Ms. Nancy Rapando (WWF) reframed the debate with a provocative question: "If agriculture drives 30% of nature degradation, what's the plan for the other 70%?" She pushed for an Agroecology Gap Report to track progress and spotlighted women's empowerment as a non-negotiable for systemic change.

Synthesis of Solutions

- *Localize Global Models*: Adapt successes like Brazil's school feeding programs to African contexts.
- *Water Governance*: Invest in large-scale rainwater harvesting and agro ecological irrigation.
- *Inclusive Data*: Use TCA and farmer-led research to design equitable policies.
- *Gender-Responsive Policies*: Mandate women's participation in initiatives.

Call to Action

1. **Governments**: Establish inter-ministerial task forces to integrate AE into water, agriculture, and gender policies.
2. **Researchers**: Produce the agro-ecology Gap Report to benchmark progress.
3. **Farmers' Groups**: Advocate for direct representation in policy drafting.

PRE-PLENARY SESSION

*Opening Remarks: **Dr. David Amudavi**, Executive Director of Biovision Africa Trust*

Dr. David Amudavi, Executive Director of Biovision Africa Trust, began his welcome remarks by warmly greeting all delegates and participants as they gathered for the third day of the conference. He expressed his appreciation for the engagement and participation in the event, underscoring the significance of the discussions that had been taking place. Dr. Amudavi emphasized that the gathering was an important platform for sharing knowledge and experiences that could contribute to meaningful change within the agricultural sector, particularly in the context of agroecology.

Reflecting on the discussions from Day 2, Dr. Amudavi highlighted some of the key lessons learned during the sessions. One of the most crucial takeaways was the importance of strengthening local markets and running effective awareness campaigns. He noted that these efforts can significantly boost the demand for organically grown produce, which, in turn, can foster more sustainable agricultural practices and enhance food security. In particular, local markets play a pivotal role in ensuring that organic produce reaches consumers, creating a positive cycle of demand and supply.

Additionally, Dr. Amudavi emphasized the need for gender-transformative agroecology. He stated that rural women must have equitable access to resources, such as land ownership and leadership opportunities, to contribute meaningfully to sustainable agricultural practices. Moreover, he stressed the importance of protecting women from gender-based violence (GBV), as this is an essential element in creating an enabling environment for women to thrive and engage in agroecology. These insights set the tone for the remainder of the conference, with a focus on inclusivity, empowerment, and sustainability in agricultural systems.

KEYNOTE ADDRESSES ON WOMEN, YOUTH & POLITICAL ECONOMY OF CLIMATE CHANGE (SUB-THEMES 3 AND 5)

Ms. Venancia Wambua, Head of Programmes (EOA & KCOA) at Biovision Africa Trust, welcomed participants to the plenary session on Women, Youth, and the Political Economy of Climate Change. She emphasized that climate change was not only an

environmental challenge but also a political, social, and economic one. She noted that its impacts were felt most acutely by women, youth, and indigenous communities, who often had the least resources but demonstrated remarkable resilience and innovation.

In her remarks, Ms. Wambua highlighted the privilege of having three distinguished keynote speakers:

- Ms. Monica Yator, Founder and Executive Director of the Indigenous Women and Girls Initiative, who would share insights on the challenges and opportunities of scaling agroecology in the Arid and Semi-Arid Lands of Baringo County, focusing on the role of women in indigenous pastoralist communities.
- Ms. Pramila Mwibanda, TEJATI Youth Ambassador, who would address how Africa's youth can catalyze transformative agroecology, bringing innovation, energy, and creativity to the future of food systems.
- Ms. Nancy Rapando, WWF Africa Food Lead, who would discuss how agroecology can advance the food, climate, and nature nexus, safeguarding biodiversity while building sustainable food systems.

She underscored that each of these perspectives—women, youth, and climate—represented both challenges and opportunities, and together they reminded participants that agroecology was not only about farming practices but also about justice, inclusion, and resilience. She concluded by warmly welcoming the keynote speakers and inviting participants to listen, reflect, and engage with their insights as part of shaping a collective vision for sustainable and equitable food systems.

Later in the plenary discussions, Ms. Venancia Wambua welcomed the panelists and guided participants into the dialogue on the role of social movements, youth, and women in advancing agroecology. She introduced the panel as a diverse group of leaders and practitioners, each bringing unique experiences from across Africa.

In her remarks, she noted that the session would provide an opportunity to connect the keynote addresses with lived realities from grassroots communities, research institutions, and advocacy movements. She emphasized the importance of collaboration across generations and sectors, underscoring that achieving agroecological transformation required collective voices and inclusive strategies.

She then invited the panelists—Dr. Million Belay of AFSA, Dr. Beatrice Kiage of APHRC, Ms. Monica Yator of IWGI, Ms. Pramila Mwibanda of TEJATI, Ms. Nancy

Rapando of WWF, Ms. Lise Chantal of ROAM, and Mr. Hannington Owegi of PELUM Association—to share their perspectives on how social movements, youth, and gender-responsive approaches could accelerate the adoption of sustainable food systems.

Remarks by Ms. Monica Yator, Founder and Executive Director of the Indigenous Women and Girls Initiative (IWGI), on ***the challenges and opportunities associated with scaling up agroecology in the Arid and Semi-Arid Lands (ASAL),***

In her address particularly focusing on indigenous pastoralist communities in Baringo County. Ms. Monica Yator highlighted the innovative and proactive steps taken by women in the region, including the digging of pits for water conservation, which serves as a vital strategy for coping with the ongoing challenges posed by the environment.

She outlined some of the critical challenges that indigenous pastoralist communities, especially women, face in Baringo. Land degradation and the impacts of climate change were significant concerns, contributing to food insecurity and reduced agricultural yields. These issues are exacerbated by marginalization, where women in particular experience limited access to resources and are excluded from decision-making processes that directly affect their livelihoods.

Despite these challenges, Ms. Yator shared the community-led initiatives that are gradually making a positive impact. The demand for agroecological practices is high, and there is growing participation in rehabilitation efforts within the community. She emphasized the importance of community ownership, noting that local communities are taking the initiative to rehabilitate their land and promote agroecological methods. A key component of this success is the presence of local champions—individuals who are leading efforts to promote agroecology within the region and drive forward sustainable practices.

However, several barriers remain that hinder progress. Financial constraints, lack of equipment, and limited access to inputs are significant barriers to scaling agroecology. Additionally, policy gaps in supporting agroecology and sustainable land management need to be addressed. Logistical challenges, such as poor infrastructure, remote locations, and limited access to information, further complicate efforts. Unpredictable climate variability and extreme weather events continue to undermine agricultural productivity, while knowledge gaps highlight the need for continuous training and capacity-building to equip communities with the skills and knowledge necessary for sustainable farming practices.

Despite these obstacles, Ms. Yator emphasized the collective efforts of both women and men in the region, who come together to dig swales, an innovative practice aimed at water conservation and soil fertility. The involvement of both genders in these activities is crucial for the long-term success of agroecology in the region.

Ms. Pramila Mwibanda, TEJATI Youth Ambassador: ***Catalyzing Transformative Agroecology by Harnessing Youth Potential***

Ms. Pramila Mwibanda,, focused on the pivotal role that youth can play in driving agroecological transformation. She highlighted that, as of 2020, 1.2 billion of the world's population was made up of youth, with Africa having the youngest population, which is expected to grow significantly by 2050. This youthful population is poised to influence the world's food systems, offering opportunities for empowerment, innovation, and sustainability. Ms. Mwibanda presented several thematic areas, including empowering youth for inclusion in decision-making and policy, advancing transformation through research and collaboration, and fostering creativity for sustainable innovations. She emphasized the importance of promoting agroecology and supporting agribusinesses through mentorship and market linkages.

Ms. Mwibanda outlined the positive attributes of youth, such as being energetic, ambitious, creative, and eager to shape the future. However, she also acknowledged the challenges youth face, including climate change, biodiversity loss, poor soil health, and limited access to financing. Despite these challenges, she pointed out the opportunities available for youth, such as leveraging technology, fostering innovation, diversifying agricultural practices, and reducing waste. She proposed strategies for involving youth more in agroecology, including providing them with sustainable research funding, encouraging collaboration, and integrating agroecology into their lifestyles. Through these strategies, Ms. Mwibanda emphasized the need for youth to be empowered and supported in their efforts to create a sustainable and equitable future for food systems.

Ms. Nancy Rapando, WWF Africa Food Lead: ***Agroecology, Advancing the Food, Climate and Nature Nexus***

Ms. Nancy Rapando, addressed the critical intersection of food systems, climate change, and biodiversity in her presentation. Drawing from the WWF Living Planet Report 2024, she highlighted the alarming 73% decline in the average size of monitored wildlife populations between 1973 and 2020, with the decline in Africa primarily driven by unsustainable food systems. These systems contribute to habitat loss and degradation through activities like cropland conversion, overexploitation of

resources, overfishing, and the pollution caused by agrochemicals. Additionally, she pointed out the impact of invasive species and diseases on ecosystems.

She also explored the environmental and socioeconomic drivers of this decline, such as climate change, land sustainability, urbanization, and the role of technology. She discussed how the growing domestic food demand in Sub-Saharan Africa (SSA) will continue to be the primary driver of cropland expansion, although export-oriented agriculture, such as cocoa production in Ghana, also contributes to deforestation in certain regions. Moreover, land degradation exacerbates the situation by further expanding cropland at the expense of soil health.

In addressing the solutions to these challenges, she emphasized the importance of changing food production systems. This includes creating policies that secure land rights for small-scale farmers to incentivize sustainable land management, investing in green technology and infrastructure, and redirecting subsidies to support nature-positive and regenerative food systems. She also called for better land use planning to determine where to grow and process food, as well as where to set aside land for biodiversity restoration.

To influence food demand and consumption, she highlighted the need for public awareness campaigns to promote dietary changes, regulate food imports and quality, and make strong commitments to reducing food waste and losses. Ultimately, Rapando advocated for a holistic approach that integrates agroecology with food systems transformation to safeguard both people and the planet.

Panel Discussion: Exploring the Role of Social Movements, Youth, and Women in Advancing Agroecology

Dr. Million Belay, General Coordinator at the Alliance for Food Sovereignty in Africa (AFSA), emphasized the importance of social movements in agroecology. He explained that social movements are vital tools to challenge entrenched power structures and amplify the grassroots voices of farmers and pastoralists. They serve as platforms for building solidarity and mobilizing collective action toward food system transformation.

Dr. Beatrice Kiage of the African Population and Health Research Center (APHRC) highlighted her organization's work with youth and women, focusing on capacity building and sustainable food production. She also discussed APHRC's efforts in influencing policy to ensure food security and that no one is left behind in access to nutritious food.

Ms. Monica Yator, Founder and Executive Director of the Indigenous Women and Girls Initiative (IWGI), shared insights into the challenges faced by indigenous communities in scaling agroecology, particularly in marginalized regions like Baringo. Her work underscores the importance of inclusive approaches that bring indigenous knowledge to the forefront.

Ms. Pramila Mwibanda from TEJATI emphasized the shift in youth mindsets due to rising economic pressures. She urged individuals and institutions to critically reflect on how they are implementing agroecological principles within their spaces and to integrate such practices more intentionally.

Ms. Nancy Rapando, WWF Africa Food Lead, pointed out the need to expand the agroecological movement by attracting more farmers. She called for stronger community engagement, policy support, and awareness to grow the movement at the grassroots level.

Lise Chantal, National Coordinator of the Rwanda Organic Agriculture Movement (ROAM), addressed the barriers and opportunities for youth and women in agroecology. She identified key challenges such as limited access to financing, inadequate training, and weak policy frameworks. However, she also highlighted opportunities like favorable weather, fertile land, and increasing consumer awareness. Her recommendations included advocating for agroecological trade policies across Africa, providing training and education, standardizing organic products in markets, treating agroecology as a business, and documenting success stories for advocacy and inspiration.

Finally, Mr. Hannington Owegi, Secretary General of the PELUM Association Regional Secretariat, reflected on the mindset challenges among youth regarding agriculture. He pointed out that youth-led initiatives often face underfunding, a lack of network synergy, and minimal support for research and innovation. He advocated for intentional investment and collaboration to support young agroecological entrepreneurs and researchers.

Overall, the panel underscored that achieving agroecological transformation requires a collective effort—rooted in inclusive policy, strong movements, empowered youth, and gender-responsive strategies.

In her closing remarks, Ms. Venancia Wambua thanked the keynote speakers, panelists, and participants for their active contributions to the session on Women, Youth, and the Political Economy of Climate Change. She noted that the discussions had highlighted the critical role women and youth play in advancing

agroecology, particularly in contexts most affected by climate change and resource constraints.

She emphasized that the session had drawn attention to the innovative practices already taking place in communities—such as women-led water conservation efforts, youth-driven innovations in agroecology, and collective movements advocating for policy change. At the same time, she underscored that significant barriers remained, including financing gaps, policy limitations, and structural inequalities that continue to marginalize vulnerable groups.

Ms. Wambua concluded by reminding participants that agroecology is not only a technical solution but also a social and political movement rooted in justice, inclusion, and resilience. She urged stakeholders to continue supporting women, youth, and grassroots movements in order to accelerate food systems transformation across Africa.

She closed the session by once again appreciating the speakers and participants, and by inviting everyone to carry forward the insights and commitments made into their own work and advocacy.

Parallel sessions

Parallel Session 1A: **Measuring the Impact of Agroecology: Productivity, Profitability, and Sustainability**

Moderator: Francesco Ajena, Thematic Advisor Agroecology, Swissaid

Opening Remarks

In his opening remarks, Francesco Ajena highlighted the pressing challenges faced by global food systems, such as climate change, biodiversity loss, and food insecurity. He emphasized the relevance of agroecology as a sustainable approach to address these issues, advocating for innovative practices that enhance both agricultural productivity and environmental health. Ajena encouraged participants to engage robustly in discussions to share insights and foster collaborative solutions.

Presentations

Ms. Carolyne Wangungu (presenting author), Dr. Lukas Pawera, Mr. Augustine Wafula,
Dr. Srinivasan Ramasamy: ***A Cost-Benefit Analysis of Conventional and Agroecological Approaches for Production of Traditional African Vegetables in Murang'a County, Kenya***

Ms. Carolyne Wangungu presented a comprehensive cost-benefit analysis comparing conventional and agro ecological approaches to cultivating traditional African vegetables (TAVs) in Murang'a County. The study involved on-farm trials with 102 farmers, revealing negative impacts from the excessive use of inorganic inputs, such as soil degradation. Wangungu indicated a growing recognition of TAVs as commercially viable due to increasing consumer interest in nutrition-rich vegetables produced agro ecologically.

The study concluded that transitioning to agroecological methods not only improves the quality and marketability of TAVs but also addresses environmental sustainability concerns. This shift is essential for the long-term viability and profitability of agriculture in the region.

Call to Action

Wangungu urged policymakers and stakeholders to support the transition towards agroecological practices and organic inputs. She emphasized the need to create enabling environments for farmers to adopt these sustainable approaches, ensuring better financial outcomes and environmental preservation.

Ms. Celia del Campo Aragones (presenting author), Mr. Chanyalew Aweke, Mr. Joe Alpuerto, Mr. Remi Cluset, Mr. Daniel Bordi, Mr. Zelalem Behailu Teklewold:

Assessing the Impact of the Ecological Organic Agriculture Project in Walmera Woreda, Ethiopia: A Multi-Dimensional Approach through the TAPE tool

Ms. Celia del Campo Aragones shared insights from the Ecological Organic Agriculture (EOA) Project, employing the TAPE tool to assess its multi-dimensional impacts. The study aimed to achieve resilient crop production and examined both enabling factors (e.g., reduced herbicide use) and disabling factors (e.g., mono-cropping) affecting agro ecological practices. The analysis found that beneficiaries reported better income perceptions than non-beneficiaries, linking agroecology with improved soil health.

