FEDERAL GOVERNMENT OF SOMALIA
MINISTRY OF AGRICULTURE AND IRRIGATION

NATIONAL AGRICULTURAL EXTENSION POLICY (NAEP)

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FOREWORD

Following more than three decades of prolonged civil war that disrupted food production systems, Somalia is currently on the path towards establishing enduring governmental institutions, indicating positive progress. To accelerate agricultural transformation, the Ministry of Agriculture and Irrigation (MoAI) has realized that the absence of a comprehensive agricultural extension policy will not help achieve the national strategic goals of food security and poverty reduction. In this context, the extension policy is the real engine to help facilitate the transition of the agricultural sector from its lingering aid dependency and transitioning it to robust and sustainable development. The primary goal of this policy is to address current challenges that have significantly hindered the agriculture sector's efficacy and provide solutions to those challenges.

The Ministry of Agriculture and Irrigation developed this extension policy to promote effective and efficient agriculture extension within an inclusive system that actively involves both the public and private sectors in the delivery of extension services. The Ministry developed the National Agriculture Extension Policy through a consultative process with federal and state ministries of agriculture, academia, farmers' associations, UN and NGOs, and agriculture experts. To ensure the Successful implementation of this policy, MoAI urges all relevant stakeholders to express their commitment work together to achieve the policy overall goals.

I would like to extend my sincere gratitude to the Food and Agriculture Organization (FAO) of the United Nations, in collaboration with the European Union (EU), for their unwavering technical guidance and generous financial backing throughout the complicated stages of policy development process. Furthermore, I extend my heartfelt appreciation to the World Food Programme (WFP) for their pivotal financial assistance during the conclusive review and validation of the National Agricultural Extension Policy.

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The Ministry of Agriculture and Irrigation (MoAI) of the Federal Republic of Somalia expresses its sincere gratitude to all individuals and organizations who contributed to the development of this National Agricultural Extension Policy. This policy represents a significant step towards revitalizing Somalia's agricultural sector and ensuring food security for its people. A collaborative efforts and support mechanisms from different stakeholders have been pivotal in shaping a comprehensive and inclusive policy framework that aims to drive positive change and sustainable growth in Somalia's agriculture sector.

The Ministry of Agriculture and Irrigation (MoAI) gratefully acknowledges the significant contributions of the following entities:

Federal and State Ministries of Agriculture Participants: Their active engagement in the consultative process has been instrumental in providing valuable insights and ensuring that the policy aligns effectively with regional requirements and priorities.

Academia, Farmers' Associations, and Agriculture Experts: Their expertise, collaboration, and dedication have greatly enriched the content and relevance of the policy, reflecting a comprehensive understanding of the agricultural landscape in Somalia.

Food and Agriculture Organization (FAO) of the United Nations: The FAO's exceptional technical and financial assistance, generously funded by the European Union (EU), has been invaluable throughout the policy development process. Special recognition is extended for their support through the CADRE project.

World Food Programme (WFP): The WFP's essential financial support during the final review and validation stage of the National Agricultural Extension Policy has been crucial in ensuring the policy's robustness and effectiveness in addressing the needs of Somalia's agricultural sector.

The MoAI recognizes the historical contributions of past agricultural extension initiatives, particularly the efforts made in establishing Farmers Training Centers (FTCs) and the Agricultural Farm Management and Extension Training Center (AFMETC) that laid the groundwork for agricultural extension services in Somalia.

Furthermore, the ministry acknowledges the vital role played by non-state actors, including NGOs, private sector entities, and farmer associations, in delivering essential extension services during civil war effects. Finally, the ministry urges all stakeholders to commit to the successful implementation of this policy, working together to achieve its overarching goals of transforming and modernizing Somalia's agricultural sector, ensuring food security, reducing poverty, and promoting sustainable economic growth.

ACRONYMS AND ABBREVIATIONS

AEAS	Agricultural Extension and Advisory Services
AEI	Agricultural Education Institutions
AESA	Agricultural Extension Service Approach
AESP	Agricultural Extension Service Providers
AFMETC	Agricultural Farm Management and Extension Training Centre
CAADP	Comprehensive African Agricultural Development Program
CARS	Central Agricultural Research Station
CBOs	Community-Based Organizations
CIAD	Center for Innovation and Agro-premiership Development
CSA	Climate -Smart Agriculture
CSOs	Civil Society Organizations
ESP	Extension Service Providers
FAO	Food and Agriculture Organization
FFS	Farmer Field School
FMAS	Farm Management Advisory Service
FOs	Farmers' Organizations
FTC	Farmers Training Centers
ICT	Information Communication Technologies
IDPs	International Development Partners
INGOs	International Non-Governmental Organizations
IWRM	Integrated Water Resources Management
LMS	Learning management systems
MoAI	Ministry of Agriculture and Irrigation
NAEP	National Agricultural Extension Policy
NAES	National Agricultural Extension Service
NARS	National Agricultural Research Station
NDP	National Development Plan
NGOs	Non-Profit Organizations
NTP	National Transformation Plan
PCE	Participatory Comparative Experiment

PPP	Public-Private Partnerships
SARIS	Somali Agricultural Regulatory and Inspection Service
SDG	Sustainable Development Goals
SLM	Sustainable Land Management
SMS	Short Message Service
SENRC	Sustainable Environment and Natural Resources Management
UN	United Nation
USAID	United States Agency for International Development
USSD	Unstructured Supplementary Service Data
WFP	World Food Program
F2F	Farmer-to-Farmer Extension
T&V	Training and Visit system
GAP	Good Agricultural practice

GLOSSARY

Agriculture	The art and science of crop production.
Agricultural Extension	The dissemination of agricultural information, knowledge, technologies, and practices to farmers and rural communities to improve productivity and livelihoods.
Agricultural Extension Policy	A framework developed to guide the planning, implementation, and evaluation of extension services for sustainable agricultural development.
Agricultural Extension System	A network of institutions and actors delivering agricultural advisory services to farmers.
Agricultural Extension Approaches	Strategies like Farmer Field Schools (FFS), Farmer-to-Farmer (F2F), and the Training & Visit (T&V) system used to deliver extension services.
Agricultural Extension Methods	Techniques used in service delivery such as demonstrations, workshops, individual visits, and use of mass media.
Climate-Smart Agriculture (CSA)	An approach that enhances productivity while addressing climate change adaptation and mitigation.
Decentralization	The process of transferring authority from central to local governments to improve service delivery and accountability.
Extension Service Providers	Government, private sector, NGOs, or individuals delivering agricultural knowledge and technologies to farmers.
Monitoring and Evaluation (M&E)	The systematic process of tracking and assessing the effectiveness and impact of extension programs.
Pluralistic Extension System	A system involving multiple actors—public, private, and civil society—in delivering agricultural extension services.
Public-Private-Producer Partnership (PPPP)	A collaborative model among government, private sector, and farmers to improve agricultural outcomes.
Stakeholders	Individuals or groups who are directly or indirectly affected by or have an interest in agricultural activities.
Village-Based Advisors (VBAs)	Trained individuals in rural communities provide localized extension services to nearby farmers.

CHAPTER ONE: INTRODUCTION

1.1 Background

This policy outlines the strategic direction for the agriculture sector, as well as the overall and specific goals that the government of Somalia aims to improve extension service delivery for increased production and productivity to ensure food security, poverty reduction, and economic growth. The policy's comprehensive framework embraces decentralized systems, pluralistic approaches, and public-private partnerships to cater to local needs while fostering accountability, community ownership, and collaboration among diverse stakeholders, underscoring the significance of evidence-based decision-making, digital integration, and private-sector involvement in driving sustainable agricultural development and enhancing the efficacy of extension services in the policy implementation.

1.1.1 Importance of the Agriculture Sector in Somalia

According to the World Bank Survey in Somalia (2023), Somalia's agricultural sector is the cornerstone of the economy, accounting for over 70 percent of GDP, 80 percent of employment, and approximately 50 percent of exports.[1] The nation is endowed with over 8.9 million hectares of arable land and two major rivers that span over 2,500 kilometers. Despite the challenges posed by climate change, Somalia's agricultural sector holds immense potential. The country's fertile soils, particularly in the riverine regions, enable year-round production of cereals, pulses, vegetables, fruits, and other crops.

By late 1986 Somalia was close to self-sufficiency in sorghum and maize production.[2] However, the current agricultural production systems are not realizing their full potential in terms of productivity. The poor crop performance is mainly attributed to poor rainfall, disease, and pest infestations, lack of proper extension services, shortage of quality seeds and other inputs. The agricultural production has significant implications for the food security and livelihoods of Somali communities. Since 1991, the Somali government currently lacks allocated financial resources to support the agricultural sector, causing agricultural production to fall below its potential, as current output levels indicate.

[1] Somalia Economic Update (World Bank ,2023)

2 African Development Bank-Somalia the agricultural extension and farm management training project performance evaluation report (paper)-1988

The Somali government has faced significant financial constraints, limiting its ability to adequately support and invest in the agricultural sector. This has led to agricultural production falling below its potential, as current output levels indicated. The National Agricultural Extension Policy (NAEP) is derived from the MoAI strategic plan 2025- 2029 and was developed through a wide consultative process. The vision of the National Agricultural Extension Policy (NAEP) is to ensure ideal conditions for the dissemination and exchange of information between producers, farmer organizations, extension agents, and other different partners to transform and modernize the Somali agricultural sector so that this sector can contribute effectively to achieve the crop production development goals. This Policy will improve agricultural production, enhancing the well-being of the farmers, promoting environmental sustainability, and addressing the challenges posed by climate change. This National Policy is firmly dedicated to facilitating the provision of a dedicated national agricultural extension and advisory services. Agricultural advisory services, in essence, constitute a public service that is optimally administered either by the Government or by non- governmental entities that receive governmental support.

1.1.2 Farming system in Somalia

Traditional farming methods in Somalia have been developed over many centuries and are based on extensive, shifting cultivation and pastoralism.[3] The farming system in Somalia can be divided into three categories: subsistence rain-fed farming, often part of agro-pastoral production systems, with a typical farm size of 2-4 ha; small-scale irrigation and oasis farming; and commercial farming, which is mainly large-scale and irrigated. Somalia possesses a diverse agricultural landscape, cultivating a range of food crops, cash crops, and other cultivated plants. Key food crops include sorghum, maize, rice, beans, and cowpeas. Cash crops include sugarcane, bananas, sesame, and historically, cotton. Other crops include vegetables, fruits. It is notable that Somali farmers employ traditional farming methods, including the use of hand tools and oxen for plowing. However, the adoption of modern machinery is hindered by its reliance on fuel, coupled with the high fuel prices. Given the high percentage of rural inhabitants (85%) and dependence on crops for human and livestock food, it is necessary to improve the productivity and sustainability of these farming systems. This includes introducing higher-yielding crop varieties and drought-resistant species, better land management practices, improved post-harvest technology, and rebuilding agriculture infrastructure destroyed by the widespread violence. [4]

[3] Characterization of Camel Production Under Pastoral Management in Benadir Region, Somalia-2023
[4] Factors associated with household food security in Somalia: ordered probit approach, Somali Journal of Science, Technology and Society, 1(1).

The introduction of modern farming equipment, such as tractors, seeders, mechanized pumps, and the adoption of efficient irrigation techniques, would significantly contribute to the expansion of agricultural land cultivation.

1.1.3 Historical background of Extension Services in Somalia (1950-2024)

The notable history of agricultural extension services in Somalia goes back during the time of the trusteeship in the 1950s. As Chapman (1987) notes, the first agricultural advisory service to farmers in Somalia was initiated at Bonkay Research Station in 1954 under a joint Italian/Somali Government scheme[5]. After Somalia gained its independence in 1960, the agricultural extension programs continued, and three extension centers were established in three areas: Jammame, Jannale, and Hargeisa[6]. As a result, these extension programs did not meet the needs of smallholder sectors. Moreover, throughout the 1970s, the focus of Somalia's agricultural development was on the irrigation infrastructure as four-fifths of planned investments in agriculture were devoted to this component.[7] In the 1980s, Somalia initiated extension training projects to strengthen the agricultural extension service.[8] The first phase, known as the Agricultural Extension and Farm Management Training Project (AFMET), was launched in August 1980 with a budget of $35 million for an initial five-year period. This phase aimed to enhance the extension service through a program of pre-service and in-service training, as well as the implementation of a systematic farmer visit system. As reported by Chapman, the central goal of the project, outlined in the Staff Appraisal Report (SAR), was to bolster the extension service through structured training and visits. The Training and Visit System was proposed as the method of extension, incorporating standard principles of training and visits. This initial phase laid the groundwork for the development and improvement of agricultural extension services in Somalia. Following the success and lessons learned from the first phase, the second phase of Somalia's agricultural extension project was approved in 1987 with a budget of $26.7 million. This subsequent phase aimed to build upon the progress made in the first phase and address any identified weaknesses to further enhance agricultural extension services and promote sustainable farming practices in the country.

