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FOREWORD



It is a great pleasure to present the National Agricultural Extension and Advisory Services Strategy (NAESS) on behalf of the Government of the Republic of Zambia. This strategy is intended to provide various stakeholders in extension services delivery with a framework within which to deliver effective pluralistic extension services in order to accelerate agricultural transformation and contribute to poverty reduction.

The overall objective of the NAESS is to transform small scale farming into sustainable, commercialised and profitable agriculture that contributes to improved national and household food and nutrition security, incomes and hence reduce poverty. The NAESS will ensure efficient utilization of scarce resources, eliminate dissemination of distorted and conflicting extension messages and improve on the adoption and adaptation of innovative technologies. It is aligned to existing government policies such as the Revised Sixth National Development Plan (R-SNDP) and Second National Agricultural Policy (SNAP) as well as key regional and international protocols.

We hope that all stakeholders in the agricultural sector will use this strategy to plan and implement various agricultural programmes.

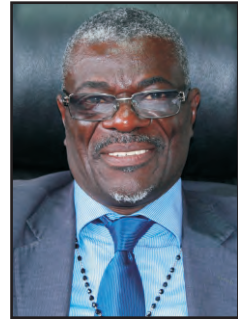
A handwritten signature in black ink, appearing to be 'Dora Siliya'.

Hon. Dora Siliya, MP
Minister of Agriculture

A handwritten signature in black ink, appearing to be 'Michael Katambo'.

Hon. Michael Katambo, MP
Minister of Fisheries and Livestock

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The Ministry of Agriculture and the Ministry of Fisheries and Livestock would like to acknowledge the valuable contributions from stakeholders in the agricultural sector who contributed information towards the formulation of the National Agricultural Extension and Advisory Services Strategy (NAESS). This strategy for Zambia is a culmination of a process that began in 2013 under the now concluded Japan International Cooperation Agency (JICA) supported Rural Extension Service Capacity Advancement Project (RESCAP). We wish to extend our sincere gratitude to the Japanese Government for supporting the process.

The finalization of the National Agricultural Extension and Advisory Services Strategy would not have been possible without the European Union supported Performance Enhancement Programme's (PEP) timely support.

We also wish to extend special acknowledgements to the multiple stakeholders who provided valuable input into the strategy.

A handwritten signature in black ink, appearing to be 'J. Shawa'.

Julius J. Shawa
Permanent Secretary
Ministry of Agriculture

A handwritten signature in black ink, appearing to be 'D. Shamulenge'.

Dr. David Shamulenge
Permanent Secretary
Ministry of Fisheries and Livestock

DEFINITION OF AGRICULTURAL EXTENSION

Agricultural Extension is the application of scientific research and new knowledge to agriculture through farmer education. Agriculture extension implies all the activities that facilitate access of farmers, their groups, organizations and other market actors to Knowledge, Information and Technologies. It facilitates farmers' interactions with other stakeholders such as researchers, training institutions, agri-business companies, and other relevant organizations.

Ultimately agriculture extension builds farmers' capacities by developing their own technical, organizational and management skills and practices. Agricultural Extension brings about changes in Knowledge Attitude, Skills and Aspirations among farmers.

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARGEOS	Agricultural Planning and Resource Guide for Extension Officers
BEO	Block Extension Officer
CAADP	Comprehensive Africa Agriculture Development Programme
CEO	Camp Extension Officer
FI	Farm Institutes
FSR	Farming Systems Research
FTC	Farmers Training Centres
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technologies
IDP	International Development Partners
MoA	Ministry of Agriculture
MFL	Ministry of Fisheries and Livestock
NAESS	National Agriculture Extension and Advisory Services Strategy
NAIP	National Agricultural Investment Plan
NAP	National Agricultural Policy
NGO	Non-Governmental Organisation
PEA	Participatory Extension Approach
PPP	Public Private Partnerships
R-SNDP	Revised Sixth National Development Plan
SAO	Senior Agricultural Officer
SMS	Subject Matter Specialist
SNAP	Second National Agricultural Policy
SWOC	Strength, Weaknesses, Opportunities and Challenges
T&V	Training and Visit System of Extension
ZNFU	Zambia National Farmers Union

1.0. INTRODUCTION

Agriculture in Zambia is one of the key priority sectors that contribute to economic growth and poverty reduction. It currently accounts for about 22% of Gross Domestic Product (GDP) and provides livelihood for more than 50% of the population. The agricultural sector has also emerged as an important foreign exchange earner.

The Government of the Republic of Zambia in its bid towards Vision 2030, has put into place a number of agricultural development frameworks: The Vision 2030, expresses the aspirations of the Zambian people to be a prosperous middle-income nation by the year 2030 and it recognises that effective delivery of agricultural extension services is key to increased agricultural production and productivity especially among small scale farmers. The Revised Sixth National Development Plan (R-SNDP) is an investment plan with focus on rural development and job creation, and alludes to improved sustainable and efficient production, productivity and value addition of a diversified agricultural sector through enhancement of Extension Service Delivery. The Second National Agricultural Policy (SNAP) encompasses the key facets of agriculture and serves as a guide to the development of the agricultural sector. Of its ten (10) main objectives, objective number one(1) “To increase agricultural production and productivity” which calls for strengthening agricultural extension service delivery by improving the efficiency and effectiveness of the existing extension staff, and promoting private extension service provision to supplement public extension system.

