



# THE UNITED REPUBLIC OF TANZANIA NATIONAL AUDIT OFFICE

## PERFORMANCE AUDIT REPORT ON THE PROVISION OF LIVESTOCK EXTENSION SERVICES



CONTROLLER AND AUDITOR GENERAL  
MARCH 2025



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## About the National Audit Office

### Mandate

The statutory mandate and responsibilities of the Controller and Auditor-General are provided for under Article 143 of the Constitution of the United Republic of Tanzania of 1977 and in Section 10 (1) of the Public Audit Act, Cap 418.

## NAOT Vision, Mission & Motto



### Vision

A credible and modern Supreme Audit Institution with high-quality audit services for enhancing public confidence.



### Mission

To provide high-quality audit services through modernization of functions that enhances accountability and transparency in the management of public resources.



### Motto

Modernizing External Audit for Stronger Public Confidence



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We are an impartial public institution, independently offering high-quality audit services to our clients in an unbiased manner.



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We deliver high quality audit services based on appropriate professional knowledge, skills, and best practices.



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We observe and maintain high ethical standards and rules of law in the delivery of audit services.



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We focus on achievements of reliable, timely, accurate, useful, and clear performance targets.



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We value and work together with internal and external stakeholders.

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## PREFACE



Pursuant to Section 28 of the Public Audit Act, CAP 418. I am mandated to conduct a Performance Audit (Value-for-Money Audit) to establish the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministries, Departments and Agencies (MDAs), Local Government Authorities (LGAs) and Public Authorities and Other Bodies which involves enquiring, examining, investigating and reporting, as deemed necessary under the circumstances.

I have the honour to submit to Her Excellency, the President of the United Republic of Tanzania, Hon. Dr. Samia Suluhu Hassan, and through her to the National Assembly of the United Republic of Tanzania, the Performance Audit Report on the Provision of Livestock Extension Services.

The report contains findings, conclusions, and recommendations for the Ministry of Livestock and Fisheries and the President's Office - Regional Administration and Local Government (PO-RALG). These Ministries had the opportunity to review the report and provide comments, and I sincerely acknowledge that their inputs were constructive and valuable.

My Office will carry out a follow-up audit at an appropriate time regarding action taken in implementing the recommendations given in this report.

I would like to thank my staff for their commitment to preparing this report. I also acknowledge the audited entities for their cooperation with my Office, which facilitated the timely completion of the audit.

A handwritten signature in blue ink, appearing to read 'Charles E. Kichere', with a large, sweeping flourish extending to the right.

Charles E. Kichere  
Controller and Auditor General,  
United Republic of Tanzania  
March 2025.

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## LIST OF ABBREVIATIONS AND ACRONYMS

AI	Artificial Insemination
ASDP	Agricultural Sector Development Program
DLFO	District Livestock and Fisheries Officer
GDP	Gross Domestic Product
LFF	Livestock Farmers' Field School
LGAs	Local Government Authorities
LSTP	Livestock Sector Transformation Plan
MLF	Ministry of Livestock and Fisheries
MoA	Ministry of Agriculture
NAIC	National Artificial Insemination Centre
NARCO	National Ranching Company Limited
NGOs	Non-Governmental Organizations
PO-RALG	President's Office - Regional Administration and Local Government
RS	Regional Secretariat
TALIRI	Tanzania Livestock Research Institute
TMB	Tanzania Meat Board
VLEOs	Village Livestock Officers
WARC	Ward Agricultural Resource Center
WLEO	Ward Livestock Extension Officers

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## EXECUTIVE SUMMARY

### Background

According to the National Sample Census of Agriculture 2019/20, Tanzania stocks 33.9 million cattle and other livestock species, including 24.5 million goats, 8.5 million sheep, and 87.7 poultry. In addition, the Economic Survey Report of 2020 indicates that the livestock sector accounts for 27% of the Agricultural Sector's contribution to GDP, of which 40% arises from beef production, 30% from the dairy industry, and the remaining 30% is contributed by other livestock products such as eggs, hides and skin.

The Livestock Sector Transformation Plan, 2022 indicates that the contribution of the livestock sector to the national income is low, as livestock-related activities contribute only 27% of the Agricultural Sector's contribution to the economy and 7.1% to Tanzania's GDP in particular, with sector growth at 5%. This growth largely reflects increases in livestock numbers rather than productivity gains.

The main audit objective was to assess whether the Ministry of Livestock and Fisheries and PO-RALG have adequately provided extension services to enhance the skills and productivity of livestock farmers. Specifically, the audit assessed the provision of livestock extension services, identification and registration of livestock of extension services, provision of resources for the quality extension services, and monitoring the quality of extension services.

### Main Audit Findings

#### Limited Access to Livestock Extension Services

91% of households lacked access to livestock extension services, contrary to the National Livestock Policy 2006, which required strengthened service coordination. Tanzania's extension officer-to-farmer ratio stood at 1:2,800, far below the World Bank- recommended ratio of 1:500.

Additionally, there was a 38% shortage of veterinary officers at the Local Government Authority (LGA) level and 42% at the Regional Secretariat (RS) level, limiting the availability of critical veterinary services, including treatment and vaccination.

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## **Inefficient Livestock Identification, Registration and Traceability**

There were inefficiencies in livestock registration, identification, and traceability, crucial for effective extension services. Only 11% of the estimated 45.9 million livestock were electronically tagged, with cattle achieving 18% of the target, donkeys 16%, goats 3%, and sheep 4%. The causes included high ear-tag fees, farmers' tax concerns, and inadequate planning. Among visited LGAs, Tanganyika registered at 61%, Kongwa at 11%, Handeni at 0.3%, and no livestock were registered at Bariadi.

Only 25% of the 184 LGAs conducted livestock registration and identification activity. Katavi achieved 100% coverage of the target, while Simiyu registered none. Dodoma and Tanga reached 75% and 60% of target, respectively. The traceability system was not functional, relying on only manual data collection using ODK software, which lacked analysis capabilities. Electronic ear tags could not be synchronized without barcode scanners, rendering the system ineffective. As a result, data for 5,068,617 livestock were not utilized for planning or improving extension services.

Additionally, LGAs, such as Kongwa and Tanganyika, lacked designated officers for livestock registration, while despite having officers, Bariadi and Handeni did not manage to register and trace targeted 430,176 and 140,474 livestock, respectively, during 2021/22-2022/23. Awareness campaigns were not adequately conducted, leaving farmers unaware of the importance of registration, leading to low participation and weakening traceability and extension services.

## **Inadequate Resources for Quality Extension Services: Human, Funds, Infrastructure, and Working Facilities**

The following were noted regarding the provision of human resources, funds, infrastructure, and working facilities for extension services:

- ***There was a 67% Shortage of Livestock Extension Officers in the Country***

The audit revealed a shortage of livestock extension officers, with 67% of the required positions unfilled. Out of the 13,279 needed officers, only 4,406 were available. In some LGAs, shortages reached as high as 86%,

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forcing one officer to serve up to seven villages in geographically dispersed areas. Similarly, there was a 38% shortage of veterinary officers at the LGA level and 42% at the regional level, leading to unqualified personnel handling veterinary tasks and risking animal health.

- ***Lack of Training for Livestock Extension Officers***

Extension officers lacked adequate training to stay updated on modern practices. In Kilosa District, only one training was planned over five years (2019/20-2023/24), and none of this was conducted. Similarly, Handeni District planned 20 training sessions but implemented only nine (45%). Kongwa and Tanganyika Districts did not plan any training sessions, leaving extension officers without opportunities to enhance their skills. Lack of training contributed to reliance on outdated livestock management methods, limiting the effectiveness of extension services provided to farmers.

- ***66% of the Extension Officers Lacked Motorcycles***

Inadequate working tools and transportation further impaired the extension service delivery. Around 66% of extension officers did not have motorcycles, limiting their ability to reach remote areas. In some regions, one motorcycle served up to 13 villages. Additionally, many officers lacked essential kits and equipment, reducing the quality of their services.

- ***There was a Deficit of 66% of Livestock Dip Tanks in the Country***

The audit noted a 66% shortage of livestock dip tanks nationwide, with 39% of existing tanks inoperable in the visited regions, contributing to the spread of tick-borne diseases that caused 15,375 cases and 1,398 livestock deaths. Additionally, the country lacked functional liquid nitrogen plants, with only two centres in Arusha and Mwanza operating, forcing farmers to incur high travel costs in search of the service.

- ***Inconsistent and Insufficient Funding***

Funding for livestock extension services was inadequate and inconsistent. Only 30% of the funds planned under the Livestock Sector Transformation Plan (LSTP) were released on average. Similarly, of the 15% revenue retention for livestock sector development, the LGAs managed to retain

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only TZS 829,930,787 and could not retain TZS 277,639,366 in the LGAs assessed. The livestock revenues were diverted to service other sectors like health and education. The LGAs of Sengerema, Monduli, Longido, and Tanganyika did not retain any amount to develop the livestock sector. Meanwhile, Kongwa and Hanang retained more than 15%, and the rest of the LGAs retained the amount, which was less than the 15% required.

Further, the extension services were deprioritized in major plans, receiving less than 6% of total investments in the National Livestock Master Plan and just 2.2% in the LSTP.

### **Inadequate Monitoring and Reporting of Extension Services**

Monitoring of livestock extension services was hindered by the existing D-by-D reporting structure, where extension officers reported to PO-RALG through LGAs without having any link to the technical ministry. This structure limited the technical ministry's ability to monitor service quality and hold officers accountable. Furthermore, the inadequate formal communication and monitoring mechanisms between ministries and LGAs resulted in the underutilisation of extension officers. It was found that in most cases, the extension officers have been performing non-extension-related duties, such as revenue collection and project supervision, which divert them from their primary roles.

