# Baseline Study of the Ecological Organic Agriculture Initiative in Africa




# Final Report

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Nairobi, December, 2019

# EXECUTIVE SUMMARY

**Introduction**

Agile Consulting was contracted by EOA-I to provide consultancy services of undertaking an independent baseline study for its Ecological Organic Agriculture Initiative in Africa as it commences its second phase of implementation. The second phase was scheduled to start in May 2019 and run for four years till April 2023. The purpose of the baseline is to measure the key indicators against which later progress at output, outcome and impact level will be measured and tracked in target areas- agricultural productivity, production, food security, access to markets and income. The Initiative is currently being implemented in eight countries (Benin, Ethiopia, Kenya, Mali, Nigeria, Senegal, Tanzania and Uganda); under the guidance and oversight of the AU chaired Continental Steering Committee (CSC).

This report therefore is an independent baseline study of the second phase of the Ecological Organic Agriculture (EOA) Initiative project in Africa - May 2019- April 2023. The study provides key benchmarks against which later progress will be measured and tracked.

The overall goal of the Ecological Organic Agriculture (EOA) Initiative is to contribute to mainstreaming Ecological Organic Agriculture into national agricultural production systems by 2025 to improve agricultural productivity, food security, access to markets and sustainable development in Africa. The project's overall specific objectives are:

A) To increase documentation of information and knowledge (evidence) on organic agricultural products along the complete value chain and support relevant actors to translate it into practices and wide application (scaling up).
B) To systematically inform producers about the EOA approaches and good practices and motivate their uptake through strengthening access to advisory and support services.
C) To substantially increase the share of quality organic products at the local, national, regional and global markets.
D) To strengthen inclusive stakeholder engagement in the development of organic commodity value chains by strengthening national, regional and continental multi-stakeholder platforms to advocate for changes in public policy, plans and practices.

The main objectives of this study as laid out in the terms of reference were:

1. Assess status of specific aspects related to EOA application in the participating countries: farmers' knowledge, attitudes and uptake of EOA practices and/or technologies; organic products (certified and non-certified); gender equality and access by the youth and other vulnerable groups.

2. Determine an appropriate sample and the number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions.

3. Assess extent of utilization/coverage of EOA related programmes/initiatives in country project areas (household and partner level).

4. Assess status of advocacy and implementation strategies at the state and national level by implementing partners (CLOs and PIPs) and other actors.

5. Assess project implementing partners' current capacities, good practices, support received from the EOA Initiative donors in relation to technical and financial project planning, implementation, monitoring, evaluation, learning and scaling up.

***Methodology***

This study utilized both quantitative and qualitative research methods to gather rich and informative data. The qualitative techniques included desktop review of numerous EOAI's and contextual literature, conducted 52 Key Informant Interviews (KII) and stakeholder consultations and use of open ended questions in the main survey. In the quantitative method, the consultant set the stage for a quasi-evaluation design. This was achieved by randomly selecting implementation and comparison sites for the project in consultation with the EOA implementing and coordinating partners across the countries. Subsequently equal samples of farmers were drawn from both the treatment areas and the control areas.

The total sample of farmers interviewed in this study was 548: 277 and 271 from the treatment and the comparison groups respectively. All the data collected was reviewed for accuracy, completeness, consistency and coded before analysing to guarantee quality. Quantitative data was analysed using STATA program while the qualitative data was analysed deductively and thematically using MAXQDA.

***Findings***

***Objective 1: Assess status of specific aspects related to EOA application in the participating countries: farmers' knowledge, attitudes and uptake of EOA practices and/or technologies; organic products (certified and non-certified); gender equality and access by the youth and other vulnerable groups.***

The level of knowledge on EOA practices and technologies was measured using a Likert scale ranging from 1 to 5; with 1 being no knowledge and 5 very knowledgeable[1]. Overall the level of knowledge on EOA practices and technologies is 3.03 and 2.542 for the farmers in the treatment and comparison groups respectively. Overall Kenya recorded the highest level of knowledge around EOA practices in both the treatment and comparison. Ethiopia and Senegal recorded the lowest EOA practices knowledge level for the treatment and comparison groups. Farmers in both

[1] Assessment of knowledge – Likert scale defined. **|1| No knowledge** – Farmer not aware of the practice/technology **|2| Aware** – The farmer has only heard about the practice / technology but can't explain **|3| Basic knowledge** – Farmer can explain the basics about the practice but not very confident on application. Never tried it. **|4| Moderately knowledge** – Farmer can explain the basics of the technology / practice confidently has tried it's with below average results **|5| Very knowledgeable** – Farmer can explain the practice accurately and can confidently demonstrate/explain its application and has applied it with above average results

[2] https://www.statisticssolutions.com/can-an-ordinal-likert-scale-be-a-continuous-variable/

the treatment and the comparison groups registered highest level of knowledge on use of animal manure. Conversely farmers in both groups indicated low level of knowledge around use of push and pull technology, use of Mexican flower, liming, soil testing and use of bio-slurry.

This study measured attitude towards EOA practices using statements that connote underlying attitudes towards EOA enterprise. The statements revolved around perceived or otherwise production cost, productivity, purpose, market, demand and impact. On average farmers in the treatment groups fairly strongly agreed with the statement that EOA practices are easy to understand and apply while farmers in the comparison group barely agreed with this statement. One of the areas where both groups seem to be pulling in different directions relates to productivity and demand for organic and non-organic products: while the treatment group favours organic products the comparison group favours the inorganic.

The EOA-I in additional to increasing knowledge and shifting attitudes towards EOA practices also aims to increase adoption and implementation of these practices by farmers. Results from this study indicates that on average there are 29.7% and 14.6% of farmers in the treatment and comparison group respectively implementing each of 22 EOA practices and technology tested in this study. Rwanda recorded the highest proportion of farmers implementing each of the EOA practices in both the treatment and comparison groups. Benin on the other hand recorded the lowest proportion of farmers implementing either of the EOA practices.

***Objective 2: Determine an appropriate sample and the number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions.***

EOA-I also endeavours to reach vulnerable and marginalised groups particularly the youths, women and the disabled. In the first phase, of all the EOA producers that the initiative was able to reach 3.6% were youth and approximately 44.7% were women. Apart from Tanzania, Senegal and Kenya, the other countries were not capturing data of the vulnerable groups (apart from that of women and youth) that the initiative was able to reach.

***Objective 3: Assess extent of utilization/coverage of EOA related programmes/initiatives in country project areas (household and partner level)***

On this objective, the consultant established other EOA related initiatives by other organizations or funded by other donors that are being implemented in the countries where EOA-I has coverage but have no direct connection to the EOA-I that is the subject of this study. Further this study established the level of reach/coverage by these initiatives.

Across all the nine countries, there are approximately 85 EOA related initiatives that are not part of the EOA-I that is funded by SSNC and SDC. Most of these initiatives cover certain administrative regions while others are national. Uganda registered the highest number (20) of EOA related initiatives followed by Benin and Kenya at 14 and 13 initiatives respectively.

***Objective 4: Assess status of advocacy and implementation strategies at the state and national level by implementing partners (CLOs and PIPs) and other actors.***

The consulting team focused on the status/ extent to which the advocacy and other implementation strategies by CLOs and PIPs have resulted to mainstreaming EOA into national policies, plans, strategies, and university programmes at country level. It was evident that majority of the implementing organizations did not have a formal organizational based advocacy strategy.

***Objective 5: Assessed project implementing partners' current capacities, good practices, support received from the EOA Initiative donors in relation to technical and financial project planning, implementation, monitoring, evaluation, learning and scaling up.***

Majority of the staff EOA at pillar level are well qualified in their technical capabilities; However, they have not wholly demonstrated project management, M&E and reporting savviness, and this could be partly attributed to the limited resources allocated of 10% allowable for administration costs; hence staff allocate limited time while other PIPs use volunteers. Majority of PIPS demonstrated weaknesses in resource mobilization.

There is progress in the financial management sphere, after the last evaluation and capacity assessment. this was also a notable concern also expressed in the final evaluation and the recent capacity assessment.

## Acronyms & Abbreviations

| | |
|---|---|
| AfrONet | Africa Organic Network |
| ASDP | Agricultural Sector Development Programme |
| AU | African Union |
| BvAT | Biovision Africa Trust |
| CAADP | Comprehensive Africa Agriculture Development Programme |
| CLO | Country Lead Organization |
| COMESA | Common Market for East and Southern Africa |
| DAC | Development Assistance Committee |
| DREA | Department of Rural Economy and Agriculture |
| EAC | East African Community |
| ECOWAS | Economic Commission for West African States |
| EOA | Ecological Organic Agriculture |
| ET | Evaluation Team |
| EU | European Union |
| MTR | Mid-Term Review |
| NOAB | National Organic Agriculture Board |
| OECD | Organization for Economic Co-operation and Development |
| PIPS | Pillar Implementing Partners |
| SDC | Swiss Agency for Development and Cooperation |
| Sida | Swedish International Development Cooperation Agency |
| SSNC | Swedish Society for Nature Conservation |
| TOAM | Tanzania Organic Agriculture Movement |

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# CHAPTER 1: INTRODUCTION

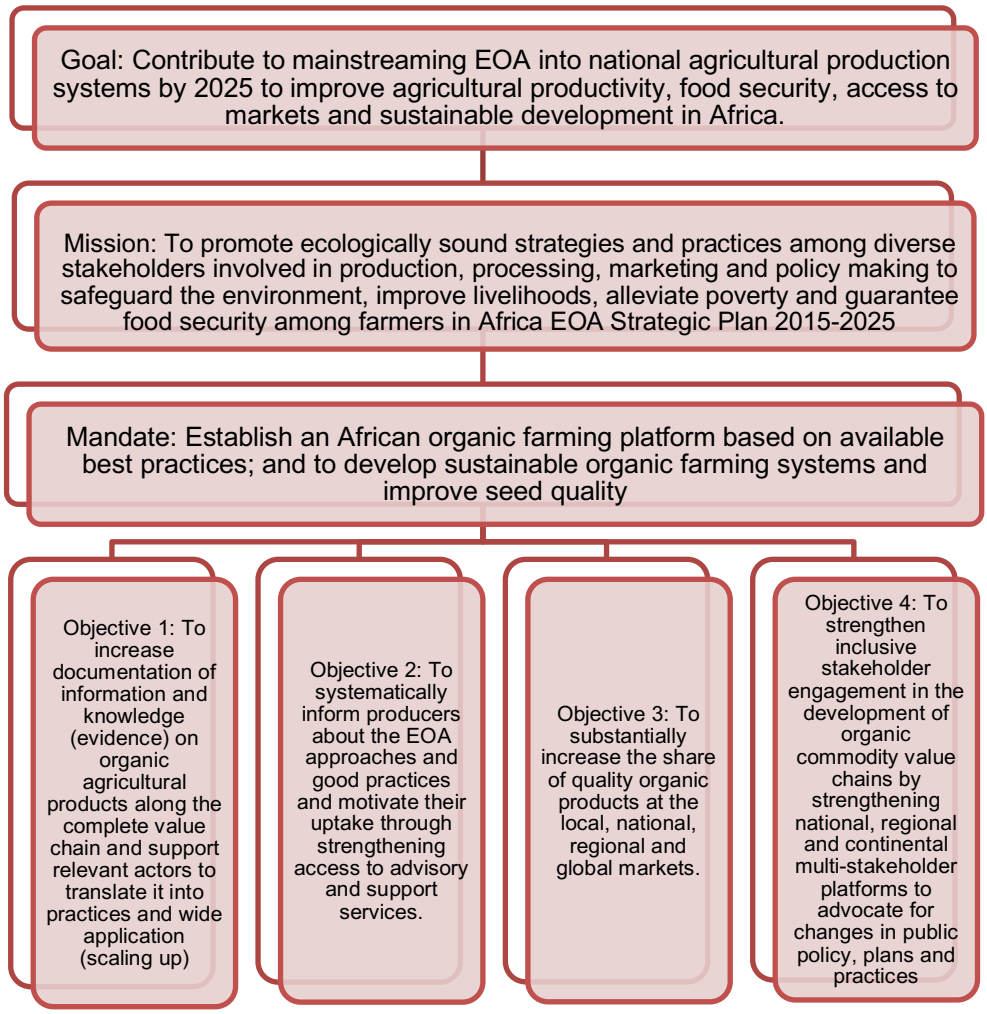
## 1.1 Background

This report is a rapid but independent baseline study of the second phase of the Ecological Organic Agriculture (EOA) Initiative project in Africa - May 2019- April 2023. It provides key indicator values against which later progress at output, outcome and impact levels will be measured and tracked.

## 1.2 The Ecological Organic Agriculture Initiative

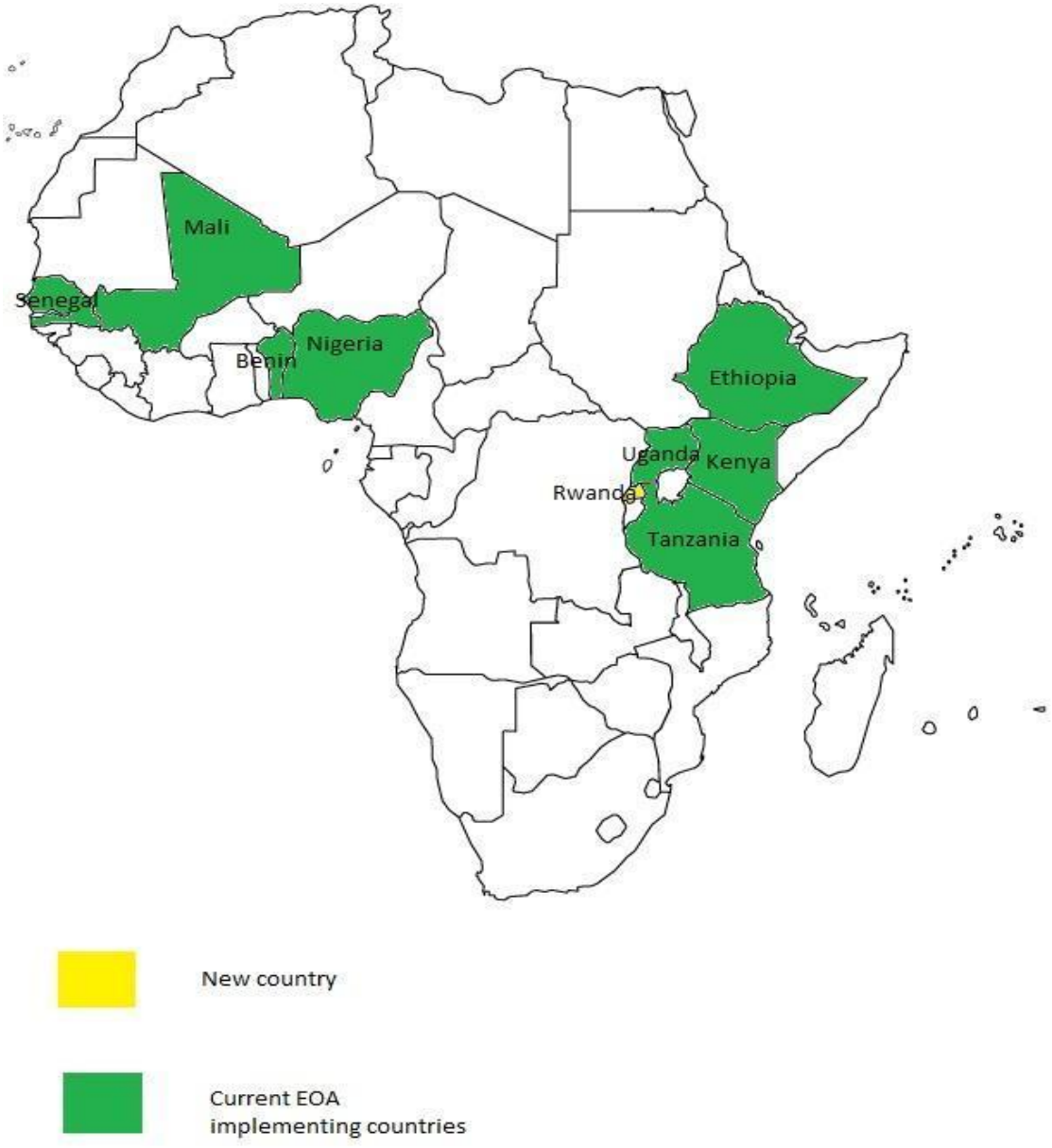
The initiative is supported by the Swiss Agency for Development and Cooperation (SDC) and Swedish Society for Nature Conservation (SSNC). Figure 1 illustrates the initiative's architecture.

