

BARRIERS TO ADOPTION OF ECOLOGICAL ORGANIC AGRICULTURE (EOA)

REPORT



Prepared For:
Participatory Ecological Land Use Management Kenya



Networking for a greener Africa.

By:
Infosearch Solutions Limited



**INFOSEARCH
SOLUTIONS LTD**
Market Research • Training • Social Research

P.O. Box 10192 – 00200, Nairobi, Kenya
Telephone: +254 20 2211558 / Cell Phone: +254 724818811
Email: info@infosearchsolutions.co.ke
Website: www.infosearchsolutions.co.ke

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ABBREVIATIONS AND ACRONYMS

AAIU	Action Aid International Uganda
AFFA	Agriculture, Fisheries and Food Authority
AFIRD	Agency for Integrated Rural Development
AFRONET	Africa Radiation Oncology Network
AFSA	Alliance for Food Sovereignty in Africa
AIDS	Acquired immunodeficiency syndrome
AU	African Union
BDS	Business Development Strategies
BOFA	Busangwa Organic Farming Association
CDs	Compact disc
CIDP	County Integrated Development Plan
CIN	Consumer Information Network
CLO	Country Lead Organisation
CSC	Continental Steering Committee
DDT	Dichlorodiphenyltrichloroethane
DVDs	Digital Video Disc or Digital Versatile Disc
EAC	East Africa Community
EBI	Ethiopia Biodiversity Institute
EOA	Ecological Organic Agriculture
EAOPS	East African Organic Products Standard
EOAI	Ecological Organic Agriculture Initiative
EOSA	Ethio-Organic Seed Action
EU	European Union
FARA	Foreign Agents Registration Act
GADC	Gulu Agricultural Development Company
GHG	Greenhouse Gases
GM	Genetically modified
GMO	Genetically Modified Organisms
HIV	Human immunodeficiency virus
IAASTD	International Assessment of Agricultural Knowledge, Science and Technology for Development
ICD	Institutional Capacity Development
I&C	Information and Communication
ICIPE	International Centre of Insect Physiology and Ecology
ICRAF	International Center for Research in Agroforestry
IFIOM	International Federation of Organic Agriculture Movements
IMO	Institute for Market Ecology
ITF	International Task Force
JAS	Japan Agricultural Standards
KBS	Kenya Bureau Standards
KIOF	Kenya Institute of Organic Farming
KNCU	Kilimanjaro Native Co-operative Union
KOAN	Kenya Organic Agriculture Network

M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animals Industries and Fisheries
MISEREOR	German Catholic Bishops' Organization for Development Cooperation
MOU	Memorandum of Understanding
NARS	National Agricultural Research Systems
NFP	National Fertilizer Policy
NGO	Non-governmental Organization
NOAM	National Organic Agriculture Movements
NOAP	National Organic Agriculture Policy
NOGAMU	National Organic Agricultural Movement of Uganda
NOP	National Organic Program
N&P	Networking and Partnerships
OA	Organic Agriculture
OCA	Organic Consumers Alliance
OPAP	Organic Policy Action Paper
OSDP	Organic Sector Development Program
PAs	Partnership Agreement
PELUM	Participatory Ecological Land Use Management
QUAL	Qualitative
QUANT	Quantitative
RECs	Regional Economic Communities
RTE	Research, Training and Extension
SAT	Sustainable Agriculture Tanzania
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
SSNC	Swedish Society for Nature Conservation
SWOT	Strength, Weakness, Opportunity and Threats
TOAM	Tanzania Organic Agriculture Movement
TOR	Terms of Reference
TPRI	Tropical Pesticides Research Institute
UK	United Kingdom
VAT	Value Added Tax
VCD	Value Chain and Market Development

EXECUTIVE SUMMARY

Ecological Organic Agriculture is a production management system that considers the diversity and ecosystem in a holistic manner. Although Formal Organic Agriculture in Kenya dates back to the early 1980s, there was need to scale it up to Ecological Organic Agriculture Initiative at a continental level in Africa as Ecological Agriculture was seen to hold the promise of increased productivity by small scale farmers. The Initiative aims to contribute to mainstreaming of Ecological Organic Agriculture into national agricultural production systems with the intention of improving agricultural productivity, food security, access to markets and sustainable development in Africa.

The Initiative’s overall goal is to mainstream EOA in EAC and Africa by 2025 through six (6) inter-related thematic areas implemented by various partners as shown in Table 1.

Table 1: Thematic Areas

Thematic areas		Pillar Leader	
i.	Research, Training and Extension	i.	Institute for Sustainable Development (ISD); Ethiopia
ii.	Information and Communication	ii.	Biovision Africa Trust; Kenya
iii.	Value Chain and Market Development	iii.	National Organic Agricultural Movement of Uganda (NOGAMU)
iv.	Networking and Partnership	iv.	Tanzania Organic Movement (TOAM)
v.	Policy and Programme Development	v.	PELUM Kenya
vi.	Institutional Capacity Development	vi.	PELUM Kenya

Despite the promise that Ecological Agriculture holds, there has been a challenge in wide scale adoption of Ecological Organic Agriculture practices by small-scale farmers. It is on this premise that PELUM Kenya commissioned a consultant (Infosearch Solutions Limited) to undertake this study to determine the barriers to adoption of EOA in five East Africa Community Countries (Kenya, Uganda, Tanzania, Ethiopia and Rwanda) and come up with recommendations on practical actions to remove the barriers and enhance adoption of EOA in East Africa Community (EAC) and Kenya. The study intended to identify policies and institutions that claim to have Ecological Organic Agriculture focus at EAC level and in Kenya, identify policies and institutions that hinder adoption of EOA at EAC level and in Kenya, validate the policy status with the ministries, government printer and parliament, identify strategies to remove the barriers and propose practical actions, and develop policy briefs on the urgent need to adopt EOA for sustainable food systems.

The Key deliverable of the study were a detailed version of the report of analysis, a popular version of the report of analysis and three policy briefs for EAC, Kenya National Government and County Government.

The assignment commenced in January 2021. The approach of the study was highly desk research and participatory. This ensured involvement of the EOA-I Pillar Implementing Partners in EAC, PELUM Kenya, Stakeholders, government officials and community project beneficiaries.

The study findings indicate that the potential environmental, health and socio-economic benefits, and better access to markets for the export of organic products are the main drivers for the development of organic agriculture in East Africa. However, slow response from the government(s) to mainstream EOA into its national programs, financial problems/poverty, inadequate policy framework for EOA, high cost of transportation, gaps in research in Organic Agriculture, poor road infrastructure, inadequate markets, low prices due to many brokers, inadequate information on EOA, inadequate technologies on processing and preservation of organic inputs, inaccessible credit, inadequate knowledge and skills on EOA, inadequate awareness by farmers and extensions, and inadequate farming land and farm inputs are some of EOA's limitations and challenges in East Africa and Kenya.

Policies hindering the adoption of EOA-I

Some of the documented policies hindering the full adoption of EOA-I within the EAC are:

- i. Subsidies on chemical fertilizers or synthetic pesticides
- ii. Approval of pesticides imports and pesticide use
- iii. Support for energy crops (biogas and biofuel plants, e.g., *Jatropha*)
- iv. Competing environmental schemes
- v. Unfavourable regulations on farm-made and organic fertilizers, plant protection products and farmers seeds. For example, in some developed countries with complex registration requirements, it is technically illegal for farmers to use any unregistered pesticide or fertilizer, even if it is biologically based and prepared on farm
- vi. Unfavourable agricultural risk management programs (e.g., crop failure compensation schemes that may favour conventional farmers more than organic farmers especially when such compensation focuses on a few commodities whereas organic farms are more diverse, etc.)
- vii. Laws related to farmland access
- viii. The East Africa Harmonized Seed policy that criminalizes sharing and exchange of seeds

Strategies in place to remove the policy barriers to organic agriculture within the EAC

For organic agriculture to grow, and to make significant progress in providing organic food and fibre for a growing population, the study established that the following strategies are already in place to remove the policy barriers to organic agriculture within the EAC:

- i. EOAI actively lobbies for pro-EOA policies and legislation targeting national governments.
- ii. EOAI has improved its visibility in the industry through strategies like labelling EOA products to differentiate them from other products in the market.
- iii. There is database in place of national policies with gaps in EOA
- iv. There are number and type of policies, plans, and programmes initiated or revised to incorporate EOA at national and regional levels
- v. A documented Roadmap to support the effort of aligning policies to support EOA.

- vi. Establishment of a database of sources, materials, and references demonstrating the value and benefits of EOA.
- vii. Documenting number and type of stakeholders sensitized.
- viii. Growth and expansion strategy: this helps in increasing food production the regions.
- ix. Partnership and networking strategy: this strategy helps build synergies and complementarities while avoiding duplication of efforts, and thus enable optimal use of available resources for maximisation of results and impacts.
- x. Community empowerment and inclusiveness: EOA knowledge that is shared with communities, and especially with women and youth, remains in these communities and made easier for passing on to generations to come.
- xi. Holistic, multi-stakeholder and multi-sectorial approach: efforts to work with all sectors ensures faster realisation as well as the greater impact of the EOA agenda. All key stakeholders are engaged to implement the EOA initiative, and are encouraged to play critical roles promoting the EOA – I.
- xii. Development of markets for agro-ecological and organic farm inputs and products

Based on the findings, various recommendations are proposed herein aimed at enhancing adoption of EOA in East Africa. The recommendations touch on standards and regulations, general policy, markets, consumption and organic production and research. Among the recommendations are:

Standards and regulations

- i. Friendlier national or regional standard for organic production should be developed, through close cooperation between the stakeholders, private sector and Government.
- ii. EAC Governments should facilitate the access to certification services, either by stimulating more foreign certification bodies to open local offices or by supporting the development of local service providers.
- iii. Mandatory regulations should only be considered when the need is clearly established and other simpler options have been ruled out.
- iv. The recommendations from the International Task Force (ITF) on Harmonization and Equivalence in Organic Agriculture for regulatory solutions, in particular those relating to import access should be considered.
- v. Producers, especially smallholders, should be supported to comply with standards, certification procedures and regulations.
- vi. Before establishing regulations, the stakeholders and partners in consultation with the EAC Governments should clarify the objectives.
- vii. Governments regulating the agricultural sector should develop the regulations in close consultation with the EOA sector and ensure that the regulations are enabling rather than controlling in nature.

General policy

- i. Organic Agriculture should be reviewed and integrated into national and sectorial strategic plans and policies and set targets for the development of the sector in view of its contribution to many of the Sustainable Development Goals, climate change adaptation and mitigation and livelihoods of the people

- ii. Regional East African Organic Policy should be developed to ensure a harmonized approach to the sector.
- iii. Assess policies that discourage organic agriculture. Effective policy measures for organic agriculture requires the removal of obstacles and biases against organic agriculture such as chemical input subsidies and extension services that focus only on non-organic agriculture.
- iv. The objectives for government involvement for the development of the organic sector need to be clarified before actions are undertaken. All stakeholders should be involved in the development of policies, plans and programmes.
- v. General and organic agriculture policies should support each other to the greatest extent possible to promote effective policy coherence, especially if organic agriculture is promoted as a mainstream solution.
- vi. An action plan for the organic sector should be developed based on analysis of the state of the sector, participatory consultations, a needs assessment and proper sequencing of actions. The action plan should state measurable targets for the organic sector to help agencies and stakeholders focus their efforts.
- vii. Ministry of Agriculture at the national level or agencies in EAC should be assigned a leading role ecological sector and organic desks should be established in other relevant ministries and agencies.
- viii. EAC Governments should recognize the diverse interests represented in the organic sector and ensure that all of them are considered properly as well as direct special attention to disadvantaged groups; people living with disability, youths and the women.
- ix. A permanent body should be established for the consultations between the Government and the private sector on organic agriculture.
- x. Organic Agriculture's stakeholders, partners and EAC Governments should actively contribute to awareness raising for organic agriculture on all levels.
- xi. More Data about organic production and markets need to be collected over the years, analysed and made available to the sector and policymakers.
- xii. Improving regulations regarding food safety and direct marketing to take smaller-scale organic farms into consideration.

Markets

- i. The organization of farmers in regards to marketing, joint distribution and storage should be supported.
- ii. Market information systems should be established.
- iii. Export promotion activities should be supported, recognising the special nature of organic markets. Organic exporters should be encouraged to join forces to promote and market their products.
- iv. Organic products should be excluded from any mandatory phytosanitary treatments that are not permitted for organic products. Alternatives for fumigation should be supported.
- v. Public procurement of organic products should be encouraged, including featuring organic food in important public events and schools.
- vi. Consumer education and awareness should be actively promoted.
- vii. Domestic market development strategies should include measures for both the supply and demand side, including the role of imports.

- viii. *The East African Community should fully adopt the Kilimo Hai mark, the regional organic product standard, as the official standard for cross border organic trade. As only the second regional standard developed worldwide, the mark should make regional trade smoother as the stamp will ensure quality and traceability and will reduce tests done at border posts.*

Consumption and Organic Production

- i. *Direct support measures to producers need to be adapted to small farmers as well as to commercial operations.*
- ii. *Organic extension services need to be established and the staff trained. Organic extension should be developed and implemented in a participatory manner and have the farm and the farmer as the centre of attention.*
- iii. *Traditional knowledge about pest control treatments should be surveyed and brought into the extension service and disseminated in other ways.*
- iv. *Recycling of agriculture and food waste into organic farming systems should be promoted.*
- v. *EAC Governments and other stakeholders should establish basic controls of biological inputs such as pest control agents and organic fertilizers.*
- vi. *Seed breeding and seed testing should be oriented to organic production. Compulsory seed treatments should be waived for organic farmers and untreated, preserved seeds should be made available. Alternative seed treatments should be developed and promoted.*
- vii. *Policies for genetically modified organisms (GMOs) need to ensure that GMO seeds are not distributed or used in a way that can cause contamination of seeds.*
- viii. *Some powerful information campaigns using the mass media such as TV, radio, and the press to advise about organic products and their benefits.*
- ix. *Organic menus in public dining rooms: hospitals, schools, day nurseries, and in restaurants, and so forth.*
- x. *Improving the quality of organic foodstuffs by diversifying the supply, by promoting research into production and processing methods, packaging, transport, conservation, and other logistics.*
- xi. *The use of a range of plant varieties and animal species and culture methods should be encouraged, thereby helping to preserve biodiversity.*
- xii. *Price is the main factor restricting consumer access to organic foodstuffs; in order to improve the current situation in which the additional cost of organic foodstuffs well exceeds the perceived advantages for consumers, production aid should be increased as showed public environmental subsidies.*

Areas of recommended research

- i. *Needs assessment is needed in each country to ensure research is relevant to the needs of organic farmers.*
- ii. *Further studies on the policies of national governments and international agencies to organic farming should be conducted, to determine the extent to which these currently influence the promotion of non-organic versus organic farming and the potential for change through policy making at these levels.*
- iii. *Comparative studies to be conducted on the price, value, quantity and supply of organic and non-organic fertilisers, particularly in areas of intensive agriculture, taking into account the true long-term value of*

organic inputs. Such studies would then lead into a full cost-accounting analysis of organic and non-organic farming systems in EAC, to include current externalised costs such as pollution damage, loss of biodiversity and negative health impacts.

- iv. Further studies on consumer perceptions in EAC of the food, health and environmental issues raised by organic farming, to determine the current and potential influence of consumer demand and public pressure.
- v. A lot of case studies analysis in East Africa Communities should be considered to ascertain the usefulness or necessity of a domestic market as a base to the setting-up of export trade in organic products.
- vi. Comparative studies between the EAC and developed countries, where organic farming has been more widely accepted and adopted, would provide interesting information which might support the tentative conclusions on different studies on the reasons for the level of organic farming found in EAC.
- vii. Regular Baseline surveys should be conducted to establish the benchmark for key project indicators, against which project progress will be measured. Such baselines will be guided by different organisational M&E Framework to be developed.

Other recommendations

- i. EAC Governments need to fund and support research in the costs of agricultural externalities, specifically on public health and the environment and to put monetary values on these impacts.
- ii. It is the responsibility of national government to sensitize their citizens of the importance of organic agriculture. EAC member states need to engage in raising awareness of the environmental and health benefits of organic agriculture and recognize its importance in achieving the Sustainable Development Goals.
- iii. Organic inputs should be subsidised and investment in environmentally friendly input production should be supported.
- iv. Organic agriculture should be integrated into the curriculum for primary and secondary schools. Specialized institutions involved in training for organic agriculture should be supported. Higher education in organic agriculture should be developed.
- v. Special research programmes should be established for organic research, and the sector should be involved in priority setting. Research and development (R&D) in organic agriculture should be participatory, build on and integrate traditional knowledge (where relevant) and be based on the needs of the producers.

1.0 BACKGROUND INFORMATION

1.1 Participatory Ecological Land Use Management



Networking for a greener Africa.

PELUM Kenya is a member of the greater Participatory Ecological Land Use Management (PELUM) Association in East, Central and Southern Africa. It is a membership networking organization founded in 1995 which promotes people-driven development towards sustainable land use management. The organization facilitates learning, networking and advocacy on agroecological practices for improved livelihoods. PELUM Kenya Membership is drawn from Non-Governmental

Organizations, Faith Based Organizations, Community Based organizations and Civil Societies currently stands at 57 organizations.

PELUM Association operates in 12 countries of East (Kenya, Uganda, Tanzania, Ethiopia and Rwanda), Central (Zambia, Zimbabwe and Malawi) and Southern Africa (South Africa, Lesotho, Swaziland and Botswana). The Association undertakes the following¹:

- i. Promotes Participatory Ecological Land Use, Management practices in the East, Central and Southern region.
- ii. Builds the capacity of members and partners to respond appropriately to community needs as they work to empower the communities they work with.
- iii. Increases the visibility of the Small-scale farmers.
- iv. Promotes sharing of information of development experiences, innovations, and best practices.
- v. Strengthens linkages and collaboration through action learning among partners and members.
- vi. Lobbies (directly) for change and formulation of policies in favor of Small-scale farmers.
- vii. Promotes Seed Security and hence food security among small-scale farmers.
- viii. Promotes the use of indigenous food Programme.
- ix. Promotes the mainstreaming of the Gender and HIV/AIDS in Agriculture Development Programme.

1.2 Ecological Organic Agriculture – Initiative

EOA-I is a continental initiative whose overall goal is to mainstream EOA in to national agriculture systems, policies and programmes by 2025 in order to improve agricultural productivity, food security, access to markets and sustainable development in Africa.

Millions of smallholder farmers depend on agriculture and cannot grow enough food to sustain their families, their communities, or their countries. This leads to recurrent food crises and enhanced difficulties to feed the increasing human population. Climate change already affecting agriculture globally aggravate the difficult position of African agriculture. Due to changed rainfall patterns, a decrease in fertile arable land and more extreme weather events including prolonged frequent droughts, agricultural production will likely decrease.

¹ PELUM Kenya Website

Solutions proposed for increasing food security in Africa are still predominantly based on the industrialisation of African agriculture and the intensification of economically and environmentally unsustainable imported inputs and products - new seed varieties, genetically modified crops and chemical farm inputs.

The necessary intensification of the productivity and climate resilience of African farming systems can and should be ecological, maintain ecosystem services and be based on restoring, building and maintaining the natural resource base, particularly soil, water and biodiversity.²

The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) – an intergovernmental process supported by over 400 experts and many UN agencies concludes that expensive, “quick fix” technologies including GM crops fail to address the complex challenges that small-scale and subsistence farmers face, and often exacerbate already worsening conditions. Instead, the IAASTD outlined the needs for ecological approaches, the use of appropriate and low-cost technologies and a focus on capacity building for small holding farmers including women³.

The Ecological Organic Agriculture Initiative (EOA-I) in EAC and Africa as a whole is therefore an effort to support and implement the African Union Council Resolution on Organic Farming as captured in document EX.CL/ Dec. 621 (XVII) in order to help overcome the pressing challenges of food insecurity, seed systems and climate change⁴.

The overall goal of the initiative is to mainstream Ecological Organic Agriculture into national agricultural production systems by 2025 in order to improve agricultural productivity, food security, access to markets and sustainable development in Africa and also has a mission to promote ecologically sound strategies and practices among diverse stakeholders in production, processing, marketing and policy making to safeguard the environment, improve livelihoods, alleviate poverty and guarantee food security with the following objectives:

- i. *To increase documentation of information and knowledge on organic agricultural products along the complete value chain and support relevant actors to translate it into practices and wide application.*
- ii. *To systematically inform producers about the EOA approaches and good practices and motivate their uptake through strengthening access to advisory and support services.*
- iii. *To substantially increase the share of quality organic products at the local, national and regional markets.*
- iv. *Strengthen inclusive stakeholder engagement in organic commodities value chain development by developing national, regional and continental multi-stakeholder platforms to advocate for changes in public policy, plans and practices.*

² LimLi, Ching, Sue Edwards, and N. El-Hage Scialabba. Climate change and food systems resilience in sub-Saharan Africa. Food and agriculture organization of the United Nations (FAO), 2011

³ IAASTD/International Assessment of Agricultural Knowledge, Science a Technology for Development (2008). Global Report. Island Press, Washington DC.

⁴ Mid-Term Review; Final Report-Ecological Organic Agriculture (EOA) Initiative (2012-2015)

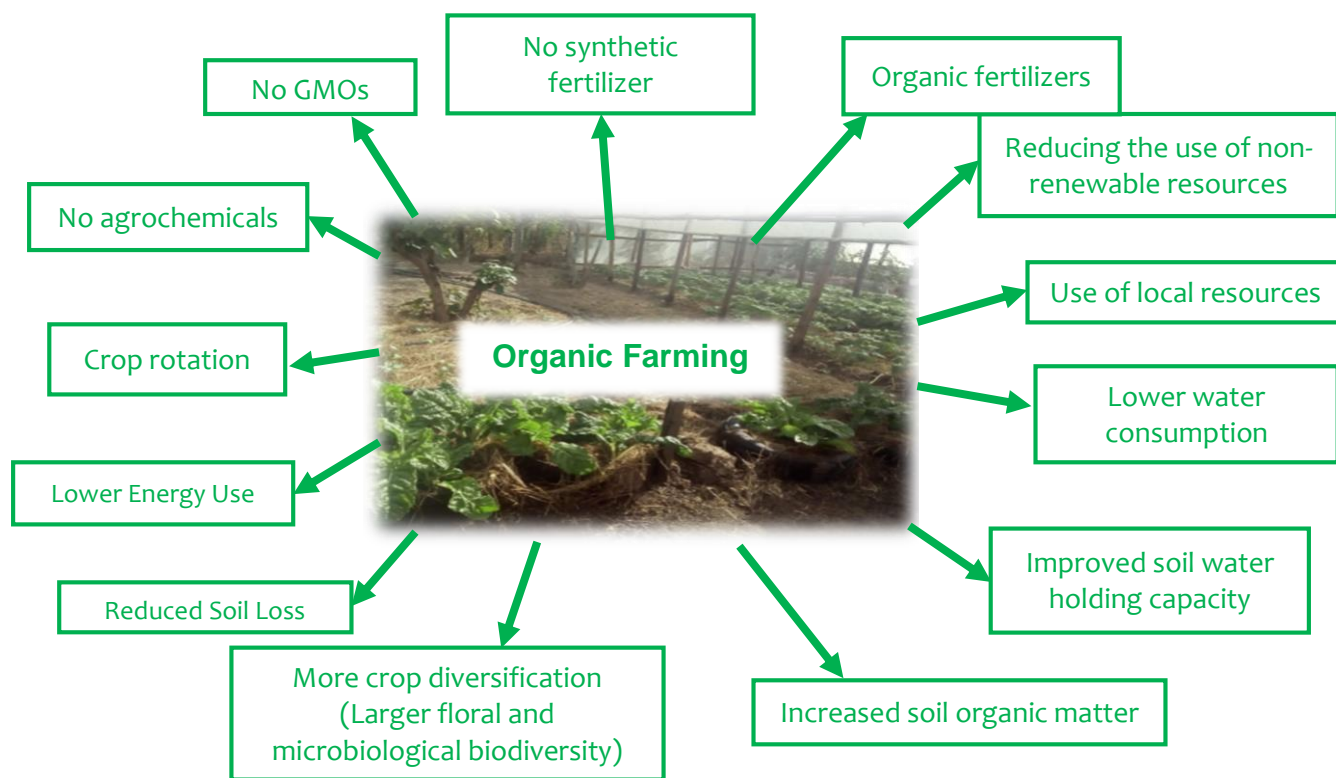


Figure 1: Summary of Organic Farming

1.3 Strategic Focus/Pillars of EOA-I

- i. Research, Training and Extension (RTE) Pillar which focuses on understanding research and training gaps within EOA value chains and undertaking activities to fill them.
- ii. Information and Communication (I&C) Pillar helps in creating awareness and strengthening EOA extension support systems through diverse information and communication strategies, products and technologies.
- iii. Value Chain and Market Development (VCD) Pillar stimulates development of sustainable markets and increase trade in traditional and high value agricultural produce both at domestic and export levels within EOA.
- iv. Networking and Partnerships (N&P) Pillar which Promoting engagement by relevant stakeholders including governments, farmers, civil society, private sector and the international community.
- v. Policy and Programme Development Pillar is supporting the development and implementation of enabling policies and programmes.
- vi. Institutional Capacity Development (ICD) Pillar is Supporting and equipping professionals with skills and competencies to promote EOA in Africa.

1.4 Ecological Organic Agriculture – Initiative

Ecological Organic Agriculture Initiative (EOA-I) is currently being implemented in EAC (Kenya, Uganda, Tanzania, Rwanda and Ethiopia) and West Africa region. The Initiative’s overall goal is to mainstream EOA in Africa. PELUM Kenya is coordinating the EOA-I activities in Eastern Africa region that are supported by (Swedish Society for Nature Conservation) SSNC in Kenya.

1.5 Ecological Organic Agriculture Initiative Key Result Areas (outcomes) 2015-2025

The EOA-Initiative has also aligned its output and intervention logic to the Comprehensive Africa Agriculture Development Programme (CAADP) results framework (2015-2025). Through borrowing from the CAADP results framework, the following are the key outcomes:

- i. Scientific and indigenous knowledge, technologies and innovations on Ecological Organic Agriculture (EOA) increased.
- ii. Information and communication on EOA approaches, good practices (production, processes, and learning systems) developed, packaged and disseminated.
- iii. EOA product value chain mapping, data collection, opportunity analysis and product/input vetting conducted.
- iv. Business Development Strategies (BDS) for target businesses along value chains developed.
- v. The market share of EOA quality products at the national, regional and international markets increased.
- vi. Functional partnerships and networks at national, regional and continental levels.
- vii. A harmonised understanding and awareness of the value and benefits of ecological organic agriculture (EOA) among various stakeholders.
- viii. Integration and alignment of EOA into National governments and Regional Economic Communities (RECs) policies, plans and regulatory frameworks of the agriculture sector and other relevant line ministries realized.
- ix. Well governed, efficient and effective EOA Institutions

1.6 Study on barriers to adoption of EOA-I

The overall objective of this assignment was to identify the barriers to scaling up/out Ecological Organic Agriculture (EOA) and to propose practical actions to remove the barriers and enhance adoption of EOA in East Africa Community (EAC) and Kenya with specific objectives including:

- i) Identify policies and institutions that claim to have Ecological Organic Agriculture focus at EAC level and in Kenya.
- ii) Identify policies and institutions that hinders adoption of EOA at EAC level and in Kenya.
- iii) To validate the Policy-status with the ministries, government printer & Parliament.
- iv) Identify strategies to remove the barriers and propose practical actions to promote adoption of EOA in EAC and Kenya.
- v) Develop policy briefs on the urgent need to adopt EOA for sustainable food Systems.

The Consultants were therefore expected to review various literature, hold discussions with various stakeholders, and develop detailed and summarised reports covering the following aspects:

- i) Policies and institutions that claim to have Ecological Organic Agriculture focus at EAC level and in Kenya.
- ii) Policies and institutions that hinders adoption of EOA at EAC level and in Kenya.
- iii) Policy-status as validated with the ministries, government printer & Parliament.