### **Audit Conclusion**

Generally, it is concluded that the livestock extension services under the Ministry of Livestock and Fisheries and the President's Office - Regional Administration and Local Government are not functioning well. Due to inadequate services, 91% of households lack access to Livestock Extension Services. Despite the noted gap, the audit acknowledges several government initiatives, including the Ugani-kiganjani, m-kilimo and other electronic services intended to bridge the extension gap.

There is an uneven distribution of livestock extension officers, indicated by the extension officer-to-farmer ratio of 1:2,800, which was significantly lower than the World Bank's recommendation of 1:500. The extension officer-to-farmer ratio of 1:2,800, which was below the recommended 1:500, indicates a high shortage of extension officers and veterinary

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professionals. Without sufficient staff and resources, farmers continue to use outdated methods.

The system for registering and tracking livestock is not working, with only 11% of livestock registered countrywide. LGAs do not have registration officers, and awareness campaigns are not adequately conducted, resulting in low participation.

Infrastructure, such as livestock dip tanks and artificial insemination centres, is also insufficient. There is a 66% shortage of dip tanks, and many existing ones are not operational. Most insemination centres do not have the necessary equipment. There was also a funding issue, with only 30% of the planned budget being released, causing limited focus on services. Monitoring is inadequate, and unclear roles make it difficult for the government to oversee and improve the Livestock Extension Services.

### **Audit Recommendations**

The President Office-Regional Administration and Local Government Authority (PO-RALG) is urged to:

- a) Conduct regular and detailed needs assessments for livestock farmers to ensure that training programs are prepared to address the skill gaps and adequate skills are provided to livestock farmers.

The Ministry of Livestock and Fisheries (MLF) is urged to:

- a) Develop a comprehensive and cost effective registration identification and traceability system that involves all relevant stakeholders to ensure smooth implementation of the registration, identification and traceability activities;
- a) Develop and implement the training programs to equip extension officers with updated knowledge of livestock farming; and
- b) Set funds to equip livestock extension officers with sufficient working tools, enabling them to provide livestock extension services at their premises.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

According to the National Sample Census of Agriculture 2019/20, Tanzania stocks 33.9 million cattle, and other livestock species include 24.5 million goats, 8.5 million sheep, and 87.7 poultry. In addition, the Economic Survey Report of 2020 indicates that the livestock sector accounts for 27% of the Agricultural Sector's contribution to GDP, of which 40% arises from beef production, 30% from the dairy industry, and the remaining 30% is contributed by other livestock products such as eggs, hides and skin.

The Livestock Sector Transformation Plan, 2022 indicates that even though Tanzania ranks second in terms of cattle population in Africa, the contribution of the livestock sector to the national income is 27% of the agricultural sector's contribution to the economy and 7.1% to Tanzania's GDP, with sector growth at 5%. This growth largely reflects increases in livestock numbers rather than productivity gains.

The Agriculture Sector Development Plan Phase Two (ASDP II) has identified strategic interventions to increase agricultural production, productivity, and commercialisation, which also include the livestock sector. The absence of a transformational plan for the livestock sector for past years until 2022 has persistently hindered the successful implementation of the previous investment initiatives for this sector.

#### 1.2 Motivation for the Audit

The motivation to carry out the audit originated from various performance problems presented by several sources. The detailed performance problems are as indicated hereunder:

##### **a) Shortage of Livestock Extension Officers at Local Government Authorities and Working Tools**

The Agricultural Masterplan, 2024 has indicated the shortage of extension officers at the village, ward and district council levels. The available data indicates that there are only 4,406 extension officers, which is 33% of the actual demand of 13,279 extension officers, which results in a shortage of

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8,873 extension officers in the country. Also, the Livestock Sector Transformation Plan, 2022, shows that inadequate working tools and facilities, including transport and extension toolkits, remain a matter of concern in the livestock sector.

**b) Inadequate Knowledge and Skills of Extension Officers in Emerging Roles**

The Audit noted that, extension workers lack adequate functional knowledge and skills in various areas like entrepreneurship, innovation systems, value chain, business skills, climate change, environmental conservation, general knowledge on extension, ICT, communication skills, proposal writing and general practical-oriented skills. Also, the extension workers have limited knowledge and skills in networking and partnering, coaching, negotiation and mediation, problem-solving, capacity to reflect, and facilitation, to mention a few. (Tanzania Livestock Modernization Report, 2015).

**c) Inadequate Access to Veterinary Extension Services for Livestock**

In a 2015 study on educating pastoralists and extension officers on diverse livestock diseases in a changing environment, the common challenge faced by pastoralists and extension officers was identified as having limited access to livestock health inputs. Furthermore, the extension officers were not adequately provided with transportation, which was a critical tool for their duties. Transport challenges have hindered the ability of extension officers to visit pastoralist households promptly and on time, particularly if multiple households requested their services.

Furthermore, the review of the Livestock Sector Transformation Plan 2022/23-2026/27 indicated that the country's annual production of vaccines stands at 65,000,000 doses compared to the required 841,104,000 doses. This indicated a gap of 776,104,000 doses per year. Additionally, out of 13 critical identified diseases in the country, only seven vaccines are currently being produced by the Tanzania Veterinary Laboratory Agency (TVLA) through its Tanzania Vaccine Institute (TVI).

Reviewed strategies for overcoming beef production in Tanzania pointed out that livestock diseases continue to impose a substantial operation cost on farmers. It is estimated that the total cost of treating Foot and Mouth



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Disease (FMD), Peste des Petits Ruminants (PPR) and Newcastle Disease (ND) in the country stands at 101.8 billion Tanzanian Shillings per year. Meanwhile, the loss estimated from tick-borne diseases is estimated at 150 billion Tanzanian shillings per year.

#### **d) Achievement of the SDGs through Livestock Development**

The Global Agenda for Sustainable Livestock adopted SDGs 1 and 2 as its reference framework in organizing its actions under four domains: food and nutrition security, animal health and welfare, livelihoods and economic growth, and climate and natural resources.

The provision of extension services for livestock resources can improve livestock productivity. Livestock farming would be improved and transformed from traditional to commercial livestock farming. This transformation can significantly improve lives by ending hunger and malnutrition through increased consumption of nutritious animal-source foods, generating income, creating employment, generating fiscal revenue, and earning foreign exchange.

Therefore, based on the above-discussed factors, there was a need to conduct an audit about the provision of extension services to livestock resources to underscore the prevailing challenges related to the provision of extension services to livestock and thereby recommend a possible performance problem that can be addressed through different interventions.

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## 1.3 Audit Design

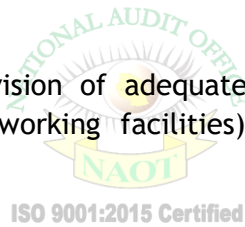
### 1.3.1 Audit Objective

The objective of the audit is to assess whether the Ministry of Livestock and Fisheries and PO-RALG have adequately provided extension services to enhance the skills and productivity of livestock farmers.

### 1.3.2 Specific Audit Objectives

Four specific objectives were used to address the main audit objective. Specifically, the audit aimed to assess whether the Ministry of Livestock and Fisheries and PO-RALG have:

- a) Adequately provided livestock extension services (training and backstopping services) to livestock farmers to enhance their skills;
- b) Adequately managed process for the identification, registration and traceability of livestock for extension services is functioning efficiently;
- c) Prioritized the provision of adequate resources (Human, Funds, infrastructure and working facilities) for the quality extension services; and
- d) Adequately monitored the quality of the provided extension services at the LGA level.



### 1.3.3 Scope of the Audit

The main audited entities were the Ministry of Livestock and Fisheries (MLF) and the President's Office - Regional Administration and Local Government (PO-RALG). The MLF is responsible for preparing, reviewing, and implementing policies, strategies, and guidelines to provide extension services to livestock farmers.

On the other hand, the PO-RALG is responsible for coordinating and monitoring the provision of extension services in different regions.

The audit focused on training given to livestock farmers and extension officers to equip them with adequate skills; the performance of identification registration and traceability of livestock during its implementation in LGAs; monitoring of quality extension services provided

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by extension officers; and provision of resources to enhance adequate extension services.

Under the aspect of the provision of training and backstopping services to livestock farmers, the audit covered sufficient provision of training and backstopping services to livestock farmers to equip them with skills; planning of training and backstopping services by taking into consideration livestock farmers across all levels; and Identification of farmers needs for sufficient planning of extension services.

The audit focused on several aspects. It examined livestock identification, registration, and traceability at all levels to support the provision of extension services.

The audit also assessed whether registration, identification, and traceability were carried out in a timely manner to establish the livestock population for effective extension services accurately.

Additionally, the audit examined the system's efficiency for livestock registration, identification, and traceability, including the timeliness of data updates. The appointment of designated livestock registration officers at the LGA was evaluated to ensure effective registration, identification, and traceability.

Under the aspect of prioritization of Resources (human, financial and working facilities), the audit assessed the availability and adequacy of training of Extension Officers, provision and maintenance of infrastructures for the provision of Extension Services at the LGAs, the sufficiency of working tools for the provision of extension services; timely availability of funds for extension services; functionality of established WARC and livestock farmers field school (LFFS).

Under the monitoring activities for the provision of extension services, the audit focused on the efforts by MLF and PO-RALG in monitoring the quality of extension services provided at the LGA, the presence of a coordinated reporting structure between extension Officers at LGAs and the Sector Ministry, adequacy of information sharing between the MLF and PO-RALG and standards for advocating quality of extension services provided to the livestock farmers.

The audit covered five (5) financial years starting from 2019/20 to 2023/24. This period gave the audit the trend on the provision of extension services

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to livestock farmers. In 2019/20, the activities for the registration of livestock had started. Hence, the five-year trend permitted the audit team to measure the impact of the government's efforts on the provision of extension services to livestock farmers. Detailed main audit questions and sub-questions are presented in **Appendix 2**.