***Figure 1: EOA Architecture***



The initiative is currently being implemented in 9 countries (Benin, Ethiopia, Kenya, Mali, Nigeria, Senegal, Rwanda, Tanzania, and Uganda); under the guidance and oversight of the AU chaired Continental Steering Committee (CSC).

***Figure 2: Map of EOA Coverage***




*Source: EOA Phase 2- Project Document*

## 1.3 Rationale and Objectives of the Study

The will enable the CSC of the EOA Initiative and its implementing partners to a) establish a starting point against (key conditions – indicators) which the EOA I can be monitored and evaluated to show the project's progress and impact on agricultural productivity, production, food security, access to markets and income in the target areas; b) assess the status of advocacy to mainstream EOA into national policies, plans, strategies and programmes for the 9 countries at operational context and c) establish the capabilities (technical, human resources and organizational capacity) and the institutional structures of the implementing partners (Country Lead Organizations (CLOs) and Pillar Implementing Partners (PIPs)] involved in the implementation of the EOA Initiative in order to identify what key capacities already exist and what additional capacities may be needed to bridge any gaps.

More specifically, the baseline study;

1. Assessed the status of specific aspects related to EOA application in the participating countries: farmers' knowledge, attitudes and uptake of EOA practices and/or technologies; organic products (certified and non-certified); gender equality and access by the youth and other vulnerable groups.

2. Determined an appropriate sample and the number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions.

3. Assessed extent of utilization/coverage of EOA related programmes/initiatives in country project areas (household and partner level).

4. Assessed status of advocacy and implementation strategies at the state and national level by implementing partners (CLOs and PIPs) and other actors.

5. Assessed project implementing partners' current capacities, good practices, support received from the EOA Initiative donors in relation to technical and financial project planning, implementation, monitoring, evaluation, learning and scaling up.

6. Identified current strengths and gaps of the institutional support structures (the AU-Chaired Continental Steering Committee, AfrONet, Regional Steering Committees, National Steering Committees, Executing Agencies and overall M&E systems) in delivering results based on their prescribed mandates.

## 1.4 Structure of the Report

Preceded by an executive summary, this report comprises of 4 chapters. Chapter 1 introduces the EOA initiative and the objectives of the baseline study. Chapter 2 deals with the approach and methodology of the study. Chapter 3 outlines the findings of the study while chapters 4 deals with conclusions (aligned to the indicators studied per each objective) and recommendations. It is important to note is that the findings on Objective 6 (see 1.3 above), have been presented in a separate report.

# CHAPTER 2: APPROACH & METHODOLOGY

## 2.1 Approach

The thrust of the of the baseline study bordered on programmatic and institutional indicators.

The findings of the study are meant to enable the CSC of the EOA Initiative and its implementing partners to a) establish a starting point against (key conditions – indicators) which the EOA I can be monitored and evaluated to show the project's progress and impact on agricultural productivity, production, food security, access to markets and income in the target areas; b) assess the status of advocacy to mainstream EOA into national policies, plans, strategies and programmes for the 9 countries at operational context and c) establish the capabilities (technical, human resources and organizational capacity) and the institutional structures of the implementing partners (Country Lead Organizations (CLOs) and Pillar Implementing Partners (PIPs)] involved in the implementation of the EOA Initiative in order to identify what key capacities already exist and what additional capacities may be needed to reach project outcomes.

The baseline study was conceived as a rapid but independent assessment. The consulting team have used new and pre-existing data from the 2017 report on Organizational and Capacity Assessment on all Country Lead Organizations & Pillar Implementing Partners; and the 2018 report on Final Evaluation of the first phase of the Initiative- in all EOA countries, except Rwanda.

This study recognizes the background, that ecological and organic agriculture is still underserved with empirical data and publications demonstrating EOA related project/program initiatives' attributable effects on beneficiaries/ participants. Therefore it was the understanding of the consulting team that this study, though a baseline, prepared the ground for a quasi-experimental design by identifying comparison and treatment groups in each country. This then provided baseline values for each group against which subsequent studies can be used to demonstrate attributable effects using Difference in Difference (DiD) method or any other applicable quasi-experimental design method.

In collaboration with executing agencies (BvAT and Pelum Kenya), CLOs and PIPs the study identified two locations in each country with largely similar characteristics (agro-ecological zones; population characteristics (number of years in school; services etc); access to largely similar markets; prone to similar natural disasters etc. The main difference between the locations was that the EOA initiative will be implemented in one location and not in the other. Farmers were selected randomly from these locations. The sample of farmers was largely similar in a variety of characteristics like years schooling; age; gender; size of land owned; income levels; agricultural activities; access to market; quantity of production or land productivity among others.

The mixed approach- qualitative and quantitative research design enabled data to be collected from a sample of farmer respondents in the 9 countries across the outcome areas of farmer status and characteristics, organic products, productivity, production, access to markets and others; as well as perceptions of the project's executing, coordinating and implementing partners.

Further the collected data has updated all indicators to the first quarter of 2019, the organizational and program indicators, and where there are gaps (like in the case of Rwanda) new information has been generated. All information, as will be seen in Chapter 3 is organized as per the study objectives.

## 2.2 Methodology

### *2.2.1 Overview of Data Collection Methods*

The cardinal rule of all methods chosen were those that encouraged consultation and participation of key stakeholders; and incorporated feedback from program beneficiaries; as well as created a nexus between data collection methods chosen findings found. As previously indicated, study methodologies adopted a qualitative and quantitative typology. While the quantitative provided the figures in graphs etc. the qualitative pieced the story behind these figures. All these answered all the baseline questions; and consequently, met the purpose of the study.

The baseline utilized diverse methods to gather information in order to generate rich and informative data. These are qualitative and quantitative techniques; which included the use of, questionnaires, , review of project and contextual literature, Key Informant Interviews (KII), observations, stakeholder consultations, desktop reviews secondary data, among others. Through this process the consulting team consulted with BvAT in Nairobi and partners in the field, and the stakeholders that are directly related to the project.

### *2.2.2 Quantitative Data Collection Methods*

Data was collected from all the 9 countries, through a physical questionnaire based on significant sample. The sample size was estimated using the following formula[3]

$$n = \frac{N*X}{X+N-1}$$

Where

$$X = \frac{Z^2_{\partial/2}*P(1-P)}{MOE^2}$$

$Z_{\partial/2}$ is the critical value of the Normal distribution at $\partial/2$ (in this case 95% confidence interval is used, and the critical value is 1.96).

$MOE$ is the margin of error

[3] Daniel WW (1999), Biostatistics A Foundation for Analysis in the Health Science, 7th edition, New 7th edition, New York

$P$ is the sample proportion
$N$ is the population size
$n$ is the sample size

The total sample size was arrived at a 95% confidence interval and 5% margin of error is 384. This implied a sample of 60 farmers allocated equally across the nine countries. At the country level, the margin of error is approximately 17.6%. The determination of 95% confidence level was informed by a review of previous similar studies on Community and SMEs development such as Impact of Capacity Building on Sustainability of Village Savings and Loans Associations in Suba District, Kenya (Achola T. A 2012), The 2012 Small Business Survey (SBS 2012) large-scale survey of business owners and managers in the United Kingdom (UK) commissioned by the Department for Business, Innovation and Skills (BIS)[4] and Impact Assessment of the participation of SMEs in the Thematic Programs of the Fifth and Sixth Framework Programs for Research and Technological Development (RTD)[5] have used the 95% confidence level. These studies have provided a precedent that to be used to determine the confidence level for this type of study.

***Table 1: Sampling Frame***

| Country | Treatment | | Control | | Total |
|---|---|---|---|---|---|
| | **Location** | **#** | **Location** | **#** | |
| Benin | Abomey, Zou | 30 | Djidja, Zou | 30 | 60 |
| Ethiopia | Birbirsa Siba, Meda Gudina | 30 | Berfeta 1st | 30 | 60 |
| Kenya | Kirinyaga | 30 | Maragua | 30 | 60 |
| Mali | Koulikolo | 36 | Bamako, Koulikolo | 31 | 67 |
| Nigeria | Ajibode | 30 | Fashola | 30 | 60 |
| Senegal | Mbawane, Notodjoba, Golame and Keur Matar, Keur Moussa | 30 | Keur Abdou Ndonye, Notodjaba, N'gueguene, Keur Moussa | 30 | 60 |
| Rwanda | | 30 | | 30 | 60 |
| Tanzania | Diovuva, Kenge, Kimbwala, Kiziwa, Ruvuma Towelo | 30 | Mvomero-Mkindo | 30 | 60 |
| Uganda | Mbale | 31 | Luka | 30 | 61 |
| **Total** | | 277 | | 271 | 548 |

As afore discussed, the study prepared the ground for a quasi-experimental design to establish projects attributable effects.

Consequently the sample per country was further divided into two, with a half of the farmers coming from a treatment location while the other half was from a control (comparison) location- where EOA was and will not be implemented over the project implementation period). The sampling for the treatment group was conducted in an area where EOA has or will have a significant presence and investments. In some instance like Benin, Rwanda and Uganda, CLOs were not able to identify distinctively separate location for comparison group. In those instances the treatment and the comparison group were drawn from largely the same areas. This might

[4] Small Business Survey 2012: SME Employers – UK Department for Business Innovation and Skills (April 2013)

[5] European Commission: - Impact Assessment of the Participation of SMEs in the Thematic Programs of the Fifth and Sixth Framework Programs for RTD-(March 2010) pg. 39

cause contamination of the comparison. As such future studies should pay keen interests to measure and account for possible spill-over effects of the project on the comparison group.

### *2.2.3 Qualitative Data Collection Methods*

During the inception phase, the consulting team reviewed key documents and made initial contacts/ meetings with the BvAT team where the field work plan, baseline study questions, data collection tools and final logistics were discussed and finalized. The key program documents reviewed the Mainstreaming Ecological Organic Agriculture (EOA) into Agricultural Systems in Africa for the Period 2019-2022 Phase II proposal, External Evaluation of the Ecological Organic Agriculture Initiative in Africa (2014-2018), Capacity Assessment Report and several other literatures drawn for operations research and relevant journals in the ecological organic agriculture space. This review provided a theoretical underpinning of the initiative.

The second phase was the field investigation where the consulting team held interviews with BvAT, the CSC, the Regional Steering Committees (RSC), National Steering Committees (NSC), Country Lead Organizations (CLOs) and Pillar Implementing Partners (PIPs) and where applicable stakeholders in the organic agriculture space- in each of the 9 EOA countries- Benin, Ethiopia, Kenya, Mali, Nigeria, Rwanda, Senegal, Tanzania and Uganda. The tools used here included Key Informant Interviews (KIIs) and general observations. Annex 1 presents the list of key stakeholders interviewed in each country.

### *2.2.4 Data Analysis & Presentation*

The instruments for data collection were pretested in Kenya. All the data collected was reviewed for accuracy, completeness, consistency and coded before analysing to ensure quality control. The STATA program was used to generate descriptive and inferential statistics. Inferential statistics established the level of statistical significance in the differences among various EOA elements between the treatment and the comparison groups. The analysed data was represented in the report in various diagrammatic forms including tables, charts as well as presented in narratives summarizing the key aspects / themes emerging from the baseline questions. Annex 2 contains the baseline data design detailing how data for each indicator was collected and analysed. This too contains areas of measurement and tools used for collection.

### *2.2.5 Reporting*

A draft was presented to BvAT and shared with the EOA partners (see Annex 3) for feedback, from where all the notes, comments, inputs, edits etc. from the partners and CSC were instructed into the Final Report in English and French.

# CHAPTER 3: FINDINGS

## 3.1 Introduction

The presentation of the baseline study findings has been made with reference to the 6[6] objectives. The study objectives were unpacked into logical questions, indicators, sources of data and tools for data collection. Further, clarity was also brought in to illustrate how the data was analysed, after collection and cleaning (see Annex 3 for detailed data design).

## 3.2 Demographics & Other Organic Farmer Characteristics

### Gender

Gender parity in development interventions and particularly in the agricultural sector in Africa has received greater attention in the development industry. This is especially so because while women are mostly involved in farm activities their access to and control of production assets in agricultural sector is seriously limited both by cultural practices and laws of the land. Research has however shown that increasing women access and control over agricultural production assets does increase production at the household level thus increasing income. Further it has been established that when women have control over the income generated from the household farm they use the produce to improve the welfare of their households[7].

Table 2 shows that the study interviewed slightly more men (55.3%) than women (44.7%) in the treatment group. A similar scenario was replicated in the comparison group where 63.2% of the farmers interviewed were men. Largely, similar proportions of higher men than women were also replicated in Benin, Ethiopia, Kenya, Rwanda, Senegal, and Uganda.

In Nigeria and Tanzania at least 73% of the total respondents were female. In Mali both genders were equally represented. Further analyses revealed that majority (81%) of the respondents are married with the most (63.29%) of the respondents being male. This occurrence maybe explained by the assumption that since in the majority of the instances the respondents were required to travel to the interview location, men opted to travel and left women handling other house or farm related chores. Further, majority of the single respondents were male at 67.44%.

***Table 2: Gender Distribution***

| COUNTRY | Treatment | Comparison |
|---|---|---|

[6] It is important to note is that the findings on Objective 6 (see 1.3 above), have been presented in a separate report.

[7] https://www.idlo.int/sites/default/files/pdfs/highlights/Women%2C%20Land%2C%20Food-Exploring%20Rule%20of%20Law%20Linkages.pdf

| | n | Male | Female | n | Male | Female |
|---|---|---|---|---|---|---|
| Benin | 30 | 66.7 | 33.3 | 30 | 83.3 | 16.7 |
| Ethiopia | 30 | 79.3 | 20.7 | 30 | 82.8 | 17.2 |
| Kenya | 30 | 56.7 | 43.3 | 30 | 46.7 | 53.3 |
| Mali | 36 | 50.0 | 50.0 | 31 | 45.2 | 54.8 |
| Nigeria | 30 | 26.7 | 73.3 | 30 | 46.7 | 53.3 |
| Rwanda | 30 | 60.0 | 40.0 | 30 | 56.7 | 43.3 |
| Senegal | 30 | 75.9 | 24.1 | 30 | 96.7 | 3.3 |
| Tanzania | 30 | 23.3 | 76.7 | 30 | 62.1 | 37.9 |
| Uganda | 31 | 61.3 | 38.7 | 30 | 50.0 | 50.0 |
| **TOTAL** | **277** | **55.3*** | **44.7** | **271** | **63.2*** | **36.8** |

*Significant at 10% **Significant at 5% ***Significant at 1%

### *Age*

Past studies have established that farmers in Africa are aging[8]. This has implications on intervention approaches if substantive impact is to be realized. There is also an argument towards encouraging young people to embrace agriculture as one of the ways of addressing high unemployment rates among the youth. Table 3 presents the farmer's average age.

***Table 3: Farmers' Average Age***

| COUNTRY | n | Treatment | Comparison |
|---|---|---|---|
| Benin | 60 | 46.6* | 41.4* |
| Ethiopia | 60 | 43.2 | 42.5 |
| Kenya | 60 | 42.9*** | 53.1*** |
| Mali | 67 | 49.9 | 52.3 |
| Nigeria | 60 | 39.9** | 47.2** |
| Rwanda | 60 | 53.4*** | 44.4*** |
| Senegal | 60 | 55.4*** | 47.2*** |
| Tanzania | 60 | 44.1** | 36.8** |
| Uganda | 61 | 40.8** | 46.4** |
| **TOTAL** | **548** | **46.1** | **45.3** |

*Significant at 10% **Significant at 5% ***Significant at 1%

This study established that the average age of the EOA farmer beneficiary is 46.1 and 45.3 years old in the treatment and comparison group respectively. Apart from Ethiopia and Mali where age

[8] Sif Heide-Ottosen (2014), *The ageing of rural populations: evidence on older farmers in lowand middle-income countries,* HelpAge International

disparities between the farmers in the treatment and comparison groups are not significant: in all the other countries either of the groups is significantly either younger or older than the other.

Nigeria recorded the youngest age in the treatment group at 39.9 years while Tanzania recorded the youngest age of 36.8 year in the comparison group. Senegal on the other hand had the oldest farmers at 55.4 years in the treatment group while Kenya had the oldest farmers in the comparison group at 53.1 years. See the table below.

### *Level of Education*

Past studies have established strong correlates between access to formal education and impact of project interventions; that is those who have access to higher education demonstrate higher impact from project interventions. The level of education also has implication on methods and approaches used in implementing the interventions if substantive impact is to be realized. The table below shows majority of the farmers in both the treatment and comparison groups have either no formal education or have only completed primary level of education. Table 4 illustrates the education levels amongst sampled farmers.

