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Food Systems Resilience Project (FSRP)

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FOREWARD

Food system resilience refers to the capacity of a food system and its components at multiple levels to consistently provide sufficient, appropriate, and accessible food to all, even in the face of unforeseen disturbances. Resilient food systems and livelihoods are crucial to achieving food and nutrition security, especially during prolonged shocks and crises. Such systems face shocks of varying magnitude and duration, which can impact all facets of a country's food system, ultimately threatening the food security of its citizens.

The **Food Systems Resilience Project (FSRP)**, a six-year initiative (January 2024 to August 2029), is funded by the World Bank through the Ministry of Agriculture and Livestock Development (MoALD). The project's development objective (PDO) is to enhance preparedness against food insecurity and strengthen the resilience of food systems in selected areas of Kenya.

Progress toward this objective will be tracked through five key outcome indicators:

- Reduction in the number of food-insecure people in targeted areas (percentage).
- Number of farmers adopting resilience-enhancing technologies and practices, with a focus on female and climate-resilient adoption (percentage).
- Land area under integrated land management practices (hectares).
- Increase in the volume of agricultural production sold in domestic and regional markets (percentage).
- Number of policy products related to agriculture, natural resources, and food systems resilience adopted with project support.

To achieve these goals, the FSRP will be implemented through six components:

- Rebuilding Resilient Agricultural Production Capacity;
- Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes;
- Getting to Markets;
- Institutions, Policies, and Knowledge for Regional Food Security;
- Contingency Emergency Response; and
- Project Coordination and Management

The project acknowledges that building resilient food systems in Kenya requires a well-functioning agricultural extension service as one of the critical inputs for increased agricultural productivity, transformation of subsistence farming to modern commercial farming, attaining food security, improving incomes, creating wealth, creating employment opportunities and reducing poverty. The FSRP will lay strong emphasis on a hybrid extension architecture where a combination of public extension, private extension, farmer-led extension and agripreneur model will leverage on Information and communication technology (ICT). The objective is to increase efficiency and effectiveness of extension services under the project.

This manual outlines the guidelines for implementing extension services under the FSRP. It details the processes and procedures for the extension service delivery under the project including i) strengthening capacity building of extension actors under the project, ii) implementation arrangements for cascading TIMPs training; iii) the hybrid extension architecture in the project; iv) implementation arrangements for FPO related extension support; v) cross cutting issues in delivery of extension services under the project. This is a living document that will be updated whenever necessary to reflect any emerging issues and the changing context.

Priscilla W. Muiruri

National Project Coordinator

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DEFINITION OF TERMS

Term	Definition as used in the manual
Business Accelerator	A firm/consortium which provides agricultural support services to established producers, start-ups and SMEs. These services include; inputs supply, market linkages, mechanization, irrigation, credit access, insurance, value addition, processing and cold storage, among others. These services enable business entities to establish their enterprises and increase efficiency in their operations.
Beneficiaries	The individuals, groups or community institutions formed by FSRP who, whether targeted or not benefit directly from the development interventions.
Bundled Services	A package of related services and products offered to farmers and other stakeholders in the agricultural sector under one common platform. These services and products are typically designed to meet the specific needs of farmers and help them improve their agricultural practices, increase their productivity, and achieve their goals.
Climate Smart Agriculture	an approach for developing actions needed to transform and reorient agricultural systems to effectively support development and ensure food security under climate change.
Common Interest Group	A group of farmers who share common problems or aspirations around a value chain/agricultural enterprise. It is formed to facilitate effective implementation of activities identified by members.
Community	A group of people living in the same locality and sharing some common characteristics
E-extension	Is the use of electronic technologies to enhance traditional extension approaches (such as written and face-to-face) to enable change
Evaluation	A systematic and objective examination of a planned, ongoing or completed project. It aims at answering specific management questions and to judge the overall value of a development intervention. It serves to inform on lessons learnt to improve future decision making. Evaluations commonly seek to determine the efficiency, effectiveness, impact, sustainability and relevance of the project objectives.

Term	Definition as used in the manual
Environmental and Social Safeguards	Measures that are put in place to protect the beneficiaries, and community members from any negative social and/or environmental impacts as a result of project activities
Extension architecture	The art or practice of design for agricultural extension service
Food Systems	Food systems are the sum of actors and interactions along the food value chain—from input supply and production of crops, livestock, fish, and other agricultural commodities to transportation, processing, retailing, wholesaling, and preparation of foods to consumption and disposal. Food systems also include the enabling policy environments and cultural norms around food. Ideal food systems would be nutrition-, health-, and safety-driven, productive and efficient (and thus able to deliver affordable food), environmentally sustainable and climate-smart, and inclusive.
Food Systems Resilience	The "capacity over time of a food system and its units at multiple levels, to provide sufficient, appropriate and accessible food to all, in the face of various and even unforeseen disturbances
Innovation	This is a modification of an existing technology for an entirely different use from the original intended use. (e.g., fireless cooker modified to be used as a hatchery)
Lead Farmer	A farmer who has been selected by a common interest group (CIG) or Vulnerable and Marginalized group (VMG) to assist in the delivery of TIMPs to that CIG or VMG
Learning by doing	This is a methodology for learning through experience. The farmer has an active role that enhances their training. Farmers learn better through experience or practice than from passive listening at lectures or demonstrations. .
Learner led study	Participants decide what is relevant to them Farmer, not the facilitator, decide what is relevant to them and what they want the FFBS to address. This ensures that the information is relevant and tailored to participants' actual needs.
Management Information system	A system of inputting, collating and organizing data that should provide selective data and reports to the management, to assist in

Term	Definition as used in the manual
	monitoring and controlling the project organization, resources, activities and results
Management Practice	This is a recommendation on a practice that is considered necessary for a technology to achieve its optimum output. It includes different agronomic practices (seedingrates, fertilizer application rates, spatial arrangements, planting period, land preparation andwatering regimes), crop protection for crops, and feed rations and disease control for livestock
Monitoring	The regular collection and analysis of information to assist timely decision making, ensure accountability and provide the basis for evaluation and learning.
One health approach	Is a collaborative, multisectoral, and transdisciplinary approach — working at the local, regional, national, and global levels — with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment
Primary Beneficiaries	Rural small holder farmers who are members of Vulnerable and Marginalized groups and other stakeholders organized in to Common Interest Groups who have benefited from FSRP project interventions.
Project	A planned set of interrelated tasks with clearly defined objectives to be executed over a specific period of time and within certain cost and scope limitations
Resilience	The ability to prevent disasters and crises as well as to anticipate, absorb, accommodate or recover from them in a timely, efficient and sustainable manner
Short Message Service	Is another name for a text message. An SMS is generally sent from one mobile device to another over the cellular network.
Sustainable Development	Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.
Stakeholders	An agency, organization, group or individual who has a direct or indirect interest in the project/program, or who affects or is affected positively or negatively by the implementation and outcome

Term	Definition as used in the manual
Stakeholder participation	Active involvement by stakeholders in the design, management and monitoring of the project. Full participation means all representatives of key stakeholder groups at the project site becomes involved in mutually agreed appropriate ways
Sustainability	The likelihood that the positive effects of a project (such as assets, skills, facilities or improved services) will persist for an extended period after the external assistance ends
Technology	This is an output of a research process which is beneficial to the target clientele (mainly farmers for the project's case), can be commercialized and can be patented underintellectual property rights (IPR) arrangements. It consists of research outputs such as tools, equipment, genetic materials, breeds, farming and herding practices, gathering practices,laboratory techniques, models etc.
TIMPs	Technologies, Innovations and Management Practices
Value Chain	The full range of value adding activities required to bring a product or service through the different phases of production, including procurement of raw materials and other inputs
Vulnerable and Marginalized Group	Communities/groups of people that meet the World Bank's criteria for "marginalization" and the GoK's criteria of "marginalized" and "minority "communities will include youth, elderly women and men, widows/orphans, the differently-abled, recovering substance abusers, and people living with HIV/AIDS
IPs	Indigenous people refer to a distinct, vulnerable, social and cultural group

CHAPTER 1: INTRODUCTION

1.1 Background

Agriculture contributes 25% to the Gross Domestic Product (GDP) and a further 27% indirectly through linkages, and associated industries through processing (ASTGS, 2019-2029). However, the sector faces challenges that include frequent droughts and climate variability, low use of agricultural inputs, low adoption of technology, low levels of private investment in the sector, under developed markets and poor rural infrastructure, such as small-scale irrigation. In an effort to address some of these challenges, FSRP focuses on building resilient food production capacity, promoting sustainable use of natural resources, enhancing food marketing and agricultural finance, and fostering resilience-focused public policies. These will include the development and delivery of climate-smart technologies and services to farmers.

A well-functioning agricultural extension service is one of the critical inputs required for increased agricultural productivity, transformation of subsistence farming to modern commercial farming, attaining food security, improving incomes, creating wealth, creating employment opportunities and reducing poverty. Agricultural extension and advisory services can be defined broadly as a set of services and institutions that facilitate agricultural value chain actors to obtain information, skills, and technologies to improve productivity, food and nutrition security and well-being. In the current agricultural extension dispensation, the Constitution of Kenya, 2010 provides for devolution of agricultural extension services to the County governments. Currently, the extension agent-to-farmer ratio is 1:1,380. This is against the proposed 1:600 extension service agent to farmer ratio as recommended in the Agriculture Sector Transformation and Growth Strategy (ASTGS) 2019-2029 and the global Food and Agriculture Organization (FAO) recommendation of 1:400.

Food Systems Resilience Project (FSRP) will lay strong emphasis on a hybrid extension architecture where a combination of public extension, farmer-led extension and private extension (agripreneur model) will leverage on Information and communication technology (ICT). The hybrid extension model will build resilience of agri-food systems through: farmer-led irrigation to reduce reliance on rain-fed agriculture; diversification of agriculture enterprises to spread inadvertent risks; digital sharing of agro-weather advisories and agriculture commodity prices as evidence-based data-driven decision making support systems; continuous pest and disease surveillance for early warning and timely intervention; complement public extension service workforce with Agripreneurs through bundled services; packaging of TIMPs into short course curricula by Kenya Agricultural and Livestock Research Organization (KALRO) and other stakeholders for sustainability and continuous capacity development of public and private extension service providers beyond FSRP implementation period.

Over the years, extension has emphasized on increasing production with little attention to structured value addition and marketing. However, it is now acknowledged that linking production with processing and marketing as well as other nodes along the value chain is a prerequisite in transforming agriculture from subsistence to a commercial enterprise. This approach will be applied in the context of farmer organizations in order to promote the group/ common interest approach. To this end, the project will support the formation and strengthening of farmer organizations at the grassroots, county and regional levels.This manual provides guidelines for approaches to be used in disseminating TIMPs by actors working with the FSRP.

1.2 Objectives of the Manual

1.2.1 Overall objective

The broad objective is to increase efficiency and effectiveness of extension services under the project.

1.2.2 Specific Objectives

The specific objectives are to:

i. Guide project implementers on the process of undertaking extension under the project

ii. Outline the project's extension ecosystem

iii. Define approaches of linking farmers to TIMPs and service providers

iv. Provide mechanisms for accessing resources for demonstrations on TIMPs

1.3 The Food Systems Resilience Project

The FSRP is a Government of Kenya Project focusing on ensuring food security and building resilience. It complements and builds on other interventions by the World Bank that support the government's current Bottom-up economic transformation agenda (BETA). The Project development objective (PDO) is "to increase preparedness against food insecurity and improve the resilience of food systems in targeted project areas of Kenya". FSRP is implemented through six Components. They include:

Component 1: (Re-) Building Resilient Agricultural Production Capacity - aim is to strengthen the resilience of food supply to climate change and other shocks with a focus on climate resilient agricultural production and related supporting services.

Component 2: Supporting the Sustainable Development of Natural Resources for Resilient Agricultural Landscapes, focusing on enhancing sustainable management of natural resources for resilient food systems by investing in soil and water conservation and rangeland management interventions.