In order to realize policy priorities and objectives set under the National Agricultural Policy, the National Agriculture Investment Plan (NAIP) 2014-2018 was also formulated under the Comprehensive Africa Agriculture Development Programme (CAADP) to identify and prioritize key investment and policy changes needed to enhance agricultural productivity growth in Zambia in ways that will contribute to poverty reduction and inclusive economic growth.

These Government policy documents all reaffirm the critical role of agricultural extension in the improvement of agricultural production and productivity among the rural poor so as to improve their livelihoods.

2.0. SITUATION ANALYSIS

2.1. Evolution of Agricultural Extension Services In Zambia

Agricultural Extension Services in Zambia have been delivered through a number of approaches over the years.

Before independence in 1964 a command or military type approach to extension delivery was used to target specific progressive individual farmers who were told

which crops to grow. This colonial individualized farm visits extension approach particularly promoted the staple maize crop in order to feed migrant workers who were concentrated in the Copperbelt Province. Following independence in 1964, Government policies to increase agricultural output and ensure national food self-sufficiency led to an increase in the number of rural households taking up agriculture.

This necessitated the Government to improve on the colonial individualized farm visits extension approach by establishing Farmer Training Centers (FTCs), Livestock Service Centres and Farm Institutes (FIs). Farmer Training Centers were constructed in a number of agriculturally strategic districts and each of the country's then nine provinces had a Farm Institute built. Farmer training centers were established for purposes of commodity demonstration and to facilitate farmer training in improved farm management practices while Farm Institutes catered for in-service training of extension staff and provision of higher level training to improved small scale farmers. During this time extension was traditionally focused on crops production with not much on livestock and fisheries.

In the early 1980s, Zambia became one of the first Sub Saharan African countries to import the Training and Visit (T&V) approach to extension. The T&V extension approach was characterized among others by systematic fortnightly trainings of field extension staff by Subject Matter Specialists (SMSs), extensive use of contact farmers, concentration of extension messages on the staple maize crop and a unified command for livestock, crops and fisheries extension services.

At the same time as T & V was being implemented, the Farming Systems Research (FSR) approach was introduced as a more holistic diagnostic process for researchers to elicit better understanding of farm households, family decisions and decision making processes, but could not take firm root into the main stream extension system.

Towards the 1990s the Zambia extension realities pointed to the fact that agricultural challenges transcended the levels of individual farms or farm households. Extension Service had to face such issues as management of collective natural resources, value chain management, collective input supply and marketing. These new issues typically required new forms of coordinated action and cooperation among farmers, between farmers and stakeholders.

In the year 2000, Participatory Extension Approach (PEA) was proclaimed as the main vehicle for delivery of extension services following a World Bank supported Government study to look at ways of revitalizing extension services delivery in Zambia. PEA is a systematic learning process focusing on cumulative joint learning using both indigenous and modern knowledge systems. It emphasizes on facilitation rather than teaching.

Public extension services delivery in Zambia is based on the principles of communication and adult learning psychology, Under PEA extension and advisory services are further distinctively delivered under four main paradigms namely;

- (i) Technology Transfer: by which Extension is a means of proactively changing voluntary behavior in the form of the adoption of externally developed, tested or proven technology or management practice. This is achieved by convincing people of the value of adoption through the use of agricultural shows, field demonstrations, field days, extension materials and presentations.
- (ii) Problem solving: by which Extension is a means of assisting individuals to find solutions to technological or management problems which arise and are inhibiting their desire to improve unit performance and productivity.
- (iii) Education: by which Extension is a means of proactive informal education which seeks to assist individuals and groups to better understand their situations, and to be able to make choices and take actions to improve their situations.
- (iv) Human Development: by which Extension is a means to facilitate and stimulate individuals and communities to take the initiative in problem definition and seeking solutions to individual and societal concerns. The assumption is that given an opportunity and interactive framework, individuals and communities will best improve their situation.

The four extension paradigms are complementary rather than in conflict, each relevant to different needs and situations. Extension under each of the paradigms could be used to assist change in a number of areas such as production, food quality, product development, rural development or social improvement

There are two main channels for extension services delivery in Zambia namely; Farm Institutes, Livestock Service Centres and Farmer Training Centres on one hand and, the network of agricultural blocks and camps for fisheries, crops and livestock on the other hand.

2.2. Major Extension Service Providers

The Government of the Republic of Zambia recognizes the important role played by non-public sector players in the provision of agricultural extension and advisory services. Historically, public agricultural extension services have been dominant in the delivery of extension services in Zambia. Following the process of economic liberalisation embarked on by the Government in the early 1990s other extension and advisory services providers have also come on board and these can be distinguished into private sector players, Non-Governmental Organisations (NGOs), International Development Partners and Farmer Organisations.