***Table 4: Farmers' Level of Education***

| **Research Group** | **COUNTRY** | **Benin** | **Ethiopia** | **Kenya** | **Mali** | **Nigeria** | **Rwanda** | **Senegal** | **Tanzania** | **Uganda** | **TOTAL** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **n** | 60 | 60 | 60 | 67 | 60 | 60 | 60 | 60 | 61 | **548** |
| Treatment | None | 83.3 | 46.7 | 6.7 | 66.7 | 16.7 | 40.0 | 53.3 | 13.3 | 16.1 | **38.6** |
| | Primary | 13.3 | 23.3 | 40.0 | 16.7 | 33.3 | 53.3 | 40.0 | 86.7 | 54.8 | **39.7** |
| | High School | 3.3 | 20.0 | 33.3 | 8.3 | 36.7 | 6.7 | 3.3 | 0.0 | 22.6 | **14.8** |
| | Technical institution | 0.0 | 0.0 | 3.3 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | **0.7** |
| | College | 0.0 | 10.0 | 16.7 | 2.8 | 3.3 | 0.0 | 0.0 | 0.0 | 3.2 | **4.0** |
| | University | 0.0 | 0.0 | 0.0 | 2.8 | 10.0 | 0.0 | 3.3 | 0.0 | 3.2 | **2.2** |
| Comparison | None | 73.3 | 53.3 | 33.3 | 48.4 | 26.7 | 36.7 | 63.3 | 10.3 | 43.3 | **43.3** |
| | Primary | 23.3 | 10.0 | 50.0 | 45.2 | 43.3 | 50.0 | 20.0 | 58.6 | 26.7 | **36.3** |
| | High School | 0.0 | 30.0 | 16.7 | 3.2 | 23.3 | 13.3 | 13.3 | 27.6 | 23.3 | **16.7** |
| | Technical institution | 0.0 | 3.3 | 0.0 | 3.2 | 3.3 | 0.0 | 0.0 | 0.0 | 6.7 | **1.5** |
| | College | 0.0 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | **0.7** |
| | University | 3.3 | 0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 3.3 | 3.5 | 3.2 | **1.5** |

In Benin 83.3% and 73.3% of the farmers have not accessed or completed any level of formal education. Similar high proportion of farmers with no formal education are replicated in Mali and Senegal. The treatment group recorded higher percentage (6.9%) of farmers with either technical institution, college or university level of education compared to the farmers in the comparison group where they were only 3.7%. The comparison group also had a higher proportion of farmers with no formal education compared to the treatment group, but this difference is not significant.

### *Size of Land Owned*

The study established the size of land owned by farmers in both the treatment and the comparison groups and the proportion of land that is dedicated to organic farming. The table below indicates that overall farmers in the comparison group own significantly more land size in acres (6.39 acres) compared to their counterparts in the treatment group who own on average 4.37 acres.

***Table 5: Average Land Size Owned & Proportion Used for Organic Farming***

| Country | n | Treatment group | | | Comparison group | | |
|---|---|---|---|---|---|---|---|
| | | Average land size in acres | Average land size for organic | Proportion of land used for organic | Average land size in acres | Average land size for organic | Proportion of land used for organic |
| Benin | 60 | 21.13 (25.16) | 8.16 (5.1) | 38.62 | 26.41 (36) | 0 | 0.00 |
| Ethiopia | 60 | 1.13*** (1.025) | 0.27 (0.35) | 23.89 | 3.96*** (3.48) | 0.128 (0.21) | 3.23 |
| Kenya | 60 | 0.73 (0.74) | 0.47 (0.75) | 64.38 | 0.88 (0.81) | 0.21 (0.28) | 23.86 |
| Mali | 67 | 2.65 (5.51) | 1.04 (1.89) | 38.38 | 3.82 (3.41) | 0 | 0.00 |
| Nigeria | 60 | 0.60*** (0.79) | 0.49 (0.66) | 81.67 | 13.21*** (13.9) | 0.48 (1.85) | 3.24 |
| Rwanda | 60 | 6.03* (10.32) | 5.78 (10.5) | 95.85 | 2.71* (7.14) | 0.64 (1.24) | 23.62 |
| Senegal | 60 | 2.74 (3.9) | 1.71 (2.4) | 62.41 | 2.05 (2.66) | 0.68 (2.78) | 33.17 |
| Tanzania | 60 | 2.37 (2.48) | 0.65 (0.65) | 27.43 | 2.15 (15.5) | 0.02 (0.09) | 0.40 |
| Uganda | 61 | 2.83 (1.95) | 2.02 (1.87) | 71.38 | 3.43 (3.17) | 1.27 (1.43) | 37.03 |
| **Total** | **548** | **4.37**** | **2.26** | **52.31** | **6.39**** | **0.38** | **5.30** |

*Significant at 10% **Significant at 5% ***Significant at 1%, () Standard deviation in brackets

Nigeria stands as unique case in point with farmers in treatment group owning on average 0.60 acres of land while their counterpart in the comparison group own on average 13.21 acres.

In Ethiopia the treatment group own significantly smaller land size in acres compared to the comparison group. Rwanda on the other hand farmers in the treatment group own significantly bigger land size in acres compared to their comparison counterparts. Overall Benin farmers in both the treatment and comparison groups reported owning the largest land size in acres at 21.13 and 26.41 acres respectively. On average farmers in the treatment group allocate 52.31%

of their land to organic farming. The comparison group on the other hand allocated only 5.03% of their land to organic farming. Farmers in the treatment group in Rwanda, Nigeria and Uganda allocated largest part of their land to organic farming at 95%, 81.67% and 71.38% respectively.

In Benin, Ethiopia, Mali, and Tanzania farmers in the treatment group allocated less than 40% of their land to organic farming. All the farmers in the comparison in all the countries allocated less than 40% of their land to organic farming. In Mali and Benin comparison group farmers did not allocate any piece of their land to organic farming.

## 3.3 Objective 1 – Findings

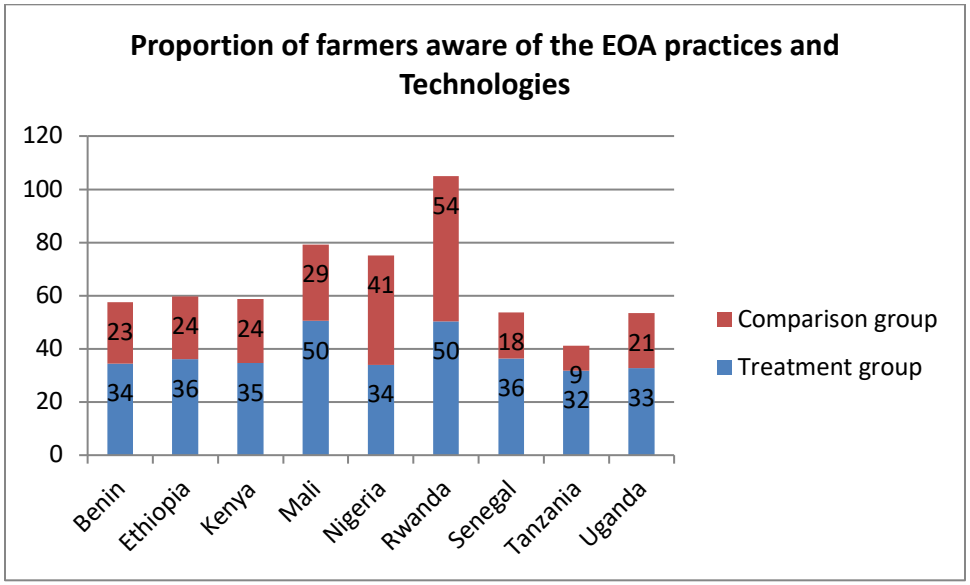
*This section contains findings on specific status of specific aspects related to EOA application in the participating countries. These include farmers' knowledge, attitudes and uptake of EOA practices and/or technologies; organic products (certified and non-certified); gender equality and access by the youth and other vulnerable groups.*

### *3.3.1 The Status of Farmers' Knowledge, Attitudes & Uptake of EOA Practices and/or Technologies*

***Awareness of EOA Practices and Technologies***

In this study awareness was determined from asking respondents to name all EOA practices that they are aware of. Figure 1 contains this data.

***Figure 3: Proportion of EOA Producers Aware of EOA Practices and Technologies***




On average there are approximately 37.9% and 26.9% of farmers in the treatment and comparison group respectively who are aware of the 24 EOA practices and technologies tested in this study. The overall difference in the level of awareness on the organic practices and technologies between the treatment and comparison groups is significant at 1%. The differences in the extent of awareness are also significant in Tanzania and Mali. In Benin, Ethiopia, Kenya, Nigeria, Rwanda, Senegal and Uganda the level of awareness of EOA practices between the treatment and comparison groups is not significant. Mali and Rwanda recorded the highest awareness rate at 50.5% and 50.4% respectively. In Nigeria and Rwanda the comparison group indicated higher level of awareness than their counterparts in the treatment groups.

Out of the 24 EOA practices considered in this study majority of the farmers - 89.7% and 66.5% of farmers in the treatment and comparison groups respectively - are aware of animal manure. Other practices known by a majority of farmers in the treatment group are crop rotation (69.8%), compost to improve soil fertility (68.4%), use of farmyard manure (65.8%), mulching (64.1%) and use of farm residue to improve soil fertility (61.8%). In the comparison group majority of farmers are (in addition to animal manure) aware of crop rotation (56.1%) and incorporation of farm residue to improve soil fertility (55.1%). The least known EOA practice among the treatment group is use of bio-slurry (8.4%), liming (9.4%) and push and pull (11.1%). The differences in the awareness of the EOA practices between the treatment and the comparison group are nearly all significantly different apart from incorporation of farm residue to improve soil fertility, crop rotation and zero tillage (See the table 6 below).

***Table 6 : Level of Awareness of EOA Practices***

| EOA Practices and technologies | Awareness | | | |
|---|---|---|---|---|
| | Treatment | n | Comparison | n |
| **EOA Practices** | | | | |
| 1. Incorporation of farm residue | 61.8 | 277 | 55.1 | 271 |
| 2. Mulching | 64.1*** | 277 | 46.5*** | 271 |
| 3. Cover crops | 44.3*** | 277 | 29.8*** | 271 |
| 4. Use of farmyard manure | 65.8*** | 277 | 45.0*** | 271 |
| 5. Crop rotation | 69.8*** | 277 | 56.1*** | 271 |
| 6. Intercropping | 53.8*** | 277 | 39.5*** | 271 |
| 7. Green manure | 36.0*** | 277 | 19.6*** | 271 |
| 8. Green fallow period | 32.7*** | 277 | 18.5*** | 271 |
| 9. Animal manure | 89.7*** | 277 | 66.5*** | 271 |
| 10. Crop rotation | 33.3 | 277 | 29.2 | 271 |
| 11. Nitrogen fixing plants | 37.8*** | 277 | 20.7*** | 271 |
| **EOA Technologies** | | | | |
| 1. Water conservation technologies | 45.4*** | 277 | 33.5*** | 271 |
| 2. Correction of soil pH | 17.1*** | 277 | 8.5*** | 271 |
| 3. Compost | 68.4*** | 277 | 41.6*** | 271 |
| 4. Push pull | 11.1** | 277 | 5.6** | 271 |
| 5. Zero tillage | 18.2 | 277 | 18.9 | 271 |
| 6. Soil testing | 12.4*** | 277 | 4.1*** | 271 |
| 7. Bio-slurry | 8.4** | 277 | 3.3** | 271 |

*Significant at 10% **Significant at 5% ***Significant at 1%

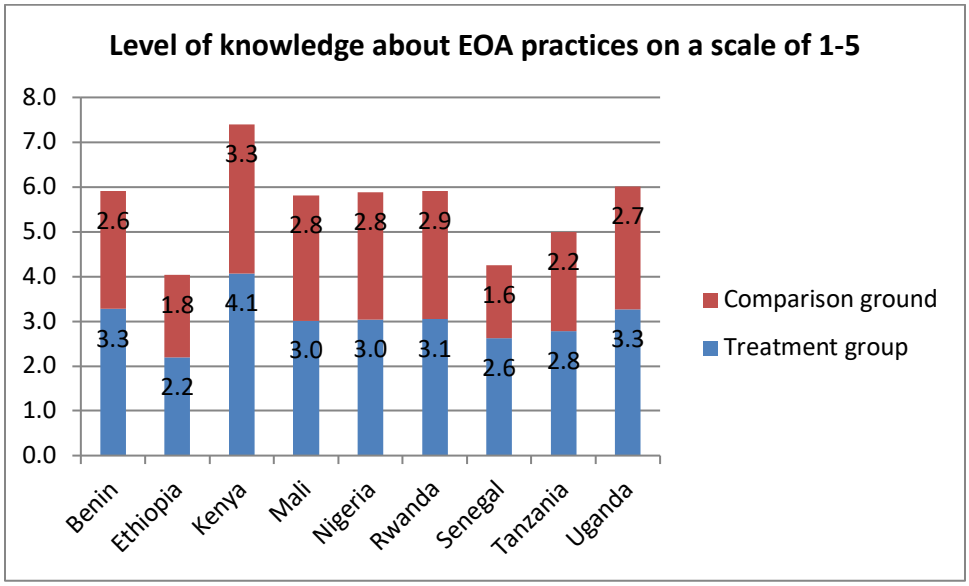
### *Knowledge of EOA Practices and Technologies*

In addition to testing awareness and current EOA practices that farmers are implementing this study also determined farmers' level of knowledge that farmers have with regard to the EOA practices considered in the study. The level of knowledge was measured using a Likert scale

running from 1 to 5 with 1 being no knowledge and 5 very knowledgeable[9]. Overall the level of knowledge on EOA practices is 3.03 and 2.54[10] for the farmers in the treatment and comparison groups respectively, and the difference between the two groups is significant at 5%. This implies that overall farmers in the treatment group are significantly more knowledgeable about EOA practices than the comparison group. Similarly in Benin, Ethiopia, Kenya, Senegal, Tanzania and Uganda farmers in the treatment groups are significantly more knowledgeable about EOA practices compared to their comparison group counterparts. In Mali, Nigeria and Rwanda farmers in the treatment group did not record significantly higher knowledge of EOA practices than their comparison group counterparts.

Overall Kenya recorded the highest level of knowledge around EOA practices in both the treatment and comparison at 4.07 and 3.32 respectively. Ethiopia and Senegal recorded the lowest EOA practices knowledge level for the treatment and comparison groups at 2.19 and 1.64 respectively. Figure 2 illustrates these findings

***Figure 4: Level of Knowledge of EOA Practices across Countries***




Farmers in both the treatment and the comparison groups registered highest level of knowledge on use of animal manure at 4.32 and 3.66 respectively. Farmers in the treatment group also recorded high level of knowledge around use of farmyard manure, crop rotation and use of

[9] Assessment of knowledge – Likert scale defined. **|1| No knowledge** – Farmer not aware of the practice/technology **|2| Aware** – The farmer has only heard about the practice / technology but can't explain **|3| Basic knowledge** – Farmer can explain the basics about the practice but not very confident on application. Never tried it. **|4| Moderately knowledge** – Farmer can explain the basics of the technology / practice confidently has tried it's with below average results **|5| Very knowledgeable** – Farmer can explain the practice accurately and can confidently demonstrate/explain its application and has applied it with above average results

[10] https://www.statisticssolutions.com/can-an-ordinal-likert-scale-be-a-continuous-variable/

compost. Conversely farmers in both groups indicated low level of knowledge around use of push and pull technology, liming, soil testing and use of bio-slurry. Table 7 makes this illustration.