Component 3: Getting to market, will improve physical and economic access to sufficient, safe, and nutritious food by improving agri-food producers' (both crop and livestock producers) access to domestic and international markets.

Component 4. Institutions, Policies, and Knowledge for Regional Food Security, to promote a greater focus on food systems resilience in policymaking

Component 5: Contingency Emergency Response, finance eligible expenditures related to emergency response mechanisms in case of natural or man-made crises or disasters, severe economic shocks or other crises and emergencies.

Component 6: Project Coordination and Management, to finance activities related to national and county-level project coordination

FSRP will be implemented in all wards of thirteen (13) counties (Baringo, Marsabit, Wajir, Mandera, Garissa, Tana River, Lamu, West Pokot, Laikipia, Isiolo, Turkana, Samburu, and Elgeyo Marakwet. Priority value chains include Livestock Value Chains; - Red meat (sheep, goats, cattle); Leather; Dairy (camel, cattle, goats); Chicken (meat, eggs); Apiculture, Aquaculture; and Crops Value Chains; - Sorghum; Cowpeas; Local vegetables; Potato; Sunflower; Tomato; Mango; Cashew nut; Cotton, Rice, Local vegetables, Beans, Simsim, Watermelon, Groundnut.

It is envisaged that over 300,000 registered crop and livestock farmers supported under the project will largely include small-scale farmers. Furthermore, the project will benefit value chain actors at various levels including extension workers, aggregators, logistics support providers and small and medium enterprises (SMEs) operating within the value chain. At least 5,000 employment opportunities will be created through multiple pathways including expansion of operations of FPO and SACCOs, agri-tech service providers, anchor off-takers, SMEs, agripreneurs, and expansion of urban agri-business linkages. The project will have a strong focus on addressing gender gaps to develop gender smart agriculture value chains through a range of integrated solutions.

1.4 Overview of the Agricultural Extension system in Kenya

1.4.1 Public Agricultural Extension system in Kenya

The public agricultural extension system in Kenya is a crucial node of the country's agricultural sector. It plays a significant role in disseminating knowledge to farmers optimizing resource use improving productivity, enhancing food security and supporting rural livelihoods among small farmers. The government primarily drives the system, with services provided departments in charge of agriculture and livestock at the county level and at the national level by the Ministry of Agriculture and Livestock Developmentand to a very small extent by private extension service providers leading to a perception that extension services are free.

Devolution in Kenya, established under the 2010 Constitution, transferred agricultural extension services from the national government to the 47 county governments. This shift aimed to bring services closer to the people, ensuring that local needs and conditions were better addressed. County governments are now responsible for implementing agricultural extension services within their jurisdictions. This includes hiring and managing extension officers, developing county-specific programmes and delivering services tailored to the local context. Counties also allocate budgets and resources for extension activities, ensuring they align with local agricultural priorities. The national government through the Ministry of Agriculture and Livestock Development, retains policy formulation and capacity building functions. It develops national policies, standards, and guidelines for agricultural extension services. The national government also coordinates with international bodies, conducts research and provides overall strategic direction. Under the two levels of government, agricultural extension remains the least prioritized in terms of staffing and resource allocation. Currently, majority of the funding to extension services is through national government projects and the private sector.

The extension system in Kenya employs various methodologies, including farm visits, office visits, farmer-to-farmer interactions, on-farm demonstrations, e-extension, adaptive on-farm trials, agricultural information desks, and technology and agro-dealer shops.

1.4.2 Private Agricultural Extension system in Kenya

The scope of providing extension and advisory services in Kenya is beyond one single actor. Several actors in public and private sector (Research Organizations, Development partners, Non-Governmental Organizations (NGOs), Farmer Organizations (FOs), Faith Based organizations (FBOs), agricultural institutions and schools, and Community Based Organizations (CBOs) are increasingly providing extension services. Collaboration and partnerships in delivery of agricultural extension services exist in different forms including those between the County Governments and private sector, private sector and farmer organizations, private sector and CBOs, donors and schools, among others. Collaboration and partnerships between public and private sector extension and advisory services are essential to overcome the effects of limited resources, meet the growing demand for food and sustain the natural resource base. Most are involved in input supply for assessing performance to track yields and uses a value chain approach. Other activities include capacity building, research, financing, technical advice, technology development and transfer. To enhance effective extension services delivery, collaboration among public service providers, agripreneurs and private extension providers will come in handy. This will provide a complementary role during the program implementation and sustainability in the future.

1.4.3 Challenges in extension service delivery

Public extension system has been perceived to be top-down, paternalistic, uniform (one-size fits-all), inflexible, subject to bureaucratic inefficiencies and therefore unable to cope with the demand dynamics of modern agriculture. However, the system faces several challenges, including human resource capacity, infrastructure and funding.

1.Declining human, capital and financial resources:

Despite the Malabo 2010 declaration by African Union (AU) member states committing to allocate at least **10% of their national budgets to agriculture, the sector in Kenya still faces** resource allocation and funding constraints. This limits the ability to adequately fund agricultural extension services. It affects the hiring and training of extension officers, provision of necessary materials and tools and the overall extension coverage, where not all farmers can access extension services, leading to disparities in agricultural productivity across different regions. Other studies have shown that, Staff: Farmer ratio is 1: 1380 as compared to the desired 1: 600 hence privatization (by CBOs, NGOs, FBOs) to fill the gap left.

2. Capacity and skills of extension staff:

In Kenya, there is a shortage of well-trained and skilled extension officers. Additionally, many existing officers may lack up-to-date knowledge of modern agricultural practices and technologies. Hence, the effectiveness of extension services is compromised, leading to outdated or irrelevant advice being given to farmers. This can hinder the adoption of improved farming techniques and technologies.

3. Coordination between national and county governments:

Devolution has created complexities in the coordination between national and county governments characterised by uncoordinated pluralistic extension services delivery and poor linkages with extension facilitating actors. There can be overlaps in roles and responsibilities, inadequate corresponding private sector input, unclear mandates and sometimes, conflicting policies. The poor coordination can lead to inefficiencies, duplication of efforts or gaps in service delivery, reducing the overall effectiveness of extension services.

4. Variability in service quality across counties:

The quality of extension services varies significantly between counties, depending on local priorities, administrative capacity and resource availability. This variability leads to unequal access to quality extension services, with some regions benefiting more than others, exacerbating regional inequalities in agricultural development.

5. Inadequate infrastructure and logistics:

In many rural areas, poor infrastructure (such as roads) and logistics challenges (such as lack of transport) hinder the ability of extension officers to reach remote farmers. Therefore, farmers in hard-to-reach areas may not receive timely or adequate extension services, limiting their ability to adopt new agricultural practices and technologies.

Despite the challenges, the extension system's impact on smallholder productivity, incomes and poverty reduction is significant. Therefore, efforts are being made to improve the performance and resilience of the extension system to include strengthening the hybrid extension service delivery systems towards commercialization and privatization of public extension architecture without compromising public interest.

1.4.4 Potential interventions to improve extension service delivery

Based on lessons learnt from the previous adopted approaches, which were characterized by high demand for manpower, time and financial resources, the Government in collaboration with other stakeholders has in recent years embraced more participatory and demand-driven extension approaches. While there are issues related to resource allocation and coordination, the localized approach offers potential for more responsive and effective service delivery. Strengthening the capacity of county governments and fostering collaboration between national and county levels are essential for maximizing the benefits of the devolved agricultural extension system.

Several constraints that have hindered proper functioning of extension have to be addressed. For this reason the government has formulated the Kenya Agricultural Sector Extension Policy (KASEP), which focuses on capacity building in extension service delivery, knowledge management, research-extension-clientele linkages, and partnership, collaboration, and coordination.

1. Enhancing resource allocation and financial support:

County governments should prioritize the allocation of adequate resources for agricultural extension services. Additionally, counties could explore alternative funding sources such as public-private partnerships, donor funding and innovative financing models like agricultural levies. With improved funding, there will be better staffing, training and equipping of extension services, leading to broader coverage and more effective service delivery.

2. Building capacity and skills of extension officers:

There is need to invest in continuous training and capacity building programmes for extension officers, focusing on modern agricultural practices, climate-smart agriculture and the use of ICT in agriculture. Collaboration with agricultural training institutions and research bodies can enhance the quality of these programmes. When extension officers' knowledge and skills are continuously enhanced, they can provide more relevant and up-to-date interventions, which can lead to increased adoption of improved farming techniques by farmers.

3. Strengthening coordination mechanisms:

With guidance from the KASEP policy, clear frameworks for collaboration and communication between national and county governments can be established, ensuring that roles and responsibilities are well defined. Regular joint planning sessions, shared databases in line with the data protection act (2019), and coordinated policy development can help improve the alignment. In this regard, improved coordination would reduce duplication of efforts, address gaps in service delivery and ensure that national policies are effectively implemented at the county level.

In Kenya, extension service delivery is considered as a public good as Kenya's agriculture is dominated by 80% small holder farmers and less commercialized. Based on the growing farmer population, farmer led extension is considered a sustainable approach to technology dissemination to complement efforts by County Governments to provide extension services.

4. Standardizing and improving service quality across counties:

Develop and implement national standards and guidelines for agricultural extension services that all counties must adhere to. Counties could also conduct regular assessments and audits to ensure compliance and identify areas for improvement. This will result to more consistent quality of extension services across all counties, reducing regional disparities and ensuring that all farmers/pastoralists have access to high-quality services and support.

5. Improving infrastructure and logistics support:

Invest in rural infrastructure development, particularly roads, to facilitate easier access to remote areas. Staff mobility could also be improved through provision of motorbikes or bicycles. Better infrastructure and logistics support would enable extension officers to reach more farmers, especially in remote areas, improving service coverage and effectiveness.

6. Leveraging ICT and digital tools:

Promote the use of ICT tools, such as mobile-based platforms, radio and online resources, to supplement traditional extension methods. These tools can provide farmers with timely information, weather forecasts, market prices and best practices. ICT tools are known to enhance the reach and efficiency of extension service delivery, making it easier for farmers to access information and support, even in areas where physical extension service delivery is limited.

By addressing these challenges through targeted interventions, Kenya's devolved agricultural extension system can become more effective, equitable, and responsive to the needs of farmers across the country.

1.4.5 Existing opportunities in extension service delivery

The devolution of agricultural extension services in Kenya has brought both challenges and opportunities. The following are possible opportunities in extension service arena that could be upscaled

1. Value addition and marketing

Over the years, extension has emphasized on increasing production with little or no regard to value addition and marketing. However, it is now acknowledged that linking production with processing and marketing is a prerequisite in transforming agriculture from subsistence to a commercial enterprise.

2. Localized Solutions: Devolution allows counties to develop and implement agricultural extension programmes that are specifically tailored to local conditions, such as climate, soil types and predominant or emerging crops/livestock.

3. Public-Private Partnerships: There is an increasing trend of counties partnering with the private sector, NGOs and other stakeholders to enhance the delivery of extension services. These partnerships can provide additional resources, expertise and innovations.

4. Use of ICT: Counties are exploring the use of Information and Communication Technology (ICT) to reach more farmers, especially in remote areas. Mobile-based platforms, radio programmes and online resources are being used to disseminate agricultural information and advice.

1.4.6 Focus of extension activities in FRSP

The FSRP will build on the extension successes and lessons learned from the Kenya climate smart Agriculture project (KCSAP) and National Agricultural and Rural Inclusive growth Project (NARIGP). It will lay strong emphasis on a hybrid extension architecture where a combination of public extension, farmer led extension, private extension (agripreneur-led extension) and leveraging on ICT technologies to disseminate Technologies Innovations and Management Practices (TIMPs) including approaches to lead farmer extension, agricultural mechanization, disruptive agriculture technologies and farmer-led Irrigation development (FLID) to the CIGs/VMGs and FPOs. It will support the county technical departments to play their rightful roles of specialized extension provision, quality control and regulatory functions as guided by the extension policy while ensuring the achievement of the project development objective.

