

# STUDY REPORT

CEA Agri-Skills Assessment Audit 2018 for Homa Bay, Busia, Kakamega and Kisumu Counties, Kenya



## 2018



**COUNTY-LEVEL** AGRI-SKILLS & EXTENSION SERVICE CAPACITY ASSESSMENT AUDIT AND DEVELOPMENT OF A POSITION FOR LOBBY ADVOCACY AS PART OF THE CIVIC ENGAGEMENT ALLIANCE PROJECT IN KENYA

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## Executive Summary

ICCO Cooperation Netherlands is implementing a 5 year project (2016-2020) in Kenya by the name Civic Engagement Alliance funded by Netherlands Ministry of Foreign Affairs. ICCO Cooperation Netherlands through the local partners aims to build capacity of Civil Society to contribute to decreasing inequality and injustice in societies in order to create the conditions for just, economic, social and political development for the most vulnerable in societies with a focus on Women, Youth and People with Disabilities. The consortium partners include: Anglican Development Services Western Kenya (ADSWK), Kenya Community Development Foundation (KCDF), Undugu society of Kenya (USK), African Youth Trust (AYT), and Kenya Alliance for Advancement of Children Rights (KAACR). The project focuses on the following pathways: Pathway one: Enhancing the Political Space for Civil Society in Kenya. The main objective is to lobby for operationalization of the Public benefits organizations (PBO) Act which was passed by parliament in 2013 but has not been operationalized. It aims to contribute towards a cohesive, inclusive, legitimate, independent, accountable and self-regulating civil society that has sufficient capacity to lobby duty bearers and policy makers for the operationalization of a progressive regulatory framework for civil society; Pathway Two: Advocacy towards progressive realization of the Right to adequate Food (SDG goal 2) in Kenya Improving the position of smallholder farmers to ensure food and nutrition security whose main beneficiaries are farmers The actions aim at promoting the realization of the right to adequate food in specific counties in Western Kenya; and Pathway Three: Position of small-scale farmers and producers & inclusive market systems: Strengthening the position of small-scale farmers and producers so that, in addition to being self-sufficient, they also contribute to sustainable farming. This includes access to means of production such as seed, finance and skills training. The pathway aims at empowering smallholder farmers to participate in sustainable value chains and inclusive markets. During the project period 2018 – 2020, it is planned that the CEA Program will focus on the following key intervention areas: Supporting the implementation of the respective County Government's Integrated Development Plans (CIDP 2018 - 2022) through their prioritized projects targeting Food and Nutrition Security (SDG 2); Improving the implementation of Agricultural Extension Services (AES) in the respective counties within which the Program is being implemented; and Supporting the development and implementation of Counties Agricultural Strategic Plans. Pursuant to these, the study was commissioned to: Identify the inclusivity of access to and outreach of agri-skills, training services, and agricultural extension services in the target areas, particularly opportunities for reaching out to women, youth and people with disabilities. This is borne from previous observations of lack thereof, as agri-skills development services are not adequately reaching women, youth and persons with disabilities; and Identify and understand the quality and relevance of skills and delivery of trainings in the target areas in a bid to improve access to quality and relevant public extension services. This is because extension services system currently has little, relevant practical and didactical experience; and Explore the business case for private sector extension services relevant for four value chains i.e. Chicken, Sorghum, Soya beans, and maize and how the provision of these services is currently done to smallholder farmers (projects, fee bases, services etc). As a way of ensuring that the public extension service is complimented by alternative private agri-service providers in order to improve access to quality skills services. To date, the assumption is that the public development agents' (PDA) system is overstretched and unable to provide the appropriate services for the many Chicken, Sorghum, Soya beans, and maize farmers.

# CHAPTER ONE

## BACKGROUND AND INTRODUCTION

### 1.1. Introduction:

This Chapter presents the general overview of the study including the County Profiles for Kisumu, Homa Bay, Kakamega and Busia Counties; an overview of the Civic Engagement Alliance (CEA) Project; Purpose of the Study; Study Justification; Objectives of the Study; Outline of the Study Report and Detailed Work plan.

#### 1.1.1. County Profiles

##### 1.1.1.1. Kakamega County

Kakamega County covers an area of 3,224.9Km<sup>2</sup> with a population was 1,660,651 according to the 2009 Kenya Population and Housing Census. The county is in the former Western Province of Kenya and Kakamega town is its capital. Kakamega County borders Vihiga County to the south, Siaya County to the West, Bungoma County to the North, Trans Nzoia to the North East, Uasin Gishu and Nandi Counties to the East. It covers an area of 3050.3 Km<sup>2</sup>.

It has seven administrative divisions: Kabras, Shinyalu, Navakholo, Lurambi, Ikolomani, lleho and Municipality. Kakamega County has 12 Administrative Sub-counties as follows: Lugari, Lukuyani, Malava, Alurambi, Navakholo, Mumias, Mumias East, Matungu, Butere, Khwisero, Sinyalu and Ikolomani Constituencies.

The local people are mostly Maragoli of the Luhya tribe, whose economic activity is mainly farming and animal husbandry.

The average temperature in the county range from a minimum of 10.3°C to a maximum of 30.8°C with an average of 20.5°C most of the year and it lies within an altitude of 250-2000m. While the rainfall ranges between 1,250 – 1,750 mm per annum. Hottest months are November, December, January and February. It has an average humidity of 67%. Kakamega County has a natural forest covering Shinyalu and Lurambi. It's one of the counties with rail fall spread throughout the year.

53.2 percent of the population breed livestock in the County, which are mainly cattle. Approximately 19.15million litres of milk are produced annually while 364,000kg of beef is also produced per year. 22.2. percent, 11.2 percent, and 1.7 percent of the population rear sheep, goats and pigs respectively. 92% of the households rear chicken while 0.7% keeps donkeys. About 19.15million litres of milk are produced annually while 364,000kg of beef is also produced per year.

The county road network has a fairly good bitumen Surface with Gravel Surface covering 323.8 Km while Earth Surface covers 2,67.3 Km. There are two air strips in the county, one in Kakamega and the other in Mumias.

Kakamega has a poverty level of 57% and age dependency ratio of 100:101. Their main resources are Gold, Arable Land, and Forests.

## Kakamega County

# 3,224.9

Square Kilometers of land



# 1,660,651

## Estimated population

**19.15million**  
litres of milk are  
produced annually

The main tourist attractions are Kakamega Forest, Caves, and Crying Stone of Ilesi. There are Commercial Banks, 3 Micro-finance on the economic front there are Large-Scale Sugarcane Farming, Mixed Farming, Commercial businesses, and 'Boda- Boda' Transport business. The main agricultural produce is Maize, Beans, Millet, Sugarcane, Tea, Dairy Products Sunflower, Soya beans.

### 1.1.1.2. Busia County

Busia County in the former Western Province is the gateway to Kenya from the neighbouring Uganda, with two border crossing points at Busia and Malaba towns. The county that spans 1,695 sq. km borders Uganda to the north, north-east and west, Lake Victoria to south west, Siaya to the south and south-east and Kakamega and Bungoma to the east. Busia, whose main economic activities are subsistence farming and fishing, has the potential to become a trading hub for the two East African countries.

Busia County consists of seven constituencies also referred to as the Sub-counties, namely; Budalangi, Matayos, Nambale, Funyula, Teso North, Teso and Butula.

Busia County has a population of 743,946 people (48% male and 52% female), according to the 2009 National Census. The Luhya tribe, the second largest ethnic group in Kenya after Kikuyu, is the dominant community in Busia - although the county has a significant population of Teso and Luo. The Luhya mainly earn their living as small scale farmers, producing maize, beans, groundnuts, cassava, sorghum, vegetables and fruits. The Teso also engage in subsistence farming and trade in agricultural produce. On the other hand, the Luo - who mainly live in fishing villages near the shores of Lake Victoria, are fish farmers and traders.

Busia County has a tropical humid climate due to the influence of the Lake Victoria. The county's annual temperatures range between 17°C and 30°C with average annual temperatures of between 24°C and 26°C. Busia's mean annual rainfall is between 900mm and 1,500mm distributed throughout the year. The long rains are usually experienced between March and June with short rains falling between September and October.

Agriculture, fishing and trade are the main economic activities in Busia County. Being the entry points between Kenya and Uganda, Busia and Malaba towns are thriving trade centres where livestock, agricultural products and manufactured goods are traded. Busia's climate is conducive for agriculture. Some of the crops that are grown within the county in small scale include maize, beans, sweet potatoes, millet, cassava, cotton and sugar cane. Fishing is also a major economic activity in Busia, thanks to the nearby Lake Victoria that supports a huge population of fish including Nile Perch and Tilapia.

### 1.1.1.3. Kisumu County

Kisumu County is one of the 47 Counties in Kenya. It lies within longitudes 33° 20'E and 35° 20'E and latitudes 0° 20'South and 0° 50'South. The County is bordered by Homa Bay County to the South, Nandi County to the North East, Kericho County to the East, Vihiga County to the North West and Siaya County to the West. The County covers a total land area of 2009.5 km<sup>2</sup> and another 567 km<sup>2</sup> covered by water. Kisumu County has seven sub-counties namely: Kisumu East, Kisumu West, Kisumu central, Nyando, Seme, Nyakach and Muhoroni.

**1,695**  
Square Kilometers of  
land



**Gender**

**743,946**  
people

**48% male**  
**52% female**



The county lies in a down warped part of large lowland surrounding the Winam Gulf, at the tip of which is Kisumu Town. East of Kisumu Town is the Kano Plains occasionally broken by low ridges and rivers. There are some notable physical features such as the scarps in the north, east and south. Others include the hill slopes and piedmont plains spreading across the vast Kano Plains.

The county can be divided into 3 topographical zones namely: the Kano Plains, the upland area of Nyabondo Plateau and the midland areas of Maseno. The Kano Plains lie on the floor of the Rift Valley, which is a flat stretch bordered to the North and East by the escarpment, while the upland area comprise ridges which rise gently to an altitude of 1,835m above sea level.

The major physical features in the county are the overhanging huge granite rocks at Kisian and the legendary Kit Mikayi in Kisumu West Sub-county, the Lake Victoria, which is the second largest fresh water lake in the world, the geographically famous rice-growing Kano Plains, and lake islands (e.g. Ndere National Park which are major tourist attraction). The granite rocks are exploited (in small scale) by the local population to produce building ballast. While the varying types of soils and rivers deposits are mined for building sand and baked bricks for building in Maseno and Nyakach.

There are three major rivers flowing into the Winam Gulf namely: the Nyando, Kibos and Sondu. The rivers are heavily silted, resulting in the extensive formation of lakeside swamps. The Kano Plains, due to the structure on the floor of these escarpments is vulnerable to flooding during heavy rains especially the lower Kano Plains and in particular low lying areas of Nyando.

The county has a long shoreline along Lake Victoria. This shoreline is 90 km long and has more than 17 beaches all of which are fish landing bays. Within Kisumu City, the shores have been used to put up beautiful tourist hotels like Kiboko Bay, the Yatch Club and Tilapia Beach Resort.

The soils are dominated by lake sediments, commonly sand and clay soils. In Kano Plains the soils are dark brown and grey, poorly drained and are generally very deep and firm. In the western part of Kano Plains are dark cotton soils commonly associated with the swamps. These types constitute more than 70 per cent of all soil types found in Kisumu County. These soils are suitable for brick making and sand harvesting especially at Maseno and Nyakach.

The total acreage under food and cash crops is estimated at 26,865 acres and 25,815 acres respectively. The main crops grown for subsistence include beans, maize, sorghum, finger millet, potatoes, groundnuts, kales and cotton. Generally, farmers are faced with many challenges which include; high cost of inputs, flooding, unpredictable rainfall/ low rainfall in some areas, weak marketing channels and crop diseases and pests.

The main livestock bred in the county include; dairy cattle, beef cattle, pigs, goats, sheep, poultry, rabbits and bee keeping. On the overall, 92.5 per cent of households rear chicken, 47.3 per cent keep cattle, 38.7 per cent and 23.6 per cent keep goats and sheep respectively. The most common livestock kept in the large-scale commercial farms are dairy and beef cattle, goat and sheep.

**land area of  
2009.5 km<sup>2</sup>**

**567 km<sup>2</sup>  
covered by  
water.**



**Food crops is  
estimated at  
26,865 acres**



**Cash crops is  
estimated at  
25,815 acres**

The mean annual rainfall varies with altitude and proximity to the highlands along the Nandi Escarpment and Tinderet. The area has two rainy seasons, with the long rains occurring in March and May while the short rains occur in September to November. During the short rains the average annual rainfall ranges between 450mm and 600mm. Rainfall data indicates that the county largely receives substantial rainfall. Maseno has a mean annual rainfall of 1,630mm, Kisumu 1,280 mm, Ahero 1,260 mm, Kibos 1,290 mm, Muhoroni 1,525 mm, and Koru 1,103 mm. The lowland area which forms a trough of low rainfall receives a mean annual rainfall of between 1,000mm and 1,800mm.