The assessment concluded that the majority of farms evaluated were transitioning to agro ecological practices, which positively influenced agro-biodiversity and food security. The study highlighted that stronger communities and better practices could enhance these transitions further.

Call to Action

The presentation called for the development of value chains, identification of small business opportunities, and the extension of technical support to farmers. It encouraged promoting knowledge exchange at the community level to enhance the viability and awareness of agro ecological practices.

Mr. David Bautze (presenting author), Ms. Anouk Unternährer, Dr. Anne Muriuki, Dr. Edward Karanja, Dr. Milka Kiboi: ***Productivity and profitability of organic and conventional systems: Results from two Kenyan long-term trials***

In this analysis, Mr. David Bautze compared organic and conventional farming systems based on long-term trials in Chuka and Kandara, Kenya. The study aimed to evaluate yield and profitability differences, identify productivity influencers, and assess economic competitiveness. The findings revealed that while organic systems generally yielded less for high-value crops, certain crops matched yields, and profitability was hampered by higher input costs requiring premium pricing.

The presentation concluded that organic farming faces significant trade-offs, balancing environmental benefits with challenges related to yield and economic viability. Additionally, it highlighted that economic performance varies widely based on crop type, location, and management practices.

Call to Action

Bautze recommended promoting targeted crop selection for organic farming and advocating for policy support to subsidize organic certification. He advised scaling best practices through training programs and integrating organic techniques with conventional methods to improve overall agricultural productivity.

Ms. Friederike Schilling (presenting author), Dr. Miriam Romero, Dr. Amy Faye, Dr. Bibiana Betancur-Corredor, Dr. Heike Baumüller, Prof. Joachim von Braun: ***Productivity effects of agroecological practices in Africa: insights from a systematic review and meta-analysis***

In her presentation, Ms. Friederike Schilling provided a comprehensive overview of the productivity effects associated with agroecological practices in Africa, drawing insights from a systematic review and meta-analysis. She highlighted the significant challenges facing the global food system, including climate change, biodiversity loss, and food insecurity, which necessitate a shift toward more sustainable agricultural practices. Schilling emphasized that agroecological approaches, rooted in principles of participation, fairness, and ecological balance, can enhance land productivity and promote resilience in farming systems.

The findings revealed that farms implementing agroecological practices often achieved higher yields compared to conventional methods, underscoring the effectiveness of these strategies in improving food security. The analysis also pointed out that while agroecological practices could increase labor productivity, evidence regarding labor demands during these transitions remains limited. Overall, the presentation concluded that agroecology holds promise for addressing food system challenges in Africa.

Call to Action

Schilling urged for increased investment in agro ecological research and the development of tailored practices that are adaptable to local conditions. She called for strategies that optimize agricultural productivity while addressing the urgent environmental and social challenges present in African food systems.

Panel Discussion

Mr. David Bautze

In the panel session, Mr. David Bautze emphasized the importance of providing technical support to beneficiaries, which has a direct impact on agricultural yields. He argued that sustained assessment of farm needs should be an integral part of agricultural research, advocating for longitudinal studies that track changes over time. Bautze illustrated how continuous engagement with farmers allows researchers to identify specific challenges and opportunities that can enhance productivity. By focusing on long-term research, stakeholders can better understand the evolving dynamics of farming practices and the implications for yield improvement. Ultimately, Bautze highlighted the need for this research to be actionable and directly beneficial to farmers on the ground.

Ms. Friederike Schilling

Ms. Friederike Schilling stressed the necessity of developing performance indicators to effectively monitor changes and progress within agroecological practices. She asserted that agroecology should be viewed as a long-term commitment, and therefore, the focus must remain on measuring long-term outcomes rather than short-term gains. By establishing clear metrics for tracking performance, stakeholders can better assess the efficacy of agroecological interventions and make data-driven decisions that support sustainable practices. Schilling advocated for a systematic approach to evaluation, suggesting that following these indicators will not only demonstrate success to funders and policymakers but will also foster greater adoption of agroecological methods among farmers.

Ms. Carolyne Wangungu

Ms. Carolyne Wangungu shared insights on the application of systematic review methods that incorporate agro ecological principles into agricultural research. She highlighted the importance of creating awareness about the benefits of agro ecological practices, particularly among smallholder farmers. Wangungu argued that increased understanding of these practices could lead to greater adoption and improved agricultural outcomes. She emphasized that informing and educating farmers about the potential advantages of agroecology is essential for driving change in agricultural practices. By leveraging systematic reviews as a tool for

promoting agro ecological methods, stakeholders can empower farmers to make informed decisions that positively impact their livelihoods and the environment.

Ms. Celia del Campo Aragones

Ms. Celia del Campo Aragones advocated for further studies focused on soil health to better understand the impacts of using various plants, such as Lantana camara, in agro ecological systems. She pointed out that soil health is a critical component of sustainable agriculture and that a deeper investigation into the intricate relationships between plant diversity and soil quality is necessary. The inclusion of underutilized plants like Lantana camara might yield new insights into their benefits for soil health and overall ecosystem resilience. By calling for this research, Aragones underscored the importance of continued exploration in agroecology to optimize practices that enhance soil health, ultimately contributing to improved agricultural productivity and sustainability.

Parallel Session 1B: **Community-Driven Approaches for Agro ecological Transformation**

Moderator: Ann Maina, National Coordinator, Biodiversity and Biosafety Association of Kenya (BIBA-K)

Opening Remarks

Ma. Ann Maina set the stage for the session, emphasizing the importance of innovative approaches in agricultural practices that marry biodiversity conservation with community engagement. She highlighted the growing need for adaptability in agricultural systems, particularly in the context of environmental challenges and food security. Maina encouraged presenters and participants to focus on collaborative solutions that promote sustainability and resilience in farming communities.

Presentations

Ms. Angela Hansen and Ms. Hazel Okech: ***From Linearity to Systems Thinking: Engaging Communities Through Human-Centered Design (HCD) in Agri-Food Systems***

Ms. Angela Hansen and Ms. Hazel Okech presented the transformative potential of Human-Centered Design (HCD) in agri-food systems, which emphasizes principles of economic diversification, social values, and community connectivity. They outlined how HCD encourages an experimental, user-centered approach that challenges conventional mindsets by promoting empathy and collaboration. The presentation illustrated that HCD can be utilized for the development of products, systems, services, and spaces that respond directly to community needs. By using observations and rapid testing, HCD fosters an environment where innovative solutions can be iteratively developed and refined. The presenters concluded that HCD provides a

robust framework for engaging communities in meaningful ways that prioritize their input and experiences, ultimately leading to more effective and relevant agro ecological solutions.

Call to Action

Hansen and Okech encouraged stakeholders in agriculture to adopt HCD principles to create context-adaptable resources, such as the National Social Protection (NSSP) toolkit, fostering deeper engagement and ownership among communities in agri-food systems.

Dr. Lisa Elena Fuchs (presenting author), Ms. Victoria Apondi, Mr. Langat Kipkorir, Mr. Levi Orero, Mr. Sulman Owili: ***Scaling Models for Regreening Africa: Enhancing Agro ecological Integration through Smallholders' Assets and Agency in Kenya***

Dr. Lisa Elena Fuchs and her team presented the "ABCD in Regreening" project, focusing on enhancing agroecological integration via Asset-Based Community-Driven Development (ABCD). The presentation highlighted the significance of participatory processes that prioritize local assets and agency, moving away from top-down interventions. They emphasized that engagement of community members leads to attitudinal shifts and behavioral changes, fostering sustainable agro ecological practices. Data revealed that high-asset groups demonstrated greater success in integrating agro ecological practices, underlining the importance of proper participant selection for impactful outcomes. The study concluded that community ownership is vital for lasting change, as active involvement in identifying problems and designing solutions enhances sustainability.

Call to Action:

Fuchs and her colleagues urged the scaling of ABCD models to other regions, building long-term partnerships between communities, researchers, and policymakers. They proposed investments in capacity-building and the adaptation of monitoring tools to ensure that interventions align with community needs, establishing a foundation for empowerment.

Dr. Anne Kuria (presenting author), Dr. Peter Bolo, Dr. Beatrice Adoyo, Dr. Hezekiah Korir, Mr. Michael Sakha, Mr. Pius Gumo, Mr. Machio Mbelwa, Mr. Levi Orero, Dr. Winnie Ntinyari, Mr. Nicholas Syano, Ms. Esther Kiruthi, Dr. Lisa Elena Fuchs: ***Understanding farmer options, context and preferences leads to the co-design of locally relevant agro-ecological practices for soil, water and integrated pest management: a case from Kiambu and Makueni agroecology living landscapes, Kenya.***

Dr. Anne Kuria and her team focused on the significance of understanding local contexts in the co-design of agro ecological practices tailored for soil, water, and

pest management. They documented various existing agro ecological methods in Kiambu and Makueni counties, including mulching, agroforestry, and different planting techniques like raised and sunken beds. The operational principles emphasized resilience, social equity, and economic diversification, reflecting the community's specific needs and preferences. The presentation concluded that contextual understanding is essential for developing relevant agro ecological practices that address local environmental challenges while promoting community engagement and sustainability.

Call to Action:

Dr. Anne Kuria and her colleagues called for a collaborative approach in further research and practice sharing, encouraging stakeholders to engage actively with farmers to adapt and refine agro ecological strategies that resonate with local realities.

Robert Kubai, Stephen Muchiri: ***Investing in Smallholder Farmers' Climate Resilience: A Policy Framework for Agroecology Financing in Sub-Saharan Africa.***

Robert Kubai presented a critical policy framework aimed at enhancing climate resilience among smallholder farmers in Sub-Saharan Africa through effective agroecology financing. He highlighted a significant financing gap, noting that smallholders receive less than 2% of global climate finance, despite being responsible for producing 90% of Africa's food. Successful financing models, such as Brazil's PRONAF and Kenya's FLLoCA, were discussed, alongside systemic barriers like collateral requirements and policy silos that restrict access to necessary funds. The presenter emphasized the Agroecology Finance Paradox, where agroecology is recognized as a proven resilience strategy yet remains marginalized in climate finance discussions. He highlighted the urgent need for structural changes to dismantle these barriers and to promote public-private partnerships that align with climate and agricultural strategies.

Call to Action:

Kubai urged for the integration of agroecology into national financial frameworks to unlock funds for smallholder farmers. He called for leveraging technology to enhance financial accessibility and ensuring that marginalized groups, particularly women and youth, are included in financial decision-making processes, thereby strengthening smallholder resilience and fostering sustainable agricultural development.

Panel Discussion

Dr. Lisa Elena Fuchs

Dr. Lisa Elena Fuchs emphasized the need for long-term self-assessments in agro ecological practices, advocating for ongoing evaluation of farming methods and their

impacts. She highlighted that these assessments are crucial for understanding the efficacy of agroecology over time, helping farmers adapt and improve their strategies. By committing to long-term evaluations, stakeholders can better track progress, identify successful approaches, and make necessary adjustments to foster sustainable agricultural practices, ultimately leading to enhanced resilience and productivity within farming communities.

Robert Kubai

Robert Kubai underscored the importance of developing models that support farmers through a holistic approach to the agroecology transition. He argued that transitioning to agro ecological practices requires not only technical resources but also an understanding of the socio-economic contexts in which farmers operate. By integrating various support models—financial, educational, and infrastructural—farmers can effectively navigate this transition. Kubai stressed that a comprehensive framework encourages collaboration and partnerships, leading to more sustainable agricultural systems that benefit both farmers and their communities.

Ms. Angela Hansen

Ms. Angela Hansen focused on the significance of considering the needs and perspectives of people at the receiving end of agroecological interventions. She advocated for a human-centered approach that prioritizes the voices of farmers, community members, and other stakeholders in the design and implementation of agroecological practices. By engaging directly with those impacted, practitioners can better understand local challenges and aspirations, ensuring that the solutions developed are relevant, effective, and inclusive. Hansen made a compelling case for empathy and collaboration in achieving meaningful outcomes.

Dr. Anne Kuria

Dr. Anne Kuria passionately argued that agroecology is essential for achieving sustainability in agriculture. She emphasized that adopting agro ecological practices can lead to improved soil health, biodiversity, and overall ecosystem resilience. Kuria pointed out that agroecology not only supports sustainable food production but also addresses pressing environmental challenges such as climate change and resource depletion. She encouraged stakeholders to embrace agro ecological principles as a pathway toward a more sustainable future, reinforcing the need for collaborative efforts to implement these practices effectively in local contexts

Parallel Session 2A: **Agroecology and the Circular Economy: Policies, Practices, and Innovations**

Moderator: Prof. Alex Awiti, Principal Scientist and Agroecology Lead at CIFOR-ICRAF

Presentations

Mr. Reagan Buluma (presenting author)- Organisation: Hand in Hand, Ms. Chiara Baiocco: ***On the Farm and Beyond***

Mr. Reagan Buluma, representing Hand in Hand, and Ms. Chiara Baiocco presented insights from their joint initiative titled *"On the Farm and Beyond,"* a project focused on regenerative agriculture and the circular economy. Launched in 2019, the project aimed to tackle the challenges brought on by climate change, particularly the low productivity experienced by smallholder farmers in Kenya. In 2020, IKEA joined as a partner, helping to establish the first formal program on regenerative agriculture and circular economy under this initiative.

From 2020 to 2023, the program operated in Busia and Bomet counties, working directly with 1,948 farmers. The project was built around three core objectives: increasing organizational capacity, developing proof of concept for regenerative practices, and promoting grassroots advocacy. Results from an endline survey in 2023 demonstrated strong outcomes, including improvements in soil health and carbon levels.

In terms of impact, the project significantly improved farmers' incomes, with an average increase of 155%. Farmers' average income rose from Kshs 9,851 at baseline to Kshs 12,943 by the end of the project. However, it was noted that this increase was more pronounced among men, largely due to ongoing issues related to women's access to land. In total, over 17,000 farmers benefited from capacity-building efforts, while grassroots advocacy reached 3,224 farmers.

The project employed various strategies to achieve its goals, such as the establishment of farm-based businesses, the use of low-cost approaches, tailored coaching sessions, access to credit through Hand in Hand, and the use of demonstration farms. Tools like the Tool for Agroecology Performance Evaluation (TAPE) and the CAET framework were also applied, though TAPE presented some adoption challenges and required consultant support.

Key learnings from the project highlighted the persistent gender-specific challenges, especially around land rights, and emphasized that transitioning to regenerative agriculture takes time. The role of advocacy was also seen as a vital opportunity to evaluate and enhance influence pathways.

Looking ahead, the team plans to scale up the initiative under two new efforts titled *"Seeds of Change"* and *"Roots for Transformation."* The goal is to mobilize USD 6 million in funding to expand the program's reach to 75,000 farmers.

Shimelis Hailu: ***The role of renewable energy technologies in promoting agroecology: A case study on biodigester technology in Ethiopia Welmera district***

Shimelis Hailu presented a case study from Ethiopia's Welmera district, focusing on the role of renewable energy technologies in supporting agroecology, specifically through the use of biodigester technology. The study emphasized how integrating renewable energy into agricultural systems can deliver both environmental and social benefits.

The findings highlighted the potential of biodigesters to create a commercially viable domestic biogas sector in rural Ethiopia. These systems not only provide a clean and sustainable energy source but also generate organic byproducts that can be used as fertilizer, thereby reducing the reliance on costly chemical inputs.