[5] Nick Chapman, 1987, "The Evolution of Training and Visit Extension in Somalia", *Agricultural Administration, 26*(3).
[6] Ibid.
[7] Ibid, World Bank, 1981.
[8] African Development Bank- the agricultural extension and farm management training project performance evaluation report (pper)- 26 May 1988.

In 1983, the central government-initiated market liberation and took steps towards opening the market. This has resulted in lifting price controls on agricultural goods. Farmers were enticed by the potential for profits and thus agricultural production increased substantially. It is worth noting that one key achievement of the government before the civil war in Somalia was the establishment of several national agricultural extension centers aimed at promoting and supporting agricultural development. These centers provided valuable resources, training, and guidance to both the staff and farmers in various regions of the country as follows:

1. Farmers Training Centers (FTCs) at Bonkay, Jannale, Jamame, Aburein, and Erigabo which were designed to train the extension staff to transfer modern agriculture technology know-how and skills to farmers.
2. Farm Management and Extension Training Center (FMETC) at Afgoi which provided practical pre-service training to farm managers, assistant managers, and field managers, and for regional and district-level extension staff responsible for outreach.
3. Farm Management Advisory Service (FMAS) at lower Jubba (Yoontooy) near Kismayo and Jamame, which aimed to advance the Farm Management Advisory Service by providing technical and managerial back-up to farm managers and advise the government on large scale farming and related issues.

Recently, the agricultural extension service landscape has undergone notable changes with a focus on the decentralization of administration and major responsibilities have been transferred from the Federal level to the Federal Member States (FMS). This shift aims to pool resources, expertise, and knowledge to provide farmers with comprehensive support and tailored solutions.

In 2021, recognizing the critical need to revitalize Somalia's agricultural sector, the Ministry of Agriculture and Irrigation (MoAI) initiated a strategic initiative aimed at boosting agricultural extension services. This transformative effort was made possible through the invaluable support of the Food and Agriculture Organization (FAO) under the European Union funded "Resilience, Inclusive, and Competitive Agriculture Value Chain Development in Southern and Central Regions of Somalia (OUTREACH II)" project. Through this collaboration, the MoAI successfully established three pivotal extension advisory centers in key regional states: Hirshabelle, Jubaland and South-West States. These centers were strategically positioned as essential hubs for the dissemination of vital agricultural knowledge, the delivery of comprehensive training programs, and the provision of critical services to farmers nationwide. These newly established centers have quickly emerged as crucial focal points within the agricultural landscape, playing a pivotal role in empowering and educating both extension workers and farmers.

By fostering a culture of continuous learning and information sharing, the MoAI aims to cultivate a more knowledgeable and resilient agricultural community, poised for sustainable growth and prosperity. The creation of these centers not only signifies a significant enhancement in agricultural extension services but also lays a solid foundation for a more inclusive, sustainable, and forward-looking agricultural sector in Somalia. With a strong focus on building resilience and fostering inclusivity, these centers are instrumental in driving positive change and ushering in a brighter future for all stakeholders involved in agriculture.

In 2025, the Ministry of Agriculture and Irrigation (MoAI) is planning to rehabilitate the existing advisory centers, and establish 18 new extension facility, according to National Transformation Plan (NTP-10) 5 years' plan, that makes the total 21 advisory stations. In alignment with this visionary policy, the Federal Member States (FMS) have been entrusted with the vital task of designing and implementing tailored extension programs that cater specifically to the unique needs and conditions of their respective regions. This decentralized approach ensures that extension services are customized and responsive to the diverse agricultural landscapes and challenges present across Somalia. Looking ahead, the planned establishment of new extension centers in all six states namely Puntland, Jubaland, Somaliland, Southwest, Galmudug, Hirshabelle, signifies a concerted effort to further expand the reach and impact of agricultural extension services throughout the country. This strategic expansion aims to bring essential knowledge, skills, and resources closer to farmers in every corner of Somalia, fostering economic growth, enhancing livelihoods, and driving sustainable agricultural development across the nation.

The ministry is still in a recovery stage and therefore continues to face persistent challenges such as a lack of resources and shortage of technical personnel. The following are the main challenges and constraints in the extension sector:

1. Security concerns are a major obstacle that hinders the delivery of extension services across the country.
2. Lack of harmonization and coordination among agricultural extension service providers is a significant challenge that needs to be addressed.
3. The government's inability to allocate sufficient financial resources for the delivery of agricultural extension services.
4. Limited institutional capacity at both national and state level, this includes the weakness of the entire extension delivery system in the country.
5. Lack of agricultural extension curricula in the country.
6. Few and Weak infrastructural development/investments in agricultural research centers and limited research experts
7. Poor dissemination and adaptation of agricultural technologies and best practices.

8. Poor access to agricultural information such as market, weather updates, pests and diseases surveillance, and other related information and advisory services.
9. Dependency on humanitarian aid
10. Poor access to ICT technologies, especially in rural areas to enhance information sharing.

1.1.4 Extension services providers

The collapse of Somalia's central government in 1991 led to the near-total disintegration of public agricultural extension services. In the years since, the delivery of these critical services has largely depended on non-state actors, including NGOs, private sector entities, farmer associations, and academia. While this pluralistic agricultural extension system has provided an essential lifeline for Somali farmers, it has also exposed limitations in addressing the sector's evolving and diverse needs.

The Federal Ministry of Agriculture and Irrigation (MoAI) acknowledges and deeply values the indispensable contributions of these stakeholders. Their unwavering commitment to delivering agricultural extension and advisory services has not only sustained Somali farmers but also introduced innovative approaches to farming practices. The Ministry extends its heartfelt appreciation to these organizations for their relentless efforts in empowering rural communities.

Despite these commendable contributions, the Ministry continues to grapple with financial constraints, rendering extension services heavily reliant on donor support. However, recent strides are being made to revitalize public extension services in Somalia. Key initiatives includel the establishment of extension facilities in all Federal Member States, the development of comprehensive training manuals and extension guidelines, and efforts to rebuild a robust extension system. Notably, both federal and state agricultural ministries have increasingly assumed active roles in extension service delivery. While the gap created by the collapse of the central government remains challenging to fully bridge, these initiatives mark significant progress.

The private sector has also emerged as a key player in agricultural transformation. Beyond providing extension services and capacity-building for farmers, private enterprises have invested heavily in the agricultural value chain, securing local and international markets for Somali agricultural products. Their proactive role underscores the potential of public-private partnerships in revitalizing Somalia's agricultural sector.

As Somalia moves forward, the Ministry remains committed to fostering collaboration among all stakeholders to ensure a sustainable and inclusive agricultural extension system that meets the needs of Somali farmers and strengthens the nation's food security and economic resilience.

1.1.5 Administrative Framework

The Federal Republic of Somalia operates within a comprehensive administrative framework that fosters collaboration between the federal government and the six federal member states - Galmudug, Hirshabelle, Jubaland, Southwest, Puntland, and Somaliland, in addition to the municipality of Benadir. This structured approach aims to ensure efficient coordination, equitable resource distribution, and the effective implementation of agricultural extension services nationwide. At the core of this framework, MoAI at the federal level takes a pivotal role in defining comprehensive agricultural extension policies, strategic directions, and national priorities. It not only coordinates the harmonization of extension activities but also spearheads resource allocation and capacity-building initiatives on a national scale.

Concurrently, the MoAI of six federal member states engage in a collaborative effort with the MoAI federal government to customize national agricultural extension policies to suit local contexts, needs, and priorities. Their responsibilities encompass the execution of extension programs, resource mobilization, and the orchestration of activities at the regional level. In terms of operational structure, Somalia is geographically segmented into 18 regions and 92 districts, serving as administrative units for the provision of agricultural extension services. Federal and FMS authorities operate in close partnership with extension agents, farmers' associations, and grassroots organizations to facilitate the dissemination of agricultural knowledge and innovative technologies

CHAPTER TWO: NATIONAL AGRICULTURAL EXTENSION POLICY IN SOMALIA

2.1 Agricultural Extension Policy Focus

The National Agricultural Extension Policy (NAEP) of Somalia is designed to align with and contribute to the strategic goals outlined in the Ministry of Agriculture and Irrigation's (MoAI) National Strategy for 2025–2029. It also supports broader regional and global frameworks, including the Comprehensive African Agricultural Development Program (CAADP), the United nations's sustainable development goals (SDGs) and Somali national transformation Plan (NTP-10). The MoAI National Transformation Strategy for 2025–2029 serves as the guiding framework for the development and implementation of the NAEP, ensuring that policy priorities are in harmony with national agricultural objectives. The MoAI Strategy 2025–2029 provides the foundation for strengthening Somalia's agricultural sector through a collaborative and stakeholder driven approach.

2.1.1 Vision

The vision of the National Agricultural Extension Policy (NAEP) is to build a resilient, inclusive, and effective extension service system that empowers Somali farmers, enhances food self-sufficiency to reduce import reliance, boosts incomes, support market access and improves the overall standard of living across farming communities in Somalia.

2.1.2 Mission

The mission of Somalia's National Agricultural Extension Policy (NAEP) is to establish a dynamic and efficient pluralistic extension system that strengthens farming communities, rebuilds national agricultural extension stations and advisory services, and promotes sustainable agricultural practices for long-term resilience and prosperity.

2.1.3 Goal, Objectives, and Policy Outcome

2.1.3.1 Goals

Enhance agricultural productivity and diversification by ensuring that all Somali farmers have access to proficient and impactful services, agricultural knowledge, information & technologies and encouraging external investors by providing financial resources, expertise, and technology to support the sustainable agricultural practices, the adoption of innovative technologies, and the improvement of agricultural value chains, ultimately helping Somali farmer's improve their yields, increase their income, and build resilience against various challenges such as climate change and market fluctuations.

2.1.3.2 Objectives:

The objectives of NAEP are to establish well-harmonized pluralistic and effective agricultural extension services which are an instrumental tool in achieving national food security goals.

The following strategic objectives help realize the overarching vision outlined by this policy:

1. Establish a well-structured institutional framework for pluralistic agricultural extension services to improve effectiveness, cooperation, and coordination at all levels, and strengthen linkages among stakeholders.
2. Re-establish agricultural extension advisory centers as well as the creation of new centers and synergies between agricultural research, extension, and innovation systems.
3. Strengthen agricultural education and knowledge by developing extension and advisory materials and enhancing the transfer of modern technologies and farming practices—such as climate-smart agriculture —through farmer field schools, training sessions, farm visits, demonstration plots, and farmer's days.
4. Enhance multi-stakeholder cooperation between government levels, the private sector, non-governmental organization, civil society organizations, and development partners.
5. Strengthening innovation processes and building strong linkages between government, research, farmers, agricultural academic institutions, and the private sector to increase farmers' knowledge and skills and agricultural productivity.
6. To enhance access to information and technology among farmers in Somalia through the effective use of Information and Communication Technology (ICT) tools and digital platforms.
7. Improve access to inputs, financial services and credit to rural areas

2.1.3.2 Policy Outcomes:

As the above-stated goals and objectives, the NAEP should realize the following outcomes within the next five years

1. Developed sustainable agricultural extension system with clear roles, improved information flow, increased farmer access, enhanced coordination, and strengthened linkages between research and extension for practical on-farm application.
2. Rehabilitated existing extension advisory centres and establishing 18 new centres, Enhanced knowledge dissemination, increased technology adoption, and accelerated agricultural development within the community
3. Agricultural education and knowledge have been enhanced, with farmers actively engaged through innovative platforms such as field schools, training sessions, farm visits, demonstration plots, and farmer's days.
4. Enhanced multi-stakeholder cooperation, improved coordination, reduced duplication of efforts, increased efficiency, innovative solutions, maximized impact, improved service delivery to farmers, inclusive decision-making, increased ownership, and enhanced resilience of the agricultural sector.
5. Increased dynamic and innovative agricultural sector, farmer knowledge and skills, enhanced agricultural productivity, and improved livelihoods for farmers and rural communities.
6. Increased adoption of digital agricultural technologies among farmers, leading to improved productivity, efficiency, and decision making in farming practices.
7. Enhanced access to inputs, financial services, and credit in rural areas, fostering economic growth and development in agricultural communities

2.2 Pilot Program

By carefully selecting pilot states and rigorously evaluating the outcomes of pilot programs, MoAI has the ability to ensure that its Agricultural Extension Policy (NAEP) is effectively designed, implemented, and adapted to meet the specific needs and challenges of the country. This involves identifying pilot states for key components of the NAEP and utilizing the outcomes of these pilot programs for refinement and validation of the policy.