- iv) *Strategies to remove the barriers and practical actions to promote adoption of EOA in EAC and Kenya.*
- v) *Policy briefs on the urgent need to adopt EOA for sustainable food Systems.*

1.7 Study of Ecological Organic Agriculture

The Consultants recognized that Ecological Organic Agriculture (EOA) Initiative is an African Union-led continental undertaking currently implemented in nine countries: 5 in Eastern Africa (Kenya, Uganda, Rwanda, Ethiopia and Tanzania) and 4 in west Africa (Mali, Benin, Senegal and Nigeria), with PELUM Kenya being the EOAI Eastern Africa regional secretariat. We further understand that there are many actors promoting key ecological farming technologies and techniques. It is noted that wide-scale adoption of EOA practices, however, remains a challenge especially amongst smallholder farmers in Eastern Africa.

1.8 Significance of the study

The study provides information EOA-I to the stakeholders on impact of organic farming system on profitability of small-scale farmers. This contributes to information available on benefits of adopting this system among small scale farmers in the counties of Kajiado, Kiambu, other counties in Kenya and the EAC. It also provides small scale farmers with the necessary information on profitability of organic production system to facilitate making informed decisions when converting to organic farming. By determining the effect of social economic, farm and market characteristics on profitability of small-scale production system, the study assists providing additional way of increasing profit margins in small scale production systems and value chains.

1.9 Scope of work

PELUM Kenya commissioned this study to identify the barriers to scaling up/out Ecological Organic Agriculture (EOA) and to propose practical actions to remove the barriers and enhance adoption of EOA in East Africa Community (EAC) and Kenya. The Consultants were therefore expected to undertake a study on barriers to adoption of Ecological Organic Agriculture (EOA). This involved;

- i) *Identifying barriers to scaling up/out Ecological Organic Agriculture (EOA).*
- ii) *Identifying strategies to remove the barriers and propose practical actions to promote adoption of EOA in Eastern Africa.*
- iii) *Identifying institutions that have Ecological Organic Agriculture focus in Eastern Africa that partners can collaborate with.*
- iv) *Compilation of detailed version of report of analysis.*
- v) *Compilation of popular version of report of analysis.*
- vi) *Developing policy briefs on the urgent need to adopt EOA for sustainable food Systems for East Africa Community, Kenya National Government and the County Governments.*
- vii) *Submission of final soft copies of detailed, popular versions and policy briefs.*

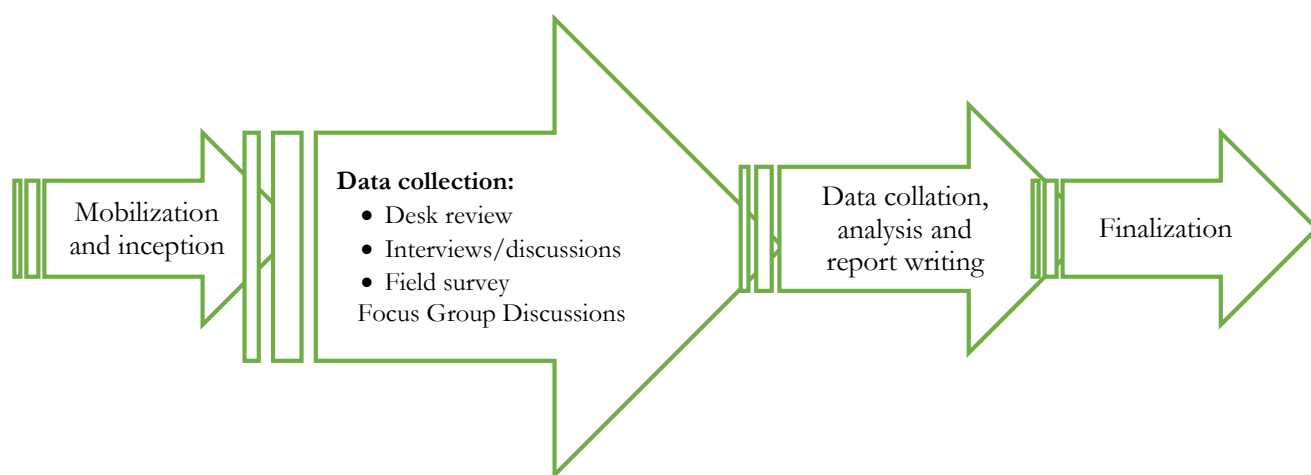
2.0 APPROACH AND METHODOLOGY

The study applied participatory approach that involved key stakeholders in the process and emphasized continuous communication throughout the assignment, where issues were resolved as they arise through discussion and consultations.

Further, the Consultants put a multi-disciplinary team consisting of experts with experience in environmental governance, agriculture, and research and policy development. This approach ensured efficient and effective coverage of each of the terms of reference and acceptance and ownership of the results by the Client.

The assignment was undertaken in stages as depicted below:

Figure 2: Summary of the Methodology



Source: Infosearch Solution limited (2020). *Approach and methodology on consultancy services for a study on barriers to adoption of ecological organic agriculture*. Unpublished inception report. PELUM Kenya.

The stages are discussed as follows:

Table 2: Assignment stages

Stages	Activities
<p>Stage 1: Mobilization and Inception</p> <p>The aim of this stage was to reconfirm the nature, scope and magnitude of activities for this assignment and to firm-up the proposed approach and work plan.</p>	<p>Activity 1: Inception meeting with PELUM Kenya The Consultant held an initial meeting with PELUM Kenya to discuss and firm up the envisioned approach to the assignment. The meeting ensured a common understanding of the assignment between the client and the Consultant.</p> <p>Activity 2: Preparation and submission of inception report Based on the Consultant’s proposal and the initial meeting held with the Client, the Consultant prepared an inception report detailing the methodology to be adopted, the work plan with weekly schedules, data collection tools, key deliverables, and reporting relationships and communication channels. The inception report was submitted to the client.</p>
<p>Stage 2: Data Collection</p>	<p>Activity 1: Desk review</p>

This stage was aimed at gathering relevant data for attainment of the assignment objectives

The Consultant undertook in-depth review of available physical and online literature on Ecological Organic Agriculture initiatives in East Africa Community (EAC) and Kenya. During the review, of interest were:

- Current practices
- Existing policies on Ecological Organic Agriculture
- Institutions focusing on Ecological Organic Agriculture in the region
- Documented barriers to Ecological Organic Agriculture
- Policies and institutions that hinders adoption of EOA

Some of the literature reviewed by the Consultants are:

- EOA project Design Document
- Annual Review and Plans for EOA research
- Project Proposal & Budget documents
- Project Log frame
- Project Policy documents
- Activity reports
- Mid-term Evaluation reports
- Documented Success Stories
- Periodic project review reports
- MOUs Signed
- Reports on EOA research Gaps
- Publications/studies on EOA by PELUM Kenya and other organizations
- AU Strategic Plan
- Existing policy briefs on EOA
- Other existing publications/studies on EOA.

Activity 2: Interviews/discussions

The Consultant held interviews/discussions with PELUM Kenya and various key stakeholders, among them PELUM Kenya member organizations and key government ministries/departments, both at the National and County levels in Kenya and EAC.

Activity 3: Field survey

Even though the Study was heavily desk review, the Consultant engaged sampled smallholder farmers from two Counties in Kenya. The sample of two counties was influenced by the Covid-19 Pandemic that resulted to restrictions in movement. The specific respondents were identified randomly from list of famers aligned to PELUM Kenya member organizations.

2.1 Study Area

The study was carried out among the organic stakeholders in Uganda, Rwanda, Ethiopia, Tanzania and the commercial smallholder organic farmers from Kiambu and Kajiado Counties of Kenya who supply produce to Nairobi market due to their proximity to Nairobi. Kiambu and Kajiado Counties have the highest population of smallholder organic farmers supplying the domestic market. The two Counties have diverse agro-ecological zones where organic products are grown in the country ranging from high potential zones in Kiambu to low potential zones in the semi-arid Kajiado County.

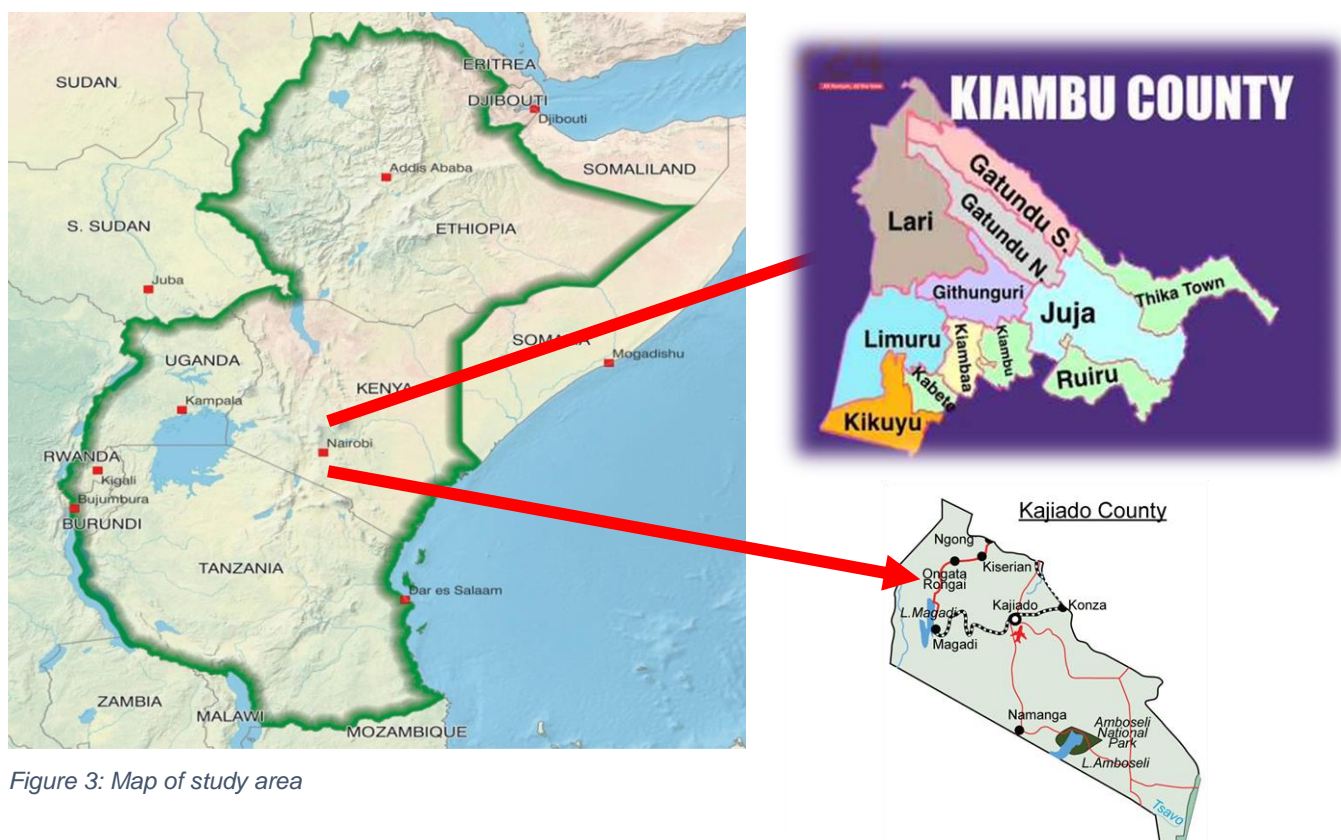


Figure 3: Map of study area

Table 3: Sampled EOA actors in Kenya

Category	Target organizations
National Coordination	1. Kenya Organic Agriculture Network
Bio/Organic Restaurants	2. Bridges Organic Health Restaurant 3. Kilimoni Greens Organic Shop
Input Suppliers	4. Legorn Fertilizers 5. Organic Technologies
Processors/Traders/Exporters	6. Catholic Diocese of Meru – Meru Herbs 7. Organic Processors and Packers Kenya Limited
Producers /Farms and Groups	8. Ngelani Athi Organic Farm 9. Muhuri Road Organic Farmers Group
Organic Technical Service Provider	10. Agribiz Management and Marketing Services Limited 11. Manor House Agriculture Centre
Consumers Bodies	12. Consumer Information Network [CIN] 13. Organic Consumers Alliance [OCA]
Organic Markets	14. Organic Farmers Market 15. Funzone Garden Estate Organic Market

Table 4: Sampled EOA actors in Tanzania

Category	Target organizations
Country Lead Organization	1. Tanzania Organic Agriculture Movement [TOAM]
NGOs	2. Sustainable Agriculture Tanzania [SAT]
Organic Technical Service Providers	3. Kilimanjaro Native Co-operative Union [KNCU]
Producer/Farmer Groups	4. Busangwa Organic Farming Association [BOFA]

Table 5: Sampled EOA actors in Uganda

Category	Target organizations
Country Lead Organization – Uganda	1. Participatory Ecological Land Use Management [PELUM]
Agro-Input Dealers	2. Biochar Uganda Organics Limited
Producers/Processors and Exporters	3. Blessed Organic Release
Honey Production and Processing	4. Golden bees
Farm Associations & Cooperatives	5. Africa Aquaponics Association
Training and Demonstration Farms	6. Kulika Training Centre
NGOs, CBOs, Civil Society Org.	7. Agency for Integrated Rural Development [AFIRD]
Government Institutions	8. Gulu Agricultural Development Company [GADC]

Table 6: Sampled EOA actors in Ethiopia

Category	Target organizations
Country Lead Organization – Ethiopia	1. Institute for Sustainable Development
Government Institutions	2. Ethiopia Biodiversity Institute [EBI]
NGOs	3. Agri-Service Ethiopia
	4. Ethio-Organic Seed Action [EOSA]

Table 7: Sampled EOA actors in Rwanda

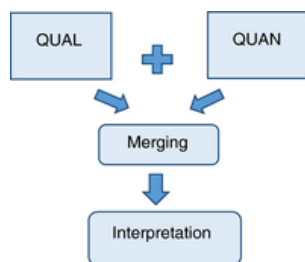
Category	Target organizations
National Organic Agriculture Movement	1. Rwanda Organic Agriculture Movement [ROAM]
Cooperatives	2. Kamara Cooperative
Producers	3. AGROPY Ltd
Participatory Guarantee System [PGS] Groups	4. PGS JURU [Fruits, cassava, beans, groundnuts, maize]
Service Providers	5. ADENYA
Government Institutions	6. RAB
NGOs	7. SAFE

Stage 3: Data collation, analysis and reporting

Data collected through desk review, field survey and interviews/discussions were collated and analyzed appropriately.

Completed questionnaires from field survey were inspected for completeness, edited, coded, and the data inputted into Statistical Package for Social Sciences (SPSS) package. For quantitative data, descriptive statistics was used in the analysis of the data. Qualitative data collected through the interviews has been analyzed through content analysis.

Figure 4: Data Analysis Process



Source: Infosearch Solution limited. (2020). *Approach and methodology on consultancy services for a study on barriers to adoption of ecological organic agriculture*. Unpublished inception report. PELUM Kenya.

2.2 Limitation and Risks

The study was being undertaken at a time of challenge of novel Covid-19 pandemic. The process to undertake the study adhered to and operated within the government of Kenya, Ministry of Health protocols & containment measures. Various measures from the study team were followed in order to curtail any transmissions during the study exercise. As consultants, we did not oversee any major risk as we undertook this project and any potential challenge arising from the exercise was mitigated hence no implication to the overall results of the study.

2.3 Ethical issue

The exercise was guided by the Ethical Code of Conduct and which was explained to participants prior to conducting the interviews, such as their voluntary participation, maintaining confidentiality, and independence of the exercise.

2.4 Quality Control and Assurance

Infosearch solutions Ltd. ensured quality control and assurance measures were put in place to guarantee that the output/deliverables are of the highest quality possible. Therefore, quality control (QC) and quality assurance (QA) were integrated in the assessment design, data collection, data management and analysis by ensuring that the study is responsive to the Terms of Reference.

3.0 CONTEXT OF ECOLOGICAL ORGANIC AGRICULTURE

3.1 Ecological Organic Agriculture

The Sustainable Development Goal three (SDGs) has placed significant emphasis on the need to ‘ensure healthy lives and promote wellbeing for all at all ages’ of which food and nutrition security forms a big part. It is in light of this that the relevance and importance of Ecological Organic Agriculture (EOA) in both food production and food value chain processing, delivery and marketing systems and consumption is articulated, in a sustainable approach, as opposed to current conventional agricultural approaches, which are not sustainable when considered in the context of sustainable development goals.⁵ The practices of Ecological Organic Agriculture have been documented to generate higher and more stable crop yields and incomes and enhance resilience to climate change compared to conventional agricultural production methods. Wide-scale adoption of EOA practices however, remains a challenge especially amongst smallholder farmers in Eastern Africa.

The EOA-I overall goal is to mainstream Ecological Organic Agriculture⁶ into national agricultural production systems by 2025 in order to improve agricultural productivity, food security, access to markets and sustainable development in Africa. To achieve its goal, EOA-I set out objectives to increase documentation of information and knowledge on Organic Agriculture, to strengthen inclusive stakeholder engagement in organic commodities value chain development by development multi-stakeholder platforms to advocate for changes in public policy plans and practices, to systematically inform producers about the EOA approaches and good practices and to substantially increase the share quality of organic products at the local, national and regional markets.

EOA-I has key priority areas that are the pillars of EOA Initiative. These priority areas are: Research, Training and Extension, Information and Communication, Value Chain and Market Development, Networking and Partnership, Policy and Programme Development and Institutional Capacity Development.

According to the IFOAM study (2003), organic agriculture exists in Africa in five forms

1. **Commercialized, certified organic agriculture** — without any significant development or donor funding. This is practiced on large-scale farms and is often oriented towards organic markets in developed countries. Examples include some large farms in Malawi, South Africa and Zambia, as well as North Africa. An outstanding example is Sekem in Egypt, which won the Right Livelihoods Award in 2003.
2. **Export-oriented certified organic agriculture** — supported by development or donor funding. This is aimed mainly at improving the incomes and livelihoods of smallholder farmers. For example, Uganda currently has 28,000 certified farms covering 122,000 ha of land, and Tanzania has 1,000 certified farms covering 5000 ha.

⁶ Ecological Organic Agriculture is a holistic system that sustains the health of ecosystems and relies on functional cycles adapted to local conditions, rather than the use of synthetic inputs which have adverse effects on total health (human, animal, plant and environmental)

3. **Poverty and environmentally oriented agriculture (agro-ecology) based on organic principles** — assisted by development agencies and NGOs. This involves many initiatives that address soil degradation, water capacity, land-use management, biodiversity conservation, agroforestry, desert control, and food and seed security. These initiatives are often designed to enhance local initiatives.
4. **Local organic agriculture innovations** — developed by farming communities and local organizations. These constitute a means of addressing pressing social, economic and environmental problems. Such initiatives are most developed in Kenya, South Africa and Zimbabwe.
5. **Organic research** — conducted by local, national and international institutions. Egypt has a well-developed national research system for organic cotton. International research institutions include the World Agroforestry Centre (ICRAF) and the International Centre of Insect Physiology and Ecology (ICIPE).

National and international NGOs working in partnership with donors and the private sector have achieved the development of the formal organic sector in Africa through three main approaches, these are:

- i) *Promoting organic agriculture technologies and practices as a way of reviving the productivity of degraded farming systems and sustaining farm productivity. This approach has been pursued mainly by rural development NGOs and is widespread in Africa.*
- ii) *Promoting national and international trade in organic produce as a way of improving smallholder farmer incomes through access to premium-price markets. This approach has been pursued mainly by bilateral donor agencies, private foundations and farmers' organisations. There is good example of this approach in Egypt, Tanzania and Uganda.*
- iii) *Traders and trading companies operating in international markets requesting their suppliers in Africa to provide organic produce in order to benefit from premium prices. This approach involves traders organising smallholder farmers into large production projects. Some African-based suppliers may be large-scale farmers who convert their farms to organic production and supply traders (often supermarket chains) in Europe and elsewhere. This approach is predominant in Kenya, South Africa and Zimbabwe.*

In order to exploit the full potential of organic agriculture in Africa, however, the concerted efforts of all stakeholders are needed to address various challenges including unfavourable national policy environments. Most politicians, policy-makers and government researchers and extensionists favour the industrial approach to agriculture, which means little or no funding for research, training and extension in organic agriculture; Lack of internationally recognised certification programmes; Little or no capacity to implement and operate certification services; High costs of certification charged by international certification agencies; Little or no capacity to implement and operate certification services; Certification standards based on farming conditions in developed countries and Lack of systematic documentation and dissemination of information on the benefits of organic agriculture. Most successes in organic agriculture are project based and are documented in project reports that have a limited circulation and often lack the scientific rigour required for formal publication. Other challenges faced by Organic Agriculture include lack of manuals to be used by small scale farmers Costs of certification, a

service provided mainly by agencies from developed countries; and limited opportunities for testing new approaches and technologies.

In addition, the documented information and experiences from the studies, should be disseminated to EAC to raise awareness about organic agriculture, particularly in relation issues such as; Costs of certification, a service provided mainly by agencies from developed countries and Lack of certification services for smallholders.

3.2 Scientific Basis of Organic Farming

Organic farming is mostly perceived as being unscientific, but this perception is based on a lack of understanding of the underlying concepts (Woodward, 2002). Organic farming methods combine scientific knowledge of ecology and some modern technology with traditional farming practices based on naturally occurring biological processes. Whereas some traditional farming characteristics such as rotations, mixed farms, mechanical methods of weed control remain features of the organic system, organic farming seeks to build upon the increased understanding of such things as the turnover of organic matter and other areas of soil life, crop and animal husbandry that have come from modern science. Thus, organic agriculture relies on application of scientific knowledge and information for its further development.

3.3 Nature of Ecological Organic Agriculture in East Africa

All five members of the East African Community (EAC) – Burundi, Kenya, Rwanda, Tanzania, and Uganda – are highly dependent on agriculture for national income and employment. As is the case with many other developing countries, agricultural development in the EAC region is a critical component in overall economic development and beyond economic considerations, organic agriculture brings with it numerous other benefits for sustainable development; Environmental benefits from increased organic agricultural cultivation, reduced greenhouse gas emissions, higher levels of biodiversity, increased soil fertility and increased food security resulting from higher productivity and therefore higher yields.

East Africa currently leads the continent in production and exports of certified organic products. Domestic markets are also growing rapidly, in part through the efforts of the Kenya Organic Agriculture Network (KOAN), the Tanzanian Organic Agriculture Movement (TOAM) and the National Organic Agricultural Movement of Uganda (NOGAMU)⁷

In Kenya a few large commercial farms have led the way in export orientated organic production, in Tanzania organic produce comes from smallholder farmers arranged in strong cooperative unions, and in Uganda organic production is dominated by smallholder farmers organized through private companies⁸

⁷ Analysis of policy gaps that hinder regional trade on organic products in EAC

⁸ An overview of the current State of Organic Agriculture in Kenya, Uganda and the United Republic of Tanzania and the opportunities for Regional Harmonization; Prepared under the CBTF Project 'Promoting Production and Trading Opportunities for Organic Agricultural Products in East Africa'

3.4 Ecological Organic Agriculture as development Strategy for ecological sustainable farming

Much evidence shows that implementation of organic Agriculture (OA) increases productivity, and that it will be possible to feed a growing population with food produced in OA systems. OA is explored, analysed and discussed in relation to the principles of Ecology, Health, Care and Fairness as enunciated by IFOAM, as a developmental strategy. Major financial powers are involved in the agro-related industries. A number of civil society-based organisations point to the major negative side effects of the trade with and use of agro-chemical products environmentally and in the further deepening of the gaps between rich and poor. The MDGs target the environmental sustainability explicitly, and OA is regarded as being a relevant strategy to meet many goals. A global development strategy is needed that explicitly includes future generations, ecosystems, biodiversity and plant and animal species threatened by eradication⁹.

3.5 The Inter-related Pillars on Ecological Organic Agriculture

3.6.1 Research, training and extension

This is a priority area that helps build scientific data for EOA. Led by actors in research and training institutes and universities; participatory, interdisciplinary, multi-cultural research is being conducted to inform stakeholder trainings. Knowledge and skill are transferred to communities through extension services. By involving farmers in the research, existing indigenous knowledge is harnessed and scientifically tested to produce empirical data that can be used for innovation. The pillar ensures that gender aspects in every innovation are considered so that farming technologies and practices consider the active participation of women and youth in farming.¹⁰

In Rwanda, Gako Training center has conducted many courses for farmers, NGOs and trainers and the government extension workers have also participated in such training. Few Rwandans have participated in training programs outside the country.¹¹

Ethiopia and Tanzania are taking the lead in ensuring they attain the planned project objectives. This is due to the fact that they have implemented all key activities (*Baseline Assessment and Documentation of EOA technologies, local knowledge study, knowledge gap study, Development of a directory of actors involved in EOA, Curriculum development in EOA training, EOA introduced in learning institutions, and Capacity building in EOA*) to a certain degree of satisfaction. Other four countries (Uganda, Kenya and Rwanda) have implemented at least six key activities planned so far under the pillar. A case of a major achievement in Ethiopia is that EOA has been introduced as a unit in a Masters' degree in Dryland Agroforestry and Land Rehabilitation while in Tanzania where local knowledge to the application of EOA has been developed and packaged in CDs, DVDs and booklets. This will serve as a training resource to farmers on how to make good compost step-by-step as it bears English subtitles. In the advancement of mainstreaming EOA in into National Policies, Strategies and Programmes in Africa, the RTE pillar was to document the EOA technologies, support extension and facilitate the development

⁹ Organic Farming as A Development Strategy: Who are Interested and Who are not?

¹⁰ Ecological Organic Agriculture (EOA)-Initiative 2015 – 2025 Strategic Plan

¹¹ Overview of Organic Agriculture in Rwanda and Options for Policy and Trade Development: International Trade Centre (ITC)

of curriculum in EOA among training institutions. To that extent, most countries have undertaken their planned activities. Some of the studies have elucidated some interesting results towards the advancement of EOA-I. One of the major constraints in EOA cited by farmers, is the unavailability of inputs, especially pests and disease control products. The studies in Tanzania and Ethiopia, have identified plants with pests and disease control properties. The TPRI in Arusha, Tanzania has gone as far as identifying the active ingredients in the plants. These studies will go a long way in developing organic inputs for control of diseases and pests.

The EOA curriculum has been developed in nearly all countries. It is anticipated that when the training institutions adopt the EOA curriculum, more professionals will be trained and equipped with knowledge of EOA.¹²

3.6.2 **Information and communication**

This priority area is the vehicle through which EOA reaches out to a vast majority on the continent. Working closely with all the priority areas of this initiative, a formidable brand for EOA is being developed, national information and communication strategies designed and information packaged in appropriate formats to be communicated to various audiences and stakeholders on the value and practices of EOA.

Ethiopia and Tanzania have taken a significant lead in ensuring implementation of key activities (*Undertake gap analysis on existing EOA I&C tools, Develop I&C strategies, Establish & maintain national EOA websites/Feature EOA work in their main websites, Develop communication materials Establish/support communication infrastructure and Organize I&C events on EOA*) in order to achieve the key set outputs of using a range of information and communication strategies, products and technologies to share insights and lessons from experiences by farmers, processors, marketers, extension agents as well as researchers in order to sensitize the general public, including policy makers on the importance of EOA in general and organic agriculture in particular. Kenya, closely follow with at least four activities implemented while Uganda lag rather behind.

3.6.3 **Value Chain and Market development**

Efforts focus on three key areas along identified EOA product value chains: Stimulating the manufacturing of organic farm inputs (especially seeds & fertilizer) so that farmers can access and grow produce for target markets, encouraging value addition of EOA products so as to earn higher margins and developing sustainable markets to increase trade in EOA high value products both at domestic and export levels. Women and youth are specifically targeted under the initiative to ensure that they get involved in value addition activities and accessing markets for their products.