***Table 7: Farmers' Level of Knowledge of EOA Practices***

| EOA Practices and Technologies | n | Treatment | n | Comparison |
|---|---|---|---|---|
| **EOA Practices** | | | | |
| 1. Incorporation of farm residue | 277 | 3.84* | 271 | 3.25* |
| 2. Mulching | 277 | 3.78 | 271 | 3.23 |
| 3. Cover crops | 277 | 3.44 | 271 | 2.73 |
| 4. Use of farmyard manure | 277 | 4.25** | 271 | 3.45** |
| 5. Crop rotation | 277 | 4.06 | 271 | 3.74 |
| 6. Intercropping | 277 | 3.74* | 271 | 3.05* |
| 7. Green manure | 277 | 3.12* | 271 | 2.27* |
| 8. Compost | 277 | 3.98** | 271 | 3.11** |
| 9. Green fallow period | 277 | 3.85** | 271 | 2.71** |
| 10. Crop rotation | 277 | 3.78 | 271 | 3.49 |
| 11. Nitrogen fixing plants | 277 | 2.70* | 271 | 1.98* |
| 12. Animal manure | 277 | 4.32** | 271 | 3.66** |
| 13. Ploughing in leguminous plants | 277 | 2.37 | 271 | 1.95 |
| **EOA Technologies** | | | | |
| 1. Water conservation technologies | 277 | 3.18 | 271 | 2.75 |
| 2. Push pull | 277 | 1.93 | 271 | 1.54 |
| 3. Correction of soil pH | 277 | 2.10** | 271 | 1.44** |
| 4. Zero tillage | 277 | 2.36 | 271 | 2.37 |
| 5. Soil testing | 277 | 1.83 | 271 | 1.50 |
| 6. Bio-slurry | 277 | 1.68 | 271 | 1.50 |

*Significant at 10% **Significant at 5% ***Significant at 1%

### *Attitude towards EOA*

In order to effectively and sustainably change human behaviour attitude plays a critical part. This study measured attitude towards EOA practices using statements that connote underlying attitudes towards EOA enterprise. The statements revolved around perceived or otherwise production cost, productivity, purpose, market, demand and impact.

Farmers were requested to indicate the extent to which they agreed or otherwise with the statements on a Likert scale from 1 to 5 with 1 being strongly agree and 5 strongly disagree. As the table below shows there is a significant difference in the response towards all the statements posed between the farmers in the treatment and comparison groups.

On average farmers in the treatment groups fairly strongly agreed with the statement that EOA practices are easy to understand and apply while farmers in the comparison group barely agreed with this statement. Farmers in the treatment group agreed fairly strongly that EOA farming improves livelihoods, increases farm productivity and that it also helps to improve household income. Conversely, the comparison barely agreed or disagreed with the same statements. One of the areas where both groups seem to be pulling in different directions relates to productivity and demand for organic and non-organic products: while the treatment group favours organic products the comparison group favours the inorganic. Response to these statements by both

farmers in the treatment and the comparison groups indicates that farmers in the treatment group have significantly more positive attitude towards EOA than their comparison counterparts. Table 8 contains this data.,

### *Table 8: Attitude towards EOA Practices*

| Statement | n | Treatment | n | Comparison |
|---|---|---|---|---|
| 1) EOA practices are easy to understand and apply | 277 | 1.68** | 271 | 2.14** |
| 2) EOA practices increase farmers productivity | 277 | 1.74** | 271 | 2.44** |
| 3) EOA practices are affordable | 277 | 1.88* | 271 | 2.23* |
| 4) Application of EOA practices has improved my livelihood. | 277 | 1.68*** | 271 | 2.644*** |
| 5) It helps to improve source of farm income | 277 | 1.76*** | 271 | 2.58*** |
| 6) Organic farming is for those who cannot afford chemicals and or non-organic seeds | 277 | 4.12*** | 271 | 3.29*** |
| 7) Nonorganic farming gives more yields than organic farming | 277 | 3.46*** | 271 | 2.80*** |
| 8) Organic farming is only for household use not market | 277 | 4.22*** | 271 | 3.34*** |
| 9) Demand for organic products is lower than that of non-organic products | 277 | 3.32** | 271 | 2.78** |
| 10) There is no market for organic products | 277 | 3.63** | 271 | 3.04** |

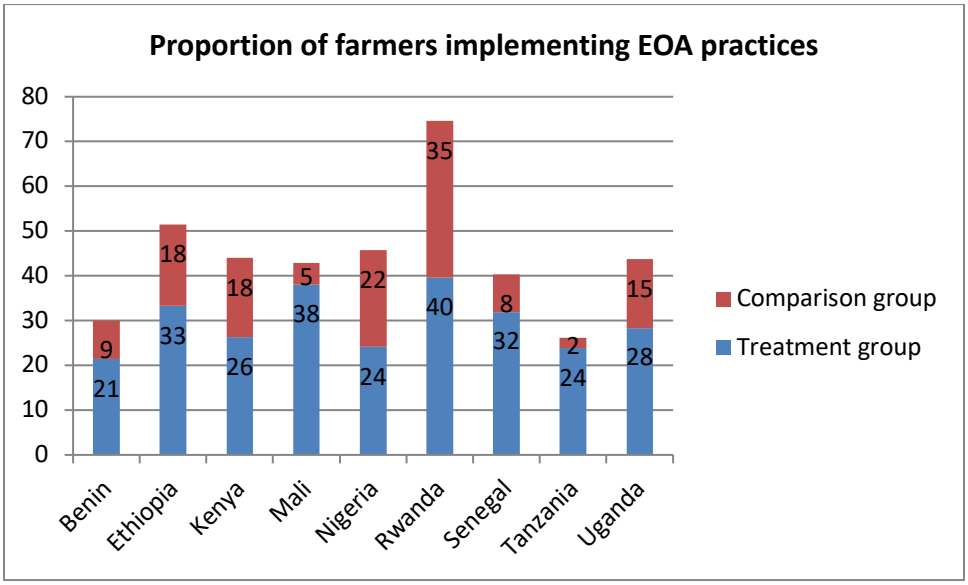
*Significant at 10% **Significant at 5% ***Significant at 1%

Another area where both groups seem to be pulling in different directions relates to productivity and demand for organic and non-organic products: while the treatment group favours organic products the treatment group favours the inorganic. It also indicates that farmers in the comparison group do not entirely have a strong negative attitude towards EOA practices.

### *Adoption of EOA Practices*

The EOA-I in additional to creating more awareness of EOA practices also aims to increase adoption and implementation of these practices by farmers. Consequently this study established the baseline status of the extent to which farmers have adopted these practices. The table 12 above indicates that there are significantly more farmers in the treatment group who have adopted and are implementing EOA practices compared to their counterparts. On average there are 29.7% of farmers in the treatment implementing each of the EOA practices and technology tested in this study compared to 14.6% in the comparison group. Rwanda recorded the highest proportion of farmers implementing each of the EOA practices in both the treatment and comparison groups at 39.6% and 35% respectively. Benin on the other hand recorded the lowest proportion (21.4%) of farmers implementing either of the EOA practices- see Figure 3.

*Figure 5: Percentage of EOA Producers who are implementing EOA practices*




Majority of farmers in the treatment group reported to be practicing use of animal manure (84.2%), crop rotation (61.4%), use of farmyard manure (59.2%), mulching (58.5%) and use of farm residue (56%) to improve soil fertility. In the comparison group most of the farmers reported to be practicing use of animal manure and crop rotation at 43.5% and 42.8% respectively - see table 9.

*Table 9: Adoption of EOA Practices*

| EOA Practices and technologies | Proportion of producers implementing EOA practices | | | |
|---|---|---|---|---|
| | Treatment | n | Comparison | n |
| **EOA Practices** | | | | |
| 1. Incorporation of farm residue | 56.0*** | 277 | 28.6*** | 271 |
| 2. Mulching | 58.5*** | 277 | 28.8*** | 271 |
| 3. Cover crops | 30.8*** | 277 | 17.6*** | 271 |
| 4. Use of farmyard manure | 59.2*** | 277 | 21.4*** | 271 |
| 5. Crop rotation | 61.4*** | 277 | 42.8*** | 271 |
| 6. Intercropping | 44.3*** | 277 | 23.7*** | 271 |
| 7. Green manure | 30.3*** | 277 | 8.5*** | 271 |
| 8. Animal manure | 84.2*** | 277 | 43.5*** | 271 |
| 9. Nitrogen fixing plants | 28.8*** | 277 | 12.1*** | 271 |
| 10. Green fallow period | 17.8*** | 277 | 6.7*** | 271 |
| **EOA technologies** | | | | |
| 1. Water conservation technologies | 34.8*** | 277 | 17.3*** | 271 |
| 2. Compositing | 39.1*** | 277 | 17.6*** | 271 |
| 3. Correction of soil pH | 9.2*** | 277 | 2.6*** | 271 |
| 4. Push pull | 5.6** | 277 | 1.9** | 271 |
| 5. Zero tillage | 17.2*** | 277 | 7.7*** | 271 |
| 6. Soil testing | 4.5*** | 277 | 0.0*** | 271 |
| 7. Bio-slurry | 3.3*** | 277 | 0.0*** | 271 |

*Significant at 10% **Significant at 5% ***Significant at 1%

In the comparison group the least practiced EOA practices and or technologies are soil testing, use of bio-slurry, Mexican flower, liming, push and pull, correction of soil pH. Intuitively, there is a very strong and positive correlation between the level of awareness and adoption or implementation of the EOA practices by farmers in both the treatment and the comparison group.

### *Organic Certification*

Organic certification is a procedure by which an independent party gives a written assurance that a production process is in conformity with organic standards. Any business directly involved in food production can be certified, including seed suppliers, farmers, food processors, retailers and restaurants. It is a marketing instrument that enables access to a special market. It confers a positive statement that a producer follows the rules of organic production. Certification bodies found in the various EOA-I target countries are listed below (Table 10).

*Table 10: Certification Bodies*

| County | Certification Bodies |
|---|---|
| Benin | SPG, 3rd party |
| Ethiopia | Fair trade, Rain forest alliance, UTZ café and Bird friendly |
| Kenya | ECOCERT, EAOPS (Kilimohai), Fair Trade, Global gap, Rain Forest, Bird Friendly. Soil Association, Ecocert, IMO, National Organic Programme, Control Union, Africert and Bio Swiss. |
| Mali | SPG, 3rd party, ECOCERT |
| Nigeria | ECOCERT |
| Rwanda | ECOCERT, Control Union, CERES PGS under development |
| Senegal | CERTISYS & TIERS are International. FENAB & AGRECOL for National. (Natbi Label), |
| Tanzania | TOAM certify farmers under PGS, EAOPS.ECOCERT-Third part rectifier. Control Union-3th party. TANCERT |
| Uganda | CERES and UGOCERT |

### *Type of Organic Certification & Certified Organic Products*

Certified organic products are those, which have been produced, stored, processed, handled and marketed in accordance with precise technical specifications (standards) and certified as "organic" by a certification body (IFOAM-2005). The type of product and certification are listed above against each of the countries. All the systems of certification used for certification complement each other.

However, PGS, is popular as it is considered low costs and the heavy emphasis placed on involvement of the farmers and local consumers is well suited to small farmers selling more locally. Other products produced organically and not certified are highlighted below. Most of these products are sold locally within the countries- see table 11.

### *Table 11: Certified Products and Type of Certification*

| County | PGS | 3rd Party |
|---|---|---|
| Benin | Rice, Soja, Vegetables | Pineapple (fresh fruit, processed & dried fruit). Cotton, Cashew nuts |
| Ethiopia | | Honey, Cotton<br>Banana |
| Kenya | | Beans, peas Macadamia, Coffee, Avocado, Cashew nuts, tea tree, herbs, Fresh Vegetables & Cashew Nuts |
| Mali | Fonio*, Rice, cotton | Sesame, Shea butter, Cotton, Mango |
| Nigeria | Cocoa | Ginger, Tumeric, Hibiscus, bird eye chilli, pepper, Moringa (leaf, powder & oil) |
| Rwanda | | Coffee, Pyrethrum, Essential Oils, Macadamia, Tea, Pineapple |
| Senegal | Onion, Tomato Cabbage, pepper Cucumber, Carrot, cotton | Mangoes, Hibiscus, Millet, Sesame |
| Tanzania | Sunflower, fruits &Veg, Avocado, cotton | Coffee, Tea, Cocoa, Spice like Ginger, Cloves, sesame |
| Uganda | | Coffee, Cocoa, Cotton, sesame, Vanilla, Fresh Fruits, Shea nuts, Fish, Hibiscus, Birds eye chilli, Black pepper, herbs , Frozen fruit. |

- **Benin:** Local Vegetables, Fonio, Poultry, Cooking oil, Coconut oil, Fish and Soap
- **Ethiopia:** Fruits**:** Avocado, Pineapple, Passion Fruit, Apple and Papaya. Others are Herbs, Spices, Coffee, Sesame, Frankincense, Gums resins.
- **Kenya:** Cashew Nut, Coconut, Mango, Peanuts, Butternuts, Bananas, Pumpkins, Indigenous Vegetables, Indigenous Chicken. Mangos Beans, Indigenous Vegetables, Chicken, Cattle, Goats, Pineapples.
- **Mali:** Millet, Onion, Cucumber, Sorghum, Oranges, Rice and Maize Local Vegetables
- **Nigeria:** Rice, Hibiscus, Local vegetables, Cucumbers, Waterleaves, Telferia, Okro, Pepper, Cassava, Scent leaves, Plantain/Banana,
- **Rwanda:** Beans, Maize, Sorghum, Rice, Fruits, Bananas, Local Vegetables Sweet and Irish potatoes,
- **Senegal:** Corn, Millet, Sorghum, Local Vegetables
- **Tanzania:** Local Vegetables**,** Sunflower and Fruits,
- **Uganda:** Beans, Bananas, Cassava, Maize, Sweet Potatoes, Irish Potatoes, Rice, Soghum, Wheat, Ground nuts, Lemon grass, Soya bean, some fruits like guava, local vegetables,

### *Status of organic Farm Certification*

Producing products organically requires the producer to be certified if they are to enjoy the market value proposition available in this venture. For instance access to premium markets for organic goods - which offer very competitive prices for organic products – requires a producer to be organically certified to access it. In this study 50.2% and 13% of the farmers interviewed from the treatment and comparison group respectively have been certified as organic farmers.

In Benin and Nigeria nearly all (96.7%) of farmers in the treatment group are certified organic farmers. In Ethiopia and Rwanda no farmer interviewed in this study in both the treatment and comparison group had been certified for organic farming. In Uganda the comparison group had more farmers (43.3%) certified for organic farming compared to their counterparts in treatment group which had only 35.5% certified farmers. Since the study used purposive cluster sampling, there is an inherent bias based on the cluster that was eventually sampled, thus this may not be an accurate representation of the proportion of farmers that have been certified in the respective country, but rather that of the sample used in this study.

### *Table 12: Proportion of Farmers Certified for Organic Farming based on the Sample*

| Country | Treatment | n | Comparison | n |
|---|---|---|---|---|
| Benin | 96.7 | 30 | 3.3 | 30 |
| Ethiopia | 0.0 | 30 | 0.0 | 30 |
| Kenya | 63.3 | 30 | 20.0 | 30 |
| Mali | 19.4 | 36 | 0.0 | 31 |
| Nigeria | 96.7 | 30 | 13.3 | 30 |
| Rwanda | 0.0 | 30 | 0.0 | 30 |
| Senegal | 60.0 | 30 | 3.3 | 30 |
| Tanzania | 86.7 | 30 | 34.5 | 30 |
| Uganda | 35.5 | 31 | 43.3 | 30 |
| **TOTAL** | **50.2** | **277** | **13.0** | **271** |

In absolutes, the approximate number of certified farmers in the respective EOA-I countries through PGS, and 3rd party certifications are as shown in table 19 below. As the table shows, Ethiopia recorded the highest number of certified organic farmers at 203,602 followed closely by Uganda and Tanzania at 190,670 and 148,274 certified farmers respectively. Nigeria had the lowest number of certified farmers at 669- table 13.