Notable among private sector players are major seed companies which are active in the delivery of extension and advisory services. Players in the cotton, sugarcane, and tobacco sectors are also active in providing extension and advisory services to their respective clients.

There are a number of NGOs which are active in delivering agriculture extension services in Zambia. Some International NGOs implement projects funded by bilateral and International Development Partners (IDPs). They employ their own full-time extension officers serving the project target areas with specific interventions.

Many NGOs and some IDPs however, depend on agriculture extension staff from the public extension system to make follow ups on their interventions. Farmer organizations and cooperatives are also active in providing extension services to their members. The Zambia National Farmers Union (ZNFU) is the biggest farmers' organization with its full-time staff providing various forms of extension services. Other players are the Zambia Cooperative Federation, the Small Scale Farmers' Association, Livestock Services and Agrivet.

2.3. Challenges of Extension Services Delivery In Zambia

Government efforts to improve the rural poor's' livelihoods through increased production and productivity have been constrained by a number of challenges both structural and institutional in nature and these include:

2.3.1. Inadequate Understanding of Participatory Extension Methodologies among Field Extension Workers

In the year 2000 the Government of the Republic of Zambia introduced Participatory Extension Approach as the main vehicle for delivery of public extension services. This development did not however go hand in hand with the necessary adjustments

in the syllabi of agricultural training institutions. This has brought about a knowledge gap in participatory extension service delivery methods among graduates resulting into ineffective dissemination of agricultural innovation. In addition, trainings in PEA methodologies inadvertently left out veterinary services and fisheries extension staff thereby widening the knowledge gap even further

2.3.2. Non Functional Value Chains as Focus in Planned Extension Programmes

The Zambia agricultural extension system commonly delivers extension services that focus on the promotion of improved technologies and practices in order to increase agricultural production and productivity for consumption based satisfaction. The extension service poorly addresses market oriented production systems..

2.3.3. Inadequate and Underperforming Livestock Service Centers and Farmer Training Centres

Livestock Service Centres which are supposed to serve as one-stop-shops for all livestock extension services and Farmer Training Centres (FTCs) which are designed for farmer tailored training as well as commodity demonstrations in selected agriculturally strategic districts are currently inadequate to meet the increased demand for extension services. Moreover, the few available have been performing below expectation resulting in poor agricultural extension service delivery, low adoption and adaptation rates.

2.3.4. Poor Extension Planning, Reporting and Feedback Culture

Execution of spontaneous extension activities is a common occurrence at field level thereby leading to inefficient use of scarce resources. This is further exacerbated by unavailability of functional information sharing platforms for harmonization and planning of field extension programs among stakeholders. In addition outcomes from most field extension activities are either not reported or inadequately covered for conveyance to facilitate management decision making. In cases where reports are conveyed, the culture of not giving feedback has been prevalent thereby defeating the whole notion of a management information system

2.3.5. Inadequate In-Service and Refresher Trainings for Front Line Extension Workers.

The current extension service delivery system does not adequately cater for extension staff in-service and refresher training. This could result in most field extension workers confronting farmers with obsolete extension messages leading to a possible loss of confidence in public extension services delivery and eventually to poor adoption and adaptation of innovation hence low production and productivity.

The Government introduced the establishment of Farm Institutes in every province of the country in recognition of the need to continually refresh and update field extension workers with the latest innovation in the agricultural sector.

Over time the refresher information has diversified from the crop and livestock orientation to include fish. In addition to inadequate financial support for In-Service training, there have not been strong linkages between the Farm Institutes and main sources of innovation leading to underutilization and dilapidation of the institutions. Currently the original purpose of establishing Farm Institutes is not being realized also partly because staff assigned to manage them is arbitrarily posted without the necessary competencies.

2.3.6. Low Extension Officer-to-Farmer Ratio

There has been an increase in the farmer population with increased demand for agricultural extension services without a corresponding increase in the number of extension workers at field level. In addition the rate of addressing the high extension worker turnover has not been adequate. This has resulted in the current extension worker to farmer ratio of up to 1:1200 for crops production and up to 1: 3000 in the case of livestock production. These low ratios which fall far below the international recommended standards have stretched the capacity of extension officers to deliver effective extension services.

2.3.7. Lack of Clarity on Farmer Categories

Targeting of developmental interventions to farmer communities has been poor because of unclear farmer categorization which has often resulted into rich capture and benefit to unintended beneficiaries.

2.3.8. Conflicting Methodologies in Extension Service Delivery between Public and Private Sector Players

The Government recognizes and encourages the participation of the Private sector and NGOs in the delivery of extension services to compliment public extension service. However, the coming on board by other players has brought about conflict in extension delivery strategies, with some providers going to the extent of enticing farmers with monetary payments to woo their participation in extension programmes.