All the EAC have implemented three key planned activities (Organic products enhanced in the entire value chain, develop markets for EOA products and Facilitate certification of EOA products). This shows that all countries have made good efforts to ensure organic products are introduced in the market. Indeed, some countries have made outstanding achievements that are noticeable like Uganda (NOGAMU), Tanzania (TOAM) and Kenya (KOAN) who have developed a National database with all key EOA actors such as processors, traders, consumer

¹² Mid-Term Review; Final Report-Ecological Organic Agriculture (EOA) Initiative (2012-2015) Consultancy Commissioned by The EOA Continental Steering Committee (CSC)

and development partners. NOGAMU can be commended to have gone a step further, and linked its National data base to a regional data base of IFOAM.

Ethiopia been outstanding in creation of new organic markets in the urban and rural areas. This has boosted access to healthy, organic vegetables and fruits to the local markets with Tanzania and Uganda also linking and exposing their traders to the international market by supporting them to attend international trade fairs like Denmark Food Fair and BIOFACH

3.6.4 Networking and partnerships

The priority recognizes that the EOA initiative does not have dedicated staff in every country and community to implement and therefore relies heavily on partners and networks already in the industry. Engagement is done through Partnership Agreements (PAs) and Memorandums of understanding (MOUs) with EOA. Networks and movements in Africa such as IFOAM, FARA, AFRONET and partners such as governments, farmers, private sector, civil society among others are engaged to maximize impact, leverage experiences and expand geographic reach and influence of EOA activities.

3.6.5 Policy and Programme development

This is the priority area that is to help EOAI realize its ultimate goal. Working closely with priority area 1 and 2, empirical data is being packaged into appropriate formats for target audiences. Through lobbying and advocacy efforts, the national governments are persuaded to develop and implement enabling policies and programmes in support of EOA.

Certification in Rwanda has been supplied by Soil Association (UK) and EcoCert (Germany) (with the latter dominating). Currently Ceres (Germany) has got involved. It has close cooperation with UgoCert in Uganda, which act as an inspection agent for Ceres.

It is evident that Kenya and Uganda have made good efforts to ensure all key activities (*Conduct country-based policy analyses to identify EOA policy gaps, Policy makers made aware about EOA through sensitization meetings and Organic Policy developed /EOA introduced into national policy making processes, strategies and investment plans*) are implemented. Key to note in these two countries is the progress made in the development of an Organic Policy and introduction of EOA aspects in other policies like the agriculture policy. It is worth noting that in Ethiopia there is a person responsible for Organic Farming at the Ministry of agriculture. The rest of the countries have also made efforts to have meetings and introduce the initiative to the policy makers with countries receiving positive signals from the government policy makers.

3.6.6 Institutional Capacity Development

This priority recognizes the nascent EOA institutions. Efforts are being made to establish, develop and support these institutions organizational capacities as well as equip its professionals with skills and competences to promote EOA in Africa.

Pelum Kenya has trained partners in the Eastern Africa Region in various trainings and exchange visits undertaken to boost the capacity of various stakeholders. Key training to note is on Monitoring and Evaluation

(M&E) and Gender issues. Biovision Africa Trust notably has trained partners in project and financial management covering the entire regions of Eastern and West Africa.¹³

3.6 Principles and Components of organic agriculture (OA)

The four principles of organic agriculture are as follows:

- i. **Principle of health:** Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible. This principle points out that the health of individuals and communities cannot be separated from the health of ecosystems - healthy soils produce healthy crops that foster the health of animals and people.

The role of organic agriculture, whether in farming, processing, distribution, or consumption, is to sustain and enhance the health of ecosystems and organisms from the smallest in the soil to human beings. In particular, organic agriculture is intended to produce high quality, nutritious food that contributes to preventive health care and well-being. In view of this it should avoid the use of fertilizers, pesticides, animal drugs and food additives that may have adverse health effects.

- ii. **Principle of ecology:** Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them. This principle roots organic agriculture within living ecological systems. It states that production is to be based on ecological processes, and recycling. Nourishment and well-being are achieved through the ecology of the specific production environment. For example, in the case of crops this is the living soil; for animals it is the farm ecosystem; for fish and marine organisms, the aquatic environment.

Organic farming, pastoral and wild harvest systems should fit the cycles and ecological balances in nature. These cycles are universal but their operation is site-specific. Organic management must be adapted to local conditions, ecology, culture and scale. Inputs should be reduced by reuse, recycling and efficient management of materials and energy in order to maintain and improve environmental quality and conserve resources.

Organic agriculture should attain ecological balance through the design of farming systems, establishment of habitats and maintenance of genetic and agricultural diversity. Those who produce, process, trade, or consume organic products should protect and benefit the common environment including landscapes, climate, habitats, biodiversity, air and water.

- iii. **Principle of fairness:** Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities. Fairness is characterized by *equity, respect, justice and stewardship* of the shared world, both among people and in their relations to other living beings.

¹³ Mid-Term Review; Final Report-Ecological Organic Agriculture (EOA) Initiative (2012-2015)

This principle emphasizes that those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties - farmers, workers, processors, distributors, traders and consumers. Organic agriculture should provide everyone involved with a good quality of life, and contribute to food sovereignty and reduction of poverty. It aims to produce a sufficient supply of good quality food and other products.

This principle insists that animals should be provided with the conditions and opportunities of life that accord with their physiology, natural behavior and well-being. Natural and environmental resources that are used for production and consumption should be managed in a way that is socially and ecologically just and should be held in trust for future generations. Fairness requires systems of production, distribution and trade that are open and equitable and account for real environmental and social costs.

- iv. **Principle of care:** Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment. Organic agriculture is a living and dynamic system that responds to internal and external demands and conditions. Practitioners of organic agriculture can enhance efficiency and increase productivity, but this should not be at the risk of jeopardizing health and well-being. Consequently, new technologies need to be assessed and existing methods reviewed. Given the incomplete understanding of ecosystems and agriculture, care must be taken.

This principle states that precaution and responsibility are the key concerns in management, development and technology choices in organic agriculture. Science is necessary to ensure that organic agriculture is healthy, safe and ecologically sound. However, scientific knowledge alone is not sufficient. Practical experience, accumulated wisdom and traditional and indigenous knowledge offer valid solutions, tested by time. Organic agriculture should prevent significant risks by adopting appropriate technologies and rejecting unpredictable ones, such as genetic engineering. Decisions should reflect the values and needs of all who might be affected, through transparent and participatory processes.

The components of organic agriculture are as follows:

- i. **Crop Rotation:** To optimally manage fertility and care of any fixed area of land, mixed cropping, pasture and livestock system applied in the rotation is advocated.
- ii. **Crop Residue Utilization:** 50% of crop residue being utilized as animals feed helps the economics of farm operations in a suitable manner.
- iii. **Organic Manure:** Manure derived from animal and human resources augments beneficial soil microorganisms by enhancing the bio-availability of nutrients.
- iv. **Waste Management:** Efficient waste management by the usage of industrial, municipal and sewage waste for fertilizers helps the economics of organic agriculture at a systematic level.

- v. **Bio-Fertilizers:** These contain microorganisms which convert nutrients from non-usable forms to more bioavailable forms, and are less expensive and more ecofriendly than the inorganic fertilizers.
- vi. **Bio-Pesticides:** These are natural plant products that include alkaloids, terpenoids, and phenolics.
- vii. **Vermicompost:** Organic manure produced by earthworm activity generates compost of much nutrients value than average manure. The application of vermicompost facilitates easy nutrients availability to plants.

3.7 Stakeholders Analysis

The stakeholders in the EOA Initiative include government ministries responsible for agriculture, farmer groups, civil society organisations, private sector (e.g., processors, traders and companies), research institutions, certification bodies, and the international community (e.g. funding partners) Other important stakeholders include African Organic Network (AfroNet), Forum for Agricultural Research in Africa (FARA), International Federation of Organic Agriculture Movements (IFOAM)-Organics International, Regional Economic Communities (RECs), Food and Agriculture Organization of the United Nations (FAO), Research Institute for Organic Agriculture (FiBL), International Centre of Insect Physiology and Ecology (ICIPE), World Agroforestry Centre and CGIAR centres. Stakeholders are grouped according to nature of their role played in the development of the organic sector in the targeted country.

Table 8: Stakeholders' categories and the Institutions per country

Categories	Institutions per Country			
	Kenya	Uganda	Tanzania	Rwanda
Government institutions	<ul style="list-style-type: none"> • Kenya Bureau of Standard (KBS) • Ministry of Agriculture, Livestock, Fisheries and Co-operatives • Ministry of Trade & Industrialization • Ministry of Environment and National Resources Management • Ministry of Health 	<ul style="list-style-type: none"> • Ministry of Agriculture Animal Industry and Fisheries (MAAIF) • Ministry of Trade, Tourism and Industry • Uganda Export Promotion Board (UEPB) • Uganda Investment Authority • Uganda Coffee Development Authority • Uganda National Bureau of Standards • National Agricultural Advisory Services • Plan for Modernization of Agriculture 	<ul style="list-style-type: none"> • Ministry of Agriculture and Food Security • Ministry of Industry and Trade • Ministry of Natural Resources and Tourism • Vice President Office, Environment • Ministry for Regional Administration and Local Government • Ministry for Livestock and Water • Ministry for Local Government, Marketing, Cooperative and Community Development • Ministry for Land and Habitat • Tanzania Bureau of Standards • Board of External Trade 	<ul style="list-style-type: none"> RADA, RHODA, RARDA, RBS
Financial Institutions		<ul style="list-style-type: none"> • 		<ul style="list-style-type: none"> Microfinance – UPBR, Donors-RSSP, SPREAD

<p>Research Institutions & Universities</p>	<ul style="list-style-type: none"> • Egerton University • Jomo Kenyatta University of Technologies in collaboration with KIOF and the university in the UK • KALRO • KENYA Tea Foundation • Kenya Coffee Foundation • Nairobi University 	<ul style="list-style-type: none"> • Makerere University • Uganda Martyrs University Nkozi 	<ul style="list-style-type: none"> • Sokoine University of Agriculture • University of Dar es Salaam • College of Moshi cooperatives • University College of Lands and Architectural Studies • Agricultural and livestock research and training institutes (Mikocheni, Katrin, Mlingano, Ukiliguru, Morogoro, Ilonga, Uyole, Nyegezi, Selien, Naliendele, Tumbi, Kibaha, Mpwapwa) 	<p>ISAR, NUR, ISAE, KIST, INATECH, IRIST</p>
<p>Farmers, Farmers Organization & Cooperatives, Companies</p>	<p>BIOP Ltd</p>	<ul style="list-style-type: none"> • Lango Organic Farming Promotion • Uganda Marketing Services • African Organic • Bio Fresh Ltd • Masaka Organic Producers • Tropical Ecological Foods Uganda • Sulma Foods • Kawacom • Ibero • Jaksons (U) ltd • Agricultural Organic Exports • Outspan • Bio Uganda • Bo Weevil 	<ul style="list-style-type: none"> • Biore • PCI • Fida Hussein • Dabaga • Biolands • LIMA • Bombay Burma • MTC • TATEPA • KIMANGO • Kibidula • TAZOP • Zanz-Germ • OCSD- essential oil distilleries of Pemba • EPOPA – TZ • Kilimanjaro native cooperative union – KNCU • Kagera cooperative union - KCU 	<p>Kamara, Tuzamurane, Rwanda Organic Agriculture Movement, Gako organic farm</p>
<p>NGOs / Civil Society/ Self-help groups/ producer associations</p>	<ul style="list-style-type: none"> • ICIPE • BIOP Ltd. • The Environment Liaison Centre International (ELCI) • Small farmers organizations (SFOs), • community-based organizations, (CBOs) 	<ul style="list-style-type: none"> • Agricultural Council of Uganda • Kulika Charitable Trust (Uganda) • Send a Cow (U) Ltd • Africa 2000 Network • Sustainable Agriculture Trainers' Network • Students Partnership Worldwide • VEDCO • ACODE • Cashfarm (U) Ltd. • VECO • Caritas 	<ul style="list-style-type: none"> • KIHATA • TOFO - Tanzania Organic Foundation • SEED - Sustainable Environment for Economic Development • ZAFFIDE • Envirocare • UHAI • Sunnhemp seed bank • PELUM-TZ • ADP Trust • Matunda Mema • MAYAWA 	<p>World Vision, Pelum Rwanda, Send a Cow, Vi Life, EER, RDO</p>

		<ul style="list-style-type: none"> • Rural Community in Development • EMESCO Development Foundation • PELUM 		
Certification & compliance institution	<ul style="list-style-type: none"> • AfriCert • Encert • IMO • BioSwiss • Soil Association 	<ul style="list-style-type: none"> • UGOCERT • SGS – Uganda • IMO Kontrol • KRAV • ECOCERT 	<ul style="list-style-type: none"> • TanCert • IMO • Bio-Inspecta • Ecocert 	RBS, EcoCert, Ceres, Soil Association
Business Development Services Centers & facilitators				PSF, CAPMER, CITT
Agri-business entrepreneurs & exporters	<ul style="list-style-type: none"> • KOPA • Greengrocers stocking organic products: Healthy U, Green Corner Shop, ABC Place • Organic Marketers Ltd, • Natural Food Marketers and • Findus in Africa • BIOP Ltd. 	<ul style="list-style-type: none"> • Gumutindo Coffee Coop • Kayunga organic Agriculture producers Association • Nombe Organic Producers Association • Masaka Organic Producers • Namulonge Horticultural Producers • Bufumbo Organic Agriculture Producers Association • Lusanja Agali Awamu 		RChillex, Floris, Rwandaflora, Urwibutso
Partners	<ul style="list-style-type: none"> • Hivos, Misericio, Sida, • FAO, • UK-DFID, • GTZ, • Biovision, • Rockefeller, • UNDP, CDE, • CBI, FibL • HDRA 	<ul style="list-style-type: none"> • HIVOS • EPOPA • DED • CBI • AGROECO • IFOAM • CORDAID • ASPS • DANIDA 	<ul style="list-style-type: none"> • Grolink • IFOAM • Agro Eco 	

Source: *The Legislation and Policy Environment for Ecological Organic Agriculture in Ethiopia, Kenya And Uganda - A Multi-Country Study Synthesis Report 2019*, National Agriculture Policy Ministry Of Agriculture And Animal Resources-Rwanda, *The United Republic Of Tanzania Ministry Of Agriculture Food Security And Cooperatives- National Agriculture Policy*, *The National Organic Agriculture Policy-Uganda*, *Agricultural Policy in Kenya: Issues and Processes*, *Structure of Agriculture and Agricultural Policies-Kenya*, 2010 Constitution-Kenya, *Kenya Organic Agriculture Sector Strategic Plan 2019-2023*, and from survey conducted by Infosearch Solutions Limited, January 2021

3.8 Activities of Organic Agriculture Stakeholders

Table 9: Stakeholders' categories and the Institutions per country

Categories	Activity and Roles
<p>Government institutions</p> <p>i. Ministry of Agriculture, Livestock, Fisheries and Co-operatives</p> <p>ii. Ministry of Trade and Industrialization</p>	<ul style="list-style-type: none"> • Facilitates the creation and implementation of national OA development plans and strategies • Supervises the activities of organic inspection and certification bodies • Provides extension and technical support services for organic operators • Facilitates organic market development and the dissemination of market information • Coordinate and conduct research into all aspects of organic horticultural production • Collaborate with other stakeholders to organize specialize training sessions and to conduct technical education • Work with other public bodies to adapt technologies in organic horticultural production systems to local conditions • Conducts applied research on all aspects of OA • Policy reform processes and maintaining an enabling macro-economic policy environment conducive for private sector participation • Provide support services needed for realization of the policy objectives • Provide regulatory services, capacity building, research and security • Establish and maintain an effective ICT to ensure Information gathering, packaging, storage and dissemination • Awareness creation of the actors • Monitoring and Evaluation • Resource mobilization viii. Support establishment of associations for value chain actors in Organic Agriculture • Awareness creation of the actors • Mobilization and provision of financial resources for Organic Agriculture implementation • Support collection and collating of agricultural Statistics through Uganda Bureau of Statistics • Identify and promote investment opportunities in Organic Agriculture Infrastructure development • Establishment of an enabling environment for acquisition and provision of credits by the Private Sector • Integrating Organic Agriculture issues in national planning frameworks through the National Planning Authority processes
<p>Local Governments</p>	<ul style="list-style-type: none"> • Promotion, mobilization of farmers and development of programs to encourage countrywide adoption of OA • Development of bye-laws and ordinances to support Organic Agriculture implementation • Monitoring performance of District Local Governments • Support policy Advocacy and support for District Local Governments • Implementation of Organic Agriculture policy at production and marketing levels • Subject matter specialists providing technical backstopping to LLG and NSAs • Monitoring and Evaluation • Capacity building of lower local governments • Planning and budgeting for implementation of Organic Agriculture activities in LGs
<p>Financial Institutions</p>	<ul style="list-style-type: none"> • Provide Credit to farmers and SMEs. • Provide Micro-credit services to small producers. • Guide farmers & SMEs on project appraisals

<p>Research Institutions & Universities</p>	<ul style="list-style-type: none"> • Conduct organic training programs. • Conduct research, however, limited, on OA through students and faculty members. • Curriculum development • Offer specialized training for Organic Agriculture actors • Partner with MAAIF to develop appropriate and practical internship programs • Generation of research priorities in consultation with farmers and other stakeholders • Formulate and implement research projects and programmes in Organic Agriculture • Provide technical support and training of actors and stakeholders • Promote adaptation and use of appropriate technologies
<p>Farmers, Farmers Organization & Cooperatives, Companies</p>	<ul style="list-style-type: none"> • Uptake of modern technologies to improve Organic Agriculture investments • Mobilization of farmers and resources • Farmer institutional development • Record keeping and provision of agricultural statistics
<p>Private sector, Non-State Actors NGOs / Civil Society/ Self-help groups/ producer associations</p>	<ul style="list-style-type: none"> • Provides an organic extension and consultancy services for farmers and extension officers. • Run apprenticeship training program and a training centres where short to medium term trainings are offered. • Conducts outreach services for farmer groups, • Promotes organic market activities and facilitates market linkage to smallholder organic farmers that benefit from its programs. • Mainly specializes in organizing organic capacity development training and outreach programs for smallholders in different parts of the countries using training the trainers' approach. • Facilitates the organization of smallholders into production groups and assists them with supports including clean seedling provisioning. • Partners with other organizations to run organic promotional campaigns on radio to foster adoption, educate farmers on organic farming management techniques and to create domestic market for the countries' organic product • Policy advocacy and lobbying for Organic Agriculture activities at all levels • Resource mobilization for implementation of Organic Agriculture interventions • Support post-harvest handling, storage, value addition and processing to promote Organic Agriculture • Provision of support services including transport, trade and marketing • Sensitization and training of farmers and other stakeholders • Consumer protection • Support and conduct capacity building activities • Supports smallholders to set up group organic marketing and production enterprises. • Embarks on promotional activities by organizing exhibitions on organic and sustainable farming systems. • Facilitates markets linkages for the organic farmers that are beneficiaries of its activities • Coordinating the initiative across the Eastern Africa Region • Leading advocacy and policy influencing in Kenya in regard to integration of EOA in public policy • Monitoring and Evaluation of the programme work

<p>Certification & compliance institution</p>	<ul style="list-style-type: none"> • Facilitate farmers to comply with organic agriculture standards. • Give certificates
<p>Business Development Services Centers & facilitators</p>	<ul style="list-style-type: none"> • Support farmers to develop business plans. • Mobilize farmers for organic production e.g., BDS at local level. • Mobilise funding and advise on appropriate funding sources. • Fund farmers best innovations.
<p>Agri-business entrepreneurs & exporters</p>	<ul style="list-style-type: none"> • Offering market to farmers produce through agro processing, export and local business sales. • Farmers’ organization and mobilization for organic agriculture. • Distributing inputs to farmers’ organization/cooperatives. • Carrying out extension services. • Increasing use of scientific & technological knowledge in organic production.
<p>Partners</p>	<ul style="list-style-type: none"> • Works with other pro-organic groups in the country to set up organic production enterprises for smallholders. • Provides management and certification supports to smallholder organic farmers in addition to capacity building trainings and extension services. • Sponsor participation in international organic fairs and links smallholders with export organic markets and also provide them with interest free and commercial loans to support their operations. • Supports pro-organic institutional building activities by, for example, offering technical assistance to set up UgoCert. • Supports organizational development and activities of the beneficiaries of funding support in the areas including trainings for organic farmers, awareness creation and organic market development. • Supports organic research and capacity building for Uganda’s organic sector through means including organization of programs that brings the stakeholders together. • Policy advocacy and support for Organic Agriculture • Provision of technical Assistance to agricultural programmes and projects • Mobilization of financial resources for Organic Agriculture investments
<p>Other MDAs</p>	<ul style="list-style-type: none"> • Mobilization of resources for implementation of interventions under their respective areas of jurisdiction • Implementation of interventions under their mandates • In collaboration with MAAIF, formulate and review standards, codes of practice, development of guidelines and product certification at all levels in the organic agriculture sub-sector • Facilitate certification and ensure compliance with international standards • Facilitate the collection, analysing and interpretation of data on Organic Agriculture

Source: *The Legislation and Policy Environment for Ecological Organic Agriculture in Ethiopia, Kenya and Uganda - A Multi-Country Study Synthesis Report 2019, East African Organic Policy Barriers Report, Kenya Organic Agriculture Sector Strategic Plan 2019-2023 and from survey conducted by Infosearch Solutions Limited, January 2021*

3.9 Contributions of Organic agriculture to the Sustainable Development Goals

Farmers represent one third of the world population. Small-scale farmers, many of whom are women, produce about 70% of our planet’s food. As the earth’s primary ecosystem’s managers farmers are best placed to ensure sustainable development (IFOAM, 2014) Organic agriculture has a significant contribution to make in relation to sustainable development and the newly established Sustainable Development Goals.

Starting in 2013 The Alliance for Food Sovereignty in Africa (AFSA) and partners collected 50 case studies on agroecology from 22 African countries with the aim of strengthening the case of agroecology as the future of farming in Africa (Farrelly, 2016). AFSA member organization, Tanzania Organic Agriculture Movement (TOAM), recently developed a simple tool to establish how these case studies contribute to the SDGs. Three project officers examined the 50 case studies, using the tool to record positive and negative impacts against the SDG goals and targets. *It was established that organic agriculture has the potential to contribute to achieving SDGs 1, 2, 3, 4, 6, 12, 13, 15 and 17.*

Organic farming methods can increase farmer's yields and, in some cases, organic methods have actually doubled crop yields per hectare for the involved thus further reducing poverty and hunger pressures. Higher yields from organic agriculture not only bring higher incomes, also less investment in input on the farm which adds to the economic return to the farm, Organic farming can play a significant role in reducing food insecurity, Organic agriculture directly contributes to an improved health owing to less chemical exposure and minimizes GHG emissions, Families use increased incomes from higher premium prices of organic produce to send their children to school, farmers learning vocational skills through agroecology schools, and communities gaining knowledge and skills to bring about their own sustainable development, Organic agriculture supports gender equality as its low-start up and production costs and stabilized yields facilitate the entry of women as it's less risky and more affordable while providing them the opportunity to increase their income, Throughout the world water contamination is a result of conventional agricultural practices in which synthetic fertilizers and pesticides contaminate our water systems (IFOAM) Conventional agriculture is prone to soil erosion, water exhaustion and increases water waste pollution. Organic agriculture uses farm produced manure and compost that encourage biological processes and prevent health problems arising from water contamination, Organic agriculture brings about Inclusivity, Sustainable Economic Growth, Employment and Decent Work for all, with a growing global population, increased urbanization and deteriorating natural resource base, shifting to a more sustainable system of food production and consumption is necessary in order to satisfy expected food, water and energy needs, Climate change is being felt by every country in the world. The industrial agricultural system is the largest emitter of Greenhouse gases (Groundswell, 2016). A widespread global shift away from industrial production modes, and towards agroecology is key to mitigating the effects of land degradation and global climate change. Implementing agroecological practices can improve soil quality, reduce greenhouse gas emissions, and teach farmers to adapt their crops to be climate smart and resilient and Organic farming contributes to better soil stability with an average of 30% higher soil organic matter and 14% higher soil organic carbon, making organic farming more resilient to drought, more resistant to soil erosion, and more efficient at water infiltration (USC Canada, 2009)¹⁴

3.10 EOA Strengths, Weaknesses, Opportunities and Threats

The agenda and theme of the EOA initiative which draws its strength from the fact that this is an African driven and supported by all African national governments, can only be decided and managed internally and any external

¹⁴ East African Organic Policy Barriers Report

input will go to support the cause but not determine its process and outcomes¹⁵ as demonstrated in the below SWOT analysis.

Table 10: EOA SWOT Analysis

<u>Strengths</u>	<u>Weaknesses</u>
<ul style="list-style-type: none"> i. EOA is an African driven process whose decision was supported by all African national governments ii. The wealth of existing indigenous knowledge on ecological organic agriculture. iii. The increasing number of stakeholders embracing Ecological organic farming on the continent is a strength already being beginning to catapult the concept to greater heights iv. The EOA existing organizational structures 	<ul style="list-style-type: none"> i. Lack of clear coordination of EOA actors at country level to get them fully involved in EOA sector promotion through their sector specific engagements has been a main weakness facing promotional efforts. ii. The dearth of empirical evidence and data on EOA's capacity to meet the food demands for African populations is the weakest link in the initiative. iii. The limited availability of agro-ecological farm inputs (especially seeds and fertilizer) is a weakness attributed to various factors but mostly to the overwhelming appeal of and push to conventional agriculture. iv. Limited African financing and over-reliance on external funding from the North is a weakness that has threatened to slow down the realization of outcomes as desired. v. The poor market development of EOA products manifested in poor distribution channels, trade barriers among African states and the dependence on export market are weaknesses that have slowed down the realization of the benefits of EOA reaching the practicing farmers. vi. Internally, the efforts have been slow in using and capitalizing on gains already made from the wisdom of older practitioners and personalities. The tendency to re-invent the wheel has slowed down progress in Ecological Organic Agriculture. vii. Efforts in engaging national governments meaningfully are weak and have led to the slow institutionalization of EOA in many Agricultural policies and plans on the continent. viii. the failure to adopt a multi-stakeholder approach that would bring on board many industry actors including the private sector is a weakness that has made the input supply end needed for this initiative slow to grow and lacking in action
<u>Opportunities</u>	<u>Threats</u>
<ul style="list-style-type: none"> i. Climate change and the growing global concern for the environment present EOA with a huge opportunity. ii. The growing consumer demand for EOA produce and products both locally and internationally is an opportunity that has arisen 	<ul style="list-style-type: none"> i. The biggest threat to promotion of EOA perhaps lies in modern agriculture and its investment in high profile public relations. Proponents of modern agriculture subscribe to the use of synthetic pesticides and fertilisers to support narrowly-bred high external input demanding seed and animal breeds, farm machinery, large scale mono-culture farming, use of molecular science [Genetically Modified Organisms (GMOs) and Genetic Engineering (GEs)] to increase efficiency and yields.