1.4.7 Guiding Principles of Extension Under FSRP

The following will be the guiding principles under the FSRP. Extension activities carried out by the project will be based on the following principles:

- Extension works with people, not for them
- Extension is accountable to its clients
- Extension is a two-way link
- Extension works with different target groups
- Extension cooperates with other rural development organizations
- Equitable service delivery to farmers
- Efficient/effective services delivery
- Decentralization,
- Local decision making
- Demand led extension services
- Working primarily with farmers groups
- Capacitating extension personnel
- Appropriate extension methodology
- Integrated extension support services
- Coordinated extension services
- Improved environmental support
- Empowerment and inclusive participation
- Quality assurance
- Pluralism and strong extension research linkage

A strong extension research linkage with various players is summarized and depicted in Figure 1.

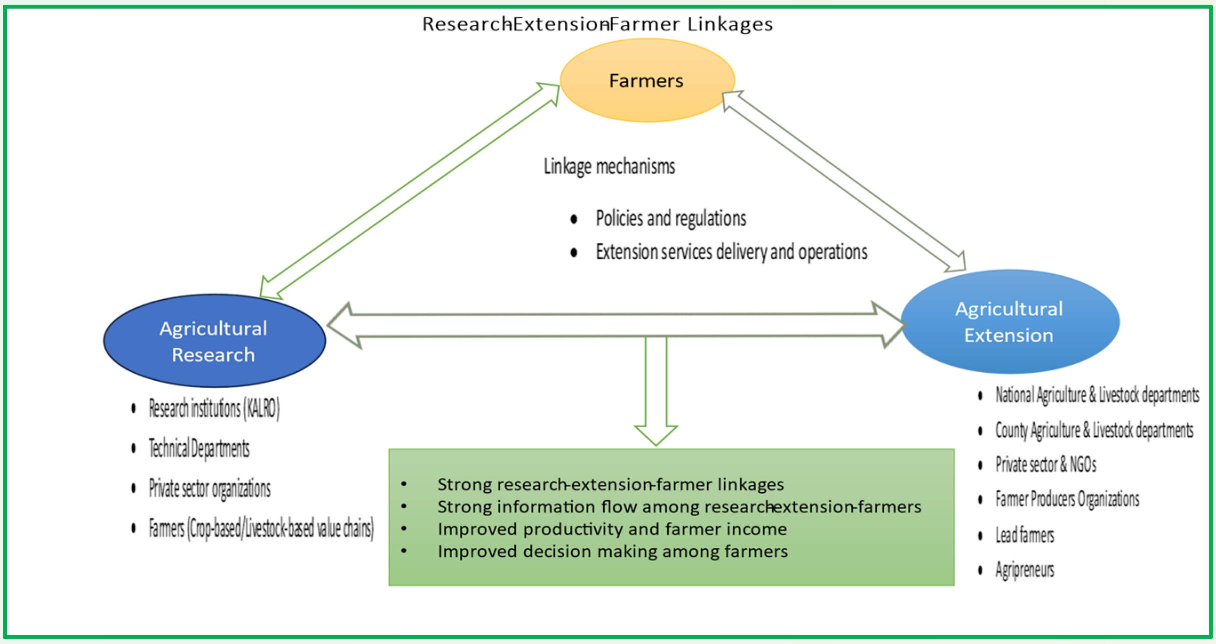

Figure 1: Research-extension-farmer linkages

CHAPTER 2: Strengthening Capacity of Extension Actors

2.1 Introduction and Background

Agricultural extension service delivery to project beneficiaries should be timely and appropriate for practical application of the TIMPs being transferred. It is imperative that adequate capacity is available to make this achievable. There is therefore need to re-tool the extension actors, individuals, organizations and communities through strengthening the skills, knowledge and resources to equip them better in order to deliver on project objectives. In this regard, the aim of the capacity building of extension actors will be to strengthen their capacity to provide extension on TIMPs, market linkages, access to credit and use of ICT tools for decision making among others.

2.2 Purpose and scope

The capacity to provide extension services in each county differs and depends on the selected value chains. The strengths and weakness of various extension actors need to be established before planning the needed extension services. The capacity building assessment will therefore be broad based, focusing on building knowledge and skills towards FSRP implementation.

To determine the specific gaps for the various project implementing teams in dissemination of TIMPs, the project will undertake a Capacity Building Needs Assessment (CBNA) by identifying the strengths and gaps of the target stakeholders and designing appropriate interventions to address them in all the project implementing counties. The NPCU in collaboration with other actors such as Agricultural Information and Resource Centre (AIRC), Kenya School of Agriculture and KALRO will develop the terms of reference (TOR) for the CBNA.

2.2.1 Objectives of Capacity Building Needs Assessment

The main objective of CBNA is to identify capacity gaps for extension actors to deliver, upscale and disseminate TIMPs. These gaps may include areas such as extension delivery methods e.g. FFS, community mobilization, setting up community TIMPs demonstrations, awareness of value chain TIMPs using integrated platforms, among others.

The specific objectives of the CBNA will be to:

- Identify the knowledge and skills gaps that would hinder implementation of extension activities.
- To identify weakness and gaps in stakeholder linkages systems that would hinder effective TIMPs dissemination.
- Develop capacity building plans in order to address the knowledge and skills gaps.

The CBNA will be carried out in all 13 project counties in year 1 of the project before the TIMPs training begins.

2.3 Approach and methodology

Qualitative data shall be collected through a survey in all the 13 project Counties targeting the identified stakeholders for the selected value chains. The NPCU will develop a capacity assessment tool/customized instrument for data collection from the respondents . For this purpose, specific questionnaires shall be developed and administered to key stakeholders through an interview in order to gather data from Key informants and focused group discussions (FGD) using a checklist that shall be developed by NPCU. Observations that shall be used to identify vital information gaps. The gaps identified shall be recorded during interviews and focused group discussions.

The needs assessment shall focus on FSRP implementation teams and stakeholders who include; Kenya School of Agriculture, AIRC, CPCU, CTDs (including SCTTs and WTTs) LF and Agripreneurs – across various specializations/sectors e.g. Agribusiness; Crops and Irrigation; Veterinary and Livestock; service providers and Cooperatives; Water; Natural resources; NEMA). Workshops and dialogues will also be carried out to address the identified weakness and gaps in the stakeholders' linkage systems hence enhance strong collaboration for TIMPs dissemination and implementation.

The following steps will be used;

1. Tool development by NPCU (Digital tool, Questionnaire, checklists)
2. Tool pre-testing in a few selected Counties
3. Tool refining based on pre-testing results
4. Carry out the actual survey
5. Data cleaning, harmonization and analysis
6. Preparation of a report of the findings and recommendations

2.4 Findings and recommendations

Expected Outputs of the Capacity Building Needs Assessment: The CBNA is expected to inform the project on the areas of strengths and weaknesses and the priority areas that need to be addressed during the training and dissemination process hence ensure desired outcomes during FSRP project implementation.

2.5 Development and rollout of the CBNA Guidelines

The CBNA guidelines will have;

- organized content, learning objectives, instructional activities/information and assessments.
- Stakeholders will be engaged to review the CBNA and make necessary revisions.
- The CBNA plan will outline roll-out processes, timelines, resources required and responsibilities of the various stakeholders and actors mandated with its full implementation.

- Guidelines, tutorials and other supporting materials will be developed to support implementation of the CBNA.
- The guidelines will be monitored for improvement and strategies for sustainability will also be outlined to address specific capacity gaps at all tiers.

CHAPTER 3: Implementation Arrangements for Cascading TIMPs Training

3.1 Background

Under the saturation approach, all CIGs/VMGs in all project wards are earmarked to receive extension support on their prioritized value chain TIMPs. The previously trained ToTs will be retooled and new ones trained thus strengthening the capacity of the trainers at all levels of training. All training will be aligned to the project goals and objectives.

3.2 Extension architecture for delivery of TIMPs

The hybrid extension architecture for training on TIMPs is presented in Figure 2. At National Level the NPCU will coordinate the training activities while KALRO will be responsible of TIMPs development and delivery. The NPCU, KALRO, AIRC and Kenya School of Agriculture will collaborate in TIMPs packaging and curriculum development. The CPCU will assist NPCU to coordinate the training activities at County level. The county teams shall consist of the CPCU members, crops and livestock technical staff while the sub county team shall consist of SCTTs, WTTs, LFs and agripreneurs. The SCTTs and WTTs will assist the CPCU to coordinate the training at ward level/ FFBS/PFBS sites while the agripreneurs shall work closely, receive guidance and mentorship from the BA. At ward level the WTTs shall backstop, supervise and give technical advice to agripreneurs and lead farmers on value chains and TIMPs during FSRP implementation.

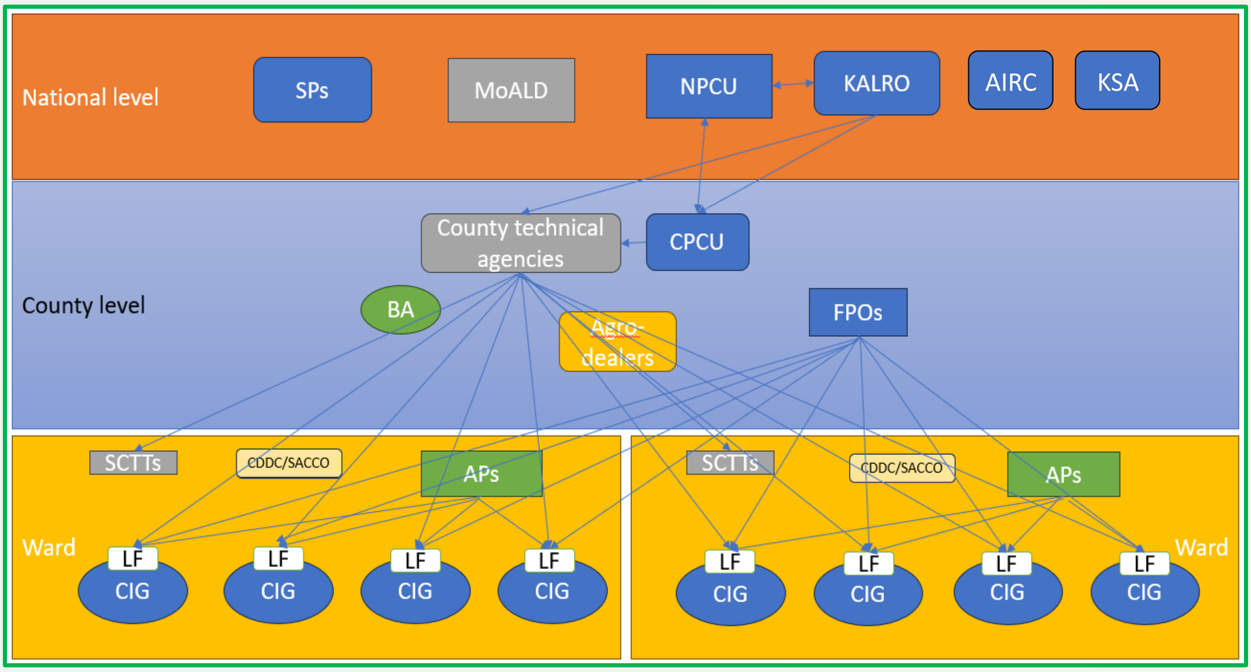

Figure 2: Hybrid Extension Architecture for TIMPs delivery

3.3 Cascading training on TIMPs

The project will use the four-tier training model (Figure 3) to cascade the training on TIMPs. The county teams shall be trained by KALRO as ToT on the respective TIMPs for the prioritized Value Chains in each county (Tier 1). The county trainers will train the SCTTs, WTTs and agripreneurs on TIMPs (Tier 2) while the SCTTs, WTTs and agripreneurs will train lead farmers and CIGs on TIMPS (Tier3). The Lead farmers together with WTTs and agripreneurs will train the CIGs/VMGs member farmers on the respective TIMPs using the demo sites and FFBS learning fields (Tier 4). The KALRO, state departments and county technical teams shall provide continuous mentoring, coaching and backstopping of tier 2 to 4 trainers on need basis. At level four, the WTTs and agri-preneurs supported by Lead farmers will train the CIGs / VMGs member farmers on the respective TIMPs using the demo sites and FFBS learning fields (Tier 4) with support from WTTs and agripreneurs.