Kismayo District: Focus on piloting digital agricultural technologies (outcome 7), revival of extension advisory centers (outcome 4) and strengthening innovation processes (outcome 3). Kismayo district in Jubbaland state is relatively common with and operating existing advisory centers and stable security environment and potential for commercial agriculture make it suitable for testing innovative approaches like mobile-based extension services, precision agriculture, and farmer-to-farmer knowledge sharing platforms.

Baidoa District: Prioritize piloting and access to inputs, financial services, and credit (outcome 5) and revival of extension advisory centers (outcome 4). Baidoa, the temporary capital of Southwest state has diverse agricultural production systems and existing networks of NGOs and cooperatives can facilitate collaboration between government, private sector, and civil society in establishing and operating effective extension centers.

Jowhar District: Concentrate on piloting improved agricultural education (outcome 1), revival of extension advisory centers (outcome 4), improved multi-stakeholder cooperation (outcome 6). Jowhar, the capital city of Hirshabelle state it has significant agricultural potential can benefit from focused efforts on developing and disseminating high-quality extension materials, facilitating access to improved seeds and fertilizers, and promoting inclusive financial services for farmers and establishing and operating effective extension centers.

2.3 Policy justification:

Extension services in Somalia began in the 1950s;[9] however, the extension has been operating without an articulated policy to guide it. One significant challenge recognized by the government is the lack of coordination and regulation in the provision of extension services nationwide, resulting in inconsistent quality control and assurance, as well as conflicting information dissemination. However, without a well-established policy, the extension services may have struggled to align the efforts with national development priorities, coordinate activities, allocate resources efficiently, and adapt to changing agricultural dynamics. The importance of establishing a National Agricultural Extension Policy to harmonize all components necessary for the delivery of efficient and sustainable extension services has been acknowledged. This policy presents a major opportunity and an urgent task to use agriculture as the engine for the pro-poor economic growth, and poverty reduction that is much needed in the present situation prevailing in Somalia.

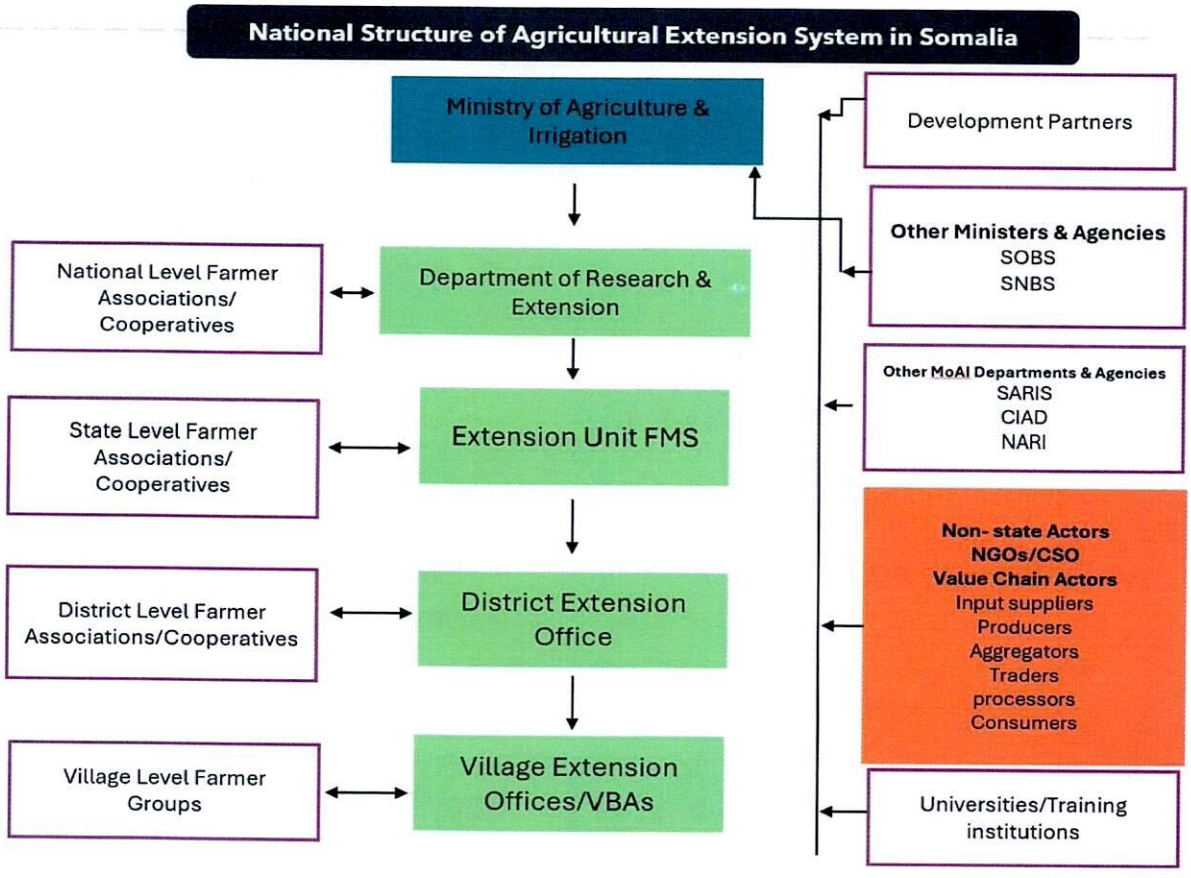
This National Agricultural Extension Policy was formulated to address those gaps and challenges and provide the necessary blueprint for setting up a demand-driven, locally managed, and sustainable agricultural extension system embedded within the agricultural knowledge and innovation system. This policy was developed to provide a framework to shift from the current traditional approach to a more coordinated program approach that is built around a shared national vision, sector strategies, and functional program frameworks.

[9] Master plan for juba valley development-April,1990(P-8)

2.4 Agricultural Extension System in Somalia (AES)

Public agricultural extension services were once centralized, but due to government structural reforms in recent years, the extension system has become decentralized. The current extension system involves various stakeholders such as government agencies, , research institutions, farmer associations, the United Nations (UN), Non-governmental organizations (NGOs), private sector, academia and other stakeholders working together to provide technical assistance, training, information, and resources to farmers to help them adopt modern and sustainable agricultural practices. During the policy consultation meetings held in federal member states, different extension approaches and methods have been discussed. This was to identify the realistic approach that fulfills the needs of the Somali farmers. The best agriculture extension approach appears to be those involving farmers and farmer groups and where the role of government is more advisory, facilitating opportunities at the local scale and creating effective coordination among various actors. The NAEP endeavors to develop pluralistic and decentralized systems in extension which emphasizes cross-cutting issues that are of importance to the people of the government of Somalia.

Figure 1. below shows the detailed structure of the agricultural extension system in Somalia



2.4.1 Decentralized Agricultural Extension System

Historically, agricultural extension in Somalia operated under a centralized, top-down approach, which limited farmer participation in identifying and addressing their own challenges. Recognizing these shortcomings, the Government of Somalia has undertaken structural reforms aimed at increasing accountability and raising awareness of diverse channels for delivering extension services. A decentralized agricultural extension approach empowers Federal Member States to play a proactive role in decision-making, prioritizing local needs, and identifying tailored solutions. This participatory, bottom-up system ensures that extension activities and decisions are made coherently and inclusively, bringing the management of extension services closer to local communities. By fostering a sense of ownership, it enhances community engagement and the effectiveness of extension programs.

The decentralized model also emphasizes collective action by engaging multiple service providers and clients, encouraging partnerships, and fostering collaboration among stakeholders. Open communication channels and inclusivity are core principles, ensuring that the extension system addresses the diverse needs of farmers while promoting equitable access to resources and services. The National Agricultural Extension Policy (NAEP) fully supports this decentralized approach, advocating for Federal Member States to establish facilitative mechanisms that empower extension systems and ensure the successful implementation of extension programs. By leveraging the opportunities provided by decentralization, the NAEP aims to build efficient and effective extension services that are responsive to local needs. This approach enhances accountability and fosters a higher level of commitment among all stakeholders. Decentralized agricultural extension ensures that local priorities are addressed through appropriate, adequate, and sustainable measures, ultimately strengthening Somalia's agricultural sector and improving the livelihoods of its farmers.

2.4.2 The Pluralistic Agricultural Extension Services

The agricultural extension system in Somalia is currently characterized by a diverse range of service providers, each operating with distinct funding sources and approaches to meet the needs and demands of farmers. This National Agricultural Extension Policy (NAEP) seeks to harmonize and optimize the contributions of various actors to enhance the welfare of Somalia's farming communities. At the heart of this pluralistic extension system, the government plays leading, coordinating, monitoring, and evaluating and accountability roles.

Non-governmental organizations (NGOs) play a pivotal role in supporting smallholder farmers within this system. Other key players include agro-businesses, farmer associations, and higher education institutions, all of which have stepped in to fill the gap left by the collapse of the central government over three decades ago.

The Ministry of Agriculture and Irrigation (MoAI), at both federal and state levels, acknowledges that agricultural extension does not need to be exclusively a government program. Instead, it recognizes extension as a shared responsibility among the public sector, private sector, and other agricultural institutions. The government actively encourages the private sector's critical role in revitalizing the agricultural sector and values their efforts in driving innovation, investment, and efficiency.

This policy was developed to enhance the effectiveness of the pluralistic extension system, ensuring it becomes more relevant, impactful, and responsive to the needs of Somali farmers.

By pooling resources—both financial and human—from multiple actors, this approach ensures far-reaching and effective extension services. The NAEP also acknowledges the limitations of public sector funding in meeting the resource demands of agricultural extension. A pluralistic approach, therefore, is ideal, as it diversifies funding sources and expertise. By fostering collaboration among public, private, and non-governmental actors, the policy ensures the delivery of high-quality extension services, encompassing scientific research, training, and outreach programs across the country.

Through this pluralistic framework, the NAEP aims to build a resilient, inclusive, and sustainable agricultural extension system that contributes to the growth and welfare of Somalia's farming communities.

2.5 Agriculture Extension Approaches and Methods

Both are essential components of agricultural extension services, which aim to improve agricultural practices, productivity, and livelihoods. However, they differ in terms of their scope, purpose, and how they are applied to engage farmers and rural communities.

2.5.1 Agricultural Extension Approaches

In Somalia's national agricultural extension policy, the Agricultural Extension Approach prioritizes a structured and participatory framework to effectively deliver services. The approaches should be built on a decentralized model, acknowledging the federal structure and ensuring collaborative efforts between federal and Federal Member State (FMS) levels. At the federal level, the Ministry of Agriculture focuses on policy development, national standards, and overall coordination added monitoring, evaluation, learning and accountability. State-level ministries will handle implementation adapting programs to regional needs and coordinating state-level stakeholders.

A pluralistic approach is vital, actively engaging diverse stakeholders. Farmers and farmer organizations are central to the process, providing feedback and driving demand-driven services. Extension agents, acting as intermediaries, will deliver technical advice, conduct demonstrations, and facilitate access to resources. Village Based Advisors (VBAs), embedded within communities, will enhance reach, build trust, and provide localized support. Research institutions will supply scientific knowledge, while NGOs and international organizations will contribute implementation capacity, particularly in vulnerable areas. The private sector, including input suppliers and agro-processors, will be integrated to strengthen market linkages. Universities and vocational training centers will play a role in training extension personnel.