¹⁵ Ecological Organic Agriculture (EOA)-Initiative2015 –2025 Strategic Plan

<p>due to the increase in health consciousness, safe food consumption and nutrition campaigns. This perfectly addresses the ‘demand problem’ and farmers producing for the growing global market.</p> <p>iii. At a global level, the Sustainable Development Goals (SDGs) endorse EOA efforts. This comes with increasing support from development partners from the North (SDC, SSNC, EU, MISEREOR, etc).</p>	<p>ii. It is now becoming increasingly understood that this system of modern agriculture is not sustainable at the current scale and potentially cannot even be sustained throughout this century (Cordell, et al., 2009; UNEP, 2011; Gleick & Palaniappan, 2010). The main reason for this is that modern agriculture depends on finite resources (some of which are indispensable for plant growth like phosphorus fertiliser) and non-renewable energy.¹⁶</p> <p>iii. There have also been recent studies that dispute some of the benefits of EOA. Most of these studies anchor their hypothesis in the assumption that ecological organic farming cannot feed the growing world’s population. The silence of scientific studies and empirical evidence of the opposite view from EOA practitioners creates a vacuum where such studies have prospered.</p> <p>iv. The youth of today are not interested in Agriculture as a means of livelihood. According to the August 2014 ‘Youth and Agriculture: Key Challenges and Concrete Solutions’ a new publication by FAO, CTA and IFAD, the youth have limited access to land (and other factors of production); inadequate access to financial services; insufficient access to knowledge; information and education; difficulties in accessing green jobs; limited access to markets; and limited involvement in policy dialogue. Many youths therefore migrate to cities and abandon rural economies based on agriculture.</p> <p>v. Evident threat should the current political goodwill and donor interest run out before realisation of EOA outcomes.</p> <p>vi. Continued control and dominance of the Agricultural research agenda by multinationals will continue the skewed support in favour of modern agriculture proposed by the multi-nationals.</p> <p>vii. The high cost of accreditation for certification for African certification organisations will eventually slow down the access to markets as the cost is passed down to farmers/producers, as well as to consumers.</p> <p>viii. The mistrust of importers of organic products in developed countries in the certification credentials and abilities of internal / national African certification bodies.</p>
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¹⁶ An opportunity not often articulated is that if all the subsidies including the backing from banks and insurance were removed from modern agriculture, the costs of modern agriculture would greatly exceed those of an ecological organic approach dependent on locally available, renewable and well researched inputs for seed, soil fertility and pest and disease management.

3.11 Opportunities for Ecological Organic Agriculture in EAC

Organic agriculture is an upcoming sector and at any continent you may consider, the numbers of organic farmers and the area under organic cultivation are rising notably and the following are some of the opportunities coming with the ecological organic agriculture¹⁷ as summarized in the table below:

Table 11: Opportunities for EOA

Opportunities for EOA

- i. Climatic conditions in many parts of the region favour organic production.
- ii. Farmers have a long history of low input production, which can be developed with further training and exposure
- iii. Due to the range of soil types within the region a wide range of crops can be grown.
- iv. A number of sound training institutions exist in the region such as KIOF and St Jude's Organic Training Centre
- v. A number of larger companies wish to expand their output through the inclusion of out grower schemes and a move into organic production
- vi. The first organic projects have been running in the region for over 10 years and hence there is good experience in commercial organisation of organic production
- vii. Strong national movements have developed to coordinate and promote organic agriculture, namely NOGAMU, KOAN, BOAM, ROAM and TOAM
- viii. IMO, KRAV, ECOCERT and Soil Association all have experience of inspection and certification in the region
- ix. Local certification companies exist in the region and national organic standards have been developed or are being developed
- x. Smallholder farmers in the region enjoy working together in groups and this makes production and certification much easier
- xi. The demand for organic products in developed markets is increasing and the region has the ability to satisfy this demand.
- xii. Further research into the possible link between organic agriculture and HIV/Aids control
- xiii. The multicultural population in the capitals can assist in the marketing of local organic production
- xiv. In some areas the use of agrichemicals is non-existent which can lead to largely simplified inspection procedures and therefore low costs
- xv. Donors and NGOs are becoming more supportive of organic agriculture
- xvi. With the organic sector having the Kilimo Hai Mark which is used across the region for marketing organic products, it is an opportunity for organic farmers in the region.
- xvii. Climate change has created an opportunity in promoting EOA for mitigation and adaptation
- xviii. Increased awareness of organic product has increased demand
- xix. Increased lifestyle diseases have called for consumption of organic food
- xx. increased cancers have also demanded for more healthy food
- xxi. Organic products can be marketed freely in EA using the east Africa standard mark of quality

Source: Organic agriculture development strategies in Tunisia and Uganda: Lessons for African organics, Socio-economic impact of organic farming in East Africa: Jennie van der Mheen-Sluijter and Elena Degli Innocenti, Organic agriculture and certification in Eastern Africa, A theoretical analysis with special reference to food security issues in Tanzania and from the findings from the survey conducted by ISL – January 2021

¹⁷ An overview of the current State of Organic Agriculture in Kenya, Uganda and the United Republic of Tanzania and the opportunities for Regional Harmonization; Prepared under the CBTF Project 'Promoting Production and Trading Opportunities for Organic Agricultural Products in East Africa'

4.0 FINDINGS AND INTERPRETATIONS

4.1 Introduction

The presentation of the study findings has been made with reference to different documents related to ecological organic agriculture. Specifically, the answers have been sought for the questions related to the overall objective of this assignment which was to identify the barriers to scaling up/out Ecological Organic Agriculture (EOA) and to propose practical actions to remove the barriers and enhance adoption of EOA in East Africa

Community (EAC) and Kenya. To meet the objectives of the study the following areas were covered: demographic data, experience in organic agriculture and land ownership, reasons for practicing organic agriculture, the inter-related pillars on ecological organic agriculture, suitability, future and achievements of EOA-I in EAC, factors associated with adoption of organic production system, impacts associated with the uptake of organic agriculture, importance of organic agriculture, organic agriculture’s contribution to the sustainable development goals, limitations and challenges to the spread of organic agriculture in East Africa and Kenya, gender



Focus Group Discussion with smallholder farmers in Kiambu County Kenya

and employment factors in success of EOA-I, the barriers to adoption of Ecological Organic Agriculture Initiative in EAC, organic products trading, Policy And Legislation, Ecological Organic Agriculture-Initiative Policies at EAC level and in Kenya, policies hindering the adoption of EOA-I in EAC, Institutions and Actors hindering the Adoption of EOA-I in EAC, strategies in place to remove the policy barriers to organic agriculture within the EAC and the lessons learned from the EOA-I.

4.2 Views of Smallholder Farmers on EOA

4.2.1 Demographic Data

From the quantitative survey with the small-scale farmers (small scale farmers-66% and pastoralists-34%), majority (64%) of respondents interviewed comprised male compared to 36% of female farmers respondents. On the other, the majority were of the age between 36 to 45years followed by 18% in the age group between 46-55 years, 11% is of 25-35 years; while only 5% and 4% are of the age of 18 to 24 and 56 years and above respectively. Most farmers interviewed were married followed by 29% who are either widowed or divorced. It’s also worth noting that only 5% was among the respondents for the study as shown in the figure below:

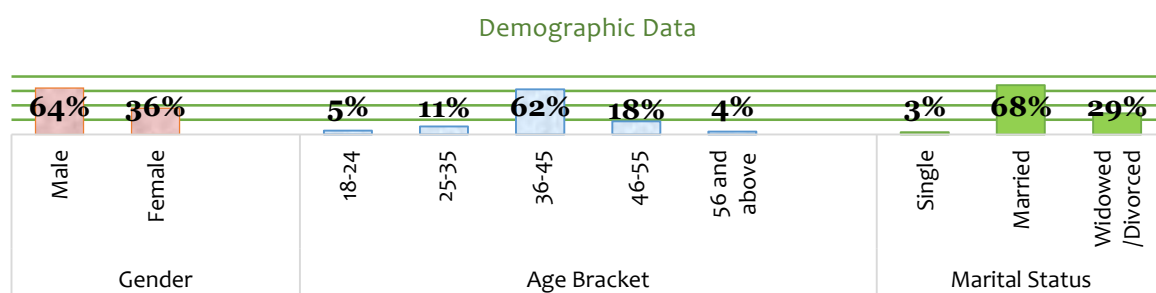


Figure 5: Demographic data

4.2.2 Experience and Land Ownership

Land units of majority small-scale producers’ range between 1 and 3 hectares on average, whereas for medium-scale producers land units’ range between 3 to 15 hectares. Large-scale producers may cultivate from 15 hectares of land for intensive production to 100,000 hectares for extensive production – mainly grazing. With most of the farmers in Kiambu County (Kenya) having less than 0.76 acres of land for both crop and livestock production. However, there was a large difference between the two counties (Kiambu and Kajiado-Kenya) in land distribution. Farmers with less than 0.76 acres of land relied on feed purchases from other farms while majority of farmers with more than 3 acres of land produced their own livestock feed.

Thus, the potential for on-farm feed production differed between the two counties, most small-scale farmers are faced with food insecurity and their main objective is to set food on the table every day. Informal indications show that compared to other families, organic producers are more food secure and are able to sell excess produce, enabling them to educate and clothe their children better than other farmers. Farmers with less than 0.76 acres of land relied on feed purchases from other farms (64.71%) while majority of farmers with more than 3 acres of land produced their own livestock feed (93.33%).

What is not at doubt is that organic production is largely feeding the three countries as the majority of people, especially those living outside large conurbations, eat mostly from their own gardens. And being commonly averse to applying artificial inputs to their own food crops, they mainly eat naturally, organically produced food as shown in the table below;

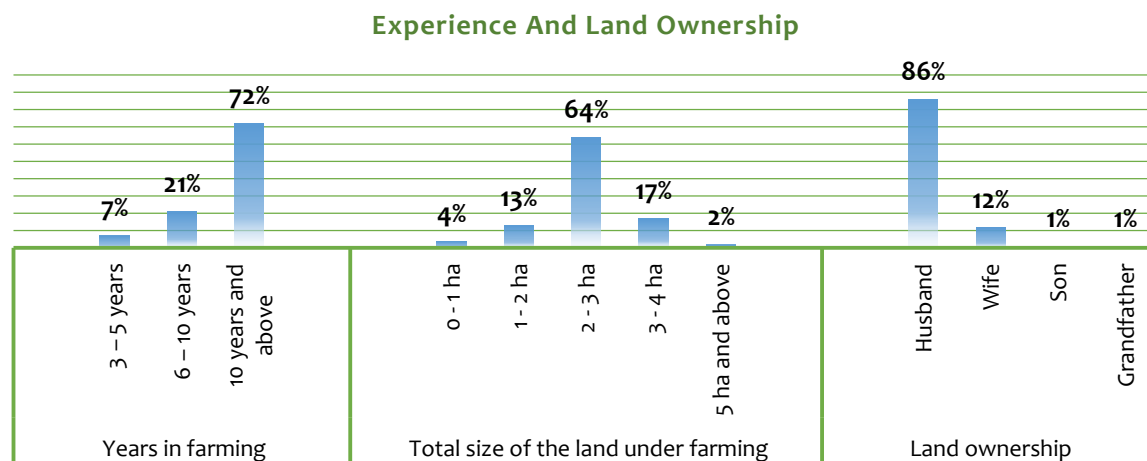


Figure 6: Experience and Land ownership

4.2.3 Reasons for practicing organic agriculture

Organic farming does not mean going back to traditional methods. Many of the farming methods used in the past are still useful today. Organic farming takes the best of these and combines them with modern scientific knowledge. In this way the farmer creates a healthy balance between nature and farming, where crops and animals can grow and thrive. Therefore, the main reasons for practicing organic agriculture as stated by the respondents are;

- i. **Reduces the toxic load:** Buying organic food promotes a less toxic environment for all living things. Artificial fertilizers and herbicides are easily washed from the soil and pollute rivers, lakes and water courses.
- ii. **Builds healthy soil:** Mono-cropping and chemical fertilizer dependency has taken a toll with a loss of top soil. Add to this an equally disturbing loss of micro nutrients and minerals, the soil balance is totally disrupted. Feeding the soil with organic matter instead of ammonia and other synthetic fertilizers has proven to increase nutrients in produce, with higher levels of vitamins and minerals found in organic food.
- iii. **Tastes better and truer flavour:** According to scientists, organic food often tastes better.
- iv. **More Income:** Family farms that are certified organic farms have a double economic benefit: they are profitable and they farm in harmony with their surrounding environment.
- v. **Promotes biodiversity**

4.2.4 The Inter-related Pillars on Ecological Organic Agriculture

According to Padel (2001), to increase rates of organic agriculture adoption, research needs to go beyond the personal characteristics of conventional farmers interested in organic adoption and investigate the structural and institutional framework of adoption. Accordingly, the first objective of this research is to identify policies and institutions that claim to have EOA focus at EAC level and in Kenya and to also identify the policies and institutions that hinder the adoption of EOA at EAC and in Kenya This is accomplished through a review of the development of organic initiatives, programs and policies in the EAC in line with the following pillars:

a) Information Needs and Sources

Table 12: Information Needs and Sources

Strategic Objective	Specific Objectives
To collate, package and disseminate research findings and other relevant information to various stakeholders using various approaches and channels of communication by 2025.	<ul style="list-style-type: none"> i. To sensitize farmers, processors, marketers, other stakeholders on the value of EOA in producing safe, nutritious and healthy products. ii. To systematically inform stakeholders and package information for lobbying and advocacy efforts.

Findings:

Majority (66%) of the respondents have basic knowledge and have known about the organic agriculture for a long time with majority (31% and 30%) saying they first heard about the OA through friends and family members respectively. Other sources of information on OA includes; through talks and seminars (24%), social media (6%), field days (5%) with 2% each through radio/television programs and articles or books on OA. And when asked on who assisted them (respondents) in making up their minds to try farming organically, it was established that the biggest influencers are family members (41%), followed by friends, talks and seminars and in field days as shown in the figure below;

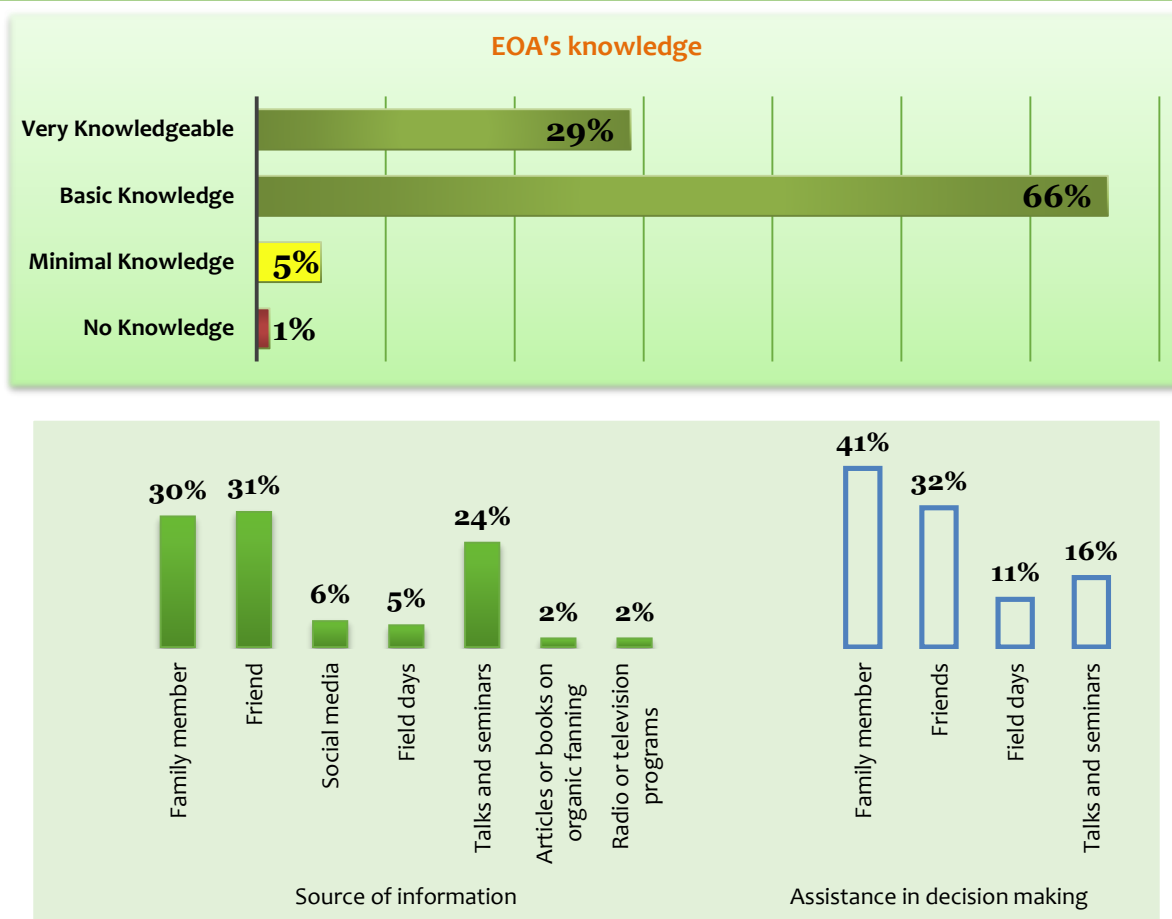


Figure 7: Knowledge on EOA, Source of Information and Assistance in decision making

b) Research, Training and Extension

Table 13: Research, Training and Extension

Strategic Objective	Specific Objectives
To carry out demand-driven, multi-disciplinary, gender sensitive and participatory research, training and extension to support holistic EOA by 2025.	<ul style="list-style-type: none"> i. To undertake participatory generation of knowledge, technology and innovation in EOA to respond to issues facing stakeholders ranging from food, fibre, agroindustry and service providers. ii. To develop/revise client-oriented training curricula of stakeholders in EOA. iii. To facilitate the dissemination of knowledge, technologies, and innovation for use in EOA through extension and advisory services.

Findings:

A lack of enough information about the technical and economic aspects of organic farming is an important limitation of the technology with some farmers confirming that they hesitated before adopting Organic

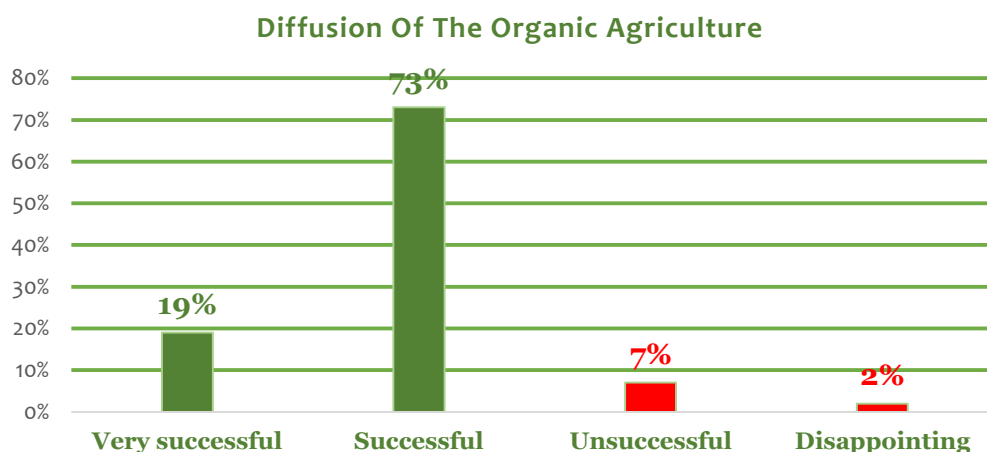
Agriculture due to lack of information. Organic Agriculture has been described as an information-based production system because of its reliance on management rather than capital inputs.

Majority (96%) of small-scale farmers have received training on EOA as a group while 4% have received training both as an individual and group. Research activities are ongoing seeking to find solutions to challenges faced by smallholder farmers in adapting Agro-ecological and organic Agriculture practices in different parts of East Africa Communities. This will ensure the EOAs' goals are supported by competitiveness in a global environment that is rapidly changing and adapting to the challenges brought about by climate change, increased population, diminishing soil fertility among other environmental hazards.

Knowledge created through collaboration of the small-scale farmers, researchers and the stakeholders will have more holistic perspectives on the socioeconomic and cultural factors that characterise the farmers' lives. Such research findings will then be re-packaged for consumption by small scale farmers as well as to influence policy change where necessary.

46% of the farmers reported to have received training on at least one of the practices promoted by EOA-I and the benefits and values obtained, with majority mentioning the food security (49%), poverty alleviation (46.5%) health and nutrition (46%) amongst others

As found out in the study, majority of the respondents (smallholder farmers and pastoralists) are of the opinion that, the diffusion of the organic agriculture to other farming in the communities has been successful, with 19% saying it has been very successful as shown below;



On the few farmer groups reached, all the members have received training on EOA on quite a number EOA-I practices. However, there are areas of training needs for the farmer groups as established from the members; Integrated pest and disease management, farm recording, budgeting and financing, marketing, and animal products processing.

The intention of EOA-I in providing training and training materials as well holding forums, conferences and EOA practices and product marketing through print and electronic media is to promote greater adoption of EOA practices by producers.

c) Value Chain and Market Development (VCMD)

Table 14: VCMD

Strategic Objective	Specific Objectives
To increase the share of quality EOA products at the national, regional and international markets through value chain analysis and market development by 2025	i. To conduct value chain analysis, develop value chain nodes and establish value addition options for EOA products.

Findings:

Majority (89%) of the interviewed respondents have received training on the value chain or market development from the EOA-I in the following areas;

- i. Postharvest, handling and processing,
- ii. Marketing EOA products
- iii. Sorting, grading, packaging and branding

And when asked on areas the EOA-I project has greatly supported the as smallholders or groups, majority (54%) feel they have gotten enough support in terms of trainings on EOA practices as follows:

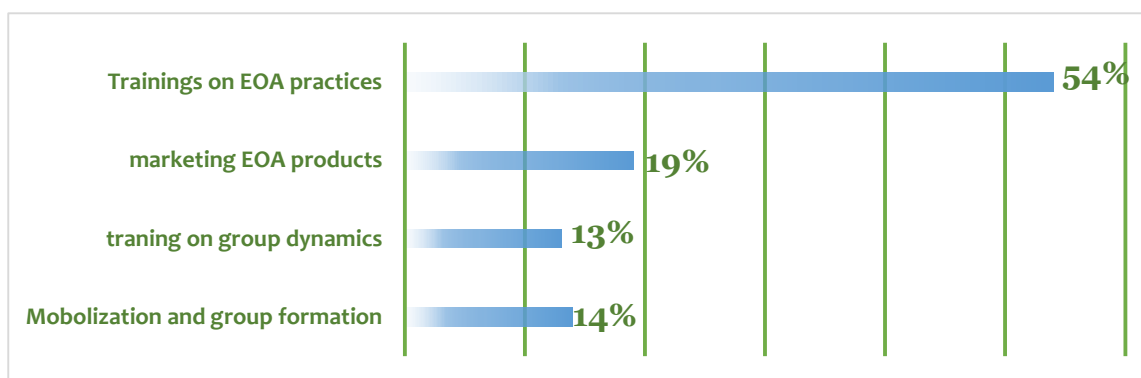


Figure 8: Training on Value Chain From the EOA-I

Majority (68%) of farmers sells their agricultural produce in Local informal Market or to local Traders, Producer Cooperatives, Supermarkets and others.

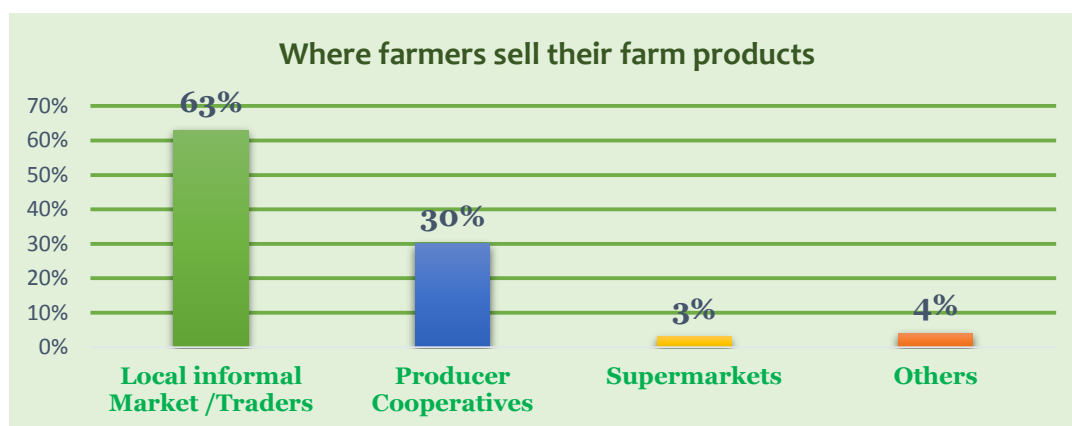


Figure 9: Markets for organic products

d) Networking and Partnerships (NP)

Table 15: Networking and Partnership

Strategic Objective	Specific Objectives
To foster and strengthen synergies among stakeholders in Africa through building networks and partnerships by 2025.	i. To enhance collaboration, information flow, and synergies among actors in Ecological Organic Agriculture in Africa.

Findings:

Majority (86%) of the respondents (small scale farmers and the pastoralists) have received trainings on networking and partnerships and 76% are of the opinion that, they have realized benefits from these trainings under the EOA project. But the smallholder famers (69%) have also experienced challenges in networking and creating partnerships for organic products, limited funds (46%) being the greatest challenge as follows;

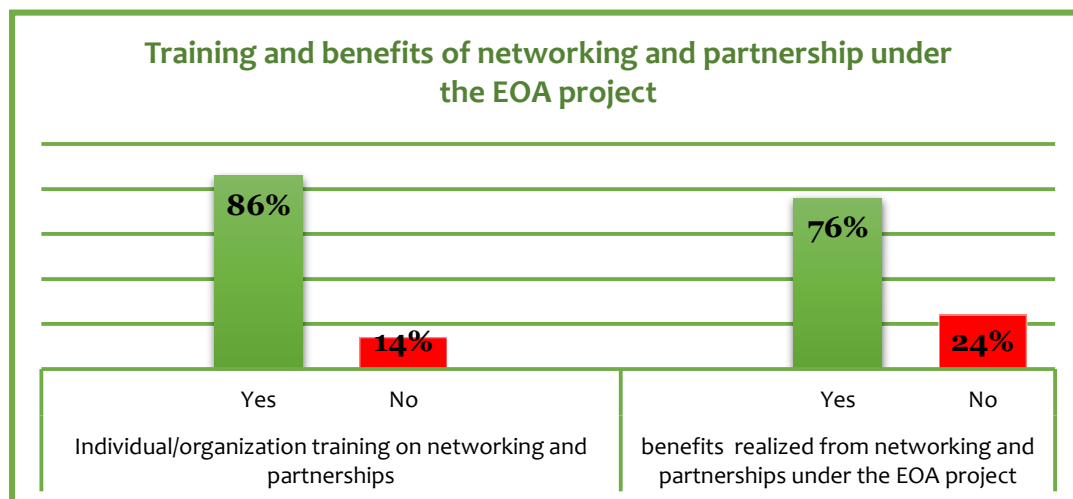


Figure 10: Trainings and benefits of N&P under the EOA Project

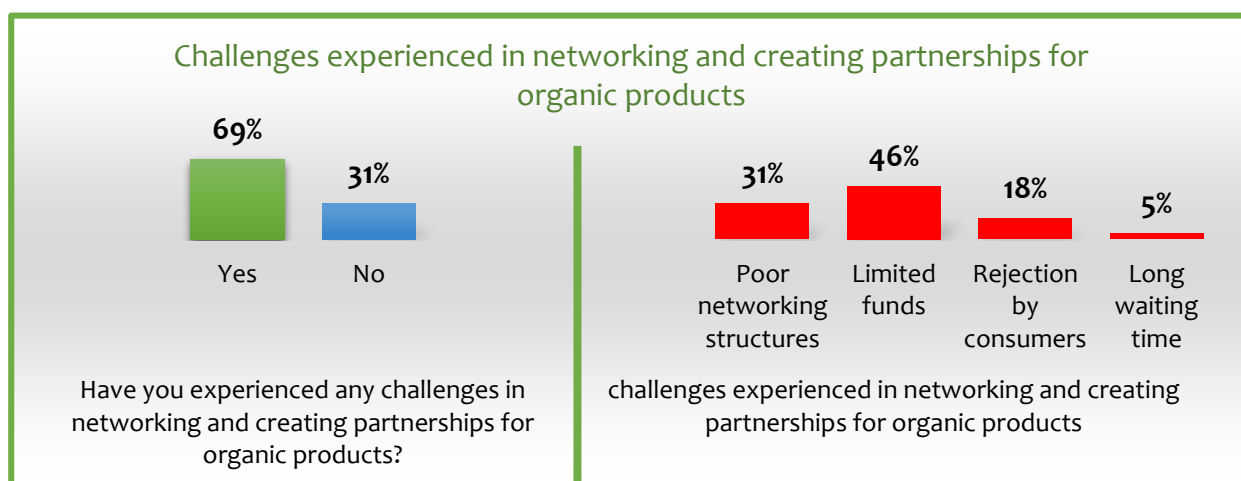


Figure 11: Challenges in networking and creating partnerships

e) Policy and Programme Development (PPD)

Table 16: Policy and Programme Development

Strategic Objective	Specific Objectives
To lobby and advocate for the mainstreaming of EOA programmes, policies, plans and in the agriculture sector as well as other related sectors by 2025.	<ul style="list-style-type: none"> a. To ensure the harmonisation, awareness and common understanding of the concept of ecological organic agriculture (EOA) among all stakeholders. <ul style="list-style-type: none"> i. To gather relevant evidence-based data to use in the development of appropriate lobby messages for promoting EOA. ii. To advocate and lobby national governments and RECs to integrate and align EOA into continental, national and regional policies, plans and regulatory frameworks of the agriculture sector and other relevant line ministries.