The project will conduct refresher training for Tier 2, 3 and 4 trainers at least once a year in order to refresh and further enhance their knowledge and skills on TIMPs. At Tier 1, Tier 2 and Tier 3 trainings, participants will prepare work plans and budgets on how they will execute the next / subsequent level of trainings keeping in mind the targeted participants. AIRC will package TIMPS dissemination material into appropriate format to ensure easy uptake for farmers in tier 4. To ensure sustainability in access to TIMPS, the Kenya School of Agriculture will develop curricula for CSA TIMPs for respective value chains for continuous training of technical staff and other stakeholders.

In figure 3 , the model defines the target participants and number to be trained at each level

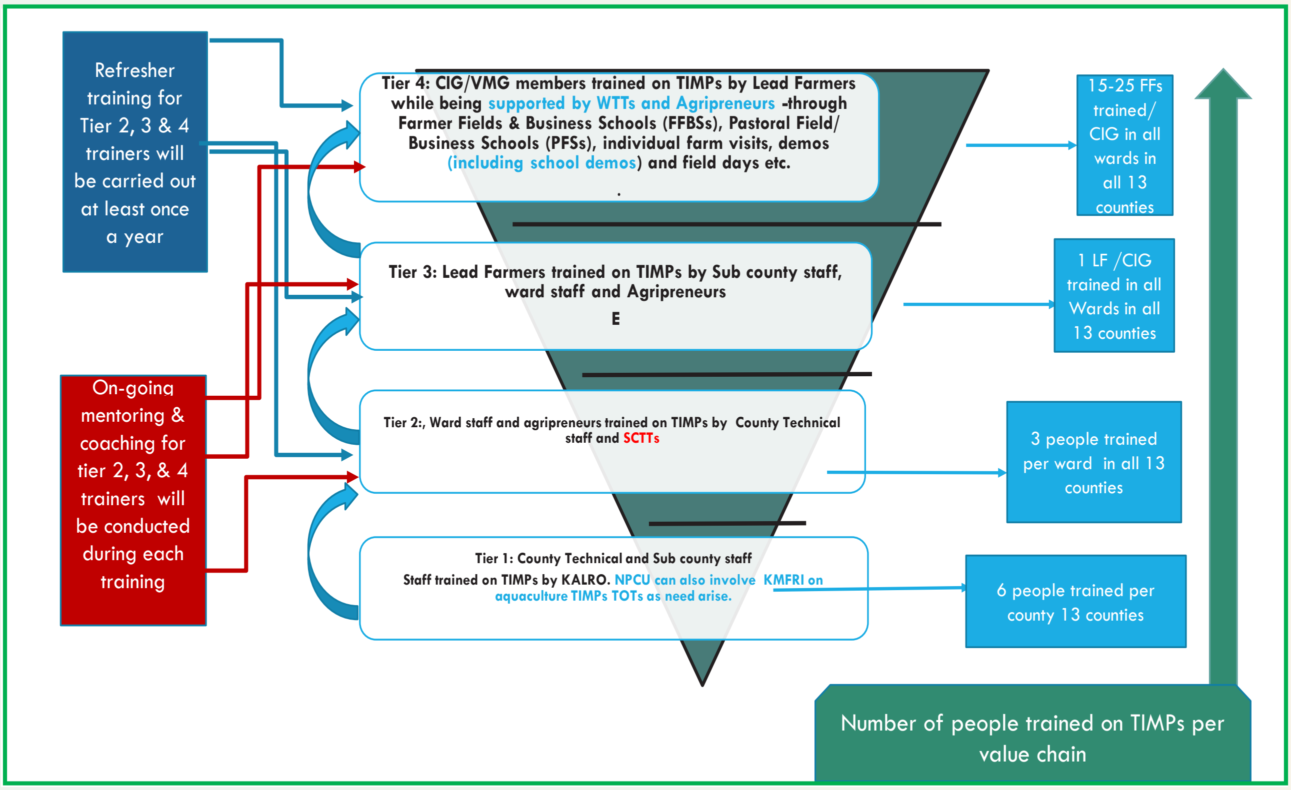

Figure 3: Model for cascading training on TIMPs.

3.3.1 Training of county TIMPs trainers (Tier 1)

The implementation arrangements to conduct TIMPs training for Tier 1 will be as follows:

a). **Responsible Organization: KALRO supported by NPCU will be responsible for TIMPs training. However the Kenya School of Agriculture, AIRC and State Technical Departments** will have specified roles to support effective TIMPs dissemination and ensuring sustainability. Their responsibilities include:

i. Development of TIMPs Menu: KALRO will provide a comprehensive list of TIMPs relevant to each value chain in the county and undertake the training.

ii. Extension Approach Criteria: KALRO will establish and provide criteria for selecting the most effective extension methods for TIMPs training.

iii. Site Set-up Assistance: KALRO in collaboration with CPCU support the establishment of research led demonstration sites, adaptive learning sites, and technology comparison sites and school demos to showcase TIMPs.

iv. Field Days and Learning Exchanges: CPCU will collaborate with KALRO, SDA, SDLP, SPs and CIGs/VMGs to organize field days and farmer learning exchange visits to facilitate peer learning.

b).**Monitoring and Evaluation**: The project will monitor the adoption of TIMPs at the CIGs level, evaluate the adoption rate, and provide reports detailing the TIMPs with high adoption rates and the reasons for slow adoption of others. AIRC to document value chain specific TIMPs lessons learned into integrated platforms such online platforms (web sites, repositories), radio and television programs, print media (manuals, guidelines, technical handbooks, newsletters, bulletins, banners, fliers, posters, brochures) and social media (blogs, newsfeeds).

c). **Selection of participants**: Develop criteria for selecting eligible county technical team members (up to 6 per value chain) for the training. NPCU in consultation with KALRO, Kenya School of Agriculture, and AIRC to share these criteria with the County Project Coordination Units (CPCUs) for the nomination process.

d). **Number of trainings**: Conduct at least one training session per value chain for each county. In cases where multiple value chains are related, combine the trainings to maximize efficiency.

e). **Training duration:** The training duration will be guided by the needs assessment of each priority value chain. On average, each training session will last 5-6 days, with adjustments based on the capacity needs identified.

f). **Venue**: Trainings should preferably be conducted at KALRO Centers and Kenya School of Agriculture campuses to leverage their specialized facilities and resources.

g). **Timing**: The training should be conducted before the onset of the cropping season or production cycle to ensure timely application of the learned TIMPs.

h). **Expected outputs**: The expected outputs include:

i. The number of County Trainers of Trainers (ToTs) trained

ii. Types and number of TIMPs covered in the training

iii. Duration in days of each training session(8 hours of training)

iv. Development of a training program and module for Tier 2

i). **Training methodology**: The TIMPs training methodology training will emphasize more of practical sessions on best practices for each value chain to ensure hands-on learning and application of the knowledge.

3.3.2 Training of SCTTs, WTTs on TIMPs (Tier 2)

The implementation arrangements to conduct TIMPs training for Tier 2 will be as follows:

a). **Responsible Organization:** CPCU and ToT Team: The CPCU, together with the trained ToT team from Tier 1, will organize and oversee the training of Sub-County Technical Teams (SCTTs), Ward Technical Teams (WTTs) and agripreneurs on TIMPs.

b). **Selection of participants**: The CPCU will select SCTTs, WTTs and agripreneurs based on their relevance and potential impact on each of the selected agricultural value chain for the county level training on TIMPs.

c). **Number of trainings**: At least one training session per value chain will be conducted. If value chains are interrelated, trainings can be combined.

d). **Training content**: In addition to TIMPs specific to the value chains, the training will cover networking skills and county-specific marketing issues related to agripreneurs, Farmers' Producer Organizations (FPOs). Training to foster increased productivity, agribusiness, financial access and sustainability related issues. In addition, the training should encourage leveraging on proven and appropriate extension methods and approaches in disseminating agricultural information and knowledge along all the nodes from inputs supply, production to marketing that address the various expectations and the needs of all the actors in agricultural value chain development in within the project areas.

e). **Training Duration**: Each value chain-specific TIMPs training will take 5-6 days, with adjustments based on specific needs.

f). **Training methodology**: The training will be classroom-based with 40% theory and 60% practical sessions, including occasional field visits to reinforce learning.

g). **Venue**: KALRO Centres and Agricultural Training Centers (ATCs) will be the preferred venue for these training sessions.

h). **Timing**: The training should be conducted at the beginning or just before the cropping season of the value chains to ensure timely application of the TIMPs for crops enterprises. For livestock enterprises the trainings can take place anytime but taking cognizance of seasonality.

Farm based training (On-farm) will be preferred especially for TIMPs on irrigation, water management, soil fertility management, pasture preservation and conservation and post-harvest management techniques.

i). **Expected outputs**: The expected outputs include:

- The number of SCTTs, WTTs and agripreneurs trained.
- Types and number of TIMPs covered.
- Duration of training.
- Development of a training program for Tier 3 and its associated activity plan

j). **Monitoring**: KALRO, NPCU, and state departments will provide technical support and monitor the county-level training of SCTTs, WTTs and agripreneurs. Regular assessments of TIMPs adoption will be reported. AIRC will support documentation of value-chain specific TIMPs trainings (lecture and demonstrations) for other online dissemination and as part of lessons learned.

3.3.3 Training of Lead farmers on TIMPs (Tier 3)

Implementation Arrangements:

a). **Responsible Organization**:SCTTs, WTTs, Agripreneurs: Organize training for lead farmers, with support from CPCUs.

b). **Selection of participants:** SCTTs, WTTs and agripreneurs, with assistance from CPCUs, will select lead farmers to participate in the training.

c). **Number of trainings**: continuous

d). **Content of the Training:** TIMPs Training will cover TIMPs specific to the value chain, as well as networking skills and marketing issues relevant to the value chain. AIRC will develop and produce simplified TIMPs training material and aids.

e). **Duration of the training**: The training will last an average of 4-5 days, depending on the complexity of the TIMPs.

f). **Training methodology**: The training will be classroom-based with 30% theory and 70% practical sessions, including field visits to enhance hands-on learning.

g). **Venue**: Agricultural Training Centers (ATCs) will be the preferred venue.

h). **Timing**: Scheduling: Conduct training at the beginning or just before the cropping season to ensure timely application of the TIMPs.

i). **Expected outputs**: The expected outputs include:

- Number of lead farmers trained.
- Types and number of TIMPs covered.
- Duration of training.
- Development of a training program for Tier 4 and its activity plan.
- Demonstration farms established

j). **Monitoring**: KALRO/NPCU, state departments, and CPCUs will monitor and support the training of lead farmers.