Delivery of services should utilize a combination of approaches and methods, including on- farm demonstrations, farmer field schools, and information dissemination through radio, mobile technology, and other ICTs etc. as per in the table below. A tiered system will ensure information flow, with feedback mechanisms from farmers to local, state, and federal levels and the dissemination of updated information and resources back down. Capacity building for extension agents and VBAs will be continuous, ensuring access to up-to-date knowledge and skills. Finally, the approach must integrate climate-smart agricultural practices and value chain development to enhance resilience and improve livelihoods.

The approach dictates the structure, goals, and priorities of the extension services. The following are the key characteristics of an extension approach:

1. **It is a strategy**: It is the overarching plan or method through which extension services are implemented.
2. **It involves farmer**: Extension approaches can vary in the level of farmer participation. Some approaches are more top-down (government or experts providing information), while others are bottom-up (farmers participate in decision-making).
3. **It engages key stakeholders**: Different approaches may involve different stakeholders such as government bodies, private sector, NGOs, and the farmers themselves.
4. **It should be relevant and flexibility**: The approach helps to adapt or maintain the extension services to meet local, regional, or national needs, considering the audience, environment, socio-economic, and cultural factors.

2.5.2 Agricultural Extension Methods

In Somalia's national agricultural extension policy, practical farmer engagement hinges on a diverse array of extension methods. On-farm demonstrations serve as a foundation, allowing farmers to witness firsthand the benefits of improved practices within their local context. Complementing this, Farmer Field Schools (FFS) foster participatory learning, empowering farmers to analyze problems and develop tailored solutions. Village Based Advisors (VBAs) and community meetings enhance reach and trust, facilitating information exchange and peer- to-peer learning. Recognizing the power of technology, Information and Communication Technologies (ICTs) like mobile phone services and radio programs disseminate timely information on weather, markets, and best practices, with visual aids compensating for literacy challenges.

Practical support extends to input demonstrations and distribution, ensuring access to quality seeds and fertilizers. Field days and agricultural shows provide platforms for learning and networking and addressing the crucial needs of farmer communities through training and access to agricultural services. Finally, extension services play a crucial role in linking farmers to markets, providing market information and facilitating connections with agro-processors and traders. These methods, adapted to local contexts and needs, are essential for driving agricultural improvement in Somalia. Methods are the practical, hands-on strategies used to implement the chosen extension approach. These methods directly engage farmers and provide them with the knowledge, skills, and support they need to improve their agricultural practices to increase production, improve productivity, and reduce post-harvest loss, access to technologies, and access to finance and access to market. It focuses on what happens in practice to engage farmers and help them improve their agricultural practices as per the table below. The following are the key characteristics of extension methods:

It should be a practical application: Methods are the means or channels through which extension agents deliver information to farmers.

It should have a learning and interaction among actors involved in the extension service delivery: They often involve direct interaction between extension agents and farmers through activities like workshops, field visits, or group meetings.

It should have tools for engagement: Methods could include group-based activities, media, demonstrations, or digital technologies to engage farmers.

It has targeted outcomes: Methods aim to help farmers adopt better farming practices, improve their skills, and address challenges specific to their needs and conditions

Extension Approaches			
Approach	**Description**	**Strengths**	**Weaknesses**
Top-Down Approach	A traditional approach where information is provided by experts or government to farmers, often without significant input from farmers.	Efficient for quick information dissemination, especially during emergencies or policy implementation.	Can lack local relevance and farmer participation, leading to lower adoption rates.
Bottom-Up Approach	Involves farmers and local communities in the decision-making process, ensuring services are designed based on their needs and preferences.	Promotes relevance and local engagement, increasing the likelihood of adoption.	More time-consuming and resource-intensive compared to top-down methods.
Participatory Approach	Focuses on collaboration between extension workers and farmers, with an emphasis on shared decision-making and co-learning.	Empowers farmers, builds local capacity, and encourages sustainable practices.	Requires more resources and time, and may be slower to implement.
Public-Private-Producer Partnership Approach (4P)	Involves collaboration between government agencies, private companies, and farmers to deliver agricultural extension services, ensuring that all stakeholders contribute to agricultural development.	Enhances access to resources, technology, and markets, with services tailored to farmers' needs.	Coordination challenges, varying priorities among stakeholders, and potential imbalances in power dynamics.
Integrated Extension Approach	Combines agricultural extension with other sectors like health, nutrition, environmental sustainability, and rural development.	Addresses broader challenges faced by farming communities, improving overall livelihoods.	Can dilute the focus on agriculture-specific issues, requiring extensive coordination among various sectors.

Farmer-Led Extension Approach	Empowers farmers to lead extension activities, using their experience to guide the development of extension programs.	Ensures relevance and practicality, as it draws directly from the lived experiences of farmers.	Requires strong farmer organization and leadership, which may be lacking in some areas.
ICT-Enabled Extension Approach	Integrates technology and digital platforms (mobile apps, SMS, web platforms) to enhance the reach and effectiveness of extension services.	Increases outreach and efficiency, especially for remote or marginalized communities.	Relies on access to technology and digital literacy, which can be limited in rural areas.
Contract Farming Approach	Establishes agreements between farmers and buyers (including processing companies) to ensure a steady market for farmers' produce.	Provides guaranteed markets and price stability for farmers, reducing market risks.	Can lead to dependency on buyers and exploitative relationships if not properly regulated.
Value Chain Approach	Focuses on improving the entire agricultural value chain, from input supply to final product marketing, enhancing the overall efficiency and profitability of farming systems.	Provides comprehensive support, from production to market access, improving farmer profitability.	Complex to implement due to the need for multi-stakeholder coordination.
Climate-Smart Agriculture (CSA) Approach	Incorporates practices that help farmers adapt to climate change while reducing greenhouse gas emissions and increasing productivity.	Enhances resilience to climate change while improving productivity and sustainability.	Requires investment in training, research, and infrastructure that can be difficult to access.
Village-Based Advisory Approach	Extension services are decentralized and delivered directly at the village level by trained local advisors or extension agents. This approach emphasizes localized, context-specific advice tailored to village and community needs.	Builds on local knowledge and ensures high relevance to farmers. Increases engagement through proximity.	Can be resource-intensive, as it requires a sufficient number of trained local advisors for each village.

Technology and Digitalization Approach	Leveraging digital tools, technologies, and platforms (such as mobile apps, online databases, remote sensing, and GIS) to deliver agricultural services, information, and data-driven decision-making.	Enhances access to timely, accurate information and improves efficiency in service delivery.	Requires access to technology, internet connectivity, and digital literacy, which may not be universal in rural areas.
Farmer Field Schools (FFS) Approach	A participatory, field-based learning method where farmers learn by doing and observe the impacts of different farming practices in real-time.	Hands-on learning builds practical skills and encourages problem-solving among farmers.	Requires significant time and commitment from farmers and extension workers.
Farmer-to-Farmer Approach	Encourages experienced farmers to pass on their knowledge to others, often through informal networks.	Empowers farmers and strengthens community ties.	Can lack structure and formal content, which may reduce the consistency of knowledge transfer.

Extension Methods			
Method	**Description**	**Strengths**	**Weaknesses**
Demonstration Plots	Small plots used to demonstrate new agricultural techniques or technologies to farmers, often in real-world conditions.	Provides farmers with visible, practical examples of new practices.	Results may not be fully representative of broader conditions, limiting generalizability.
Training and Workshops	Structured learning sessions, often in classrooms, focused on specific agricultural topics such as pest management or irrigation techniques.	Allows for in-depth expert instruction and focused learning on specific agricultural practices.	May be less effective for farmers who prefer hands-on learning or lack time for formal training.
Farm Visits	Extension agents visit individual farmers to offer personalized advice, troubleshooting, and guidance.	Tailored advice increases relevance and helps address specific challenges.	Time-consuming for extension workers, limiting the number of farmers they can serve.
ICT-Based Methods (Mobile Apps, SMS, Web Platforms)	Uses digital tools such as mobile apps, SMS, and web platforms to deliver agricultural information, weather updates, and market prices to farmers.	Can reach a large audience quickly and cost-effectively, particularly in remote areas.	Requires access to technology and literacy, which may be limited in some rural communities.
Radio and TV Programs	Mass media methods such as radio and television broadcasts to disseminate agricultural knowledge and updates to a broad audience.	Reaches a large number of farmers, even in remote areas, with a variety of topics.	Lack of interactivity may make it difficult to address specific farmer concerns.
Group Meetings and Farmer's Days	Events where farmers gather to receive training, updates, and engage with extension agents or other farmers.	Encourages farmer-to-farmer exchange, networking, and community involvement.	Not all farmers may be able to attend, especially those with time or logistical constraints.

Community-Based Extension	Involves local community members as extension agents who can directly interact with farmers and address their unique needs.	Local knowledge ensures relevance and effectiveness in delivering extension services.	Requires strong community organization and training for extension agents.
Peer-to-Peer Learning	Encourages farmers to share experiences and learn from one to another, fostering mutual learning and collaboration.	Builds trust among farmers and encourages collective problem-solving.	Effectiveness depends on the willingness of farmers to engage and share knowledge.
Workplace/On- the-Job Training	Extension agents work directly with farmers at their farms, providing hands- on support and training.	Enables farmers to learn practical, farm-specific techniques in real time.	Resource-intensive, as extension agents must be able to visit farms regularly.
Field Demonstrations with Mobile Units	Mobile units (e.g., vehicles equipped with farming tools, technologies, or equipment) visit farmers' communities to demonstrate techniques.	Increases reach and engagement with farmers in remote areas.	Logistically challenging and costly to implement on a large scale.
Participatory Video	Involves farmers in the creation of educational videos that demonstrate agricultural practices, promoting community involvement.	Encourages active engagement and sharing of knowledge.	Requires access to video equipment and can be time-consuming.
Learning Networks	Groups of farmers, extension agents, and other stakeholders form learning networks to exchange knowledge and experiences.	Fosters ongoing learning and knowledge exchange.	Requires sustained coordination and participation from all involved stakeholders.
Agricultural Fairs and Exhibitions	Large events where farmers can learn about new technologies, practices, and innovations in agriculture.	Allows farmers to experience new technologies and techniques in a hands-on setting.	May not be accessible for all farmers, especially those in remote areas.

Village Based Advisors (VBAs) Approach	Trained individuals within rural communities have a good understanding of local farming practices, challenges, and opportunities to provide agricultural advisory services and support to local farmers.	Enhance the accessibility of agricultural extension services to remote rural communities where formal extension services may not reach	Sustainability challenges may arise if there is a lack of ongoing support, training, and supervision for VBAs, potentially undermining the long-term effectiveness of the approach.

2.6 Technology and digitalization

Effectively integrating Information and Communication Technologies (ICTs) into Somalia's agricultural extension system will significantly enhance the reach, efficiency, and effectiveness of extension services. By empowering farmers with the knowledge and tools they need, this integration will support improved livelihoods and contribute to the sustainable development of the agricultural sector. The agricultural extension policy in Somalia seeks to modernize extension services and broaden outreach through the use of ICTs and digital platforms. Key plans for this integration include:

2.6.1 Digital Platform (E-fidiye)

The Ministry of Agriculture and Irrigation (MoAI) in Somalia is developing the Extension Services App (e-Fidiye) to enhance agricultural service delivery and stakeholder communication. This mobile application will serve as a centralized platform for farmers, input suppliers, extension officers, and village-based advisors, streamlining processes such as extension officer registration, service delivery tracking, and data management. The app will integrate various communication tools—including in-app chat, WhatsApp, SMS, USSD, and multimedia sharing—allowing stakeholders to report issues, receive responses from relevant departments, and escalate unresolved matters through a ticketing system. Additionally, MoAI will use the platform to send announcements, early warnings, and critical updates.

To ensure effective implementation, the National Agricultural Extension Policy (NAEP) will include a clear rollout plan encompassing pilot location, comprehensive training needs assessments, and strategic partnerships. Initially, the E-Fidiye App will be launched in selected pilot locations, chosen based on factors such as agricultural significance, infrastructure availability, and farmer density, allowing for focused implementation and evaluation. Thorough training needs assessment will be conducted to identify the specific skills and knowledge required by farmers, extension officers, input suppliers, and village-based advisors to effectively utilize the app. Training programs will be developed and delivered in both Somali and English, incorporating hands-on demonstrations and practical exercises.