4.2.5 Factors associated with adoption of organic production system

Agriculture is unique in that it directly affects many of the very assets on which it relies for success. Agricultural systems at all levels rely on five main types of assets; natural, social, human, physical and financial capital, are now recognized as being important. The basic premise is that sustainable agricultural systems accumulate stocks of these five assets, thereby increasing the per capita endowments of all forms of capital over time. Sustainable agricultural systems tend to have a particularly positive effect on natural, social and human capital, whilst unsustainable systems feedback to deplete these assets, leaving less for future generations.

Organic agriculture is a sustainable and environmentally friendly production system that offers African countries a wide range of economic, environmental, social and cultural benefits. To fully recognize the role of organic agriculture and agroecology citizens and governments must rethink the way in which they evaluate progress and development. Conventional pesticides and fertilizers do not actually produce cheap food when we take into account the hidden negative environmental and public health implications. According to IFOAM, true cost accounting studies are starting to demonstrate, in monetary terms, that organic agriculture is cheaper, for the society overall, than conventional agriculture. The right policies would have the power to optimize public welfare by incentivizing farmers to produce positive externalities of high societal value (IFOAM, 2017).

By supporting the organic sector through the development of enabling policy and institutional support of the sector, governments in East Africa will contribute not only to the revitalizing of rural economies but will also witness positive externalities to the environment, the health of its citizens and realizing food sovereignty of those involved in food production and consumption.

To determine factors associated with adoption of organic agriculture system, the following explanatory variables were considered; age, gender, farming experience, occupation, land size, number of parcels, irrigation, land ownership and the farmer location.

Age, irrigation, land ownership, farming experience and County of residence significantly influenced a farmer’s decision to convert to organic farming. Age, accessibility to irrigation and land ownership targeting to market in retail markets positively influence adoption of organic agriculture system while location of residence has an inverse relationship to adoption of organic vegetable agriculture. The findings presented, demonstrate that social economic factors, farm and market characteristics can significantly explain the adoption of smallholder organic agriculture.

The study established that older farmers were responsive to adoption of organic agriculture compared to the youth. This finding can be explained by the labour intensity associated with organic production system. As expected, farmers who have access to irrigation and own land are more likely to adopt organic production system. Access to irrigation is a key component to planning and ensuring consistency in production. Its presence will therefore contribute to farmers’ motivation to convert. Since organic production system requires investment in establishing cropping systems, canopies and requires planning as observed by Elzakker and Eyhon (2010), farmers on hired or leased land will not be motivated to convert as observed by the study.

The target market was found to influence the decision to convert to organic production system. Majority of farmers expressed the desire to sell their produce to retail markets as compared to wholesale markets. Retail markets are associated with higher prices due to elimination of middlemen and hence the preference compared to wholesale markets.

4.2.6 Impacts Associated with the Uptake of Organic Agriculture

There is growing recognition among policy makers that Organic Agriculture has a significant role to play in addressing the pressing problems of food insecurity, poverty, land degradation and climate change in Africa. Results from both the desk research and interviews indicate Organic Agriculture offers East African smallholders and family farmers a wide range of economic, environmental and social benefits by:

Table 17: Impacts associated with the intake of OA

<p>Positive Impact</p>	<ul style="list-style-type: none"> a. Increasing yields through the use of affordable inputs; b. Improving livelihoods and food security; c. Reducing the financial risk by replacing expensive chemical inputs with locally available renewable resources; d. Integrating traditional farming practices; e. Allowing farmers access to new market opportunities: both at home and abroad; f. Providing much greater resilience of the farming systems in times of climate extremes such as drought and heavy rains; g. Improving human health and maximizing environmental services. h. Sustainable environment and production i. Healthy produce free from chemicals
<p>Given its affordability and the valuable tool-kit provided by Organic Agriculture, government policies could significantly benefit from the integration of organic practices into their agriculture, climate change, food security, and rural development policies and action plans.</p>	

<p>Negative Impact</p>	<p>Some of the challenges facing small scale farmers include;</p> <ol style="list-style-type: none"> a. Inadequate experience in organic agriculture production methods, b. Organic fertilizers to be used for planting crops c. Lack of good roads to transport produce to the market. d. It takes time to build a healthy soil for increased organic food production.
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4.2.7 Importance of organic agriculture

From the interviews conducted by the EOA-I stakeholders and the beneficiaries, it was established that, Organic Agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on natural cycles and systems adapted to local conditions, combining tradition, innovation and science in production systems that promote fair relations along supply chains. Organic production system is managed by integrating cultural, biological and mechanical practices that foster cycling of resources, promote ecological balance and conserve biodiversity. This works under the four principles; health, care, fairness and ecology.

The EOA-I has achieved what it intended to through an organic production system complying with set organic standards which define requirements for production, conversion, handling, storage, processing and packaging. To confirm compliance with standards, farmers undergo a verification system, where they are monitored annually by an independent certification body.

Organic farming system has been found to have environmental, social and economic benefits. For instance, it reduces run off by allowing more water percolation, uses less energy in terms of fossil fuels for farm machinery, fertilizers, seeds and herbicides. It also contributes to building more soil carbon, increasing water holding capacity, retaining more nitrogen in the soil and increasing biodiversity.

Through a holistic health approach, organic agriculture considers human health in-terms of social, mental, physical and ecological wellbeing exhibited in immunity, resilience and regeneration. It also stands for clean environment, protected from destruction through deforestation, soil erosion, extinct plant and animal species.

The principle of organic farming involving a balance in water usage, controlling expenditure on energy and recycling waste, helps optimize the cost of food cultivation. Damaged soil prone to erosion and salinity can be restored by careful administration of micronutrients via crop rotation and green manure, thereby sustaining soil quality for longer. The labor-intensive nature of organic agriculture compared to mechanized helps provide employment for the unemployed in rural areas in EAC villages. Organic agriculture uses biodiversity and conserves it at all levels.

Organic produce has also been found to contain more vitamins, minerals, enzymes and micronutrients compared to conventional produce (Reganold, 2006). Studies demonstrate organic products as safe with no risk of containing chemical residues (UNEP-UNCTAD CBTF, 2008). Organic farming system is shown to be more resilient and less risky thereby providing the base for immense potential towards food security (Pimentel et al., 2005; Kerselaers et al., 2007; UNEP-UNCTAD CBTF, 2008)

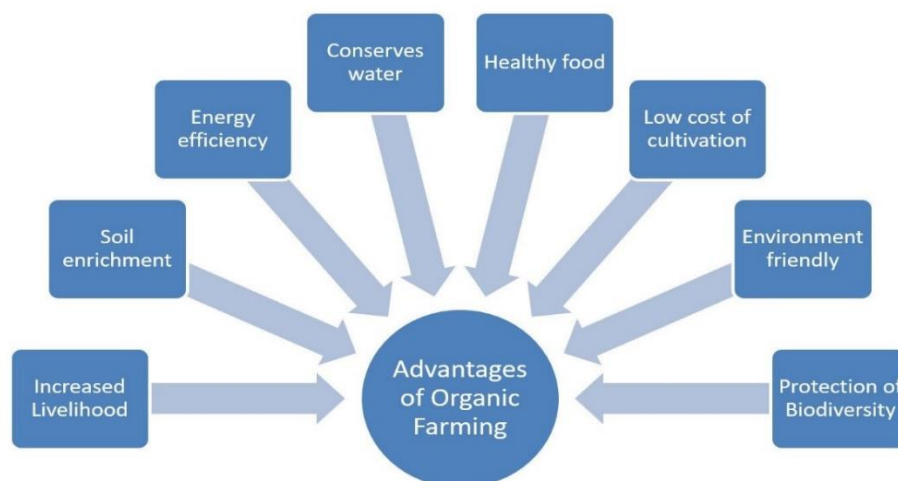


Figure 12: Summary of advantages of Organic Agriculture

According to the majority (66.7%) stakeholders and partners, EOA-Initiative has achieved what it intended to do by; having a strong movement to spearhead the goal of the initiative across Africa and most of the target group are quite aware of benefits of sustainable farming/agroecological farming as opposed to when we started working with them. These intended results were achieved because of the structures in place that are needed to spearhead the goal of the initiative, Partnerships and working in consortiums which pulled organizations with different expertise in different areas e.g. Research, communication, extension work etc. while those who are of the contrary opinion (33.3%) said, in a greater extent, the initiative has achieved miles stones, however if each of the pillar per the strategic plan need to be reviewed, a lot need to be done, for instance the policy pillar, in Kenya there is no public policy where EOA is anchored.

4.2.8 Organic agriculture’s contribution to the Sustainable Development Goals

Farmers represent one third of the world population. Small-scale farmers, many of whom are women, produce about 70% of our planet’s food. As the earth’s primary ecosystem’s managers farmers are best placed to ensure sustainable development (IFOAM, 2014) Organic agriculture has a significant contribution to make in relation to sustainable development and the newly established Sustainable Development Goals. It was established that organic agriculture has the potential to contribute to achieving the SDGs:

Table 18: Organic Agriculture’s contribution to the SDGs

<p>Good health and well-being</p>	<ul style="list-style-type: none"> a. Organic Agriculture directly contributes to an improved health owing to less chemical exposure. b. OA also enhances the availability of and consumption of nutritious food. c. Organic food production involves use of friendly inputs to the soils which are not harmful both to humans and soils and in turn food produced is also healthy with no harmful chemical residues. d. Organic products are produced with least synthetic fertilizer and pesticide hence MR in the foods. In additional, research shows that organic agriculture production increases with time hence household food security e. Supporting nutritious food farming where synthetic chemicals believed to have side effects on healthy living are discouraged
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<p>Quality Education</p>	<ul style="list-style-type: none"> a. This is achieved due increased income hence the families can comfortably send their children to schools; farmers learn vocational skills to bring about their own sustainable development. b. Organic farming has low cost of production hence higher profit margins which helps the smallholder farmers have enough money to provide quality education to their kids c. EOA contributes in improved food education; this is through community education programmes, some tertiary institutions have included EOA in their programmes, in addition some institutions are supporting research in EOA.
<p>Clean water and sanitation</p>	<ul style="list-style-type: none"> a. Organic Agriculture uses farm produced manure and compost that encourages biological processes and prevent health problems arising from water contamination. b. The use of environment friendly inputs in organic farming contributes to clean water and sanitation c. EOA protects the environment since little synthetic chemical remain in the surroundings. Further EOA is an integrated approaches and diversification in crops / plant is encouraged hence soil erosion is reduced
<p>Reasonable Consumption and Production</p>	<ul style="list-style-type: none"> a. Due to high production of food through Organic Agriculture, the growing global population and increasing urbanization can be easily tackled. b. EOA embraces the use of resources within the farm to make inputs and also seed saving. In addition, EOA reduces transportation of goods to reduce negative impact to the environment c. EOA encourages responsible production where future generations are considered thus farming without harming the environment i.e., using ecosystem friendly pest and disease control methods
<p>Climate Change</p>	<ul style="list-style-type: none"> a. Implementing agroecological practices can improve soil quality, reduce greenhouse gas emission and teach farmers to adapt their crops to be climate smart and resilient. b. Organic farming is a sustainable way of production which is environment friendly and resilient to changing climate conditions c. EOA practices has minimal emission of GHG hence a form of mitigation. Also due to diversification of plant and animal as an approach their more adaptability compared with conventional form of agriculture d. EOA encourages integration of farming practices such as agroforestry which has a different positive impact on the climate
<p>Life on land</p>	<ul style="list-style-type: none"> a. Organic agriculture contributes to better soil fertility with an average of 30% high soil organic matter and 14% high soil organic carbon, making organic farming more resilient to drought, more resistant to soil erosion, and efficient at water infiltration. b. Organic farming respects biodiversity c. One principle of EOA is ecology. ensuring protection of biodiversity on land d. Ecological farming encourages close relationship with all living things in the ecosystem and also integrates integrated pest management. This in turn helps to sustain bio diversity.
<p>Zero hunger</p>	<ul style="list-style-type: none"> a. Organic Agriculture plays a significant role in reducing food in security, b. Organic farming is a sustainable production method that ensures continuous food production as the soils are continuously healthy and the inputs required are cost friendly. c. EOA approaches in a form of sustainable agriculture to ensure adequate food production.
<p>No poverty</p>	<ul style="list-style-type: none"> a. Organic agriculture increases farmers' yields, thus reducing poverty and hunger pressures. b. With continuous food availability, farmers sell surplus to get income for other necessities as well as create job opportunities for the rest. c. EOA ensures fairness in access to resources to all gender to reduce the effects of economic, social and natural shocks
<p>Gender equality</p>	<ul style="list-style-type: none"> a. Organic agriculture supports gender equality because of its low start up and production cost and suitability yield facilitate the entry of women. b. EOA ensures fairness in access to resources to all gender to reduce the effects of economic, social and natural shocks

4.3 Suitability, future and Achievements of EOA-I in EAC

Ecological Organic Agriculture (EOA-I) in accordance with the organic principles of health, ecology, fairness and care have the potential and have contributed significantly to future food security and sovereignty relying on integrated, robust, resilient, productive and ecologically intensified systems, which are owned by people practicing organic agriculture in their daily lives.

The avoidance of chemical pesticides creates a healthy environment for all the living organisms. The principles also include future generations and the silent actors' ecosystems, bio-diversity and wild as well as cultivated plant and animal species threatened with eradication. Capacity and knowledge building, education and strengthened social capital are necessary when using OA as development strategies, which stimulate empowerment and gender equity, as well as equality. The principle of Fairness points to an organisation of organic farming and food systems that emphasises gender equality throughout the sector, as well as within the trade system of national, regional and international markets.

4.4 Regulations and Standards for Organic Agriculture

Almost all certified organic production in EAC is certified according to the EU regulation 2092/9.¹⁸ Increasingly, as producers target more distant markets, production is also certified according to the US National Organic Program (NOP), or the organic standards of Japan Agriculture Standards (JAS).

The Kenya Institute of Organic Farming (KIOF) developed a local organic standard for Kenya many years ago and that standard was used to further develop a Kenyan standard. During 2004, KOAN developed its own set of organic standards. The Kenya Bureau of Standards (KBS) also entered the arena and formed a "Technical Committee on Organic Foods". The remit of this committee was to develop a set of organic standards for Kenya. KBS is a statutory governmental organization that develops national standards on various issues (water, food and other products). KOAN has been involved in the development of KBS standards through the involvement of the chairman of the KBS Technical Committee in the KOAN Certification sub-Committee. The chairman of the KOAN Certification sub-Committee is also a member of the KBS Technical Committee, and both were very much involved in developing KOAN standards.

On a study conducted on the legislation and policy environment on Ecological Organic Agriculture in Eastern Africa¹⁹, it was established that:

- i. *The Eastern African Countries are at very different stages in their organic policy formulation processes. All the three countries lack final national organic agriculture policies.*
- ii. *The absence of permanent technical and administrative capacity for policy development is the greatest constraint to policy formulation and consequent implementation*
- iii. *Governments, private sectors, and civil societies require considerable inclusivity, goodwill, and transparency to meaningfully engage in policy formulation and key advocacy efforts*

¹⁸ The EU regulation that defines the standards and inspection measures for any product sold as organic within the European Union.

¹⁹ A three-country study synthesis – Dr. Edith Kareko Munene

- iv. *Political commitment by governments to evidence-based analysis; Country assessments show that the practice of evidence-based policy formulation remains very limited or absent in Eastern Africa. Reliable data and independent capacity are very limited.*

The East African Organic Products Standard (EAOPS) and the East African Organic Mark “Kilimohai” were launched in 2007 (UNEP-UNCTAD and CBTF, 2010). The organic standards describe the specific requirements that must be verified by an accredited certifying agent before products can be classified as organic within the region. The EAOPS and the East Africa organic mark were developed to promote national and regional trade and to build recognition, assurance and confidence among consumers.

As of October 2018, Ethiopia did not have an explicit draft national organic agriculture policy (NOAP) document. It has instead an Ethiopia’s Agriculture Sector Policy and Investment Framework (2010-2020) that does not address/ mention ecological organic agriculture/ organic agriculture. At the same time, a draft policy aimed at streamlining and promoting organic farming in Kenya was in the pipeline, after almost a decade long wait. The draft of the organic agriculture policy developed by agricultural experts from the Ministry of Agriculture, Kenya Agricultural and Livestock Research Organization (KALRO) and Kenya Organic Agriculture Network (KOAN) is complete and ready to be deliberated upon by the Cabinet after which it will be tabled for debate in Parliament. In a nutshell, the process of drafting/formulating the national organic agriculture policy begun in 2009 and is deemed complete

As of October 2018, and after fifteen years have gone by, the draft national organic agriculture policy (NOAP) document for Uganda had been reviewed and was ready to be discussed at the cabinet level, and on top of that, the action plan/ implementation plan for the NOAP is also ready. That said, one major step remained before the draft policy could become an Act – a framework for further guidance and regulations among other things. Uganda leads the way in terms of national government commitment to the ecological organic agriculture sector among the three countries.

4.5 Challenges of Regulations and standards for organic agriculture

Despite recent achievements, the stakeholders face many challenges, some of which are not restricted to EAC but apply in many other developing countries. The main challenges are:

- i. *Lack of an explicit government policy support for organic agriculture: this is responsible for the high dependency on external funds to finance organic agriculture development in the region. It also means that the full force of the country’s resources cannot be mobilised to support this development. While the process to develop relevant policies is on process, there will be a need to ensure that it is stakeholder driven and managed.*
- ii. *Negative impact of other government policies: some other government policies pose a threat to the development of the organic sector. For example, the intentions of the government to permit genetically modified organisms (GMOs) in Uganda could increase the certification costs for the commercial segment of the organic (GMOs) in Uganda could increase the certification costs for the commercial segment of the organic sector, making it less profitable.*

- iii. *The lack of a distinct local organic market:* this makes the commercialised organic agriculture risky as it relies solely on the export market.
- iv. *The lack of an agreed way for harmonising organic standards:* this may make certification based on Ugandan, Tanzanian or regional standards irrelevant on the international market.
- v. *The continuing degradation of the vast areas of agriculture land.* This presents a challenge to the subsector to develop economically viable organic soil fertility replenishment technologies.
- vi. *Lack of information on the extent of traditional agriculture and its compliance with organic certification requirements.* Collecting and analysing such information is costly. NOGAMU has commissioned a study to establish the extent and potential of organic agriculture. The Austrian University of Natural Resources and Life Sciences is preparing an extensive study to determine the potential of organic agriculture in Uganda.

4.6 Gender and Employment, factors in success of EOA-I

Gender: Consideration of the influence of gender on the distribution of land, activities, income and decision-making need to be taken into account in relation to the potential for organic farming strategies since many women do not own land. Women were often responsible for cultivating the small vegetable gardens as a contribution to household food production or for the market. On a small scale, women mainly undertake the production, sometimes primary processing, and the marketing of organic produce/products at the national level. Men usually take charge of larger scale cash crop production and sale to informal and organized markets at both local and national levels (KOAN – informal discussions)

Smallholder management is, in large part, in the hands of men while a great deal of the farming work is executed by women. Due to these inequities, social and economic development in EAC has been, and continues to be, uneven. However, any attempt to improve the lot of women farmers through training and other means must be implemented sensitively and be aimed at the whole community, otherwise it risks actually worsening the women's lives.

Organic agriculture is an alternative source of income for many involved in the initiative. Income is generated within communities through smallholder farmers who sell their products to the operators and through casual labourers who perform various processing operations.

Women in the EAC are in general more prone to poverty and unemployment. Organic agriculture projects in the region have therefore adopted a policy of promoting women and employing them in various operations. This stance has tremendous impact on the social status of women in communities and is an added input for the poverty reduction policy of the country which can improve family livelihoods.

In Uganda organic farming is practiced on smallholder farms, where the majority of work is carried out by the women, supported by other family members. The family owns the land, with direct ownership held generally by the man. The monetary benefits resulting from the farm are controlled by the men, especially where a cash crop such as coffee is being produced. If a farm is organically certified it is normally registered in the name of the man.

Employment: It is difficult to determine how many people are directly employed by organic agriculture, especially small-scale farmers, as the sector is extensive, largely informal and has been evolving over a long period of time. Even information about the employment levels of large-scale producers, who export both certified and non-certified products, is difficult to establish. Information provided by KOPA member companies indicates that between 30 and 1,200 staff members are employed per company. In this regard, commercial organic agriculture can be seen as an important source of employment and an employment opportunity.

4.7 Organic Products Trading

The methods of organic products trading are through exportation, selling the products locally and online marketing using the available platforms. The markets for the organic agriculture are not well establish like in Kenya there are few market outlets in The Hub Karen, Funzone garden estate, Kiserean Ngong Organic market and newly established Kikuyu Organic Market and Kangari Market. The mode of organic certification not Known by most farmers and the public. The participatory Guarantee System should be publicised more. Direct marketing methods, including farmers’ markets, farm stands and pick-your-own, were described as important marketing strategies for small farms. While potentially more lucrative, interviewees also described a number of challenges to direct marketing, including geographic location, language barriers and ability to sell at profitable farmers’ markets

The key players in organic products trading are farmers, middlemen and CSOs who are responsible for marketing and value chain pillar and Kenya Organic Agriculture Network (KOAN), TOAM, ROAM, NOGAMU; they carry out organic certification and gives out the Kilimo Hai Mark in Eastern Africa.

Challenges in organic product markets & marketing: The EAC is taking up a healthier turn for good as people seem to accept the inclusion of organic food as a part of their daily life. Over 80% of the farmers and stakeholders in the study reported marketing challenges. Here are the challenges in organic product markets and marketing;

Table 19: Challenges of organic product markets and marketing

marketing as a major challenge	40%
Volume (too much or too little) was the largest specific marketing challenge	79%
Obtaining organic price premiums	65%
Locating and accessing markets	66%
Competition	89%
Lack of pricing information	58%
Difficulties meeting buyer requirements	38%
Consumer preference for low price product	87%
Retailers prefer conventional over the organic for the quick movement from the shelf	56%
Expensive storage method	49%
Need for the Government support	76%
Initial high cost of production	69%
Most trader use organic to promote their products without any certification	23%

Marketing challenges varied based on farm size, with larger farms more likely to report competition as a challenge and smaller farms citing issues of staff time associated with marketing. Crop type affected marketing challenges somewhat. Survey respondents selling wholesale reported the most marketing problems, while

farmers selling at farmers’ markets reported the fewest problems. Length of time farming was not a significant factor in the survey.

Interviewees identified issues associated with scale as the most significant challenges facing small and mid-sized organic farmers, specifically competition with large scale farmers.

Interviews with stakeholders shed light on the challenges of working with small farmers from a buyer’s perspective. These challenges include price, transaction costs, quality, appearance, food safety, consistency, volume and availability, knowledge of business, and communication. Small scale farmers and key informants, were very interested in seeing the development of new intermediaries and distributors to address these issues, such as cooperative marketing systems, distribution hubs to aggregate product from multiple farmers and sympathetic distributors that specialize in working with smaller-scale farms.

Summary on Organic Products’ Market and Marketing

Small scale organic farmers themselves can improve their marketing opportunities by:

- a) Differentiating themselves from large organic and small conventional farms through direct relationships with customers and telling the story of their farms.
- b) Competing on values rather than price.
- c) Developing diversified production and marketing systems.
- d) Working together to access larger markets through marketing cooperatives and distribution hubs
- e) When selling wholesale, focusing on quality and appearance, packing, frequent communication, and developing knowledge of the wholesale market.
- f) Sharing information with each other via farmer-to-farmer networks.

4.8 Policy and Legislation

4.8.1 Requirements for organic production:

During the study, it was established that anybody planning or is in the organic agriculture must meet the following requirements;

Table 20: Organic production requirements

General	a. The requirements of this clause shall apply to all categories of organic production and to all operators.
Documentation and transparency	<ul style="list-style-type: none"> a. The operator shall maintain records of the production, appropriate for the scale of production and the ability of the operator. b. The operator shall give interested parties relevant information about the production. c. The operator shall maintain a system for traceability of organic products.
	<ul style="list-style-type: none"> b. The operator shall avoid using chemical products that may endanger human health or the environment. Where there are products that are considered to be less harmful, they shall be used. c. The operator shall take relevant precautionary measures to avoid the contamination of organic sites and products. Where there is a reasonable suspicion of substantial contamination by, for example, soil, water, air, inputs or ingredients, appropriate actions shall be taken. Litter and production waste, both

	<p>on farms and in processing, shall be handled in such a way that they do not contaminate the organic products or the environment. Chemical products shall be properly labelled and safely stored.</p> <p>d. Contamination of organic products that results from circumstances beyond the control of the operator may alter the organic status of the operation, the product or both.</p>
Genetically Modified Organisms (GMOs)	<p>a. Genetically modified organisms or their derivatives shall not be used or introduced through negligence or oversight. This includes animals, seed, and propagation material, farm inputs such as fertilizers, soil conditioners and crop-protection materials.</p> <p>b. Ingredients, additives or processing aids derived from GMOs shall not be used in organic processing.</p> <p>c. Inputs, processing aids, and ingredients shall be traced back one step in the biological chain from which they are produced to verify that they are not derived from GMOs.</p> <p>d. Genetically modified organisms shall not be used in the conventional production on farms that are not fully converted to organic production.</p>
Social justice	<p>a. Employees and workers shall be guaranteed basic human rights and fair working conditions in accordance with national and international conventions and laws.</p> <p>b. The operator shall not use forced or involuntary labour.</p> <p>c. Employees, casual workers and contractors of organic operations shall have the freedom to associate, the right to organize, and the right to bargain collectively.</p> <p>d. Employees shall have equal opportunities and equal wages when performing the same level of work, regardless of colour, creed, ethnicity or gender.</p> <p>e. The operator shall not hire child labour. Children may work on their family's farm or a neighbouring farm provided that such work is not dangerous to their health and safety and does not jeopardize their educational, moral, social and physical development. Such work shall be supervised by adults and authorized by a legal guardian.</p> <p>f. The operator shall provide adequate health and safety measures for employees, casual workers and contractors.</p>
Adherence to relevant legislation	<p>a. The operator shall act in accordance with relevant legislation</p>
Knowledge about organic production	<p>a. The operator shall ensure that all persons involved in organic production have adequate knowledge of organic production and the relevant parts of this standard.</p>

4.8.2 Ecological Organic Agriculture-Initiative Policies at EAC level and in Kenya

It's only Uganda in the region who passed their National Organic Agriculture Policy in 2020. Other countries are yet to have policies/strategies. The Kenyan Agriculture sector where organic agriculture falls is regulated by policies developed by the government, led by the Ministry of Agriculture. Since independence, Kenya has seen evolution of agriculture policies which basically looked at the periods when there was a lot of government controls in agriculture to the phase where liberalization has reduced government intervention.