3.3.4 Training of CIGs/VMGs on TIMPs (Tier 4)

Implementation Arrangements:

a). **Responsible Organization**: WTTs and agripreneurs with support from Lead Farmers: Organize TIMPs training for CIGs/VMGs.

b). **Participants**: All members of the CIGs/VMGs will participate in the training sessions.

c). **Duration of the training**: The training duration will depend on the value chain. Crop-based value chains: Training should ideally span the entire growing season. For livestock-based value chains: Training should cover the entire production cycle.

d). **Training methodology**: Emphasize learning by doing and learner-led study to ensure active participation and practical application of TIMPs. The farmer-led demos will be used to disseminate TIMPs.

e). **Venue**: Trainings will be conducted at lead farmers, Farmer Field Schools (FFBS) and Pastoral field and business schools' sites. Utilize FFBS/PFBS plots, demonstration plots, individual farm visits, and field days to provide comprehensive and practical training.

f). **Expected outputs**: The output of the CIGs/VMGs training will be:

- Number of farmers trained disaggregated by gender;
- Number and types of TIMPs the farmers were trained on
- Duration of training.
- Number of demo farms established.

h). **Monitoring**: County technical teams, SCTTs will technically backstop the training of CIGs/VMGs on TIMPs by Lead farmers who will be supported closely by agripreneurs and WTTs. AIRC will support documentation of value-chain specific TIMPs trainings (lecture and demonstrations) for other online dissemination and as part of lessons learned.

CHAPTER 4: Hybrid Extension Architecture in FSRP

4.1 Background

The FSRP extension architecture is designed to empower farmers by organizing them into Common Interest Groups (CIGs) and Vulnerable and Marginal Groups (VMGs/IPs), with a designated lead farmer serving as the group's representative. This structure facilitates the delivery of extension support from various providers, including public, private, and FPOs. Building upon the successful hybrid extension model established in previous projects, FSRP aims to expand its reach to all wards within the targeted counties. Additionally, it will incorporate activities related to Disruptive Agriculture Technologies (DATs) and engage with agricultural entrepreneurs to further enhance its impact and effectiveness.

At its core, the FSRP Project Development Objective aims to fortify resilience against food insecurity while enhancing the robustness of food systems. This endeavor entails advocating participatory extension methodologies like Farmer Field School (FFBS) and Pastoral Field Schools (PFS). The dissemination of TIMPs encompasses a spectrum of practices and services, including those geared towards soil health and water conservation to mitigate emissions and sequester carbon, as well as services related to rangelands management, animal health and production, seed multiplication, certification among others.

4.1.1 Hybrid extension architecture developed under NARIGP and KCSAP

Under NARIGP and KCSAP a hybrid extension architecture was applied . This involved a multiplicity of both public and privates service providers who included Sub-County Technical Teams (SCTTs), Community Driven Development Committees (CDDCs), Community Based Facilitators (CBFs), Contracted Service Providers (SPs) and Lead Farmers (LFs). These technical service providers played different roles and were involved at different stages of the extension process through respective Common Interest Groups (CIGs) and Vulnerable and Marginalized Groups (VMGs). In addition, the two projects had contracted specialized Service Providers (SP) to provide specific technical extension support related to the micro projects (MPs) and on DATs. Most of these SPs worked directly with the CIGs/VMGs and only at a later stage through the lead farmers.

4.1.2 FSRP hybrid extension model

In FSRP, the hybrid extension model is designed to fit and operate effectively in the greater last mile ecosystem for the extension services. In the transfer and dissemination of prioritized TIMPs from KALRO to the beneficiaries, FSRP will lay strong emphasis on a hybrid extension architecture (Figure 4) where a combination of County Technical Departments (CTD), Lead Farmers (Farmer Led extension),, Agripreneurs and Agtechs will be embraced.

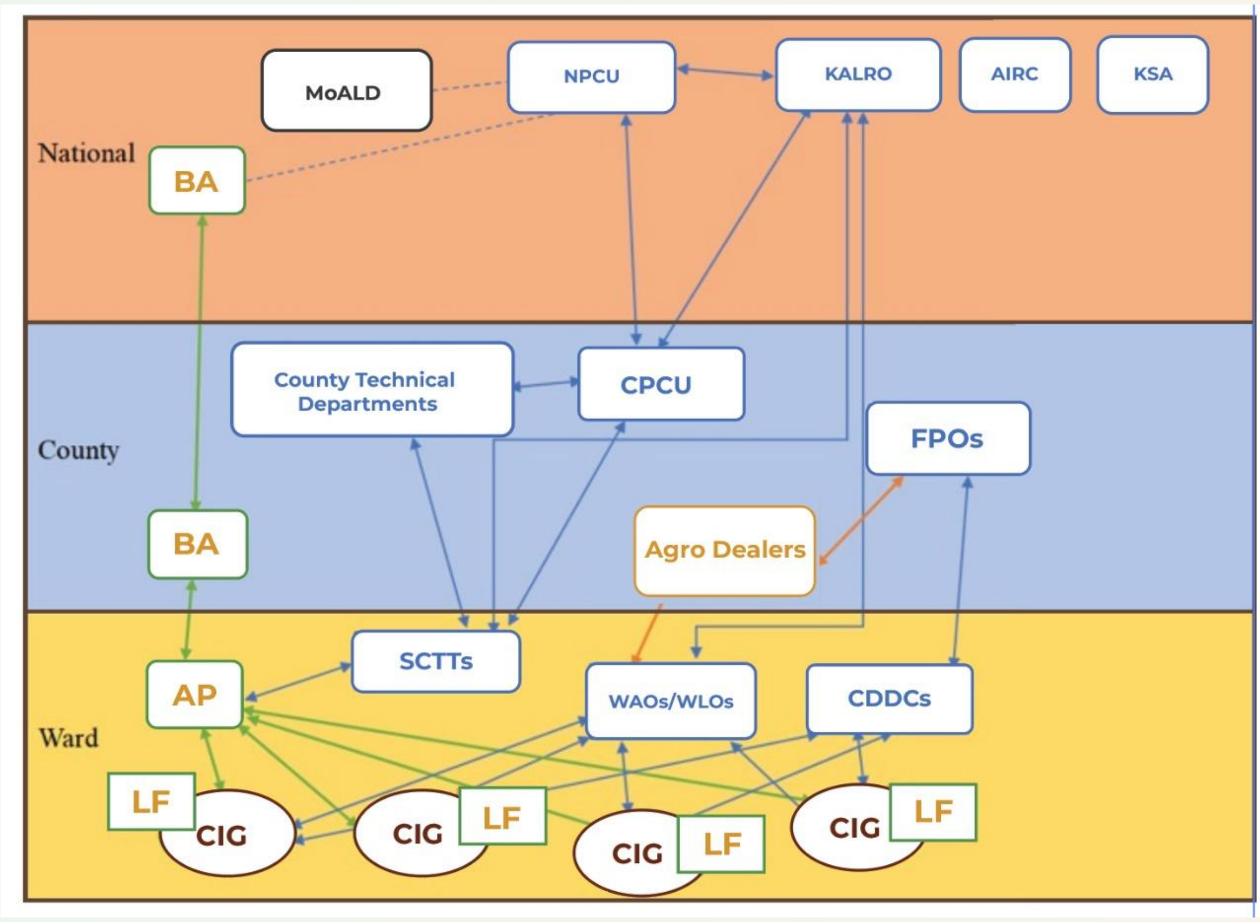

Figure 4: FSRP Hybrid extension architecture

The Lead Farmer will be the "last-mile" extension service provider for productivity and resilience building. The extension providers will provide extension support to the CIGs/VMGs through the Lead Farmers at ward level, and every CIG/VMG will be supported to become the epicenter of extension service delivery, training farmers on climate-smart TIMPs, setting up demonstrations, supporting adaptive research and field trial activities. The subject matter specialists at county level will provide technical backstopping to the SCTT.

KALRO has developed, field tested and documented sufficient TIMPs for the different agricultural value chains.

FFBSs/PFBSs are very instrumental in the adoption of TIMPs by farmers (Tier 4) and in fostering productivity of their respective agricultural value chains. CIGs/VMGs/IPs will be linked to FPOs for input, marketing support and extension support.

4.1.3 Main actors and their roles in FSRP's hybrid extension

a) Lead farmers

Lead farmers are innovative farmers willing to try-out new ideas and technologies and volunteer to serve as role models in their respective CIGs/VMGs. They are identified by their community leaders and CIG member farmers. Aslead farmers, theytrain and support fellow farmers in specific technologies thereby creating a critical mass of adopters on a specific technology in designated locations. Their roles are to:

- Liaise with the other extension providers on farmers' needs.
- Implement technologies introduced by the other extension service providers.
- Organize the farmers to participate in demonstrations, field days, extension meetings and exchange visits in liaison with the SCTT, WTT and Agripreneurs.
- Give feedback to the other extension providers on the members' experiences with agricultural technologies.
- Champion community-based monitoring and evaluation with support from the SCTT.
- Based on previous performance, the lead farmers trained under NARIGP and KCSAP will be expected to continue to facilitate the CIGs/VMGs in FSRP. In the new wards, CIGs will be requested to select lead farmers, who will receive training on the respective TIMPs and networking.

b) Ward Officers

Ward Officers are County Government employees based at ward level to discharge agricultural extension service to farmers. Their main duties are to;

- Provide technical advice to CIG/VMG members on TIMPs.
- Follow up on farmers to track TIMPs adoption.
- Discuss progress of activity implementation with the SCTT and agripreneurs.
- Mobilizing the community into CIGs/VMGs/IPs and selection of lead farmers.

c) Sub-County Technical Teams (SCTTs)

As the most decentralized public extension units, the SCTTs are very important in:

- Offering technical support for value chain development to CIGs/VMGs/IPs through the Lead farmers.
- Supporting CIGs/VMGs/IPs to federate into FPOs or join existing FPOs.
- Monitoring and reporting on the progress made in supporting the different value chains.

d) Agripreneurs

An Agripreneur is an individual whose main business is agriculture or agriculture related (agriculture + entrepreneur = Agripreneur). The agripreneurs will be on-boarded, mentored and coached on business planning, entrepreneurship, negotiation, marketing, financial literacy, mentorship, backstopping, monitoring, and reporting by the business accelerator. They will provide continuous data updates on CIGs/VMGs farmers.

The roles of an Agripreneur include:

- Advisory and information services,
- Facilitate access to quality inputs,
- Farm services like mechanization, FLID
- Financial services (advisory, credit and insurance),
- Market linkage and other demand driven services.

e) Business Accelerators

A Business Accelerator (BA) refers to a firm or consortium which provides agricultural support services to established producers, start-ups and SMEs. The Business Accelerators will be recruited at the national level to provide services at national, regional and county levels. The BAs will include; a) value chain-based service providers who will be engaged to provide support to the prioritized value chains and their respective institutions, b) Farmer-led Irrigation Development (FLID) advisors and c) feedlots development accelerator. The value chain based BAs will work closely with National and County Value Chain Development Platforms to identify investment opportunities for value chain upgrading and support FPOs on business development services. The BA for FLID will work in close collaboration with the National and County Irrigation Accelerator Platforms. The feedlots development accelerator will be recruited at the national level and will work closely with the CAEO and County infrastructure officer

4.2 Extension approaches under FSRP

4.2.1 Demonstration plots

Researchers and/or extension workers will collaborate with farmers to establish field demonstrations. These demonstrations will be conducted at farmers' fields, KALRO stations, government institutions (ATC, ADC, pastoral training centers and livestock multiplication centers), NARS, primary, secondary schools and colleges. The philosophy behind field demonstrations is *"seeing is believing"* through experiential learning. Field demonstrations are valuable tools used to validate and showcase new agricultural technologies or practices in farmers' fields. The purpose of field demonstrations is to:

- Create awareness and interest among farmers about new technologies.
- Demonstrate the benefits of a new practice or technology, aimed at encouraging farmers to adopt it

- There will be two types of demonstrations i.e. *large scale TIMPs demonstrations* (research led demos) and *small plot demonstrations (*farmer led demos) on selected lead farmers' fields.

a. Large Scale Demonstrations (Research-Led)

The large-scale demonstrations will comprise institutional demonstrations and 4-K Club demonstrations in schools.

i. Institutional Demonstrations

NPCU in collaboration with other stakeholders including KALRO and other NARS will establish the "research led" demos to showcase a range of TIMPs. These demos should be located on a research station, government institutions (ATCs, KALRO, Training Institutions, Universities) or on-farm at a central location in the county.

ii. 4-K Club Demonstrations

NPCU will facilitate the State Department for Agriculture (Youth Unit) to establish demonstration plots for4-K Clubs in selected schools. This will be in collaboration with KALRO, county teams and other multi-sectoral stakeholders. These demonstrations will inculcate positive attitudes in agriculture among learners with expanded beneficiaries; parents and community living around the schools.