2.3.9. Inadequate Coordination and Communication among Extension Service Providers

Pluralistic extension service delivery entails the need for effective coordination and communication among the players at all levels (National, Provincial, District and Community) for effective resource utilization. Currently, the extension service delivery is characterized by duplication of efforts between and amongst service providers while other needy areas are not covered. Further, the lack of effective coordination and communication has often resulted in conflicting information on the same topic.

2.3.10. Inadequate Support to Extension Service Delivery

Effective extension and advisory services delivery requires provision of adequate operational logistical support such as transport, appropriate accommodation (both staff houses and offices), and extension equipment and tools. Currently, it is uncommon for extension officers not to work with limited or without operational resources.

2.3.11. Inadequate Technical Capacity in Advisory Service Provision

The coming on board of the Private sector extension service delivery has seen an increase in unqualified staff engaged to provide agricultural advisory services. A similar trend is emerging in the Public sector where staff employed to provide the advisory services lack the relevant competences resulting into ineffective innovation transfers and poor advisory services provision.

2.3.12. Unpredictable Weather Pattern due to Climate Change

Climate change will impact a number of vital economic sectors including agriculture. The negative effect of climate change may delay the start of the rainy season or cause unstable rainfalls that directly affect the flowering and productive capacity for crops. Zambia has not been spared from increasingly prolonged drought periods, which especially affect perennial crops and livestock nutrition resulting in substantially lower outputs in both crops and livestock among small scale farmers.

2.3.13. Constrained Access to Agricultural Information and Technologies due to Gender Inequality

It has been shown that men typically receive more extension advice and have more contact with extension agents than women, yet women carry an important proportion of agricultural work

3.0. VISION OF THE NATIONAL AGRICULTURAL EXTENSION AND ADVISORY SERVICES STRATEGY

The vision of the National Agricultural Extension and Advisory Services Strategy is: “A well-developed and dynamic extension and advisory services system that contributes to wealth creation among small scale farmers.”

4.0. RATIONALE

The National Agriculture Extension and Advisory Services Strategy (NAESS) is formulated on the basis of key Strengths, Weaknesses, Opportunities and Challenges in the agricultural sector. It is aimed at transforming low agricultural production and productivity into sustainable agriculture that ensures the promotion of household food and nutrition security, improved incomes and poverty reduction.

5.0. GUIDING PRINCIPLES

- 5.1. Adult learning and communication
- 5.2. Sustainable growth and transformation of agriculture in a gender responsive and nutrition sensitive manner
- 5.3. Physical and economic access to nutritious food
- 5.4. Diversity in extension approaches
- 5.5. Improved incomes for rural households
- 5.6. Government as facilitator of private sector led agriculture
- 5.7. promotion of agriculture as a business
- 5.8. Agricultural diversification

6.0. OVERALL OBJECTIVE

To contribute to the effective and efficient information dissemination and uptake of responsive innovations in order to increase sustainable agricultural production and productivity that assures household and national food and nutrition security.

6.1. Specific Objectives:

- 1 To promote participatory extension approaches
- 2 To promote participatory research;
- 3 To improve extension and advisory services delivery to farmers and other stakeholders in the value chain;
- 4 To strengthen technical capacities of farmers and other stakeholders in the value chain;

- 5 To promote farmer organizations based on commodity interest;
- 6 To facilitate formation of commodity interest groups
- 7 To enhance farmer participation in agricultural innovation platforms;

7.0. STRATEGIC OBJECTIVES AND MEASURES

Objective 1: Strengthening Capacities in Understanding of Participatory Extension Approaches (PEA)

Measures

The identified knowledge gap in PEAS among extension staff shall be resolved by

- i. Conducting regular and periodical reviewing of the agricultural extension syllabi in agricultural learning institutions with the Ministry of Agriculture and Ministry of Fisheries and Livestock taking a leading role.
- ii. Capturing emerging PEA topics and other issues related to agricultural extension during periodical syllabi reviews.
- iii. Conducting short induction courses and refresher in-service training to mitigate the knowledge gaps among the extension staff (both public and private) in the short term.

Objective 2: Focusing Functional Value Chains in Planned Extension Programmes

Measures

Increasing production does not necessarily guarantee better income for farmers unless it is strategically linked to markets through effective value chain development.

- i. Encourage production and diversification into agricultural commodities of economic importance and have comparative advantage to the specific localities.
- ii. Each District to have an extension strategy focusing on functional value chains that will be developed based on the local natural environment, recommendations from research and Subject Matter Specialists, Lead Farmers' practices as well as challenges experienced by farmers.
- iii. The extension strategies shall be availed to all intervening agencies as a guide for targeting service delivery.

Objective 3: Public Private Sector Partnerships and Transformation Of Farmer Training and Livestock Service Centres into Farmer Driven Enterprises

Measures

- i. Transform Farmer Training Centres and Livestock Service Centres into effective farmer driven enterprises through Public-Private Partnerships (PPPs).