#### **1.3.4 Audit Criteria**

The assessment criteria were drawn from various legal documents that mandate the respective audited entities to perform their functions. Four major audit criteria were used. These include: (i) Training to livestock farmers and extension officers; (ii) Implementation for identification, registration and tractability of livestock; (iii) Monitoring of extension services; and (iv) Infrastructure and Working Facilities for improvement of extension services provision.

These assessment criteria are explained below:

##### ***Provision of Training to Livestock Farmers***

Para 2.4.1 (ii) of the Guidelines for the Provision of Livestock Extension Service, 2011, requires the LGAs to design capacity-building programmes for staff and livestock farmers that may involve a wide range of activities, including, among other things, education, training, study tours, sensitisation seminars, technical assistance and the provision of working tools and facilities such as transport and communication facilities, office space and extension kits.

Moreover, para 1.3 (ii) of the PO-RALG Strategic Plan (2021/22-2025/26) stipulates the roles of PO-RALG, which include building the capacity of Regional Administration, coordinating and monitoring regional affairs and provision of technical support to LGAs through the Regional Secretariats.

In addition to that, para 5.4(vii) of the Livestock Sector Transformation Plan requires the use of e-extension to improve the coverage of the extension services to be provided.

##### ***Implementation of the Activity for Identification, Registration and Traceability of Livestock***

Para 3.10 of National Livestock Policy 2006 stipulates the establishment of a system for identifying, registering and collecting data for each animal

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throughout its entire life cycle. Additionally, Section 65 (1)(b) of the Animal Disease Act, 2003, instructs the responsible entity (MLF) to prescribe measures for the identification of animals at all times for purposes of traceability and also for specific identification.

Section 6(1) of the Livestock Registration, Identification and Traceability Act, 2010 requires the registration of premises established. Furthermore, Section 6(ii) of the same act requires the owner of the livestock farm in the compulsory livestock registration and identification area to register and keep records of his livestock.

Also, Section 12(1) of the same act requires the LGA to designate one of its officers as a livestock identification, registration and traceability officer.

#### ***In Ensuring Adequate Resources and Working Facilities to Improve Provisional Extension Services***

Para 6(ii) of the Guidelines for the Provision of Livestock Extension Services requires the LGA to Keep and update an inventory of LGA livestock extension human resources and facilities. Para 1.3(ii) of the PO-RALG Strategic Plan (2021/22-2025/26) indicates the roles of PO-RALG to be building the capacity of Regional Administration and monitoring regional affairs and technical support provided to LGAs by Regional Secretariats.

Moreover, Para 2.5.2 of the Guidelines for the Provision of Livestock Extension requires the Ministry of Livestock and Fisheries to monitor the extension services provision, including the extension services provided by LGAs and private service providers.

#### **Monitoring of Extension Services**

Para 2.3.1 of the Strategic Plan (2021/22-2025/26) requires the PO-RALG to ensure the coordination and monitoring of the provision of quality services to the community that shall trigger the well-being of all community members. Additionally, para 2.5.2 (xvi) of the guidelines for the provision of extension services requires the Ministry of Livestock and Fisheries to monitor the quality of extension services provision by LGAs.

#### **1.4 Sampling, Methods for Data Collection and Analysis**

To achieve its objectives, the audit gathered the needed audit evidence from MLF, PO-RALG and all sampled LGAs. Below are detailed explanations

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of the sampling techniques used, methods for data collection, and data analysis.

#### 1.4.1 Sampling Techniques

Purposive sampling was used to select the type of livestock to be assessed, as well as the respective regions and LGAs. Below are detailed explanations of the sampling techniques used, methods for data collection, and data analysis.

##### (a) Selection Depending on the Types and Nature of Livestock

Tanzania has different livestock types, including cattle, shorts (goats and sheep), poultry, and pigs. The audit team purposively selected cattle and shorts (goats and sheep) as they are most reared and have many by-products such as hooves, leather, milk, etc. Also, they are considered wealthy in different societies.

##### (b) Sampling of Livestock Production Zones

The Ministry of Livestock and Fisheries has categorized livestock zones into three categories based on the livestock production systems. The existing livestock zones are:

- Central zone
- Coastal and Lake zone
- Highland zone

Selection of each zone considered the existing livestock population of cattle, goats and sheep. The livestock population in zones were ranked **high**, **medium** and **low**, and the audit team selected all zones to have a fair representation in the due course of analysis. Details are indicated in **Table 1.1**.

**Table 1.1: Livestock Production Zone and Selection Reasons**

Livestock Zone	Livestock Population (cattle, goats and sheep) in Millions	Rank	Inference	Reason for selection
Central	21.3	High	Selected	64% of household livelihood depends on livestock activities  The livestock is mainly kept for beef
Coastal and Lake	21	Medium	Selected	30% of household livelihood depends on livestock activities  The livestock is mainly kept for beef.
Highland	4.8	Low	Selected	37% of household livelihood depends on livestock activities. Further, this zone is highly engaged in commercial farming

*Source:* Auditors' Analysis Using Data from the Tanzania Livestock Sector Analysis, 2016/17-2031/32

### Sampling of the Regions from the Livestock Production Zones

The Audit team selected at least one region from each livestock production zone. In that regard, four regions were selected out of 21 regions present in the mainland. The four selected regions were Simiyu, Tanga, Katavi, and Dodoma, with mixed scores of High, Medium, and Low based on the number of livestock present. **Table 1.2** summarises the selected regions and the reasons for their selection. A detailed analysis of the number of livestock in each region is presented in **Appendix 3**.

**Table 1.2: Details of Regions and Respective LGA Sampled**

Livestock Production Zones	Region Selected	Criterion for Selection	Reason for selection
Central	Dodoma	High	Dodoma Region met the conditions by having a high number of cattle, goats and a medium number of Sheep. Furthermore, at Dodoma, there is the headquarters of two potential Ministries (PO-RALG and MLF), which are the main audited entities
	Tanga	Medium	Tanga region scored medium in terms of the number of livestock present. Despite being medium in number, in the Tanga region, there were immigrants from Ngorongoro; hence, there are several government interventions to accommodate the immigrated Maasai and their livestock
Coastal and Lake-Zone	Simiyu	High	Simiyu Region met the conditions by having a high number of cattle, goats and sheep. At Simiyu, their livestock extension services for cattle, goats and sheets are of great intensity
Highlands	Katavi	Low	Katavi Region met the conditions by having a low number of livestock and is geographically positioned in the western zone. This assisted the audit in assessing and comparing measures on extension services provided to those areas with high, medium and low numbers of livestock

*Source:* Auditors' Analysis Using Annual Agriculture Sample Survey  
Crop and Livestock Report, 2016/17

### (c) Sampling of Local Government Authorities

The main criterion used in sampling the LGAs to be visited was the presence of a high number of livestock compared to other LGAs in a particular region and existing government interventions that would affect the extension services. **Table 1.3** provides a summary of each LGA sampled. The details about the number of livestock in each LGA from each region are presented in **Appendix 4**.



**Table 1.3: Criteria Used for the Selection of LGAs**

Region	Local Government Authority	Number of Livestock (Cattle, Goats and Sheep)	Selection Criterion	Reason for the Selection
Katavi	Tanganyika DC	299,144	High	It was selected because it scored higher than other LGAs in the region in number of livestock.
Dodoma	Kongwa	288,348	High	Kongwa was selected because it has a large livestock stock and receives extension services and livestock inputs from different places, including the Kongwa Ranch.
Tanga	Handeni	420062	High	It was selected because it has a high number of livestock, and there were government interventions where Maasai and their livestock were shifted from Ngorongoro to Handeni (Msomera). This led to an increased extension of services to accommodate new immigrants.
Simiyu	Bariadi	330,176	High	It was selected because it scored higher in the number of livestock compared to other LGAs. Further, there were other government interventions, such as the establishment of livestock hay fields.

*Source:* Auditors' Analysis using Livestock Data from LGAs of Tanganyika, Kongwa, Handeni and Bariadi DC, 2024

#### 1.4.2 Methods for Data Collection

Both qualitative and quantitative data were collected to provide strong evidence for assessing the provision of extension services to livestock keepers. The Audit used different methods to gather information from the

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audited entities. These methods include *interviews*, *document reviews*, and *observations*, as detailed below:

**(a) Interviews**

Interviews were conducted with officials from the Ministry of Livestock and Fisheries, PO-LARG, Regional Administration offices and LGAs to validate information obtained from the review of the relevant documents. The details and reasons for interviewing them have been shown in **Appendix 5**.

**(b) Documents Review**

The Audit reviewed documents from the Ministry of Livestock and Fisheries, the President’s Office - Regional Administration and Local Government (PO-RALG) and Local Government Authorities (LGAs) to get comprehensive, relevant, and reliable information regarding the provision of livestock extension services to livestock keepers.

All relevant documents from the audited entity falling within the period under audit, i.e., from July 2019 up to June 2024, were reviewed. These documents covered planning, performance, and progress reports. **Appendix 6** indicates the type of documents reviewed and the reason(s) for reviewing.

**(c) Physical Verification**

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The audit visited selected LGAs, conducted physical verification for the available dips and livestock working tools, and assessed their conditions. During verification, the audit team visited different livestock infrastructures such as Livestock dips, charcoal dams, and livestock-designated market areas.

Furthermore, the audit team assessed, verified, and documented the presence and functionality of Artificial Insemination kits in the LGAs that had them. Through site visits, the audit team was able to take pictures and notes.

**1.4.3 Methods of Data Analysis**

The obtained quantitative and qualitative data from interviews, document review and physical verification was analysed using different methods, which are:

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## a) Quantitative Analysis

The Quantitative data Analysis was conducted using various methods, such as the analysis of the trend of availability of extension officers, the percentages of availability of officers in LGAs, the serving ratio of extension officers to villages, the status of transportation for extensionists, and the training programs executed. Additionally, the quantitative analysis was done to determine the availability and functionality of livestock infrastructure and facilities, including the operational status of livestock dips, the supply of acaricides, and the functionality of artificial insemination services, including liquid nitrogen plants.