Policy reforms in Kenya have revolved around: *Institutional frameworks, Agricultural taxation Production and infrastructure, Value addition and Marketing*. There has not been any deliberate attempt to analyse and present Kenyans with policy options around agricultural farming practices such as, conventional agriculture, genetic engineering and/or organic agriculture

There are no official policies at the national level for organic agriculture in Kenya with an exception of some counties in Kenya, even though there is increasing public interest and recognition of organic agriculture. The organic sector has developed to date without any explicit official government policy support. Past attempts by the ABLH, KIOF, KOAN and other interested parties to get the government to work on this issue has received a cold reception. Despite that, the sector has benefited directly from two main government policies: Firstly, the *NGO Coordination Act (1990) which basically recognizes the work of NGOs as co-workers in the rural development arena* and secondly, *the economic liberalization policies of the late 1980s and early 1990s, which created an environment for free enterprise with minimum government intervention and controls in the agriculture sector.* Indirectly, these created a favourable environment for the development of the organic industry and the sector has been able to exploit these policy opportunities.

Players in the ecological sector believe that it cannot develop to its full potential without government support. Among the issues that require government support are *curriculum development, harmonization, validation of organic research findings by the government research authorities, and mainstreaming of organic agriculture.*

The government has for instance come up with the Strategy for Revitalizing Agriculture (SRA) and a draft of National Food and Nutrition Policy. In their objectives and scope, these tools do not give any mention to the direction the government wants to take on OA and its integration in the agriculture sector reforms. Operation in the OA is still left ungoverned with a lot of intervention coming from the CSOs which conduct research, training, certification promotion, marketing and lobbying and advocacy.

Currently, the agricultural sector in Kenya is governed by 131 pieces of legislation including legislation for supporting institutions. *The principal Act governing the agriculture sector is the Agriculture Act Chapter 318.* The Act does not give specific reference to Organic Agriculture (OA) while most provisions are not relevant to the current production trends. Examples are as below;

- i. *Part VIII, Section 100. The Act ensured production of a sufficiency of food for the requirements of Kenya. The Minister shall declare essential crops necessary for good land management and for the requirements of Kenya or obligations to supply East Africa. Sub-section (3) states that scheduled crops include maize as defined in the maize marketing Act. Elsewhere in section 13 maize is defined by the National Cereals and Produce Board Act.*
- ii. *Part XII, Section 184-Rules for the Preservation, Utilization and Development of Agricultural land. Reference is made to Good estate management, good husbandry, and reasonable standard of efficient production. Practices on land may also be covered by Subsidiary legislation, Section 48, The Agriculture (basic land usage) Rules.*

No mention is referred to OA with regard to institutional or regulatory framework and presumption has been that Organic Agriculture is governed by the same legislation as conventional agriculture. Organic Agriculture will

in the foreseeable future be influenced by government driven reform initiatives in the agricultural sector as indicated below.

The large number of legislative Acts will be reduced to pave way for the development of an all-encompassing Act allowing for increased stakeholder self-regulation by sector players. This will be achieved by; -

- i) *Review and harmonization of agricultural legislation. The objective is to have a single generic all-encompassing Agriculture Act that will allow for expeditious policy changes as circumstances demand.*
- ii) *Review and harmonization of agricultural legislation to empower farmers and farmer organization control production and marketing of their produce.*
- iii) *Under the Privatization Bill, the role of the government in agriculture will be limited to an extent, regulation aimed at maintaining the accepted standards of safety while shedding off commercial functions.*
- iv) *Merger of research institutions into one umbrella body.*
- v) *Facilitating the capacity building of farmers organizations take up regulatory roles for their commodities including aspects of inspection and quality control.*
- vi) *Strengthening the capacity of parastatals responsible for quality control.*
- vii) *Reviewing and harmonizing legislation of collaborating ministries and institutions.*

There are two organic certification bodies in Kenya, AfriCert and EnCert. UgoCert is based on Uganda and TanCert in Tanzania. EnCert has a clear focus on certification for the domestic market, while AfriCert is ISO 65 accredited for EurepGap. TanCert and UgoCert are both in the process of accreditation to ISO 65 and the IFOAM Norms. TanCert has agreements with IMO and bio. inspecta and UgoCert with IMO and Ceres. Both have been heavily supported by the EPOPA program, but support is now phasing out and will cease mid-2008. Otherwise, certification is offered by European based certification bodies such as IMO, Ceres, EcoCert, BCS, Soil Association and bio-inspecta. Apart from third-party certification, the National Organic Agriculture Movements, often in cooperation with NGOs, are implementing guarantee schemes for smallholder along the lines of Participatory Guarantee Systems (PGS).

Local organic certification bodies were established in Uganda and Tanzania in 2003, with support from the Sida-financed EPOPA program (www.epopa.info). In Kenya two local bodies offer organic certification. The local certification bodies in Uganda and Tanzania developed local organic standards, and the Kenya Organic Agriculture Movement (KOAN) did the same in Kenya. In 2005, the Bureaus of standards in Kenya and Tanzania showed interest in this and started to develop own public standards for organic, in the case of Kenya they were completed and gazetted in 2006.

Being trained by IFOAM, UNEP and UNCTAD the EAC stakeholders developed a regional standard in the period December 2005 to January 2007. The main work was done in a technical working group comprising representatives of national organic movement, certification bodies and bureaus of standards. RBS participated

in this process. In April 2007 the council of the EAC approved the East African Organic Products Standard (EAOPS). At this time Burundi and Rwanda had joined the EAC and the standard therefore also applies there.

The following are identified and analysed national policies and legislations though they are not directly touching on organic agriculture;

National Policies and Legislation

1. *The Constitution of Kenya, 2010: The Constitution is the foundation of public policies and legislation at the national and county levels.*
2. *The Kenya Vision 2030: The Sessional Paper Number 10 of 2012 on the Kenya Vision 2030 is the national economic policy for all sectors, including agriculture and the environment.*
3. *Legislation Implementing Agricultural-Related Policy Issues: A number of legal instruments implement agricultural-related policy issues, including the Agriculture, Fisheries and Food Authority (AFFA)*
4. *The National Agricultural Research Systems (NARS) Policy: provides the foundation for research in the agricultural sector, though it was never submitted to Parliament for debate and adoption. It aims at achieving reforms in the Kenyan agricultural research systems to support the development of an innovative, commercially oriented, and modern agricultural sector.*
5. *National Agricultural Sector Extension Policy: Policy has the objective of empowering extension clientele through public private shared service provision under an independent regulator.*
6. *Environment and Development Policy, National Climatic Change Strategy and Environmental Management and Coordination Act: Policy directs the conservation of natural resources including air, land, flora and fauna, the promotion of conservation of soil fertility, biodiversity, the fostering of afforestation, and the protection of catchment areas.*
7. *National Social Protection Policy: Policy has the goal of ensuring that all Kenyans attain social and economic development.*
8. *Biotechnology Policy and Biosafety Act: Policy promotes safe biotechnology.*
9. *Policy on Development of Micro- and Small Enterprises for Wealth and Employment Creation for Poverty Reduction: Policy aims at achieving a competitive Micro- and Small Enterprises (MSE's), including commercial small-scale agriculture.*
10. *Cooperatives Policy reflected Cooperative Societies Act: Provides for the constitution, registration and regulation of cooperative societies.*
11. *Forests Policy and Forests Act: Policy has the objective of sustainable management of forests and trees*
12. *National Food and Nutritional Security Policy: The Policy directs the promotion of sustainable food production systems with particular attention to increasing soil fertility, agro-biodiversity, organic methods and proper range and livestock management practices*
13. *National Livestock Policy: Policy aims at achieving sustainable development of the livestock industry while improving and conserving animal genetic resources.*
14. *The National Land Policy;*

15. *The Environment and Development Policy; The Policy attributes adverse climatic changes to deforestation and “greenhouse gases”. It directs the provision of economic and financial incentives for sustainable utilization, conservation, and management of natural resources, the development biotechnology guidelines while encouraging beneficial genetic engineering.*
16. *The National Policy on Water Resources Management and Development: The Policy directs the formulation of a national water conservation programme through which water catchments and other sources would be protected, and reservoirs for run-off water and for regulating river-flows would be constructed.*
17. *The National Pharmaceutical Policy*
18. *National Wildlife Conservation and Management Policy*
19. *The National Policy for Water Resources Management and Development*
20. *The Water Act*
21. *The Agriculture, Fisheries and Food Authority Act*
22. *The Crops Act*
23. *The Agricultural Finance Act*
24. *The Seeds and Plant Varieties Act*
25. *The Kenya Agriculture, Livestock Research Organization Act*
26. *The Science, Technology and Innovations Act*
27. *The Land Act*
28. *The Environmental Management and Coordination Act*
29. *The Social Assistance Act*
30. *The Biosafety Act*
31. *The Micro and Small Enterprises Act*
32. *The Forests Act*33. *The Pest Control Products Act*
33. *The Animal Diseases Act*
34. *The Fertilizers and Animal Foodstuffs Act*
35. *The Prevention of Cruelty to Animals Act*
36. *The Veterinary Surgeons and Veterinary Paraprofessionals Act*
37. *The Kenya Plant Health Inspectorate Services Order*
38. *Wildlife (Conservation and Management) Act*

County Policies

1. *Baringo CIDP: The CIDP directs the proper utilization of resources in a sustainable manner generally but with bias to conservation of forests. It also encourages use of traditional high value crop seeds. It directs the upgrading of livestock and also the promotion of good livestock health through disease and vector management.*
2. *Bomet CIDP: The CIDP provides for the mission of equity and “sustainable environment”. It directs the transfer of “appropriate technology”, which is undefined, but which opens room for incorporation of the technology on elum*

3. Bungoma CIDP: The CIDP has largely integrated most of the elum principle and practices and has paid significant attention on the subject.
4. Busia CIDP: It directs integration of smallholders and equitable distribution of resources
5. Embu CIDP: It directs sustainable land management by promoting the adoption of proper farming methods, though details of what is proper are not provided.
6. Homa Bay CIDP: It directs strengthening of extension services for adoption of appropriate technologies, “protected farming” (though undefined), and promotion of soil and water conservation, conservation agriculture, agroforestry, carbon sinks and organic inputs. Farmers would be supported to integrate and also adopt mechanization. It supports the promotion of access to financial services and support with farm inputs. It provides for disease, vector and pest control to improve livestock health as well as breed and feeds improvement to increase production. It directs development of a post-harvest handling improvement scheme and the general promotion of agricultural produce marketing.
7. Isiolo CIDP: It directs the training of farmers on environmental conservation and appropriate farming methods so as to reduce environmental degradation and also directs their support to develop resilience and adaptation skills
8. Kajiado CIDP: provides for sustainable socioeconomic development as a mission of the county government
9. Kakamega CIDP: It directs the sustainable and intensive land use management practices which it defines as the use of fertilizers, modern methods of farming, use of suitable highly yielding seeds and intensification of extension services.
10. Kiambu CIDP: The CIDP integrates the principle of sustainable development but under labour and trade development and in educational development.
11. Kericho CIDP: the CIDP partially integrates the elum principles and practices
12. Kirinyaga CIDP: It integrates sustainable development as a county government vision and also in policy directions in livestock and forestry development, in infrastructure, in trade, in environment and in education. It directs sustainable land management. It recognizes an existing status of low soil fertility in the county which is noted as cause of low agricultural productivity.
13. Kisumu CIDP: The CIDP has the mission of improving livelihoods through promotion of competitive agriculture, sustainable livestock and fisheries sub-sectors, equitable distribution and sustainable management of land resources and sustainable management of forestry and wildlife resources. It sets out to improve livestock and plant health and trade, improve breeds to get better production and encourage fodder production and conservation.
14. Kitui CIDP; The CIDP capture the mission of the county government to include sustainable socio-economic development.
15. Laikipia CIDP: The CIDP is strong on integration of most of elum principles and practices, though the document is poorly bulleted and therefore difficult to reference specific paragraphs.
16. Machakos County Agricultural Development Fund Act: The Machakos County Agricultural Development Fund Act, Number 6 of 2014 is a pronouncement of public policy in the county. The Act provides for the

growth and development of the agricultural sector, enhancement of production and value addition, and marketing of agricultural products in the county.

17. *Makueni CIDP: It has the objective of sustainable utilization of resources like land, with emphasis on conservation of forests and water catchments areas, reducing soil erosion, increasing land under farming, environmental conservation and promotion of farm forestry and agroforestry.*
18. *Meru CIDP: It directs improvement in food storage facilities, animal & produce markets, seed bulking, breed improvement & fingerling production, value addition & processing, technology and knowledge transfer through extension services, support for supply of production inputs and affordable credit and for marketing, animal, fish and crop disease, vector, & pest management using the integrated pest and disease management system, and the promotion of soil fertility and water management and conservation.*
19. *Migori CIDP: The Popular Version of the CIDP directs the strengthening and improvement of farmers' access to subsidized farm inputs, including credit financing, research and extension services, the diversification of agricultural production, irrigated farming of high-value crops, breed improvement, disease and pest control, fodder bulking, improvement in marketing and sustainable capture fisheries.*
20. *Murang'a CIDP: It provides for promotion of reforestation to replace the trees that have been felled in search of wood fuel while exploring other alternatives of fuel such as biogas and solar energy.*
21. *Nairobi CIDP: The CIDP directs the integration of the principles of sustainable development into county policies and programmes. It also upholds the direction under physical planning on the promotion of sustainable land and urban development. It does not explicitly provide for maintenance of soil health but undertakes to reduce environment degradation generally in the hilly areas*
22. *Nakuru CIDP: It sets out to promote sustainable development through intensification of extension services, promotion of agro-forestry and orphaned crops, afforestation, irrigation, and support for environmental conservation.*
23. *Nyandarua CIDP: It encourages organic farming, soil and water conservation, and an improved land use management by promoting soil conservation and intensive farming*
24. *Nyeri CIDP: has integrated sustainable development as a mission of the county government and as an objective in the area of environmental management, in livestock and fisheries development, in education and in land management. It also integrates sustainable land use as a vision of the lands subsector. It promotes soil, water and environmental conservation. On soil fertility it promotes policies that conflict between organic and non-organic farming, i.e., use of both chemical and organic fertilizers, respectively*
25. *Samburu CIDP: The CIDP assures sustainable development, including sustainable development and utilization of the land resource.*
26. *Siaya CIDP: It sets out the framework for increasing the quality and quantity of farm produce using sustainable interventions including improving mechanization, provision of quality and affordable farm inputs such as fertilizers, plant and livestock health measures, improvement of breeds, feed supply, seed-bulking, diversification of crops with introduction of high-value crops and cash crops as well as on-farm and communal post-harvest food storage.*

27. *Taita-Taveta CIDP: The CIDP has largely integrated many of the elum principles and practices. Though it has not directly captured sustainable development in agriculture,*
28. *Tharaka Nithi CIDP: It directs sustainable land management*
29. *Trans Nzoia CIDP: It aims to improve livelihoods through sustainable use, conservation and management of forests and trees. In agricultural sector, it aims to increase agricultural production in an environmentally sustainable manner.*
30. *Vihiga CIDP: The CIDP sets out to reduce poverty, promote food security, develop agro-industries and create rural employment through sustainable utilization of the rural resources. It directs rehabilitation and improvement of the environment through soil rehabilitation, equitable distribution and sustainable management of land, promotion of green technology, agro-forestry, organic manure, farm-forestry, carbon-sink markets, water-harvesting, commercial high-value tree plantations, better farm-management and use, biodiversity conservation, forest conservation, afforestation, sustainable land use and climate change mitigation.*
31. *West Pokot CIDP: The CIDP aims at achieving equitable and sustainable social-economic development. In agricultural sector, it aims at equitable distribution and sustainable management of land resources.*
32. *The Kitui County Sorghum Act*
33. *The Kitui County Markets and Farm Produce Trade Act*
34. *The Kitui Charcoal Management Act*
35. *The Machakos County Agricultural Development Fund Act*
36. *The Meru County Microfinance Corporation Act*
37. *The Meru County Co-operatives Societies Act*

Regional Policies

- i. *Treaty for the Establishment of the East African Community (EAC): The Treaty binds Kenya and other Partner States to protect and conserve natural resources*
- ii. *EAC Fourth Development Strategy: The Strategy promotes agricultural productivity and sustainable natural resources management, environmental conservation and mitigation of the effects of climatic change.*
- iii. *EAC Agriculture and Rural Development Policy: The Policy aims at achieving food security under sustainable use and management of soil and other natural resources.*
- iv. *Comprehensive Africa Agriculture Development Programme (CAADP): The Policy aim at increasing agricultural growth rates through extending the area under sustainable land management*
- v. *Maputo Declaration on Agriculture and Food Security in Africa: The Policy provides for sound agricultural policies and over 10% of the national budgets*

EOA-I Key Achievements towards:²⁰

i. Goal Attainment on National Policies and Plans

Table 21: Goal Attainment on National Policies and Plans

	Kenya	Uganda	Tanzania	Rwanda	Ethiopia
Policies	There is an ongoing process of developing a National EOA strategies led by KOAN and Ministry of Agriculture	<ul style="list-style-type: none"> Draft Uganda Organic Agriculture Policy; Awaits Ministry of Finance to provide a certificate of financial implication National Fertilizer Policy (NFP) 			
Plans		<ul style="list-style-type: none"> National Agriculture Sector Strategic Plan 2015/16-2019/20. 	<ul style="list-style-type: none"> Greening Island Initiative plan Tanzania Agricultural Sector Development Programme (ASDP II) Organic Sector Development Program (OSDP) Organic Policy Action Paper (OPAP) 		

ii. Goal Attainment-Focus on University Programmes

Table 22: Goal Attainment-Focus on University Programmes

Country	Programme
Kenya	<ul style="list-style-type: none"> <i>Egerton University</i>: Organic Agriculture course units within the undergraduate degree programmes, and Masters Students carrying out research on Organic agriculture related studies. <i>Jomo Kenyatta University of Agriculture and Technology (JKUAT)</i> has a Diploma in Organic Agriculture Course that is designed to produce technical level manpower with knowledge and skills required for development of the organic agriculture value chain.
Uganda	<ul style="list-style-type: none"> At <i>Makerere University</i>: - PhD. and Masters Students are carrying out research on organic Agriculture while the undergraduates are exposed to organic Agriculture through course units. At <i>Uganda Martyrs University Nkozi</i> –there is a fully-fledged undergraduate course on organic Agriculture, have developed a Masters course in Agro Ecology, and a PhD programme in agro ecology and livelihood systems.
Tanzania	<ul style="list-style-type: none"> There are ongoing Organic Agriculture Research programmes at PhD. And Masters levels at <i>Sokoine University</i>. The first 2 PhDs to graduate in 2018. Dar es Salaam

²⁰ Ecological Organic Agriculture Initiative in Africa - key achievements, lessons learnt and future prospects of EOA Initiative

	University is conducting research around EOA and is also playing a front role in EOA curriculum review.
Rwanda	
Ethiopia	<ul style="list-style-type: none"> • <i>Mekele University.</i> There are Organic Agriculture course units within the Degree programmes, and Masters Students carrying out research on Organic agriculture related studies

iii. Goal Attainment-Focus on Standards and Certification

Kilimohai has been in existence since 2007. Its main purpose is to maintain a single organic standard for organic agriculture production under East African conditions. The EOA-I continued to support certification of Farmers for the Kilimo Hai Mark;

Table 23: Goal Attainment-Focus on Standards and Certification

Country	Programme
Kenya	<ul style="list-style-type: none"> • 15 PGS certification.
Uganda	<ul style="list-style-type: none"> • 11 Local Inspectors trained in PGS • 226 farmers trained in ICS
Tanzania	<ul style="list-style-type: none"> • 42 PGS have been developed; 12 bear active licenses under the East African Organic Products Standard. • 6 ICS groups have been formed.
Rwanda	
Ethiopia	<ul style="list-style-type: none"> • 78 producers sensitized on PGS and 50 vegetable farmers undergoing PGS process.

4.8.3 Policies hindering the Adoption of EOA-I in EAC

Farmers are, by and large, responding rationally to the conditions they work under, including the policy environment. Most of the policy measures used to support agriculture discourage sustainable and organic farming. In the short term, this means that farmers switching from high-input to resource-conserving technologies cannot do so without incurring some transition costs. To some extent, one can claim that the premium-priced organic market lets the consumers carry the burden of failures in policy. Whilst the organic market has been instrumental for driving the development, it is questionable in the longer term if consumers are willing to, or if they should, compensate for policy failures by paying higher prices for organic products.

It is essential that organic policy development consider the broader policy framework as that could negate efforts to develop the organic sector. To review the overall policies affecting the agriculture sector is therefore an essential part of organic policy development. That said, it might be much more difficult to change overall policies, than to introduce specific organic measures. Hence, policies hindering the full adoption of EOA-I in EAC are:

Subsidies on chemical fertilizers or synthetic pesticides: the EAC subsidize agricultural inputs, and particularly fertilizers, in an attempt to increase agricultural production. When the structure of the subsidy program is such that only commercial chemical fertilizers are subsidized and organic commercial fertilizers and on-farm produced fertilizers are not, the policy environment works against organic agriculture. Similarly, when the country applies reduced value-added tax (VAT) for commercial fertilizers and pesticides, this works as a quasi-subsidization of

conventional agriculture, at the expense of organic agriculture. It is therefore crucial that, in a comprehensive strategy to promote organic agriculture, the issue of subsidies for conventional inputs is considered, and ideally reversed. This has been successfully done in a few countries, either in a deliberate attempt to promote organic agriculture or simply as part of a strategy to decrease the use of toxic and environmentally damaging substances in agriculture.

Approval of pesticides imports and pesticide use: Mass pesticide spraying is one of the government decisions that can have the single most sudden detrimental impact on a national organic sector. *A case in point is the story of DDT spraying to combat malaria in Uganda in 2008. That year, the Ugandan Ministry of Health took the decision to apply Dichlorodiphenyltrichloroethane (DDT) to control malaria on a large scale. Each house, in an entire region, received compulsory DDT spraying, and even though the spraying was indoor residual spray, the contamination impact on organic products that are stored in-house after the harvest was significant and expected to last many years after the spraying.*

Support for energy crops (biogas and biofuel plants): Studies²¹ have shown that biofuels and biogas competitiveness depend heavily on government subsidies, exemption from petroleum taxes and other policy instruments (such as obligatory blending or 20 years payment guarantee). Excessive policy support towards energy crops has a negative impact on organic farming development, through land and price competition. As a result, the demand for energy crops has considerably increased and led to high crop and land prices. This has had, according to most experts' opinions, a negative impact on organic farming development, with the government's targets for organic growth not being met.

Competing environmental schemes: There are diverging opinions on the extent to which non-organic environmental schemes compete with organic. There are a variety of agri-environmental schemes that support certain practices that go in the direction of organic, but which are not fully organic. Those can either support producers directly (policy measures such as subsidies) or they can be consumer-oriented labels that aim to influence consumers' choice in favour of more environmentally friendly production systems. No general position can be taken on whether all such schemes are good or bad for organic. On one hand, they promote (and sometimes mainstream) practices that often go in the direction of organic agriculture. On the other hand, they can compete with the choice of going fully organic, either at the level of the producer's choice or at the level of the consumer choice.

Unfavourable regulations on farm-made and organic fertilizers, plant protection products and farmers seeds: Governments undertaking a strategic plan for organic agriculture and markets should always undertake a review of current fertilizer and pesticide regulations and rectify any provisions that deter use of organic inputs. This includes any provision that would deter the on-farm preparation and use of organic inputs. In some developed countries with complex registration requirements, it is technically illegal for farmers to use any unregistered pesticide or fertilizer, even if it is biologically based and prepared on farm. Attention should also be placed on

²¹ E.g. Banse M. et al, 2008, Impact of EU Biofuel Policies on World Agricultural and Food Markets.

the legal requirements linked to the registration of crop varieties, as registration requirements can be too complex and unsuitable to the need of the organic sector.

Unfavourable agricultural risk management programs (crop failure compensation schemes, etc.): Some countries manage a government-sponsored farm insurance program to help their farmers to cope with risks such as catastrophic weather. Other states give financial compensation (using calamities funds or ad-hoc aids) to farmers in cases of calamities or natural catastrophes, in order to save a particular sector. Such risk management programs are generally a positive thing for agriculture, including organic agriculture. However, some of those programs disadvantage organic farmers compared to conventional farmers, for example, by not taking into account that the market price for organic products is higher (applying the same price level to all farmers), or by focusing on a few commodities (when organic farms are more diverse).

The Kenya National Agricultural Insurance Program launched in 2016 is the largest government-sponsored agricultural insurance program in Africa and is one that is clearly unfavourable to organic farming. The program is a partnership between the government and the private sector, particularly the Syngenta Foundation with its own insurance company. The program is a package that ties crop insurance to input purchases and extension messages that promote the use of those inputs.

Laws related to farmland access: In many parts of the world, increased population and urbanization pressure and the need for more agricultural products (whether food, fibres, biofuel, biomaterials or for other usage), as well as new restrictions on clearing new land (positive for biodiversity) have led to land access becoming an increasing problem for anyone interested to start farming or to expand their farming area. Just like in EAC, the price of land (even agricultural land) has skyrocketed to the extent that it has become impossible to recover the money invested in land purchase through an agriculture activity, be it organic agriculture or any other farming method.

The East Africa Harmonized Seed policy criminalizes sharing and exchange of seeds

Summing up, there are a number of reasons for why a Government should support the development of a domestic organic sector:

- i) *Improved health, or reduced health risks for farmers, farm-workers and consumers;*
- ii) *Protection of natural resources (e.g., water) and biodiversity;*
- iii) *Improved quality of soils and thereby long-term high productivity;*
- iv) *Improved market access;*
- v) *Improved profitability in farming.*

Each of these alone could also be accomplished by means other than organic farming. The strength of organic agriculture is that it combines and integrates solutions to so many of the pressing problems of agriculture. Nevertheless, for organic farming the general framework also needs to be right. If farmers lack access to resources such as land, organic agriculture has little to offer; if farming is unreasonably taxed, there is not much

relief to get from organic farming; if women are discriminated against by legislation or customs, they are likely to be discriminated against in an organic system as well. Organic agriculture can therefore not be seen as a silver bullet that solves all problems in the agriculture sector.

4.9 Limitations and Challenges to adoption of Organic Agriculture in East Africa and Kenya

Findings of the survey on EOA's limitations and challenges in East Africa and Kenya established that slow response from the government to mainstream it into its national programs, financial problems/poverty, lack of clear policy framework for EOA, high cost of transportation, gaps in research in Organic Agriculture, poor road infrastructure, Lack of markets, low prices due to many brokers, Inadequate knowledge and information on EOA, Lack of technologies of processing and preservation of organic inputs, Inaccessible credit, lack of enough knowledge and skills on EOA, inadequate awareness by farmers and extensions, The pillars sometimes worked in solitary without synching with other pillars, lack of enough farming land and lack of enough farm inputs which were further elaborated as below:

- i. *Poor support from the national and regional governments*
- ii. *Research in EOA is rudimentary and need enhancement. Extension in EOA is skeleton and largely by NGOs with very limited numbers of Extension staff especially at the devolved county governments level by the departments responsible for agricultural & livestock production.*
- iii. *Poor roads and long distances to established organic product markets is a hindrance to EOA in rural areas*
- iv. *There is inadequate policy in EOA. More lobbying and advocacy should be directed towards development of supportive policies in EOA*
- v. *GMOs are a threat to EOA in regard to possible gross interference of genetic makeup of useful indigenous varieties*
- vi. *More needs to be done to develop technologies for processing and preservation of organic inputs. Consequently, there is need to scale up research on EOA in both research institutes and universities to support transfer of technology to the farmer/producer level.*
- vii. *Consumer awareness in regard to quality of EOA products is growing in urban areas but still very low in rural areas resulting in low prices in rural areas for EOA products*
- viii. *Although KOAN has done well in promoting access to EOA information, EOA should be mainstreamed in to AKIS and other information systems. More awareness of these systems be created to increase access.*
- ix. *Lack of bulk production and packaging of organic inputs makes it difficult to standardize and control quality and quantity of inputs*
- x. *Inadequate technical and market information on EOA*
- xi. *Inadequate skills and knowledge in production, Value addition and pest and disease control in crops and livestock*
- xii. *Shortage of materials for composting at the farm level*

- xiii. *Bulky farm inputs inappropriate for larger farms*
- xiv. *Lack of certified seeds and improved animal breeding resources*
- xv. *Shortage of water for irrigation*
- xvi. *EOA is labor intensive. Many local consumers lack awareness of the nutritive and health qualities of EOA products, and are therefore unwilling to pay more for EOA products especially in the rural areas.*
- xvii. *Credit not readily available as compared to credit for conventional inorganic farming which is readily available*

It was also noted that there was variation from the original plans in the sense that, the initiative should be government owned and the structures and systems should be within government offices at national, regional and continental level but with the government slow response the CSOs are the ones driving the initiative

4.10 The Barriers to Adoption of Ecological Organic Agriculture Initiative in EAC

Some of the documented Ecological Organic Agriculture Initiative Barriers include Economic, social-cultural, legal, education and management barriers which are a great bottleneck to adoption and uptake of Ecological Organic Agriculture in Africa. However, the growth of organic agriculture production and trade has been accompanied by an increase in national legislations and policies in order to set the minimum requirements for organic agriculture and create the institutional framework for certification, thus giving the organic label greater credibility. In the policy front, the supportive domestic policy frameworks that can be put in place in Kenya and other Developing countries include; Introduction of organic farming and other farming systems in all educational levels primary to higher education institutions, Increased research both at public, community and private institutions, Increased research both at public, community and private institutions and legislation in parliament.