Beyond environmental and economic impacts, the technology has significantly improved the living conditions of women and children, who often bear the burden of collecting firewood and are exposed to indoor air pollution from traditional cooking methods. With biogas, households experience cleaner cooking solutions, saving time and improving health outcomes.

Overall, the presentation concluded that biodigester technology can be a key enabler of agroecological transformation, offering a holistic approach that supports sustainability, enhances livelihoods, and strengthens rural resilience.

Audience Questions

1. How do you manage post-harvest losses?
   We have developed curriculum on post-harvest losses and value addition.
2. Credit access is a challenge? How did the facility work?
   They worked with farmers since 2010 and this have built their entrepreneur skills. They have also conducted training on credit access and conduct a review 6 months before giving credit. They undertake proper vetting at group level to understand need and get recommendation. The credit is issued with 18months, and they start with about Kshs. 10,000 to 30,000.

4. On tape, how are you working with farmers to communicate the findings? What strategies have you put for farmers to use TAPE tool?
   We have simplified understanding of TAPE tool for easy uptake by farmers. The findings are disseminated at end of the program through a forum with all stakeholders.
5. Results on income is exciting, how is the incoming balancing with food security?
   There is a mismatch between production and consumption. The increase in income looks at financial saving, money that could have been spent in buying vegetables in the absence of the project. The impact is more on lowered cost of production through reduced purchase of farm inputs.
6. Do we need to increase investment or concentrate on existing financed programs?
   To maintain a strong movement, we need both new investment and existing ones to reach more farmers.
7. RA is context specific, at what level should the upscaling happen?
   Study ecological areas to understand what would work in the area and get the facts on agroecological zones right, then build case based on evidence to upscale adoption.
8. What are the mechanism in place to ensure farmers upscaled technologies at the end of project cycle?
   They conducted trainings for continuity and capacity building. The government has contributed resources to develop the program.
9. Do you incorporate solid waste and water from domestic households in the biogas program?
   They have supported effective waste managed in households. They train farmers on the need to identify poisonous materials so that they don't go into the feed. Wastewater can be incorporated.

Parallel Session 2 B: **Farmer Managed Seed Systems for Resilient Agrifood Systems**

Moderator: Mary Irungu, Programme Officer, Advocacy, Participatory Ecological Land Use Management

Presentations

Claire Atukunda, Ms. Freda Orochi (presenting author), Ms. Agnes Kirabo:
Secured Land Tenure Rights a key tenet for promoting Indigenous Seed and

local Food System- A Game Change for resilient and sustainable Agrifood system- A case of Uganda

The presentation focused on the critical role of **secured land tenure rights** in promoting **indigenous seed systems and local food sovereignty** in Uganda. Framed as a game changer for building resilient and sustainable agri-food systems, the case study highlighted the urgent land-related challenges facing communities in the country.

Uganda operates under **four land tenure systems** and is recognized for its rich biodiversity. However, the country faces a **rampant loss of biodiversity**, including agrobiodiversity, largely due to insecure land rights and growing pressure from land-based investments. **Access to land for food production is becoming increasingly limited**, with land conflicts emerging as a persistent and unresolved issue—**90% of local conflicts** are linked to land disputes. National policies that push for middle-income status through **large-scale agricultural investments** on prime land have further threatened traditional seed systems and community food security, especially in areas with contested land ownership.

The team's findings revealed a clear **correlation between competing land uses** and the **erosion of indigenous seeds, ecosystems, and traditional knowledge systems**. In regions affected by large-scale land investments, communities have experienced the **loss of indigenous seed varieties** and **disturbance to fragile ecosystems**. In pastoral communities, the changes have even led to the breakdown of cultural systems and the displacement of long-held indigenous knowledge.

A key element of resistance and preservation has been the **mobilization of affected communities by local civil society organizations (CSOs)**, advocating for land rights and the protection of indigenous food systems.

In conclusion, the presenters emphasized that **strong and secure land tenure systems are foundational** to protecting indigenous seeds and supporting sustainable local food systems. Without addressing land rights, efforts to build resilient agri-food systems and preserve biodiversity are unlikely to succeed.

Prof. Carl Lachat (presenting author), Dr. Gloria Otieno: ***Seed systems in nature-positive agriculture focus on diversity, resilience, farmer participation, local adaptation, and sustainable practices to support ecosystems***

The presentation explored the critical role of seed systems in promoting nature-positive agriculture, emphasizing the importance of diversity, resilience, local adaptation, and farmer participation in supporting sustainable food systems and healthy ecosystems.

Prof. Lachat began by outlining the negative impacts of industrial agriculture, including widespread deforestation, threats to species, increased greenhouse gas emissions, and soil and land degradation. In contrast, he highlighted the benefits of more diversified agricultural systems, which not only improve resilience but also support biodiversity and ecological balance.

Agrobiodiversity, he noted, is found both on farms and in international gene banks. However, to truly harness its potential, farming systems must embrace methods such as polyculture, intercropping, diverse crop rotations, genetic diversity in crops, evolutionary populations, and agroforestry. These approaches foster both ecological and economic sustainability.

One initiative, "Seeds for Needs," was presented as an example of shifting the focus from simply supplying seeds through markets to incorporating conservation and farmer-led research. This model encourages farmers to actively participate in seed research and provide feedback, ensuring the development of varieties that are better suited to local conditions.

The pathway toward developing Farmer-Managed Seed Systems (FMSS) involves several key steps:

- Enhancing seed dissemination and conservation,
- Strengthening and scaling Community Seed Banks (CSBs) to improve sustainability and reach.

The presentation also acknowledged existing policy challenges, particularly around Access and Benefit Sharing (ABS) regimes and Intellectual Property Rights (IPRs), which can limit the free exchange and development of seeds by smallholder farmers.

To address these challenges, the presenters offered several recommendations:

- Ensure a **holistic seed supply system** that includes conservation, access, and quality control.
- Promote a **research agenda** that funds seed system improvement, especially those led by communities.
- Create **enabling policies** that foster integration and complementarity between formal and informal seed systems.
- Enhance the **genetic base of crops** to ensure adaptability and resilience.
- Provide **access to finance** to strengthen local seed initiatives and empower farmer-led innovation.

In conclusion, the presentation made a strong case for inclusive, decentralized, and biodiversity-friendly seed systems as the foundation for a more sustainable and equitable agricultural future.

Tabitha Munyiri, Mr. Peter Aeberhard, Mr. Kenenisa Assefa Kelele, Mr. Dominic Kimani (presenting author), Ms. Julia Kamau (presenting author), Mr. Dalmus Mitei: ***Farmers managed-seed in preparedness and resilience against climate-induced emergencies***

The team presented on the vital role of **farmer-managed seed systems (S/FMSS)** in strengthening community **preparedness and resilience against climate-induced emergencies**. Their work aims to empower local communities by enhancing their control over seed systems, particularly in the face of increasing climate-related challenges.

The background of the initiative is rooted in the recognition that climate change is directly impacting agricultural productivity. The **effects include significant crop loss, declining household income, and livestock deaths**—all of which threaten the food and livelihood security of smallholder farmers.

The presentation summarized several on-the-ground activities and findings, emphasizing that many farmers **do not grow indigenous or traditional crop varieties**, despite their suitability for local conditions. The reasons for this are tied to **market limitations, lack of access to quality seed, and poor seed distribution infrastructure**.

The study identified several **challenges related to seed access**, including:

- High seed prices

- Long distances to seed providers
- Inadequate or non-existent supply chains
- Limited availability of diverse and suitable varieties
- Poor germination rates
- Inability to source seeds that meet desired quality standards

These issues severely limit farmers' ability to adapt to climate variability and maintain productive farms.

In response, the presenters proposed practical solutions, notably the **establishment of a "Seed School" in April**, designed to improve community knowledge around seeds, including aspects of **seed selection, saving, storage, and multiplication**. The school is intended to build local capacity and reintroduce indigenous varieties that are better suited to changing climatic conditions.

The overall message was clear: investing in **community-led seed systems** is critical to enhancing **climate resilience, seed sovereignty, and food security**, particularly in rural areas vulnerable to climate shocks.

Dr. Tanay Joshi, (presenting author), Dr. Amritbir Riar, Ms. Rajwinder Riar, Mr. Alexander Heer, Ms. Veronica Massawe, Dr. Monika M. Messmer, Dr. Tanay Joshi: ***Farmers Varieties as a Sustainable Alternative for Resilient Agri-Food Systems***

The presentation, *"Farmers' Varieties as a Sustainable Alternative for Resilient Agri-Food Systems,"* focused on the pressing issue of seed biodiversity loss and the critical role of **farmer-managed varieties, or landraces**, in preserving resilience, heritage, and sustainability in agriculture.

Dr. Tanay Joshi opened by exploring the idea of a **seed crisis**—a situation where even the genetic foundation of agriculture is under threat. This was illustrated through the example of **desi cotton in India**, where traditional cotton varieties have been rapidly displaced by commercial hybrids, leading to a severe loss of **cotton agrobiodiversity**.

Landraces, often passed down through generations, are deeply rooted in traditional agricultural practices. However, they are **struggling to survive** in the face of **climate change, genetic erosion, market-driven agricultural systems, and declining cultivation of local varieties**. Despite these pressures, **farmer varieties offer**

immense value: they act as reservoirs of genetic traits, are highly adaptable to local environments, and play a key role in sustaining cultural and ecological diversity.

The presentation emphasized the importance of recognizing and protecting these varieties, highlighting the Indian Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act of 2001. This legislation recognizes the rights of farmers as breeders and conservators, provides legal protection for farmer varieties, and enables registration in a National Register of Plant Varieties. It also mandates a three-year compulsory license for commercial use and establishes a National Gene Fund to support community conservation efforts.

Through participatory research, the team has worked with farmers to document and revive these varieties. This includes efforts in India and Africa, such as the promotion of Bambara groundnut in African contexts. In India, the initiative has led to the formal release of two cotton cultivars for organic farming, integrating farmer-bred varieties into the formal seed system.

The presentation concluded with a strong affirmation: farmer varieties are not only genetically and culturally significant but are also essential for the future of resilient agri-food systems. Moreover, supportive legislation like the PPV&FR Act has been transformative, empowering farmers to preserve and innovate within their own seed systems.

Audience Questions

1. How can stakeholders unpack policies to understand what it means and ensure it works?
   Too much of policy becomes unpalatable for farmers. The policy environment is not conducive, but things are changing as more policy makers get involved in agroecology. Stakeholders must also understand that policies take time to work.
2. The varieties sold, are they farmer varieties and what's the quality?
   They have a network of community seed banks who work to preserve biodiversity. Farmers are recognised as seed produced (QDS), produce seeds of traditional varieties though no certification is done. Farmers have good understanding of their seed quality.
3. There is a gap between old and new generations on food systems. How can this gap be addressed? What efforts have been done to analyse nutritional value of traditional crops? Why were some families not consuming vegetables?

The study on nutritional value is ongoing. They have secured marketplace in government county places for agroecology products. Proper labelling for certified organic products is required for authenticity, and integrity is key. Capacity building is needed at all levels and encourage engagement with youths to trigger markets.

Parallel Session 3A: **Agroecological Pest Management for Sustainable Crop Protection**

Moderator: Manei Naanyu, Head of Programmes, PELUM Kenya

Presentations:

Dr. Simon Boni, Dr. Stephen Othim, Mr. Nickson Mlowe, Ms. Judith Assenga, Mr. Raphael Mallogo, Dr. Fekadu Dinssa, Dr. Srinivasan Ramasamy (presenting author), Dr. Komivi Akutse, Dr. Daniel Mutyambai: ***Management of diamondback moth and aphids in cabbage using push-pull technology in Tanzania***

In Tanzania, cabbage is a key vegetable crop, ranking third in importance after tomatoes and onions. It plays a vital role in both human nutrition and environmental health. Rich in nutrients and medicinal properties, cabbage also acts as a bio-fumigant by producing glucosinolates, compounds toxic to many soil-borne plant pathogens (excluding fungi). The crop is predominantly cultivated by women in both rural and urban areas, contributing significantly to household food security and income generation.

Despite its importance, cabbage production faces major challenges from pest infestations, especially by the diamondback moth (DBM)—a pest capable of causing up to 100% yield loss if unmanaged. Aphids, including the cabbage aphid, green peach aphid, and Indian mustard aphid, also severely impact crop health. Other damaging pests include the cabbage cluster caterpillar, webworm, looper, and white butterfly.

To combat these threats, chemical pesticides have been widely used in brassica production systems, leading to adverse health and environmental impacts, and accelerating the development of pest resistance. While classical biological control involving introduced parasitoids has shown success against some pests, secondary lepidopterans and sucking pests remain problematic.

The presentation explored the push-pull cropping system as a sustainable pest management strategy. This approach uses a pest-deterring crop (push) alongside a

pest-attracting crop (pull), both of which hold economic value. The system has shown promise in reducing aphid and DBM infestations in cabbage while supporting productivity.

Key findings include:

- Significant reduction in aphid infestations where common beans sprayed with kale extract were used as a pull crop (T1), acting as a dead-end trap crop.
- Similar pest suppression was observed with the combination of onion and spider plant (T4), further validating the push-pull concept.
- These outcomes suggest that push-pull strategies can reduce reliance on synthetic pesticides, promoting ecological sustainability without compromising yields.

The presentation concludes by emphasizing the potential of push-pull systems in cabbage production, especially in smallholder contexts. On-farm validation and assessment of the economic viability of these integrated systems are ongoing.

Evanson Rigan Omuse (presenting author), Dr. Honest Machekano, Dr. Daniel Mutyambai, Dr. Subramanian Sevgan, Dr. Frank Chidawanyika: ***Effects of intensified push-pull technology and frass-based soil amendment on pest damage, striga weed, carbon sequestration and farm productivity***

Sub-Saharan Africa is facing increasing pressure to produce more food to meet the needs of its rapidly growing population. The region relies heavily on staple cereal crops such as sorghum, maize, rice, wheat, and millet, which are cultivated primarily by smallholder farmers, who manage about 80% of the continent's farmland.

These smallholders are confronted with numerous challenges, including insect pests, invasive weeds, declining soil fertility, and the growing impacts of climate change. These issues not only reduce agricultural productivity and yield, but also drive farmers to become overly reliant on agrochemicals, leading to long-term environmental, social, and economic sustainability concerns.

To address these challenges, the concept of sustainable intensification has been promoted. This approach aims to increase productivity on existing agricultural land while also protecting and improving natural resources. Several agricultural innovations are at the forefront of this strategy:

1. **Push-pull technology** – an intercropping system that uses certain plants to **repel pests (push)** and others to **attract them (pull)**, simultaneously controlling pests and improving soil health.
2. **Vegetable-integrated cereal push-pull technology** – combines vegetable crops with cereals in the push-pull system to enhance **dietary diversity, farm productivity, ecosystem services**, and **income diversification**.
3. **Black Soldier Fly (BSF) farming** – a novel approach that uses **organic waste** to rear larvae, whose frass (by-product) is used as a **biofertilizer** to improve soil health and crop yield.

Key findings from implementing these innovations include:

- **Push-pull systems** are effective in controlling **insect pests and striga weed**, leading to reduced dependency on chemical inputs.
- Integrating **vegetables and cereals** within this system significantly improves **biomass, carbon stocks**, and overall **farm yield**.
- The use of **BSF frass** as an organic fertilizer further boosts productivity across both **monoculture and diversified systems**.
- Enhanced **carbon storage** in croplands contributes to **climate change mitigation** by reducing **soil organic carbon loss**.
- **Crop diversification**, driven by the integration of vegetables, promotes **nutritionally diverse diets** and **resilient farm incomes**.
- Additionally, the **fodder** produced in push-pull plots can be used to **feed livestock**, generating **sustained income** for farming families.