#### 1.1.1.4. Homa Bay County

Homa Bay County lies between latitude 0015' South and 0052' South, and between longitudes 340 East and 350 East. The county covers an area of 4,267.1 Km<sup>2</sup> inclusive of the water surface which on its own covers an area of 1,227 km<sup>2</sup>. The county is located in South Western Kenya along Lake Victoria where it borders Kisumu and Siaya counties to the North, Kisii and Nyamira counties to the East, Migori County to the South and Lake Victoria and the Republic of Uganda to the West.

The county is divided into two main relief regions namely the lakeshore lowlands and the upland plateau with a number of rivers namely Awach Kibuon, Awach Tende, Maugo, Kuja, Rangwe and Riana rivers, most of which originates from Kisii and Nyamira counties. Climate is inland equatorial, with temperatures ranging from a mean annual minimum of 17.1°C to a mean maximum of 34.8°C, with rainfall amounts of between 250mm and 700mm per annum.

Homa Bay County has eight parliamentary constituencies and 40 electoral wards. According to the 2009 census, Homa Bay County had 428,911 persons who had attained the voting age of 18 years, representing 41.7 per cent of the total county population. This eligible voter population is projected to have reached 449,319 persons (or 46.6 per cent) of the total county population in 2012.

Based on projections from the 2009 Kenya Population and Housing Census, Homa Bay County has an estimated population of 1,038,858 persons consisting of 498,472 males and 540,386 females by the end of the year 2012. This population is projected to rise to 1,177,181 persons in 2017. Of this total, 564,843 will be males while 612,338 will be females



population of  
**1,038,858**  
persons



projected to  
rise to  
**1,177,181**  
persons

#### 1.1.2. Civic Engagement Alliance Project Overview

ICCO Cooperation Netherlands is implementing a 5 year project (2016-2020) in Kenya by the name Civic Engagement Alliance funded by Netherlands Ministry of Foreign Affairs. ICCO Cooperation Netherlands through the local project implementation partners aims to build capacity of Civil Society Organizations (CSOs) to contribute to decreasing inequality and injustice in societies in order to create the conditions for just, economic, social and political development for the most vulnerable in societies with a focus on Women, Youth and People with Disabilities.

The consortium partners include: Anglican Development Services Western Kenya (ADSWK), Kenya Community Development Foundation (KCDF), and Undugu Society of Kenya (USK), African Youth Trust (AYT), and Kenya Alliance for Advancement of Children Rights (KAACR).

The Civic Engagement Alliance (CEA) Project focuses on the following pathways:

- a. Pathway one: Enhancing the Political Space for Civil Society in Kenya. The main objective is to lobby for operationalization of the Public benefits organizations (PBO) Act which was passed by parliament in 2013 but has not been operationalized. It aims to contribute towards a cohesive, inclusive, legitimate, independent, accountable and self-regulating civil society that has sufficient capacity to lobby duty bearers and policy makers for the operationalization of a progressive regulatory framework for civil society.
- b. Pathway Two: Advocacy towards progressive realization of the Right to adequate Food (SDG goal 2) in Kenya Improving the position of smallholder farmers to ensure food and nutrition security whose main beneficiaries are farmers The actions aim at promoting the realization of the right to adequate food in specific counties in Western Kenya.
- c. Pathway Three: Position of small-scale farmers and producers & inclusive market systems: Strengthening the position of small-scale farmers and producers so that, in addition to being self-sufficient, they also contribute to sustainable farming. This includes access to means of production such as seed, finance and skills training. The pathway aims at empowering smallholder farmers to participate in sustainable value chains and inclusive markets.



## **1.2. Purpose of the Present Study**

The purpose of the study is to conduct a County-level Agri-skills & Extension Service Capacity Assessment Audit and Development of a position for lobby advocacy as part of the Civic Engagement Alliance Project in Kenya

### 1.3. Study Justification

Minute 4/27/4/2018 of the Briefing Session with His Excellencies the Governors of the four target counties focused on the planned activities and project focus from 2018 – 2020. During the project period 2018 – 2020, it was highlighted to His Excellency the Governors that the CEA Program will focus on the following key intervention areas:

- (a) Supporting the implementation of the respective County Government's Integrated Development Plans (CIDP 2018 - 2022) through their prioritized projects targeting Food and Nutrition Security (SDG 2);
- (b) Improving the implementation of Agricultural Extension Services (AES) in the respective counties within which the Program is being implemented; and
- (c) Supporting the development and implementation of Counties Agricultural Strategic Plans

In order to implement activities envisaged under focus item #2 above, the Consortium has now commissioned the current study whose purpose is to identify existing agri-skills and agricultural extension service provision models, service providers and gaps in the four target counties.

### 1.4. Objectives of the Study

- (a) Identify the inclusivity of access to and outreach of agri-skills, training services, and agricultural extension services in the target areas, particularly opportunities for reaching out to women, youth and people with disabilities. This is borne from previous observations of lack thereof, as agri-skills development services are not adequately reaching women, youth and persons with disabilities; and
- (b) Identify and understand the quality and relevance of skills and delivery of trainings in the target areas in a bid to improve access to quality and relevant public extension services. This is because extension services system currently has little, relevant practical and didactical experience; and
- (c) Explore the business case for private sector extension services relevant for four value chains i.e. Chicken, Sorghum, Soya beans, and maize and how the provision of these services is currently done to smallholder farmers (projects, fee bases, services etc.), as a way of ensuring that the public extension service is complimented by alternative private agri-service providers in order to improve access to quality skills services.

To date, the assumption is that the public development agents' (PDA) system is overstretched and unable to provide the appropriate services for the many Chicken, Sorghum, Soya beans, and maize farmers.

### 1.5. Outline of the Study Report

The report is structured into five chapters as follows: Chapter One presents the background and introduction to the study, county profiles, CEA Project Overview, Purpose of the Study, Study Justification, Objectives of the Study, Outline of the Study Report and Detailed Work plan of the Study; Chapter Two presents the review of literature relevant to the study including sections on Chapter Introduction, Policy and Legislation Framework upon which the Study is anchored; the CEA Project anchorage on the existing National Policy and Legislation Framework; Current Concepts and Approaches in Agri-Skills Development and Extension Services in Kenya; and a Chapter Conclusion. Chapter Three delves on Study Methodology while Chapter Four and Five deals with Data Analysis and Interpretation and Conclusion and Recommendations respectively.







# CHAPTER TWO

## LITERATURE REVIEW

### 2.1. Introduction

The chapter presents a detailed literature review related to the objects of the study as postulated in Chapter one and include a brief overview of the Policy and Legislation Framework upon which the study is anchored; The Civic Engagement Alliance Anchorage on the Existing National Policy and Legislation Framework; Current Concepts and Approaches in Agri-Skills Development and Extension Services in Kenya; and a Conclusion.

### 2.2. Policy and Legislation Framework upon which the Study is anchored

#### 2.2.1. National Agricultural Sector Extension Policy (NASEP, 2012)

The current study is anchored on the National Agricultural Sector Extension Policy (NASEP, 2012). The policy indicates that extension service is one of the priority functions of the agricultural sector within core poverty alleviations programmes. The policy spells out modalities for effective management and organization of agricultural extension in a pluralist system where both public and private service providers are active participants. The policy provides a point of reference for service providers and other stakeholders on standards, ethics, and approaches, and guides all players on how to strengthen coordination, partnership and collaboration.

The policy further underscores that a well-functioning agricultural extension service operated by the public and private sectors is one of the critical inputs required for increased agricultural productivity to transform subsistence farming into modern and commercial farming, attain food and nutrition security, improve incomes and eventually reduce poverty. The policy concludes that it is important to ensure that agricultural extension services are adequately funded, well-coordinated and regulated.

However, the success of the policy implementation will dependent to a large extent on how the agricultural sector actors and players will collaborate and partner to address main challenges in extension management and extension service delivery including:

- (a) Management pluralistic extension service for effective service delivery.
- (b) Developing private sector-operated extension services to complement public extension services.
- (c) Commercializing and privatizing public extension services without compromising public interest.
- (d) Harmonizing extension approaches and methods especially those promoting demand- driven extension and capacity building for grassroots institutions.
- (e) Addressing institutional weakness in capacity building and technology development and dissemination.
- (f) Creating functioning institutional frameworks to coordinate and provide linkages among stakeholders, including those involved in providing extension facilitating factors.
- (g) Mainstreaming cross-cutting issues in extension messages.

#### 2.2.2. Sessional Paper on Soil Fertility and Bill on Fertilizers and Soil Conditioners (2006)

This policy and its legal instrument was intended to regulate the importation, exportation, manufacture and sale of fertilizers and soil conditioners.

#### 2.2.3. The National Biotechnology and Development Policy (2006)

The policy addresses various issues with regards to capacity building and resource mobilization, financial and business support, public protection and support, public education awareness and access to information with regards to biotechnology, regional and international collaboration and ethical issues.

#### **2.2.4. National Food and Nutrition Security Policy (2012)**

Sessional paper no. 1 of 2012 seeks to achieve good nutrition for optimum health of all Kenyans.

#### **2.2.5. National Agricultural Research System Policy (2012)**

The policy aims to reform the Kenyan agricultural research system into a dynamic, innovative, responsive and well-coordinated system driven by a common vision and goal

#### **2.2.6. National Agribusiness Strategy**

The priorities of the strategy is to put markets at the centre of all agricultural production, processing, product development and packaging as well as focus research and development and innovation to better catalyse growth of a vibrant agribusiness sector.

#### **2.2.7. National Livestock Policy Sessional Paper No.2 of 2008**

The policy seeks to address challenges in the context of breeding, nutrition, feeding, diseases control, value addition, marketing and research and extension

#### **2.2.8. National Poultry Policy**

The policy aims at enhancing the contribution of the poultry industry towards food security and employment creation in Kenya

#### **2.2.9. Agriculture Sector Gender Policy**

The policy aims at enhancing gender responsive programming and institutional transformational in the agricultural sector. The policy will therefore, create structures to:

- (a) Disseminate gender –sensitive technologies and interventions,
- (b) Influence development of gender-sensitive technologies
- (c) Link extension clientele with other stakeholders on education and awareness creation on different rights as well as change of attitudes on gender relations in the community.
- (d) Influence mainstreaming of gender issues in schools and training institutions' curricula.
- (e) Target the youth in and out of school or TIVET and centres to help mould them as future farmers and agribusiness entrepreneurs

### **2.3. The Civic Engagement Alliance Project Anchorage on the Existing National Policy and Legislation Framework**

The Civic Engagement Alliance believes that the civil society organizations are paramount for an equal and just society. The CEA is therefore a joint collaboration between Dutch and Southern Civil Society Organizations to contribute to inclusive development, reaching the most vulnerable members of the society

The CEA is a joint collaboration between 11 Dutch organizations in partnership with the Royal Netherlands Ministry of foreign Affairs. The organizations are: CNV International, Edukans, ICCO Cooperation, Kerk in Actie, Prisma, Wilde Ganzen, Woord een Daad, Light for the World, Leprazending, Red een Kind and Tear.

The programme that started in 2016-2020, focuses on four subjects:

- (a) Creating space for civil society by strengthening the position of civil society organization; trade unions; self-help groups, farmers' cooperatives and faith based organizations.
- (b) Promotion of sustainable and inclusive food systems and consumption by: improving the position of marginalised farmers, drawing attention to customers, especially women youth and persons with disabilities and indigenous groups who face challenge in securing access to sufficient and nutritious food. The priorities here are access to natural services and awareness knowledge and practices related to health diets

- (c) Position of small scale farmers and produce and inclusive market systems. This is pursued by strengthening the position of small scale farmers and producers so that in addition to being self –sufficient, they also contribute to sustainable farming. This includes access to means of production such as seeds, finance and skills training.
- (d) Responsive entrepreneurship. CEA seeks to strengthen private companies’ awareness of and involvement in international corporate social responsibility and respecting labour rights within production and value chains; promoting food working conditions, living wage equal rights.

In Kenya, the alliance seeks to strengthen civil society organization’s engagements in dialogue with policy makers and influencers to advocate for effective [policy formulation and implementation. The alliance seeks to support a better environment for civil society organizations, advocate for the realization and access of nutritious foods to smallholder farmers in western Kenya (Homa Bay, Kisumu, Busia and Kakamega counties) and to ensure small producers have access to markets, skills and inputs and improved agricultural extension services.