The livestock registration and traceability status were analysed, along with the number of LGAs conducting livestock registration and identification at the regional and within secretariats. The number of functional committees in the visited LGAs and funding and expenditure patterns were also analysed, including funding priorities and the comparison of collected versus retained funds for sector development. The analysis also covered trends in planned versus released funding for regional secretariats and the disbursement of funds for livestock extension services. The analysed data were presented in tables and graphs, such as histograms, pie charts, and time series.

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## b) Qualitative Analysis

Qualitative data relating to the implementation of strategies for livestock extension services were collected, compared, and analysed in order to explain and align them with the audit objectives. The analysis involved identifying categories such as events, descriptions, consistencies, or differences to develop a theory or conclusion from the collected data.

Qualitative data were obtained from testimonial evidence and reviewed documents. Furthermore, depending on the number of interviews and reviewed documents, the qualitative information was supported by quantitative data in terms of frequencies and percentages to determine how many included positive or negative statements about a particular issue or how many provided similar statements.

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## 1.5 Data Validation

Both the Ministries of Livestock and Fisheries and the President's Office - Regional Administration and Local Government (PO-RALG) were given the opportunity to go through the draft audit report and comment on the facts and figures of the presented information. They all confirmed the accuracy of the information and figures presented in this report. The comments and responses of the Ministries are presented in **Appendix 1**.

In addition, experts in the field of livestock extension services cross-checked the presented information and provided comments that improved the audit report.

## 1.6 Standards Used for the Audit

The audit was conducted following the International Organisation of Supreme Audit Institutions (ISSAIs) performance auditing standards issued by the International Organisation of Supreme Audit Institutions (INTOSAI). The standards require the audit to be planned and performed to obtain sufficient and appropriate evidence that provides a reasonable basis for findings and conclusions based on the audit objective(s).

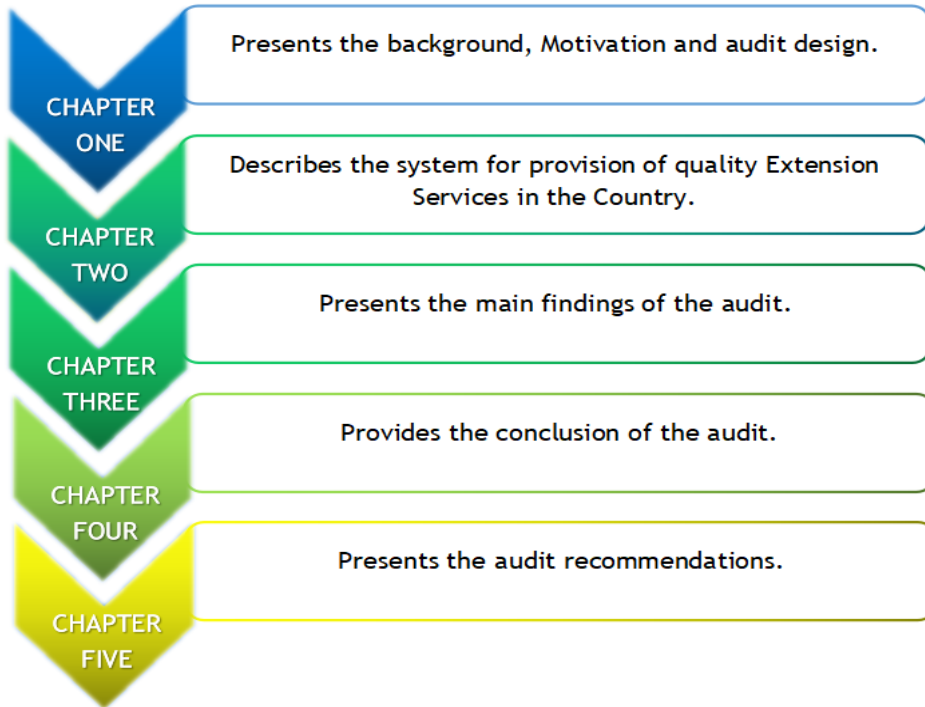
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## Structure of the Report

The main parts of the audit report are presented in **Figure 1.1**.

**Figure 1.1: Structure of Chapters Presented in this Report**



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## CHAPTER TWO

### SYSTEM FOR THE PROVISION OF QUALITY LIVESTOCK EXTENSION SERVICES

#### 2.1 Introduction

This chapter outlines the legal framework, roles, responsibilities, and relationships between key actors and stakeholders involved in the provision of livestock extension services. It details the process involved in providing these services.

#### 2.2 Policy and Legal Framework Governing the Provision of Extension Services to Livestock Resources

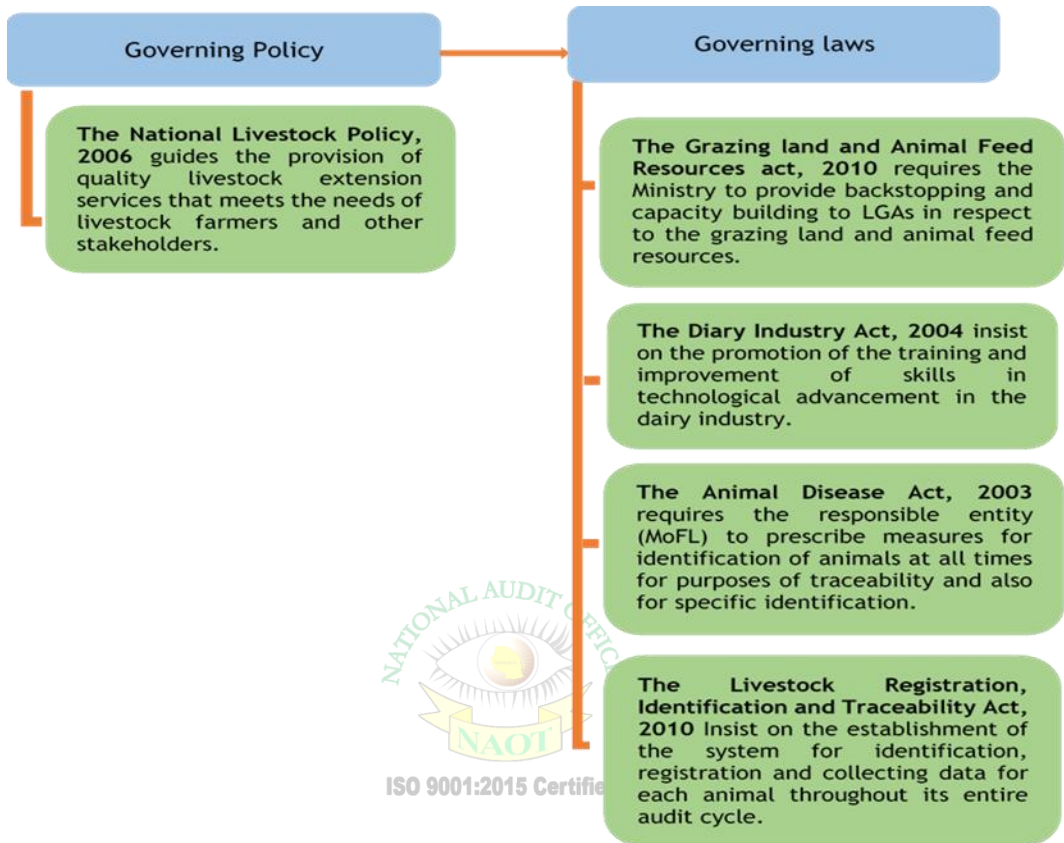
##### 2.2.1 National Livestock Policy, 2006

The provision of extension services is guided by the National Livestock Policy, 2006, several acts and their respective regulations. The policy explains the government's and stakeholders' intentions to meet the livestock industry's challenges. The overall objective of the National Livestock Policy was to develop a competitive and more efficient livestock industry that contributes to improving the well-being of the people whose principal occupation and livelihood is based on livestock.

##### 2.2.2 Governing Laws

The extension services are guided by different cross-cutting legislation based on the activity and product specifics, such as dairy production, beef production, disease control range management, etc. A detailed legal framework for the livestock sector governance in the Country is presented in **Figure 2.1**.

**Figure 2.1: Policy and Governing laws in the Provision of Extension Service**



*Source:* Auditors' Analysis from Ministerial Instruments, 2024

## 2.3 Goals and Strategies

### (i) Sustainable Development Goals (SDGs)

Tanzania is a signatory of the 2030 agenda and the sustainable development goals in improving the extension services to livestock resources SDG 2, insisting on increasing investment in extension services, technology development and plant and livestock gene banks to enhance agricultural production capacity in developing countries, in particular least developed countries.

Further, indicator 8.2 of goal 8 aims to achieve higher economic productivity through diversification and emphasis on high-value-added and

labour-intensive sectors. This indicator has been translated to objective 5.1 of the Livestock Sector Transformation Plan, 2021/22-2025/26, which requires improving and making available access to highly productive livestock breeds.

(ii) **Strategic Plans for MLF and PO-RALG**

The strategic plans and objectives that govern the provision of extension services in the country are summarized in **Table 2.1**.