- ii. undertake necessary staff realignment and recruitment to ensure effective delivery of extension services
- iii. Have functional management committee with visible farmer representation that will be responsible for the overall operations and management of the institution.
- iv. The institutions shall further be generating bankable business plans with concise cash flow diagrams for economic self-sustenance.
- v. Establish new Livestock Service Centres and Farmer Training Centres at strategic locations.
- vi. Encourage participation of the private sector in establishment and running of these institutions in line with the Public-Private-Partnerships guidelines.

Objective 4: Robust Extension Planning, Monitoring, Reporting and Feedback

Measures

- i. Planning of public extension activities shall be in line with the Agricultural Planning and Resource Guide for Extension Officers (ARGEOs) format which is designed to enhance focused planning and monitoring of daily activities. Progress in reporting of extension activities to supervisors shall be transparently displayed in the supervisors' offices in the "checklist format" already designed to ensure self-checking. Such format will clearly show the mode (mail, verbal, phone call, text message etc) and timeliness of feed back.

Objective 5: Revitalized In-Service and Refresher Trainings for Front Line Extension Staff.

Measures

In efforts to resuscitate the operations of Farm Institutes and make them responsive to their diversified extension staff refresher and in-service training mandate, the Government of the Republic of Zambia shall undertake to strengthen linkages between Farm Institutes and major sources of refresher and In-Service innovation such as research and information centres. This will be achieved by

- i. making known the availability of land space and infrastructure at Farm Institutes for on-farm trials and demonstrations of proven innovative technologies,
- ii. Use of ICT to link Subject Matter Specialists to main research and information centres around the country;
- iii. Encouraging refresher training sessions by research with Subject Matter Specialists.
- iv. Harmonization committee meetings will be particularly taken advantage of to advance the Farm Institutes/Research linkages agenda.

While lack of in-service training results in gaps in knowledge, skills and practices contributing to delivery of ineffective extension and advisory services, provision of the

same to cover multiple domains may not be sustainable with scarce resources. The Government will promote and encourage stakeholders to identify specific areas requiring capacity building among extension workers.

The identified knowledge gaps shall be further resolved by regular and periodical reviewing of the agricultural extension syllabi in agricultural learning institutions with the Ministry of Agriculture and Ministry of Fisheries and Livestock taking a leading role as main consumer of the institutions' products. The periodical syllabi reviews would further capture emerging topics and other issues related to agricultural extension.

The Government shall further undertake necessary staff realignments and recruitments which will go hand in hand with generation of bankable business plans that will contribute to creation of an economically viable revolving fund which will sustain the Farm Institutes. The participation of the private sector in running Farm Institutes shall be encouraged in line with the Public-Private-Partnerships guidelines.

Objective 6: Focus On Good Practice and Farmer Commodity Study Groups

Measures

The Government of the Republic of Zambia shall:

- i. Encourage and promote the use of farmer commodity study groups such as Farmer Field Schools (FFS) and Farmer Study Circles (FSC) as the main entry points for farmer tailored advisory services and experiential learning. The group approach has the advantage of not only horizontal innovation transfer but helps to reach out to more farmers and thus mitigate the low extension officer to farmer ratio. This will be concurrent with the recognition of individual farmers and their unique farm constraints.
- ii. Promote formation of Farmer Field Schools as farmer commodity study groups for functional value chains where farmers lack knowledge in basic agronomic practices.
- iii. Promote formation of Farmer Study Circles to be used on functional value chains to address issues that may affect a given commodity along the value chain.
- iv. Promote and encourage use of Lead Farmers as models in “good practice” within their respective farmer categories

Objective 7: Farmer Registration and Categorization for Effective Targeting of Development Interventions

Measures

The agricultural sector has a wide variation in the farmer categories. The Government of the Republic of Zambia fully recognizes the need to distinguish between different users of agricultural advisory services. A comprehensive farmer registration system is

indispensable in the accurate categorization of farmers and targeting of development interventions by all stakeholders.

Based on a number of social, cultural and economic criteria, the Government shall for extension purposes recognize and fully cater for the following crops farmer categories:

- i. Large Commercial,
- ii. Medium Commercial,
- iii. Emergent,
- iv. Small Scale and
- v. Unclassified Subsistent Farmers.

The Government shall further work with key stakeholders to characterise and categorize fish and livestock farmers.

With respect to crops production:

- i. Large Commercial and Medium Commercial farmers may be distinguished based on hectareage cultivated (more than 20 hectares and up to 20 hectares respectively) and level of mechanization:
- ii. Emergent farmers are those who have total cultivated area of 5 to 10 hectares per season not for purposes of household food security but with view to sell and they commonly possess own Animal Draft power in some parts of the country, or have lighter tractors. They are also capable of hiring extra hands at peak times.
- iii. Small Scale farmers generally depend on family labour, they use hand implements and their motive for cultivating (1 to 5 hectares) is often household food security and generally depend on extension workers or social gatherings for agricultural information.
- iv. Unclassified Subsistent farmers don't depend on farming as their main source of livelihood. They could engage in charcoal burning, beer brewing and can hire their labour to other peoples' farms. They also generally cultivate less than one hectare at any time Public extension services will target small scale farmers and strive to graduate them into Emergent Farmer categories while keeping the lower door open for progressive unclassified subsistent farmers to improve into small scale farmer ranks.