The Alliance in Kenya consists of partners from the Netherlands under the leadership of Alphaxrd Gitau Ndungu, combined with local partners including; Undugu Society of Kenya; Kenya Alliance for Advancement of Children Rights,, Anglican Development Services Western Kenya, Kenya Community Development Foundation and the Africa Youth Trust.

#### **2.4. Current Concepts and approaches in Agri- skill development and extension services in Kenya.**

In a study by Kristin Davis and Nick Place (2003). It was observed that many different agricultural extension models have been utilised in developing countries in order to bring about desired levels of rural development through the realization of optimal levels of food nutrition security

Earlier studies conducted in Kenya by scholars such as McMillan, Hussein and Sanders (2001) indicated that early extension models in Kenya followed what the scholars termed as a “cookbook” approach to new technology through state extension services. In the “cookbook” approach technologies were developed and run through the extension pipeline to the farmers, with agricultural development being the main desired output and product. This approach bred a top-down extension model where information originated from the state development of Agriculture and livestock, and filtered down to the farmers through state .employed extension agents. In this model, farmers were not much involved in the development of the technology.

Evaluation studies conducted by Collison (2000) on the top-down approach revealed that the extension model failed to transfer critical knowledge and technologies to the farmers as the research and extension were mainly focused on large scale farmers or small-holder in high and medium- potential agro-ecological zones in Kenya. Give the shortfalls of the “cookbook” approach; a new focus was placed on the needs of small-scale. Low resource farmers, which led to the farming systems approach. This approach was marked by participation at the farm level through farmer input and on farm trials, and by interdisciplinary linkages and systems approach to extension. In this model, a three way linkage between farmers, researchers and extensionists was adopted.

Training and visit sponsored by the World Bank under the Structural Adjustment programme (SAP) was also attempted in Kenya in the 1980s/90s. The system was previously piloted successfully in turkey and India. Training and visit (T&V) model attempted to professionalize the extension service and reach more small-holder farmers. T&V used Lead farmers/contact farmers as a way to multiply their effects at the grassroots level. The main critique of this system is that it was also top-down and characterized by rigidity and high expense.

In the year 2000, a search for other potential actors resulted from the lack of funds and growing inability of state extension services to effectively provide for farmers, with the private sector emerging as one important actor. This is what is called the private sector approach to extension service provision. The approach is often motivated by the profit



motive for services. The approach is considered more efficient however it sometimes tends to ignore Arid and Semi-Arid Lands (ASALs) (Davis and Place, 2003). The adoption of private sector approach is informed by the ever decreasing public sector spending on agriculture extension services and the need to ensure profitability across the value chain actors.

Hargrave (1999) recognized the important role of the Civil Society Organizations (CSOs) (NGOs/CBOs/FBOs and Trade Unions) as an important actor with several comparative advantages over the traditional extension service providers. CSOs are credited for championing and implementing sustainable food and nutrition security programmes enjoy more direct grassroots contacts and apply participatory methods that resonate well with their target audiences.

GOK (2017) published the Capacity Building Strategy for Agriculture Sector that held the view that one of the key drivers of the agriculture sector is a functional agricultural extension service that is innovative and responsive to the changing socio—economic conditions prevailing upon Kenya today. The Ministry of Agriculture, Livestock and Fisheries, in the published Capacity Building Strategy, held that a robust and functional extension requires a competent, knowledgeable and skilled manpower that will appropriately respond to the dynamic situations in the agriculture sector today.

The National Capacity Building Strategy for Agriculture Sector (2017), thus stated that capacity building, which is the main focus of the CEA Project (2016 – 2020), entails much more than training and encompasses development of the human, scientific, technological, organizational and resource capabilities for institutions and so involves the following key components:

- (a) Human Resource Development involving equipping individuals with the understanding, skills and access to information, knowledge and training in agriculture to contribute to the sector's development.
- (b) Institutional Strengthening including management of structures, processes, and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community).
- (c) Creation of Enabling Environment with focus on policy, legal, regulatory, norms and institutional frameworks.

To achieve the broad objectives under the above three key components for the National Capacity Building Strategy for Agriculture Sector, the National Government in collaboration with County Governments has set out the following strategic objectives around which programming and intervention development for capacity building for enhanced agri-skills development and increased access to extension services will now be anchored on:

- (a) Strengthened governance structures and coordination mechanisms for institutions that are mandated with capacity building;
- (b) Improved knowledge, skills and competencies of sector human resource including supporting and facilitating programs for continuous development of the knowledge and skills for staff; facilitating partnerships with County Governments, development partners and other stakeholders to support delivery of services; establish a coordination mechanism for agriculture training institutions involving the Ministries of Agriculture, Livestock and Fisheries and Education and Science and Technology and other relevant state actors and agencies; and align the governance structures of agriculture institutions to the TVET and NITA Acts, Laws of Kenya.
- (c) Ensure expanded mandate of the Agriculture Information Resource Centers for enhanced data and information sharing between the two levels of government. Interventions under this objective at the County Government Level will include: identification and facilitation of county staff for capacity building management information system (MIS) linking counties with national monitoring and evaluation system (NIMES); building capacity of sector human resource on data collection and capture; providing facilities for county based trainings; and

reactivation and information centres.

- (d) Improved infrastructural and functional capacities of human resource in the agricultural sector. The focus at the county level under this objective include; establishing new and rehabilitating existing agricultural institution; procure and maintain vehicles, motorcycles, computers, video conferencing facilities and associated equipment for use by human resource in the agricultural sector; providing land for development of vocational and agricultural training institutions; and preserving all agricultural training institutions for use by the sector.
- (e) Enhancing capacity for vocational and agribusiness education and agricultural centres of excellence. The interventions proposed at the county level under this objective include; promoting experimental learning in all agricultural training institutes; promoting development of centres of excellence in vocational and agribusiness institutions in the counties; and providing land for infrastructure development for agricultural training institutions.
- (f) Increased youth participation and investment in the agriculture sector with focus on the counties being to; promote use of innovative and climate smart agricultural technologies; facilitate access to financial services (credit, grants and insurance); supporting the youth to engage in agribusiness marketing; support youth to participate in business development services; and promote youth engagement in agriculture through improved access to factors of production e.g. land, labour, capital and market.

## 2.5. Conclusion

From the above foregoing literature review, it is safe to conclude that extension and advisory services play critical role in agricultural development through the delivery of knowledge, technologies and innovation. It links agricultural producers to other actors in the agricultural products value chains and economy.

As seen from the brief synoptical analysis of the extension models and approaches, Kenya is implementing a pluralistic extension system, with a wide mix of extension initiatives. This presents a unique challenge that can only be addressed through the development of a critical body of knowledge on the existing agri-skills capacity available, networks of actors and areas of concentration of the existing agri-skills capacities while developing an effective and farmer-centred service delivery models with common guidelines and standards.

The present study, therefore seeks to conduct a county-level agri-skills and extension service capacity assessment audit and development of a position for lobby advocacy as part of the civic engagement alliance project in Kenya.

The question then to be answered is: who are the main actors by location and focus in each of the value chains- maize, sorghum, soya beans and maize in each of the project focal counties of Kisumu, Homabay, Kakamega and Busia? Who are the main current stakeholders in the provision of extension services in the four focal counties of Kisumu, Homabay, Kakamega and Busia? What are the main roles of each stakeholders in the value chain process? How many farmer field schools/Agricultural Training Centers exist and operational in each county by types of agricultural courses or training programs they offer to the farmers?



# CHAPTER THREE

## STUDY METHODOLOGY

### 3.1. Study Design

The study adopts a descriptive survey research design. Qualitative and Quantitative Data for use in the study will be collected through a variety of means. These include content analysis and detailed review of literature relevant to the study, use of semi-structured interviews with key informants and focus groups. These qualitative methods will allow for gathering of data that are rich, detailed and in the language of the subjects of this current study.

The interview guide was developed through a consultative approach that takes into consideration the developments along the project implementation cycle such that the adoption of interview questions were designed to build from the recommendations of previous baseline study conducted on "Small Holder Farmers' Skills Assessment for Improved Access to Markets for Chicken, Maize, Sorghum and Soya Beans Value Chains (2017)" and further recommendations reached during a briefing session with His Excellences the Governors of Homa Bay, Kisumu, Kakamega and Busia at Acacia Premier Hotel in Kisumu on 27th April 2018.

### 3.2. Study Population

The study targets key informants including County Government Officials such as the County Chief Officers for Agriculture, Livestock and Fisheries drawn from Homa Bay, Kisumu, Kakamega, and Busia, Directors of Agriculture, Crop Production, Agri-Business Development, Cooperative Development, Livestock Production and Heads of Agricultural Extension Services from each county in reference. Other respondents targeted by the study include the private sector players in value addition and value chain management for the four value chains under the CEA Project as well as TVETs and TTIs providing agricultural skills related training services in each county. Maximum number of respondents targeted is calculated to be 50.

### 3.3. Sampling Procedure

Purposive sampling will be applied and respondents selected from key informants drawn from each county as per the study population described herein. Main target respondents will be Chief Officers and Directors of Agriculture and Livestock, Training Managers or Registrars Academics of TVET Centers and Agricultural Training Centers and Institutes and business sector players in the Agricultural Value Chains related to maize, sorghum, soya beans and chicken.

The intended respondents will be contacted by phone, email and personal visits prior to the interview and or request for reference materials/reports to aid the study process.

For Focus Groups Discussions (FGDs), private sector players in the four value chains will be approached and asked to gather a group of 3 – 7 of their members for group interviews. Where necessary, a translator will be used to communicate with the members of the Focus Groups in their own language. Once the FGD is gathered, the researcher will explain the study objectives and expected outcomes and the format of the interview. Interviews may at sometimes be taped or video recorded, and the data transcribed in English.

### 3.4. Data Analysis

Data will be analysed by analysing documents, transcriptions and field notes. Themes and key words including organizations, approaches and partners will be drawn out from the study questionnaires and discussion notes. Data will then be interpreted and presented using tables and charts for ease of analysis with descriptions of facts as presented by the respondents or acquired from the review of published materials obtained from the respondents.



Triangulation - that is the use of multiple sources of data and information and study methods (Ary, Jacobs and Razavieh, 1996) will be utilized to verify the credibility of the data collected from the field using KII.

### **3.5. Final Set of Data Collection Tools**

The study will use a set of Key Informant Interview Schedules as per Annex 1:



## **CHAPTER FOUR**

### **DATA ANALYSIS & INTERPRETATION**

#### **4.1. Access and Outreach**

##### **4.1.1. Availability of Crops Development Officers Per County by Sub-County and Gender and Estimated Number of Farmers Per Officer**

The focus of this section was on the localized services provided to farmers by extension service officers in the focus counties, building on findings of previous research findings conducted by AYT in 2017.

The following were the findings:

- (a) Availability of Crops Development Officers Per County disaggregated by number per Sub-County, gender and estimated number of farmers per extension officer



**Table 2: Access and Outreach Table (No. of Extension Workers Per Ward by Gender and No. of farmers covered)**

Name of County	Name of Sub-County	No. of Extension Workers	Male	Female	Estimated No. of Farmers per Extension Worker
Homa Bay County	Suba South	10	10	0	8,165
	Suba North	11	9	2	n/a
	Ndhiwa	14	11	3	n/a
	Homa bay	9	2	7	n/a
	Rangwe	8	4	4	n/a
	Karachuonyo South	8	4	4	n/a
	Karachuonyo	8	6	2	n/a
	North				
	Karachuonyo East	6	3	3	n/a
<b>TOTAL</b>	8 Sub Counties	<b>74</b>	<b>49</b>	<b>25</b>	<b>8,165</b>
Busia	Butula	10	2	8	300
	Matayos				
	Samia				
	Teso North	8	6	2	1,094
	Teso South	17	10	7	12,538
	Nambale	9	3	6	1,200
<b>TOTAL</b>		<b>44</b>	<b>21</b>	<b>23</b>	<b>15,132</b>

Kakamega	Lurambi	16	8	8	2,594
	Shinyalu	6	2	4	2,298
	Ikolomani	6	2	4	4,009
	Khwisero	5	4	1	1,298
	Butere	10	8	2	1,440
	Matungu	10	7	3	1,250
	Mumias West	7	5	2	1,309
	Mumias East	6	2	4	2403
	Navakholo	9	7	2	1,861
	Malava	11	5	6	1,530
	Matete	6	2	4	1,600
	Lugari	10	5	5	1,580
Likuyani	12	7	5	4,778	
	Head Quarters	9	6	3	
	Bukura ATC	6	3	3	
	ASDSP	3	1	2	
<b>TOTAL</b>		<b>132</b>	<b>74</b>	<b>58</b>	<b>27,950</b>
KISUMU	Data not provided				

From the above table, it was established that each county had a wide ratio between service providers and the farmers with a case in Suba South where the ratio was widest at 1:817 followed by Busia at 1: 344 and Kakamega at 1: 212. Data from Kisumu was not available as at the time of preparing the report. It was also established that data on actual number of farmers reached could not be provided by Homa Bay and some areas in Busia County. This was due to weak data management systems in these counties requiring further intervention in strengthening agricultural data collection and management systems by these counties.