The app will feature an educational module offering training videos, manuals, and guides on best agricultural practices, pest and disease management, and modern farming techniques, accessible in both Somali and English. It will also include a marketplace module, enabling suppliers to list products and services while allowing users to browse, compare, and interact with service providers. By digitizing these essential functions, e-Fidiye will strengthen the agricultural sector's efficiency, knowledge-sharing, and resilience in Somalia.

2.6.2 Online Training and Virtual Workshops

The policy emphasizes the creation of online training modules covering essential agricultural topics. These modules will include virtual workshops focused on new technologies, market trends, and best practices. Peer-to-peer learning will be facilitated through online platforms, allowing farmers to share experiences and challenges, thus fostering a collaborative learning environment. To bridge this gap, the NAEP will leverage radio programs as a primary channel for disseminating agricultural information, utilizing local languages and culturally relevant formats to ensure comprehension. Complementing radio broadcasts, USSD and SMS services will provide timely and targeted agricultural advice, market information, and weather updates, requiring minimal literacy skills and functioning on basic mobile phones. These technologies will be used to deliver interactive content, quizzes, and feedback mechanisms, fostering engagement and knowledge retention. Furthermore, extension agents will be trained to utilize these tools, and community listening groups will be established to facilitate discussions and knowledge sharing among farmers. The accessibility of these technologies, the NAEP ensures that essential agricultural information reaches even the most remote and underserved farmers, empowering them to adopt improved practices and enhance their livelihoods.

2.6.3 ICT Tools for Data Collection and Analysis

ICT tools will be utilized for efficient data collection and analysis, enabling the tracking of extension service impact. Mobile surveys and online feedback mechanisms will be implemented to continuously gather input from farmers. This feedback will inform the ongoing enhancement of extension services, ensuring they remain relevant to the evolving needs of the agricultural community.

2.7 Policy Priorities and Target Areas

To achieve the overall goals, the policy focuses on the following four key priorities under the National Agricultural Extension Policy:

1. Facilitation of information sharing among extension services providers,
2. Rehabilitation and development of agricultural research and extension stations and advisory centers.
3. Institutional capacity development within the extension sector at both the National and State level and increase the number of well-trained extension agents to Strengthening agricultural extension services to reach rural farmers with relevant training, knowledge, and technical support
4. Strengthen Agricultural Education, Institutions, and vocational training.

The national-level coordination will be led by the Department of Research and Extension. It is vital to strengthen communication, coordination, and collaboration among extension service providers. There is currently an inadequate level of coordination and information exchange among various extension service providers nationwide.

2.7.1 Policy statement:

Developing and strengthening coordination and information sharing will be achieved by:

1. Decentralizing and devolving agricultural extension systems.
2. Encouraging and facilitating the use of ICT and new technologies in rural areas.
3. Establish information-sharing platforms at all levels to identify and narrow down areas of divergence.
4. Strengthening mechanisms for the collection and dissemination of agricultural information.
5. Enhancing the participation of a wide spectrum of actors in the delivery of agricultural extension services.

2.8 Rehabilitation and expansion of agricultural extension stations

The debilitating state of the agricultural extension stations has been thoroughly mentioned in the first chapter of the NAEP. There is an urgent need for the rehabilitation and expansion of the national extension stations to boost agricultural productivity and increase food security.

2.9 Institutional capacity development within the extension sector

The development and capacity building of extension service delivery systems is pivotal-for farmers' knowledge and behavioral change and skills which will improve agricultural production. The extension is primarily concerned with building the capacity of extension personnel for improving better communication and knowledge transfer. Agricultural extension remains one of the most effective avenues for rural development. It is through an agricultural extension that technical expertise and skills are transferred to farmers and in return, they provide feedback from the field to agricultural experts and staff in the agricultural extension centers. This policy encourages the utilization of the latest technology and innovations which ultimately lead to increased agricultural productivity. According to the policy vision, institutional and human resource developments are key requirements to help deliver effective sector-wide and development by stimulating growth and prosperity.

2.10 Strengthening agricultural education and technical institutions

Agricultural education institutions (AEI) are organizations that solely provide basic foundations and specializations in the agricultural field. AEI offers different agriculture fields and land management through experience and practices. In general, AEI are determined by national policies and technical and vocational level institutions are the ones most closely tied to the government. Agricultural education and training are designed mainly to prepare officers for the administrative and technical services of rural and agricultural development and training centers.

Generally, there are two main types of agricultural education institutions in the country namely: formal and non-formal institutions. Formal agricultural education institutions are guided by a formal curriculum, which leads to formally recognized credentials such as universities, agricultural schools, and agricultural training centers that provide undergraduate and graduate degrees. On the other hand, non-formal AEIs are flexible, learner-centered, contextualized, and use participatory approaches; there are no specific target groups for this type of education; it could be youth or adults. An example of informal education is the farmer field school. However, it is provided by many agencies, including the sector of agricultural extension, non- governmental organizations (NGOs), commercial traders, and input suppliers. Incorporating agricultural knowledge and the secondary agriculture curriculum into Somalia's agriculture extension policy is crucial for ensuring the effective dissemination of agricultural practices, technologies, and skills among farmers and students. By aligning the secondary agriculture curriculum with the goals and strategies of the agriculture extension policy, Somalia can enhance agricultural education, promote sustainable farming practices, and bolster food security in the country. Agricultural knowledge and the secondary agriculture curriculum can be integrated into Somalia's agriculture extension policy is:

1. **Curriculum Development**: MoAI collaborates with the Ministry of education and culture and higher education, educational experts, agricultural stakeholders, and policymakers to update and align the secondary agriculture curriculum with the key objectives of the agriculture extension policy. MoAI has the role of ensuring that the curriculum includes topics such as sustainable agriculture practices, climate-smart farming techniques, soil conservation and water management, crop diversification, and agricultural engineering.
2. **Teacher Training**: Provide professional development opportunities for agriculture teachers to enhance their knowledge and teaching skills in line with modern agricultural practices and technologies. This training should focus on practical application and hands-on learning experiences.
3. **Student Engagement**: Design the curriculum to engage students in practical agricultural activities, such as school gardens, agricultural clubs, and field trips to local farms. This hands-on experience will help students apply theoretical knowledge in real- world agricultural settings.

CHAPTER THREE: Roles and Responsibilities at Different Levels

3.1 The Federal government:

The MoAI is responsible for the development of inclusive agricultural strategies and policies for the nation. Similarly, the MoAI has the mandate, legitimacy, and authority to initiate and implement the National Agricultural Extension Policy (NAEP)[10]. This policy leads to greater participation resulting in more understanding of the government's role and, in turn, helps improve the image of agriculture extension throughout the country. The extension services should remain a decentralized function, with the Federal Government offering technical support and backstopping in line with the agricultural extension policy while the state ministries of Agriculture will be responsible for implementing and coordinating extension services at the state level.

The goal of decentralizing agricultural extension systems is to improve managerial capacity that would improve technical capacity to deliver services at all levels.

The federal ministry of agriculture has the responsibility ensuring that the agricultural extension policy is effectively communicated to all stakeholders, fostering understanding, buy- in, and active participation in its implementation. Target audience segmentation for the agricultural extension policy of Somalia includes the Federal Government, Federal Member States, Private Sector stakeholders (such as input suppliers and financial institutions), NGOs and INGOs, Farmer Associations, Universities and Research Institutions, and individual Farmers and farming communities. Key communication messages for the agricultural extension policy of Somalia includes clearly articulated policy objectives to highlight benefits for farmers and the sector, defined stakeholder roles, emphasis on benefits like increased incomes and food security, and a strong call to action for active participation and collaboration in policy implementation.

The federal governments will be primarily responsible for the following tasks:

1. MoAI is responsible for the overall coordination, monitoring and evaluation, establishing a conducive environment, and developing a legal framework for the extension sector.
1. Formulate and review sectorial policies, regulations, and strategies and monitor the overall performance of the extension sector.
2. Work on infrastructure development in collaboration with federal member states.
3. Improve the delivery of quality agricultural inputs.

10 Ministry of agriculture strategic plan 2016-2020

4. Provide technical guidance for the federal member state and other stakeholders.
5. Coordinate agricultural data and information management systems.
6. Participate in the monitoring and evaluation of agricultural extension programs and projects.
7. Establish National Agricultural Research Institute (NARI) and National Extension Service (NES) as a separate agency within the structure of the Ministry of Agriculture and Irrigation, reinstating research and extension centers and reconstructing civil work offices.
8. Build strong partnerships with agriculture state ministries, NGOs, agricultural education Institutions, farmer organizations, and agribusiness companies to ensure effective and quality extension services.
9. Resource mobilization for extension service to support farmers
10. Improve transfer technology and dissemination of research outcomes to service providers.
11. Empower farmer organizations and cooperatives.
12. Encourage agricultural education institutions and the private sector to expand their role in field extension and undertake extension and research services.

3.2 The Federal Member States (FMS)

Federal member states will play an increasingly important role in the implementation of the National Agricultural Extension Policy (NAEP). They are responsible for the implementation of all extension programs and activities in their respective locations by outsourcing expertise from the federal government and other relevant stakeholders. Federal member states' agricultural ministries will liaise with the federal MoAI and maintain robust communication channels. The state governments will primarily be responsible for the following activities:

1. Develop programs/projects and activities aligned with policy frameworks to provide effective agricultural extension services.
2. Build the capacity of frontline extension workers and farmers.
3. Collaborate with federal governments and other relevant stakeholders in the investments of rural infrastructure, such as rural roads, advisory stations, and water supplies.
4. Monitor and evaluate the performance of the agricultural projects implemented by the agricultural stakeholders in their respective locations.

5. Assist farmers with access to extension, market information, and other advisory services.
6. Establish strong linkages between farmers, farmer's organizations, and service providers.
7. Conduct regular field visits, assessments, and surveys to identify modern technology and address the gaps to improve crop production.

3.3 The Private Sector

The public sector plays an active role in technology generation and transfer and supplying farm inputs that contribute to increasing food production, farmer's income, and improving livelihoods. According to the National Economic Council (NEC) report (2019),[11] several agribusinesses have emerged that require high levels of investment, management, and coordination with other sectors in their value chain. However, the role of the governmental institutions in the development and revitalization of the agricultural sector has been noted particularly where Famer organizations are either weak or non-existent. The government encourages farmer associations and community-based organizations (CBOs) to provide extension services at different levels. The government would be to provide the appropriate regulatory framework for the private sector to ensure fair competition and maintain quality standards. There are real prospects for investing in input markets and agricultural processing to meet the growing domestic demand for food, driven by rapid urbanization, high population growth, and improving incomes. This policy promotes the idea that large-scale farmers/producers should seek and leverage private expertise and consultants through paid services to enhance their productivity and contribute to economic growth. The government could strategically identify gaps in the delivery of extension services and subsequently work to address these gaps by acting as an intermediary and engaging role by connecting service providers including the private sector. The government levels must create a conducive environment to attract financial institutions to provide financial support to the agricultural sector. In particular, the private sector will be expected to play a primary role concerning the:

1. Investment in agricultural input supply and distribution
2. Provide extension and credit services.
3. Invest in agro-industry, storage facilities, processing, and marketing.
4. Stimulating the development and use of innovative procedures and modern technology in the agricultural sector.
5. Strengthening agricultural education institutions through funds for scholarships.

11 National Economic Council (NEC) report 2019

In the agricultural extension policy of Somalia, the government can foster collaboration, attract private sector investments, and promote sustainable agricultural development while upholding transparency and accountability in the sector. In the extension policy, specific guidelines on public-private partnerships (PPPs), incentives for private investments, and mechanisms to ensure accountability should be outlined as follows

3.4 Private, public partnership guidelines

Public-Private Partnerships (PPPs) in agricultural extension are agreements between the government and private sector to provide extension services to farmers and rural communities PPPs can help address challenges in the extension system, such as: The disparity between extension workers and farmers, reducing the fiscal burden on the government, and transitioning to agricultural commercialization. The PPPs guideline is expected to:

1. Establish clear roles and responsibilities for both public and private sector partners such as defining the scope of services to be provided by each partner, the financial contributions, and the performance indicators.
2. Develop joint implementation plans that outline the specific activities, timelines, and budgets for each PPP initiative and should be reviewed and updated regularly to ensure alignment with changing needs and priorities.
3. Promote knowledge sharing and collaboration between public and private sector partners through regular meetings, workshops, and the establishment of joint working groups.
4. Define mechanisms for sharing risks between public and private partners to encourage private sector investment in agricultural extension without undue financial burden on either party.
5. Ensure transparent and competitive procurement processes for selecting private partners, promoting fairness and accountability in partnership selection.