In the spirit to foster partnership and sustainability, national projects funded by other development partners will be considered to complement TIMPs dissemination and programs such as school feeding programs (SFP).

b. Small Demonstrations (Farmer-Led)

The County (CAEO) in consultation with RELOs andWTTs will establish the "farmer led" demos that comprise one to four TIMPs under farmer management and farm resources at CIG level. The TIMPs will be a sub-set of those chosen by CIGs.

4.2.2 Field days

Field days are educational events held on-farm, on-ranch or institutional farms. Farmers come together to learn and discuss new technologies which are expected to improve understanding and achieve increased adoption. Field days are cost-effective in reaching many farmers/pastoralists. They will be organized and hosted by the host farmers/ pastoralists (producers), 4K Clubs, Young farmers Clubs in collaboration with agricultural extension service providers (Ward officers, APs etc). The events will include demonstrations of specific value chain TIMPs.

4.2.3 Farmer field schools/ Pastoral field schools/Farmer Field and Business Schools

The project will adopt the use of both the demo plots and the FFBS approaches to train farmers on TIMPs. Demonstrations are a good forum not only to make farmers aware and interested in TIMPs but also to evaluate developed TIMPs. On the other hand, the farmer field school (FFS) is a "school without walls". It is a group-based adult learning approach that teaches farmers how to experiment, solve problems independently and become better decision makers in their farming system. The field school (FS) approach is anchored on the theories of constructivism, adult learning, experiential learning, action learning/ research and group dynamics. In addition to the FFS, the Farmer Field and Business School (FFBS) have added topics on entrepreneurship, aggregation, value addition and marketing.

4.2.4 Farmer Producer Organizations (FPOs) driven extension service

Some of the well-established FPOs are also providing value chain specificextension support to farmer members. The project will create awareness on extension and other services that the FPOs can possibly provide in order to create demand for services. The Business Accelerators will build the capacity of the FPOs along with other targeted project training (operations, agribusiness, governance, gender, financial, procurement management and environmental management) that are still not yet providing these services to their members.

4.2.5 Disruptive Agricultural Technologies (DAT) extension

The objective of embracing Information and Communication Technology (ICT) is to complement and modernize existing extension approaches and methods. FSRP will facilitate training of Extension Service Providers on application of E-Extension and use of ICT facilities and equipment for internet and mobile access devices (smart phones, tablets). CIGs/VMGs/IPs and FPOs will be sensitized and exposed to available E-extension platforms. KALRO will digitize developed TIMPs and through data sharing frameworks avail this content to the DAT Cohorts for onward dissemination to the CIGs/VMGs/IPs by Agtechs/Agripreneurs.

4.2.6 Farmer-to-farmer Extension

Farmer-to- Farmer Extension(F2FE) is a grassroots approach that leverages the knowledge and experience of local farmers to promote sustainable agricultural practices. This is an approach where farmers provide training to other farmers. It involves creating a structure of farmer-trainers. Experienced farmers (often called model/lead farmers) share their knowledge and expertise with other farmers. They provide training on various agricultural practices, techniques, and innovations. The process starts with extension programs providing education to these model farmers. These lead farmers then become farmer-trainers themselves.

4.3 Types of extension support provided under FSRP

The FSRP will support the following extension services for priority value chains;

a) TIMPs training for the different value chains

KALRO has developed, pre-tested and documented over 1600 TIMPs. These will be cascaded to target farmers and 4K Clubs using various levels of training by KALRO, Line Ministries specialists, County SMS, Sub County Technical staff, Ward Technical staff, Agripreneurs and lead farmers.

b) Learning institutions integration

Institutions of learning can play an important role in shaping the community's development through extension and outreach programs. These institutions range from schools (both primary and secondary), colleges and universities. The spread of these institutions in the country provides a vast network through which information, innovations, technologies and extension services can be disseminated to the communities around them. This will involve devising innovative extension and outreach programs as an avenue to disseminate agricultural information to farmers within catchment areas of learning institutions. KARLO will disseminate value chain specific TIMPs and line ministries teams, county SMS, sub county technical staff, ward technical staff and agripreneurs will facilitate the trainings in the wards.

c) Development of Linkages

Farmers and pastoralists will be linked to various institutions for marketing, financial services, insurance and other services. Such linkages may include SACCOs, Cooperatives, Commercial banks and other stakeholders operating in the area, e.g. the DRIVE project. They will also be linked to research through the extension staff. Research-extension linkages will be strengthened through continuous sensitization and addressing weak links for better service delivery. It's important to identify other stakeholders that are promoting the value chains development in the areas.

d) Provision of agricultural information

Information sharing with the farmers is usually very important since the farmers get to know where to source for certain goods and services. Support will therefore be provided in this area through extension service especially using digital devices, road shows, stakeholder consultation meetings, and mass media. Extension service providers will source and avail real time information to the CIGs/VMGs/IPs. Such agricultural information will include specific value chains marketing, inputs,value addition, emerging pests and diseases and weather among others.

CHAPTER 5: Implementation Arrangements for the Demonstration plots, FFBSs and PFBS

5.1 Background

FSRP will support the establishment of demonstration plots to support the uptake and adoption of TIMPs and the development of the related agricultural value chains. The objectives of the demonstration plots will be to showcase the performance of TIMPs. The demonstration plots will be in the Farmer Field Business Schools/ Pastoral Field Business Schools. The hosting lead farmers will utilize the demonstration plots as an extension platform for organizing FFBS / PFBS weekly learning sessions with core activities and at least one field day before the end of their learning cycle for the farming communities and CIGs / VMGs / IPs meetings. In addition, the field days and CIG/VMG meetings can and should also be used for discussing marketing and other value chain development issues.

Trained facilitators for FFBSs will be selected from a pool of trained farmers who have received prior training. Those facilitators who have skills on FFS will undergo a 5-day refresher course on FFBS. For the CIGs / VMGs / IPs with no trained CBF, the group will select at least one person (lead farmer or someone else who has some technical knowledge in agriculture / livestock) will undergo 21-day training on FFBS. The CPCU will facilitate establishment of FFBSs / PFBSs. Oversight of demonstration implementation will be conducted by Research Extension Liaison Officers (RELOs) stationed at the respective KALRO Centers, SCITs and WTTS. The FFBS will prioritize all facets of developing agricultural value chains, encompassing TIMPs, aggregation, value addition, financing, and marketing. The learning fields of the FFBS will serve as demonstration plots and extension platforms for the additional activities mentioned above, broadening outreach to more farmers in the wards.

The demonstrations will be undertaken in all wards. Existing FFBS will be expected to conduct demonstrations as per their respective value chains. Figure 6 presents the hybrid extension architecture for demos and FFBS.*(Refer to chapter 3 for detailed description)*

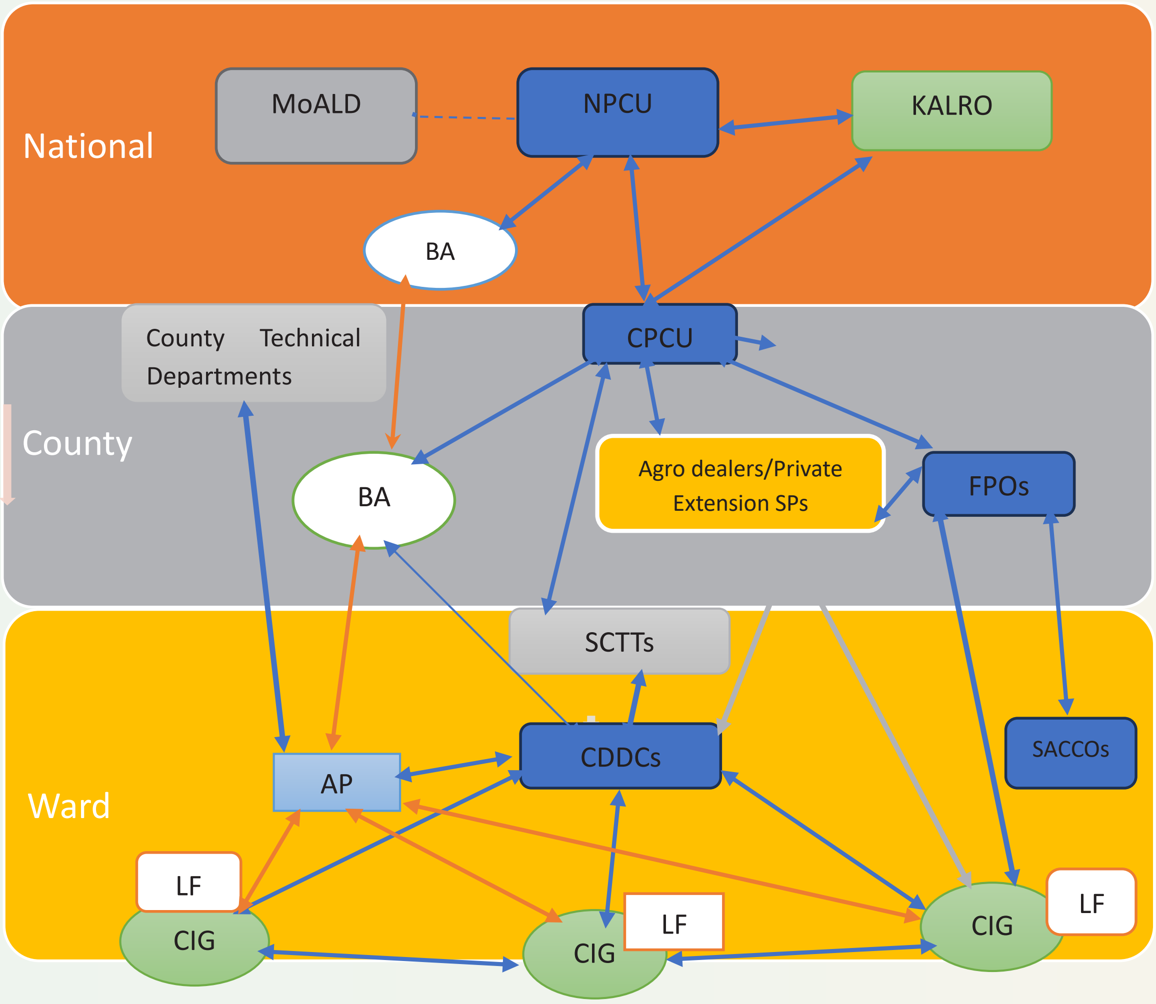

Figure 7: Hybrid Extension Architecture for demos and FFBS

Key:

Relationship between MoALD and NPCU

Information and feedback flow among institutions

BA information and feedback flow

5.2 Implementation arrangements: TIMPs Demonstration plots

FSRP will execute two categories of demonstration plots: small-scale (Farmer-led) demonstration plots and large-scale(Researcher-led) TIMPs demonstration plots.