#### 4.1.2. Officers' Interactions with Farmers and Farmer Groups

The study was focused on the four value chains under the Civic Engagement Alliance (CEA) Agri-Skills Audit Assessment that is, Soya Beans, Sorghum, Maize and Chicken. The study sought to establish the frequency of interaction with farmers, kind and quality of services offered by service providers during these interactions, number of Farmer Training Centers (FTCs) and Farmer Field Services (FFS) available within the regions covered by the CEA project and the number of extension officer by knowledge and competency area with specific focus and knowledge on the program focus value chains (soya beans, sorghum, maize and chicken). The following were the responses from the key informants interviewed:

- i. Level of Interactions with the farmers: In Homa Bay County, it was reported that farmers apply mixed farming system so interactions on various value chains is varied and is mainly on demand basis. It was reported that the level of interaction is determined by the extension method, e.g. in field days, the interaction will depend on the number of field days planned or by other partners and attendance. For farm visits, the level of interaction will depend on the ratio of staff to farmer, so according to the County Director of Agriculture, the interaction between the service providers and the farmers, especially for Soya Beans, Sorghum and Maize could be once in a year or slightly more. However, due to limited human resource, the County Agricultural Extension Officers in Homa Bay preferred group approach to individual approach. Where private sector extension officers were involved e.g. Suba South, the interaction for soya beans, sorghum and maize were conducted seasonally (during planting seasons).

In Kakamega County, the Department of Agriculture reported that field extension workers reached farmers 1 – 2 times per week for soya beans and sorghum but maize field services and outreach was conducted 3 – 4 times per week. Level of interactions with chicken farmers was noted to be irregular and sometimes unpredictable unless there is an outbreak.

In Busia County's Nambale Sub-County the level of interaction between the extension officers and the farmers was regular at weekly for all the four value chains. The scenario was the same for Teso South and Teso North. In Butula, Matayos and Samia, the level of interaction between the farmer and the extension service providers was conducted once after every two weeks.

- ii. Frequency of Interaction with Farmers and Farmer Groups within the Four Value Chains  
Respondents from Homa Bay, Kakamega and Busia indicated that most extension services were demand driven. However, where the private sector was involved in conducting extension services, the services were offered quite regularly with detailed workplan meticulously drawn and executed and reports generated and acted upon. A case in hand is the KALRO and ADSP in Kakamega and Busia County which had managed to do a weekly program for farmers.
- iii. Kind and quality of services offered by service providers during these interactions: In Homa Bay County, as reported by the Sub-County Agriculture Officer for Suba South, farmers were offered with services that included - Technical support in terms of trainings, demonstrations, field follow-ups and field days in the farmer field schools. In particular, the Directorate of Crop production in Homa Bay offered technical information on crop production/management, agri-business, soil and water conservation, agro-forestry and conservation agriculture, and farm planning depending on the stage of growth in the crops' cycle. The officers in Homa Bay also conduct method demonstrations to impart crop production/management/husbandry skills. The officers also give information on other agricultural programmes being undertaken by partners/collaborators that may be of interest to the farmers. Undugu Society in Suba South is also contributing to farm extension services through farmer mobilization, agronomy and external checks for soya beans and green grams.

In Kakamega, the County Director of Agriculture reported that dissemination of appropriate agricultural messages to farmers; depending with the interests of the farmers was done orally and sometimes through

printed materials. It was also observed that some interactions went beyond a working relationship to friendly relationships between the farmer and the service providers, making outputs from such interactions quite enriching.

KALRO's Extension Officers in Kakamega and Busia County on the other hand offered diverse services to farmers that included the following: Soil Sampling, Soil Fertility Methods, Conservation Agriculture, Pests and Disease Control, Good Agricultural Practices, Technical Packages on various Value Chains, Crop and Livestock Production, Post Harvest Management, Value Addition, Marketing, and Land Management Practices.

The County Department of Agriculture in Busia County is providing training services for farmers and farmer groups, establish demos, conduct farm visits and field days especially in Teso North, Matayos and Teso South.

#### **4.1.3. Number of Farmer Training Centers (FTCs) and Farmer Field Services (FFS) available within the regions covered by the CEA project:**

In Homa Bay County, it was reported that there was no single Farmer Training Center after the only one that existed in Homa Bay Town was converted into Tom Mboya University College. Busia County has the Busia Agricultural Training Center in Teso South that offers training for farmers on various aspects of crop and livestock husbandry and management practices, organize and facilitate field demonstrations, conduct seed bulking and participate in agricultural shows and trade fairs. In Kakamega County, Bukura Agricultural Training Center exists to train farmers and other stakeholders on relevant agricultural technologies and skills through teaching, demonstrations and provision of training facilities.

#### **4.1.4. Number of extension officers by knowledge and competency area with specific focus and knowledge on the program focus value chains and Existing Gaps in Service Provision:**

The study established that in Homa Bay County, a total of 70 Extension Officers existed across the county with competencies on all the three crop value chains (Soya Beans, Sorghum and Maize) but that gaps had not been identified as staff capacity assessment and performance audits has not been conducted. However, an interview with the Sub-County Agricultural Officers for Suba South and Ndhiwa indicated to the contrary that of all the existing 4 officers in Ndhiwa had no special knowledge in any of the 4 value chains under the CEA Program and only 4 out of 6 officers in Suba South had some special knowledge on maize, sorghum and soya beans. Existing gaps were identified in Rachuonyo North and Suba South to include: Technology Adoption, Control and Management of emerging pests and diseases such as fall army worm in maize and sorghum, value addition in maize, sorghum and soya beans. In Ndhiwa Sub-County, the officers identified gaps including lack of contact with farmers since their service is demand driven, lack of expertise in soya bean farming, lack of commitment by both farmers and officers, unavailable means of transport hampering effective field coverage and outreaches, and demand of handouts by farmers whenever they were called for field visits and demonstration activities. Lack of FTCs and FFS was seen as a cross cutting challenge across Homa Bay County.

In Busia County's Teso North, there existed a total of 8 Extension Officers who were reported to be knowledgeable and competent in all the four value chains under CEA Program. However, a gap existed in terms of inadequate facilitation in terms of means of transport, resource allocation for provision of extension services and generally the underfunding of their operations. KALRO in Busia County had a total of 10 knowledgeable and competent extension officers but experienced challenges with collective marketing, impact of birds on sorghum and maize farming and poor housing for chicken by most farmers. In Nambale Sub-County, there existed a total of 9 officers with satisfactory knowledge and competency on all the four value chains but with gaps in value addition, collective marketing, birds and pests control and disease management. Teso South on the other hand had a total of 18 officers with knowledge and competency in all the four value chains. However, their main challenge s included unavailability of new technologies for value addition in sorghum, soya beans and chicken.

In Kakamega County, the study established that there were 3 extension officers with speciality in Maize value chain, 1 for soya beans value chain and 1 for sorghum value chain – depicting a very huge gap in staff capacity and ability to address the growing needs of farmers in these value chains across the expansive Kakamega County.

#### 4.1.5. Gaps Identified in Chicken, Sorghum, Soya Beans and Maize Value Chains

**Table 3: Existing Gaps in the Four Value Chains**

VALUE CHAIN	GAPS IDENTIFIED
<b>Maize</b>	<ul style="list-style-type: none"> <li>• Emerging Pests and Diseases e.g. Fall Army Worms, Aflatoxin</li> <li>• Soil Acidity leading to poor harvest</li> <li>• Post harvest challenges</li> <li>• Lack of contact with farmers since services are demand-driven</li> <li>• Unavailable means of transportation</li> <li>• Poor value chain technology adoption</li> </ul>
<b>Sorghum</b>	<ul style="list-style-type: none"> <li>• Agronomic practices (varieties and post harvest handling of sorghum)</li> <li>• Lack of contact with farmers since services are demand-driven</li> <li>• Unavailable means of transportation</li> <li>• Poor value chain technology adoption</li> <li>• Effects of birds on white sorghum</li> </ul>
<b>Soya Beans</b>	<ul style="list-style-type: none"> <li>• Lack of adequate expertise on soya beans farming</li> <li>• Unavailable means of transportation</li> <li>• Lack of contact with farmers since services are demand-driven</li> <li>• Poor value chain technology adoption</li> </ul>
<b>Chicken</b>	<ul style="list-style-type: none"> <li>• Shortage of staff to facilitate effective extension services</li> <li>• Lack of contact with farmers since services are demand-driven</li> <li>• Poor value chain technology adoption</li> <li>• Poor poultry housing and husbandry practices</li> </ul>

The other aspects investigated included the following:



#### **4.1.6. Correspondence of the Practice of Agricultural Extension with the National Extension Policy in Kenya:**

The agricultural extension practice in Kakamega County is derived from the National Agricultural Sector Extension Policy. But in practice, the policy was not adhering to owing to resource constraints affecting the agriculture sector.

In Homa Bay County's Suba South Sub-County, the respondents observed that the extension service does not correspond to National Agriculture Sector Extension Policy as the extension to farmer ratio has changed due to under staffing, resources are dismal and sometimes unavailable, areas are vast and farmers demand is low owing to resource position at the Sub-County. This position was also observed by respondents from Ndhiwa Sub-County who reported that whereas the policy requires an extension: farmer ratio of 1:50, the current situation is that one (1) extension officer was assigned the entire ward. An in-depth interview with the County Director of Agriculture in Homa Bay however averred that the County is using the National Agriculture Sector Extension Policy (NASEP) and the recently introduced Extension Guidelines which stipulates a demand-driven extension that is multi-disciplinary and pluralistic, provided by people who are professionals in their areas of competence and jurisdiction and using the recommended extension approaches.

In Busia County, especially in Teso South, Teso South, Matayos, Samia and Butula, it was reported that all efforts, trainings and farmer support are geared towards the improvement of food production and food security. They also focus on sustaining soil fertility, training farmers on good agricultural practices and linking farmers to marketing system. All these are done within the NASEP framework by both the private (CSO) and public extension service providers.

#### **4.1.7. Work Planning by Extension Officers:**

At the macro level, the officers in Homa Bay County planned and derived their work plans from the County Work Plan based on the annual programmes planned for a particular financial year. However, at the more micro level, the officers confided that services offered at the farm level are not planned but are demand driven making work planning more or less ad hoc. Faced with many challenges such as lack of or inadequate resources such as manpower, funds, means of transport (grounded vehicles and motorcycle) and Information, Education and Communication materials as well as lack of access to ICT facilities to facilitate sharing of information, real time data capture and manipulation, report writing and data storage. The Department of Agriculture also reported that the extension staffs were also hampered in their work by lack of demonstration materials and sites to stage demonstrations.

In Kakamega County, every Officer has a performance contract which he/she signs in each year. They are facilitated with office space and to some extent a motor cycle or a vehicle to carry out their assigned mandates as contained in the County Annual Development Plan.

While in Busia County, the staff (key informants) indicated that quarterly and monthly work plans are done in collaboration with partners from the civil society or the private sector – major partners being Agri-Nutrition, World Vision – Kenya, Anglican Development Services, and private companies. In Nambale, all the available extension officers had motorcycles and a vehicle was assigned to the sub-county for extension purposes. In Teso South, monthly work plans were done according to the community needs, each staff is assigned a motorcycle with fuel allocation.

KALRO Extension Officer on the other hand had their officers develop weekly work plans and reports. The KALRO staffs are also facilitated with transport and fuel to conduct regular field visits within Busia County and Kakamega County.

#### 4.1.8. Extension Service Providers' Attitudes towards Women, Youth and Persons with Disabilities:

In Teso North and Teso South in Busia County, it was observed that the service providers' attitude towards this core group of farmers was positive and that they were also included at all levels of planning and plan implementation and each of these group of farmers were treated fairly equally. In Nambale the attitude was also reported to be positive as all farmers were treated equally and with utmost respect. In Butula, Matayos and Samia as in the other sub-counties, the informants reported that all these groups of people are seen as the drivers in the agriculture sector and so were treated equally and with respect.

The attitude of service providers towards the women, youth and PwDs in Homa Bay County was more similar to their counterparts in Busia County. Overall, the officers in the department of agriculture have been sensitized and some even trained on mainstreaming of cross cutting issues such as gender, disability and drug abuse. In practice, all staffs have a positive attitude towards these groups. In Kakamega County, as in Homa Bay County, all extension Officers have been sensitized on mainstreaming crosscutting issues including vulnerable members of the society e.g. Women, Youth and People living with disabilities.