Objective 8: Extension Coordination and Harmonizing Diversity in Extension Approaches

Measures

A unified pluralistic extension service is indispensable in ensuring that farmers get value for their efforts, and the Government of the Republic of Zambia has the responsibility to facilitate coordination and collaboration among various extension service providers.

Given that the agriculture sector has wide variation in extension approaches and service delivery, it is prudent to strengthen communication, coordination and collaboration among extension service providers. This will be achieved by

- i. Implementing the guidelines of the Extension Harmonisation Committee which were adopted in 2011.
- ii. Promoting and encouraging establishment of extension planning and information sharing platforms in the name of harmonization committees in order to identify and narrow down areas of divergence, as well as consolidate commonality in extension approaches .
- iii. Government taking the lead in identifying key extension players at all levels and encouraging such to nominate representatives to respective extension harmonization committees.
- iv. Systematic promotion of exchange of information, innovation and human resources between and among stakeholders and partners.

Objective 9: Incentivising Performance among Field Extension Workers

Measures

While it is not uncommon for field extension workers to implement extension programmes with constrained operational support, some individual field extension workers have often stood out to show their commitment to work even under limited resources. The Government shall undertake to recognize and incentivise performers within the field extension worker ranks. This incentivisation shall take many forms, including:

- i. Nominations for both local and overseas short study tours and courses,
- ii. Recommendations for promotions or opportunities to work briefly at National or provincial offices.

Any form of reward shall be required to be supported with documented proof outlining an individual's areas of excellence.

Objective 10: Strengthening Farmer-Research and Extension Linkages

Measures

Enhancement of linkages between research and extension is cardinal in effective innovation dissemination. This will be achieved through:

- i. Strengthening Planned and institutionalized dialogue among research, extension and farmers
- ii. Promotion and encouraging of on-farm planning, implementation and assessment of research activities will be encouraged.

The desired interaction among research, extension and farmers in trying out technologies is illustrated in annex 2.

Objective 11: Professionalizing Agricultural Extension and Advisory Services through development of a Science Based Extension System.

Measures

- i. The Government shall take centre stage in enhancing professional growth of agricultural extension and advisory services by working with other stakeholders to establish standards and rules of engagement through appropriate regulatory mechanisms that will focus on the quality and competencies of both public and private sector extension providers.

Objective 12: Information and Communication Technologies (ICT) Within Agricultural Extension and Advisory Services

Measures

Given the increasing usage of ICT tools in agricultural extension and advisory services, the Government shall continue to encourage inclusion of ICT tools as a means of scaling up extension and advisory services. The Government recognizes the importance of knowing available and selection of the most effective combination of systems and devices for effective communications appropriate to a range of purposes, contexts and users:

- i. Use of broadcasting technologies to serve large groups of people shall be encouraged. This will include use of radios, televisions and videos. Broadcasting tools that are interactive and have “active listening communities” in discussion as well as transmission of knowledge shall be promoted along with participatory video production methods that allow farmers to be actively involved in telling their own stories and learning from one another sharing their best practices
- ii. Use of mobile devices to enhance agricultural extension and advisory services shall be encouraged. The Government recognizes the higher penetration of mobile technology amongst all ICTs. Use of cell phones and other devices with internet capability will be promoted for providing certain types of information to farmers and allowing farmers and extension workers to extend their communications with each other.
- iii. The Government further recognises the use of internet and internet based tools for functions such as raising awareness and providing technical information and free training opportunities.
- iv. To ensure high standard of service delivery agriculture extension staff will be equipped with appropriate ICT equipment and training.

Objective 13: Mainstreaming Gender in Agricultural Extension and Advisory Services

Measures

Despite their great contributions to the agricultural production and productivity, Zambian women farmers don't get due attention to access different extension services. This has negatively impacted on productivity, efficiency, effectiveness and overall economic progress of the country. The Government of the Republic of Zambia recognizes that access to extension services is one of the key enabling factors that shapes women's opportunities. The Government shall:

- i. Promote and encourage efforts to look at opportunities for engaging and enhancing the role of women farmers in increasing farm household production and income.
 - ii. Encourage formation of women farmer groups and gender-led producer associations as a means to bring extension and advisory services closer to women farmers.
 - iii. Pay attention to identification of inherent gender bias in extension and advisory services programming and management structures with view to identify barriers that may exist for women extension and advisory services professionals.
 - iv. Promote identification and sharing of good practices in reaching women and addressing gender inequalities by extension/advisory service providers.
- The overall intent shall be to ensure that gender is not an “add-on” to current extension and advisory services programs, but rather that addressing the needs of rural women and women farmers is fully integrated into the programs and institutions from the start.