In summation, these innovations offer a **holistic pathway** toward sustainable and resilient food systems in Sub-Saharan Africa, improving **agricultural productivity**, enhancing **ecosystem services**, and supporting **farmers' livelihoods** while reducing environmental harm.

Ms. Bretor Mutua (presenting author), Dr. Edward Karanja, Dr. Thomas Dubois, and Dr. Daniel Mutyambai: ***Vegetable Importance and production in Kenya***

In Kenya, **vegetables**, especially **kale**, are central to the livelihoods and diets of smallholder farmers, with an estimated **90%** engaged in their cultivation. Vegetables offer **high nutritional value**, rich in **phytochemicals** with antioxidant properties and fiber, making them essential for improving **food and nutrition security**, generating **income**, and creating **employment opportunities**.

Despite their importance, vegetable production faces several critical challenges:

- Limited farmer awareness on sustainable practices,
- Overreliance on chemical pesticides, leading to safety concerns and environmental damage,
- Low productivity,
- Emergence of pest resistance,
- Loss of biodiversity,
- Persistently low farmer incomes, and,
- Ongoing nutrition insecurity in farming households.

Push-pull cropping systems, previously successful in managing maize pests, offer a promising solution for vegetable production as well. This strategy involves combining specific companion plants that repel (push) or attract (pull) pests, while supporting the presence of natural biological control agents such as parasitoids.

The current intervention explores the use of rosemary, a plant traditionally used for its medicinal, cosmetic, and insect-repellent properties, as a potential push plant in kale-based systems. Research has shown that intercropping rosemary with sweet pepper effectively suppressed pest species such as *Frankliniella intonsa*, *Bemisia tabaci*, and *Myzus persicae*, without negatively affecting populations of beneficial natural enemies.

Study Objectives

1. Evaluate the potential of rosemary as a push plant for managing *Brevicoryne brassicae* (cabbage aphid) in smallholder kale systems.
2. Characterize the volatile compounds emitted by rosemary that influence the behavior of both the cabbage aphid and its natural enemies.
3. Assess how intercropping kale with rosemary impacts aphid populations and supports beneficial parasitoids.
4. Examine both the behavioral and olfactory responses of the pest and its parasitoid to rosemary volatiles using anemographic techniques.

The Cabbage Aphid Challenge

The cabbage aphid is a major pest of cruciferous crops. Its ability to reproduce both sexually and asexually enables it to build up populations rapidly. The aphids feed on plant sap, leaving behind yellowed, curled leaves, damaged buds, and deformed

fruits. In addition, they act as vectors for plant viruses, affecting a wide range of crops including cucumbers, melons, pumpkins, beans, lettuce, and potatoes—causing symptoms such as stunted growth and mottled or yellowing leaves.

Severe infestations can lead to crop losses of 70% to 80%, significantly reducing farmer incomes. Compounding the issue is the aphid's ability to develop resistance to pesticides quickly, rendering chemical control increasingly ineffective.

In light of these challenges, the integration of habitat management approaches like push-pull cropping and the strategic use of botanical repellents such as rosemary offers a sustainable, low-cost, and environmentally friendly alternative. This innovation not only addresses pest control but also promotes ecological balance, supports natural enemies, and reduces the need for harmful synthetic pesticides.

Parallel session 3B: **Agroecological Innovations for Sustainable Pest, Weed, and Livestock Health Management.**

Moderator: Samuel Ndungu, Programmes Manager, Kenya Organic Agriculture Network

Presentations

Prof. M N Balakrishnan Nair (presenting author), Prof. N Punniamurthy: ***Ethno-veterinary medicine as an alternative approach to responsible use of antibiotics and other chemical veterinary drugs in veterinary health care.***

India stands as the global leader in milk production, having produced 230.58 million metric tons in the 2023–2024 period. This remarkable output is largely attributed to efforts made since the 1960s to increase dairy productivity, most notably through crossbreeding indigenous cattle with exotic breeds. While this strategy significantly boosted milk yields, it brought with it a series of unintended consequences, the most serious being a marked increase in disease incidence among cross-bred animals.

To manage the health of these high-yielding but disease-prone dairy animals, antimicrobials and veterinary drugs began to be widely used. However, weak enforcement of regulatory policies has led to widespread misuse, resulting in several concerning outcomes:

- Veterinary drug residues are now commonly found in animal-derived foods like milk.
- Treatment costs for farmers have escalated significantly.

- Milk quality has declined.
- The issue has contributed to the global crisis of antimicrobial resistance (AMR), posing a serious threat to both animal and human health.

In response to these challenges, there is growing recognition of the need for safer, cost-effective, and sustainable alternatives in animal healthcare. One such alternative lies in India's traditional medical knowledge systems, which include both codified and non-codified branches.

The codified systems—Ayurveda, Siddha, Unani, and Tibetan medicine—are formally recognized and legally practiced in India. These systems offer comprehensive theories of health and disease, and their herbal-based remedies have long been used for treating both humans and animals.

In parallel, non-codified systems, often rooted in folk traditions and oral knowledge, remain deeply embedded across India's 4,639 ethnic communities. These practices, though informal, are dynamic and adaptive. They reflect centuries of local innovation, closely tied to cultural identity and biodiversity, and often complement codified practices.

Harnessing these ethno-veterinary practices—particularly herbal formulations—represents a promising pathway for managing livestock health in a way that is ecologically sound, culturally appropriate, and cost-effective. It reduces dependence on synthetic drugs, supports food safety, and helps to address the growing concern of AMR by providing natural alternatives that are more compatible with the biological systems of indigenous and cross-bred animals.

Thus, integrating ethno-veterinary medicine into mainstream livestock management is not only a nod to cultural heritage but also a practical solution to modern veterinary challenges, aligning animal health care with public health, sustainability, and rural livelihoods.

*Ms. Loise Kioko (presenting author), Dr. Peter Lueth: Kichawi Kill: **A Bioherbicide Transforming Agri-Food Systems***

Striga, commonly known as *witchweed*, is widely regarded as Africa's number one biological threat to food security, inflicting severe damage on millions of smallholder farmers across the continent. This parasitic weed primarily attacks staple cereal and legume crops, including:

- Maize
- Sorghum
- Millet
- Dryland rice
- Sugarcane
- Cowpea
- And more recently, **wheat**

The devastation caused by Striga is staggering, with **annual crop losses estimated at $9 billion**, primarily affecting smallholder farmers. What makes Striga particularly destructive is that it **kills the crop before it even emerges from the soil**, making early intervention essential.

Striga Mitigation: The Role of Kichawi Kill and StrigAway Technology

Efforts to mitigate Striga have led to the development of **StrigAway**, a treatment applied to **IR-resistant (imidazolinone-resistant) maize varieties**. This innovative approach has shown promising results:

- It costs approximately **$15.50 per acre**.
- Results in a **maize yield increase of 37% to 60%**, depending on conditions.
- The **average yield increase is about 450 kg per acre**.
- This translates to a **value increase of around $170 per acre**.
- Over **10,000 acres**, this could generate **an additional $1.7 million in economic value**.

Such outcomes highlight the **transformative potential** of targeted agronomic innovations like Kichawi Kill in restoring yields, improving livelihoods, and bolstering food security.

Enhancing Collaboration Between Researchers and Farmers

A key question raised during discussions was how to foster effective collaboration between researchers and farmers in combating Striga. The response was clear:

"Through training and working closely with the farmers."

Indeed, **farmer-centric research**, **on-farm demonstrations**, and **capacity building** are essential. Empowering farmers with knowledge and tools through **participatory**

approaches ensures that innovations are not only adopted but also adapted to suit local conditions.

Mr. Bo Gunnar Lager, Monica Nderitu: ***Agroforestry and Agroecology - Sustainable and safe alternatives to pesticides for increased biodiversity and human health.***

The growing dependence on synthetic pesticides in agriculture has raised alarm due to its far-reaching impacts on **human health, environmental sustainability, and economic viability**. Transitioning away from these harmful chemicals is not just a matter of ecological urgency—it is essential for restoring soil health, safeguarding biodiversity, protecting water resources, and enhancing the climate resilience of our farming systems. Moreover, reducing pesticide use also addresses critical **financial burdens** faced by smallholder farmers who often lack the resources for repeated chemical applications.

Proven Strategies for Building Resilient Agro-Ecosystems

A range of practical, nature-based approaches is already available and has demonstrated success in managing pests sustainably:

- **Integrated Pest Management (IPM)** combines biological, mechanical, and cultural techniques to minimize chemical use.
- **Agroforestry systems** enhance natural pest control by creating balanced ecosystems with beneficial organisms.
- **Mechanical pest control methods**, including manual removal and traps, are viable for small-scale farms.
- **Push-Pull Technology** employs pest-repellent and pest-attracting crops to divert insects from main crops.
- **Biological pest control** introduces natural enemies such as predators and parasitoids to regulate pest populations.
- **Botanical and indigenous pest control solutions** tap into traditional knowledge and local plant-based repellents for safe and effective pest deterrence.

A Multi-Sectoral Call to Action

To make this transition effective and far-reaching, **coordinated action from all sectors** is crucial:

- **Businesses and Market Actors** must take the lead in **scaling up the production and distribution of biopesticides and biofertilizers**. Investment in **innovative research** is needed to develop context-specific and commercially viable alternatives to synthetic pesticides.
- **Consumers** play a powerful role through **demand for safe, organic, and sustainably grown produce**. Public awareness campaigns can empower people to make informed food choices and support ecological farming.
- **Governments** must enforce bans on hazardous pesticides and **redirect agricultural subsidies** to support agroecological practices. Training and extension services should be strengthened to help farmers implement these methods successfully.
- **Official Development Assistance (ODA) and Civil Society Organizations** are urged to **prioritize support for farmers** transitioning to ecological methods. A **greater share of ODA** should be allocated to agroecology and sustainable land management efforts.

Dr. Hottensiah Mwangi (presenting author), Dr. Edward Karanja, Mr. David Bautze, Mr. Edwin Mwangi, Dr. Felix Matheri, Dr. Anne Muriuki, Dr. Jesca Mbaka, Dr. Martha Musyoki, Mr. Elias Thuranira, Dr. David Kamau, Dr. Milka Kiboi: ***Influence of long-term farming systems Management practices on weed composition, and density and dry matter in Tharaka Nithi and Muranga counties, Kenya.***

In organic farming, efforts to reduce crop yield losses are often hindered by limited understanding of weed dynamics. Weeds remain a persistent challenge because they originate from **weed seed banks** in the soil—the hidden source of future weed growth. Monitoring the types and abundance of weeds in a farm provides valuable insight into the composition of these seed banks. Effective management, therefore, requires strategies to **limit the spread and introduction of new weeds** and to **flush out existing weed populations** early.

Challenges on the Ground

Despite the importance of weed management, several practical realities complicate its success:

1. **Labor scarcity and tediousness**: Weed removal is labor-intensive and often not done thoroughly or consistently.
2. **Slow manifestation**: Weed interactions with crops and the ecosystem often develop gradually, making timely intervention difficult.

3. **Weed resilience:** Weeds possess adaptive traits that enable them to thrive and compete effectively within farm ecosystems.

Among the best practices for weed management, **minimum tillage** stands out as a key approach, reducing soil disturbance and helping to control weed seed germination.

Research Findings and Recommendations

Studies show that **weed dry matter yields vary depending on farming systems and input levels**. Interestingly, conventional farming systems with high input levels tend to record the **highest weed biomass**, indicating that while these inputs benefit crops, they also promote more vigorous weed growth.

This highlights the need for innovative, integrated weed management (IWM) strategies tailored to different farming contexts. Notably, organic farming practices demonstrate strong potential in reducing weed pressure, partly due to the natural balance they foster in agro-ecosystems.

Addressing Good vs. Harmful Weeds

Questions have arisen about the classification of "good" weeds—those with medicinal properties, potential as biopesticides, or suitability as fodder (e.g., for rabbit farming). Sharing knowledge about these beneficial weeds and their nutritional or ecological roles is crucial for farmers. Equally important is educating farmers about **toxic weeds** that can harm livestock, especially when consumed at vulnerable stages.

Seasonal Data Collection

The research underpinning these findings was conducted across both **long and short rainy seasons**, ensuring a comprehensive understanding of weed dynamics under varied climatic conditions.

Parallel Session 4A: **Agroecology, Soil Health and Productivity**

Moderator: Stellamaris Mulaeh, Country Programme Coordinator, Fastenopfer Country Programme Kenya

*Dr. Peter Bolo, Alliance of Diversity International: Agroecology in Practice: **Evidence from Makueni, Kenya***

Dr. Peter Bolo shared insights from the CGIAR Initiative on Agroecology, highlighting how agroecological transitions are being supported through innovation, evidence, policy engagement, and behavior change. The study was implemented across various countries, with Kenya focusing on **two key entry points: Kiambu and Makueni Counties**. His presentation focused on **findings from Makueni**.

Study Design and Methodology

The study employed **co-designed workshops** where **farmers selected specific agroecological practices** most relevant to their local needs. The research addressed two key questions:

1. **How effective are the co-designed agroecological practices** in managing soil health, water conservation, and pest control?
2. **Can these practices lead to meaningful income gains** from maize and bean production among smallholder farmers?

Key Findings

Soil Health

- The average **soil pH** across plots was within acceptable levels.
- However, **soil organic matter and nitrogen levels were critically low**.
- **Micronutrient levels** were generally medium, offering some fertility potential.

Yield Gains

- **Maize yields increased by 99 kg/ha** compared to control plots.
- **Beans showed a 72 kg/ha yield improvement** over control plots.
- These increases were attributed to improved agroecological practices, particularly **biopesticide use** and **organic soil amendments** like manure.

Pest Management

- Test plots using **biopesticides** and **manure** recorded significantly **lower pest prevalence** than control plots, suggesting these practices are effective in natural pest control.

- **Biopesticide treatments outperformed all other methods** in both yield and income, highlighting their economic value to smallholders.

Conclusions

The findings confirm that **agroecological interventions, especially biopesticides**, can substantially improve crop productivity and farmer incomes while reducing pest incidence. The **test plots not only yielded more but also generated higher income**, emphasizing the viability of agroecology as a sustainable alternative to conventional practices.

Audience Questions

1. What are the optimal levels of phosphorus, nitrogen, and potassium in soil?
   These levels are guided by national and international soil standards and vary based on crop type and soil conditions.
2. How can we determine the correct fertilizer dosage to address nutrient deficiencies?
   This requires **regular soil testing**, followed by tailored recommendations. Diagnosing nutrient deficiencies through **continuous monitoring** enables effective and balanced nutrient management.

Cosmas Kiprono, Maseno university student: ***Maximizing Land Productivity through Intercropping in Western Kenya***

With land for agriculture becoming increasingly scarce, farmers in **Western Kenya** are turning to **innovative intercropping systems** to enhance land productivity, improve food security, and sustain soil health.

One such method involves **maize–desmodium intercropping**, a technique that not only **boosts maize yields** but also contributes significantly to **soil fertility** through **nitrogen fixation**, and helps **suppress striga weed**, a major pest threatening cereal production. To further increase land use efficiency and enhance household nutrition, **vegetables are integrated into the cropping system**, offering additional income and dietary diversity.

However, this **multi-species intercropping**—involving maize, desmodium, and vegetables—presents both opportunities and challenges. Because these crops have differing **growth habits and resource requirements**, they often **compete for water,**

nutrients, and space, which can impact overall yields if not managed carefully. Moreover, the system is labor-intensive, requiring careful coordination of planting, maintenance, and harvesting times.