#### 4.1.9. The Extent to and Conditions under which Peer-to-Peer Learning Reach Women, Youth and PWDs:

The table below summarizes the findings from the responses as obtained from Homa Bay, Kakamega and Busia:

**Table 4: Extent and Conditions under Which Peer-to-Peer Learning Reach Women, Youth and PWDs**

Extent to Which Peer-to-Peer Learning Reach	Great Extent	Large Extent	Normal Extent	Little Extent	Very Little Extent	Not at all
Women, youth and PwDs	√√√√√√ = 6	√ √√√ √√√ = 7	√√√√√√√√√√ √√√√√√√√ = 14	√√ = 2	0	0
Under What Conditions do Peer-to-Peer Learning Reach Women, youth and PwDs	Extremely Difficult Condition	Very Difficult Conditions	Difficult Conditions	Fair Conditions	Good conditions	Very Good Conditions
	0	0	√√√√√√√√√√ √√√√ = 13	√√√√√ = 5	√√√√√√√√√√ √√ = 11	√√√ =
How do farmers value field Extension Services	Extremely valuable	Highly Valuable	Moderately Valuable	Valuable to some extent	Somehow valuable	Not valuable
	√√√√√√ √√√ = 8	√√√√√√√√√√√√√√√√ √√√√√ = 16	√√√√√ = 4	√ = 1	0	0

The above table shows that the concentration of the extent to which peer-to-peer learning reach women, youth and PWDs is normal with 14 out of 29 respondents; the conditions under which peer-to-peer learning reached women, youth and PWDs was noted to be under difficult conditions with 13 out of 29 respondents with some sub-counties especially in Kakamega County and Busia County reporting good conditions; and the value attached by farmers to field extension services was reported to be highly valuable with 16 out of 29 respondents indicating that the services were highly valuable followed by 8 out of 29 respondents stating that the services were extremely valuable. In all whereas the services were highly valuable, they were offered

majorly under difficult conditions leading to normal extent of coverage. Example given by respondents was to do with vaccinations routines and soil management and improvement practices demonstrations.

Investigations as to whether peer-to-peer learning actually reached women, youth and PWDs showed that 100% of the respondents concurred that it indeed reached the groups through such approaches as farmer-to-farmer learning tours; farmer field days; training of trainers; established demonstration farms in some areas such as Teso South, Bukura, Nambale and Suba South; occasional theoretical and practical training sessions supported by the private sector and other stakeholders on new technology adoption in agriculture; annual agricultural shows and exhibitions and organized field study visits and tours organized by the County Departments of Agriculture, Livestock and Fisheries. Peer-to-peer learning was also facilitated by distribution of pamphlets from various agriculture knowledge creators such as KALRO, ILRI, Research Institutions such as Tegemeo Institute, JKUAT, ASDSP etc, Seed Companies, Agrochemical and Allied Companies, Mass Media, and e-extension services including internet-based services, bulk sms services, WhattsApp platforms and emails.

#### **4.1.10. Focus on Agronomic Skills:**

100% of the respondents said that the field officers focused on agronomic skills supported by other skills sets such as pest and disease control, marketing, etc. In all the Counties, it was reported that agricultural extension is mainly decided upon a need basis (demand driven). However, since not all farmers know about the demand driven extension approach, activities to sensitize the farmers about the activities carried out are normally conducted on regular basis especially in Kakamega and Busia. However, this is mainly through the support of the private sector partners and CSOs working with the Department of Agriculture. Efforts to promote community sensitizations in Homa Bay County are recommended. Examples of successful extension programs were given as follows:

##### **a. Kakamega County:**

In Kakamega County, the Department of Agriculture work closely with organizations ran, managed and or work with people with disabilities eg Empowerment of the Disabled Development Organization (EDDO) and all the HIV/AIDS Post Test Clubs. In addition women and youth groups are among the major targets by extension officers. During NALEP Programme, for example, each officer was supposed to reach out to School Going Youth, Out of School Youth and Women Groups. In addition, in our reporting, each officer was supposed to report on the number of women nad youth farmers reached in each reporting period. Moreover, women groups, Youth Groups and Groups for people living with disabilities were the major target group by the Njaa Marufuku Kenya Program, which were offred agricultural grants to boost the agricultural activities of the groups. The National Accelerated Agricultural Inputs Access Program (NAAIAP) also was aimed at reaching out to the vulnerable members of the society by giving out grants to them to boost their agribusiness. These Scenarios are special to Kakamega County since they reach out to the marginalised members of the society. In addition, they increase the extension officers' effectiveness and efficiency in service delivery as well as assist them to mainstream crosscutting issues.

In summary the following interventions makes extension service in Kakamega County a success case:

- i. The county has established an e-extension platform which sends out information to farmers and staff through text messages and WhattsApp Groups
- ii. Use of specific value chains' WhattsApp Platforms or WhattsApp for specific group of farmers in a specific region/sub-county;
- iii. Interventions are targeted to the specific needs of the individual farmers as observed in Malava Sub-county;
- iv. Demonstration farms have been established in each sub-county
- v. Training of Trainers has been conducted in each sub-county to help transfer modern farming techniques and knowledge to the farmers within their respective jurisdictions

- vi. Demand-pull method has been adopted as a method for targeting information to the farmers across the county;
- b. Busia County:**
  - i. Soya Beans Cooperative Society establish to champion the interests of the farmers including promoting it for its nutritional value and marketing it for its commercial value;
  - ii. Farm Mechanization has been steadily promoted with increasing uptake of new agricultural technologies and farming methods;
  - iii. Demand-pull method has been adopted as a method for targeting information to the farmers across the county;
  - iv. Strategies to promote the uptake of subsidized fertilizer from the National Cereals and Produce Board Stores is already in place and the uptake is steadily growing among farmers (Data not provided though);
  - v. Stable production and supply of maize has lead to stabilized market prices for this commodity in Busia County;
  - vi. Training of Trainers has been conducted in each sub-county to help transfer modern farming techniques and knowledge to the farmers within their respective jurisdictions
- c. Homa Bay County:**
  - i. The County Government has offered women, youth and PWDs with greenhouses, water storage tanks and or assisted farmers to sink shallow wells to promote horticulture farming;
  - ii. Training of Trainers has been conducted in each sub-county to help transfer modern farming techniques and knowledge to the farmers within their respective jurisdictions
  - iii. Demonstration kits for Greengrams, cowpeas and maize given to women, youth and PWDs farmer groups and they have been trained on how to replicate the knowledge;
  - iv. Demand-pull method has been adopted as a method for targeting information to the farmers across the county;

#### 4.1.11. Existing plans for transforming the extension service system in the Respective Counties

- d. Kakamega County: The following plans for transforming the extension service in the county were pointed out by the key informants interviewed at the Department of Agriculture:**
  - i. Plans are underway to domesticate several national policies to fit into the county context.
  - ii. In addition, we are planning to employ more technical staff to improve service delivery.
  - iii. Extension approach to be instituted.
  - iv. Need to organize and provide refresher courses to service providers to keep them abreast with emerging technologies and farming methods e.g. climate smart agriculture
  - e. Homa Bay County: The County has plans to strengthen the extension service in the county through provision of transport facilities in the form of vehicles and motorbikes, conducting refresher courses/trainings to appraise staff on contemporary technologies and emerging issues such as pests and diseases, recruiting additional staff to improve staff to farmer ratio, establishment of an agricultural training centre in the county and providing other extension material such as ICT equipment/ devices. The challenge is availability of funds to implement the plans as proposed by the Department of Agriculture and Livestock.
  - f. Busia County: The following plans exists to strengthen the provision of extension services in Busia County:
    - i. Provision of refresher courses to the field officers to keep them abreast with emerging trends and challenges in the sector;
    - ii. Creation of value addition centres and programs across the county with support from the private sector and CSOs;

- iii. Promote Soya Value Chain Development at the Grassroots level for expanded markets and income for farmers;
- iv. Domestication of National Value Chain Development Policies and Programs at the County level.

**4.1.12. How extension officers and FTCs transfer knowledge and deliver training to farmers**

- a Farmers Field Days
- b On farm trainings
- c On farm Demonstrations
- d Individual Farm visits
- e Group Visits
- f Workshops
- g Seminars

**4.1.13. Existing Unmet Needs in the Provision of Extension Services in the Respective Value Chains:**

**Table 5: Unmet Needs in the Four Value Chains**

Value Chain	Unmet Needs
Maize	<ul style="list-style-type: none"> <li>▪ Up to date data and statistics on production and farm produce projections to help stabilize the market prices and trends</li> <li>▪ Post harvest handling</li> <li>▪ Control and management of emerging pests, diseases and weeds e.g fall army worms, striga weed, birds menace in white sorghum,</li> <li>▪ Effective use of Fertilizer</li> <li>▪ Soil and water conservation</li> <li>▪ Value addition and product development</li> <li>▪ Processing and collective marketing</li> <li>▪ Marketing and farmer organization/group dynamics</li> <li>▪ Soil sampling and testing</li> </ul>
Sorghum	<ul style="list-style-type: none"> <li>▪ Seed selection</li> <li>▪ Control of pests and birds in sorghum</li> <li>▪ Fertilizer use in sorghum farming</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Value addition and product development</li> <li>▪ Up to date data and statistics on production and farm produce projections to help stabilize the market prices and trends</li> <li>▪ Marketing and farmer organization/group dynamics</li> </ul>



Soya Beans	<ul style="list-style-type: none"> <li>▪ Seed selection</li> <li>▪ Utilization of Soya Beans</li> <li>▪ Value Addition and product development at the local level</li> <li>▪ Marketing and farmer organization/group dynamics</li> <li>▪ Up to date data and statistics on production and farm produce projections to help stabilize the market prices and trends</li> </ul>
Chicken	<ul style="list-style-type: none"> <li>▪ Up to date data and statistics on production and farm produce projections to help stabilize the market prices and trends</li> <li>▪ Disease control and management in chicken</li> </ul>

In Homa Bay County, a cross cutting unmet needs were also singled out to be:

1. A Farmer-training facility (ATC/FFCs) with relevant training and skills development programs to be development in the county to replace the Homa Bay ATC that has since been converted to a University College
2. Sensitize farmers on the importance of extension services to create a strong demand and supply relationship.

In Kakamega County, the Department of Agriculture prioritized the following unmet needs:

- a Post Harvest Losses Control e.g. Larger Grain Borer, Aflatoxins control, among others
- b Agro-processing and Value Addition
- c Farming Business including Gross Margins and Business Planning
- d Good Agronomic Practices
- e Food safety and agri-nutrition
- f Soil and water Conservation
- g Climate Smart Agriculture and Climate Change resilience
- h Increasing Farm Yields and Productivity

#### **4.1.14. Relationship of Trainings to Popular Products e.g. Improved Seeds and High Quality Inputs (Fertilizer, Pesticides) or Threat of Climate Change**

- 1 Training aid in better decision making on the use of appropriate farm inputs and technologies;
- 2 Trainings focus on good agricultural practices including mitigation of emerging challenges such as effective choice of seeds that conforms with the climate change trends and resilience to disease and pest infections or planting of more cover crops that help retain more moisture during dry seasons;
- 3 Focus is on the adoption of high quality farm inputs, disease and pest management, climate change mitigation and climate smart farming through promotion of adaptation to climate change through such interventions as crop and livestock insurance, promotion of drought resistant crops and promotion of agro-forestry and forest and soil and water conservation;
- 4 Trainings are also scheduled as per activities that are due, e.g. during planting, farmers are trained on seed selection, use of fertilizer and farm preparation; during harvesting, farmers are trained on post harvest crop management and handling, marketing and pricing strategies;
- 5 Cross cutting topics such as seeds selection, fertilizer application, disease and pest control and climate change adaptation are emphasized in all training programs to realize the key mandate of the sector

#### 4.1.15. Farmers' Willingness to Pay for Extension Services

Farmers' Willingness to Pay for extension services	Extremely Willing	Highly Willing	Willing	Somehow Willing	Not willing
	0	0	0	7	22
Percentage Respondents	0%	0%	0%	24.14%	75.86%

#### 4.1.16. Frequency of Provision of Refresher Courses to Extension Officers on Technical Skills/ Knowledge and Methodologies

Frequency with which Extension Officers get refreshment and initial training	Yearly	Bi-Annual	Quarterly	Monthly	Irregularly
	1	1	0	0	27
Percentage Respondents	3.45%	3.45%	0%	0%	93,10%