### *Table 13: No of Farmers Certified*

| Country | No of Farmers Certified |
|---|---|
| Benin | 6,498 |
| Ethiopia | 203,602 |
| Kenya | 37.295 |
| Mali | 3,524 |
| Nigeria | 669 |
| Rwanda | 44,174 |
| Senegal | 2,800 |
| Tanzania | 148,274 |
| Uganda | 190,670 |

Source: CLOs and PIPs

### *3.3.2 Results Tracker Indicators*

| Indicators | How the indicator is measured | Country | Baseline values | | Target | Mid-term | End-term |
|---|---|---|---|---|---|---|---|
| | | | Treatment | Comparison | | | |
| 1. Extent to which farmers are aware of EOA practices | Farmers are asked to list all the possible EOA practices and or technologies that they are aware of.<br><br>If a farmer is aware of a practice its assigned 1. The total number of farmers aware of each practice is summed up and divided by total number of sample size. The average percentage for all the practices is then estimated. | Benin | 34.3% | 23.2% | | | |
| | | Ethiopia | 36.1% | 23.6% | | | |
| | | Kenya | 34.7% | 23.9% | | | |
| | | Mali | 50.5% | 28.6% | | | |
| | | Nigeria | 34.0% | 41.0% | | | |
| | | Rwanda | 50.4% | 54.4% | | | |
| | | Senegal | 36.3% | 17.5% | | | |
| | | Tanzania | 31.8% | 9.3% | | | |
| | | Uganda | 32.7% | 20.8% | | | |
| | | **TOTAL** | **37.9%** | **26.9%** | | | |
| 2. Knowledge of EOA practices | Farmers are asked to demonstrate their level of knowledge on a list of EOA practices.<br><br>This likert scale of 1 to 5 with 1 being No knowledge and 5 Very knowledgeable was used[11]. | Benin | 3.27 | 2.63 | | | |
| | | Ethiopia | 2.19 | 1.85 | | | |
| | | Kenya | 4.07 | 3.32 | | | |
| | | Mali | 3.01 | 2.79 | | | |
| | | Nigeria | 3.04 | 2.84 | | | |
| | | Rwanda | 3.05 | 2.85 | | | |
| | | Senegal | 2.62 | 1.64 | | | |
| | | Tanzania | 2.77 | 2.22 | | | |
| | | Uganda | 3.27 | 2.74 | | | |
| | | **TOTAL** | **3.03** | **2.54** | | | |
| 3. Proportion of EOA practices adopted and being implemented by farmers | Farmers are asked to list all the possible EOA practices and or technologies that they use.<br><br>If a farmer names a practice its assigned 1. The total number of farmers using each practice is summed up and divided by total number of sample size. The average percentage for all the practices is then estimated per country and overall. | Benin | 21.4% | 8.6% | | | |
| | | Ethiopia | 33.3% | 18.2% | | | |
| | | Kenya | 26.3% | 17.8% | | | |
| | | Mali | 38.1% | 4.7% | | | |
| | | Nigeria | 24.2% | 21.5% | | | |
| | | Rwanda | 39.6% | 35.0% | | | |
| | | Senegal | 31.9% | 8.3% | | | |
| | | Tanzania | 23.9% | 2.3% | | | |
| | | Uganda | 28.4% | 15.3% | | | |
| | | **TOTAL** | **29.7%** | **14.6%** | | | |

[11] **|1| No knowledge** – Farmer not aware of the practice/technology **|2| Aware** – The farmer has only heard about the practice / technology but can't explain **|3| Basic knowledge** – Farmer can explain the basics about the practice but not very confident on application. Never tried it. **|4| Moderately knowledge** – Farmer can explain the basics of the technology / practice confidently has tried it's with below average results **|5| Very knowledgeable** – Farmer can explain the practice accurately and can confidently demonstrate/explain its application and has applied it with above average results

### *3.3.3 Conclusion*

This been a baseline study, the focus was laid on establishing the current status of farmers knowledge, their attitude and uptake of EOA promoted practices and or technologies (The results around these elements are presented in section 3.3 of this report). It also endeavored to establish the type and number of products that have been certified or otherwise per country (see section 3.4), and the reach of the EOA-I on the marginalized and minority groups (see section 3.2). The approach, as is in the entire study, is the use of a treatment and comparison group. The treatment group is significantly aware of more EOA practices than their comparison group counterparts. Similarly the treatment group has significantly more knowledge and has adopted more EOA practices than their counterparts in the comparison groups.

## 3.4 Objective 2 – Findings

*This section determines from an appropriate sample and the number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions.*

### *3.4.1 EOA Reach to Farmers, including* Youth and other Vulnerable Groups

From the desktop review and triangulation with key in-depth interviews with the pillar implementers this study established that the total number of farmers reached by the initiative have not changed substantially from what it was in the final evaluation conducted in 2018. It was also noted that it is still a challenge for the implementing partners to provide hard numbers across all the categories of different stakeholders reached through various modes. The table 14 below presents best approximations of the number of stakeholders reached. As the table shows, the initiative has reached approximately 288,637 EOA producers. Majority of the producers were reached through the social media, EOA materials, and trainings. Kenya recorded the largest number of EOA producers reached at 176,910.

***Table 14 : Number of Producers Reached/ Means Used***

| How they were reached | Mali | Benin | Uganda | Nigeria | Senegal | Tanzania | Ethiopia | Kenya | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1. Training | 741 | 16,535 | 3,500 | 1,119 | 7,510 | 2,678 | 3,566 | 17,794 | **53,443** |
| 2. Materials | | 41 | | 12,000 | 218 | 294 | 22,750 | 23,570 | **58,873** |
| 3. Extensions | 150 | 3,125 | | 212 | | 460 | 100 | | **4,047** |
| 4. Media | | | | | | | | | |
| 5. Social media | | | | 5,000 | 2,251 | 6,018 | 6,039 | 124,000 | **143,308** |
| 6. Conference/ forums | | | | 321 | | 1,200 | 186 | 5,312 | **6,833** |
| 7. Research papers/books | | | | 5 | | 2,868 | 3 | | **2,873** |
| 8. Curriculums | | 41 | | 3(Institutions) | | 2,000 | 1 (Institutions) | | **2,041** |
| 9. Public gathering (Barazas) | | | 2,500 | | 899 | | 2,400 | | **3,399** |
| 10. Exchange visits | | | | 5 | | | 2 | 6,234 | **6,239** |
| 11. Farm institute and demonstration farm | | | | | | | 2 | | **0** |
| 12. TOT | | | | 3 | 298 | | 285 | | **301** |
| 13. More than 1 medium | | | 3,150 | | | 1,259 | | | **4,409** |
| 14. Other (Email subscribers) | | | | | | 2,868 | | | **2,868** |
| **TOTAL REACHED** | **891** | **19,742** | **9,150** | **18,668** | **11,176** | **19,645** | **32,455** | **176,910** | **288,637** |

Sourced – EOAI Final evaluation 2018

### *Vulnerable Groups Reached*

In the current development, dispensation youth and women are classified as vulnerable groups along with other special groups like those with physical disability, medical disability, widows and orphans. Table 15 below summarizes the number of vulnerable groups reached per country.

#### *Table 15: Number of Vulnerable Groups Reached*

| Vulnerability | Benin | Ethiopia | Kenya | Mali | Nigeria | Rwanda | Senegal | Uganda | Tanzania |
|---|---|---|---|---|---|---|---|---|---|
| Physical disability | | | | | | | 2 | | 96 |
| Vision impaired | | | | | | | | | 137 |
| Hearing impaired | | | 20 | | | | | | |
| Medical disability (e.g. HIV positive) | | | Training HIV groups | | | | | | 87 |
| Widows | | | | | | | | | 201 |
| Orphans | | | | | | | 15 | | 82 |
| Other (Specify) (Youth & Women) | | | | | | | | | 100,000 |

In the preceding discussion the proportion of youth and widows reached or participating in the study is still significantly small. The proportion of women is still lagging behind that of men. In the key in-depth interviews, it was further established that these groups are still underserved. Majority of the implementing partners indicated that there is no policy existing in their setting to specifically target these groups. The table 7

### *3.4.2 Results Tracker Indicators*

| Indicators | | | Baseline values | Target | Mid-term values | End-term |
|---|---|---|---|---|---|---|
| 1. Number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions. | EOA-I implementing organization were requested to provide the number and the category of vulnerable groups that they are working with. | Physical disability | 98 | | | |
| | | Vision impaired | 137 | | | |
| | | Hearing impaired | 20 | | | |
| | | Medical disability (e.g. HIV positive) | 87 | | | |
| | | Widow | 201 | | | |
| | | Orphans | 97 | | | |
| | | Other (Youth & Women) | 100,000 | | | |

### *3.4.3 Conclusion*

This study established the number of different EOA value chain players reached by the initiative through different mediums per country.

Aggregately, EOA-I phase one reached approximately 288,637 EOA value chain players, with Kenya recording the highest number of EOA value chain players reached at 176,910. Mali on the other hand had only reached 891 EOA value chain players. This is minus the number of value chain players reached through electronic and print media.

Although these numbers have been aggregated in the table, this may not entirely be advisable particularly because of problem of potential double counting. The mediums that EOA used to reach these value chain players include training, use of printed materials, use of extension services, print and electronic media, use of social media, farmer exchange visits among others. This study also established that aggregately, EOA-I reached approximately 3.6% youth. This is marginal given the proportional number of youths in African countries. This however can be explained by the fact that EOA-I phase one did not explicitly target marginalized and or vulnerable groups like youth and the disabled.

## 3.5 Objective 3 – Findings

*This section assesses the extent of utilization/coverage of EOA related programmes/initiatives in country project areas (household and partner level)..*

### *3.5.1. Utilization/coverage of EOA- Related Programmes/initiatives*

The consulting team determined the indicators that relate to investigating how the CLOs and PIPs have supported the movement of ecological organic agriculture across the 9 countries. Of interest, here was the level of geographical coverage of the project interventions across country political units like region, county, prefecture, district province etc. per each pillar.

It also related to the number of partnerships (and their geographical coverage) that have been established by the partners to further the multiplier effect of the project interventions across country. Also determined was the level inter-pillar coordination across particular regions and how this built intra and inter organizational synergies- see tables 16-17

***Table 16: Other EOA-related Initiatives in West Africa***

| | Name of the Organization | Type of project | Implementation area | Name of Donor supporting the project |
|---|---|---|---|---|
| Senegal | Agri. Sud International | Extension on EOA practices | Babagara, Bambey and Casamance Areas | AFD(French Gvt), EU |
| | Action Aid | Advocacy, EOA practices | Groundnut Basin, Western Senegal | |
| | Action contre la faim | Advocacy, food security | Podor, Valley of Senegal River | Spanish Government |
| | IRD(Institute for Development Research) | Research in EOA practices | Dakar | Senegalese Government |
| | UGB (University) | Professional Training | Saint-Louis, Students | Senegalese Government and other funders |
| | Taskéforce Agroécologie | Sensitization on EOA practices | Nationwide | National |
| | Alliance 3AO | Promotion and Advocacy of EOA. | National | Europa and Partners |
| Benin | PADMAR | Project from the Ministry | South and centre of Benin | FIDA |
| | URPAof | PROMOTE ORGANIC CASHEW NUTS | Zou: Southern and center of Benin | |
| | AKP | Organic shea assisted regeneration | North, North center | |
| | Ministry of agriculture | Projet to enhance EOA products | Benin | |
| | PROSOLO | Project of GZ Allemand on sustainable land management | | GZ |
| | FAEB | NGO | Benin | |
| | Abomey Calavy University | Research | Abomey Calavy, Parakou | |
| | Universite de parakou | Research | Parakou | |
| | Jnuku | NGO | South Benin | |
| | Fabricant de compost | Private organisation | Glazoue, Allada | |
| | REPAB | Federation of Ecological Agriculture | South of Bening | |
| | JUS-TILLOU | Private organization | Allada | |
| | PROCIVA | Projet allemand | Zoo, albori | |
| | FAEB | Federation of Ecological Agriculture | Benin | |

| | | | | |
|---|---|---|---|---|
| Mali | FiBL | Organic resource management to build soil fertility | Sikasso (Zoumana Diassa) and Koulikoro (Maféya) | FiBL |
| | Helvetas | Works with farmers in organic agriculture | Sikasso, Segou | Helvetas |
| | MOBIOM | Works with farmers in organic cotton, sesame and shea butter | Sikasso | MOBIOM |
| | GIP BIO | Farming on EOA practices | Bamako | ELVETAS. Switzerland, England |
| | AMSD | Ecological agriculture | Bamako and Nionsonbougo | Switzerland. Elvetas (depend on the activity) |
| | BEDE | Research | National | France |
| | COFERSA | Ecological agriculture | Bamako | BEDE, FAO, LUXE DEVELOPPEMENT |
| | USA-CANADA | EOA practices.<br>Dry culture and farming | SEVERE, doutzaen | Canada |
| | CAB DEMESO | Rural development (milk, seed, EOA practices) | SAFO<br>BAMAKO | USA-CANADA |
| Nigeria | Contec Global Organic Company | Setting up demonstration farms with the use of organic fertilizers | 9 States of the federation | Market development in the Niger Delta (MADE) |
| | JDPL Ekiti | Farming & empowerment | Ekiti | Miscerror |
| | U.I and Association of Organic Agriculture Practice of Nigeria | Fruits & vegetables | Southwest Nigeria | FARA |
| | Oyo State Agricultural Development Program (ASADEP) | Promoting organic farming | Oyo State<br>(All other states have similar program) | State |
| | ANSADEP – Anambra State ADP | Vegetable, rice and cassava | Farmers in all the local government areas in Anambra State | Anambra State Government. |
| | OM4D | Supporting organic agriculture | Ghana, Togo, Burkina Faso, Princeton | Deutch |
| | ECOWAS | Declaration of Organic Agriculture | Togo, Co'de Devour, Burkina Faso | ECOWAS |

### *Table 17: Other EOA-related Initiatives in Eastern Africa Africa*

| | Name of the Organization | Type of project | Implementation area | Name of Donor supporting the project |
|---|---|---|---|---|
| Ethiopia | PAN | Push & Pull technology and area wide pest Management | National | ICIPE |
| | ISD | Area wide pest Management and Control (Sorghum and Maize | Amara Tigre region | ICIPE |
| | ISD | | | IFAM |
| | SNV – Netherlands Dev Org | Bio- Slurry utilization in Agriculture | | |
| | Universities ( Wuolo, Wuldea, Debra Markos) | Adaptive research (Sorghum & Maize) | West Amara region | French Government |
| | GIZ | Biogas Technology & Bio Slurry for Agriculture | | GIZ |
| Rwanda | Organic Trade for EA (OTEA) | Organic Guarantee system, VCD, Policy support Institutional building | National | SIDA through IFOAM |
| | ROAM | Umbrella organisation for organic sector in Rwanda | National | EOA, GTZ and other donors |
| | Food for the hungry | Agro-Ecology | National | Donor funding |
| | Agri promotions ltd | Vermiculture | National | Donor funding |
| | HUGUKA | Sustainable Agriculture | National | EU, Netherlands, Rwanda Government |

| | | | | |
|---|---|---|---|---|
| Uganda | SATNET | Organic value chain development | Western Uganda | Donor finance and membership contributions |
| | PELUM | Ecological land use and advocacy | National | Multiple grants |
| | NOGAMU | Umbrella Org Organic value chain and marketing and advocacy | National | Denmark, BMZ |
| | KULIKA TRUST | Training, Advocacy and organic production | National | Own sources of finance and donor funding |
| | CARITAS Uganda | Ecological land use and advocacy | National | Catholic church and multiple donors |
| | CARITAS Kampala/Kabale/Masaka | Organic agriculture training, production and marketing | Central and Western region | Self-generated funds and fundraising |
| | Africa Network 2000 | Training and organic production /marketing | National | Donor funding |
| | St Jude | training and demonstration and production | central | Fundraising and own sources |
| | NARO | Research demonstration training and production | National | Governments Grants |
| | UGOCERT | Certification | National | Self-generated funds |
| | CERES (National Network affiliated in Africa) | 3rd Party certification, sustainable agriculture and market development | National | |
| | Rural Community in Development (RUCID) | Training in EOA and marketing | Mityana/central region | Self-generated funds and partnerships |
| | Kasenge Riverford Organic Training Centre | Training and organic value chain development/management and marketing | Central region | Self-generated funds and donor finance |
| | Uganda Martyrs University (UMU) | Training and research | National | Catholic Church Consultancy |
| | AFIRD | Sustainable agriculture | Central region | Donor based |
| | Makerere University | Research, Training and Organic production | National | Self-generated funds and Donor finances |
| | Eastern and Southern Africa small scale farmers forum | Advocacy for EOA and small holder farmers | National | Donor finances |
| | Send a cow Uganda | Organic farming | National | Donor based financing |
| | Skills oriented development initiative | Organic agriculture training, value addition and marketing | Central region | Donor based funds |
| | Sustainable agriculture for rural development network | EOA Training and advocacy | National | Donor based |
| Kenya | Welt Hunger Hilfe Kenya | Sustainable Agriculture (Production through organic practices) | Kakamega | BMZ/DFID/EU/USAID |
| | Green Peace Africa | Implementing Agro ecology and promoting EOA | Africa | ESAFF, Africa Centre for Biodiversity (ACB), Africa Biodiversity Network (ABN) |
| | Pelum Kenya | EOA | Kakamega, Busia | SSNC |
| | Yard | Improving organic agricultural productivity | Gatanga | Tudor Trust |
| | GBIAL | Permaculture | Kilimabogo | Miseror |
| | RIDEP | Dry land farming | Tharaka | Tudor Trust |
| | CREP Program | EOA | Awasi | |

| | | | | |
|---|---|---|---|---|
| | G-Black | Application of The Grow Biointensive Agriculture Organic, Ecological Technology Options. | Kiambu | Ecology Action/Kilili Self-Help |
| | RODI Kenya | | Kiambu | |
| | INADES Formation | | Machakos | |
| | SEED Savers | | Nakuru | |
| | COSDEP | | Kiambu | |
| | Africa Food Sovereignty Alliance | | | Sida |
| Tanzania | SWISSAID | Agro ecology | Morogoro, Mtwara-Masasi | SwissAid & French embassy |
| | Institute Of Rural Development (IRDP) | Agriculture, Forestry, Bee keeping & Livestock | Morogoro, Dodoma | EU |
| | Tanzania Forest Conservation Group(TFCG) | Agroforestry | Morogoro, Dodoma | UKAID |
| | MJUMITA | Agroforestry | National level Movement | UKAID |
| | PADMAR | Project from the Ministry | South and centre of Benin | FIDA |
| | URPAof | PROMOTE ORGANIC CASHEW NUTS | Zou: Southern and center of Benin | |
| | AKP | Organic shea assisted regeneration | North, North center | |
| | Ministry of agriculture | Projet to enhance EOA products | Benin | |
| | PROSOLO | Project of GZ Allemand on sustainable land management | | GZ |
| | FAEB | NGO | Benin | |
| | Abomey Calavy University | Research | Abomey Calavy, Parakou | |
| | Universite de parakou | Research | Parakou | |
| | Jnuku | NGO | South Benin | |
| | Fabricant de compost | Private organisation | Glazoue, Allada | |
| | REPAB | Federation of Ecological Agriculture | South of Bening | |
| | JUS-TILLOU | Private organization | Allada | |
| | PROCIVA | Projet allemand | Zoo, albori | |
| | FAEB | Federation of Ecological Agriculture | Benin | |

### *3.5.2 Results Tracker Indicators*

| Indicators | How the indicator is measured | Country | Baseline | Target | Mid-term | End-term |
|---|---|---|---|---|---|---|
| 1. Extent of utilization/coverage of EOA related programmes/initiatives in country project areas | This captures the number of EOA related initiatives being implemented in each country. | Benin | 14 | | | |
| | | Ethiopia | 6 | | | |
| | | Kenya | 14 | | | |
| | | Mali | 9 | | | |
| | | Nigeria | 7 | | | |
| | | Rwanda | 6 | | | |
| | | Senegal | 7 | | | |
| | | Tanzania | 4 | | | |
| | | Uganda | 12 | | | |

### *3.5.3 Conclusions*

Other EOA-related Initiatives clearly demonstrates that there are several Organic agriculture initiatives in all the 8 countries, however their information was scanty.