**Table 2.1: Strategic Plans and Objectives for the Provision of Livestock Extension Services**

Ministry	Year of the Strategic Plan	Objective	Strategy	Targets
MLF	Medium-Term Strategic Master Plan 2021/22-2025/26	Sustainable livestock production and productivity improved	<ul style="list-style-type: none"> <li>Improve extension services delivery and outreach.</li> <li>Promote massive livestock breed improvement by natural breeding through selection and artificial breeding.</li> </ul>	9,760 livestock professionals trained by June 2026
	Transformation plan of 2022/23-2026/27	Improving extension services	<p>Equip agriculture extension officers with transportation facilities</p> <p>Purchasing Artificial Insemination Kits for Livestock Extension Officers (WLEOs and VLEOs) in strategic areas of the Southern and Northern highlands, Central and Western regions, and Coastal and Lake Zones</p>	<p>Purchase motorcycles 4,016, in 184 Councils, 3,956 wards</p> <p>To purchase an Artificial Insemination Kit for four (4) Livestock Extension Officers in each District Council at Local Government Authorities in two strategic zones.</p>



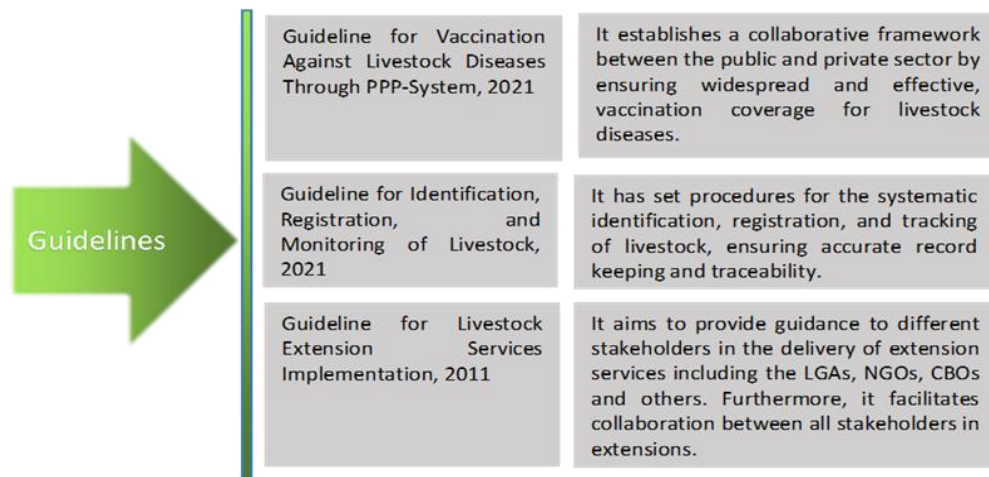
Ministry	Year of the Strategic Plan	Objective	Strategy	Targets
			Building capacity for livestock extension officers through training and provision of extension delivery tool kits in Local Government Authorities	Providing training on Artificial Insemination to 920 Extension Officers in Local Government Authorities
			Developing an electronic livestock registration system,	To develop an electronic livestock registration system, provision and management of extension services
PO-RALG	PO-RALG-Strategic Plan 2021/22 - 2025/26	PO-RALG's capacity to undertake mandated functions improved	Strengthening Human Resource Capacity and improving performance capacity of RSs and LGAs	Coordination of government business operations in 26 Regions and  Coordination of Regional Secretariat capacity building program

Source: Auditors' Analysis of the Medium Term Strategic Master Plan 2021/22-2025/26 and Transformation Plan of 2022/23-2026/27

### (iii) Guidelines

The Ministry of Livestock and Fisheries has developed guidelines essential for providing extension services in the country, as Summarized in **Figure 2.2**.

**Figure 2.2: Guidelines for the Provision of Livestock Extension Services in the Country**



Source: Auditors’ Analysis of the Guidelines on the Provision of Livestock Extension Services

## 2.4 Roles and Responsibilities of Key Actors in Provision of Livestock Extension Services

The Ministry of Livestock and Fisheries and the President’s Office - Regional Administration and Local Government (PO-RALG) were the key Actors in the provision of Livestock Extension Services.

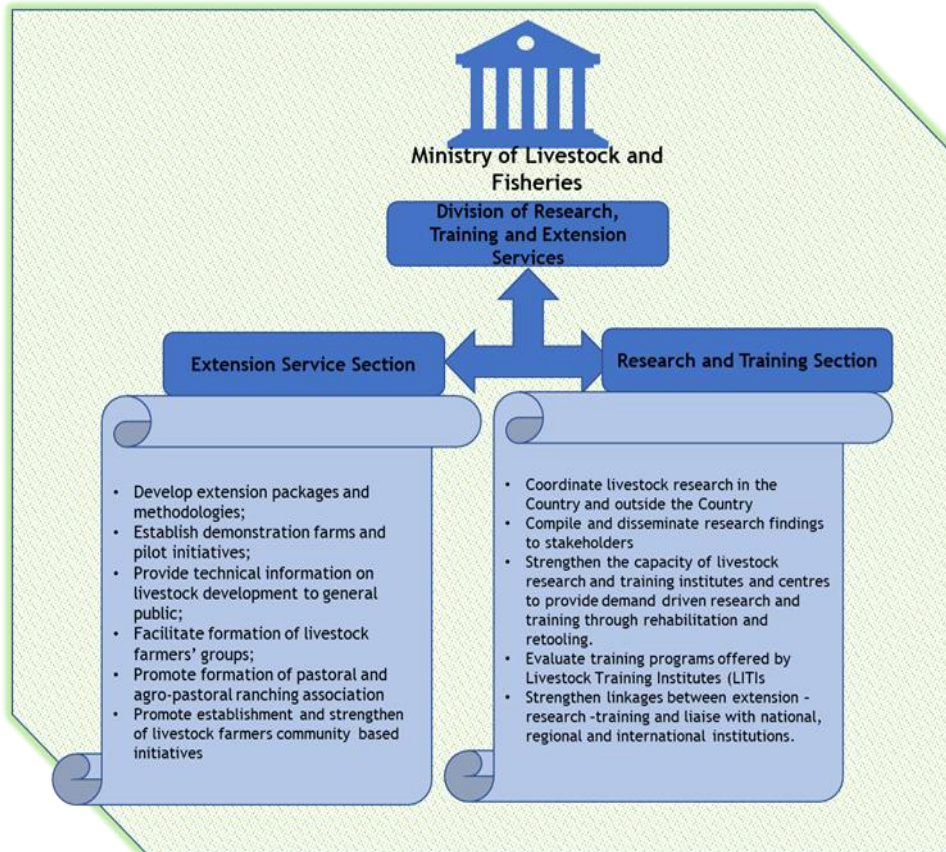
### 2.4.1 The Ministry of Livestock and Fisheries

In the provision of extension services to livestock farmers, the Ministry is responsible for formulating relevant policies, strategies, and guidelines; coordinating, monitoring, enforcing, evaluating and capacity building in the livestock sector; and monitoring pertinent institutions for the provision of extension services to livestock keepers. Specifically, the Ministerial Organization Structure and GN 384 of July 2021 have vested functions to the MLF. These functions include:

- Development of Livestock Infrastructure
- Provision of Livestock training and Extension services
- Animal breeding and genetic improvement
- Animal traceability and registration
- Veterinary services

At the Ministry of Livestock and Fisheries, a function of extension services is vested in the Division of Research, Training and Extension Services, as detailed in **Figure 2.3**.

**Figure 2.3: Divisions Responsible for the Provision of Extension Services at the Ministry of Livestock and Fisheries**



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## 2.4.2 The President's Office - Regional Administration and Local Government (PO-RALG)

The roles and responsibilities of the President's Office - Regional Administration and Local Government (PO-RALG) on the provision of extension services to Tanzania are detailed below;

- (i) Facilitate local government authorities (LGAs) to plan, implement, and monitor extension services tailored to local needs;
- (ii) Coordinate the activities of regional and district livestock officers to ensure consistency and quality in service delivery;
- (iii) Supervise the implementation of livestock extension programs and projects across different regions and districts; and
- (iv) Organize and facilitate training programs for extension officers at regional and district levels to enhance their skills and knowledge.

### (a) Regional Administrative Secretariat (RAS)

The Officer-in-Charge of Livestock Development in the Regional Administrative Secretariat (RAS) leads and coordinates livestock extension service providers operating in the respective regions, as outlined in section 2.1.2 of the Livestock Extension Guideline of 2011. Specifically, the Officer-In-Charge identifies, maps out and maintains a directory of the key public and private actors in livestock service delivery within the region and monitors the establishment and operation of the various livestock coordination fora at the LGA level.

### (b) Local Government Authorities (LGAs)

The Local Government Authorities (LGAs) are responsible for ensuring accurate and timely delivery of technical packages to livestock farming communities through Subject Matter Specialists and other livestock extension services providers.

Furthermore, the LGAs are responsible for facilitating the dissemination of extension recommendations based on verified research findings under livestock farmers' management conditions to ensure that the technologies

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developed are disseminated to target groups in a timely manner using the correct channels. In addition, the LGAs allocate resources to extension officers and monitor service delivery.

### **(c) At Ward level**

The Ward Development Committees (WDCs), through its Ward Facilitation Teams (WFTs), consolidate and submit the monitoring reports from the Village Councils, which are in turn, submitted to the Council Management Teams (CMTs).

## **2.5 Process for the Provision of Livestock Extension Services**

The process for the provision of livestock extension services is grouped into two parts: (i) to ensure the livestock are registered and (ii) to ensure that extension services are provided. The main responsibilities found in these roles are explained in detail below:

### **2.5.1 Policy and Strategy Setting**

The Ministry of Livestock and Fisheries is setting a policy that indicates aspects of livestock extension services that need to be covered during the implementation of the policy. Critical identified areas include an increase of livestock extension officers, working tools, improved breeding and disease prevention. The policy objectives are further cascaded down to the five-year strategy and annual implementation plans.

### **2.5.2 Conducting Needs Assessment**

The District Livestock and Fisheries Officer (DLFO) consolidates extension service needs submitted from Wards regarding the number of livestock farmers to be served annually.

The DLFO identifies the needs of livestock farmers, which are supposed to be based on consultations and field visits by extension officers. It also involves training in identifying challenges faced by farmers, such as poor animal health, inadequate feed, climate change effects, and market access, which are supposed to be identified to tailor the support.

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### 2.5.3 Identification, Registration and Traceability of Livestock

DLFO assigns a unique identifier to each animal to track key information throughout its life, ensuring effective management and traceability and supporting animal health, disease control, and market access. These processes involve identification, registration, and traceability activities. These activities are explained in detail hereunder:

- **Livestock Identification**

In this stage, DLFO assigns a unique identification mark, such as an ear tag or a microchip, which helps trace the animal's history and characteristics. This includes birth date, breed, sex, and health history.