5.2.1 Small-scale (farmer led) demonstration plots

A small-scale demonstration plot is a place (field / farm / site) that ranges from 0.1 – 0.5 hectares in size (for crop-based value chains) that can be used to test or experiment various agricultural practices and used to train, teach, showcase or create awareness on these practices or on new technologies, crops, livestock, or methods to CIG / VMG members. Establishment of small plots TIMPs demonstrations in existing or newly formed CIGs / VMGs will be governed by the following guidelines:

a) Selection process of potential host lead farmers

The process for selecting potential host lead farmers involves several steps. Initially, KCSAP and NARIGP supported the establishment of CIGs / VMGs / IPs and the training of lead farmers. Under FSRP, the CPCU, in close collaboration with SCTTs and ToT teams of county technical staff, will hold consultations forums with the host community and with the help of local leaders identify potential lead farmers from existing CIGs / VMGs / IPs to host the TIMPs demonstration plots, aligning with the selected value chains. County team will facilitate the identification process for potential lead farmers, in consultation with the host communities and their leaders, to host the prioritized TIMPs demonstration plots.

b) Selection criteria for hosting the TIMPs demonstrations

The following will guide in the selection of the host farmer;

- The hosting farmer MUST be resident in the ward
- Someone socially acceptable by the community
- The farmer should be a progressive lead farmer and committed member of a CIG/VMG/IP
- Hosting farmer willingness to sign a legally binding MOU for the land use investments and produce.
- The hosting farmer is available to be trained and willing to facilitate TIMPs training throughout the duration project.
- Ability to collect and keep basic information for record keeping purposes (i.e. basic literacy)

The selection criteria for the host farm should be:

- The site should be centrally located in a zone
- The site should be accessible to all group members, facilitators, extension staff and researchers throughout the year.
- Farm / field characteristics of the site should be representative of the area
- Site and animal/herd security should be ensured
- The site should be democratically selected by all stakeholders
- The site should be spacious enough to hold a group of about 30 persons,

c) Produce from the Demonstration Plots

The produce from the demonstration plots will be utilized according to an MoU done between the group members and the host farmer. The group will enter into an MoU with the host farmer before the start of the demonstration. The MoU will spell out the modalities of managing the farm produce after the objectives of the demonstration are achieved.

d) Number of demonstration plots per ward: Each ward will establish 1 demonstration, based on the prioritized value chains. This site can also simultaneously host the FFBS / PFBS group learning activities.

e) Development of TIMPs demonstration proposals:

To facilitate the learning at F/PFBS at the CIG level, 5 farmer led demonstrations will be established in each ward (one demo per value chain where possible). The CAEO in consultation with RELOs and WTS will establish the "farmer led" demos that comprise one to four TIMPs under farmer management and farm resources at CIG level. The TIMPs will be a sub-set of those chosen by CIGs.

The CIGs will develop a proposal (Ref dissemination manual) with support from the Sub County technical teams (SCTTs) and Ward technical teams (WTTs). The proposal will be vetted by the CDDC through the Sub-CTAC and forwarded to CPCU. The CPCU will present the proposal to CTAC and CPSC for vetting and approval. CPCU will forward CTAC and CPSC minutes to NPCU for concurrence.

f) Eligibility criteria for the small-scale demonstration plots proposals:

- The proposed TIMPs have to address priority community needs identified in the CDP/MCAP
- The average number of CIG/VMG/IP members to be reached is 20-25 members
- Proposal must be in line with the prioritized value chain.
- The proposal must meet the assessment criteria set out in Annex 1B

g) Procedure for proposal approval and funding

i. The developed demonstration support proposals will be subjected to environmental and social impact screening by CIG / VMG assisted by CTDs / SCTTs.

ii. Prior to funding, SCTTs will ensure the following attachments are in place:
   - Application form (Refer to Guidelines and Procedures for Disseminating TIMPs) with a forwarding letter signed by CIG / VMG / IP chairperson and hosting lead farmer
   - Completed demonstration proposal that includes how they are going to mainstream environmental and social issues
   - Filled environmental screening checklist
   - CIG registration certificates and the constitution /by-laws.
   - MOU between the lead farmer and CIGs/VMGs/IPs that is legally binding for the land use investments and produce
   - A list of CIG/VMG/IP executive and sub committees in place.
   - A work plan and budget

iii. The proposals will be channeled to the CPCU through the CDDCs.

iv. The CPCU will forward the proposals to CTAC (including RELOs) for approval.

v. The CPCU will write a feedback letter to the CIG/VMG and hosting lead farmer informing them of the approved demonstration proposals for funding. The funding ceiling for a demonstration will be Ksh500,000 (70% for demonstrative materials and 30% for the facilitation of the field days and extension meetings with the CIG/VMG members). The time and financial resources available to organize and manage a demonstration are important to consider because they limit the ability of the CMG/VMG to execute activities and achieve the desired outputs.

Key considerations in determining the funding ceiling for demos are derived from the answer the following questions:

- Value chain - does the demo involve crops only, livestock only, or both? Does it also involve comparisons to existing practices / models?
- For how long is the demonstration going to run? Is it just for one season, two seasons or for many seasons and years?
- How much time is needed to set up and run the demonstration, e.g. at the beginning, and every season?
- Do you need time for dissemination and networking at various levels of implementing the demonstration? If so, at which stages?
- What are the costs of setting up and managing various components of the demonstration? Think of the types of materials, quantities per unit, unit cost, transport costs, etc.
- Will there be additional costs to consider, e.g. for trainings events, dissemination materials?
- Is the necessary budget available for the foreseen timeframe?

The key considerations in a small-scale demo, which correspond to FFBS PTDs are highlighted in section 5.3 below herein.

h) Procurement procedure of demonstration materials by CIG/VMG/IP

Procurement will be undertaken in accordance with as guided by the procurement manual, with support from the NPCU.

i) Operationalization of Demonstrations

- The NPCU and KALRO will develop the protocols for setting up TIMPs farmer led and research led demonstrations.
- KALRO and CPCU will train CTDs on the protocols for setting up community demonstrations
- The CPCU, County teams and KALRO will organize for the sensitization of the communities on the key aspects of the community demonstrations

5.2.2 Large Scale (Research-Led) Demonstrations

Large-scale demonstrations will be used to scale up production and commercialization of fully proven best TIMPs derived from the treatments done during experimentation in small scale demo plots and the FFBS / PFBS groups farm and after the analysis of their performance. This will be particularly useful for tree crops such as mangoes, avocados, bananas, cashew, since they require large spacing and livestock enterprises such as feedlots, dairy, pasture and fodder development. They are important indicators on the actual performance on farmer fields. Funding limit for large scale (Researcher-Led) demos will be KES 15,000,000/demo

a) Selection process of demonstration plots:

KALRO, in consultation with the CPCU, will establish selection criteria for determining the optimal locations for these large demonstration plots. Preferred sites will include government institutions such as ATCs, ATDCs and KALRO Centers, government farms, KSA, as well as holding grounds, among others. Additionally, fields belonging to farmers willing to offer their land will be considered. In such cases, it is essential that plot owners should be open to hosting other farmers for educational purposes.

b) Selection criteria for hosting the TIMPs demonstrations:

- The site should be centrally located in a zone and suitable for the selected value chain
- The hosting farmer/entity willingness to agree to a legally binding agreement for the land use investments and produce as guided in the ESS manual.
- The site should be accessible and secure

c) Number of demonstration plots: This will be determined by the number and types of value chains within the hosting entity locations. KALRO and CPCU will determine the actual numbers based on the available resources.

d) Development of TIMPs demonstration proposals: KALRO and the CPCU will facilitate the identification of the prioritized TIMPs for demonstration as informed by the PICD report. Value chain leads at relevant KALRO Centers will designate a scientist to oversee demonstrations addressing issues within their respective value chains. These scientists will formulate proposals based on emerging concerns across various value chains, which will then be submitted to the KALRO coordination unit. The proposals will undergo vetting and approval by KALRO's coordination unit and NPCUto secure funding. The involvement of CPCU is pivotal in this evaluation process. Subsequently, the designated scientist, working closely with RELOs and CPCU, will take charge of implementing the demonstrations. Resources for the execution of large-scale demonstration plots will be disbursed by the KALRO Coordination Unit.

e) Procurement procedure of demonstration materials:

Procurement will be undertaken in accordance to KALRO's Procurement procedures and guidelines, with support from the NPCU.

f) Operationalization of Large-Scale TIMPs Demonstrations:

The KALRO Coordination Unit will request for proposals from value chain leads of the hosting entities.

- The NPCU and KALRO will develop the protocols for setting up TIMPs large scale demonstrations.
- KALRO and CPCU will guide CTDs on the protocols for setting up large scale demonstrations
- The CPCU, County teams and KALRO will organize field days and exhibitions for learning.

5.3 Implementation arrangements: Farmer Field and Business Schools (FFBSs)

Based on peer-to-peer learning, the FFBSs approach has proven to be an effective way of assisting farmers in adopting TIMPs and in improving productivity of their respective agricultural value chains. FSRP will implement FFBS in wards where FFBS facilitators (previously trained SCTTs, CBFs, etc.) will be made available. To finance the required agricultural inputs for the FFBS learning field, training materials and facilitation, these groups will be linked to SACCOs for financing. Where FFBS facilitators are mobilized, FSRP will support one FFBS on TIMPs for prioritized value chain per ward.

The cornerstone of FFBS / PFBS methodology is Participatory Technology Development (PTD) whose main basis is to create a learning process through which farmers test, monitor and evaluate new ideas, technologies or innovations for improving productivity and profitability of farming systems. Simple experiments or trials are carried out in the small plots / herds to empower participants / enhance farmers' observational and analytical skills to investigate the cause and effect of major production and marketing problems. Common farmer practices are tested and compared with other available options to solve an identified problem.

For crop value chain PTDs, a calendar year of experiential learning is recommended consisting of two repetitive production cycles at least 3 months each for the long rains and short rain seasons. The plot size varies from County to County (production system) and the crop species. For livestock-based value chain experiments, duration of PTDs ranges from 6 – 24 months depending on the focal enterprises. The number of livestock and species determines the scale of operation.

a) Identification of available FFBS facilitators: CPCU will compile a list of trained FFBS facilitators within the county who are equipped to lead FFBSs across various wards and prioritize value chains. Utilizing this inventory, CPCU will ascertain the number of FFBSs it can support per season and identify the value chains to focus on.

b) Where there are no FFBS facilitators available in the county: In such cases, the CPCU will establish new FFBSs. The CPCU will facilitate training of FFBS facilitators for 21 days with the technical support of KALRO, Kenya Field Schools Coordination Unit (KFSCU) and available FFBS master trainers.

c) Selection of CIGs for FFBS support: The CIGs/VMGs/IPs and their lead farmers will prepare a proposal for the FFBS support i.e. learning grant (why, what the focus of the FFBS should be, where the FFBS sessions will be held, location of the learning field, timing). The approval process will further follow the same approval process as with the FFBS TIMPs Demonstration proposals. A CIG / VMG / IPs group can have both the small-scale demonstration field and an FFBS / PFBS plot running concurrently. Consequently, it can have each as a stand-alone in different times / seasons.

d) Comparison of FFBS / PFBS, demonstration plot and experimental plot:

A comparison of the three is shown in the table 5 below:

		FFBS / PFBS	Demonstration plot	Experimental plot
1	Focus	Strengthen farmers capacity to observe their agro-ecosystems, identify a problem and seek and test solutions in order to adapt their practices to their value chain	Transfer and dissemination of newly generated TIMPs Techniques / knowledge to farmers	Generate new TIMPs
2	Objective	Empower farmers to find solutions to their problems The facilitator does not provide farmers with lectures or a recipe / direct advice to follow.	Seeks to show the value of a technique / TIMP to farmers. Provision of direct advice to farmers	Production of knowledge by researchers. Carry out a scientific study in a controlled environment (experimental station) or under farmers' conditions.
3	Scope	Compare proven TIMPs (from KALRO) with local / current farmer practices	Work with proven TIMPs from KALRO only	Science based innovations in KALRO
4	Farmers know how incorporation	Endogenous innovations / ITK of farmers valued, tried and tested).	Useful for introducing new varieties to farmers, Only proven TIMPs adopted	Used to obtain specific references on a technique or variety, or to study how and why a technique may be relevant to farmers.
5	Solutions proposed	Priorities chosen by farmers, and to aim to propose Innovative systems adapted to farmers' local conditions.	Chosen by researchers	Demand driven by donor / sponsor interests
6	Design	Designed and implemented by farmers with the guidance of trained FFBS / PFBS facilitator	Designed by Technical persons	Designed by KALRO scientists