### 4.2. Quality and Relevance of Learning

#### 4.2.1. Introduction

Other than access and outreach, the study of agri-skills among the target counties also targeted to investigate quality and relevance of learning that farmers had access to. The focus was on the availability Technical and Vocation Training Centres (TVETs) and Technical Training Institutes (TTIs) within or near the target counties within which CEA Program is implemented. The study thus sought to establish the names of the TVETs/TTIs, their physical and postal addresses and training programs offered that could be of benefit to the farmers. Also sought were the budgetary allocations for TVETs/TTIs offering agricultural training in the respective counties. The following were the findings:

#### 4.2.2. Existing TVETs/TTIs, addresses and training programs offered that could be of benefit to the farmers.

NAME OF COUNTY	NAME OF THE TVET/TTI	PHYSICAL & POSTAL ADDRESS	TRAINING PROGRAMS OFFERED TO FARMERS
Homa Bay	None	None	None
Busia	Busia ATC	Teso South	<ul style="list-style-type: none"> <li>▪ Training farmers on modern farming methods and agricultural technologies;</li> <li>▪ Train farmers on technical areas of the different value chains;</li> <li>▪ Conducting field demonstrations and farmer field days;</li> <li>▪ Seed bulking;</li> <li>▪ Organizing/participating in trade fairs</li> </ul>

Kakamega	Bukura ATC	Bukura	<ul style="list-style-type: none"> <li>▪ Staff and farmer training centre</li> <li>▪ Stakeholders training centre</li> <li>▪ Demonstrations</li> <li>▪ Supply of propagation materials e.g. tissue culture banana, sweet potato cultivars etc</li> </ul>
	1 polytechnic per sub county offering TVET to youth e.g. Ematioli Youth Polytechnic	Each sub county	Horticulture

#### 4.2.3. Courses offered, Training Methods Quality of Teaching and Training and Budgets for TVETs and TTIs

Key respondents interviewed especially among the private and public sector actors did not have further information about the actual training programs provided by the TVETs and TTIs and recommended a further baseline survey on all TVETs and TTIs to ascertain the actual training programs they offered, target clients and training methodologies adopted. The baseline survey should also determine actual institutional capacity and readiness to bridge the gaps in the provision of agricultural skills and capacity development in the counties within which CEA Program is being implemented. The study should also be done to determine the funding gaps in these institutions as well as their linkage to the farmers and farmer groups as well as value chain actors in the respective counties.

#### 4.3. Private Sector Actors in Value Chain Development per County

The table below summarizes major private sector players per county by their location, contact persons and coverage:

County	Name of the Private Sector Actors and Key Contact Person in the Value Chains	Locations/Region	Phone Numbers	Coverage (Zones & Capacity) per month or annually
Kakamega	Anglican Development Services Western Kenya (ADSWK),	Busia & Kakamega	Samuel Akollo ACK Western Region CCS, P. O. Box 2830 – 50100, Kakamega Tel: 056 306610 Cell: 0716426654 / 0720116044	Busia and Kakamega
	ASDSP	Western Kenya Region	0712 824 130	Busia and Kakamega Counties
	WHH	Kakamega County	Mr. Moses Onkecha 0722 463 717	Kakamega County
	Rural Outreach Africa	Western Kenya Region	Doris Anjawa Tel: +254720109 213	Western Kenya
	Agriculture Development Fund	Busia County	0722 472 297	Kshs. 20 Million in Loans Annually in Busia



	(ADF)			County alone
	Kakamega County Agro Dealers Association	Kakamega County	0720 833 431	Kakamega County
	Kebuk Savings and Credit Cooperative Society	Khwisero Sub-County	0790 392 271	Khwisero, Butere, Lurambi, Emuhaya
	Kenya Community Development Foundation (KCDF)	Busia, Kakamega & Busia		
<b>Homa Bay</b>	Undugu society of Kenya (USK)	Suba South Sub-County		
	Levi Chikombe	Ndhiwa Sub-County	0728 600 372	Soya Beans Value Chain in Ndhiwa Sub-County
	Real Solution	Suba South and Suba North, Rangwe Sub-County, Homa Bay Sub-County Ndhiwa Sub-County	0724 452 885 0724 298 203 0728 549 976	Cassava Value Chain, Sorghum Value Chain, Cotton Value Chain Peanut Value Chain
	Sori Coffee Farmers SACCO Limited	Rangwe Sub-County	0710 859 459	Coffee and Soya Beans
	Kakagero Horticulture SACCO Limited	Rangwe Sub-County	0725 440 253	Horticulture Development and Marketing in Rangwe Sub-County
	South Kabuoch SACCO Limited	Ndhiwa Sub-County	0711 234 593	Horticulture and Maize Development and Marketing in Ndhiwa Sub-County
	Pala Marketing SACCO Limited	Ndhiwa Sub-County	0720 066 566	Pala Location in Ndhiwa Sub-County
	Kanyadoto Farmers SACCO Limited	Ndhiwa Sub-County	0715 344 340	Kanyadoto Ward in Ndhiwa Sub-County
	Kosoko SACCO Limited	Ndhiwa Sub-County	0713 446 153	Ndhiwa Sub-County
	Konyango Women SACCO Limited	Ndhiwa Sub-County	0722 290 494	Horticulture Development among women in Ndhiwa Sub-County
	Kanyada Dairy SACCO Limited	Homa Bay Sub-County	0706 829 185	Dairy and Chicken Production and Value Chain Development in Homa Bay Sub-County.
	Ramba SACCO Limited	Ndhiwa Sub-County	0722 876 150	Multi-Purpose SACCO in Ndhiwa Sub-County
	Orinde Coffee Farmers SACCO Limited	Rachuonyo South Sub-County	0701 426 031	Coffee, Agro-Forestry and Livestock Development in Oyugis

				Town.
	Western Fresh Industries Limited located at Kigoto in Suba South.	Suba South, Ndiwa and Suba North Sub-Counties	Mr. Bernard Odero Tel: 0721 832 775	Covering four Zones with 2000 farmers producing approximately 65 Metric Tons of Maize Annually and unestimated tones of Soya Beans annually.
	Miranga Farmers SACCO Limited	Ndiwa Sub-County	0727 813 771	Coffee and Horticulture Development in Ndiwa Sub-County
	Ayoro Coffee Farmers SACCO Limited	Rachuonyo East and Rachuonyo South Sub-Counties	0714 254 180	Coffee and Soya Beans Development and Marketing in Rachuonyo Region.
<b>Kisumu County</b>	Global Empowerment Initiative (GEI)	Kisumu and Western Kenya Region	Benard Okebe Project Officer Tel: 0723 630 596	Reaching 200 people per month in Kisumu County and Western Kenya Region
	Global Empowerment Initiative (GEI)	Kisumu and Western Kenya Region	Elizabeth Achieng Ngome Project Officer, Poliview Planning and Development Area	Reaching 30 – 40 Chicken Farmers in the Poliview ADP.
	Destiny Mentors CBO	Nyakach and Muhoroni Sub-Counties	Samuel Mola Executive Director Tel: 0722 958 936	Sorghum, Maize, Soya Beans, Chicken, Water Melon Value Chain Development in Nyakach and Nyando Sub-Counties.
	United Destiny Shapers CBO	Nyalenda 'A' Western Unit	Peter Odera Owiny Project Coordinator	Nyalenda 'A' and Nyalenda 'B' Wards covering approximately 50 farmers per month with Maize, Soya Beans, Sorghum and Chick Husbandry Support.
	Yogo Poultry Farmers SHG	Kisumu Town West Sub-County	Beatrice Achieng Organizing Secretary Tel: 0712 610 621	Reaching 10 Groups of Poultry Farmers per Month in Kisumu Town West Sub-County
	Kokeyo Self Help Group	Kanyakwar Village along Uzima University – Airport Road	Eunice Onyango Coordinator Tel: 0724 137 067	Kisumu Kanyakwar and Kisumu Kogonyo Locations
	Radio Nam Lolwe FM	Kisumu County and its Environs	David Bondo Head of News Tel: 0717 491 464	Covering Nyanza, Western, Nairobi, Nakuru, Mombasa and Malindi with Farmer-

				Centered Agricultural Value Chain Development and Marketing Programs
	Manyatta Community Poultry Farmers Group	Kisumu Central Sub-County	0729 821 986	Manyatta 'A'
	Dala FM 98.8	Kisumu County and its environs	Evans Odhiambo Head of News Tel: 0712 065 446	Covering Nyanza, Western, and Rift Valley with Farmer-Centered Agricultural Value Chain Development and Marketing Programs
	Sun Weekly	Kisumu County	0722 252 012	Print Media focusing on Agriculture Development in Kisumu County.
<b>Busia County</b>	Trendy Forbes Limited	Busia County	Bro. John Kwoba 0733 542 360	Covering 3 Sub-Counties in Busia County with focus on maize, soya beans and chicken value chains.

#### 4.3.1. Ratio of Private Sector Service Providers to Farmers

**Table 7: No. of Farmers reached by Private Sector Extension Service Providers in each County**

Value Chain \ County	NO. OF FARMERS COVERED BY PRIVATE SECTOR SERVICE PROVIDERS PER COUNTY			
	Kakamega	Busia	Homa Bay	Kisumu
Maize	33,600	60,360	2,795	220
Sorghum	0	0	2,680	230
Soya beans	721	30,850	652	540
Chicken	3,600	990	290	170

From the above table, it is evident that none of the service providers has adequate number of service providers to meet the required ratio of 1:40 as per the national policy on Agricultural Extension.

#### 4.3.2. Type of Specialization of the Private Sector Service Providers

The following table presents types of specialization of the private service provide who responded to the study question from different counties under the study.



**Table 8: Name and Type of Specialization of Sampled Private Sector Service Providers**

Name of Service	Specialization	Type of	Type of	Cost of	Payment	Financial
Provider by type of entity		Farmers Targeted by the Service Provider	Training Service Provided to Farmers	Service Delivery in Kenya Shillings	Modalities per service provided	Turnover/Profits per year
Rural Outreach Program (Africa) (ROP) – Non-Profit Making Entity	<ul style="list-style-type: none"> <li>Promotion of indigenous vegetables</li> <li>Dairy Farming</li> <li>Data Collection</li> <li>Tools and Technology for Conservation Agriculture</li> </ul>	Small scale farmers	<ul style="list-style-type: none"> <li>Crop Husbandry</li> <li>Soil Management</li> <li>Post Harvest Management</li> <li>Financial Management</li> </ul>	N/A	N/A	N/A
Agricultural Development Fund (ADF)	<ul style="list-style-type: none"> <li>Train Farmers on Loan Management and Repayment</li> <li>Issue Loans to Farmers</li> </ul>	Small holder farmers	<ul style="list-style-type: none"> <li>Budgeting</li> <li>Project Management</li> <li>Loan Repayment</li> </ul>	Kshs, 10 Million	After Yields have been realized	Kshs. 200 million
Kakamega Agro Dealers Association	Agro Dealership	Small holder farmers	Best Use of Chemicals and their Disposal	N/A	Cash	Over Kshs. 5 Million
Kebuk Cooperative Society Limited	Processing Sweet Potatoes and Bananas	Sweet Potatoes and Banana Farmers	Better Agricultural Practices and Post harvest Handling of crops	Kshs, 2000 per farmer	Cash	Over Kshs, 3 million
ASDSP – State Corporation	Capacity Building	Maize and Chicken farmers in Busia and Kakamega Counties	<ul style="list-style-type: none"> <li>Agronomy, Entrepreneurship skills development,</li> <li>Marketing and</li> <li>Animal Husbandry</li> </ul>	Kshs. 3.6 Million	Fixed Fee per Service	N/A
WHH (Welthungerhilfe) - NGO	Agribusiness Emergency Response Economic Development	Small holder farmers	Organizational Development	Kshs. 8 Million	Free Services	N/A
Kedo Solutions Company Limited	Agribusiness	Small holder farmers in Ndhiwa Sub-County in Homa Bay County	Extension Aggregation, Trainings of Farmers, Marketing of Farm Inputs, Agricultural Credit Facilitation	Kshs. 7,500 per farmer per season	Percentage of increased yields afterwards	Average of Kshs. 100,000 per month.
Real Solutions Limited	<ul style="list-style-type: none"> <li>Farm Inputs</li> <li>Loans to Farmers</li> <li>Agricultural Products Processing</li> </ul>	Cassava, Sorghum, Millet, Maize Farmers in Ndhiwa, Homa Bay, Rangwe and Suba Sub-	<ul style="list-style-type: none"> <li>Garden Demonstration</li> <li>Face to face encounter with farmers</li> </ul>	N/A	N/A	N/A