Some of the documented key policy barriers to organic trade within the East African region include, lack of explicit organic policy framework, different national bureaux of standards, non-tariff barriers and bureaucracy at the border. Gaps in climate change Policies relevant to Agroecology and the interests of smallholder farmers and pastoralists²² include; In Kenya, the National Environment Policy (2013) does not highlight control of greenhouse gas emission, nor provide for integrated pest management, agriculture enterprise diversification, seed and cereal banks and farm planning. Delicate, conflicts and Overlaps climate Change Framework Policy, 2016 tends to duplicate the National Environment Policy, 2013 and silent on small holder farmers and pastoralists support mechanisms Draft Agricultural Policy is strong on the incorporation of agroecology but fall short on addressing the efficient use of farm energy, farm planning, poverty eradication, and small farmers' enterprise development

From the study conducted by ISL, the barriers to adoption of EOA-I in EAC are categorized into four groups: economic, social-cultural, managing, and educational barriers: As established by the study, regarding the economic barriers, the following items are the main priorities: High costs of producing organic crops, the higher

²² February 2020. A Policy Brief by PELUM Kenya

performance of non-organic products than organic one, and inadequate financial capacity of the farmers and their needs for more products. There are some factors contributing to the high price of organic food, such as, higher cost of fertilizer for organic crops, crop rotation, post-harvest handling cost, organic certification and cost of covering higher loss. On the other hand, weak financial capacity of farmers was referred to the absence of a specific market for organic products, and the presence of brokers whom share profits with those farmers.

Table 24: Economic barriers to adoption of EOA

Economic Barriers		Percentage (%)	Priorities
i.	Inadequate financial capacity of the farmers and their needs for more products	43%	1
ii.	High costs of producing organic crops	41%	2
iii.	Organic products in the market are unfavourable	39%	3
iv.	Low governmental supports (subsidies, loans and bank credits)	39%	4
v.	Increase in unemployment and migration due to organic cropping	37%	5
vi.	Unavailability of proper tools and infrastructure for organic agriculture	35%	6

On social – cultural barriers it has been showed by the respondents that the following items were the main priorities: *Weak participation of farmers, the farmers' consideration of the quantity rather than the quality and more inappropriate appearance of organic products, lack of necessity to produce organic products.* The farmers and other stakeholders' weak participation in organic agriculture system can be traced to the little use of organic agriculture law and the weak marketing system that is being used in EAC agricultural markets. In addition, farmers found a difficulty for obtaining quality certificate for organic products, and government not providing financial incentives for them. Moreover, the limited production of organic products can be attributed, from experts' point of view, to the nature of EA society in terms of the low monthly income of the consumers and their inability to buy organic products that have higher price compared to the normal product.

Table 25: Social-cultural barriers to adoption of EOA

Social-Cultural Barriers		Percentage (%)	Priorities
i.	Weak participation of farmers	45%	1
ii.	Inadequate necessity to produce organic products	40%	2
iii.	More inappropriate appearance of organic products	41%	3
iv.	Limited consumer awareness of organic products	40%	4
v.	Inadequate necessity to consume organic products	39%	5
vi.	The farmers' consideration of the quantity rather than the quality	39%	6
vii.	Uncertainty over higher quality of organic products	38%	7
viii.	Difficult to be understood agricultural technology by farmers	35%	8

Regarding political and managing barriers, the following items were the main priorities; inadequate knowledge of some of the managers and politicians on organic agriculture, inadequate coordination between policy departments and extension centres and the existence of some unfavourable rules. The weakness of knowledge some key stakeholders had towards organic farming was mainly referred to the inadequate real and actual knowledge and experience in this type of farming. Moreover, some aspects regarding organic farming couldn't be fulfilled by farmers such as the lack to a success reform of agricultural policies because of the poor infrastructure for transportation, warehousing and manufacturing. Also, the lack of having quality standards and specifications, weak competitiveness agricultural products, and the low number of specialists found in agricultural marketing.

Table 26: Legal and Managing barriers to adoption of EOA

Legal and Managing Barriers	Percentage (%)	Priorities
Inadequate knowledge of some of the managers and politicians on organic agriculture	45%	1
The existence of some annoying rules	44%	2
Inadequate coordination between policy Departments and extension centres	42%	3
The absence of proper planning	41%	4
Weak of specific sponsorship in Agriculture Departments for organic agriculture	41%	5
Weak of determined policy and legislation in the field of organic agriculture	37%	6

Regarding the educational barriers to Adoption of Ecological Organic Agriculture Initiative in EAC, the following items were the main priorities: The low level of education in the community, weak of knowledge about the hazards of pesticides and chemicals, Limited awareness about organic products. The reason behind organic farming falling back in some EAC was the low level of education for some farmers, most farmers are old and received a basic education. Moreover, the weakness of farmers' knowledge to the dangers of pesticides and chemical fertilizers referred to the low number of workshops and courses offered by agricultural stakeholders to them.

Table 27: Educational barriers to adoption of EOA

Educational Barriers	Percentage (%)	Priorities
The low level of education in the community	42%	1
Weak of knowledge about the hazards of pesticides and chemicals	41%	2
Limited awareness about organic products	41%	3
Weakness of extensional system in informing farmers about organic agriculture	41%	4

Weaknesses of the schools and educational books to distribute the culture and awareness in the production and consumption of organic products	40%	5
Weaknesses of media for extending the culture of using organic products	39%	6
The farmers' limited environmental knowledge	39%	7

Agro-climatic barriers to EOA: Specific organic farming techniques might be expected to be more suitable and common in some climatic zones than in others, and the constraints to sustainable husbandry are also likely to differ according to agro-climate. For example, the extent of manure use is dependent on livestock numbers and management, and these vary with agroecological zone.

The degree of intensification of the farming system: The potential for adoption of organic agriculture varies upon on the degree of intensification of the farming system. This, in turn, is related to population size/growth and consequent land pressures. The findings indicated a transitional trend of increasing intensification of the farming systems. The relevance of improved soil fertility management techniques and organic farming methods are likely to differ depending on the stage in this transition.

Labour inputs: A frequently cited constraint to organic soil fertility management was that of labour. This was true both in general and for individual organic techniques. In Kenya, for example, farmers identified lack of labour as a constraint to the adoption of composting. Organic soil fertility maintenance may also involve manure collection and spreading, composting, tree pruning and green manure incorporation. These techniques were likely to require more labour than either no-maintenance traditional farming or modern high-input mechanised agriculture.

Environmental concerns/negative experiences with agrochemicals: Field work revealed that in the more intensive farming systems, there had been some experience of the negative impact of agrochemicals. There, farmers had an appreciation of the comparative benefits of organic soil inputs and many wished to reduce their fertiliser use. There was a widespread perception that chemical fertilisers were damaging both soil structure and soil moisture holding capacity and also creating an economic dependency on costly inputs. There was a clear understanding of the relationship between organic fertilisers and soil physical properties. A commonly known fact was that chemical fertiliser provided some concentrated nutrients for the plant but that manure or compost was required to feed and give structure to the soil, and that chemical fertilisers were effective for only one season whereas manure could last for two to four seasons.

Proximity to urban markets: Farmers in remote areas with poor infrastructure have limited access to chemical inputs. In this situation, there is little option to achieve a more productive agriculture than to optimise the local resources available through organic farming techniques. Around the urban centres of Nairobi and Kumasi, farmers tended to be commercially orientated and could generally afford to purchase inputs. The demand from

urban markets increased the use of pesticides to attain a high standard of crop appearance, and the use of fertilisers for continuous intensive vegetable production.

Availability and cost of organic materials: A number of respondents cited the unavailability of organic materials as being their prime constraint to utilising organic soil inputs.

Gender: Consideration of the influence of gender on the distribution of land, activities, income and decision-making need to be taken into account in relation to the potential for organic farming strategies since women many women do not own land. Women were often responsible for cultivating the small vegetable gardens as a contribution to household food production or for the market.

4.10.1 Barriers to Ecological Organic Agriculture

A number of issues have been raised that offer themselves as either challenges or barriers for the development of the organic sector in Eastern Africa²³ as summarized in the following table:

Table 28: Barriers to EOA

Barriers ²⁴	Variables ²⁵
Productive barriers	<ul style="list-style-type: none"> i. Increasing population has led to uneconomic land units in some areas ii. Use of chemicals that are harmful to the environment, e.g., Dichloro-diphenyl-trichloroethane (DDT) iii. Lack of adequate organic research applicable in the countries iv. Inadequate funds to boost the activities of the sector v. Need for manual labour vi. Inadequate time for organic cultivation vii. Inadequate access to required input viii. Not being enough organization to produce natural defiant Insects
Natural barriers	<ul style="list-style-type: none"> i. Product supply and demand is very seasonal as most agriculture is rain fed; producer supply, in particular, has at times been variable due to climate, pests and local market competition.
Attitude and Knowledge Barriers	<ul style="list-style-type: none"> i. Inadequate knowledge of organic techniques by farmers and limited availability of high-quality advice on organic production and marketing
Infrastructural Barriers	<ul style="list-style-type: none"> i. Infrastructure and facilities such as cooling facilities and pack-houses are poor, especially in Uganda, which leads to poor post-harvest handling ii. Lack of a common network, e.g., an East African Organic Network
Institutional Barriers	<ul style="list-style-type: none"> i. No government policy for organic agriculture and harmful policies, such as government tax policies which do not favour local, small-scale, producers and processors ii. Mainstream agriculture, government and other leaders are still largely hostile to organic iii. No clear message from the governments about GMOs and other threats to the organic sector iv. The export market is dominated by raw material supply rather than retail products, and is therefore subject to considerable price variation v. NGO extension support has focused on organic production for food rather than organic production for income

²³ East African Organic Policy Barriers Report

²⁴ Barriers to conversion to organic farming: A case study in Babol County in Iran; Faculty of Agriculture, Jiroft University, Iran.

²⁵ An overview of the current State of Organic Agriculture in Kenya, Uganda and the United Republic of Tanzania and the opportunities for Regional Harmonization; Prepared under the CBTF Project 'Promoting Production and Trading Opportunities for Organic Agricultural Products in East Africa'

	vi.	Government does not have commitment for payment when organic products are destroyed due to pest.
	vii.	Lack of clear standards for this production methods
Economic Barriers	i.	Organic certification is carried out by expensive external bodies
	ii.	Internal control systems are expensive for producer groups to organize and require substantial human resources
	iii.	Utility prices and transport costs are high in the region, in particular, high freight costs in Uganda and inland Tanzania
	iv.	Exposure to the demands of developed markets is very limited at a time when the market requires more certificates in addition to the basic organic documents, e.g., fair trade and some of these are difficult for smallholders to acquire
	v.	Local markets are hard to develop because of poor understanding of organic, no local certification and inconsistent supply
	vi.	People are not willing to pay more for organic products.
	vii.	Brokers and buyers lower the price they purchased
	viii.	Inadequate access to appropriate markets to purchase these products

4.10.2 Elimination of Ecological Organic Agriculture Barriers' Strategies

According to a report of the Initial Background Study of the National Integrated Assessment of Organic Agriculture Sector – Kenya, to eliminate the barriers to ecological organic farming, the following needs to be done:

- i. Education and training of farmers in organic farming and other appropriate farming systems that guarantee sustainable production while protecting the environment.
- ii. Adoption of organic farming and other appropriate systems which will substantially reduce demand for external inputs.
- iii. There is need to create awareness on the environmental and economic benefits organic agriculture,
- iv. There is need to create awareness of the benefits of organic products with the aim of empowering local consumers, and thus opening up local demand
- v. There is need for Kenya to set its own standards for organic certification rather than depend on organic production guidelines from either Europe or the United States. Plus, some of these standards can be modified to fit within Kenya's environmental capacity and regulation procedures.
- vi. Organic products are still fetching very low prices. There is need to set good price premium to attract more entry into organic farming.
- vii. Need for the government to develop an all-inclusive policy on organic agriculture. For instance, food supplied to schools must be organic like it has been done in the United States and United Kingdom.
- viii. Revising the pricing for organic products like tea, macadamia nuts, coffee in the world market to ensure
- ix. Small farmers to partner with larger companies like James Finlay Kenya Limited so as to increase the volume of organic tea production.
- x. The government could borrow certification regulations from established traditions like Kenya Bureau of Standards.
- xi. Scaling up ICT platforms e.g., Virtual meetings and Scaling up TOT/TOF for multiplier effects to train
- xii. Adapt a fundraising strategy that includes non-donor sources

- xiii. Empower communities to engage in the implementation of the strategy and compliment staff gaps
- xiv. Continuously include staff in capacity building opportunities
- xv. Adapt the global organisational M&E framework to strengthen internal reporting and monitoring
- xvi. Use the strong partnerships with ICIPE and other research institutes to access more and solid information and data on ecological sustainable agriculture
- xvii. Use the EOA platform and networks to lobby governments for favorable legislation in the sector
- xviii. Exploit the current donor goodwill to raise funds for Global campaigns in favor of Ecological sustainable agriculture to counter the GMO campaigns

4.10.3 Strategies to remove the barriers of ecological organic agriculture initiatives

To address the raised concerns (gaps) the following areas are critical for research initiatives²⁶: How to support developing countries to integrate environmental and sustainable development considerations, including sustainable trade, into organic agriculture and food security; Supporting countries to translate findings from integrated assessments into practical policies that contribute to sustainable development in the OA sector that will entail standards and certification issues; Carry out policy advocacy initiatives and awareness creation around organic agriculture with developing countries government's and the farmer folk, Promoting the use of integrated assessment methodologies by national governments, development organisations, and non-governmental organisations, Promoting and refining analytical tools to support integrated assessment and policymaking, including economic valuation of the environment, integrated economic and environmental accounting, and lifecycle analysis and The gender issues in organic agriculture sector in relation to agriculture policies and more particularly on local and international trade, production, marketing and food security.

4.11 Institutions and Actors hindering the Adoption of EOA-I in EAC

Agriculture being the dominant sector in the economy draws a lot of interest from different actors and stakeholders through the formulation of policies that affect its performance and development. In an effort to discuss the institutions and actors in agricultural policy, we present findings and discussion of the study that has attempted to identify the main actors and institutions hindering the adoption of EOA-I in EAC.

One of the major problems in hindrance of adoption of EOA-I is the political elite having captured public institutions and resources essentially driven by motives of serving their private interests. The resulting consequences have been that *corruption has flourished, public institutions have declined, growth has faltered and poverty has worsened*. In regard to attitude to change, the very same political elite benefiting from the status quo have generally opposed desirable patterns of change. Political leadership or elite and donors are identified as the main forces affecting the EOA-I in EAC. The form taken by these forces depends on the nature of incentives and restraints resulting from changes emanating from social, economic, political and institutional processes which keep altering the context for policy making. The EAC governments have also been hesitant in

²⁶ Ms. Cecilia Kimemia, Mr. Eric Oyare, January 2006. Background Study of the National Integrated Assessment of Organic Agriculture Sector - Kenya

pushing for the ecological policies. The Ministry of agriculture are yet to establish organic agriculture department. Currently it's only a desk with one staff.

4.11.1 Strategies in place to remove the policy barriers to organic agriculture within the EAC

Organic agriculture offers the global promise of a future in which food and other farm products are produced and distributed in a healthy, ecologically sound, truly sustainable and fair manner. For organic agriculture to grow, and to make significant progress in providing organic food and fibre for a growing population, several long-term strategies are needed through the following:

- i) EOAI actively lobbies for pro-EOA policies and legislation targeting national governments.
- ii) EOAI has improved its visibility in the industry through strategies like labelling EOA products to differentiate them from other products on the market.
- iii) There is database in place of national policies with gaps in EOA
- iv) There are number and type of policies, plans, and programmes initiated or revised to incorporate EOA at national and regional levels
- v) A documented Roadmap to support the effort of aligning policies to support EOA.
- vi) Establishment of a database of sources, materials, and references demonstrating the value and benefits of EOA.
- vii) Documenting number and type of stakeholders sensitized.
- viii) Growth and expansion strategy: this helps in increasing food production the regions.
- ix) Partnership and networking strategy: this strategy helps build synergies and complementarities while avoiding duplication of efforts, and thus enable optimal use of available resources for maximisation of results and impacts.
- x) Community empowerment and inclusiveness: EOA knowledge that is shared with communities, and especially with women and youth, remains in these communities and made easier for passing on to generations to come.
- xi) Holistic, multi-stakeholder and multi-sectorial approach: efforts to work with all sectors ensures faster realisation as well as the greater impact of the EOA agenda. All key stakeholders are engaged to implement the EOA initiative, and are encouraged to play critical roles promoting the EOA – I.
- xii) Development of markets for agro-ecological and organic farm inputs and products

4.12 Lessons Learned from the EOA-I

- i. Focusing on thematic pillars to implement the project is a unique and best practice that bring partners together in utilizing their comparative advantages.
- ii. The EOA initiative's strategy to work with already established institutions like the National Organic Agriculture Movements (NOAMs) enabled the coordination of the various efforts by different stakeholders and accelerated acceptance of EOA by a much wider audience.
- iii. Effective, efficient and strong governance and management systems, are critical requirements for successful scale up of EOA and sustainability.

- iv. *Beyond the resources, the sustainability of the uptake of EOA practices and technologies and changes at farmer level, will only be sustained by a well thought-out market system approach.*
- v. *Organic famers face serious competition from inorganic farmers and also proponents of chemical inputs.*
- vi. *The EOA-I concept and design are an effective approach for advancement of farming for food, health and enhanced livelihood and is good for the health of people, animals, plants, soil health and health of the environmental.*
- vii. *The game changer for EOA success and stability at country level is a functional CLO.*
- viii. *Emerging technologies in EOA such as push- pull have proved to be effective in achieving results not achieved before in sustainable soil fertility and pest control*
- ix. *Sourcing and harmonization of streams of funding, coordination, monitoring and evaluation is still key for impact creation and scale-up.*
- x. *The information dissemination approaches that combined ICT and other mass approaches ensured easy approach to information and wide coverage.*
- xi. *There exists a lot of un-documented and poorly validated indigenous information and knowledge which should be harnessed and made available through EOA Information and Communication efforts through resource centres, radio, print media, websites, etc.*
- xii. *Strong value chains and creation of organic product markets has improved lives of organic farmers & stakeholders. Value Chain Development that includes value addition and linking producers to markets ensures good returns for all chain actors*
- xiii. *The shortage of organic farm inputs (especially seeds and fertilizers) remains a big challenge in promoting EOA and farmers with large tracts of land are not able to access adequate and affordable organic seeds and fertilizers. This has slowed down progress and presents a weak link which is exploited by those promoting alternative conventional farming approaches.*
- xiv. *The fact that farmers in Africa are ready to adopt and adapt EOA practices as long as these translate into direct improved household food security and financial benefits, EOA practitioners have the task to provide evidence of these direct benefits so as to bring many more farmers on board and create a critical mass that will help increase the scope of EOA farming in Africa.*
- xv. *The adaptability of farmers to this initiative is high since it embraces practices that are familiar and rooted in the agricultural practices of society long before conventional farming came along.*
- xvi. *The inclusion of women and youth in EOA initiatives more prominently will ensure higher uptake of the initiative as well as sustain its future.*
- xvii. *Organic chemical-free farming in EOA and inclusion of good and healthy practices such as tip-tap, dish racks and pit latrines etc. provides for perfect family health and sanitation*

5.0 CONCLUSION: INSIGHT INTO THE FINDINGS

The overall objective of this study was to identify the barriers to scaling up/out Ecological Organic Agriculture (EOA) and to propose practical actions to remove the barriers and enhance adoption of EOA in East Africa Community (EAC) and Kenya.

To determine factors associated with adoption of organic agriculture system, the following explanatory variables were considered; age, gender, farming experience, occupation, land size, number of parcels, irrigation, land ownership and the farmer location.

Land units of majority small-scale producers' range between 1 and 3 hectares on average, whereas for medium-scale producers land units' range between 3 to 15 hectares. Large-scale producers may cultivate from 15 hectares of land for intensive production to 100,000 hectares for extensive production – mainly grazing

The main reasons for practicing organic agriculture as stated by the respondents are; it reduces the toxic load, builds healthy soil, tastes better and truer flavour, it increases income and promotes biodiversity.

Majority (66%) of the respondents have basic knowledge and have known about the organic agriculture for a long time with the main source of information coming from friends and family members.

46% of the farmers reported to have received training on at least one of the practices promoted by EOA-I and the benefits and values obtained, with majority mentioning the food security (49%), poverty alleviation (46.5%) health and nutrition (46%) amongst others.

Majority (89%) of the interviewed respondents have received training on the value chain or market development from the EOA-I in the following areas; Postharvest, handling and processing, Marketing EOA products and Sorting, grading, packaging and branding

Findings of the survey on EOA's limitations and challenges in East Africa and Kenya established that slow response from the government to mainstream it into its national programs, financial problems/poverty, lack of clear policy framework for EOA, high cost of transportation, gaps in research in Organic Agriculture, poor road infrastructure, Lack of markets, low prices due to many brokers, Inadequate knowledge and information on EOA, Lack of technologies of processing and preservation of organic inputs, Inaccessible credit, lack of enough knowledge and skills on EOA, inadequate awareness by farmers and extensions, The pillars sometimes worked in solitary without synching with other pillars, lack of enough farming land and lack of enough farm inputs

With the potential environmental, health and socio-economic benefits, better access to markets for the export of organic products are the main drivers for the development of organic agriculture in East Africa. As discussed in this study, there are different private organic standards and a lack of regulation at East Africa Communities' level with no organic standards. EAC farmers wishing to start organic agriculture currently strive to comply with different organic agriculture requirements. Organic agriculture has great potential to improve the livelihood of smallholder farmers in EAC.

Organic agriculture systems are making significant contribution to the reduction of food insecurity, poverty and to an improvement in rural livelihood in EAC.

The key players in organic products trading are farmers, middlemen and CSOs who are responsible for marketing and value chain pillar and Kenya Organic Agriculture Network (KOAN), TOAM, ROAM; they carry out organic certification and gives out the Kilimo Hai Mark in Kenya.

There are two organic certification bodies in Kenya, AfriCert and EnCert. UgoCert is based on Uganda and TanCert in Tanzania. EnCert has a clear focus on certification for the domestic market, while AfriCert is ISO 65 accredited for EurepGap. TanCert and UgoCert are both in the process of accreditation to ISO 65 and the IFOAM Norms. TanCert has agreements with IMO and bio.inspecta and UgoCert with IMO and Ceres. Both have been heavily supported by the EPOPA program, but support is now phasing out and will cease mid-2008. Otherwise, certification is offered by European based certification bodies such as IMO, Ceres, EcoCert, BCS, Soil Association and bio-inspecta. Apart from third-party certification, the National Organic Agriculture Movements, often in cooperation with NGOs, are implementing guarantee schemes for smallholder along the lines of Participatory Guarantee Systems (PGS)

Policies hindering the full adoption of EOA-I in EAC are; Subsidies on chemical fertilizers or synthetic pesticides, Approval of pesticides imports and pesticide use, Support for energy crops (biogas and biofuel plants), Competing environmental schemes, Unfavourable regulations on farm-made and organic fertilizers, plant protection products and farmers seeds, Unfavourable agricultural risk management programs, Laws related to farmland access and The East Africa Harmonized Seed policy criminalizing sharing and exchange of seeds.

One of the major problems in hindrance of adoption of EOA-I is the political elite having captured public institutions and resources essentially driven by motives of serving their private interests. The resulting consequences have been that *corruption has flourished, public institutions have declined, growth has faltered and poverty has worsened*. Organic agriculture offers the global promise of a future in which food and other farm products are produced and distributed in a healthy, ecologically sound, truly sustainable and fair manner. For organic agriculture to grow, and to make significant progress in providing organic food and fibre for a growing population, several long-term strategies are needed.

6.0 RECOMMENDATIONS

This chapter consolidate the key recommendations as already discussed in the previous chapters:

Standards and regulations

- ❖ Friendlier national or regional standard for organic production should be developed, through close cooperation between the stakeholders, private sector and Government. It should be well adapted to the conditions in the East Africa Communities and Kenya and mainly focus the domestic market.
- ❖ EAC Governments should facilitate the access to certification services, either by stimulating more foreign certification bodies to open local offices or by supporting the development of local service providers. The EOA stakeholders and partners should work hand in hand with the EAC Governments to consider establishing a governmental certification service.
- ❖ Compulsory requirements for mandatory third-party certification should be avoided as they will not enable other alternatives to emerge.
- ❖ Mandatory regulations should only be considered when the need is clearly established and other simpler options have been ruled out. In the early stage of development, a mandatory organic regulation is not likely to be a priority. Regulations for domestic markets should be based on local conditions, and not mainly on the conditions in export markets.
- ❖ The recommendations from the International Task Force (ITF) on Harmonization and Equivalence in Organic Agriculture for regulatory solutions, in particular those relating to import access should be considered.
- ❖ Producers, especially smallholders, should be supported to comply with standards, certification procedures and regulations.
- ❖ Before establishing regulations, the stakeholders and partners in consultation with the EAC Governments should clarify the objectives.
- ❖ Governments regulating the agricultural sector should develop the regulations in close consultation with the EOA sector and ensure that the regulations are enabling rather than controlling in nature.

General policy

- ❖ Organic Agriculture should be reviewed and integrated into national and sectorial strategic plans and policies and set targets for the development of the sector in view of its contribution to many of the Sustainable Development Goals, climate change adaptation and mitigation and livelihoods of the people
- ❖ Regional East African Organic Policy should be developed to ensure a harmonized approach to the sector.
- ❖ Assess policies that discourage organic agriculture. Effective policy measures for organic agriculture requires the removal of obstacles and biases against organic agriculture such as chemical input subsidies and extension services that focus only on non-organic agriculture.
- ❖ The objectives for government involvement for the development of the organic sector need to be clarified before actions are undertaken. All stakeholders should be involved in the development of policies, plans and programmes.