Crop Establishment and Management Practices

The study emphasized that successful implementation of the intercropping system required:

- Land preparation and soil conditioning
- Soil treatment to enhance fertility and reduce disease pressure
- Careful planting to ensure spatial compatibility and minimize competition
- Timely weeding to reduce interspecies stress and optimize growth

Research Findings and Impact

Field evaluations were conducted using different methodologies to assess yield gains and system productivity. Results demonstrated that intercropping maize with desmodium and vegetables significantly improved land productivity while contributing to sustainable soil health management.

This research initiative received funding support aimed at promoting sustainable agricultural intensification in East Africa. It aligns with regional efforts to optimize limited land resources while addressing food security, environmental sustainability, and climate resilience.

Thomas Rewe, Judith Libaisi, Patrick Sigei, Mercy Kamau-Rewe, David Ojwang':
Participatory on-farm assessment of regenerative agriculture technologies in Nakuru, Bungoma, Kakamega, Uasin Gishu and Kericho counties in Kenya

A recent study was undertaken in Kenya to evaluate the impact of commercial organic fertilizers (OFs) on soil health and crop productivity, specifically focusing on bean yields, which currently average 471 kg/ha, significantly below the potential yield of 1,100 kg/ha.

The main objective was to determine whether organic fertilizers could outperform or complement inorganic fertilizers (IOFs) in restoring soil health and improving crop performance.

Key Findings

- Soil Chemical Properties: Organic fertilizers were found to **significantly enhance soil chemical properties**, particularly **phosphorous content**, compared to IOFs.
- Germination Rates: Higher **germination percentages** were recorded in plots treated with organic fertilizers, likely reducing the labor costs associated with replanting.
- Weed Suppression: Organic fertilizers appeared to **suppress the growth of certain weeds**, including *Striga*, though more targeted research is needed to understand this phenomenon.
- Crop Yield: While there was **yield improvement** when **organic and inorganic fertilizers were integrated**, the **differences were not statistically significant**—possibly due to the limited sample size (**20 plants per plot**) and the fact that **many plants had not fully matured** by the time of evaluation.

Conclusions and Recommendations

The study supports the idea that **regenerative agriculture**, using organic inputs, can contribute to **improved soil health** and **sustainable farming practices**. However, for broader adoption and effectiveness:

- A **long-term comparative cost-benefit analysis** is needed to better quantify the economic advantages of regenerative practices.
- There is a need to **strengthen farmer groups** to support collective action, knowledge sharing, and access to inputs.
- Additional research is warranted to:
  - Understand how organic fertilizers might **suppress *Striga* weed**.
  - Identify why **yield differences** were minimal despite improvements in soil quality.

Audience Questions

1. Do you have any options to control *Striga*?

   The suppression effect seen with organic fertilizers is promising, but **further investigation** is necessary to confirm mechanisms and identify consistent control options.

2. Why was there no significant yield difference?

   The limited sample size and the fact that many plants had not matured by harvest time affected yield data. Future studies should allow for full crop maturity and larger sample sizes for better comparisons.

Dr. Isaac Bazugba (phd), Research scientist, ministry of agriculture: ***Balancing Fertilizer Use for Sustainable Yield Increases in South Sudan***

In sub-Saharan Africa, the urgent need to triple food productivity is placing immense pressure on agricultural systems. To meet demand, many regions have resorted to land expansion through deforestation, a trend that significantly contributes to climate change. In response, sustainable intensification practices—including improved fertilizer use—have become increasingly vital.

A recent study in South Sudan explored the effects of integrating organic and inorganic fertilizers on maize yield and soil health, in a context where fertilizer use remains low due to persistent farmer beliefs and barriers.

Farmer Perceptions and Resistance

Farmers in South Sudan often avoid fertilizer use, citing two main reasons:

- A belief that local soils are already fertile and do not require enhancement.
- A perception that fertilizers degrade soil quality over time.

These views, while understandable given traditional practices, may limit productivity and sustainability in the long run.

Study Results and Observations

- Maize Yield: The study showed a 62% average increase in maize yield when organic and inorganic fertilizers were combined, compared to untreated plots.
- Soil Chemical Properties: The blend of fertilizers led to improvements in soil nutrient availability, especially nitrogen and phosphorus, without negative impacts on soil structure.
- Soil Types and Climate: Variations in soil type, rainfall, and temperature were recorded and found to influence yield responses. Consistently, regions with moderate rainfall and loamy soils showed the highest productivity gains.

Conclusion

This study strongly suggests that **integrating organic and inorganic fertilizers** can significantly **boost maize yields** while maintaining or enhancing **soil health**. In regions like South Sudan, this could offer a path to **sustainable intensification** without further land expansion.

However, success depends on:

- **Educating farmers** on soil management and long-term impacts of fertilizer use.
- **Demonstration plots** to prove visible results.
- Encouraging a **shift in perception**, showing that fertilizers, when used properly, **restore rather than harm soil health**.

Audience Questions

Have you ever done soil analysis before choosing the fertilizer?

Soil analysis done and data on chemical components displayed hence the baseline stand that soil needs proper management to improve the organic matter

What is our take on the use of OF and IOF on the take to grow agroecology?
It is the responsibility of the farmers to understand the soil properties, from these results an improvement should be made where by organic fertilizers should be upheld in soil and a boost of inorganic fertilizer for a regenerative agriculture with the aim to gradually eliminate the use of inorganic fertilizer through a sustainable movement and gradual soil improvement.

Parallel Session 4B: Businesses, Entrepreneurship & Agroecology: Scaling Sustainable Food Systems

Moderator: Ms. Beryl Oyier, Managing Director, East Africa at BoP Innovation Center

Presentations

Isaac Muhofa, Hannes Van den Eeckhout: ***Growing Agroecological Businesses to Transform the Food System***

A key question facing the agroecology movement today is: **What needs to be built to scale agroecology, and what resources are required to support those systems?**

In response, a new approach is emerging that combines **business innovation with ecological sustainability**—using the **startup studio model**.

This **hands-on approach** focuses on identifying and nurturing **talents, ideas, and resources**, aiming for a **30–50% success rate** in developing impactful ventures. The startup studio doesn't just build businesses—it **cultivates ecosystems** that can drive **regenerative agriculture** at scale.

Core Objectives and Takeaways

The model is guided by three strategic takeaways:

1. **Build businesses** while **strengthening the agroecology movement**.
2. Leverage **business development expertise** to support new ventures.
3. Use the **studio model** to **deliver scalable impact** across food systems.

The overarching goal is to **protect founders and their purpose-driven missions**, provide **access to resources and networks**, and **launch regenerative agri-food startups** that are **steward-owned and mission-aligned**.

Key Features and Focus

- The focus is **not solely on exports**, but rather on building strong **domestic markets** for agroecological products.
- The initiative supports the **entire founder journey**, including:
  - Tailored **courses**
  - **Venture building support**
  - **Studio co-founding** opportunities

Long-Term Vision

The ambition is to **grow big with a clear vision**, supported by an **international network** committed to regenerative agriculture. This network provides not only technical support but also mentorship, financing pathways, and a global community aligned around sustainability and equity.

Audience Question

What are the critical success factors to consider when growing an agroecological business?

Success in agroecological business building depends on having a strong foundational background rooted in sustainability, being inclusive and avoiding marginalization, and listening closely to grassroots and market needs. It's also important to focus on solving real problems rather than clinging to fixed solutions—"love the problem, not the solution." This approach keeps efforts relevant, practical, and community-driven.

Mr. Fitsum Biruk (presenting author), Mrs. Leah Mwaura, Mr. Gemechis Jaleta, Mr. Shimelis Hailu: ***The Role of Agroecology in Youth Employment and Entrepreneurship; Case study of the Veggies for Planet and People project.***

Agroecology presents a strong opportunity for addressing environmental degradation, food insecurity, and unemployment—especially among youth. By applying sustainable farming principles, it supports both ecological balance and economic empowerment.

Project Overview: The initiative focused on building youth capacity in agroecological techniques, aiming to generate jobs and create entrepreneurial pathways.

Methodology & Results: Data was collected using random sampling methods, leading to a clear picture of agroecology's job creation potential. One success story highlighted youth-led healthy seedling production using traditional broadcasting methods, showing strong motivation and potential for business expansion.

Key Impact: The project demonstrated that with proper training and support, agroecology can drive youth employment and sustainable economic development.

Dr. Thomas Bernet: ***Promoting Agroecological Food Systems Through Consumer Awareness and Market Linkages***

Dr. Bernet emphasized the importance of integrating **demographic trends, consumption patterns, and technology markets** into agroecological development. His approach uses **participatory market chain methods** to co-develop innovations and foster business partnerships that link smallholder farmers to markets.

Key strategies include:

- **Retailer and food caravan campaigns** to raise awareness about organic and agroecological foods.

- Use of **chefluencers and foodfluencers** to promote healthy diets and sustainable food choices.
- The **comB methodology** to support adoption of agroecological practices among farmers.
- Leveraging **social media** to streamline value chains and reach consumers more directly.
- Emphasis on **process facilitation** to transform food systems across East Africa.

Audience Questions

1. Sourcing sufficient agroecological products for market?
   Start small and build supply around growing demand while ensuring quality.

2. Ensuring diffusion of practices to grassroots smallholders?

   Extensive dissemination of proven, successful practices is essential.

Pclimate and encirmentpolicy and geopolitivsrof. Charles Ssekyewa (presenting author), Dr. Stella Namanji, Mr. Williams Echeku, Ms. Norah Asio: ***Co-learning and co-creating a vending system for agroecology market shops in Teso Sub-Region, Eastern Uganda***

This initiative focuses on catalyzing inclusive transitions using various methodologies such as identifying key enablers and disablers, applying the Equi agro-business model, and improving it with a strong emphasis on gender and inclusivity. It envisions better market access through critical thinking and pre-understanding of market dynamics, including engagement with prospective agroecological shops, dynamic resource flows, and partnerships with agroecological shops and restaurants. Awareness campaigns, co-developed materials, co-publishing, co-learning, and capacity building are integral parts of the process.

Audience Questions

1. How is supplier inclusivity handled in agroecological business?
   Suppliers, including producers and processors, are actively involved as part of the team in business development.
2. Have you reached high-end restaurants?
   Yes, the initiative successfully connected with urban restaurants frequented by higher social groups.

Parallel session 5A: Special Session on Farmers' Voices for Agroecological Transformation

Moderator: Dr. Mwatima Juma, Social Ecologist, Director: Msonge Organic Family Farm,

Chair: Tanzania Organic Agricultural Movement (TOAM)

In a powerful session titled "Farmers' Voices: Challenges & Opportunities in Agroecology," four farmers from Uganda, Kenya, Tanzania, and Rwanda shared their personal journeys, highlighting the real-life obstacles and benefits associated with transitioning to agroecological practices.

From Uganda, Awame Christine emphasized the difficulty many farmers face when trying to shift back to agroecology after prolonged reliance on synthetic fertilizers. Without visible and proven results, convincing farmers to change practices remains a major challenge. She called for more demonstration and *proof of concept* to inspire confidence.

Caleb Odhiambo from Kenya shared that language barriers often prevent farmers from accessing and understanding research findings that could benefit their practices. Additionally, corruption in the seed sector undermines farmers' trust and limits access to quality seeds, making it harder to adopt agroecological approaches.

Amina Senge from Tanzania transitioned to agroecology due to declining soil health after using synthetic inputs. Encouragingly, she noted that Tanzania has made progress by legalizing some local seed varieties, providing a supportive environment for farmers who want to preserve indigenous crops.

Representing Kenya's GROOTS Organization, Cecilia Mmburugu spoke about the gendered challenges women face in balancing farming with domestic responsibilities. She also highlighted political unwillingness as a barrier to scaling agroecology. However, she shared that agroecology has contributed to reduced hunger, lower gender-based violence, and increased women's empowerment in her community.

Gitonga Muruiki, also from Kenya, recounted his move away from synthetic fertilizers after experiencing health issues. Though initial yields were lower and pest control options limited, he found agroecology to be more sustainable in the long run. However, government backing of synthetic inputs continues to be a major hurdle.

Key Takeaway: Farmers across the region are eager to adopt agroecology but need stronger policy support, clear success stories, and access to appropriate inputs and knowledge.

Key Policy Recommendations:

1. Promote community-driven policies that recognize and build on local knowledge and farmer experience.
2. End the promotion of synthetic fertilizers in favor of bio-based and regenerative alternatives.
3. Integrate livestock more effectively into agroecological systems to enhance farm diversity and resilience.
4. Improve organic certification standards and educate consumers to build differentiated markets for agroecological products.
5. Ensure active participation of youth and women in shaping agroecological policies and decision-making processes.

Parallel Session 5B: **Special Session on Pesticides in Agriculture - KOAN: Pesticides in Agriculture. Promotion of Safer Alternatives to Conventional approaches in Agricultural production and consumption.**

Moderator: Daniel Kaburu, K24

Panelists

Alice Blondel, SwedWatch CEO: ***Corporate responsibility in the context of hazardous pesticides***

Alice Blondel, CEO of SwedWatch, addressed critical concerns about the widespread use of hazardous pesticides, highlighting the severe human health and environmental impacts, as well as the lack of corporate accountability in this sector.

Blondel underscored the staggering toxicity of pesticides, which are linked to over 11,000 deaths annually, mostly in developing countries. She pointed out a troubling double standard where pesticides banned in the European Union continue to be sold and used in Kenya and other African nations. This practice exposes vulnerable populations to dangerous chemicals without adequate protections.

The presentation revealed significant regulatory gaps: many African countries lack comprehensive legal frameworks to hold pesticide manufacturers and distributors accountable for the harms caused by their products. The health risks range from

acute toxicity, such as immediate poisoning incidents, to chronic illnesses caused by long-term exposure. Additionally, pesticides damage non-target species and degrade soil quality, threatening ecosystems and agricultural sustainability.

To address these challenges, Blondel called for stronger pesticide regulations backed by effective enforcement mechanisms. She advocated for increased support and promotion of biopesticides and organic alternatives that pose fewer risks to humans and the environment. Crucially, she emphasized the need for greater transparency and corporate accountability in pesticide production and sales.

Eustace Kiarii, CEO KOAN: ***Pesticides advocacy in Kenya and the gains achieved***

Eustace Kiarii, CEO of KOAN, presented a detailed overview of the challenges and progress related to pesticide use in Kenyan agriculture, focusing on pesticide residue violations and their implications for public health and export markets.

His findings revealed that out of 105 agricultural produce samples tested, 31% failed to meet the European Union's maximum residue limits (MRLs). The affected crops included kale, tomatoes, and onions. Particularly concerning was the detection of unregistered pesticide residues, such as Acephate and Carbendazim, found in tomatoes where their use is not authorized.

Specific instances of pesticide residue violations were highlighted, including kale samples from Nyandarua containing Acetamiprid at levels vastly exceeding the EU limit, and tomato and kale samples from Nakuru County with residues above safe thresholds. These violations underscore the ongoing risks to consumer health and compliance challenges for farmers.

The presentation also pointed out a rising trend in interceptions of fresh produce exports from Kenya due to excessive pesticide residues. For example, interceptions increased from 48 cases (79,000 tonnes) in 2016 to 113 cases (111,000 tonnes) in 2021, highlighting serious challenges for the country's agricultural export sector.

Call to Action

Kiarii emphasized the need for urgent and coordinated efforts, recommending:

1. **Acknowledging government roles**, particularly the Pest Control Products Board (PCPB) and the Ministry of Agriculture, Livestock, and Fisheries, for their regulatory efforts.
2. **Eliminating highly hazardous pesticides (HHPs)** from the market through stringent enforcement and regular monitoring to ensure banned substances are not in use.
3. **Enhancing pesticide residue testing** for locally sold produce and improving traceability systems along the supply chain to track pesticide use and compliance.
4. **Promoting safer alternatives**, including supporting research into organic and less toxic pesticides.
5. **Increasing advocacy and awareness** by uniting farmers, agro-dealers, researchers, policymakers, and consumers to reduce HHP use and educate about pesticide risks.