- **Premises and Livestock Registration**

DLFOs are supposed to register their premises and Livestock owned by the Livestock Farmers. Each livestock animal is to be electronically and manually registered, and essential details such as breed, sex, age, and health status are supposed to be recorded. The animals are supposed to be linked to their registered premises, creating a traceable history of the animal's movements, health, and other key characteristics.

- a) **Livestock Traceability**

DLFO is supposed to track the whereabouts of animals' movement throughout their life cycle. This includes movement between farms, markets, abattoirs, and other facilities. DLFO tracks the Movement permits, which are supposed to ensure that animals are transported in compliance with health and regulatory standards, helping to prevent the spread of diseases.

### 2.5.4 Provision of Extension Services

The identified extension services to be done in the respective year are listed. These services include need assessment, capacity building for livestock farmers, improved livestock breeding (artificial insemination, fattening, etc.), improved livestock productivity, and disease control and prevention. These are done at LGAs and sector ministries levels. The

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provision of livestock extension services can be divided into different stages, as discussed below.

**a) Training and Capacity Building for Livestock Farmers**

The capacity building for livestock farmers is given by LGAs and MLF<sup>1</sup> through either Ward Agricultural Resource Centre (WARC), Livestock Farmer Field School and Community-Based Workshops and Meetings, depending on the nature of the training programme so that livestock farmers could obtain technologies, information and advice. The capacity-building activities involved training, extension linkage, platforms and strengthening group formation. The functioning WARC help livestock keepers learn about new and appropriate technology and improve productivity.

**b) Improve Livestock Breeding through Livestock Artificial Insemination**

The Ministry has the role of establishing Livestock Artificial Insemination centres and their facilities, such as liquid nitrogen plants, to assist farmers in visiting and obtaining knowledge regarding livestock improvement. Artificial insemination centres offer insemination services to livestock keepers needing breeding improvement. This activity aims to enhance breed improvement for dairy and meat production.

**c) Disease Prevention and Control**

Local Government Authority reports directly to the MLF whenever there is an outbreak of a disease. At the LGA level, these activities are done by designated veterinary professionals under Section 43 of the Veterinary Act of 2003.

Veterinary officers are required by the Veterinary Act to check the quality of meat and prevent and treat diseases like Foot and Mouth Disease (FMD), Paste des Petits Ruminants (PPR) and Newcastle Disease (ND) in the country to rescue the animal health and lives and reduce the risk of cost increase to the government from treatment of the affected animals.

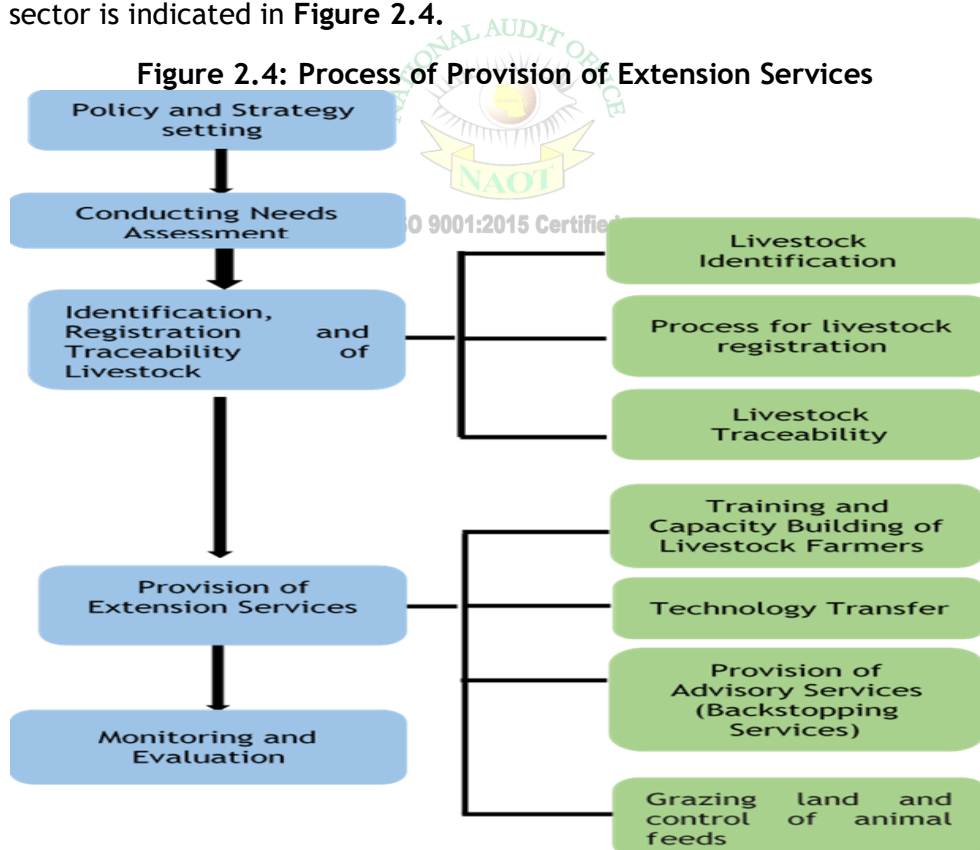
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<sup>1</sup> Tanzania Livestock Sector Analysis (2016/17-2031/32)

## 2.5.5 Monitoring and Evaluation

The extension service activities done at the ward level are monitored by the District Livestock and Fisheries Officer through physical visits and written reports. Moreover, the Ward Livestock officer provides monthly, quarterly and annual progress reports on what has been implemented. Furthermore, the RS monitors the implementation of livestock extension services at LGAs and consolidates and sends the implementation reports from LGAs of their jurisdiction to PO-RALG.

Additionally, MLF coordinates with PO-RAL on monitoring and evaluating livestock extension services, except on the issue of disease outbreak control, whereby LGAs report directly to MLF. Furthermore, extension services are monitored and evaluated to assess their effectiveness. This includes tracking improvements in livestock productivity, farmer knowledge, and the adoption of new technologies. The summarized description of the structure for extension services provision in the livestock sector is indicated in Figure 2.4.



Source: MLF and PO-RALG Established Instrument, 2024



## 2. 6 Resources for Managing Livestock Extension Activities

Financial resources allocated for managing livestock extension activities at the Ministry of Livestock and Fisheries are indicated in **Tables 2.2 and 2.3.**

**Table 2.2: Table: Funding at the MLF (Division of Research, Training and Extension)**

Financial Year	Amount Budgeted (TZS)	Actual Amount Released (TZS)	Released (%)
2020/21	1,738,678,887	1,785,568,564	103
2021/22	1,469,685,216	1,312,062,113	89
2022/23	7,530,348,000	4,263,585,257	57
2023/24	7,658,989,800	2,443,897,486	31

*Source: MLF Progress Report, 2020/21-2023/24*

As indicated in **Table 2.2**, the release of funds at MLF for recurrent in 2020/21/20 to 2023/24 ranged from 31% to 103%. There was a decreasing trend of releasing funds within four years, from 2020/21 to 2023/24.

Apart from financial resources, livestock extension services also depend on the availability of adequate human resources in terms of quantity and quality. The audit noted gaps in the availability of human resources for extension services at both the ministry and LGA levels, as **Table 2.3** illustrates.

**Table 2.3: Human Resources Allocation at the MLF and PO-RALG up to the year 2024**

Ministry	Division	Total Number of Staff Required	Total Number of Staff Present	Gap (%)
MLF	Divisions of Research, Training and Extension	20	15	25
PO-RALG	Section of Economic and Productive	16	07	56
	Extension officers at LGAs in the Country	13,279	4,406	67

*Source: Auditors' Analysis on the Human Resource Need Analysis Reports from PO-RALG and MLF, 2024*

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**Table 2.3** shows that there were deficits in human resources of about 25% at the MLF (Divisions of Research, Training and Extension), 56% at PO-RALG and 67% at the LGAs level. This is likely to impair the performance of the Ministry of Livestock, PO-RALG and LGAs when fulfilling their responsibilities in the provision of extension services in the country.



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## CHAPTER THREE

### AUDIT FINDINGS

#### 3.1 Introduction

This chapter presents audit findings regarding the provision of livestock extension services. The findings address four specific audit objectives as described in Section 1.3 of this report. These objectives are to determine the extent of accessibility of extension services to livestock farmers in the country, to assess the provision of livestock extension services (including training, identification, registration, and traceability of livestock, to facilitate the prioritization of resources (human, financial, infrastructure, and working facilities) for the provision of quality extension services, and the monitoring of the quality of the provided extension services.

The detailed findings for each specific objective are presented in the subsequent sections:

#### 3.2 Extent of Accessibility of the Livestock Extension Services to Livestock Farmers

The Livestock Modernization Report, 2015 indicated that, only 20% of the livestock extension services were met in the country, contrary to National Livestock Policy 2006, objective 3.15, which requires the Ministry of Livestock and Fisheries (MLF) to provide quality extension services that meet the needs of all livestock farmers and other stakeholders.