3.5 Public Private Partnership funding mechanisms and incentives

Public-Private Partnership (PPP) funding mechanisms and incentives in the National Agricultural Extension Policy of Somalia, considering the federal governance structure with a central government and federal member states, is crucial for promoting collaboration, efficiency, and sustainability in agricultural extension services. These tailored mechanisms aim to enhance the effectiveness of agricultural development initiatives across diverse administrative levels within the country. Integrating PPP funding mechanisms, the National Agricultural Extension Policy can facilitate enhanced collaboration between the central government, federal member states, and private sector entities. This collaborative approach fosters synergies, coordination, & knowledge sharing among stakeholders, leading to more comprehensive and impactful extension services.

3.5.1 Government Co-Financing

In Somalia, where there is a federal government and federal member states, implementing a government co-financing model within the National Agricultural Extension Policy can foster collaboration between the central government, regional authorities, and the private sector to enhance agricultural extension services. This approach acknowledges the diverse administrative structures within the country and aims to leverage resources effectively to benefit farmers across different regions. Government co-financing entails a joint effort between the federal government, federal member states, and the private sector to fund agricultural extension services. By sharing the financial burden, all parties can optimize their resources to enhance the quality and accessibility of extension programs, ensuring a broader reach and greater impact on agricultural development.

Through the government co-financing model, the federal government and federal member states can pool their resources with private sector contributions to support extension services. This collaborative approach allows for a more efficient allocation of resources, ensuring that investments in infrastructure, training programs, and advisory services are strategically distributed to address the needs of farmers across different regions of Somalia. The government and private sector working together can enhance the quality and reach of agricultural extension programs. Co-financing arrangements enable the development of comprehensive and tailored extension services that cater to the specific needs of farmers in diverse geographical areas. This collaborative effort can lead to the implementation of innovative approaches, technology adoption, and sustainable practices that benefit farmers and promote agricultural growth.

Government co-financing promotes accountability and transparency in the utilization of resources for extension services in the engagement of multiple stakeholders in the funding process, including the federal government, federal member states, and the private sector, mechanisms for oversight and monitoring can be established to ensure that resources are allocated effectively and efficiently. This transparency fosters trust among stakeholders and enhances the credibility of extension programs.

The collaborative nature of government co-financing contributes to the sustainability and impact of agricultural extension services in Somalia in the alignment of efforts and resources, the government and private sector work towards common goals, such as improving agricultural productivity, enhancing food security, and promoting sustainable farming practices. This shared commitment to agricultural development can lead to long-term benefits for farmers, communities, and the agricultural sector as a whole.

3.5.2 Farmer Contribution Model

The Farmer Contribution Model, as a potential component of Somalia's national agricultural extension policy, presents a crucial avenue for fostering sustainable and participatory agricultural development of empowering farmers to actively contribute to the financing and management of extension services, thereby promoting ownership and ensuring that services are tailored to their specific needs.

By shifting from a solely donor or government-funded approach, the Farmer Contribution Model aims to establish a more resilient and locally driven system. This necessitates a careful examination of the feasibility and mechanisms for implementing such a model within the Somali context, considering factors such as farmer capacity, existing agricultural practices, and the overall socio-economic landscape. Successful implementation would require establishing transparent and accountable systems for collecting and managing farmer contributions, as well as ensuring equitable access to extension services for all farmers, regardless of their financial capacity. Ultimately, the Farmer Contribution Model holds the potential to build a more sustainable and effective agricultural extension system, aligned with the long-term goals of Somalia's agricultural development.

The Farmer Contribution Model implementation will be through a system of subsidized service fees and enhanced by Extension Service Vouchers and E-Vouchers, offers a promising pathway to strengthen Somalia's agricultural extension landscape. In this model, farmers contribute a small, manageable service fee towards accessing private extension services, with the government providing a significant subsidy to ensure affordability, particularly for resource-constrained smallholder farmers. This shared financial responsibility fosters a sense of ownership and accountability, leading to more demand-driven and effective extension services. To further optimize this approach, the introduction of Extension Service Vouchers, particularly in their digital form as E-Vouchers, presents a significant advantage. E-Vouchers, leveraging digital payment platforms, streamline the process of accessing and paying for private extension services. This reduces transaction costs, minimizes the risk of corruption, and enhances transparency in the delivery of services. Crucially, by enabling direct transfer of government and donor subsidies to farmers through E-Vouchers, smallholders can access quality extension services at a significantly reduced cost, thereby promoting wider adoption of improved agricultural practices. This integrated approach, combining farmer contributions with government subsidies and digital voucher systems, creates a sustainable and efficient framework for delivering essential extension services, ultimately contributing to improved agricultural productivity and food security in Somalia.

3.5.3 Contract Farming and Out-grower Schemes

Contract Farming and Out-grower Schemes, integrated into Somalia's national agricultural extension policy, offer a potent mechanism to link smallholder farmers with markets and enhance their access to vital extension services. These schemes establish contractual agreements between farmers and agribusinesses or larger buyers, ensuring a guaranteed market for their produce while providing access to inputs, technical assistance, and training. Within this framework, extension services can be effectively delivered through the agribusinesses involved, ensuring that farmers receive practical, market-oriented knowledge and skills. This approach fosters a symbiotic relationship, where agribusinesses benefit from a reliable supply of quality produce, and farmers gain access to improved production techniques, market linkages, and potentially better prices. Contract Farming and Out-grower Schemes into the national agricultural extension strategy, Somalia has the ability to create a more efficient and sustainable agricultural value chain, promoting economic growth and improving the livelihoods of smallholder farmers while simultaneously strengthening the reach and relevance of extension services.

3.6 Incentives for Private Investment

1. Provide tax incentives for private sector investments in agricultural extension services, such as tax breaks, accelerated depreciation, and research and development tax credits.
2. Facilitate access to finance for private sector partners through initiatives such as credit guarantees, venture capital funds, and blended finance mechanisms.
3. Promote market access for private sector partners by facilitating linkages with farmers, input suppliers, and other value chain actors.
4. Streamline the regulatory environment to facilitate private sector engagement in agricultural extension services by reducing bureaucratic hurdles, simplifying licensing procedures, and ensuring a fair competition among all stakeholders.
5. Offer training programs and capacity-building opportunities to enhance the skills and capabilities of private investors in delivering quality extension services and adopting sustainable agricultural practices

3.7 stakeholder forum

The National Agricultural Extension Policy Stakeholder Forum in Somalia plays a pivotal role in uniting diverse stakeholders from various sectors involved in agricultural development to foster collaboration, knowledge sharing, and strategic discussions aimed at enhancing agricultural extension services across the nation.

This inclusive platform brings together key entities such as the Ministry of Agriculture and

Irrigation of the Federal Government of Somalia, state-level counterparts, NGOs, private sectors, universities, cooperatives, research institutions, women farmers, and input supplier companies to engage in substantial dialogues and cultivate partnerships. The primary goal of this forum is to facilitate in-depth conversations on the formulation and effective implementation of a comprehensive National Agricultural Extension Policy. This policy is designed to elevate agricultural productivity, advocate for sustainable agricultural practices, and uplift the livelihoods of farmers in Somalia through emphasizing critical areas such as policy formulation, capacity building, technology adoption, gender inclusivity, and public-private partnerships, the forum aims to catalyze positive transformations within Somalia's agricultural sector. It serves as a catalyst for driving impactful change, promoting sustainable practices, and contributing significantly to the overall development and prosperity of the country. Through collaboration with stakeholders at both federal and state levels, NGOs, private sectors, academia, cooperatives, research institutions, women farmers, and input supplier companies, the National Agricultural Extension Policy Stakeholder Forum aims to spearhead policy development initiatives, enhance extension services, and pave the way for sustainable agricultural growth in Somalia. Fostering a culture of collaboration, sharing knowledge, and encouraging innovation, this forum is committed to formulating and executing a robust National Agricultural Extension Policy that will serve as a cornerstone for positive change and sustainable agricultural practices in Somalia.

3.8 Establishment of Linkage among Extension stakeholders

In Somalia, establishing strong linkages between all agricultural extension services stakeholders in the national agricultural extension policy is essential for effective policy implementation and achieving sustainable agricultural development. The policy can ensure that extension services are well-coordinated, responsive to the needs of farmers, and aligned with national agricultural priorities to foster collaboration and coordination among stakeholders. The linkage among stakeholders will be facilitated in the national agricultural extension policy of Somalia through:

1. Conduct a comprehensive stakeholder mapping analysis to identify all relevant actors involved in agricultural extension services, including government agencies, NGOs, research institutions, farmer cooperatives, agribusinesses, educational institutions, and community-based organizations.
2. Encourage the building of partnerships and collaboration among stakeholders through formal agreements, memoranda of understanding, and joint initiatives to facilitate the sharing of resources, expertise, and best practices for effective extension service delivery.
3. Establish coordination mechanisms, such as inter-agency committees or working groups, to facilitate communication, collaboration, and information sharing among stakeholders. Regular meetings, workshops, and forums can help stakeholders align their activities and avoid duplication of efforts.

4. Provide capacity-building opportunities for stakeholders to enhance their skills, knowledge, and capabilities in delivering quality extension services. Training programs, workshops, and knowledge-sharing sessions can help stakeholders stay up- to-date of the latest agricultural practices and technologies.
5. Develop a system for sharing data, information, and knowledge among stakeholders to support evidence-based decision-making and policy formulation. Implement monitoring and evaluation frameworks to assess the impact of extension services and track progress towards policy objectives.
6. Involve local communities, farmers, and beneficiaries in the design, implementation, and evaluation of extension programs to ensure that extension services are tailored to meet the specific needs and priorities of farmers and are culturally appropriate.
7. Develop a clear and actionable policy implementation framework that outlines roles, responsibilities, timelines, and resources needed for effective policy implementation. Regular review and evaluation of the implementation progress can help identify challenges and opportunities for improvement.

3.9 Mechanism for ensuring accountability

Establish robust performance monitoring and evaluation systems for tracking the progress and impact of PPP initiatives by setting clear and measurable performance indicators, collecting data regularly, and conducting independent evaluations to assess the effectiveness of partnerships.

Ensure transparency and disclosure of all PPP agreements and activities by publishing information on the terms of agreements, the use of public funds, and the performance of private sector partners.

Establish clear and accessible grievance redress mechanisms to address complaints and concerns from farmers and other stakeholders regarding the performance of private sector partners, ensuring independence, impartiality, and timeliness.

Conduct regular reviews of PPP arrangements to assess effectiveness, make necessary adjustments, review performance indicators, address challenges, and explore new collaboration opportunities.

CHAPTER FOUR: Coordination, Monitoring and Evaluation

4.1 Coordination Process

Coordination among all stakeholders and policymakers is widely recognized as fundamental to the successful implementation of this agricultural extension policy[12].

All stakeholders must be in a position where they contribute and actively participate in the provision of agricultural extension services. Stakeholder Coordination is one of the main responsibilities of MoAI should lead such efforts in collaboration with others in the agricultural extension service delivery. The MoAI is responsible for the overall coordination of the extension sector and linking stakeholders' efforts in the realization of the objectives of this policy. Coordination should be ongoing, continuous and assume a cascading shape where the MoAI ensures all efforts are geared towards common goals and activities. It is important to note that a cascading shape does not necessarily portray only a top-down approach but rather the process flows in both directions. The goal of the coordination is to build confidence, enhance transparency, open communication channels, and exchange of ideas among all involved with NAES to achieve the goals and objectives of the policy. The government will develop stakeholder collaborative forums at all levels of the implementation, which will promote joint program planning and implementation, and information sharing, this will minimize the duplication of efforts and ensures that the role of relevant stakeholders addresses the needs of farming communities in a balanced way.

4.2 Coordination Mechanism

Effective coordination is critical for the successful implementation of the National Agricultural Extension Policy (NAEP). This requires well-organized links between all stakeholders to ensure the optimal use of available resources. The coordination mechanism should be a three- pronged approach:

1. Government at the Federal Level
2. Government at the State Level
3. Farmers' Associations and Other Key Stakeholders (including financial bodies, NGOs, CBOs, agribusinesses, national and international donors, Agricultural Extension Institutions (AEIs), etc.)