		FFBS / PFBS	Demonstration plot	Experimental plot
7	Adoption process	Collective actions = involvement of all PFBS group member	Adopting a new TIMP that was tried and tested elsewhere as show cased	Developing new TIMPs for adoption
8	Management	Trained FFS facilitators FFBS / PFBS group leaders	Lead farmer Technical persons / advisers.	Principal investigator
9	Funding model	Learning grant	Development Grants Loans	Research grant / self-sponsored / loans
10	Scale	Small scale (several plots in a field usually less than 0.1 Hectares)	0.1 – 0.5 hectares	Varied
11	Key actor	FFBS / PFBS members	Designated scientist	Research institution
12	Target	FFBS / PFBS group	CIG / VMGs / IPs	Financier / sponsor
13	Duration	FFBS implementation cycle (Group start up, Production, Post Production and Sustainability activities)	Production cycle (seed to seed)	Experimental cycle

e) Funding of the FFBS: The funded CIGs / VMG / IPs selected to host FFBS / PFBS will require additional funding to cater for the establishment and running of the farmer field schools up to graduation. The value chain for the FFBS / PFBS should be the same as the host CIG / VMG / IP. The funding amount for CIGs / VMGs / IPs that host FFBS / PFBS will be KES 500,000. Inclusive of learning grant. (70% for establishment of FFBS/PFBS 30% learning activities) for supporting the establishment, running and learning FFS core activities. This will enable the FFBS / PFBS group to test alternative solutions and risk experimenting with new technologies. The expenditure items for the FFBF / PFBS budget include:

i. Field inputs for the learning activities and experiments (livestock, feed, seeds, veterinary drugs).
ii. Stationery (flip charts, flip chart stand, pens, markers, note books, biro pens, record books, rulers, crayons, pencils).
iii. General management tools / equipment and facilities used across all activities (weigh bands (weigh bands, castration tools, rain gauge).
iv. Field comparative experiment items – detail equipment & materials for each treatment.

v. Participatory Monitoring, Evaluation and Learning activities.
vi. Field days (at least 1, but 2 is recommended).
vii. Exchange visits (seed money to compliment members own contribution).
viii. Graduation (displays, transport, certificates, guests, branding).
ix. Facilitation allowance (transport reimbursement and motivation) of the facilitators (both the main facilitator and potential external 'special topics' facilitators).

f) Procedure for funding FFBS TIMPs Demonstration proposals

An FFBS encompasses one or more CIGs / VMGs/ IPs ready to collectively aggregate produce, add value, and engage in joint marketing, thereby capitalizing on economies of scale to boost production. These CIGs/VMGs/IPs will receive support to demonstrate various TIMPs through the FFBS approach, with community investments aligned with three scenarios. In existing project wards where prioritized value chains (VCs) funded by FSRP are in place, mobilized CIGs/VMGs/IPs will have the opportunity to adopt productivity-enhancing TIMPs for selected crops or livestock enterprises. For new VCs in existing project areas (and KCSAP groups not exposed to the FFS approach), mobilized CIGs/VMGs/IPs will qualify for TIMPs demonstration input support. In new project areas with new TIMPs, mobilized CIGs/VMGs/IPs will also qualify for TIMPs demonstration input support under the FFBS approach.

a. The CIG/VMG/IP leadership, supported by the trained FFBS facilitator and SCTT will develop FFBS funding proposals. The SCTT will ensure that the following attachments are in place:
   i. Application form with a forwarding letter signed by CIG/VMG/IP
   ii. Environmental and social screening checklist
   iii. Registration certificates and the FFBS constitution
b. The proposals will be presented to the CDDC for submission to the CPCU

   The CPCU will present the proposals to CTAC (including RELOs) for vetting and selection using the eligibility criterion above. The developed demonstration support proposals are subjected to environmental and social impact screening by FFBS assisted by CTD.

c. The CTAC will share the selected proposals with CPSC for approval.

d. The CPSC will approve and direct the CPCU to write a feedback letter to the FFBS informing them of the recommended demonstration proposals for funding.

e. The CPSC will advise the CPCU to process the demonstration grant and give authority for the transfer of the funds from the CPCU to the CDDCs accounts.

f. An MoU between FFBS and CPCU will be signed for FFBS TIMPs demonstration implementation

g. KALRO and Technical Departments will provide TIMPs technical backstopping when required

The minimum value for a CIG / VMG / IP small scale demonstration with a FFBS component will be KES 500,000 for inputs and technical facilitation for both the CIG / VMGs / IPs small scale demonstration and FFBS / PFBS groups.

Figure 8. shows the extension support through FFBSs.

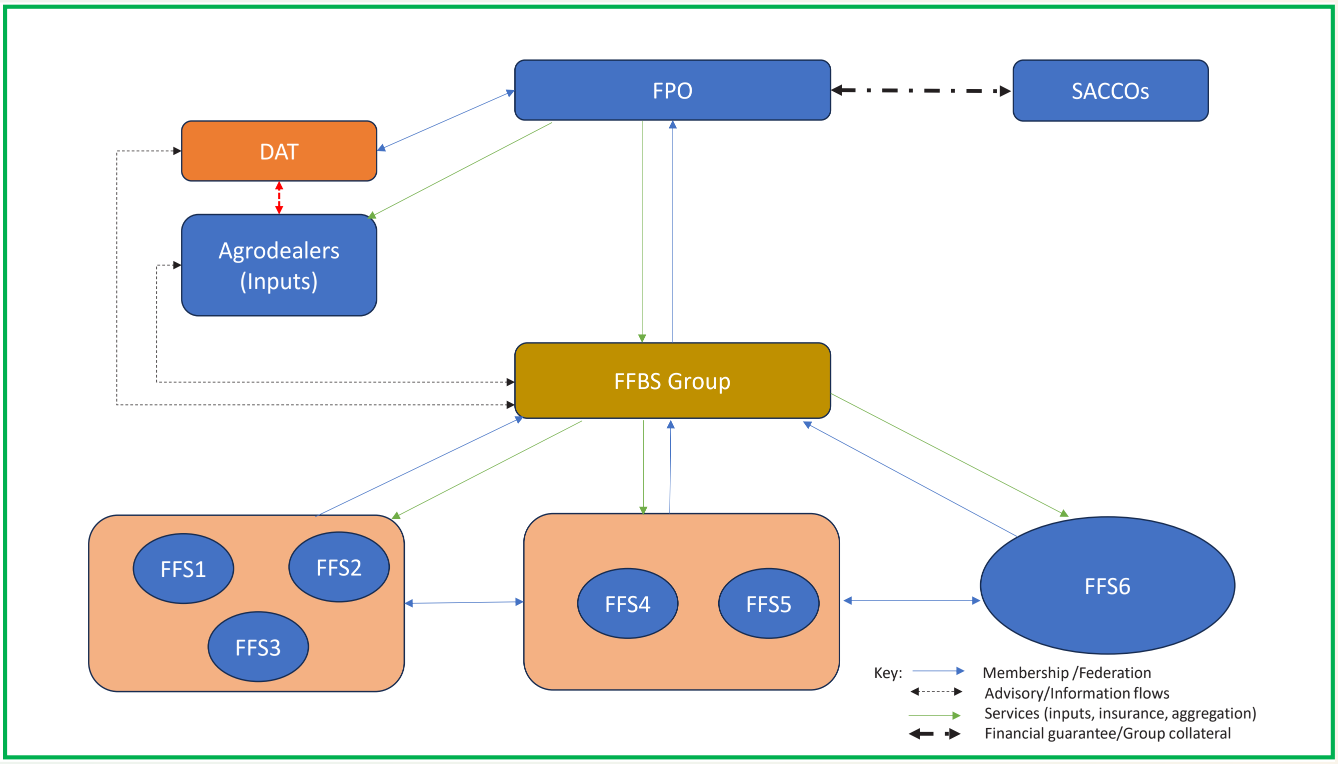

Figure 8: Extension support through FFS and FFBS

CHAPTER 6: Cross-cutting Issues in Delivery of Agricultural Extension Services

Aspects that have a direct or indirect influence on the provision of extension services are included in cross-cutting concerns. The achievement of the project objective of increasing preparedness against food insecurity and improving resilience of food systems will be hampered if cross-cutting issues in the extension service delivery are not addressed. The interventions are intended to mainstream and disseminate information on cross-cutting topics related to agricultural extension.

The following are the key cross-cutting issues affecting delivery of agricultural extension services: -

6.1 Human health and wellness

High prevalence of human diseases, such as HIV/AIDS, malaria, or other endemic illnesses, can significantly reduce availability of resources, time and attention for agricultural production. This affects both productivity and the effectiveness of extension services. In addition, farmers who are sick may struggle to implement best practices advised by extension services, leading to poorer agricultural outcomes.

The project will promote the one health approach in extension services

6.2 Social inclusivity

Social inclusivity challenges include limited inclusivity in gender, youth and persons living with disabilities; limited access for youth to agricultural production factors such as land, information and financial resources; and limited gender sensitive technologies and interventions in extension approaches and methods.

The project will provide the following interventions:

- Promote social inclusivity in agricultural extension at all levels.
- Promote access to factors of production to the youth.
- KALRO, Kenya School of Agriculture and AIRC in collaboration with relevant institutions will develop/source, package and disseminate gender sensitive TIMPs to stakeholders.

6.3 Drug and substance abuse

Drug and substance abuse limit productivity of agricultural extension work force and reduce the adoption of extension information.

The project will provide the following interventions:

- NPCU will develop programs for awareness creation and sensitization on drug and substance abuse.
- CPCU will link with relevant institutions for the rehabilitation of agricultural extension stakeholders affected by drug and substance abuse.

- Awareness creation and sensitization will be mainstreamed in trainings at all levels.

6.4 Climate change

Unpredictable impacts of climate change limits application of extension information and hinder timely delivery of physical extension services. This restricts adoption of TIMPS.

The project will provide the following interventions: -

- The NPCU will develop and package information on to stakeholders at all tiers of the extension program.
- NPCU will build capacity of service providers in provision of accurate, timely and reliable climate/weather information to inform decisions of stakeholders on relevant value chains.
- KALRO in connection with relevant institutions will disseminate climate smart adaptation TIMPs including sustainable natural resource management, water harvesting and storage, irrigation infrastructure development, efficient water-use and conservation agriculture.
- KALRO in connection with relevant institutions will disseminate climate smart mitigation TIMPs including promotion of energy-efficient technologies and reduction of greenhouse gas emissions from agricultural production systems.
- NPCU and CTTs will promote innovative ways of extension information delivery cognizant of the effects of climate change.

6.5 Governance

Efficient and effective governance of FPOs, CIGs and VMGs is vital for a successful and sustainable extension program. Principles of good governance including accountability, transparency, stakeholder participation, rule of law, zero tolerance to corruption and financial management need to be fully embraced by the organizations. Poor governance is associated with mismanagement of resources, erodes confidence of members in the organization and ultimately leads to poor service delivery.

The project will provide the following interventions: -

- NPCU will develop training packages on efficient and effective governance for dissemination to stakeholders.
- Capacity building on good governance will be mainstreamed in trainings carried out at all tiers of the extension program.
- Enhance communication and coordination as tenet of good governance.

6.6 Policy

Successive implementation of the project extension program requires an adequate policy, legal, regulatory and institutional framework.

The project will provide the following interventions: -

- The NPCU will enhance capacity of existing extension service providers including CTTs, SCTTs and WTTs

- Recruitment and training of APs and LFs will be carried out for sustainable extension service delivery
- NPCU will develop guidelines for dissemination to stakeholders including CIGs and VMGs through FFS and FFBS programs
- KALRO in collaboration with relevant partners will capacity build CTTs, SCTTs and WTTs on TIMPs for dissemination to stakeholders including CIGs and VMGs
- ICT will be utilized in agricultural extension service provision and information management at all training tiers.

NOTE:

For details on TIMPs dissemination please refer to the TIMPs Dissemination Guidelines and Procedures.

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