Conclusion

Kiarii's presentation highlighted the significant problem of hazardous pesticide residues in Kenyan agriculture, which threatens both public health and export viability. The urgent message was clear: there must be a collective push from all stakeholders to phase out harmful pesticides, enforce stricter regulations, and champion safer, sustainable alternatives to safeguard Kenya's agricultural future.

Christine Gatwiri, Project Coordinator Route to Food Initiative (RTFI) HBS

Christine Gatwiri, Project Coordinator of the Route to Food Initiative (RTFI), highlighted the pervasive problem of pesticide misuse in Kenya, emphasizing how it threatens environmental health, farmer livelihoods, and consumer safety. She detailed several critical issues including the frequent **non-adherence to recommended pesticide application rates and pre-harvest intervals (PHIs)**, the use of **pesticides ill-suited for small-scale farms**, and the alarming presence of **unregistered or banned pesticides**. Gatwiri also exposed the problematic practice of **harmful pesticide dumping by exporting countries**, which further damages Kenya's soil, contaminates water, and contributes to biodiversity loss.

To tackle these challenges, she advocated for a **systemic approach to change**, anchored on three main pillars:

1. Evidence-Based Advocacy: Gatwiri stressed that effective advocacy must be grounded in scientific evidence to influence meaningful policy reforms. She called for policies that prioritize **pesticide reduction** and actively promote safer alternatives.
2. Collective Action: Addressing pesticide misuse requires a multi-stakeholder approach that engages not just farmers but also policymakers, consumers, and civil society. She emphasized that **long-term collaboration** is necessary to drive structural change beyond surface-level policy tweaks.
3. Promotion of Agroecological Alternatives: The integration of agroecological farming practices through farmer training, alongside the creation of **resource guides for sustainable farming and consumer protection**, are key to reducing pesticide dependence.

Gatwiri also underscored practical solutions to build systemic change:

- **Raising Consumer Awareness** about pesticide dangers and how to minimize exposure.
- Urging policymakers to engage directly with farmers and consumers instead of prioritizing corporate interests, alongside **strengthening enforcement** of existing pesticide regulations.
- Encouraging consumers to **demand safer food and better policies**, leveraging platforms such as social media, community gatherings, and advocacy groups.

Call to Action

- **Farmers** are urged to adopt agroecological methods and prioritize soil health.
- **Consumers** should make informed food choices and push for policy reforms.
- **Policymakers** must align regulations with the interests of farmers and consumers.
- **Everyone** should engage in awareness-raising, discussions, and advocacy to sustain momentum.

Final Thought

Christine Gatwiri concluded that lasting change depends on embedding safer pesticide practices into governance, farming systems, and consumer culture, thereby preventing regression to harmful practices.

Dr. Monica Nderitu, Agroforestry Network: *Agroforestry and Agroecology – sustainable and safe alternatives to pesticides for increased biodiversity and human health Brief on Agroforestry and Agroecology as sustainable – Launch of the Agroforestry Policy Brief*

Dr. **Monica Nderitu**, representing the **Agroforestry Network**, delivered a compelling presentation on the urgent need to transition from pesticide-dependent agriculture to more sustainable, health-conscious practices through **agroecology and agroforestry**. Her remarks coincided with the **launch of the Agroforestry Policy Brief**, which outlines practical, economic, and policy-driven approaches to improving biodiversity, human health, and farming resilience.

She began by emphasizing the role of agroforestry and agroecology in building **sustainable farming systems**. These practices, she explained, not only enhance biodiversity and restore ecosystems but also improve **climate resilience**, offering farmers tools to better cope with changing weather patterns and degraded soils.

A central point of her message was the need to **reduce reliance on synthetic pesticides**, which have well-documented negative impacts on both human health and the environment. Agroecological systems, by contrast, help restore soil fertility, protect water bodies from contamination, support beneficial organisms like pollinators, and reduce exposure to harmful chemicals. Moreover, these systems can alleviate the **financial burden** many farmers face from purchasing expensive synthetic inputs.

Dr. Nderitu outlined a range of **practical solutions** for building resilient agricultural ecosystems. These included **Integrated Pest Management (IPM)**, **mechanical and biological pest control**, **push-pull technology**, and the use of **indigenous and botanical pest control methods**. Agroforestry practices, in particular, offer natural pest control by fostering predator-prey relationships within diversified crop systems.

The presentation also highlighted key **policy and research needs** to support the transition. These include **increased investment in farmer training and research**, improved access to **bioinputs** such as biopesticides and organic fertilizers, **financial incentives** for ecological farming, and **strengthened agricultural extension services**. Equally important is the enforcement of regulations restricting harmful pesticide use.

From an economic perspective, Dr. Nderitu made a strong case for the **business potential of agroecology**. She argued that producing and scaling up bioinputs is not

only environmentally sound but also economically viable, particularly as global demand for organic and sustainable products continues to rise. Supporting the agroecological market, she noted, aligns with both environmental regulations and shifting consumer preferences.

In her call to action, Dr. Nderitu urged all actors in the food system to play a role. She called on businesses to expand markets for biopesticides and certify traders in sustainable methods, while urging governments to enforce stricter pesticide regulations, subsidize sustainable agriculture, and support pollinator health. Consumers were encouraged to become more aware of how their food is produced and to demand organic and agroecological alternatives. Meanwhile, she stressed the importance of civil society and development partners in supporting farmers' transitions and increasing the share of Official Development Assistance (ODA) allocated to agroecology and agroforestry.

Address by Hon. Gladys Shollei, Deputy Speaker of Kenya's National Assembly

Hon. Gladys Shollei, Deputy Speaker of Kenya's National Assembly, opened her keynote address by expressing sincere gratitude to the conference organizers and the various partner organizations working to champion agroecology and sustainable food systems. She acknowledged their crucial role in driving the movement toward safer, more environmentally conscious agricultural practices in Kenya.

Turning to the pesticide crisis in Kenya, Hon. Shollei raised alarm over the intense use of toxic agrochemicals, particularly in Kirinyaga County, which she identified as having the highest pesticide usage in the country. This has coincided with a disturbing increase in cancer cases, illustrating the direct link between pesticide exposure and serious public health outcomes.

Hon. Shollei also addressed the troubling issue of Kenyan agricultural exports being rejected in global markets due to high levels of pesticide residues. Shockingly, rather than being destroyed, these rejected products are often redirected into local markets, meaning that Kenyans end up consuming food that has been deemed unfit for international consumers. This practice, she noted, highlights glaring double standards and raises urgent concerns about food safety and regulatory enforcement in the country.

On the legislative front, Hon. Shollei affirmed her **commitment to banning the importation of harmful pesticides**. She emphasized that Kenya's laws must urgently be updated to prevent hazardous products from entering the market. She strongly criticized the **Pest Control Products Board (PCPB)**—the agency tasked with pesticide regulation—accusing it of gross negligence in approving highly toxic pesticides that are banned in other countries. She described the Board's actions as **reckless and dangerous**, with dire consequences for the health of millions of Kenyans.

In light of these failures, Hon. Shollei revealed that she had taken decisive action by **filing a petition to remove all PCPB board members** from office. The petition seeks to hold them accountable and initiate a much-needed overhaul of the **pesticide regulatory system** in Kenya.

Hon. Shollei then issued a clear **call to action**. She urged the **Ministry of Agriculture and the PCPB** to **immediately remove all Highly Hazardous Pesticides (HHPs)** from circulation. She stressed that enough research already exists to demonstrate the danger these substances pose, and that further delay is unjustifiable.

She called for the **fast-tracking of legislation** to **ban the sale, importation, and use of harmful pesticides** altogether. In addition, she encouraged **Kenyan citizens—especially farmers, consumers, and civil society organizations—to actively petition Parliament** and use their constitutional rights to demand safer food systems.

Furthermore, Hon. Shollei highlighted the need for **realistic and enforceable standards and regulations**. All actors in the agricultural value chain—from farmers to regulators to policymakers—must adhere to clear safety standards to ensure that the health of the public is protected.

In conclusion, Hon. Shollei emphasized that addressing the pesticide crisis is a **shared responsibility**. She called on all stakeholders—**policymakers, researchers, farmers, and consumers**—to unite in building a **healthier, safer, and more sustainable food system**. Such a system must prioritize public health, environmental sustainability, and a robust, accountable regulatory framework.

Launch of the Agroforestry and Agroecology Policy Brief

As part of her keynote address, **Hon. Gladys Shollei** also presided over the **official launch of the Agroforestry and Agroecology Policy Brief**, developed by the

Agroforestry Network. This launch marked a significant step toward institutionalizing more sustainable, climate-resilient farming approaches in Kenya and the region.

The policy brief serves as a strategic document aimed at guiding policy development and implementation in the agricultural sector. It calls for the integration of agroecology and agroforestry into national agricultural strategies, positioning them as essential pillars of sustainable food systems.

Key objectives of the brief include:

- Promoting agroforestry as a solution to environmental degradation and a contributor to soil health, biodiversity, and climate resilience.
- Encouraging policymakers to embed agroecological principles into agricultural planning and investment frameworks.
- Offering practical, evidence-based recommendations to help transition from chemically intensive farming to systems that support ecological balance, farmer livelihoods, and food security.

In launching the brief, Hon. Shollei underscored the urgency of rethinking Kenya's agricultural future and emphasized the potential of agroforestry and agroecology to lead that transformation.

Parallel Session 6: **Women in Agroecology entrepreneurship and leadership for food systems and rural livelihoods Resilience in Africa.**

The session, focused on the critical role of women in agroecology and how gender transformation can catalyze change in food systems and rural livelihoods in Africa. The discussion highlighted food insecurity, climate change, gender disparities, and challenges facing smallholder farmers, particularly women.

Key speakers and panelists shared insights on successful projects that empower women in agroecology, fostering climate resilience, gender justice, and food system transformation. The event also featured the launch of the Harvesting Equality knowledge product, which examines gender, governance, and decolonial futures in Kenyan agriculture.

Key Takeaways

1. Challenges in Food Systems & Women's Role
    - 1 in 5 people in Africa faces starvation.

- Declining agricultural productivity and unfavorable market systems for smallholder farmers.
- Gender-based violence and social inequalities hinder women's ability to provide food.
- Addressing climate resilience and gender justice is key to equitable food distribution.

2. Impact of Agroecology & Women's Empowerment
    - The **Rural Women Cultivating Change Project** (funded by Global Affairs Canada) empowers women in agroecology across Africa.
    - Women are turning farms into training centers and leading advocacy efforts.
    - Successful cases from **Kenya, Tanzania, and Ethiopia** show how access to land, seeds, and leadership roles enhances food security.
    - Women-led cooperatives improve market access and financial independence.
3. Panel Discussions – Women's Stories & Leadership
    - **Farmers from Kenya & Ethiopia** shared experiences of overcoming gender-based challenges through agroecology, self-help groups, and financial empowerment.
    - **Women entrepreneurs** demonstrated how small investments in poultry and vegetable farming transformed their lives and influenced their communities.
    - **Community health volunteers & seed banks** emphasized the need for indigenous seed preservation and sustainable food production.
    - **Leadership insights:** Women exhibit inclusive leadership that benefits all members of society, including vulnerable groups.
4. Policy & Systemic Change Needed
    - Need for gender-responsive budgeting and policies that promote agroecology and sustainable food systems.
    - Strengthening collaboration between policymakers, stakeholders, and grassroots women leaders.

- Encouraging **farmer-to-farmer learning**, collective financial models (SACCOs, cooperatives), and indigenous knowledge integration in pest and disease management.
- Engaging men as allies in gender transformation for sustainable food systems.

5. Call to Action for Policymakers
    - Develop and implement policies that promote **gender equity, agroecology, and sustainable seed systems.**
    - Increase **women's representation in decision-making and leadership** at local and national levels.
    - Support women's access to land, financing, and climate-resilient farming techniques.

This session emphasized that women must move from being beneficiaries to becoming architects of food system transformation in Africa. Investing in women's leadership and agroecology is a sustainable solution for tackling climate change, food insecurity, and gender inequalities in rural communities.

Closing Session & Collective Call to Action: Charting the Path Forward for Agroecology

The conference concluded with a dynamic **Closing Session** moderated by **Mr. Markus Arbenz, Convenor and Senior Consultant at FiBL Switzerland**. Arbenz emphasized the **urgent need to translate the conference's rich discussions into concrete, collaborative action**. He highlighted that **partnerships, research, and innovation** must serve as the driving forces behind a **sustainable future for agroecology**.

COLLECTIVE CALL TO ACTION – DELIVERED BY MS. VENANCIA WAMBUA

Ms. Venancia Wambua, Head of Programmes at Biovision Africa Trust, presented the conference's **official Call to Action**, outlining strategic priorities and commitments for advancing agroecology across Africa and beyond.

Key areas included:

1. Investment in Research and Innovation

- Increase **investment in agroecological research** to improve the effectiveness and scalability of sustainable practices.
- **Involve farmers directly** in the research process, recognizing them as **key innovators** and co-creators of knowledge.
- Address **critical knowledge gaps** identified during the conference to drive context-relevant solutions.

2. Integration of Agroecology into Existing Agricultural Systems

- Embed **agroecological innovations** into mainstream agricultural practices.
- Promote **structured multi-stakeholder dialogues** for knowledge exchange and coordinated action.
- Align **National Agricultural Strategies (NAS)** with **global and continental frameworks** for sustainability.

3. Strengthening Legal and Institutional Frameworks

- Develop **robust legal and policy frameworks** to support agroecology.
- Standardize **tools for measuring performance** and **monitoring progress**.
- Address **land tenure barriers**, especially those affecting **women and marginalized communities**.

4. Mobilizing Resources and Investment

- Integrate agroecology into **national and regional investment plans**.
- Establish **monitoring and evaluation frameworks** for agroecological interventions.
- Align agroecology with **regional trade protocols** to ensure cross-sectoral integration and support.

5. Institutionalization and Capacity Building

- Institutionalize **coordination mechanisms** for agroecology at national and regional levels.
- Revise **education curricula** to include agroecology, fostering a new generation of practitioners.
- Promote **learning platforms and capacity development** for all stakeholders.

6. Financing Agroecology

- Secure **dedicated national funding** to support agroecological transitions.
- Forge **technical partnerships** to scale innovations across Africa.
- Develop **innovative financing models** to increase investment and de-risk agroecological initiatives.

7. Enhancing Market Access

- Strengthen the role of **trade and market systems** in supporting agroecological products.
- Promote **regional collaboration** to establish **agroecology incubation hubs**, regional standards, and pathways to **improved market access** for smallholder farmers.

In closing, Ms. Wambua emphasized that achieving the goals of agroecology requires **shared commitment, inclusive participation**, and a clear **alignment of policies, investments, and actions** across all sectors and levels of governance.

Remarks by Hon. Dr. Stephen Mbaya Kimwele, the County Executive Committee Member (CECM) for Kitui County.

Dr. Stephen Mbaya delivered a thought-provoking address that underscored the significance of agroecology as an interdisciplinary approach to sustainable agriculture. He described agroecology not only as a science but also as an art and a movement aimed at achieving long-term agricultural sustainability. Dr. Mbaya emphasized that agroecology blends ecological principles with innovative farming techniques, enhancing agricultural productivity while maintaining environmental health.