[12] Somalia National Development Plan (2020-2024)

At the federal level, the policy recommends the establishment of a National Technical Coordination Committee where representatives from all relevant stakeholders come together to collectively discuss and address emerging issues.

At the state level, collaboration among various extension services is vital to meet the diverse needs of different farmer groups in rural areas. This collaboration will focus on providing tailored support to farmers while ensuring that information and knowledge are shared across organizations. This exchange of experiences and ideas will enhance the effectiveness of extension services. The policy emphasizes the importance of identifying common goals and objectives from the outset to ensure that all stakeholders are aligned and well-informed. It advocates for inclusive actions throughout the implementation process, with robust monitoring and evaluation practices in place. The coordination mechanism should allow for an open flow of feedback and ensure that all stakeholders have the opportunity to contribute, participate in decision-making, and access resources and funding where available. Inclusion is the most vital element for the success of this coordination, ensuring equal opportunities for all to be involved in the process.

4.3 Monitoring and Evaluation

Monitoring is an ongoing process of supervision and oversight aimed at ensuring the effective execution of activities. The primary goal of this continuous oversight is to identify potential slippages, shortfalls, or overruns before they occur and implement corrective actions. This forward-looking approach is designed to anticipate challenges, mitigate risks, and ensure the achievement of objectives.

As part of the planning process, monitoring specifies clear goals, outlines the actions required to achieve them, forecasts potential obstacles, and allows for real-time adjustments. This proactive approach helps to keep initiatives on track and aligned with desired outcomes.

The Federal Ministry of Agriculture and Irrigation (MoAI) is expected to play a key role in monitoring and evaluation. In collaboration with state governments and other stakeholders, the MoAI should regularly assess the delivery of agricultural extension services in accordance with the policy objectives. Additionally, the Ministry should evaluate the impact of these services on broader agricultural activities, including crop production, knowledge dissemination, information sharing, and the empowerment of farmers.

4.4 Log Frame Approach to Monitoring and Evaluation

The NAEP strongly advocates for the use of the Log Frame approach in monitoring and evaluating agricultural extension services delivery. The Log Frame approach can be defined as "an analytical process and set of tools to support objective oriented project planning and management[13]" Even more, the approach is "a methodology for planning, managing and evaluating programs and projects, using tools to enhance participation and transparency and to improve orientation towards objectives[14]".

It is important to note that the Log frame approach evolved in the field of development and aid work. In the beginning, the approach was used to just describe projects and provide specific information for decision-making. However, with time, the approach became more analytical in nature and is now being used as a tool for improved project design and management, and monitoring and evaluation.

As evident from the three definitions provided above, the Log Frame Approach to monitoring and evaluation is essentially a tool to support planning, managing, and evaluating projects and programs. To track progress effectively, a comprehensive baseline survey is conducted to gather data on farmers' socio-economic conditions, agricultural production, access to extension services, and farmers' knowledge and practices. Evaluations within the national extension policy include periodic reviews, such as mid-term assessments, to gauge progress towards policy objectives and address challenges. End-term evaluations are also conducted to assess the policy's overall impact on the agricultural sector and its alignment with national development goals. Implementation oversight is led by the Federal Government, with member states managing local implementation and data collection To effectively monitor and evaluate the National Agricultural Extension Policy (NAEP), a set of key performance indicators (KPIs) will be employed, covering crucial aspects of service delivery. For farmer outreach, the KPIs include the percentage of targeted farmers reached by extension activities, measured through attendance records and surveys, with an annual target increase of 10%, adjusted for vulnerable groups. Farmer satisfaction, assessed through standardized surveys, aims for a minimum score of 4 out of 5. Technology adoption will be tracked by the percentage of farmers utilizing improved seed varieties and digital agricultural tools, with annual target increases of 15% and 20%, respectively, tailored to key crops and local needs.

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[13] European Integration office, 2011

[14] Umhlaba Development Services, 20

The effective extension agent-to- farmer ratio, reflecting the number of active farmers per agent, will strive for a 1:500 ratios, accounting for logistical constraints. To ensure the policy's continued relevance and effectiveness, a mid-term review will be conducted at the policy's midpoint. This review will involve data collection and analysis of KPIs, baseline survey results, and stakeholder feedback, along with an evaluation of the Log Frame approach. Stakeholder consultations through workshops and focus groups will gather insights for policy revision. The NAEP's objectives, strategies, and evaluation framework will be reviewed and adjusted, and the findings will be reported and disseminated to all stakeholders. The review process will establish a feedback integration mechanism, ensuring policy adjustments are communicated and implemented. Key considerations, such as data disaggregation for equitable access, contextualized KPIs, capacity building for stakeholders, and adaptive management, will guide the monitoring and evaluation process, fostering continuous improvement. Evaluations in the extension policy include periodic reviews, such as mid-term assessments to evaluate progress towards policy objectives and identify challenges, and end-term evaluations to assess the overall impact of the policy on the agricultural sector and its contribution to national development goals. The Federal Government will oversee implementation and monitoring, provide support to member states, and coordinate data collection, while member states will implement the policy locally, collect data, and coordinate with communities. The private sector will contribute to policy design, service delivery, and research, NGOs will support implementation, conduct research, and mobilize communities, farmer associations will participate in program design, provide feedback, and represent farmer interests, and universities will conduct research, generate evidence, and provide training. Data utilization will involve disseminating findings to all stakeholders, using data to inform policy adjustments, program improvements, and resource allocation decisions, and ensuring transparency and accountability in resource use and service delivery.

4.5 Cross-Cutting Issues

In the context of the National Agricultural Extension Policy (NAEP) in Somalia, the emphasis on cross-cutting issues involves integrating emerging challenges that affect agricultural extension services. These issues encompass aspects such as the involvement of youth and women in agriculture, promoting good governance practices, ensuring equitable access to resources and funding, enhancing safety and security in agricultural activities, and addressing nutrition concerns. The policy aims to address these issues by providing necessary support and implementing solutions where needed to improve the overall effectiveness of agricultural extension services in Somalia.

4.5.1 Youth and Women in Agriculture

The agricultural sector, particularly the farming industry, has traditionally been dominated by men. The National Agricultural Extension Policy (NAEP) should open avenues to facilitate the participation of youth and women in agricultural production. The policy recognizes the essential roles that youth and women play in subsistence farming, where they make significant contributions to fieldwork. Rather than hindering their potential, the NAEP aims to empower women and youth in agriculture.

Empowerment can be achieved through several key measures. First, periodic training and education programs should be provided to equip women farmers with the necessary skills and knowledge to improve their productivity. Additionally, the NAEP recommends setting up funding mechanisms for women farmers and encourages NGOs and community-based organizations (CBOs) to prioritize support for women in agriculture. It also advocates for the hiring of more women extension staff and ensures that women have equal opportunities for employment in the agricultural sector.

The policy further calls for the establishment of Youth and Women-Centric Funding Programs, which would provide youth and women with access to microloans, grants, and credit facilities tailored specifically for agriculture. Additionally, the NAEP promotes investment in women- led agricultural projects by providing targeted financial support to enhance their participation in agricultural extension services.

To empower youth and women further, the policy suggests developing specialized training programs that cater to their specific needs in agricultural extension. These programs should focus on skill development, leadership training, technical knowledge, and sustainable agricultural practices. The policy also advocates for organizing workshops to enhance leadership skills and provide education on advanced agricultural techniques, climate-smart agriculture, and other relevant areas. Enforcing gender quotas within agricultural extension services will help ensure equal representation, and efforts will be made to recruit, train, and advance women extension workers to bridge the gender gap and address the unique needs of women farmers.

In the framework of the National Agricultural Extension Policy of Somalia, practical measures are essential to advance women's empowerment in agricultural extension services. Specific targets for hiring women extension agents play a crucial role in this endeavor, encompassing initiatives such as establishing a minimum percentage of women extension agents to be recruited and trained within a defined period, offering tailored capacity-building programs to enhance their skills, providing mentorship opportunities for professional growth, implementing gender-responsive policies, and ensuring women's active involvement in decision-making processes at various levels of agricultural extension service delivery to enhance gender equality, promote women's empowerment, and bolster the participation of women in agricultural extension services, ultimately contributing to the sustainable development of the agricultural sector.

The policy emphasizes youth engagement in agriculture, encouraging young people through targeted programs, incentives, and support systems. It promotes agro-entrepreneurship and technology-driven solutions by offering training, funding, and mentorship to help young farmers start and grow their agricultural businesses. Integrating youth involvement into Somalia's National Agricultural Extension Policy (NAEP) is important for ensuring the sector's long-term sustainability and dynamism. To achieve this, the NAEP will prioritize initiatives that actively engage young people as key actors in agricultural development. This will involve fostering agritech start-ups, providing support for agribusiness incubation programs, and establishing dedicated funding mechanisms for youth-led agricultural projects. Recognizing the potential of young entrepreneurs to drive innovation, the policy will promote the establishment of agro-tech start-ups by providing access to training, mentorship, and seed funding. Agribusiness incubation programs will offer young people the opportunity to develop their entrepreneurial skills and build viable agricultural businesses, with access to resources, market linkages, and technical assistance. Furthermore, the NAEP establishes dedicated funding streams for youth-led projects, empowering young farmers and entrepreneurs to implement innovative solutions to agricultural challenges. This will include grants and no- interest loans specifically targeted at youth initiatives. In addition to these targeted programs, the NAEP will also integrate youth perspectives into all aspects of policy implementation, including planning, monitoring, and evaluation. This will involve establishing youth advisory boards and creating platforms for young people to share their ideas and feedback. Finally, the NAEP highlights the importance of digital platforms to provide youth with essential agricultural information, promotes precision agriculture technologies, and offers online training on modern agricultural practices, climate-smart agriculture, and agribusiness management to further equip youth for success in the sector.

4.5.2 Good Governance

Farmers and all those involved in agricultural activities must be provided with a favorable environment by the government. Good governance means that farmers and other stakeholders are not heavily taxed and that portions of the taxes they pay are returned to them in the shape of services and infrastructure. Good governance also indicates flexible bureaucracy and a lack of red tape. Farmers should be able to purchase and sell equipment, set up farms, and engage in transactions without extreme hindrance from the government. The government's role is to facilitate agricultural production and productivity in the country.

4.5.3 Sustainable environment and natural resources management

Somalia's National Agricultural Extension Policy must give top priority to integrating sustainable environment and natural resources management (SENRM) into its core strategies for numerous compelling reasons. Environmental degradation has a significant impact on agricultural productivity in Somalia. Deforestation, driven by charcoal production and fuel wood collection, leads to soil erosion, reduced water infiltration, and loss of biodiversity, all negatively affecting agricultural output. Land degradation resulting from overgrazing, unsustainable farming practices, and soil erosion diminishes soil fertility, reducing land productivity for agriculture. Water scarcity, exacerbated by climate change and unsustainable water practices, poses a significant constraint to agricultural production in Somalia. The nation is highly susceptible to climate change impacts, including droughts, floods, and erratic rainfall patterns, severely affecting agricultural yields and livelihoods.

Incorporating sustainable practices enhances agricultural resilience. Promoting Climate-Smart Agriculture (CSA) practices such as water conservation techniques, drought-resistant crops, and agroforestry helps farmers adapt to climate change and fortifies agricultural resilience. Implementing Sustainable Land Management (SLM) practices such as terracing, contour plowing, and crop rotation prevents soil erosion, boosts soil fertility, and enhances long-term agricultural productivity. Integrated Water Resources Management (IWRM) ensures efficient and equitable water resource use for agriculture while safeguarding ecosystems and other users. Agroforestry, through the integration of trees into agricultural systems, provides multiple benefits, including enhancing soil fertility, providing windbreaks, and carbon sequestration.

SENRM supports long-term agricultural sustainability by protecting biodiversity crucial for healthy ecosystems that sustain agriculture, reducing environmental pollution by minimizing pollution from fertilizers and pesticides, and building community resilience through sustainable natural resource management. Integrating SENRM into the National Agricultural Extension Policy involves mainstreaming SENRM principles and practices into all extension services, capacity building by training extension workers on SENRM concepts, promoting farmer participation in addressing environmental challenges, forming partnerships with government agencies, NGOs, research institutions, and community-based organizations, and establishing monitoring and evaluation systems to assess the effectiveness of SENRM interventions through prioritizing SENRM in its National Agricultural Extension Policy, Somalia can develop a more resilient and sustainable agricultural sector that enhances food security, economic growth, and environmental conservation.