Objective 14: Extension and Adaptation for Small Scale Farmers to Climate Change

Measures

Small scale farmers are the most vulnerable people to the expected impacts of climate change mainly due to their lack of information, adaptation capabilities and access to financial and technical support mechanisms. The Government recognizes that effective adaptation strategies must reduce present and future vulnerability to climate change and these should include coping strategies, or changes in practices and processes, in response to or in anticipation of the perceived climatic change. Agricultural extension and advisory services shall focus on three specific adaptation measures in addressing the effects of climate change as follows:

- i. Short-term solutions for adapting crops production will include dissemination of messages that promote improved water irrigation systems, more efficient water use, soil management and soil protection, Pest management and fertilization and

shade management.

- ii. Encouraging measures to reduce greenhouse gases through promotion of forestation/ reforestation, mulching techniques, Organic production and utilisation of waste materials/ bio-energy.
- iii) Long-term strategies include dissemination of extension messages for diversification of incomes, use of new and improved production techniques, use of improved varieties and preservation of genetic diversity. This shall be concurrent with deliberate efforts to improve access to climate data, linking of small scale farmers to carbon markets as well as linkage of organizations with external financing.

Objective 15: Mainstreaming Nutrition into Extension and Advisory Services

Measures

Malnutrition is one of the problems facing Zambia, especially the rural farming communities. Zambian farmers are producers of a variety of foods but they lack the knowledge on the nutritional importance of the foods they produce and how to utilize them for a healthy and productive life. The extension and advisory services will therefore play a key role in ensuring that appropriate skills, knowledge and messages are disseminated on

- i. Dietary diversity
- ii. Production diversity
- iii. Food Storage and Processing
- iv. Seasonal food use (crop choice and storage)
- v. Food safety (e.g. aflatoxins);
- vi. And water sanitation and healthy particularly in relation to livestock.

Some of the avenues to be used for dissemination of the innovations in order to facilitate effective nutrition education delivery at community level would include demonstrations, peer to peer engagement, positive deviance and model farmers.

Objective 16: Agricultural Productivity and HIV-AIDS

Measures

Planning and delivery of extension and advisory services need to fully take into account HIV/AIDS when interacting with farmers as it negatively impacts productivity. Individuals infected with HIV/AIDS lack the necessary physical strength required for farm work and this has a negative impact on food production. Even when not infected some households are often negatively affected by HIV/AIDS. This is as in the case where family members infected with HIV/AIDS will require extra care that will take away

productive time from their healthier relatives. People living with HIV/AIDS need nutritious foods on a daily basis.

In most cases these nutritious foods have to be bought using scarce financial resources that would otherwise have been invested into agricultural production and this has a potential to negatively affect both production and productivity. Under Participatory

Extension the following shall be done by field extension staff:

- i. Get a competent person on HIV/AIDS in the district to conduct awareness and sensitization sessions/workshops on HIV/AIDS prevention and control for both staff and communities/villages.
- ii. Get posters, pamphlets, and videos on HIV / AIDS for communities and staff from organizations that are dealing with HIV / AIDS.
- iii. Assist and encourage the establishment of home care programmes to avoid stigmatization of the infected.
- iv. Potential Youth Groups may be contacted to compose songs and drama to be used to create HIV / AIDS awareness.

8.0. NAESS COORDINATION AND IMPLEMENTATION FRAMEWORK

Whilst the coordination of extension activities is a responsibility of the Ministry of Agriculture and Ministry of Fisheries and Livestock, the sector-wide approach to extension and advisory services delivery calls for inclusiveness of stakeholders. At the national level, the two Ministries will work closely with the Zambian Forum for Agricultural Extension and Advisory Services (ZAFSAAS) which operates under the auspices of the Africa Forum for Agricultural Advisory Services (AFAAS) created and operates under the African Union authority to contribute to the fulfilment of the CAADP pillar IV (Maputo and Malabo Declarations).

The two Ministries will have a further responsibility of building the capacity of ZAFSAAS to enable the institution better serve the role of harmonizing and professionalizing agricultural extension and advisory services as well as providing a national forum for extension and advisory services information sharing.

The Ministry of Agriculture and Ministry of Fisheries and Livestock through their various departments will play a major role in the implementation of the NAESS by committing required human and financial resources.

Current efforts by Government aimed at supporting Extension and Advisory Services delivery include the following:

- i. Encouragement of Closer Research and Extension Linkages: This is with view to hasten the feedback process on technologies development and disseminated and target group acceptability and adoption

- ii. The Ministry of Agriculture and Ministry of Fisheries and Livestock supports formation of Farmer Groups such as Farmer Filed Schools, Farmer Study Circles, Dip Tank Committees and Disease Task Forces which save as critical entry points for advisory services
- iii. Recognition by Government that Fisheries and Livestock extension workers have been left out in mainstream extension services capacity building is an important milestone in closing the knowledge gaps among frontline extension staff
- iv. Promoting participation of the private sector in advisory services delivery as demonstrated by institutions such as the Zambia National Farmers Union, Livestock Services and other Farmer Associations.