This calls for the need of the national platforms to be more dynamic and bring all the actors in OA on board; so that this information can easily be available and up to date. This would be important in aiding the tracking of relevant and accurate OA numbers (farmers, level of investments, actors etc.) within the country easily.

## 3.6 Objective 4 – Findings

*This section assesses the status of advocacy and implementation strategies at the state and national level by implementing partners (CLOs and PIPs) and other actors*

### *3.6.1. Advocacy Strategies at Implementing Partner Level*

The consulting team focused on the status/ extent to which the advocacy and other implementation strategies by CLOs and PIPs have resulted to mainstreaming EOA into national policies, plans, strategies, and university programmes at country level. It was evident that majority of the implementing organizations did not have a formal organizational based advocacy strategy, but all had elements of advocacy within their diverse activities which are discussed below. Table 18 below also captures existing policies and programs / plans on organic in the respective countries.

***Table 18: EOA Partners' Advocacy Strategies***

| Country | Partner | Formal documented Advocacy Strategy |
|---|---|---|
| Benin | Organisation Béninoise pour la Promotion de l'Agriculture Biologique | None |
| | Platform for Civil-Society Actors | None |
| | Crasteda | None |
| Ethiopia | Mekelle University | None |
| | PAN | None |
| | Institute for Sustainable Development | I YES – within Strategy document |
| Kenya | Egerton University | None |
| | Kenya Organic Agriculture Network | Kenya Organic Agriculture Sector Strategic Plan (2018-2022) |
| | Biovision Africa Trust | None |
| Mali | IER | None |
| | Rural Polytechnic Institute | YES – within Strategy document |
| | Réseau Malien pour la Transformation locale du Coton Biologiqu | None |
| | Association des Organisations Professionnelles Paysannes | YES – within Strategy document |
| Nigeria | University of Ibadan | None |
| | Kwara State University | None |
| | Healthy Foods Consumer Initiative | None |
| | Nigerian Organic Agricultural Network | Association of Organic Agriculture Practitioners Strategy (2017-2031) |
| Senegal | ENDA PRONAT | None |
| | Senegalese Association for the Promotion of Organic Agriculture). | None |
| | Association for Agriculture & Ecology. | None |

| | | |
|---|---|---|
| | Fédération Nationale pour l'Agriculture Biologique | National EOA Strategic plan (2017 – 2037) |
| Tanzania | Sustainable Agriculture Tanzania | "Mainstreaming Organic farming, Gender and Environment management in higher learning institute |
| | PELUM Tanzania | Community radio program campaigns, community dialogue and farmer stakeholders' forums Strategy |
| | Tanzania Organic Agriculture Movement | - TOAM Strategic Plan.<br>- Organic Sector Development Program (OSDP). |
| Uganda | Uganda Martyrs University | |
| | Makerere University | |

***Benin***

Benin has the Innovation for Sustainable Agricultural Growth (2017) plan that promotes use of organic herbicides and fertilizers in the rice and soya value chains. Even though the PIPs did not have a formal advocacy strategy, they have formalized their relationship with different stakeholders to achieve their goals. OBEPAB advocacy strategy has focused on bring on board political leaders during events/conferences/fairs promoting EOA practices. This strategy has been successful, as EOA agenda has featured in Government key meetings on agricultural decision-making. This has resulted into the Ministry building putting in place a roadmap for the promotion of EOA. It also includes having a more robust data collection on farmers, understanding their point of view, opportunities and challenges to increase the visibility of EOA. The strategy also influenced the Ministry to acknowledge organic pesticides. They are testing a few samples to establish their efficacy. PASCiB's advocacy strategy is yet to been concluded, however, an element of advocacy is included in its communication strategy.

***Ethiopia***

Ministry of Agriculture have a number of elements of EOA including the promotion of organic fertilizer reflected in its Nutrition sensitive Agriculture Strategy. Ethiopia has also held the 1st National conference on Organic Agriculture in 2018 chaired by the state department of Agriculture and a steering committee established to develop ToRs for a technical committee to design a National strategy. Makele University has also held a range of workshops to sensitize the regional governments on need to shift from conventional Agriculture to organic EOA.

ISD – every year ISD holds a National advocacy event under the Cultural diversity, and also an Organic farming action week where the concept of EOA is promoted.

PAN – The institution does not have a formal written advocacy strategy but the it has been working on an informal advocacy on a number of issues through meetings and organized workshops. such as: Inclusion of IPM methods on the National Pest Management Support System aligned to cotton production, E-Waste management regulation developed and elimination Lead in paints project in Africa.

***Kenya***

The Kenya Organic Agriculture Sector Strategic Plan (2018-2022) anchored at KOAN is driving the investment in the completion of OA policy development, Mainstreaming OA in National and

County government, Representation of Organic sector in domestication of international treaties and promoting recognition of Organic Agriculture in the national development agenda. These efforts have resulted into a Draft Organic Agriculture Policy, development of Ecological Organic Agriculture Sector Plan and influenced Kirinyaga County in Kenya to single out one sub-county for organic farming.

***Mali***

Institute d'Economie Rurale (IER) efforts on lobby have been geared towards Resource mobilization on EOA initiatives from institutions, Government, and more involvement of women in organic farming to improve their income. The latter has benefited from Syprobio (Project funded by the European Union through the SWUISSE Cooperation. The institution also has resources for Organic resource management to build soil fertility (ORM4SOIL) also funded by the SWUISSE COOPERATION aimed at continuous improvement of soil.

Institute Polytechnique Rural de Formation et de recherche Appliquée advocacy strategy is Included in its strategic plan. The institution collaborates with various stakeholders such as the World Bank, GIZ, FAZAM (Canadian organization) to improve quality of training on EOA practices, push for the Gender balance with a target to have 30% of women taking agricultural related courses. This has contributed to greater inclusion of more women undertaking doctorate programmes.

REMATRAC-BIO handling pillar does not have an explicit advocacy strategy; it carry out advocacy informally through meetings, training, fair, seminar, courtesy visit to politicians. They invite political leaders and give them information and update related to EOA. This approach has been operational since 2015 and has allowed the inclusion of several mayors in the EOA project and in its promotion.

The CLO Association des Organisations Professionnelles Paysannes (AOPP) advocacy has revolved around the contribution to changes in national and local policies and practices for EOA in Mali, through the influencing of policies Consideration of EOA in the national budget and the national fund, Contribution to the modification of the agricultural policy: e.g.-in regard to seeds. The policy now advocates that a certain number of organic crops be taken into account in subsidy programmes and access to women, youth and other marginalized actors to funding through FIDA and in the various state-level programs.

***Nigeria***

Nigeria has Association of Organic Agriculture Practitioners Strategy (2017-2031) which has advocacy as a thematic area. The strategy is anchored at NOAN. There have been efforts for EOA policies to be integrated into national policy frameworks and there is a 3rd draft Nigeria Organic Agriculture Bill being discussed. The county also hosts a National Organic Agriculture Business Summit (NOABS) annually. The business summit brings together stakeholders to discuss EOA issues towards mainstreaming to national development. The summit is held on a rotational basis and has contributed to increase in awareness and business opportunities for EOA products across the country.

The Healthy Foods for Consumers Initiative (HeFCI) has been informally lobbying at the national level to restrict use of chemicals and have achieved reduction of subsidies for inorganic inputs. There has been an Inclusion of Organic Inputs in the Growth Enhancement Scheme of the Federal Government though lobbying support coordinated by NOAN. This has resulted into organic fertilizer, natural seeds and other organic allowable inputs being subsidized to farmers by the government

***Rwanda***

In Rwanda, the status of EOA strategy is yet to be elaborated in Rwanda Organic Agriculture Movement, which is a national umbrella organization that unites producers, farmers' organizations, processors, exporters companies, importers companies, institutions and organizations which are greatly involved in or support organic production, processing, marketing and export in Organic sector in Rwanda.

***Senegal***

Senegal, National Agricultural Investment Program for Food Security and Nutrition (PNIASAN) plan is awaiting validation; nonetheless, the Fédération Nationale pour l'Agriculture Biologique has developed The National EOA Strategic plan 2017 – 2037. Senegal's has several broad formal strategies amongst development partners that touch on Organic Agriculture. This include the Security of land properties by the authority supported by AFD (French Agency for Dev.) and NEPAD. The strategy discusses land Property Politics and Political Dialog on EOA. The GMO Management 2009-2027; Caution principles supported by BMZ infers to regulations on organic Safety in Senegal.

***Tanzania***

In 2018, SAT in Tanzania through a strategy inferred to as "Mainstreaming Organic farming, Gender and Environment management in higher learning institutes" supported the process through development of Three (3) modules in Organic farming, Gender in Agriculture and Environment management using the SAT innovation platform for organic Agriculture. These have informed the development of a new curriculum by the Ministry of Agriculture and the implementation has attracted support for training institutes (ASTI project). The training materials are aligned to EOA practices for both farmers and pastoralist.

Lobbying and Advocacy to influence partnerships, networks, and government departments is one of the strategic areas for TOAM. The organization has been involved in development of policy briefs aimed at influencing the government to support EOA through operationalization of the Tanzania National Agriculture Policy 2013, and organizing National Organic Policy Forums.

PELUM Tanzania has used the community radio program campaigns, community dialogue and farmer stakeholders' forums to advocate for farmers right to seeds, women land rights and EOA agenda. The initiative on seeds has influenced the seed industry to take into account farmers concern on quality seed availability and affordability and thus extended to Quality Declared Seed (QDS) production which has been spelled out in Agricultural Sector Development Programme (ASDP II). The programme also has Development of Organic sector Development project as one of its deliverable.

***Uganda***

Existing EOA advocacy strategy in Uganda are expressed in the East African EOA policy which is in place. Uganda Draft Policy which is currently a cabinet paper that is yet to be finalized and the EOA pillar implementing agencies have elements of advocating EOA.

### *3.6.2 AfrONet*

AfrONet's mission is "to spur a uniquely OA sector that transforms smallholder agriculture, into socio-cultural, affordable, productive, efficient and competitive farming systems that guarantee, food security and sovereignty, income growth and equity". As implied in its mission, AfrONet's focus revolves around lobbying for a united and vibrant Organic Agriculture movement in Africa. The institution has applied both formal and informal advocacy strategies to influence the EOA agenda across Africa. Of importance is the African Organic Conference (AOC) that is convened by AfrONet every 3 years as a stakeholder's platform, for sharing knowledge, experiences and views on various issues of concern in organic and ecological agriculture.

***Table 19: Partnerships Established by AfrONet with Donor Communities***

| Organization | Core Activity | Country |
|---|---|---|
| IFOAM | Organic Trade | Kenya, Uganda, Rwanda and Burundi |
| Biovision Africa Trust | Ecological Organic Agriculture Initiative | Kenya, Uganda, Tz, Benin, Mali, Senegal Ethiopia, Nigeria |
| Swiss AID Tz | Organic Agriculture support | Continental |
| Andreas Hermes Akademie (AHA) | Institutional capacity Support | Continental |
| UNCTAD | Trade & Policy | Continental |
| International Society of Organic Agriculture Research (ISOFAR) | Organic Research | Continental |
| UNFAO | Organic Agriculture Trade | Continental |
| AUC | Organic Agriculture Conference support | Continental |

AfrONet has also advocated for inclusion and mainstreaming of EOA policies through support to initiatives and partnerships across the region.

The institution supported the Arusha Organic policy symposium, which has had an influence on organic development policies in Kenya, Uganda and Zanzibar. Currently AfrONet has partnerships in 30 African Countries inclusive of the 8 countries implementing EOA-Initiative. Such strategic partnerships have contributed to Organic movements in South Africa and Morocco joining the EOA movement.

### 3.6.3 Results Tracker Indicators

| | | Advocacy Strategy | | | Target | Mid-term | End-term |
|---|---|---|---|---|---|---|---|
| **Country** | **Partner** | **Existing as a document** | **Existing thro' activities** | **Non-existent** | | | |
| Benin | Organisation Béninoise pour la Promotion de l'Agriculture Biologique | | | x | | | |
| | Platform for Civil-Society Actors | | x | | | | |
| | Crasteda | | | x | | | |
| Ethiopia | Mekelle University | | | x | | | |
| | PAN | | | x | | | |
| | Institute for Sustainable Development | x | | | | | |
| Kenya | Egerton University | | | x | | | |
| | Kenya Organic Agriculture Network | x | | | | | |
| | Biovision Africa Trust | | | x | | | |
| Mali | IER | | | x | | | |
| | Rural Polytechnic Institute | x | | | | | |
| | Réseau Malien pour la Transformation locale du Coton Biologiqu | | | x | | | |
| | Association des Organisations Professionnelles Paysannes | x | | | | | |
| Nigeria | University of Ibadan | None | | x | | | |
| | Kwara State University | None | | x | | | |
| | Healthy Foods Consumer Initiative | None | | | | | |
| | Nigerian Organic Agricultural Network | x | | | | | |
| Senegal | ENDA PRONAT | None | | x | | | |
| | Senegalese Association for the Promotion of Organic Agriculture). | None | | x | | | |
| | Assoc. for Agriculture & Ecology. | | | x | | | |
| | Fédération Nationale pour l'Agriculture Biologique | x | | | | | |
| Tanzania | Sustainable Agriculture Tanzania | " | x | | | | |
| | PELUM Tanzania | | x | | | | |
| | Tanzania Organic Agriculture Movement | - x | | - | - | - | - |
| Uganda | Uganda Martyrs University | | | x | | | |
| | Makerere University | | | x | | | |

### 3.6.4 Conclusion

There were only 3 draft advocacy strategies at the national level, in Kenya, Uganda and Nigeria. All the Countries except Ethiopia, Rwanda and Mali had explicit national level programs and plans. All the PIPs interviewed were involved in advocacy activities; however, except for the majority 9 that integrated advocacy initiatives in their plans and organizations strategies the 11 had advocacy informal strategies and the 5 learning institutions had none at all as that does not fall directly within their mandate.

## 3.7 Objective 5 – Findings

*This section assesses the project implementing partners' current capacities, good practices, support received from the EOA Initiative donors in relation to technical and financial project planning, implementation, monitoring, evaluation, learning and scaling up*

### *3.7.1 Strengths and Gaps of the Institutional Support Structures and M&E System*

The consultants assessed the project implementing partners' current capacities, good practices, support received from the EOA Initiative donors in relation to technical and financial project planning, implementation, monitoring, evaluation, learning and scaling up.