The extent of extension services provision was measured through outcome indicators, mainly the extent to which there was the transfer of knowledge and skills from experts to livestock farmers and the sharing of information and experiences among stakeholders to increase production and productivity. Generally, it was found that, the strategies for extension services provision were inadequately implemented to improve accessibility. Detailed explanations are provided in the sub-sections below:

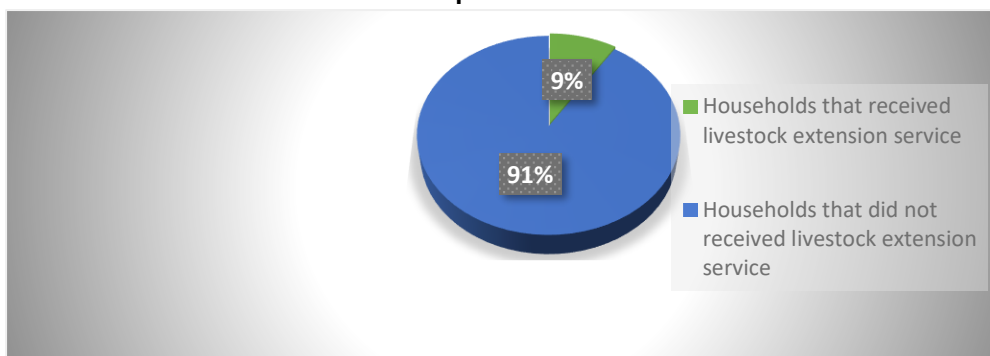
##### 3.2.1 Inadequate Accessibility of Livestock Extension Services

National Sample Census of Agriculture (NSCA), 2019/20 shows that the total number of households engaged in rearing livestock was 2,747,910, whereby 2,683,454 households were in Mainland Tanzania and 64,456 households in

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Tanzania Zanzibar. The census further indicates that, only 9 per cent of the total households rearing livestock received livestock extension services while 91 per cent did not receive extension services at all, as detailed in **Figure 3.1**. This finding contradicts para 5.4 (i) of the Livestock Sector Transformation Plan, which requires strengthening extension services delivery, increasing coverage for livestock farmers, and equipping extension officers with transport facilities.

**Figure 3.1: Percentage of Farmers who Received Livestock Extension Services as per NSCA 2019/20**



*Source:* National Sample Census of Agriculture (NSCA), 2019/20

**Figure 3.1** indicates that the extent of livestock extension services provided in the country is not adequate enough to enhance livestock productivity. As indicated in **Figure 3.1** above, 91% of households with livestock did not get extension services. This implies that these households used informal approaches to treat, keep, and feed their livestock daily.

It was noted that the limited provision of extension services was caused by an inadequate number of Livestock Extension Officers across the country. Tanzania's extension officer-to-farmer ratio was 1:2,800, which was significantly higher than the World Bank's recommended ratio of 1:500. This indicated that the number of available Extension Officers was insufficient to meet the demand. Specifically, the number of Extension Officers available was 4406 equivalent to 33%, as shown in **Table 3.1**.

A review of the Tanzania Livestock Sector Analysis of December 2017, indicated that the Ministry of Livestock and Fisheries lacked a comprehensive database of livestock extension officers at the local

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government level. Moreover, the same information could not be obtained from the President's Office - Regional Administration and Local Government. Because of that, these Ministries could not discern the areas with a high number of livestock extension officers versus those with a low number so as to distribute the officers with respect to livestock population.

Additionally, the audit noted that the provision of extension services was constrained by inadequate veterinary clinics and an insufficient number of working facilities:

**a) *Inadequate Veterinary Clinics***

The audit noted that the government had one veterinary hospital situated at Sokoine University of Agriculture, but it did not have veterinary clinics. This implied that, all 184 Local government Authorities did not have government-based veterinary clinics. Instead, LGA depended on those owned by private service providers. Assessment has indicated that, the total number of privately owned veterinary clinics was 36 spread across all regions. The insufficient number of public veterinary clinics was a threat to livestock sector development as it impairs the veterinary services livestock farmers could get if they face challenges.

**b) *Insufficient Number of Working Facilities and Extension Officers***

The audit also revealed that there is limited availability of extension services across the country. This was mainly attributed to insufficient equipment and transport facilities, particularly motorcycles, as well as a limited number of demonstration farms and farmer field schools, which are necessary for hands-on skills development for professionals and extension officers in the country.

Assessment of the number of required extension officers and their working facilities at the National level is shown in **Table 3.1**.

**Table 3.1: Total Number of Extension Service Resources in the Country**

Extension Service Resource	Required	Available	Gap	Gap (%)
Motorcycles	13,279	1500	11,779	89
Extension Officers	13,279	4406	8,873	67
Veterinary clinics	NA	18	NA	NA
Livestock Farmer Field Schools	NA	4	NA	NA

*Source:* Auditors' Analysis from Distribution List of Motorcycles and List of Extension Officers and Progress Report 4<sup>th</sup> Quarter 2021/22

### 3.2.2 Strategies for the Accessibility of Livestock Extension Services Inadequately Implemented

According to the organizational structure of the policy and planning division, the Ministry of Livestock and Fisheries was supposed to embed the strategies into its Five Years Strategic Plan and Annual Plans for implementation purposes.

However, the audit found that, except for equipping extension officers with transport facilities, they were inadequately implemented. This was contrary to para 5.4 (i) of the Livestock Sector Transformation Plan, 2022 and Fourth Quarter Progress Report of 2020/21-2023/24, which identified strategies to address challenges associated with extension services, strengthen extension services delivery, and increase coverage for livestock farmers. **Table 3.2** shows the details of the strategies for extension services in Livestock Resources for the financial year 2019/20 to 2023/24.

**Table 3.2: Implementation of the Strategies for Livestock Extension Services Provision from 20/21 to 2023/24**

No.	Planned strategies	Implementation status	Remarks
i.	Equipping extension officers with transport facilities, including 4,016 motorcycles	A total of 1500 motorcycles were provided to extension officers	37% of the planned number
ii.	Purchasing Artificial Insemination Kit for Livestock Extension Officers (WLEOs and VLEOs) in strategic areas of the Southern and Northern Highlands, Central and Western regions, and Coastal and Lake Zones	Artificial Insemination Kit for Livestock Extension Officers had not yet been purchased at the time of this audit.	Not yet done
iii.	Building capacity for livestock extension officers through training and provision of extension delivery tool kits in Local Government Authorities	Tool kits not delivered to LGAs	Not yet done
iv.	Developing an electronic livestock registration system	The Ministry is currently working on the finalization of the identification, registration and traceability module, which will form part of a Digital Platform Framework to support Animal Identification, Traceability and Health Surveillance System in Tanzania	The audit team were given the concept note report and the Software Requirement Specification (SRS) from e-GA that indicated the status of newly identification, registration and traceability system.

No.	Planned strategies	Implementation status	Remarks
v.	Establishing and strengthening e-Extension services	In the agricultural sector, M-Kilimo and Ugani Kiganjani (Digital Agricultural Service Portfolio) have been established to cover both kinds of extension services provided in agriculture and the livestock sector.	Done
vi.	Strengthening extension services management systems, including performance contract agreements	Performance contract agreements in the livestock sector have not yet been initiated	Not yet done
vii.	Establishing 830 Livestock Farmers Field Schools (FFSs).	Livestock Farmers' Field Schools (FFSs) established were 208 only	25% of the planned number of LFFs

**Source:** Auditors' Analysis Using Information from Livestock Sector Transformation Plan 2022/23-2026/27 and Fourth Quarter Progress Report for Financial Year 2020/21 up to 2023/24.

**Table 3.2** The audit noted that the implementation of targets was inadequate since they did not match the time that had elapsed, hence posing the risk of not being attained by June 2026. Within three years of the Livestock Sector Transformation Plan, MLF managed to implement two activities, 37% and 25% of its target out of seven planned activities.

This was caused by inadequate release of funding for the implementation of items identified in the strategic plan. Inadequate supply of funds hindered adequate provision of extension services to livestock farmers.



## Inadequate Training was Provided to Livestock Farmers

The following were observed with regard to the provision of training to livestock farmers:

### (i) Only 0.06% of the Farmers were Trained by the Ministry of Livestock and Fisheries

The audit noted that only 12,120 out of 1,920,836 livestock farmers, equivalent to 0.06%, were trained from 2019/20-2023/24. This was contrary to Target 3 of Objective E of the Medium-Term Strategic Plan from the Ministry of Livestock and Fisheries of 2021/22-2025/26, which planned to train a total of 1,920,836 livestock farmers by 2023/24. Table 3.3 shows the number of trained farmers who were against the plan.

**Table 3.3: Implementation Status of the Training to Farmers 2019/20-2024**

Financial Year	Number of Livestock farmers Planned to be Trained	Livestock Farmers Trained	% Farmers Trained
2019/20	260,000	0	0
2020/21	0	119,18	N/A
2021/22	360,380	0	0
2022/23	500,000	0	0
2023/24	800,456	202	0.03
<b>Total</b>	<b>1,920,836</b>	<b>12,120</b>	<b>0.06</b>

*Source:* Auditors' Analysis of the Medium-Term Strategic Plan and its Implementation Report, 2021-2025/26 and their implementation Report, 2024

Table 3.3 shows that no training activity was planned for the year 2020/21; however, 119,185 farmers were indicated to be trained in the respective year, which was the highest number in five years. Furthermore, no training reports were submitted suggesting that the activity was conducted.

The further assessment noted that, despite having the responsibility of providing training to farmers, the Ministry of Livestock and Fisheries did not conduct training needs analysis to establish a knowledge gap among farmers. A review of the Medium-Term Strategic Plan noted that training needs analysis for livestock farmers was not included.