The policy framework addresses challenges such as soil degradation, water scarcity, deforestation, and biodiversity loss, aiming to enhance the resilience of farming systems, improve productivity, and protect the environment for future generations. It emphasizes key aspects including soil conservation, water resource management, biodiversity conservation, climate change adaptation, and sustainable land use planning. Somalia aims to cultivate a resilient and environmentally sustainable agricultural sector that effectively addresses challenges while safeguarding natural resources and promoting long-term sustainability. All Extension Service Providers (ESPs) will mainstream environmental and natural resources-related issues in extension messages by imparting knowledge on good practices for water catchments management, soil and water conservation, agroforestry, and wetland utilization. They will also focus on appropriate land-use allocation and management of economically viable production units, existing initiatives by other stakeholders on community-based natural resource management plans, the importance of community disaster preparedness, and linking with relevant institutions involved in early warning and disaster preparedness.

4.6 Risk Assessment, Management and Resilience

The policy incorporates comprehensive disaster risk reduction strategies to proactively identify, assess, and mitigate risks posed by natural disasters such as droughts, floods, and pests including measures such as early warning systems, land-use planning, infrastructure development, and community-based disaster preparedness initiatives. The policy implements Insurance schemes tailored for farmers can help mitigate the financial impact of crop failures, extreme weather events, and other unforeseen circumstances. The extension policy focuses to establish effective crisis response mechanisms to provide timely assistance to farmers in times of emergencies. Providing training and capacity-building programs for farmers on risk management techniques and Promoting climate-smart agriculture practices can enhance the resilience of the agricultural sector to climate change impacts. The extension policy advocates for sustainable farming techniques that conserve natural resources, improve soil health, and reduce greenhouse gas emissions

4.6.1 Assessment of Political Instability and Mitigation Strategies

Political instability in Somalia can significantly disrupt service delivery, causing insecurity, displacements, interruptions in essential services critical for effective agricultural extension programs, resource diversion to security and humanitarian needs during conflicts, and the displacement of trained extension workers, impacting service continuity and quality. The following are mitigation strategies:

1. Decentralized Approach through Empower local communities and establish robust governance structures to maintain service continuity during unrest.
2. Community-Based Extension by training and equipping local farmers and VBAs as agents to ensure knowledge transfer even amidst service disruptions.
3. Partnership building collaborates with NGOs, civil societies, and community groups to mitigate instability effects on extensions.
4. Conflict-sensitive Programming by integrating conflict sensitivity in program design to address conflict root causes and promote peaceful coexistence.

4.6.2 Funding Constraints and Mitigation Strategies

Funding constraints in agricultural extension are evident through limited resources, external aid dependency, and inadequate budget allocations, which hinder technology adoption, jeopardize service sustainability, and restrict extension capacities to meet farmer needs. Insufficient money can restrict extension reach, hampering technology and practice adoption over-reliance on aid renders programs subject to donor budget volatility, undermining service sustainability. The government's insufficient budgetary assistance may limit extension capacity to satisfy agricultural requirements. Mitigation strategies are as follows:

1. Diversified Funding by exploring private sector investment, community contributions, and innovative financing to reduce aid dependency as per in NTP 2025-2029
2. Cost-Effective Delivery in utilizing technology and community networks for efficient service delivery to maximize limited resources.
3. Financial Sustainability through sustainable development financing models like user fees and cost-sharing for long-term service viability.
4. Advocacy and Mobilization by advocating for agricultural extension importance, mobilize resources from governments and stakeholders for sustainable services.

4.6.3 Equitable access to resources and funds:

All stakeholders engaged in the agricultural sector should have equitable access to funds and resources. These funds and resources may come from the federal government, state governments, farmers, agricultural cooperatives, agribusiness, and NGOs or INGOs. There should be zero tolerance for corruption and other social ills in the agricultural sector. All stakeholders should have an equal and independent chance for opportunities.

4.7 Sustainable Financing

Current sources of funding extension services come from the international development partners with the government and the private sectors. International development partners through government system are still the main player in extension service provision with inadequate provisions for operations and maintenance. However, some programmes and projects have extension services funded as a core activity. For some of the commercial enterprises such as banana, sesame and lime fully pay for the cost of extension services given by both the private (e.g. private companies and cooperatives) and service providers from quasi- public organizations. The major constraints to financing extension service delivery include lack of a well-planned exit strategy in public sector extension services that encompasses sustainable.

Privatization and commercialization, and lack of an enabling environment for the private sector to take an increasing role in provision of extension services. Modalities for contracting out some of the extension services, though accepted in principle, have not been defined. Meanwhile, declining public budgetary allocation for providing extension services and poor planning of extension service delivery have not helped the situation in utilization of human and financial resources efficiently. The main challenges to ensuring sustainable funding to agricultural extension include increasing resources allocated to fund public extension services and improving planning and coordinating the allocation of resources to extension by different stakeholders to minimize duplication and wastage. Other aspects to be addressed include formulating a well-managed public sector financing and exit strategy including sustainable privatization and commercialization of extension services, designing a financing mechanism for extension services with better targeting especially for the marginalized and vulnerable groups, creating an enabling environment for the private sector to take an increasing role in provision of extension services, and developing modalities for identifying services and the mechanisms for contracting them out. Financing of extension services in the country will continue to be carried out by Government, private sector, universities/collages, NGOs and civil society with three categories of funding scenarios:

1. Government funding using public and private sector Extension Service Providers (ESPs)

1. Funding with partial cost recovery where beneficiaries contribute to extension service funding
2. Type of funding where the clientele bears the full cost of extension services.

4.8 Safety and security:

Occupational safety should be closely implemented across all levels of the agricultural sector. Farms, processing and packaging factories, and agribusiness must always enforce safety measures. The federal government and state governments have the responsibility of always keeping farmers and their equipment safe and secure. Roads and other infrastructures must be completely secured so that agricultural productivity is not stifled.

4.8.1 Food Security and Nutrition:

Good nutrition is a cornerstone for both physical and mental health. The NAEP should contribute towards ensuring the food and Nutrition security of the country. Farmers and other stakeholders ought to encourage healthy nutrition for their workers and convey nutritional messages via their produce. All activities across all levels should be geared towards guaranteeing healthy and adequate nutrition for the country.

Integrating nutritional education into extension services is vital for enhancing food security and improving overall health outcomes in Somalia. The National Agricultural Extension Policy (NAEP) will adopt a multi-faceted approach to achieve this integration, ensuring that nutritional considerations are woven into all aspects of agricultural extension.

Firstly, the NAEP prioritizes the development of integrated training modules that combine agricultural best practices with nutritional education. These modules will equip extension agents with the knowledge and skills to educate farmers on the importance of dietary diversity, balanced diets, and the nutritional value of locally available foods.

Secondly, the policy will promote demonstration gardens and model farms that showcase the production of nutrient-rich crops. These sites will serve as learning platforms for farmers, demonstrating practical methods for growing and utilizing diverse food sources.

Thirdly, the NAEP will emphasize community-based nutrition education programs, leveraging existing community structures and networks to reach vulnerable populations, especially women and children. These programs will focus on promoting healthy eating habits, food preparation techniques, and the prevention of malnutrition.

Fourthly, the policy will encourage collaboration with health sector stakeholders, including nutritionists and health workers, to ensure that extension services align with national nutrition guidelines and strategies. This collaboration will facilitate the development of joint programs and the sharing of resources and expertise.

Fifthly, data collection and monitoring will be crucial for evaluating the impact of nutritional education initiatives. The NAEP will establish mechanisms for tracking indicators such as dietary diversity, child nutritional status, and the adoption of healthy eating practices.

Finally, the policy will support the promotion of indigenous knowledge and practices related to food and nutrition, recognizing the valuable role of traditional food systems in ensuring food security and nutritional well-being. Implementing these strategies enables that NAEP to transform agricultural extension into a powerful tool for improving nutrition and fostering healthy communities in Somalia.

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Appendix I: Priority Interventions and Actionable Items

The Table below provides a detailed description of interventions, action items, expected outputs and outcomes.

Intervention	Action Items	Expected Outputs	Expected Outcomes	Responsible Institution
Rehabilitation of Existing Extension Centers (Jowhar, Baidoa, Kismayo)	Conduct assessments, develop rehabilitation plans, upgrade infrastructure, integrate technology, train staff, and establish monitoring systems.	Renovated centers, enhanced facilities, trained personnel, improved communication, and adoption of digital tools.	Strengthened extension services, improved farmer outreach, increased adoption of best practices, enhanced food security, and climate resilience.	FGS
Establishment of 18 New Agricultural Extension Facilities	Site selection, construction, equipping, staff recruitment, and community engagement.	Fully operational extension centers in five Federal Member States (FMS).	Broader access to knowledge, increased agricultural productivity, and improved livelihoods.	FGS
Digital Registration and Training of Extension Officers & VBAs	Develop a digital registration platform, track performance, and implement training programs using standardized manuals.	2,000 Village-Based Advisors (VBAs) registered and trained.	Expanded outreach, improved extension services, and community empowerment.	FMS
Establishing a Decentralized and Pluralistic Extension System	Set up regional offices, engage NGOs and private sector, implement monitoring & evaluation frameworks.	Localized extension services, enhanced stakeholder participation, and a national policy framework.	Improved service delivery and increased agricultural productivity.	FGS & FMS
Introducing Innovative Agricultural Extension Approaches	Implement farmer-to-farmer training, demonstration plots, ICT-based extension tools, and Farmer Field Schools (FFS).	Knowledge-sharing platforms, research hubs, and demonstration farms.	Enhanced adoption of improved farming techniques.	FGS & FMS
Strengthening Institutional Capacity for Agricultural Extension	Conduct capacity-building programs, enhance coordination mechanisms, and implement monitoring systems.	Improved infrastructure, policies, and training programs.	Effective service delivery and better coordination in extension activities.	FGS

Intervention	Action Items	Expected Outputs	Expected Outcomes	Responsible Institution
Enhancing Agricultural Education & Training Institutions	Collaborate with universities to revise curricula, provide hands-on training, and promote research.	Updated academic programs, internship opportunities, and quality assurance mechanisms.	A skilled agricultural workforce.	FGS
Establishing a National Agricultural Extension Agency	Mobilize resources, develop policies, facilitate technology transfer, engage private sector actors.	National policy implementation, enhanced coordination, and strengthened partnerships.	Streamlined extension service delivery.	FGS
Strengthening Private Sector Investment in Agriculture	Encourage investments in input supply, agro-industry, infrastructure, research, and scholarships.	Public-private partnerships, improved market access, and research collaborations.	Increased agricultural productivity and value chain development.	FGS
Enhancing Coordination & Stakeholder Collaboration	Establish communication strategies, convene joint planning forums, implement stakeholder engagement framework.	Strengthened communication, improved policy alignment, and better program efficiency.	Effective agricultural development initiatives.	FGS
Strengthening Monitoring, Evaluation, and Learning (MEL) Systems	Develop key performance indicators (KPIs), implement real-time data collection, conduct periodic reviews.	Transparent evaluation frameworks and improved resource allocation.	Enhanced accountability and performance-driven agricultural policies.	FGS
Promoting Gender Inclusion in Agricultural Extension	Increase female participation through training, funding access, recruitment of female extension staff, and NGO partnerships.	Gender-sensitive extension programs and women-focused agricultural services.	Reduced gender disparities and greater economic empowerment for women.	FGS
Ensuring Fair & Transparent Access to Agricultural Resources	Establish clear guidelines for resource distribution and ensure merit-based funding allocation.	Equitable access to agricultural inputs, credit, and training.	Inclusive growth and support for marginalized farmers.	FMS
Strengthening Occupational Safety in Agriculture	Develop safety guidelines, provide protective equipment, and enforce compliance measures.	Occupational safety regulations and access to PPE.	Reduced workplace injuries and improved farm safety standards.	FGS
Integrating Nutritional Education into Extension Services	Train extension workers and farmers on nutrient-rich crop production and dietary diversification.	Developed nutrition curricula and trained extension workers.	Improved community health and food security.	FGS

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