***Staff Competencies***

Majority of the staff EOA at pillar level are well qualified in their technical capabilities. However, they have not wholly demonstrated project management, M&E and reporting savviness, going by the last evaluation the recent capacity assessment and this baseline study. This could be partly attributed to the limited resources allocated of 10% allowable for administration costs; hence staff allocate limited time while other PIPs use volunteers.

***Resource Mobilization***

This is important for long term sustainability of the PIPs and as well as upscaling EOA-I; It featured as a key weakness across the PIPs.

***Financial Management and Reporting***

There was a notable concern also expressed in the final evaluation and the recent Capacity assessment. The consultants assessed progress based on efforts made by BvAT to improve the accounting practices of partners and there was noticeable improvement[12].

***Experience Sharing Across Pillars***

This was also mainly to be driven by CLOs but was generally weak as the PIPs focused on diverse value chains, which then limited opportunity for synergies.

***Monitoring and Evaluation Systems***

The success of any project/programme is intertwined with the existing monitoring and evaluation (M&E) system and EOA-I is not any different[13]. Centrally, M&E system is used to collect and

[12] As identified by the capacity assessment 11 Organizations (SACDEP, Egerton University, Pelum Tanzania, Pelum Kenya, BvAT, ISD, Mekelle, Enda Pronat, PASCIB, CRASTEDA, University of Ibadan) were low risk in that they have well developed financial management systems and functioning control frameworks, 9 (KOAN, AOPP, NOAN, OBEPAB, AGRECOL, IER, REMATRAC BIO, KWASU, FACAN) medium risk. 1 (IPR) significant risk and 6 (TOAM, Makerere, FENAB, ASPAB, OFPSAN, HEFCI) high risk which implies they are open up to the possible misuse of funds

[13] M&E system here refers to the framework, resources (financial or otherwise), human resource, infrastructure and the requisite tools needed to monitor project/program progress over the implementation period and evaluate its effectiveness and efficiency over and after the implementation period.

manage project/program data that then provide evidence required to advice and guide management decisions.

This study established that in general EOA-I does have an M&E framework that cuts across the roles and functions of different EOA-I structures: from the continental, regional and national platforms and their respective steering committees; to the Country Lead Organizations (CLOs), and Pillar Implementing Partners (PIPs) for each pillar.

In any project/program, the rule of thumb is that 5-10% of the budget should be allocated to M&E[14]. This budget is used to develop respective M&E infrastructure and support implementation of the M&E plan, data collection, management, processing and dissemination, and where necessary capacity building among others. This study established that EOA-I in phase one allocated approximately 8% of the budget to M&E. Despite the allocated budget lying within the required proportional allocation, there is evidently lack of M&E infrastructure, data collection and management system and data collection tools across all the nodes in the EOA-I structure.

Further, this study established that majority of the EOA-I executing, coordinating and implementing agencies do not have staff purely dedicated to the M&E functions both for the EOA-I and or the relevant organization in general. This is a fundamental deficiency which implies a systemic weakness with no possible self-re-correction.

These weaknesses in the M&E system were also evident in the difficulty with which the organizations involved in the EOA-I implementation had with providing data requested for the purposes of this study.

Table 20 provides  summarizes areas of strengths and weaknesses in the capacities discussed above.

[14] *Frankel, et al (2016),* "M&E Fundamentals: A Self-Guided Mini-Course" *MEASURE Evaluation*

### *Table 20: Strengths and Gaps of the Institutional Support Structures and M&E System: Eastern Africa*

| Country | Partner | Funding and/ resource mobilization strategy | Dedicated EOA staff and Policies & Procedures | Robust M&E in place | Remark |
|---|---|---|---|---|---|
| Uganda | **Uganda Martyrs PIP 1** | Developed synergies with donors but still to develop resource mobilization strategies | Well-documented systems<br>No full time staff | Delayed reporting | Strengthen M&E<br>Develop strategic plan |
| | **Makerere University PIP 2** | Leverages IT on implementation<br>Partnerships with strategic organization (OSI) for implementation | Policies and procedures in place | Well-structured M&E | |
| Kenya | **PIP 1 – Egerton University** | No other sources of funding | Skilled & competent research team<br>Bureaucratic decision making | Limited follow up to farmers | |
| | **KOAN PIP 3 & 4** | Vibrant networks<br>Weak resource mobilization | Well-documented systems<br>Competent staff | Weak M&E | |
| Ethiopia | **Mekelle University PIP 1** | No other sources of funding | Well-documented systems<br>University accountant dedicated to the project | Strong M&E | |
| | **PIP 2 PANA** | No strategy for advocacy | Competent staff | Vibrant communication activities | |
| | **PIP 3 & 4 ISD** | Weak resource mobilization strategy | Well-documented systems<br>Competent staff | Weak M&E | |
| Tanzania | **PIP 1: SAT** | Uses IT in project management | Competent staff | Weak M&E | |
| | **PIP 2: PELUM TZ** | Strong project management skills<br>Limited funding base | Well-documented systems<br>Understaffed | Well documented M&E | |
| | **TOAM PIP 3 & 4** | Collaborating work within the network | Competent staff<br>Some procedures are not documented | Weak M&E and reporting | |

### *Table 21: Strengths and Gaps of the Institutional Support Structures and M&E System: West Africa*

| Country | Partner | Funding and/ resource mobilization strategy | Dedicated EOA staff and Policies & Procedures | Robust M&E in place | Remark |
|---|---|---|---|---|---|
| Benin | **OBEPAB PIP 1 &4** | Three donor projects running<br>Weak fund raising strategy<br>No strategic plan | Has skilled staff | Weak M&E | Strengthen M&E<br>Develop strategic plan |
| | **PASCIB PIP 2** | Vibrant advocacy activities | Policies and procedures in place<br>Dedicated team | Well-structured M&E | |
| | **CRASTEDA PIP 3** | Board plays active role in fundraising | Well-documented systems<br>Staff skills gap | Weak M&E | |
| Nigeria | **University of Ibadan. PIP 1** | Bureaucracy slows down implementation<br>Weak resource mobilization | Uses network of competent partners<br>Systems and procedures in place | | |
| | **Kwara State University PIP1** | Bureaucracy slows down implementation | Competent team | Weak project management, ME & and reporting | |
| | **HEFCI PIP 2** | No strategic plan | Competent team<br>Some policies and procedures are lacking | No M&E unit | |
| | **FACAN PIP 2** | No resource mobilization strategy | Policies and procedures in place | Weak M&E | |
| | **NOAN PIP 3** | Limited resource base | Full time and competent staff | Uses IT to communicate with partners | |
| | **OFPSAN PIP 3** | Weak resource mobilization | Full time and competent staff<br>No systems or procedures | Weak M&E | |
| Senegal | **Enda Pronat PIP 1** | Inclined to capacity more inclined to advocacy than research | Policies and procedures in place | Strong M&E | |
| | **PIP 3 AGRECOL** | Strategic plan in place<br>Weak resource mobilization | Competent team | Weak M&E | |
| Mali | **IER PIP 1** | Re-known research organization | Competent team | Weak M&E | |
| | **IPR PIP 2** | Accredited by the Ministry of Higher Education and Research | Strong in extension systems<br>Inadequate financial management systems and policies | Weak Project management, M & E systems. | |
| | **PIP 3 REMATRAC BIO** | Sustaining operations at 10% from organic trading activities<br>No strategic plan | No operational plans<br>Incomplete systems and procedures | Weak M&E | |
| | **PIP 4 AOPP** | Re-known organization in the organic space | | Reporting systems and templates are still not understood by PIPs,- conspire against M&E | |

### *3.7.3 Results Tracker Indicators- Eastern Africa*

| | Partner / | Capacity Improvement Plan Targets – based on baseline | | | Mid-term | End-term |
|---|---|---|---|---|---|---|
| **Country** | **Capacity Gaps** | **Funding and/ resource mobilization strategy -** | **Dedicated EOA staff and Policies & Procedures** | **Robust M&E in place** | | |
| Uganda | **Uganda Martyrs PIP 1** | Develop / strengthen resource mobilization strategies | Explore working with volunteers | Develop / strengthen M&E and reporting system | | |
| | **Makerere University PIP 2** | Develop / strengthen resource mobilization strategies | | | | |
| Kenya | **PIP 1 – Egerton University** | Develop / strengthen resource mobilization strategies | | Enhance extension to farmers | | |
| | **KOAN PIP 3 & 4** | Develop / strengthen resource mobilization strategies | | Develop / strengthen M&E and reporting system | | |
| Ethiopia | **Mekelle University PIP 1** | Develop / strengthen resource mobilization strategies | | | | |
| | **PIP 2 PANA** | Develop strategy for advocacy | | | | |
| | **PIP 3 & 4 ISD** | Develop / strengthen resource mobilization strategies | | Develop / strengthen M&E and reporting system | | |
| Tanzania | **PIP 1: SAT** | | | Develop / strengthen M&E and reporting system | | |
| | **PIP 2: PELUM TZ** | Develop / strengthen resource mobilization strategies | Explore working with volunteers | | | |
| | **TOAM PIP 3 & 4** | | Develop/ strengthen policies and procedures | Develop / strengthen M&E and reporting system | | |

### 3.7.4 Results Tracker Indicators- West Africa

| | Partner / | Capacity Improvement Plan Targets – based on baseline | | | Mid-term | End-term |
|---|---|---|---|---|---|---|
| **Country** | **Capacity Gaps** | **Funding and/ resource mobilization strategy** | **Dedicated EOA staff and Policies & Procedures** | **Robust M&E in place** | | |
| Benin | **OBEPAB PIP 1 &4** | Develop fund raising strategy<br>Develop strategic plan | | Develop / strengthen M&E & reporting system | | |
| | **PASCIB PIP 2** | Document advocacy strategy | | | | |
| | **CRASTEDA PIP 3** | | Train staff on project management | Develop / strengthen M&E and reporting system | | |
| Nigeria | **University of Ibadan. PIP 1** | Develop / strengthen resource mobilization strategies | | | | |
| | **Kwara State University PIP1** | | | Develop / strengthen M&E and reporting system | | |
| | **HEFCI PIP 2** | Develop strategic plan | Develop/ strengthen policies and procedures | Develop / strengthen M&E & reporting system | | |
| | **FACAN PIP 2** | Develop resource mobilization strategies | | Develop M&E and reporting system | | |
| | **NOAN PIP 3** | Develop / strengthen resource mobilization strategies | | | | |
| | **OFPSAN PIP 3** | Develop / strengthen resource mobilization strategies | Develop/ strengthen policies and procedures | Develop / strengthen M&E & reporting system | | |
| Senegal | **Enda Pronat PIP 1** | Invest more capacity on RTE | | | | |
| | **PIP 3 AGRECOL** | Strengthen resource mobilization strategies | | Develop / strengthen M&E and reporting system | | |
| Mali | **IER PIP 1** | | | Develop / strengthen M&E & reporting system | | |
| | **IPR PIP 2** | | Develop financial management systems and policies | Develop / strengthen M&E &reporting system | | |
| | **PIP 3 REMATRAC BIO** | Develop strategic plan | Develop/ strengthen policies and procedures | Develop / strengthen M&E and reporting system | | |
| | **PIP 4 AOPP** | | | Develop / strengthen M&E &reporting system | | |

### 3.7.5 Conclusion

The key areas of weaknesses across board include;

a) Weak M&E and reporting systems
b) Lacking or incomplete policies and procedures for operation
c) Skills' gap among staff in project management and M&E
d) Lack of strategic plans, strategies and resource mobilization strategies

All the above were notable concerns also expressed in the final evaluation and the recent capacity assessment.

# CHAPTER 4: CONCLUSIONS & RECOMMENDATIONS

## 4.1 Conclusion

This study employed a quasi-experimental study design. It anticipates that attributable change overtime will be measured or estimated using difference in difference method or any other applicable quasi-experimental analysis design.

Further, this being a baseline subsequent studies that may be conducted to track changes of the indicators captured in this report should seek to: replicate (to the extent possible) the questions used in this study; It will also be critical to sample farmers from the areas where this study was conducted and if possible the same farmers or farmers drawn from the same groups as farmers who participated in this study.

The comparison and the treatment groups used in the study have important differences especially at the country level. In order to measure attributable change therefore, it will be important to observe how these differences behave and be accounted for in the eventual programmatic effects. This study also anticipates possible spill-over effects especially in the countries where the samples for the treatment and the comparison came from largely the same areas. Consequently subsequent studies and particularly, final evaluation should endeavour to measure this spill –over effects and attribute them to the project.

Subsequent studies should seek to establish whether these proportions and the magnitude difference will change and by how much over time. It will also be important to establish whether the number of certified products will change and their markets. It would also be important to check whether the production and productivity of the certified products will also change overtime.

## 4.2 Recommendations per the Objectives

***Objective 1: Assessment of the status of specific aspects related to EOA application in the participating countries: farmers' knowledge, attitudes and uptake of EOA practices and/or technologies; organic products (certified and non-certified); gender equality and access by the youth and other vulnerable groups.***

1. This study established that a majority of the EOA-I potential beneficiaries have either none or basic level of education. As such the conventional training methods may not work effectively for this group. Importantly during the implementation, the initiative should focus more on farmers' experiential learning – that is learning by doing and use of local

language as much as possible. Printed material should be in local language, use imagery with illustrations and demonstration. This also may call for encouraging peer to peer learning, farmers exchange farm visits or visiting demonstration farms.

2. It was established in this study that organic farmers barely allocate half of the land that they own to organic farming: particularly Benin, Ethiopia, Mali, and Tanzania. This may imply the venture does not generate sufficient income to motivate increase on the size of land allocated to farming. The comparison group on the other had barely allocated any land for organic farming. This will be an interesting indicator to track overtime. Significant change around this indicator may among other thing be proxy to farmers' self-perceived sense of value and benefits that they attach to EOA practices.

3. Farmers' awareness of the EOA practices and technologies is the first and most critical step onwards to further enquiry, adoption and implementation. According to this study farmers are not aware of a majority of EOA practices especially the non-conventional ones like push and pull, green fallow period - despite they not allocating half of their land to organic farming- zero tillage, use of leguminous plants, cover crops among other practices. Low level of awareness is also replicated in low level of adoption and implementation. It would be important to promote and seek to increase more awareness around the possible EOA practices that are available for farmers to choose from. That in itself has the capability to trigger curiosity and further enquiry around those practices, which may increase their adoption which could lead to increased production.

4. This study also notes that measuring change in the adoption EOA practices may not be the most ideal approach in determining the projects effects. This is particularly so because some of the EOA practices serve the same purpose and the producer can rightly opt for one and not both like use of compost manure or organic fertilizer and the difference would be productivity. Similarly some practices are best suited for some products and not for others. As such it would be recommended that while the why the initiative should pay keen attention to the practices adopted; more emphasis should be given to change in productivity as a consequence of the adopted EOA practice and or technology.

***Determination of an appropriate sample and the number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions.***

5. It is recommended that the EOA-I should identify, monitor and record the volumes and market prices for various organic products both at the local and the premium markets noting changes overtime. This will enable the initiative to incorporate market dynamics in its outreach approaches and also assisting EOA producers reposition themselves to take advantage of such markets. This could also enrich arguments in the advocacy campaigns.

6. This study also notes that despite there been a good number of local EOA certification bodies, the number of certified producers and even products is still marginal. It is

recommended that the initiative conducts rapid participatory appraisal with the producers to establish why this is the case in all the countries. This can also be carried out through the PIPs particularly pillar 3.

7. This study established that EOA-I still has a challenge in the collection and management of data relating to pillar intervention, particularly at the point of interaction between the pillar and EOA producers. Nearly all the implementing partners could not provide accurate data with the required level of detail for the purposes of this study. It is therefore recommended that the initiative collects all the basic demographic data of the producers that it comes into contact with; whether in the training, extension services, visits during farmer's forums/exhibitions and the like. This data should then be transcribed and aggregated at the national and for the whole initiative. Such a practice will enable the initiative tracks its extent, quality, type and category of reach of the EOA producers.

***Assessment of the extent of utilization/coverage of EOA related programmes/initiatives in country project areas (household and partner level).***

8. As this study demonstrated, there are many EOA interventions on the ground that are not part of the EOA-I. While this study endeavoured to identify them, their areas of focus, scope and their respective sources of funding; there still could be more that may not have been covered by this study. It is recommended that such initiatives be identified and methods of engaging in a non-bipartisan manner be developed to enable the initiative to create a critical mass that can be used to lobby and advance the EOA agenda at the national, regional and continental level.