8.1. EXTENSION AND ADVISORY SERVICES STRATEGIC MATRIX

OBJECTIVES	STRATEGIES	MAJOR ACTIVITIES
<p>Increase yields by at least 25% over a period of Five years</p>	<p>Strengthening Technology Dissemination</p>	<ol style="list-style-type: none"> I. Developing and packaging extension materials for extension staff and farmers II. Promoting extension /methodologies which will encourage hands on learning such as the farmer field school and other farmer interest groups III. Strengthening farmer exchange visits IV. Conducting specialized training for extension staff in various commodities with comparative advantage in producing regions
	<p>Strengthening technology generation</p>	<ol style="list-style-type: none"> I. Improving and adapting commodity management practices II. Developing and adapting post-harvest technologies III. Strengthening regional and international collaboration and partnership with Research organisations

	Strengthening technology generation	<ol style="list-style-type: none"> I. Improving and adapting commodity management practices II. Developing and adapting post-harvest technologies III. Strengthening regional and international collaboration and partnership with Research organisations
Increase the awareness of farming as a business	Minimising Post harvest losses	Training field level staff in appropriate post-harvest equipment, machinery and facilities
	Strengthening market linkages	Establish strong self-supporting groups in which members support each other to produce, process, package and market their commodities
Strengthening the coordination among stakeholders in extension and advisory services	Improving coordination between the public and private sector stakeholders	<ol style="list-style-type: none"> I. Organise multi stakeholder innovation platforms at district, province and National levels II. Participate in trade fairs, exhibitions and exchange visits for best practices III. Set up management information systems for knowledge sharing and learning
	Advocating for a predictable public private partnership environment for Extension and advisory services delivery development	<ol style="list-style-type: none"> I. Lobby and advocate for policy and regulatory reforms in the extension and advisory services area

ANNEXES

Annex 1: Strengths, Weaknesses, Opportunities and Challenges Analysis

Based on the present extension delivery mechanism and service providers, the Strengths, Weaknesses, Opportunities and Challenges of the current status of service delivery mechanism and providers are given below:

Strengths

1. Availability of well-defined extension structures at all levels.
2. Presence of technical personnel at sub-district, District, Provincial and National offices.
3. Presence of extension approaches.
4. Existence of farmer and staff training facilities.
5. Presence of Agriculture Research Stations at National and Provincial Levels.
6. Interest of farmers to adopt/adapt new appropriate technologies and innovative interventions to improve their agricultural productivity.
7. Availability of various stakeholders who are participating in delivering extension services in the Government, Private Sectors and NGOs.
8. Availability of public and private actors to train farmers and staff.
9. Presence of various farmers' organizations, NGOs and projects as service providers.
10. Willingness by the Government, NGOs and the Private Sectors to support growth of agriculture
11. Enabling policy environment for development of the agriculture sector.
12. Existence of Agriculture Training Institutions to train and produce required trained/qualified personnel to deliver extension services.
13. Existence of public and private media to disseminate agricultural information.
14. Operating Structures already in place for the Decentralization process
15. Induction and training plans in place for extension staff to further their education.
16. Presence of out-grower schemes and contract farming

Weaknesses

1. Inadequate staffing at all levels of extension service delivery mechanisms.
2. Low extension service workers to farmer ratio at field level.
3. Inadequately trained field extension workers to provide effective advisory services.
4. Inadequate resources to drive and sustain extension service delivery mechanisms.

5. Inadequate linkages between Research and Extension.
6. Inadequate responsive innovations.
7. Absence of information sharing platforms among extension and advisory service providers.
8. Lack of a legal framework for extension collaboration among stakeholders.
9. Absence of established standards for extension and advisory services delivery.
10. Inadequate ICT for extension services.
11. Inadequate infrastructure to deliver effective extension services.
12. Low utilization of existing infrastructure to deliver effective extension services.
13. Training contents at tertiary level not responsive to changing needs for agriculture extension.
14. Change of mind-set among Public Extension Officers with regards to changed extension approaches.
15. Inadequate access to agricultural information for farmers and other stakeholders.
16. Poor transparency and weak governance systems within farmer organizations.
17. No regulation on personnel engaged in extension services which often result in poor quality of extension services.
18. Poor Adherence to Job Descriptions

Opportunities

1. Existing Government Policies and Strategies to promote growth of agriculture.
 2. Willingness and interest of many farmers to adopt new technologies
 3. Willingness of the donor community to support agriculture.
 4. Collaboration with other international agricultural training/research institutions.
 5. High potential of natural conditions and resources for sustainable agriculture.
 6. Existence of professional regulatory framework in other sectors to learn from.
 7. The existing and growing local and international markets for agricultural products.
 8. Increase in population and urbanization.
 9. Global economy.

Challenges

1. Volatility of Government Policies and commitment towards strengthening and improvement of effective extension service delivery as stipulated in the current Government Plans and Policies.
2. Slow progress with the decentralization process triggering anxiety and uncertainty. .
3. Inadequate allocation and erratic release of resources.

4. Climate Change
5. Withdrawal and shrinking of some donor support.
6. Economic recession
7. Restrictive land tenure systems

ANNEX 2:

RESEARCH-EXTENSION-FARMER LINKAGE