		Counties in Homa Bay County.				
Farmer SACCOs in Homa Bay County	Savings and Credit Activities	Respective members of the societies	<ul style="list-style-type: none"> <li>• Garden Demonstration</li> <li>• Farmer Trainings</li> <li>• Collective Marketing of the produce</li> <li>• Training of farmers on savings and loans management</li> <li>• Extension Service to members</li> </ul>	N/A	N/A	N/A
One World Development Foundation	Cereals, Passion Fruits, Soya Beans Value Chain Development Activities	Busia County	Striga Control and Management,  Agri-business development	Kshs, 300,000 per planting season  Kshs. 6.5 Million for Value Chain Development	From Yields  Loans recovered from sale of produce	Kshs. 392,000 per season  Kshs. 9 Million per annum
Western Fresh Industries Limited	Large and Small Scale Farmers (Maize, Sunflower and Soya Beans) in Homa Bay County	Homa Bay County	Training on Agronomics	Kshs. 12,500,000 pa	Fixed Fee Upfront	Kshs. 19,324,087

### 4.3.3. Requirements of a Good Trainer

The following were considered by the respondents as key requirements for effective service providers as considered by the private sector:

- Ability to understand the needs of the clients and develop appropriate solutions
- Ability to embrace change, especially technological and agronomical
- Ability to motivate farmers to embrace new technologies and approaches in agriculture
- Be knowledgeable about the program and its desirable outputs and outcomes
- Effective Communication Skills with good confidence in the self and the program
- High level of commitment to ethical standards and principles required of a trainer and training facilitator e.g. time management, honesty, reliable, confident, trustworthy, and hardworking person who is also a good team player;
- Appropriate education and training (at least Diploma Holder) in relevant field and field experience is an added advantage with good technical knowledge in the field

### 4.3.4. Risk Apportionment in case of Service Failure

**Table 9:Service Risk Apportionment Table**

Who Bears the Risk?	Service Provider	Farmer/Client	Both
	xxxxxxx = 7	xxxxxxxxxxxxxxxx = 14	xxxxxxx = 7
<b>Percentage Risk Apportionment</b>	24.14%	48.25%	24.14%

Higher risk burden in case of service failure is reported to be borne by the farmer at 48.25% while risk sharing between the farmer and service provider stands at 24.14%, especially where services offered are cushioned by product guarantees. In certain cases, services providers also bear a 24.14% risk burden in case of a service failure as seen in table 9 above.

#### 4.3.5. Current vs Planned Activities of the Service Providers by County

Sampled firms and organizations outlined some of their current activities in their respective areas of service delivery as outlined in table 10 below:

FIRM	CURRENT ACTIVITIES	PLANNED ACTIVITIES
Global Empowerment Initiative (Kisumu County)	<ul style="list-style-type: none"> <li>▪ Lobbying and advocacy for better markets and services to maize, sorghum, soya beans and chicken farmers in Kisumu County</li> <li>▪ Developing Strategies for effective media relations and communication</li> </ul>	<ul style="list-style-type: none"> <li>▪ Capacity building for farmers on agri-business skills development and value addition</li> <li>▪ Training farmers on how to relate and communicate with the media for enhanced market access and penetration.</li> </ul>
Farmers' SACCO Societies in Homa Bay County	<ul style="list-style-type: none"> <li>▪ Providing farmers with inputs and loans</li> <li>▪ Conducting trainings for farmers and farmer groups in crop and livestock husbandry, community savings and loaning schemes (including table banking), loan and</li> </ul>	<ul style="list-style-type: none"> <li>▪ Purchase and value chain products from farmers and farmer groups;</li> <li>▪ Expand loan portfolio for farmers to include farm opening, large scale farming, value addition technology financing and capacity building</li> </ul>
	financial management	programs etc
Kedo Solutions Co. Limited in Ndhiwa Sub-County of Homa Bay County	<ul style="list-style-type: none"> <li>▪ Participating in the whole soya beans value chain and value addition processes in Ndhiwa and Suba Sub-Counties in Homa Bay County</li> </ul>	<ul style="list-style-type: none"> <li>▪ Upscale the project and expand the business model, promote seed multiplication and incorporate other crops</li> </ul>
WHH (Weltherngerhilfe) in Busia and Kakamega Counties	<ul style="list-style-type: none"> <li>▪ Conducting Organizational Development (OD) Trainings and Village Savings and Loans Association (VSLA) Trainings at the community level;</li> <li>▪ Mentoring and coaching</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop market linkages for enhanced market access and penetration by small holder farmers</li> <li>▪ Lobby and advocacy for more financial and technical support</li> </ul>

	program for leaders in value chain development innovations	for the organization's programs.
ASDSP Western	<ul style="list-style-type: none"> <li>▪ Capacity Building</li> </ul>	<ul style="list-style-type: none"> <li>▪ Offer grants for few innovative value chain development concepts</li> <li>▪ Increase and expand its capacity building programs</li> </ul>
Western Fresh Industries, Kigoto in Suba Sub-County in Homa Bay County	<ul style="list-style-type: none"> <li>▪ Seed distribution to farmers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Perform processing of the fresh farm produce purchased from farmers</li> </ul>
One World Development Foundation in Kisumu and Western Kenya Region	<ul style="list-style-type: none"> <li>▪ Provide credit in terms of seeds, fertilizer, pesticides, and other farm inputs to farmers</li> <li>▪ Provide trainings on crop and livestock husbandry and agronomics</li> </ul>	<ul style="list-style-type: none"> <li>▪ Perform pest and disease spray crew to prevent common pests and diseases.</li> </ul>
Sun Weekly Newspaper in Kisumu County	<ul style="list-style-type: none"> <li>▪ Minimal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Promote and conduct media awareness in collaboration with the private sector value chain actors in Kisumu, Homa Bay</li> </ul>
		and parts of Western and Rift Valley regions
Manyatta Community Poultry Farmers Group	<ul style="list-style-type: none"> <li>▪ Poultry keeping</li> <li>▪ Marketing of poultry products</li> <li>▪ Sales of poultry and poultry products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Expand poultry keeping business venture by increasing the number of layers and broilers in store</li> <li>▪ Lobbying other individuals and groups to embrace poultry keeping as a business</li> </ul>
Kokeyo Self Help Group	<ul style="list-style-type: none"> <li>▪ Poultry Keeping</li> </ul>	<ul style="list-style-type: none"> <li>▪ Train other farmers in poultry farming</li> <li>▪ Supply poultry and poultry products to the local markets</li> </ul>



Yogo Poultry Farmers Group	<ul style="list-style-type: none"> <li>▪ Keeping Kuroiler Chicken for meat and eggs and breeding them ready for sale in the next three months</li> </ul>	<ul style="list-style-type: none"> <li>▪ Expansion of the Kuroiler Chicken Breeding Program in Kisumu County</li> </ul>
United Destiny Shapers CBO in Kisumu County	<ul style="list-style-type: none"> <li>▪ Following up payments from farmers who obtained loans in the last season</li> <li>▪ Using interns to provide agricultural extension and support services to local farmers and help track loan repayment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Train private service providers on agriculture extension and support services</li> <li>▪ Lobby for funding for increased and expanded services</li> <li>▪ Develop a manual on value addition and value chain management</li> <li>▪ Offer farm-based services</li> </ul>
KEBUK SACCO Limited in Khwisero Sub-County, Kakamega County	<ul style="list-style-type: none"> <li>▪ Processing farm produce</li> <li>▪ Profiling and recruiting current and new farmers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Have more trainings for farmers of GAP and post harvest handling of produce</li> </ul>
Kakamega County Agro Dealers Association	<ul style="list-style-type: none"> <li>▪ Training farmers on respective produce use e.g. farm chemicals, herbicides,</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continue training farmers and conducting follow-ups</li> </ul>
	<p>fungicides, pesticides and storage equipments and facilities.</p>	
Agriculture Development Fund, Busia and Kakamega Counties	<ul style="list-style-type: none"> <li>▪ Providing loans to farmers</li> <li>▪ Training farmers</li> <li>▪ Follow up activities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide loans to farmers</li> <li>▪ Follow up to farmers with loans</li> <li>▪ Training of farmers on crop and livestock management and financial management</li> </ul>

Rural Outreach Africa in Western Kenya region	<ul style="list-style-type: none"> <li>▪ Putting up maize demonstration plots and piloting farms;</li> <li>▪ Testing of tools and equipment that promotes conservation agriculture in farmer groups</li> <li>▪ Selling indigenous vegetables seeds to farmers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sustainable land management</li> <li>▪ Processing of soya beans through value addition processes</li> <li>▪ Commercializing African indigenous vegetables in the western Kenya region.</li> </ul>
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All the respondents indicated that they were providing embedded services where real-time data collection and or acquisition, pest and disease control, soil testing and sampling, seed selection and multiplication, value addition and value chain management and market access were all integrated into their interventions among other services such as loans and savings, trainings and capacity building and peer-to-peer learning. These were observed in both public and private sector led interventions, drawing guidance from Kenya’s agriculture sector strategies. It was argued by the key informants that embedded services enabled the effective utilization of meagre resources at their disposal such as field officers, mobility and transport equipment, financial resources etc.

The respondents further reported that there was minimal competition between the sector actors as services were mutuality and symbiotic in nature – both in planning and service delivery. Efforts from different actors were known and recognized by the officers in the public sectors and these were offered on mutually agreed parameters of engagement. The services were also carefully designed and tailored to reach the critical players in the sector that is women, youth and people with disabilities.

On the willingness of farmers to pay for the services offered by private sector service providers, the following were the observations:

**Table 10: Willingness of Farmers to Pay for Services offered by the Private Sector Players**

Farmers’ Willingness to Pay for extension services	Extremely Willing	Highly Willing	Willing	Somehow Willing	Not willing	N
	Xxxxxx = 5	Xxx = 3	XXXXXXXXXX=8	XXXXXXX = 7	Xx =2	29

The above table shows that a total of 16 out of 29 surveyed key respondents indicated that farmers were willing to pay for agricultural extension and support services. This translate to approximately 55.17% of the respondents with 27.59% of all those willing to pay being within the normal curve. On further interrogations, the respondents indicated that as long as the farmers viewed the services as being capable of addressing their needs and in return contributing to increased yield from their farms, they will be more than willing to pay for the services and vice versa. It was also reported by the respondents that farmers often viewed the cost of services as being pro-poor especially those offered by the Civil Society Organizations in the sector as well as those offered by the Department of Agriculture, Livestock and Fisheries in the respective counties as well as the national government through the National Cereals and Produce Board. In most cases, as in Kakamega, Kisumu, Homa Bay and Busia Counties, agricultural services were highly subsidized, making most farmers willing to access them e.g. supply of fertilizer and pesticides.

# CHAPTER FIVE

## CONCLUSION AND RECOMMENDATIONS

### 5.1. Conclusion

In conclusion, therefore, the study was conducted to among others identify the inclusivity of access to and outreach of agri-skills, training services, and agricultural extension services in the target areas, particularly opportunities for reaching out to women, youth and people with disabilities. This is borne from previous observations of lack thereof, as agri-skills development services are not adequately reaching women, youth and persons with disabilities; and Identify and understand the quality and relevance of skills and delivery of trainings in the target areas in a bid to improve access to quality and relevant public extension services. This is because extension services system currently has little, relevant practical and didactical experience; and Explore the business case for private sector extension services relevant for four value chains i.e. Chicken, Sorghum, Soya beans, and maize and how the provision of these services is currently done to smallholder farmers (projects, fee bases, services etc.), as a way of ensuring that the public extension service is complimented by alternative private agri-service providers in order to improve access to quality skills services.

Among the key findings of the study are that the ratio of service to providers did not conform with the legal and policy requirement of 1:40 as in most cases observed and reported in the study, 1 officer in the public sector was assigned an entire administrative ward to offer the extension service. Farmers were also reported to be ignorant of the demand driven approach being championed by the NASEP (2012) leading to poor provision of agricultural extension services. This was due to farmers' ignorance of the available services and or being ignorance of the challenges they are likely to experience. Whereas the private sector service providers worked with strict workplans and necessity to document actual work done as seen with KALRO and ADS in Western Kenya, the sector was curtailed by apparent lack of financial and human capacity to meet the growing demand for agricultural extension services. Even though the TVETS were evenly spread across counties, most of them other than Bukura ATC, Busia ATC and Mawego TTI are not offering any related training programs necessary for promoting agricultural skills among practitioners and farmers. In Homa Bay County, there was no any existing ATC since the only one, Homa Bay ATC was converted into Tom Mboya University College. It was also established that farmers were quite willing to pay for services as long as the services were relevant to their needs and that that the services could contribute to increase in crop and livestock yields. The study also established that lack of access to modern agricultural technologies and value addition technologies was an impediment to the farmers who are now limited with their ability to meet market needs and demands.

Access to finance and technology was noted as a major contributor to the underperformance of the sector, making the sector non attractive to the young farmers and skilled populations. This was being addressed in Western Kenya through the private sector interventions though at limited capacity due to limited capitation of these crucial service providers.