- ❖ General and organic agriculture policies should support each other to the greatest extent possible to promote effective policy coherence, especially if organic agriculture is promoted as a mainstream solution.
- ❖ An action plan for the organic sector should be developed based on analysis of the state of the sector, participatory consultations, a needs assessment and proper sequencing of actions. The action plan should state measurable targets for the organic sector to help agencies and stakeholders focus their efforts.
- ❖ Ministry of Agriculture at the national level or agencies in EAC should be assigned a leading role ecological sector and organic desks should be established in other relevant ministries and agencies.
- ❖ EAC Governments should recognize the diverse interests represented in the organic sector and ensure that all of them are considered properly as well as direct special attention to disadvantaged groups; people living with disability, youths and the women.
- ❖ A permanent body should be established for the consultations between the Government and the private sector on organic agriculture.
- ❖ OA stakeholders, partners and EAC Governments should actively contribute to awareness raising for organic agriculture on all levels.
- ❖ More Data about organic production and markets need to be collected over the years, analysed and made available to the sector and policymakers.
- ❖ Improving regulations regarding food safety and direct marketing to take smaller-scale organic farms into consideration.

Markets

- ❖ The organization of farmers in regards to marketing, joint distribution and storage should be supported.
- ❖ Market information systems should be established.
- ❖ Export promotion activities should be supported, recognising the special nature of organic markets. Organic exporters should be encouraged to join forces to promote and market their products.
- ❖ Organic products should be excluded from any mandatory phytosanitary treatments that are not permitted for organic products. Alternatives for fumigation should be supported.
- ❖ Public procurement of organic products should be encouraged, including featuring organic food in important public events and schools.
- ❖ Consumer education and awareness should be actively promoted.
- ❖ Domestic market development strategies should include measures for both the supply and demand side, including the role of imports.
- ❖ The East African Community should fully adopt the Kilimo Hai mark, the regional organic product standard, as the official standard for cross border organic trade. As only the second regional standard developed worldwide, the mark should make regional trade smoother as the stamp will ensure quality and traceability and will cut tests done at border posts.

Consumption and Organic Production

- ❖ Direct support measures to producers need to be adapted to small farmers as well as to commercial operations.
- ❖ Organic extension services need to be established and the staff trained. Organic extension should be developed and implemented in a participatory manner and have the farm and the farmer as the centre of attention.
- ❖ Traditional knowledge about pest control treatments should be surveyed and brought into the extension service and disseminated in other ways.
- ❖ Recycling of agriculture and food waste into organic farming systems should be promoted.
- ❖ EAC Governments and other stakeholders should establish basic controls of biological inputs such as pest control agents and organic fertilizers.
- ❖ Seed breeding and seed testing should be oriented to organic production. Compulsory seed treatments should be waived for organic farmers and untreated, preserved seeds should be made available. Alternative seed treatments should be developed and promoted.
- ❖ Policies for genetically modified organisms (GMOs) need to ensure that GMO seeds are not distributed or used in a way that can cause contamination of seeds.
- ❖ Some powerful information campaigns using the mass media such as TV, radio, and the press to advise about organic products and their benefits;
- ❖ Organic menus in public dining rooms: hospitals, schools, day nurseries, and in restaurants, and so forth;
- ❖ Improving the quality of organic foodstuffs by diversifying the supply, by promoting research into production and processing methods, packaging, transport, conservation, and other logistics;
- ❖ The use of a range of plant varieties and animal species and culture methods should be encouraged, thereby helping to preserve biodiversity. This could be added to the criteria already referred for the modulation of production aid as a means of promoting environmental values;
- ❖ Price is the main factor restricting consumer access to organic foodstuffs; in order to improve the current situation in which the additional cost of organic foodstuffs well exceeds the perceived advantages for consumers, production aid should be increased as showed public environmental subsidies;

Areas of recommended research

- ❖ Needs assessment is needed in each country to ensure research is relevant to the needs of organic farmers
- ❖ Further studies on the policies of national governments and international agencies to organic farming should be conducted, to determine the extent to which these currently influence the promotion of non-organic versus organic farming and the potential for change through policy making at these levels.
- ❖ Comparative studies to be conducted on the price, value, quantity and supply of organic and non-organic fertilisers, particularly in areas of intensive agriculture, taking into account the true long-term value of organic inputs. Such studies would then lead into a full cost-accounting analysis of organic and

non-organic farming systems in EAC, to include current externalised costs such as pollution damage, loss of biodiversity and negative health impacts.

- ❖ Further studies on consumer perceptions in EAC of the food, health and environmental issues raised by organic farming, to determine the current and potential influence of consumer demand and public pressure.
- ❖ A lot of case studies analysis in East Africa Communities should be considered to ascertain the usefulness or necessity of a domestic market as a base to the setting-up of export trade in organic products.
- ❖ Comparative studies between the EAC and developed countries, where organic farming has been more widely accepted and adopted, would provide interesting information which might support the tentative conclusions on different studies on the reasons for the level of organic farming found in EAC.
- ❖ Regular Baseline surveys should be conducted to establish the benchmark for key project indicators, against which project progress will be measured. Such baselines will be guided by different organisational M&E Framework to be developed.

Other recommendations

- ❖ EAC Governments need to fund and support research in the costs of agricultural externalities, specifically on public health and the environment and to put monetary values on these impacts.
- ❖ It's the responsibility of national government to sensitize their citizens of the importance of organic agriculture. EAC member states need to engage in raising awareness of the environmental and health benefits of organic agriculture and recognize its importance in achieving the Sustainable Development Goals.
- ❖ Organic inputs should be subsidised and investment in environmentally friendly input production should be supported.
- ❖ Organic agriculture should be integrated into the curriculum for primary and secondary schools. Specialized institutions involved in training for organic agriculture should be supported. Higher education in organic agriculture should be developed.
- ❖ Special research programmes should be established for organic research, and the sector should be involved in priority setting. Research and development (R&D) in organic agriculture should be participatory, build on and integrate traditional knowledge (where relevant) and be based on the needs of the producers.

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APPENDICES

Appendix I: Stakeholders Interview Tool

Stakeholders Questionnaire:

INTRODUCTION

Hello, my name is I work with **Infosearch Solutions Ltd** which has been contracted by **PELUM** to conduct a study of its programme in this area. The organization facilitates learning, networking and advocacy on agro ecological practices for improved livelihoods. We have randomly selected you to represent farmers in this region by way of answering a few questions on the EOA programme. Please note that there is no right or wrong answers and the information you give us will be aggregated with the views of others to come up with a report that will be used by PELUM to improve the program. It will not be shared with any other institution without consent

Gender of respondent:		01 = Male	02= Female
Organization			
Position of the respondent			
Region	[1] KENYA	[2] UGANDA	[3] TANZANIA [4] ETHIOPIA [5] RWANDA
Date of the Interview:			
Interviewers Initial:		Comments:	

1. What is your role in the EOA initiative? [Probe; involvement in project design)	
2. a) According to you, has the initiative achieved what it intended to do?	1. Yes – how
	2. No – why
b) What helped the EOA initiative to achieve its intended results?	
3. What are the strengths of EOA initiative?	
4. What inhibited the initiative to achieve the intended results?	
5. Were there any variations from the original plans? <i>Elaborate</i>	
6. What are contributions of Organic agriculture to the Sustainable Development Goals based on;	<ul style="list-style-type: none"> i. Good Health and Well-being ii. Quality Education iii. Clean Water and Sanitation iv. Responsible Consumption and Production v. Climate Action vi. Life on Land vii. Zero hunger viii. No poverty
7. Has the project been effective in bringing about anticipated changes?	If yes , please elaborate If no , please elaborate
8. In your assessment, how have the East Africa Communities performed with regard to the following principles of organic agriculture?	<ul style="list-style-type: none"> 1. Principle of Health 2. Principle of Ecology 3. Principle of Fairness: 4. Principle of Care
9. What are the opportunities in EAC organic sector?	
10. What are the impacts associated with the uptake of organic agriculture?	Positive impacts: Negative impacts
11. What are the constraints in the organic agriculture in east Africa and how can the constraints be eliminated?	Constraints: How to eliminate:

12. What are the methods of trading including main outlets?	
13. Who are the key players in organic products trading and what are their roles in the farming and processing marketing activities?	Key Players: Roles:
14. What are the challenges in organic product markets & marketing?	
15. What are the barriers facing organic products marketing (local & export)	
16. What achievements has the organization registered in implementation of EOA initiative? [In the pillar of Networking and Partnership]	
17. How effective has been the mode of implementation EOA initiative at;	1. At the Regional level 2. At the country level 3. At community level (farmers, farmer groups/association)
18. Are there any existing EOA policies in the country?	1. Yes [Give examples of the policies] 2. No [Skip to Q20]
19. Which stakeholders have participated in the formulation of the EOA policies and regulations?	
20. Are there regional organic policy in place to ensure a harmonized approach in EAC?	1. Yes – example of the policies 2. No
21. Are there identified opportunities in the policy environment for regional trade in organic products and the development of EOA?	1. Yes [mention] 2. No
22. Are there policies and institutions that hinder the adoption of EOA in EAC?	1. Policies 2. Institutions
23. What are the key policy barriers to organic trade both local and export?	
24. What are the evidences of hardship caused by the barriers identified?	
25. What are the strategies in place to remove the policy barriers to organic agriculture within the EAC?	
26. What have been the most effective methodologies and approaches the organization used to bring about changes? a. What has worked? b. What has not worked?	Most effective methodologies and approaches What has worked What has not worked:
27. To what extent has the EOA initiative contributed to the achievement of broader national/government goals?	
28. What lessons have you learnt as project partner and as an implementer?	
29. For continued effectiveness in carrying out your role with regards to EOA, what kind of support would the organization require?	
30. a) Do you know of institutions that EOA focus in Eastern Africa that partners can collaborate with?	1. Yes 2. No
b) Would you name the institutions?	
31. What are your final comments on farming, marketing, and policies regarding organic farming in your area?	i. Farming ii. Marketing iii. Policies

Appendix II: PELUM Kenya Engagement Tool

PELUM KENYA Questionnaire:

Introduction

Hello, my name is I work with **Infosearch Solutions Ltd** which has been contracted by **PELUM KENYA** to conduct a study of its programme. We have randomly selected you to represent PELUM by way of answering a few questions on the EOA programme. Please note that there is no right or wrong answers and the information you give us will be aggregated with the views of others to come up with a report that will be used by PELUM to improve the program. It will not be shared with any other institution without consent

Gender of respondent:	01 = Male 02= Female		
Organization			
Position of the respondent			
Region	[1] KENYA		
Date of the Interview:			
Interviewers Initial:		Comments:	

1. What is your role in the EOA initiative? [Probe; involvement in project design)	
2. a) According to you, has the initiative achieved what it intended to do?	1. Yes – how 2. No – why
c) What helped the EOA initiative to achieve its intended results?	
3. What are the strengths of EOA initiative?	
4. What inhibited the initiative to achieve the intended results?	
5. Were there any variations from the original plans? <i>Elaborate</i>	
6. What are contributions of Organic agriculture to the Sustainable Development Goals based on;	i. Good Health and Well-being ii. Quality Education iii. Clean Water and Sanitation iv. Responsible Consumption and Production v. Climate Action vi. Life on Land vii. Zero hunger viii. No poverty
7. Has the project been effective in bringing about anticipated changes?	If yes , please elaborate If no , please elaborate
8. In your assessment, how have the East Africa Communities performed with regard to the following principles of organic agriculture?	1. Principle of Health 2. Principle of Ecology 3. Principle of Fairness: 4. Principle of Care
9. What are the opportunities in EAC organic sector?	
10. What are the impacts associated with the uptake of organic agriculture?	Positive impacts: Negative impacts
11. What are the constraints in the organic agriculture in east Africa and how can the constraints be eliminated?	Constraints: How to eliminate:
12. What are the methods of trading including main outlets?	
13. Who are the key players in organic products trading and what are their roles in the farming and processing marketing activities?	Key Players: Roles:
14. What are the challenges in organic product markets & marketing?	

15. What are the barriers facing organic products marketing (local & export)	
16. What achievements has the organization [PELUM] registered in implementation of EOA initiative? [In the pillar of Networking and Partnership]	
17. How effective has been the mode of implementation EOA initiative at;	<ol style="list-style-type: none"> 1. At the Regional level 2. At the country level 3. At community level (farmers, farmer groups/association)
18. Are there any existing EOA policies in the country?	<ol style="list-style-type: none"> 1. Yes [Give examples of the policies] 2. No [Skip to Q20]
19. Which stakeholders have participated in the formulation of the EOA policies and regulations?	
20. Are there regional organic policy in place to ensure a harmonized approach in EAC?	<ol style="list-style-type: none"> 1. Yes – example of the policies 2. No
21. Are there identified opportunities in the policy environment for regional trade in organic products and the development of EOA?	<ol style="list-style-type: none"> 1. Yes [mention] 2. No
22. Are there policies and institutions that hinder the adoption of EOA in EAC?	<ol style="list-style-type: none"> 1. Policies 2. Institutions
23. What are the key policy barriers to organic trade both local and export?	
24. What are the evidence of hardship caused by the barriers identified?	
25. What are the strategies in place to remove the policy barriers to organic agriculture within the EAC?	
26. What have been the most effective methodologies and approaches the organization used to bring about changes? c. What has worked? d. What has not worked?	<p>Most effective methodologies and approaches</p> <p>What has worked</p> <p>What has not worked:</p>
27. To what extent has the EOA initiative contributed to the achievement of broader national/government goals?	
28. What lessons have you learnt as project partner and as an implementer?	
29. For continued effectiveness in carrying out your role with regards to EOA, what kind of support would the organization require?	
30. a) Do you know of institutions that EOA focus in Eastern Africa that partners can collaborate with? b) Would you name the institutions?	<ol style="list-style-type: none"> 1. Yes 2. No
31. What are your final comments on farming, marketing, and policies regarding organic farming in your area?	<ol style="list-style-type: none"> i. Farming ii. Marketing iii. Policies

Appendix III: Key Informants Interview Tool

Key Informants Tool:

Introduction

Hello, my name is I work with **Infosearch Solutions Ltd** which has been contracted by **PELUM KENYA** to conduct a study of its programme in this area. The organization facilitates learning, networking and advocacy on agro ecological practices for improved livelihoods. We have randomly selected you to represent farmers in this region by way of answering a few questions on the EOA programme. Please note that there is no right or wrong answers and the information you give us will be aggregated with the views of others to come up with a report that will be used by PELUM to improve the program. It will not be shared with any other institution without consent

Gender of respondent:	01 = Male 02= Female	
Organization		
Position of the respondent		
Region	[1] KENYA [2] UGANDA [3] TANZANIA [4] ETHIOPIA [5] RWANDA	
Date of the Interview:		
Interviewers Initial:		Comments:

1. What is your role in the EOA initiative? [Probe; involvement in project design)	
2. a) According to you, has the initiative achieved what it intended to do?	1. Yes – how 2. No – why
d) What helped the EOA initiative to achieve its intended results?	
3. What are the strengths of EOA initiative?	
4. What inhibited the initiative to achieve the intended results?	
5. Were there any variations from the original plans? <i>Elaborate</i>	
6. What are contributions of Organic agriculture to the Sustainable Development Goals based on;	i. Good Health and Well-being ii. Quality Education iii. Clean Water and Sanitation iv. Responsible Consumption and Production v. Climate Action vi. Life on Land vii. Zero hunger viii. No poverty
7. Has the project been effective in bringing about anticipated changes?	If yes , please elaborate If no , please elaborate
8. In your assessment, how have the East Africa Communities performed with regard to the following principles of organic agriculture?	1. Principle of Health 2. Principle of Ecology 3. Principle of Fairness: 4. Principle of Care
9. What are the opportunities in EAC organic sector?	
10. What are the impacts associated with the uptake of organic agriculture?	Positive impacts: Negative impacts

11. What are the constraints in the organic agriculture in east Africa and how can the constraints be eliminated?	Constraints: How to eliminate:
12. What are the methods of trading including main outlets?	
13. Who are the key players in organic products trading and what are their roles in the farming and processing marketing activities?	Key Players: Roles:
14. What are the challenges in organic product markets & marketing?	
15. What are the barriers facing organic products marketing (local & export)	
16. What achievements has the organization registered in implementation of EOA initiative? [In the pillar of Networking and Partnership]	
17. How effective has been the mode of implementation EOA initiative at;	1. At the Regional level 2. At the country level 3. At community level (farmers, farmer groups/association)
18. Are there any existing EOA policies in the country?	1. Yes [Give examples of the policies] 2. No [Skip to Q20]
19. Which stakeholders have participated in the formulation of the EOA policies and regulations?	
20. Are there regional organic policy in place to ensure a harmonized approach in EAC?	1. Yes – example of the policies 2. No
21. Are there identified opportunities in the policy environment for regional trade in organic products and the development of EOA?	1. Yes [mention] 2. No
22. Are there policies and institutions that hinder the adoption of EOA in EAC?	1. Policies 2. Institutions
23. What are the key policy barriers to organic trade both local and export?	
24. What are the evidence of hardship caused by the barriers identified?	
25. What are the strategies in place to remove the policy barriers to organic agriculture within the EAC?	
26. What have been the most effective methodologies and approaches the organization used to bring about changes? a. What has worked? b. What has not worked?	Most effective methodologies and approaches What has worked What has not worked:
27. To what extent has the EOA initiative contributed to the achievement of broader national/government goals?	
28. What lessons have you learnt as project partner and as an implementer?	
29. For continued effectiveness in carrying out your role with regards to EOA, what kind of support would the organization require?	
30. a) Do you know of institutions that EOA focus in Eastern Africa that partners can collaborate with?	1. Yes 2. No
b) Would you name the institutions?	
31. What are your final comments on farming, marketing, and policies regarding organic farming in your area?	1. Farming 2. Marketing 3. Policies

Appendix IV: Smallholder Farmers/Household Survey Tool

Household Tool:

Hello, my name is I work with Infosearch Solutions Ltd which has been contracted by PELUM Kenya to conduct a study of its programme in this area. The organization facilitates learning, networking and advocacy on agro ecological practices for improved livelihoods. We have randomly selected you to represent farmers in this region by way of answering a few questions on the EOA programme. Please note that there is no right or wrong answers and the information you give us will be aggregated with the views of others to come up with a report that will be used by PELUM Kenya to improve the program. It will not be shared with any other institution without consent

Gender of respondent:		01 = Male 02= Female	
Category of Farmer		(1) = Youth (2) = Man (3) = Woman	
H/H No.		For Official Use ONLY	
Region	[1] KENYA		
Date of the Interview:			
Interviewers Initial:	Comments:		

A.	BASIC DEMOGRAPHIC DATA			
1.	Gender of HH head:	01 = Male		02= Female
2.	Age of Household head:			
3.	Name of respondent			
4.	Marital Status of respondent:	(1) = Single (2) = Married (3) = Widowed (4)= Divorced		
5.	Age bracket	(1) 18-24 (2) 25-35 (3) 36-45 (4) 46-55 (5) 55 and Above		
6.	Household size Total:	1. Number of Males:		2. No of Females
		3. Number of adults (18yrs and above)		4. No. of children (Below 18yrs)
7.	Formal education level completed by HH head?	01 = P7 02 = "O" Level Cert 03= "A" Level Cert 04= Tertiary Education 05= No formal education. 06= Don't Know		
8.	Who in your household makes major decisions on all farm operations (including the technology to be used)?	(1) Myself (2) Spouse (3) Both myself & spouse (4) Other (Specify)..... (If they do not form part of decision – ask to interview the key decision maker)		
9.	Name/Group/Organization (Optional)	Name:		

B.	EXPERIENCE AND OWNERSHIP	
10.	For how many years have you been farming?	1. 1 – 2 years 2. 3 – 5 years 3. 6 – 10 years 4. 10 years and above
11.	In what year did you first start converting your farm to an Organic system?	
12.	What is the total size of the land under farming?ha

13.	What is the size of the land under organic agriculture?ha
14.	Who owns the land?	

C. INFORMATION NEEDS AND SOURCES	
15. How long have you known about Organic farming methods?	
16. From whom did you first hear about Organic farming as an option for a farm such as yours'?	
17. Which of the following assisted you in making up your mind to try fanning Organically	<ol style="list-style-type: none"> 1. Field days 2. Talks and seminars 3. Articles or books on organic fanning 4. Radio or television programs 5. Other [Specify]

D. RESEARCH, TRAINING AND EXTENSION			
18. Have you received any training on EOA?	<ol style="list-style-type: none"> 1. Yes 2. No 		
19. How were you trained?	<ol style="list-style-type: none"> 1. As an individual 2. As a group/association 3. Both (Individual & Group) 4. Other (specify)..... 		
20. What areas have you been trained under the EOA initiative and what agriculture system/activities do you currently practice	Agricultural Systems Practiced	Trained	Practiced System
	1) Plant Husbandry		
	2) Integrated Pest and Disease Management		
	3) Soil Science/fertility Management		
	4) Agro-forestry		
	5) Farm power, structures and appropriate technology		
	6) Livestock husbandry		
	7) Breeding		
	8) Bee keeping		
	9) Fish farming		
	10) Animal Products processing		
	11) Animal feeds production		
	12) Ecology and Environment		
	13) Climate Change mitigation		
	14) Marketing		
	15) Farm recording, budgeting and financing		
	16) Harvesting, post harvesting and value addition		
17) Other [specify]			
21. Were you trained or sensitized on the benefits of practicing EOA?	<ol style="list-style-type: none"> 1. Yes 2. No 		
22. a) Are you aware of any benefits/values obtained from Ecological Organic Agriculture?	<ol style="list-style-type: none"> 1. Yes 2. No 		
b) If Yes, Could you list any five benefits?	<ol style="list-style-type: none"> 1) Health and Nutrition 2) Food Security 		

	<ol style="list-style-type: none"> 3) Poverty Alleviation 4) Accessing Markets for sustainable Organic Products 5) Mitigating climate change through Organic farming 6) Others (specify).....
23. How many times have you been trained as an individual or group?	
24. Mention any three utmost perceived problems associated with or that can be attributed to EOA in your area?	<ol style="list-style-type: none"> 1. Expensive 2. Risks to health 3. thieves 4. Other (specify).....
25. Have you ever accessed information on Ecological Organic Agriculture?	<ol style="list-style-type: none"> 1. Yes 2. No 3. DK
26. Please mention the main source (s) of information on Ecological Organic Agriculture?	<ol style="list-style-type: none"> 1. Radio 2. TV 3. Printed Material 4. Extension Worker 5. Workshops/seminars 6. Community meetings 7. Other (specify).....
27. What is your <i>PREFERRED</i> source of information on EOA information, laws, threats and sustainable use practices?	<ol style="list-style-type: none"> 1. Radio 2. TV 3. Printed Material 4. Extension Worker 5. Workshops/seminars 6. Community meetings 7. Other (specify).....
28. Is there any institution/NGO/user-groups supporting you with OA farming?	<ol style="list-style-type: none"> 1. Yes 2. No
29. How do you rate the diffusion of the OA to other farmers in the community?	<ol style="list-style-type: none"> 1. Very successful, 2. successful, 3. unsuccessful 4. non-existent/disappointing

E. AGRICULTURAL PRODUCTIVITY, FOOD SECURITY AND ACCESS TO MARKETS													
30. For each of the crop, livestock and other activities; please indicate your agricultural productivity performance	<table border="1"> <thead> <tr> <th>Crop Activity</th> <th>Acreage</th> <th>Annual Yield before project</th> <th>Annual Yield after project</th> <th>Change in yield</th> <th>Utilization for home consumption</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Crop Activity	Acreage	Annual Yield before project	Annual Yield after project	Change in yield	Utilization for home consumption						
	Crop Activity	Acreage	Annual Yield before project	Annual Yield after project	Change in yield	Utilization for home consumption							
<table border="1"> <thead> <tr> <th>Livestock Activity</th> <th>Number in Flock/herd</th> <th>Annual Yield before project</th> <th>Annual Yield after project</th> <th>Change in yield</th> <th>Utilization for home consumption</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Livestock Activity	Number in Flock/herd	Annual Yield before project	Annual Yield after project	Change in yield	Utilization for home consumption							
Livestock Activity	Number in Flock/herd	Annual Yield before project	Annual Yield after project	Change in yield	Utilization for home consumption								
31. In your view, has your Organic Agriculture output increased since adoption?	<ol style="list-style-type: none"> 1. Yes 2. No 												
32. In your view, has your farm income increased since adopting OA?	<ol style="list-style-type: none"> 1. Yes 2. No 												

F. MEMBERSHIP TO FARMER GROUPS/ORGANIZATIONS [If any]	
33. How many members are subscribed to your farmer Group/Institution/Organizations?	<ol style="list-style-type: none"> 1. Male 2. Female 3. Youth [18-35 yrs]
34. What is the common activity or enterprise of your group/association?	
35. a) Have you received any training on EOA?	<ol style="list-style-type: none"> 1. Yes 2. No [Skip to next section]
b) How many members are trained in your group/association	

c) List down the areas of training needs for your farmer group/association	
--	--

G. VALUE CHAIN AND MARKET DEVELOPMENT (VCMD)

36. a) Have you received any value chain or market development training from the EOA Initiative?	1. Yes 2. No	
b) Which of the following training areas have you received	Training Area	Tick
	Postharvest Handling and Processing	1
	Sorting, Grading, Packaging and branding	2
	Marketing EOA products	3
	Agro-tourism	4
	Others (specify).	
37. In which areas has the EOA initiative project greatly supported you as a farmer/group?	Mobilization and group formation	
	Trained in group dynamics	
	Received market access information	
	Others [specify]	
38. What are the benefits of organic agriculture?	<ol style="list-style-type: none"> 1. More sustainable and higher yields per hectare 2. Improved food security and consistent agriculture production 3. The market for organic agriculture products is growing and profitable 4. Organic products are sold at a high price premium. 5. open up employment opportunities 6. reduce soil erosion and improve soil fertility 7. more resilient with respect to the effects of climate change 8. Prohibiting the use of chemical inputs also reduces agriculture's contribution to global warming 9. The lack of chemical inputs enhances agriculture's contribution to ecosystem services and prevents environmental damage 10. favours natural synergies that are ecologically and economically sustainable 11. The prohibition of chemical agro-inputs is better for the health of farmers, the health of local populations and the health of the consumers. 	
39. a) Have you sold any of your organic products as a group/individual?	1. Yes 2. No	
b) If yes, were you supported by the EOA project to sell your organic products?	1. Yes 2. No	
c) Where did you sale your organic products as a farmer/group?	<ol style="list-style-type: none"> 1. Local community exhibition 2. Trade shows 3. East Africa trade show 4. Other [specify]..... 	
40. a) Have you exported any organic products?	1. Yes 2. No	
b) If yes, to which market of country did you export your organic product(s)?	<ol style="list-style-type: none"> 1. Domestic/Local Market 2. Regional market 3. International market 4. Other [Specify]..... 	
41. a) Have you faced any challenges in the process of adding value to your organic products?	1. Yes 2. No	
b) If yes, what challenges have you experienced?		
42. a) Have you faced any challenges in the process of marketing your organic products?	1. Yes 2. No	
b) If yes, what challenges have you experienced?		

H. NETWORKING AND PARTNERSHIPS (NP)

43. Have you as an individual or organization received training on networking and partnerships?	<ol style="list-style-type: none"> 1. Yes 2. No
44. Are there any benefits you have realized from networking and partnerships under the EOA project?	<ol style="list-style-type: none"> 1. Yes 2. No
45. What areas have you been greatly supported by PELUM?	<ol style="list-style-type: none"> 1. Establish partnerships (MOU or Contract). 2. Dealing with Conflict resolutions in partnerships. 3. Communication channels in partnerships 4. Establishing free information flow 5. Joint activity implementation 6. Other [specify.....]
46. Have you experienced any challenges in networking and creating partnerships for organic products?	<ol style="list-style-type: none"> 1. Yes 2. No
47. If yes, what challenges have you experienced in networking and creating partnerships for organic products?	<ol style="list-style-type: none"> 1. Poor networking structures 2. Limited funding 3. Lack Of Determination 4. Incompetent Manufacturers 5. Rejection 6. Long Waiting Time 7. Others [specify]
48. Are there any existing EOA policies in the country?	<ol style="list-style-type: none"> 1. Yes 2. No
49. Are there regional organic policy in place to ensure a harmonized approach in EAC?	<ol style="list-style-type: none"> 1. Yes 2. No
50. What are the key policy barriers to organic trade both local and export?	