***Assessment of the status of advocacy and implementation strategies at the state and national level by implementing partners (CLOs and PIPs) and other actors.***

9. While most of the organization allude that they do conduct advocacy, nearly all of them do not have formal/written advocacy strategies. This was also found lacking at the national, regional and even continental level. This is particularly concerning given that one of the major goals of this initiative is to mainstream EOA agenda into the national, regional and continental policies, strategies, plans and programmes. It is recommended that the initiative endeavours to build the capacity and encourage the partners at all levels to develop advocacy strategies with their respective implementation strategies. This will enable proper allocation of resources, monitoring achievements along this outcome area, and impress accountability.

***Assessment of project implementing partners' current capacities, good practices, support received from the EOA Initiative donors in relation to technical and financial project planning, implementation, monitoring, evaluation, learning and scaling up.***

10. The need for a robust M&E system was evident. This would enable availability of consistent data across all levels, i.e. from the implementing partners to country lead organizations and RSCs. This would also require identification and agreement of key prioritized indicators by the CLOs, PIPs and other EOA-I structures that are then clearly defined to avoid any ambiguity in recording and reporting. This calls for sufficient allocation of resources. The lack of robust M&E framework may have affected the reliability and or validity of the some of the numbers that have been reported by the PIPs and CLOs.

## *Annex 1: Key Stakeholders Interviewed*

| Country | Organization | Person Interviewed | Position in the Organization | Contact |
|---|---|---|---|---|
| | | | **Location** | |
| Benin | PABE | Silvere Tovignon | Member | +22997281138 |
| | PASCIB | Valentin Attossi | Project Manager | +229 66516993 |
| | CRAST<br>EDA | Tokannou Rene | Coordinator | +229 95287350/ 67048978 |
| | OBEPAB | Prof Simplice | President and Coordinator | +229 96691096 |
| Ethiopia | African Union | Dr. Simplice Nouala's | Head of Agriculture and Food Security Division | Noualas@africa-union.org |
| | | Jonathan Nyarko Ocran | Policy Officer - Rural Economy and Agriculture Department | Ocranj@africa-union.org |
| | Ministry of Agriculture | Mulatu Abete | NSC member Ethiopia | |
| | Institute for Sustainable Development (ISD) | Ghebremedhin Belay | Executive Director, ISD | |
| | | Gizaw Gebremariam | Program Manager, ISD | |
| | | Wibishet Fessha Assefa | Pillar Coordinator, Focal Person (CLO) | webefish@gmail.com<br>+251 911 249420<br>+251 913 558309 |
| | | Azeb Worku | Coordinator Value Chain and Market Development | azebworku@gmail.com |
| | Pesticide Action Nexus Association | Atalo Belay | Programme coordinator | feelatalo@gmail.com |
| | Mekelle University | Tewodros Tadesse | Tewodros Tadesse (PhD), Coordinator, Pillar I | tewodros.tadesse@mu.edu.et |
| Kenya | KOAN | Mary Otieno | Programme Assistant | |
| | | Samuel Ndungu | Coordinator Value chain and Market development | +254 721949546 |
| | BvAT | Pauline Mundia | Coordinator Information and communication | +254 722313291 |
| | Egerton University | Martin Kimani | Principal Investigator | |
| | Pelum Kenya | Zackary Makanya | NSC Chair | +254 714642916 |
| | | Manei Naanyu | RSC Coordinator | +254 722535473 |
| | | Rosinah Mbenya | Project manager | +254 724760438 |
| | | Everlyn Kaumba | M&E Officer | +254 721989244 |
| | SACDEP | | | |
| Mali | IER- Institut d'Economie Rurale | Urbain Dembele | Researcher | +223 66798171/ 70303540 |
| | IPR-IFRA | Coulibaly Amadou | Professor in anthropology of agriculture | +223 7633085 |
| | REMATRAC BIO | Mai-GA Diani Counda Basse | Procurement Manager | +223 6620750 |
| | AOPP | Coulibal Issa Konotje | Programme Manager | +223 7617888 / 63331919 |

| | | | | |
|---|---|---|---|---|
| Nigeria | RSC Secretary General | Dr. Adeoluwa O. O. | RSC Secretary general | +234 8035709365 |
| | NOAN | Oyewole Gbadamosi | Project Manager | +234 8072711147 |
| | Kware State University | Dr. Adebayo Olowoake | Coordinator Pillar I | +234 8034370246 |
| | University of Ibadan | Dr. Yekinni O. T. | Head of research | +234 8035905311 |
| | Ikotekpene Women Food & Cash Crop | Emmanuel Udonyah | Technical Officer | +234 8064026018 |
| | Healthy Foods for Consumers Initiative (HeFCI) | Okanlawon Oluwatoyin | Desk officer | +234 7062314395 |
| | Nnamdi Azikiwe University | Principal Implementing Partner Coordinator | Dr. Mrs. Onunwa, Akudo | +234 8034817334 |
| | Ministry of Agriculture | Vice Chairman I, LOC Organic Division | Mr. Isah Adamu | +234 8035049545 |
| Senegal | Enda Pronat | Laure Brun DIALLO | Head Monitoring & Evaluation | +221774415310 |
| | FENAB | SECK Ibrahima | Coordinator | +221774424029 |
| | AGRECOL | Assane GUEYE | Coordinator | +221774691827 |
| | Nous sommes la solution | Fatou Binatou DIOP | Zonal Coordinator | +221775627640 |
| | NSC | Mody GAYE | Chair | +221775357745 |
| Rwanda | HUGUKA | Eugene Ndekezi | Coordinator | +250782846189 |
| | University of Rwanda | Dr, Guillame Nyagatare | Ag Director Research and Innovation | +250789529484 |
| | Rwanda Organic Agriculture Movement | Lise Chantal Dusabe | CEO | +250788848454 |
| Tanzania | TOAM | Bakari Mongo | Programme Manager | +255684441790 |
| | PELUM | Zakia Mohamed | Programme Officer-Agriculture | +255766674114 |
| | AfroNet | Moses Aisu O. | Programme Director | +255685490452 |
| | SAT | Janet Maro | Executive Director | +255754925560 |
| Uganda | St. Lawrence University | Professor Charles Ssekyewa | University Secretary | +256702616988 |
| | Ministry of Agriculture | Alex Lwakuba | Commissioner-Crop Production | +256772402380 |
| | NOGAMU | Jane Nalunga | CEO | +256 772 495627 |
| | NARO | Mme W.Nakyagaba | Research Officer | +256 772516825 |
| | Uganda Martyrs University | Prof. Julius Mwine | Professor | +256 772648863 |
| | Uganda Martyrs University | Brother Murongo Marius | Lecturer | +256786797530 |

*Annex 2: Data Collection and Analysis per Indicator and Objective*

1. ***Assess status of specific aspects related to EOA application in the participating countries: farmers' knowledge, attitudes and uptake of EOA practices and/or technologies; organic products (certified and non-certified); gender equality and access by the youth and other vulnerable groups.***

## Indicators for Objective 1

| **To assess status of specific aspects related to EOA application in the participating countries: farmers' knowledge, attitudes and uptake of EOA practices and/or technologies; organic products (certified and non-certified); gender equality and access by the youth and other vulnerable groups.** | **How the indicator was measured** | **How the data was analysed** |
|---|---|---|
| ***1. Status of knowledge, attitudes and adoption of EOA practices and/or technologies;*** | | |
| i. What is the farmers' extent of awareness about EOA practices and technologies? | Farmers list the number of EOA practices and or technologies without any prompting | calculated the proportion number of farmers aware of EOA practices and or technologies at the national level and also per practice and or technology<br><br>Carried out test statistic to compare similarity in proportions of the comparison and the treatment group |
| ii. What is the farmers' level of knowledge around EOA practices and technologies? | Farmers was asked to demonstrate or explain how much the know about pre-listed EOA practices and technologies. The level of knowledge was measured using a Likert scale of 1 to 5 as follows:<br>**\|1\| No knowledge** – Farmer not aware of the practice/technology | Calculate the average level of knowledge among the farmers per practice and the national average<br><br>Carried out test statistic to compare the means for the |

| | | |
|---|---|---|
| | **\|2\| Aware** – The farmer has only heard about the practice / technology but can't explain<br>**\|3\| Basic knowledge** – Farmer can explain the basics about the practice but not very confident on application. Never tried it.<br>**\|4\| Moderately knowledge** – Farmer can explain the basics of the technology / practice confidently has tried it's with below average results<br>**\|5\| Very knowledgeable** – Farmer can explain the practice accurately and can confidently demonstrate/explain its application and has applied it with above average results | comparison and the treatment group<br><br>NB: A likert scale of 5 or more can be treated like a continuous data (Johnson & Creech, (1983)[15] |
| iii. What is the farmers' attitude towards EOA practices and technologies? | Farmers were asked to express extent to which they agreed or disagreed with the following statement on a likert scale of 1 to 5. With 1 been "Strongly disagree" and 5 "Strongly agree"<br>i. EOA practices are easy to understand and apply<br>ii. EOA practices increase farmers productivity<br>iii. EOA practices are affordable<br>iv. Application of EOA practices has improved my livelihood<br>v. It helps to improve source of farm income | Was analysed by finding the average of the extent to which farmers agreed or disagreed with each statement<br><br>NB: A likert scale of 5 or more can be treated like a continuous variable (Johnson & Creech, (1983)[16] |

[15] Johnson, D.R., & Creech, J.C. (1983). Ordinal measures in multiple indicator models: A simulation study of categorization error. *American Sociological Review*, 48, 398-407

[16] Johnson, D.R., & Creech, J.C. (1983). Ordinal measures in multiple indicator models: A simulation study of categorization error. *American Sociological Review*, 48, 398-407

| | | |
|---|---|---|
| | vi. Organic farming is for those who cannot afford chemicals and or non-organic seeds<br>vii. Non-organic farming gives more yields than organic farming<br>viii. Organic farming is only for household use not market<br>ix. Demand for organic products is lower than that of non-organic products<br>x. There is no market for organic products | |
| iv. Which EOA practices and technologies is the farmer currently practicing? | Farmers were asked to list the EOA practices and or technologies that they are using in their farms | Calculated the percentage of farmers using each of the EOA practices and or technologies<br><br>Carried out test statistic to compare similarity in proportions of the comparison and the treatment group |
| ***2. Organic products (certified and non-certified)*** | | |
| i. Products that have been certified or uncertified | CLOs and PIPs were requested to list the name of the products that have been certified under each certification body currently active in the country<br>Uncertified products were identified as products been grown organically but have not yet been certified | Listing products by the category of certification standard/body used to certify them |
| ii. Productivity of the EOA products (certified and or uncertified) | Farmers were requested to indicate volume in production in the last two seasons of the crops that they grow organically. The They | Total production was first converted to kilograms (kgs). The size of land was converted to acres. |

| | | | |
|---|---|---|---|
| | | were also requested to indicate the size of land the was used to cultivate the products | To measure productivity the average production per season in kgs was determined and then divided by the size of land in acres to get Kgs per acre<br><br>Carried out test statistic of the mean productivity for the treatment and the comparison group |
| iii. | Which EOA premium markets exist for the EOA products, and for which specific EOA product? | CLOs and PIPs were requested in the KII to indicate current existing premium markets for EOA products and the specific products being sold in those markets<br>This data was triangulated with other data sources from EOA related published most recent reports like one by IFOAM 2019-2020 | Listing existing premium markets with the respective products been sold in those markets |
| iv. | How many farmers have been certified? | CLOs and PIPs provided information on the number of farmers that have certified (national aggregates). However they were not able to disaggregate the data by gender or product | Aggregate the total count of certified farmers per country |

2. ***Determine an appropriate sample and the number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions.***

## Table 2: Indicators for Objective 2

| **To determine an appropriate sample and the number (or percent) of farmers, youth and other vulnerable groups who have been reached by the various EOA pillar interventions.** | **How the indicator was measured** | **How the indicator was analysed** |
|---|---|---|
| ***1. Total # farmers reached by EOA interventions (Disaggregated by gender and age) per pillar*** | | |
| i. # of EOA producers reached via different mediums: training, distribution of EOA materials, electronic and print media, internet and the social media etc | CLOs and PIPs provided the data of the number of EOA producers were reached through different mediums in their respective countries. This was triangulated with annual EOA-I reports and EOA-I phase one final evaluation report | The numbers were aggregated by the medium used to reach EOA producers and by country |
| ii. Number of youth, women and other vulnerable groups reached by the EOA pillar interventions | CLOs and PIPs provided the number of vulnerable groups reached. (Majority of the organizations were not able to provide data on the number of women, youths and other vulnerable groups that they had been able to reach through their intervention)<br><br>Youth was defined as any one aged 35 and below. | The number of people reached were aggregated and disaggregate by their category of vulnerability<br><br>For youth and women, the proportion of either group that participated in the survey was used as a proxy for the national proportional reach. |

### 3. *Assess extent of utilization/coverage of EOA related programmes/initiatives in country project areas (household and partner level).*

## Table 3: Indicators for Objective 3

| **To assess extent of utilization/coverage of EOA related programmes/initiatives in country project areas (household and partner level)** | **How the indicator was measured** | **How the indicator was analysed** |
|---|---|---|
| ***1. Partner organizations actively working within the EOA-I catchment areas and dealing with EOA related intervention*** | | |
| i. # of partner organization carrying out EOA activities and or initiatives but not part of EOA-I and their scope | Organizations working on EOA related initiatives and or projects were identified with their respective possible sources of funding for the identified initiatives, and the scope for these initiatives. This was achieved through interviews with the EOA partners, EOA industry players and other secondary data. | Tabulation of the initiatives, the organizations implementing those initiatives and the scope for each of the objective |

### *4. Assess status of advocacy and implementation strategies at the state and national level by implementing partners (CLOs and PIPs) and other actors.*

## Table 4: Indicators for Objective 4

| **To assess status of advocacy and implementation strategies at the state and national level by implementing partners (CLOs and PIPs) and other actors.** | **How the indicator was measured** | **How the indicator was analysed** |
|---|---|---|
| ***1. #, type and name of advocacy and implementation strategies in place with clear outcomes and targets*** | | |
| i. #, name of advocacy and implementation strategies in place in each EOA-I implementing partner and or organization that spells out what they aim to achieve with targets | CLOs and PIPs provided information on the availability and the nature of advocacy and implementation strategies within their organization | EOA-I implementing partners were tabulated alongside availability and the nature of their advocacy and implementation strategies |

### *Annex 3: Participants in the Validation Workshop*

| No. | NAME | ORGANISTION | POSITION | EMAIL/PHONE NUMBER | COUNTRY |
|---|---|---|---|---|---|
| 1. | Gama Jordan | AFRONET/TOAM | President/CEO | toam@kilimohali.org | Tanzania |
| 2. | Tovignan Silvere | PABE- BENIN | Member | tsilvere@yahoo.org | Benin |
| 3. | Nyakanda Fortunate | ZOPPA/ ISAN | Executive Director/ Chairperson | fortuhofisu@gmail.com | Zimbabwe |
| 4. | John Kinyua | Agile Consulting | Specialist | John.kinyua@agileafrica.org | Kenya |
| 5. | Manei Naanyu | PELUM KENYA | Coordinator EOA-I regional secretariat | manei@pelum.net | Kenya |
| 6. | Gbadamosi R Oyewole | Ass of organic agriculture practice of Nigeria | Project manager | ogbadamosi@noanigeria.net | Nigeria |
| 7. | Prof. Charles Ssekyewa | St Lawrence University | Chair RSC | cssekyewa@gmail.com | Uganda |
| 8. | Ben Mwongela | Agile consulting | Director | bmwongela@agileafrica.org | Kenya |
| 9. | Thomas O Were | Agile consulting | Director | tobiero@agileafrica.org | Kenya |
| 10. | Moses Okurut | AFRONET | Programing Director | aisumos@gmail.com | Tanzania |
| 11. | Zachary Makaya | PELUM KENYA | Country coordinator | makanya@pelum.net | Kenya |
| 12. | Martin Njoroge | KOAN | Programing officer | martin@koan.co.ke | Kenya |
| 13. | Caroline Nderitu | BvAT | M&E officer | Cnderitu@biovisionafrica.org | Kenya |
| 14. | Purity Khandasi | BvAT | Intern | puritysumbule@gmail.com | Kenya |
| 15. | Venancia Wambua | BvAT | EOA Project Manager | vwambua@biovisionafrica.org | Kenya |
| 16. | Alex Mutungi | EOA-I Continental secretariat | Coordinator | Amutungi@biovisionafrica.org | Kenya |
| 17. | Dr. David Amudavi | BvAT | Executive Director | damudavi@biovisionafrica.org | Kenya |