None of the counties surveyed had adequate human capacity needed to provide effective agricultural extension services to the farmers. The minimal ratio was approximated at 1:1,387 which is quite impractical if effective services are to be planned and offered. This was also hampered by apparent lack of equipment (motorcycles, vehicles and other field outreach information education and communication materials) coupled with lack of funds to implement annual agricultural extension work plans and programs as development by both field officers in the public and private sector. Farmers in Kisumu County and Homa Bay Counties were disadvantaged when it came to access to agri-skills development programs for lack of ATCs and FFSs in these counties. Seed multiplication programs were yet to bear optimal results as centres for seed multiplications were yet to be set up in most counties. Emerging pests and diseases both in crops and livestock were posing major risks for farmers who apparently had no immediate solution at hand.

## 5.2. Recommendations

The following recommendations are made for immediate and future actions by actors in the agriculture sector:

- (a) Set up ATC and Farmer Field Schools and Centres in Homa Bay County, preferably in each sub-county
- (b) Set up agricultural value chain centres in each county to effectively promote value addition
- (c) Invest in product development research and market access to promote effective exploitation of agricultural value chains especially for maize, sorghum, soya beans and chickens as most farmers and farmer groups were yet to comprehend real value in each of these value chains
- (d) Develop a strong linkage between research institutions and agricultural sector actors to promote the use of emerging technologies and agricultural products.
- (e) Employ more field officers to be able to meet the minimum standard ratio of 1:40 as per NASEP Recommended ratio between Extension Service Provider to Farmers.
- (f) Develop and support agricultural skills training programs within the existing County Technical, Vocational, Entrepreneurship and Industrial Training Centres (TIVETs) to ensure as many farmers and practitioners had access to agri-skills development opportunities as is possible; and
- (g) Promote climate smart agriculture in regions worst affected by effects of global climate change by promoting sorghum and poultry farming to mitigate against the effect of conventional crop failures;
- (h) Improve agricultural data collection, simulation, manipulation, and analysis for effective policy and program planning and project development.

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## Annex 1: Key Informant Interview Guide for Agriculture and Livestock Officers

### Questionnaire 1: Access and outreach

The focus of this section is on the localized services provided to farmers by extension service officers in the areas of focus, building on findings of previous research findings.

- How many crops development extension officers do you currently have in the field by their operational/jurisdiction areas?

NAME OF COUNTY	SUB-COUNTY	NO. OF EXTENSION WORKERS	Male	Female	FIELD (S) OF SPECIALIZATION (Tick As appropriate)		ESTIMATED NO. OF FARMERS PER EXTENSION WORKER
					CROPS	LIVESTOCK	

- How often do they interact with farmers and farmer groups?

Crops	Frequency of Interaction with Farmers	Livestock	Frequency of Interaction with Farmers
Soya Beans		Chicken	
Sorghum			
Maize			

- What does the officer offer farmers when they meet with them? What level of interaction do farmers have with extension officers?

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- How many FTCs/FFS are there in the area? What is the focus of the FTCs in the target areas?

NAME AND ADDRESS OF FARMER TRAINING CENTER (FTC) IN THE COUNTY	FOCUS OF THE FTC IN THE TARGET AREA

- How many extension officers and FTCs have specific focus and knowledge on the program focus value chains, that is, Chicken, Soya Beans, Maize and Sorghum?

No. of Extension Officers in the each Sub-County	Knowledge and Competency Area (indicate whether the officer is competent in Chicken, Maize, Soya Beans or Sorghum or all the four value chains)	Existing Gaps if already identified

- How does the practice of agricultural extension service correspond with extension policy?  
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- How does the officer plan their work? What resources are available for them to do their work?  
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- What are attitudes towards women, youth and persons with disabilities among these service providers?  
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- To what extent is peer-to-peer learning reaching women, youth and persons with disabilities? Under what conditions? How do farmer groups value extension services contribution?

Extent to Which Peer-to-Peer Learning Reach Women, youth and PwDs (Tick one)	Great Extent	Large Extent	Normal Extent	Little Extent	Very Little Extent	Not all
Under What Conditions do Peer-to-Peer Learning Reach Women, youth and PwDs (Tick one)	Extremely Difficult Condition	Very Difficult Conditions	Difficult Conditions	Fair Conditions	Good conditions	Very Good Conditions
How do farmers value field Extension Services	Extremely valuable	Highly Valuable	Moderately Valuable	Valuable to some extent	Somehow valuable	Not valuable

- How do extension officers and FTCs transfer knowledge and deliver training to farmers?

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- Is there any peer-to-peer knowledge transfer? (From lead farmers to other farmers, and between other farmers?)

**YES [ ] NO [ ]**

- Does peer-to-peer transfer reach women, youth and people of disabilities? **YES [ ] NO [ ]**

In which cases, and how?

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- Do officers focus on agronomic skills? **YES [ ] NO [ ]**

Or are theses supported by other skills and linkages such as marketing? **YES [ ] NO [ ]**

- Are there particularly successful examples of extension officer’s outreach? **YES [ ] NO [ ]**

Why are these special?

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- How information that is disseminated is decided upon? (Demand pull or supply push?)

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- What plans exist for transforming the extension service system in your county?

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- What are actual unmet needs for training by farmers in the four value chains in your County?

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- How do trainings relate to popular products like improved seeds and high-quality inputs (fertilizer, pesticides) or the threat of climate change?

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- What is a farmer's willingness to pay for extension services (mind-set)?

Farmers’ Willingness to Pay for extension services (Tick one)	Extremely Willing	Highly Willing	Willing	Somehow Willing	Not willing

- How often do extension service officers get refreshment and initial training on technical skills/knowledge and methodologies?

Frequency with which Extension	Yearly	Bi-Annual	Quarterly	Monthly	Irregularly



Officers get refreshment and initial training					
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## Questionnaire 2: Key Informant Interview Guide For TVETs/TTIs Providing Farmer And Extension Training Services

### Quality and relevance of learning

The focus of this section is on the training given by BTVETS/TTIs to farmers.

- What are the names of BTVETS operational within and near to the target counties of implementation?

NAME OF THE TVET/TTI	PHYSICAL & POSTAL ADDRESS	TRAINING PROGRAMS OFFERED TO FARMERS

- What specific courses are offered at the BTVETS, with how many annual graduates vis-à-vis the yearly enrolment rate?

NAME OF THE TVET/TTI	COURSES/TRAINING PROGRAM(S) OFFERED TO FARMERS/ EXTENSION OFFICERS	ANNUAL GRADUATES	ANNUAL ENROLMENT RATE PER COURSE / PROGRAM

**NB: a respondent can attach an institutional brochure and or training booklet (if any)**

- What are main features in the curriculum and instructional materials used

NAME OF THE CURRICULUM USED	TYPE OF INSTRUCTIONAL MATERIAL USED	MAIN FEATURES & CHARACTERISTICS

**NB: include topics for study, guidelines for knowledge transfer and competency tests if available**

- Is there specific curriculum for Chicken, Soya beans, and maize? **YES** [ ] **NO** [ ] When was the curriculum updated according to developments in the chain?
- Are there alternative, extra-curricular trainings that are offered through the BTVETS?  
**YES** [ ] **NO** [ ]
- What teaching and training methods are used to transfer knowledge and skills to the farmers?

NAME OF THE COURSE/ TRAINING PROGRAM	TOPIC (S)	TEACHING/TRAINING METHODS USED TO TRANSFER KNOWLEDGE AND SKILLS TO FARMERS

- Rate the quality of teaching and learning, learning results, exam results, pass rates.

RATING OF QUALITY OF TEACHING / LEARNING, LEARNING RESULTS AND PASS RATES	EXCELLENT	VERY GOOD	GOOD	FAIR	POOR

- In what ways do trainings reflect sensitivity to culture, age of trainees, religion in area, and other local specificities of target communities?

SENSITIVITY TO CULTURE, AGE OF TRAINEES, RELIGION IN THE AREA AND OTHER LOCAL SPECIFICATIONS OF THE TARGET COMMUNITIES	EXTREMELY SENSITIVE	VERY SENSITIVE	SENSITIVE	SOMEHOW SENSITIVE	NOT SENSITIVE

- How do the trainings reflect gender sensitivity? (In materials, support systems, ratio of male to women staff)

SENSITIVITY TO GENDER	EXTREMELY SENSITIVE	VERY SENSITIVE	SENSITIVE	SOMEHOW SENSITIVE	NOT SENSITIVE

- In what ways do trainings promote accessibility to persons with disabilities? What strengths and weaknesses in access are there in terms of staff capacity, infrastructure, training methods, support systems, etc.?

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- What performance tracking and appraisal systems are there for the BTVET teachers and success of trainees in the field?

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- Are there links between trainings and the labour market? YES [ ] NO [ ]
- What is your enrolment capacity: How many can be enrolled by training program?

TRAINING PROGRAM	ENROLMENT CAPACITY PER SESSION

- What is the rate of turnover of trainers? .....

What resources are available to provide specialized field-level training? -----  
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- How are trainings modified in keeping with development in the field of agriculture?

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- What soft skills for knowledge transfer are developed?

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Are there also short courses at BTVETS available for farmers and at what costs?

SHORT COURSE AVAILABLE FOR FARMERS	COST OF TUITION

- What is the budget for BTVETS compared to Uganda, Ethiopia and Kenya

BUDGET FOR BTVETS	2013	2014	2015	2016	2017
<b>Kenya</b>					
<b>Uganda</b>					
<b>Ethiopia</b>					

**Questionnaire 3: Key Informant Interview Guide For The Private Sector – Kenya National Chamber Of Commerce & Industry, Private Sector Value Chain Players & Civil Society Organizations In Agriculture And Livestock Value Chain Development**

**Private Sector**

This section includes County Department of Trade, Industrialization, Investment and Cooperative Development, Kenya National Chamber of Commerce & Industry, Value Chain Industry Players and Suppliers and the Non-Governmental Organizations (NGOs) service providers in the target Counties of Homa Bay, Kisumu, Busia and Kakamega, but priority focus should be on the private sector actors in the Four Value Chains – Chicken, Soya Beans, Sorghum and Maize.

Among these priority sector actors are MFIs and service-providing input suppliers. Assessment should be done from private sector perspective and from perspective of end users, for example from the perspective of producer organizations.

▪ **Mapping:**

- ✓ Names, locations, phone numbers, coverage (zones and capacity – how many farmers can they reach monthly and annually)

Name of the Private Sector Actors and Key Contact Person in the Value Chains	Locations/Region	Phone Numbers	Coverage (Zones & Capacity) per month or annually

- ✓ Ratio of service providers to farmers

NO. OF SERVICE PROVIDERS PER VALUE CHAIN	NO. OF FARMERS COVERED	OPTIMAL REQUIRED FOR QUALITY SERVICE DELIVERY
Maize		
Sorghum		
Soya beans		
Chicken		

- ✓ Type of Specialization of the Private Sector Service Provider

Name of Service Provider by type of	Specialization	Type of Farmers	Type of Training	Cost of Service	Payment Modalities per	Financial Turnover/Pro

entity (NGO/Business Enterprise / Community Based Organization / Faith Based Organization / Industry / Cooperative Society / Company / Research Entity)		Targeted by the Service Provider	Service Provided to Farmers	Delivery in Kenya Shillings	service provided (fixed fee upfront, embedded service, percentage of increased yield afterwards, no cure no pay)	fits per year

✓ What is required of a good trainer (trainer profile)

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✓ Who bears the risk in case of service failure? **Service Provider** [ ] **Farmer/Client** [ ]

✓ What is the service provider currently doing, and what do you/they plan to do in the (near) future?

CURRENT ACTIVITIES	PLANNED ACTIVITIES

✓ Are embedded services being provided? **YES** [ ] **NO** [ ]

▪ Are private services competing with or complimenting government skills providers? **YES** [ ] **NO** [ ]

▪ What business models are working well? What are the profit margins?

BUSINESS MODELS	PROFIT MARGINS

▪ Are private companies reaching youth, women, and people with disabilities? **YES** [ ] **NO** [ ] How?



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- Are services affordable to farmers? **YES** [ ]      **NO** [ ]

How willing are farmers to pay for services?

Farmers' Willingness to Pay for extension services (Tick one)	Extremely Willing	Highly Willing	Willing	Somehow Willing	Not willing

- What parameters do farmers look at to decide whether to use or not use services?

TYPE OF SERVICE NEEDED BY FARMERS	PARAMETERS USED TO DECIDE ON THE USE OF NOT USE OF THE SERVICE

- What attitudes do farmers have towards private sector service providers?

ATTITUDE TOWARDS PRIVATE SECTOR SERVICE PROVIDERS (Tick one)	POSITIVE	NEGATIVE	NEUTRAL