He further emphasized the commitment of Kitui County's policymakers to draft and implement policies that support the adoption of agroecological practices. He acknowledged the critical role of community involvement in the development of these policies, stressing that collaborative efforts between government, farmers, and other stakeholders are essential. Dr. Mbaya highlighted the need for effective governance and supportive frameworks to empower farmers and promote sustainable agricultural practices throughout Kitui County, ensuring that these policies not only protect the environment but also improve livelihoods for the people.

Hon. Fred Bwino, State Minister for Agriculture, Uganda

Hon. Fred Bwino, the state minister for Agriculture in Uganda, pledged the country's preparedness to embrace agroecological practices as part of its agricultural development strategy. He emphasized the urgent need for collaboration among regional stakeholders to enhance food security and sustainable farming. He articulated Uganda's commitment to advancing agroecology through supportive policies, capacity-building initiatives, and partnerships with various organizations. He called for a united front in addressing common challenges faced by farmers, particularly in climate resilience and resource management. Honn. Bwino's remarks underscored the importance of regional cooperation to facilitate knowledge sharing and promote agro ecological innovations across borders.

Remarks by Hon. Gladys Boss Shollei- Member of Parliament, and Deputy speaker of the Republic of Knya

Hon. Gladys Boss Shollei expressed her appreciation to the conference organizers for the impactful sessions and emphasized the importance of holding such forums more

frequently to accelerate progress in agroecology. She reaffirmed her strong commitment to safeguarding both the environment and public health, noting her active role in championing the removal of harmful pesticides, which has already led to the ban of eight such products in Kenya.

Deeply passionate about promoting agroecological practices, Hon. Shollei highlighted the wealth of research already available and stressed the need for the government to collaborate with researchers in implementing proven solutions rather than calling for further studies. She pointed out that pesticides banned in Europe should not be available in the Kenyan market, advocating for strengthened regulatory oversight.

On the role of regulatory institutions, Hon. Shollei voiced her firm belief that the relevant authorities, particularly the Pest Control Products Board (PCPB), must take greater responsibility and demonstrate accountability in ensuring only safe products are allowed into the market. While maintaining a diplomatic tone, she emphasized the importance of proactive action by the Board to uphold the health and safety of the public and the environment, underlining the urgency of aligning national practices with global safety standards.

Remarks by Mr. Benjamin Tito – Director, Agriculture and Food Authority

Mr. Benjamin Tito delivered a candid and thought-provoking address on the critical issue of food safety. He pointed out the stark contrast between food destined for export—which is subject to strict safety standards—and food produced for local consumption, which is often contaminated with harmful chemicals. Highlighting a concerning complacency among local consumers, he questioned who bears responsibility for the contaminated products commonly found in local markets. Mr. Tito emphasized that no consumer would willingly choose to eat poisonous food, yet the reality in local food systems suggests otherwise. He called for concerted efforts across all sectors to address these challenges in the food value chain, urging consumers to become more vigilant and responsive. According to him, the demand for safe food should not be passive; rather, citizens must actively push for higher standards, accountability, and the right to safe, uncontaminated food for all.

KEYNOTE ADDRESS BY CHIEF GUEST: DR. KIPRONOH RONOH PAUL, PRINCIPAL SECRETARY, THE STATE DEPARTMENT OF AGRICULTURE

Dr. Kipronoh Ronoh extended his appreciation to all participants for their active engagement and to Biovision Africa Trust for successfully convening the conference. He acknowledged the valuable contributions made during the discussions, noting that they significantly enriched the ongoing dialogue around sustainable food systems.

He emphasized agroecology as a critical pathway for achieving sustainable livelihoods and resilient food systems, highlighting the importance of harnessing traditional knowledge in shaping effective agroecological solutions.

Dr. Ronoh acknowledged the existence of the 10-year National Agroecology Strategy (NAES) as a guiding framework and urged all stakeholders to foster partnerships, take responsibility, and act with commitment in advancing agroecology.

He concluded by framing the conference as more than a dialogue platform — but as a catalyst for action, inspiring practical steps toward transforming agricultural systems in Kenya and across the region.

Closing remarks by Dr. David Amudavi, Executive Director of Biovision Africa Trust

In his closing remarks, Dr. David Amudavi acknowledged and appreciated the presence of all guests and stakeholders at the conference. He emphasized that the 2nd Conference on Agroecology was a continuation of the 2023 Conference, with remarkable progress made in advancing food systems' resilience and sustainability.

Dr. Amudavi recognized the valuable comments made by the Deputy Speakers regarding the importance of building on existing research and leveraging the knowledge gained to further agroecology. He noted that this global event saw the participation of 42 countries, which underscores the widespread commitment to fostering sustainable agricultural practices.

In his closing remarks, Dr. Amudavi also addressed the request to host the next conference in Uganda, a proposal that would build on the momentum generated in this year's conference. He called on all attendees to commit to the recommended call for action at all levels, emphasizing that it is crucial for stakeholders to take deliberate steps to ensure practical impacts.

He further stressed that the Call for Action must be approached with intentionality, as a committee will be established to analyze the outcomes and develop specific actions to be implemented by all actors in the field of agroecology.

Dr. Amudavi concluded by expressing his vision for a food-secure Africa, where healthy people live in a healthy environment, supported by strong, resilient, and economically viable agricultural systems

Award Ceremony

The award ceremony recognized and appreciated the invaluable contributions of chief guests, keynote speakers, sponsors, and donors whose support and commitment made the success of the conference possible. Their dedication to advancing agroecology and sustainable food systems was duly acknowledged with gratitude and commendation.

Vote of Thanks – Mr. Alex Mutungi, EOA Continental Secretariat Coordinator, Biovision Africa Trust

A heartfelt vote of thanks was extended to the event organizers, distinguished speakers, all participants, and exhibitors who showcased practical innovations aligned with agroecological principles. Service providers who ensured smooth logistical and operational support throughout the conference were also recognized for their crucial role in making the event seamless and impactful.

Closing Prayer

The conference officially concluded with a closing prayer led by Dr. Sarah Olembo, invoking a spirit of unity, gratitude, and continued collaboration as participants prepare to translate insights and commitments into action.

ANNEXES

Annex 1: Field Excursion Comparative Report

Section	Field 1	Field 2	Field 3	Field 4	Field 5	Field 6
Title of Excursion	Visit to Effective IPM Association (EIPMA)	Visit to G-BIACK Kenya	Visit to Far-Mine Wonder and Pure Plants Organics	Visit to Forest Foods	Visit to Charles Mawia Farm	Visit to Seed Savers Network and Beatrice Wangui Farm
Date & Location	28th March 2025, EIPMA Facility	28th March 2025, Thika, Kenya	28th March 2025, Gatundu, Kenya	28th March 2025, Brackenhurst, Limuru, Kenya	28th March 2025, Machakos County, Eastern Province, Kenya	28th March 2025, Gilgil, Nakuru County, Kenya
Project Overview	EIPMA promotes integrated pest management (IPM) and sustainable agricultural practices to enhance livelihoods and food safety. Established in 2010, it focuses on training communities	G-BIACK, founded in 2008 on a 2ha farm, promotes biointensive farming to empower smallholder farmers and youth through sustainable agriculture practices, reaching over 30,000 farmers and	Far-Mine Wonder transforms urban agriculture through vertical farming, enhancing food security and income for urban residents. Pure Plant Organics focuses on regenerative	Established in April 2022, Forest Foods operates on a 0.85-hectare plot within the 70-hectare Brackenhurst indigenous forest. It employs Syntropic Agroforest	Mr. Mawia's farm focuses on agro ecological practices, integrating horticulture and poultry to enhance productivity. Key projects include the	The Seed Savers Network advocates for seed sovereignty by promoting farmer-led seed conservation, biodiversity preservation, and climate adaptation. Their programs include seed saving, storage, germination testing, and training on

	on agro ecological practices.	fostering employment opportunities across Africa.	agriculture, promoting soil health and crop resilience through innovative practices and community empowerment.	ry techniques to integrate plants, animals, and forestry, enhancing soil health and biodiversity while contributing to climate change mitigation.	cultivation of diverse crops (such as fruits and vegetables) and sustainable poultry farming, aimed at providing nutritious food and income for the family while promoting environmental health.	organic soil fertility and water conservation. Beatrice Wangui, an agroecology farmer in Gilgil, has transformed rocky land into a productive, regenerative farm and learning hub for peri-urban and urban farmers.
Development Partners	Collaborates with local communities, PELUM, KOAN, and IFOAM.	G-BIACK collaborates with local communities and agricultural organizations.	Local communities and agricultural innovators.	Brackenhurst Hotel and local agricultural communities.	Biovision Africa Trust and the local farming community.	Local farming communities, Seed Savers Network, and agroecology advocates.
Activities Undertaken	The visit included sessions on livestock	Presentations on agro ecological practices,	Demonstrations of multi-storey gardens,	Training sessions on Syntropic Agroforest	Discussions on sustainable	Demonstrations on traditional and modern seed-saving

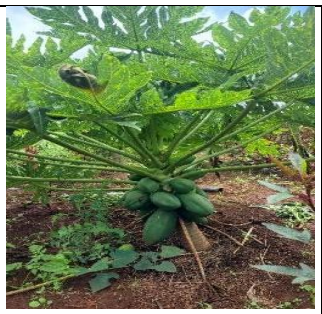
	management, training on biopesticide preparation, and tours of the demo farm showcasing agro ecological practices.	youth empowerment programs, and community engagement initiatives.	organic soil amender production, and soil testing techniques.	ry, nursery management, and practices promoting environmental sustainability.	agriculture, demonstrations of composting, and exploration of diverse cropping systems.	techniques, training sessions on soil fertility management, natural pest control, water conservation, and urban farming innovations.
Products /Outputs	Development of bio pesticides for livestock treatment; practical application of the 'Wheel of Animal Production and Wellbeing.	Training programs for over 600 youths, establishment of community seed banks, and promotion of biodiversity and food security.	Vertical farming systems, biochar enriched soil inputs, and user-friendly soil testing kits.	Nutrient-dense organic produce, indigenous trees, and training for local farmers.	Implementation of sustainable horticulture and poultry farming practices, improved soil fertility through composting.	Diverse, locally adapted seed varieties, improved soil fertility techniques, regenerative urban farming models, vegetable preservation, and training materials on agroecological practices.
Beneficiaries	Local farmers and community stakeholders gain knowledge and practical skills in sustainable agriculture.	Smallholder farmers and youth in the community.	Urban farmers and the local community.	Local farmers and communities benefiting from reforestation and organic	Local farming communities benefiting from enhanced food security and	Local smallholder farmers, peri-urban and urban growers, community seed banks, and agroecology learners.

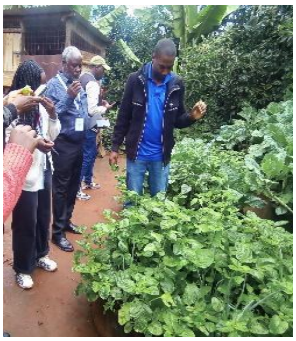
				farming practices.	income generation for Mr. Mawia.	
Key Observations	Effective use of IPM practices, community engagement in sustainable farming, and need for improved livestock management.	Biointensive practices enhance soil fertility while maximizing resource efficiency and promoting food sovereignty.	Innovative farming techniques effectively maximize small land areas, fostering sustainable agriculture and improving household food security.	Syntropic agroforestry enhances soil health, promotes bio-diversity, and improves water management, supporting climate resilience.	Mr. Mawia's farm agro ecological practices yield diverse crops, providing both nutritional and economic benefits while fostering biodiversity.	Strong community involvement in seed conservation, effective use of regenerative practices on degraded land, and promotion of climate-resilient farming models.
Challenges Encountered	Impact of 2024 floods on crops and challenges in transitioning farmers from chemical to organic practices.	Need for increased awareness of agro ecology among farmers and limited resources for sustainability.	Limited government investment, prevalence of counterfeit products, and resistance to transitioning from traditional practices.	Weather variability, including heavy rainfall affecting farm activities.	Unpredictable weather patterns, pest management, and the labor-intensiveness of agro ecological practices.	Limited access to infrastructure for large-scale seed processing, climate-related stress on seed viability, stiff competition from conventional farmers and lack of widespread adoption of

						seed-saving practices.
Recommendations	Enhance labeling for easy plant identification, integrate more livestock practices, promote tree planting, and conduct further outreach training with policymakers.	Strengthen government partnerships, improve seed bank management, integrate livestock, and enhance online outreach for broader impact.	Enhance market awareness, engage in agro ecology events, utilize social media for outreach, and include youth in farming projects to ensure continuity.	Continue community outreach, expand training programs, and increase awareness of sustainable farming practices to optimize resource utilization.	Enhance community engagement, develop markets for organic produce, provide support for small farmers, and facilitate knowledge-sharing to improve agro ecological practices.	Support expansion of seed banks, promote policy support for farmer-led seed systems, enhance training on seed viability and documentation, and encourage replication of Beatrice's urban farming model in other regions.

Annex 2: Field Excursion Images

Site	Visualization

Field 1: Visit to Effective IPM Association (EIPMA)	 *Figure 1: Malkia pawpaw species growing at EIPMA demo farm. The variety is hydride and yields within 1 year.*	 *Figure 2: Tree nursery for various agroforestry trees.*	 *Figure 3: A section of participants engaging in learning during the field tour*	 *Figure 4: A group photo of the participants*
Field 2: Visit to G-BIACK Kenya	 *Figure 5: Agroecology products at G-BIACK Kenya.*	 *Figure 6: G-BIACK Kenya.*	 *Figure 7: G-BIACK Kenya*	 *Figure 8: G-BIACK Kenya*
Field 3 Visit to Far-Mine Wonder and Pure Plants Organics 28th March 2025, Gatundu, Kenya	 *Figure 9: G-BIACK Kenya*	 *Figure 10: G-BIACK Kenya*	 *Figure 11: G-BIACK Kenya*	

Field 4 Visit to Forest Foods 28th March 2025, Brackenhurst, Limuru, Kenya	 *Figure 12: A showcase of nursery management at Forest Foods.*	 *Figure 13: A group photo*	 *Figure 14: A showcase of farm management at Forest Foods.*	 *Figure 15: farm management at Forest Foods.*
Field 5 Visit to Charles Mawia Farm 28th March 2025, Machakos County, Eastern Province, Kenya	 *Figure 16: A section of participants trying out Mr. Mawia's apples as they traverse the farm.*	 *Figure 17: Mr. Mawia teaching participants about his organically grown apples and pawpaw*	 *Figure 18: A group photo of the participants*	
Visit to Seed Savers Network and Beatrice Wangui Farm	Seed Savers Network		Beatrice Wangui Farm	
	 *Figure 19: Participants arrive at Seed Savers Network.*	 *Figure 22: Dried vegetables Savers Network.*	 *Figure 26: Agroecology Products at Beatrice Wangui Farm .*	 *Figure 29: Beatrice Wangui Farm*

28th March 2025, Gilgil, Nakuru County, Kenya				
	 *Figure 20: Seed Savers Network.*	 *Figure 23: Farm management at Seed Savers Network.*	 *Figure 27: Traditional seed storage at Beatrice Wangui Farm*	 *Figure 30: Beatrice Wangui Farm .*
	 *Figure 21: Participants at Seed Savers Network.*	 *Figure 24: Seed Savers Network.*	 *Figure 28: Traditional seed storage at Beatrice Wangui Farm*	 *Figure 31: Beatrice Wangui Farm .*

Annex 3: Day 2 Poster Presentation

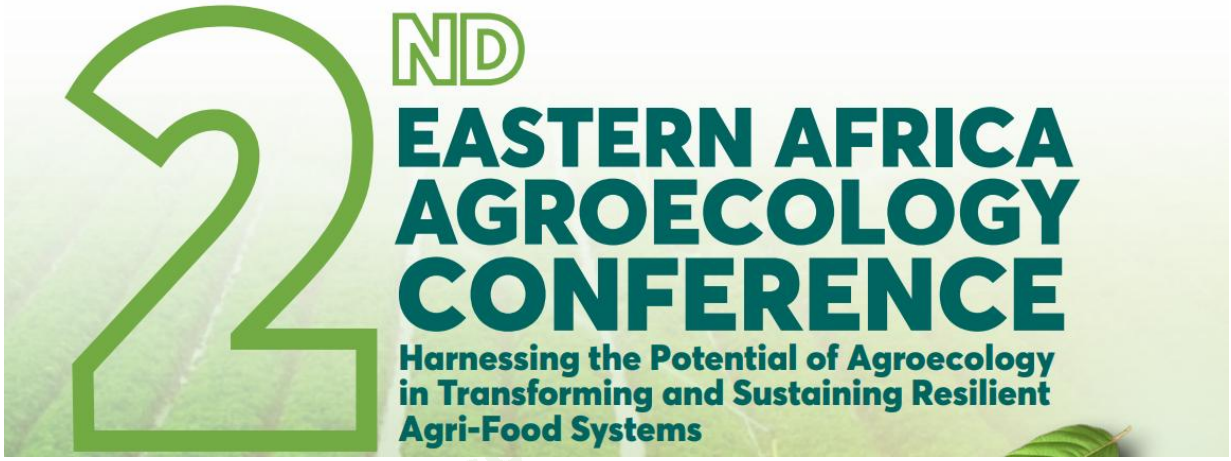
Walk No.	Presenter(s)	Topic
1	Dr. Hezekiah Korir, Dr. Lisa Elena Fuchs, Mr. Michael Sakha, Mr. Pius Gumo, Dr. Peter Bolo, Dr. Beatrice Adoyo, Mr. Machio Mbelwa, Dr. Anne Kuria, Dr. Nehemiah Mihindo,	Protocols for innovative agroecological soil, water and integrated pest management practices

	Ms. Esther Kiruthi, Mr. Nicholas Syano, Mr. Ngunjiri Kihoro, Dr. Frederick Baijukya	
2	Dr. Wubetu Bihon Legesse, Mr. Amha Besufkad, Mr. Yidnekachew Zewde, Dr. Ralph Roothaert	Soil health evaluation in regenerative and conventional farming systems in Central Ethiopia
3	Dr. Isaac Bazugba	Judicious use of inorganic fertilizer is critical for improved crop production in South Sudan
4	Dr. Never Zekaya	The potential of liquid seaweed biofertilizer for sustainable crop production in Tanzania

Annex 4: Day 3 Poster Presentation

Walk No.	Presenter(s)	Topic
1	Ms. Kidist Yilma, Ms. Sophie Vontobel	Enhancing Yields and Soil Fertility in Acidic Soils: The Impact of Integrated Soil Fertility Management and Lime Application in Ethiopia
2	Dr. Charles Nwokoro	The Nutrition in City Ecosystems (NICE) project is improving agroecology adoption in Kenya
3	Dr. Angela Mkindi	Harnessing Pesticidal Plants for Sustainable Pest Management through Farmer-Centered Innovations

Annex 5: Conference Communique and Call to Action



25th- 28th March, 2025: Argyle Grand Hotel, Nairobi

Call to Action

Title	2nd Eastern Africa Agroecology Conference: *Harnessing the Potential of Agroecology in Transforming and Sustaining Resilient Agri-Food Systems.*
Theme	*Strengthening Agri-Food System Transformation for Resilience, Sustainability and Socioeconomic Development.*

Preamble	The **2nd Eastern Africa Agroecology Conference**, convened by **Biovision Africa Trust**, the **Ministry of Agriculture and Livestock Development of Kenya**, and a broad coalition of agroecology stakeholders from the Eastern Africa region, was held from **25th to 28th March 2025** at the **Argyle Grand Hotel, Nairobi, Kenya**. This conference built on the foundation laid by the inaugural **1st Eastern Africa Agroecology Conference**, which took place in March 2013 at the Safari Park Hotel, Nairobi. The second edition brought together over **800 delegates from more than 42 countries** across Africa, Europe, Asia, South America, and North America. Through a rich program of keynote speeches, panel discussions, exhibitions, poster presentations, and case studies, the conference fostered critical dialogue on transforming agri-food systems to promote **health, equity, resilience, and cultural diversity** across all stages of food production, processing, distribution, and trade. The event also spotlighted the vital contributions of **women and youth** in shaping sustainable food systems. Throughout the conference, the pivotal role of **agroecology** was emphasized as a pathway to strengthen agri-food systems by enhancing **sustainability, resilience, and economic development**. Yet, challenges such as **policy gaps, funding constraints, and trade and market barriers** remain significant obstacles to scaling agroecological solutions. It is anticipated that the insights, knowledge, and commitments generated at this conference will serve as a catalyst for agroecological transformation, driven by **evidence-based policymaking, strategic investment, and collaborative knowledge-sharing**.

	Call to Action We, the delegates of the **2nd Eastern Africa Agroecology Conference**, hereby **CALL UPON** the following stakeholders to take urgent and decisive action in advancing agroecology and sustainable food systems: • United Nations Bodies and Agencies • African Union (AU) and Regional Economic Communities (RECs) • Member States • Development Partners and Financial Institutions • Private Sector • Civil Society Organizations • Media • Farmers and Farmer Organizations • Other Relevant Stakeholders The conference's **Call to Action Committee** will identify specific priorities and responsibilities tailored to each stakeholder group, culminating in an actionable plan to ensure effective implementation and measurable impact.
Acton Areas	Call to Action
Research and Innovations	1) **Invest in research and development** focused on agroecological innovations that foster adaptive solutions for food security and climate resilience. 2) **Meaningfully engage farmers** in the research process, recognizing their critical role in the **co-creation, adaptation, and replication** of knowledge and practices, while ensuring **transparency** in sharing research outcomes and benefits. 3) **Prioritize further research** to address the specific knowledge gaps identified during the conference, advancing context-relevant agroecological solutions.

	4) **Integrate agroecological innovations** into existing agricultural systems to enhance sustainability, resilience, and productivity.

Policy and Program Development	1) Convene structured dialogues to facilitate the development, alignment, and exchange of agroecology policies, knowledge, and best practices from local to global levels. 2) Develop and align national agroecological strategies and policies with global and continental commitments such as the Sustainable Development Goals (SDGs 2030), Africa Agenda 2063, Regional Agricultural Development Frameworks, and Nationally Determined Contributions (NDCs). 3) Establish legal, institutional, and financial frameworks to mainstream agroecology within national agricultural policies, plans, and strategies. 4) Develop standardized performance measurement tools to track the impact, scalability, and sustainability of agroecological interventions. 5) Advance national agroecology certification and trade facilitation, ensuring products meet both domestic and international market standards. 6) Address land tenure challenges that restrict access to land for women and marginalized groups, promoting equitable resource distribution. 7) Integrate agroecology into National and Regional Agricultural Investment Plans (NAIPs & RAIPs) to institutionalize sustainable food production systems. 8) Develop appropriate performance indicators for agroecology within the Comprehensive Africa Agriculture Development Programme (CAADP) Biennial Review Process to enhance accountability and impact assessment. 9) Establish comprehensive monitoring and evaluation frameworks to assess agroecology-based food system performance, enabling evidence-driven decision-making and highlighting the cost of inaction. 10) Align agroecological policies and programs across Member States in accordance with AU decisions on organic farming (2011), the Ecological Organic Agriculture

	Initiative, the Soil Health Initiative Africa, CAADP's Kampala Declaration, Africa Agenda 2063, and the African Common Position on UNFSS outcomes. 11) **Harmonize national and regional policies with existing trade protocols** to support the growth of agroecological markets and improve farmers' access to fair and sustainable trade opportunities. 12) **Institutionalize agroecological coordination mechanisms** to ensure sustained leadership, governance, and promotion of agroecology and ecological organic agriculture. 13) **Integrate livestock policies and programs** into agroecology initiatives to enhance holistic and sustainable agricultural systems.

Partnership and Capacity Development	1) Build capacity for resource mobilization and investments in agroecological interventions, with an emphasis on gender inclusivity and youth empowerment. 2) Strengthen partnerships to foster collaboration, enabling the co-creation and exchange of knowledge, technology transfer, and practical applications that benefit farmers globally. 3) Support continuous learning and research in agroecology, prioritizing key areas such as biopesticides, farmer-led innovation, and agroecological business models. 4) Revise and update national education curricula to integrate agroecological principles from primary through tertiary education levels, nurturing future generations of agroecology practitioners. 5) Facilitate multi-stakeholder engagement by coordinating agroecology actors and optimizing the use of resources to maximize impact and efficiency.
Financing Mechanisms	1) Allocate dedicated funding for agroecology programs, with specific focus on empowering women, youth, and marginalized communities. 2) Urge Member States to allocate at least 20% of their total agricultural budgets to agroecology, positioning it as a central pillar for sustainable agri-food systems, soil health, food security, and climate adaptation. 3) Encourage development and technical partners to significantly increase their financial support for agroecological interventions across Africa. 4) Develop and implement innovative financing models, including blended financing mechanisms, to

	attract both public and private investments in agroecology. 5) Scale up investments in agroecological research and innovation, including appropriate mechanization technologies that reduce labor intensity and improve efficiency in agroecological farming systems.
Trade and Markets	1) Enhance Market Access and Consumer Awareness Support improved market access for organic and agroecological products while raising consumer awareness about the health, environmental, and socio-economic benefits of agroecology. 2) Leverage the African Continental Free Trade Area (AfCFTA) Explore and promote trade opportunities for agroecological products within the AfCFTA framework to strengthen intra-African trade in sustainable food commodities. 3) Develop and Harmonize Regional Standards Formulate, strengthen, and promote regional standards and protocols for agroecological products to ensure quality assurance and greater market acceptance. 4) Support Youth Enterprises and Incubation Hubs Facilitate the establishment of agroecology-based incubation hubs and businesses for youth across the continent to stimulate innovation and job creation. 5) Collaborate on Standard Development Partner with relevant stakeholders in the development and alignment of standards for agroecologically produced goods, fostering consistency and trust in the marketplace.

Financing Mechanisms	1) Allocate Dedicated Funding for Agroecology Ensure targeted financial support for agroecology programs, with a strong emphasis on empowering women, youth, and marginalized communities. 2) Commit 20% of Agricultural Budgets to Agroecology Urge member states to dedicate at least 20% of their total agricultural budget to agroecological initiatives. This will reinforce sustainable agri-food systems and recognize agroecology as a viable solution for improving soil health, food security, and climate resilience. 3) Mobilize Support from Development and Technical Partners Encourage development and technical partners to increase resource allocation for agroecological interventions across Africa. 4) Develop Innovative Financing Models Promote innovative financing mechanisms, including blended finance approaches and public-private partnerships, to scale up agroecological practices. Invest in Agroecological Research and Innovation Increase investments in research, technological innovation, and mechanization tailored to agroecology — particularly tools that reduce labor-intensive practices and improve efficiency

Annex 6: Conference Links

1. Conference Website: Click Here
2. Conference Photos: Click Here
3. Conference Videos: Click Here

2ND EASTERN AFRICA AGROECOLOGY CONFERENCE

HARNESSING THE POTENTIAL OF AGROECOLOGY IN TRANSFORMING AND SUSTAINING RESILIENT AGRI-FOOD SYSTEMS

March 2025

Strengthening Agri-Food System Transformation for Resilience, Sustainability and Socioeconomic Development.

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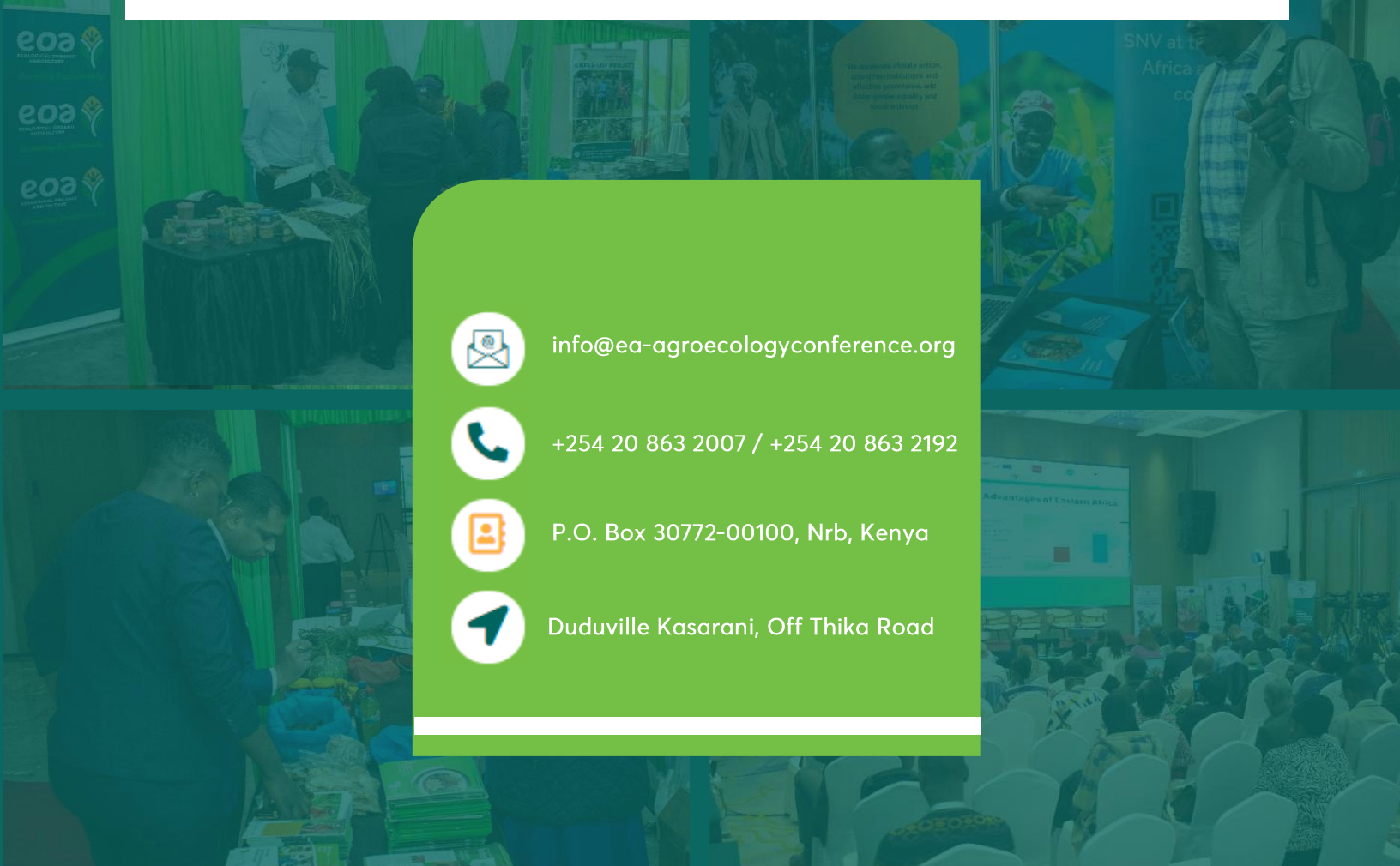

info@ea-agroecologyconference.org

+254 20 863 2007 / +254 20 863 2192

P.O. Box 30772-00100, Nrb, Kenya

Duduville Kasarani, Off Thika Road