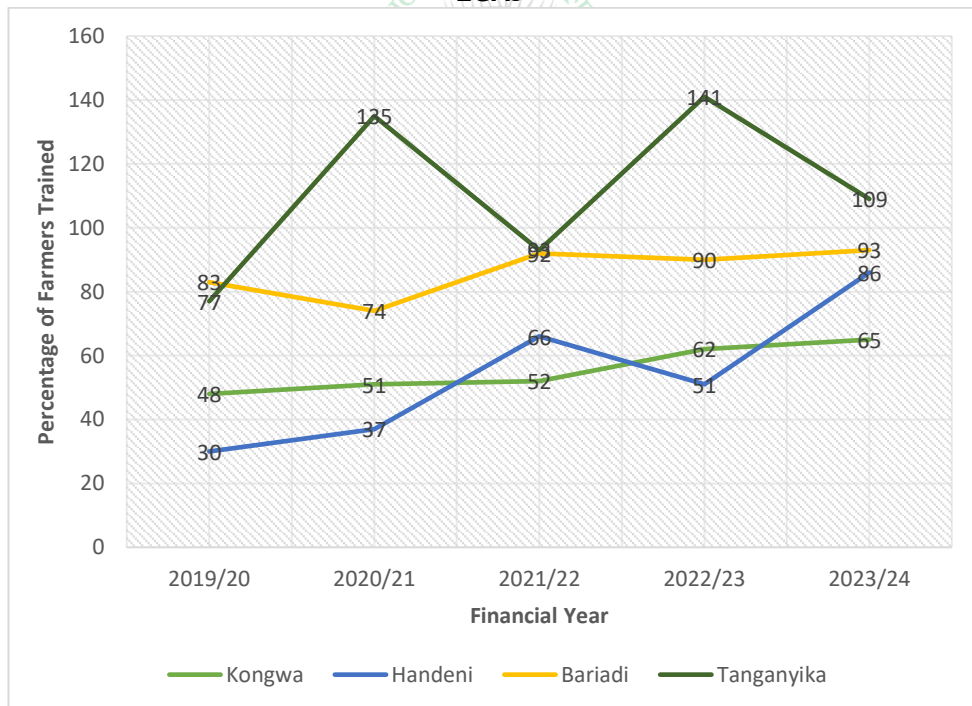
Inadequate implementation of training for livestock farmers could result in inadequate awareness of several key aspects of livestock husbandry at a household level.

**(ii) Inadequate Training of Livestock Farmers at LGAs**

Reviewed Annual Reports from the four LGAs visited revealed that the average percentage of training for livestock farmers was equivalent to 65% from 2019/20-2023/24. This was below the expectation indicated in objective D, Para 1.3(ii) of the PO-RALG Strategic Plan (2021/22-2025/26), which indicates that the role of PO-RALG is to build the capacity of Regional Administration, coordinate and monitor regional affairs and provide technical support to LGAs through Regional Secretariats.

Figure 3.2 depicts the percentage of Livestock Farmers Trained in the visited LGAs.

**Figure 3.2: Percentage of Livestock Farmers Trained in the Visited LGAs**



Source: Auditors' Analysis of Training Reports, 2019/20-2023/24

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As indicated in **Figure 3.2**, Tanganyika exceeded its targets in 2020/21 (135%), 2022/23 (141%), and 2023/24 (109%). Bariadi ranged from 83% in 2019/20 to 93% in 2023/24, showing progress without exceeding targets. Kongwa increased from 48% in 2019/20 to 65% in 2023/24. Handeni fluctuated, starting at 30% in 2019/20, peaking at 66% in 2021/22, dropping to 52% in 2022/23, and reaching 65% in 2023/24.

Further, Tanganyika District Council exceeded its targets within the three financial years of 2020/21, 2022/23, and 2023/24, achieving 135%, 141%, and 109%, respectively. Bariadi DC, Handeni DC and Kongwa DC did not achieve the planned number of livestock farmers to be trained from 2019/20-2023/24. LGA officials also indicated that the training was executed with funds from the development partners in all LGAs. It was noted that the visited LGAs lacked the training plans that would indicate the type of training for livestock farmers and the knowledge gaps to be covered.

### **3.3.1 LGAs did not Identify Training Needs for Livestock Farmers**

There was no document prepared for the livestock farmers' training need assessment in all visited LGAs of Tanganyika, Kongwa, Bariadi and Handeni. This was contrary to **section 2.3.1** of the Guidelines for the Provision of Livestock Extension Services, 2011, which requires the LGAs to ensure that extension services are demand-driven, taking into account the special needs of various groups in planning, implementation, monitoring and evaluation.

The audit further noted that LGAs did not have updated databases of livestock farmers they served. Hence, it became difficult to conduct needs analysis as the livestock farmers are mobile. During the audit, the team requested responsible officials to provide a database indicating the number of livestock farmers, location, and number of livestock possessed, but the officials could not provide it, indicating that the actual number of livestock farmers was unknown at the LGAs. Because of the absence of an actual number of livestock farmers, the Local Government Authorities could not identify the needs of livestock farmers for training.

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### 3.3 The Process for Identification, Registration and Traceability of Livestock was not Efficient

Assessment of the status of implementation of activities for registration, identification and traceability revealed the following:

- Livestock were not adequately identified, registered, and traced at all levels to enhance adequate provision of extension services.
- The registration, identification, and traceability were not done in a timely manner to establish the livestock population for the provision of extension services.
- The livestock registration, identification, and traceability system did not operate efficiently and did not have timely updates or accurate livestock data;
- Livestock farmers were not trained to enhance awareness of the identification, registration, and traceability of livestock activities; and
- Designated livestock registration officers at the LGA did not effectively register, identify, or ensure traceability of livestock.

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Details for each observation are as presented hereunder:

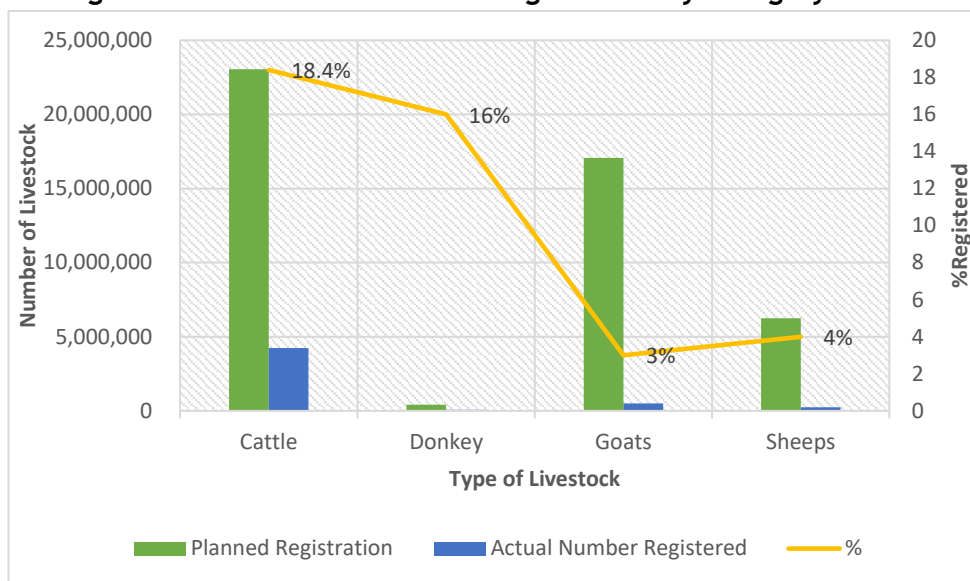
#### 3.4.1 The Livestock Identification, Registration and Traceability Activities were not Attained

Through the review of the Registration Report from the Ministry of Livestock and Fisheries of 2022, it was noted that there was inadequate attainment of the registration, identification and traceability of livestock in the country as detailed below:

##### (i) 11% of Livestock were Electronically Registered

The audit noted that in 2022, only 5,068,617 livestock, equivalent to 11% of the estimated 45,920,000 to be identified, were electronically ear-tagged, as shown in **Figure 3.3**.

**Figure 3.3: Status of Livestock Registration by Category in 2022**



*Source:* Auditors' Analysis using data extracted from MLF, 2024

Based on **Figure 3.3**, the audit noted that MLF and PO-RALG did not attain the planned number of livestock to be tagged with electronic ear tags. It was pointed out that, the activity started in 2021 and stopped in October 2022, where the attainment was only 11%. The audit further revealed that out of the targeted 23,043,397 cattle, only 4,239,955 were registered, achieving 18.4% of the goal. In addition, 415,206 donkeys were targeted, but only 66,433 were registered, equivalent to 16%. Moreover, 17,064,333 goats were planned for registration, but only 511,930 were registered, equivalent to 3%. For the sheep, the target was to register 6,256,725, but only 250,269 sheep (4%) were registered by the end of the exercise.

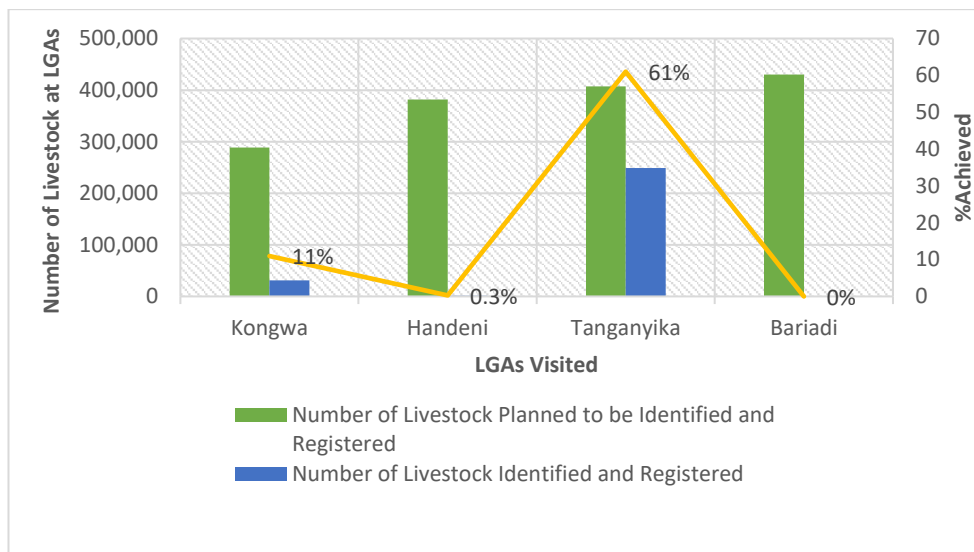
Through a review of the Registration and Traceability Report that was prepared and submitted to the District Executive Director of Handeni with reference number Kumb. Na. HW/V.10/21/170, the audit noted that the activity could not be achieved because livestock farmers considered the fee for a single ear tag, which was set at TZS 1,750 per cow and TZS 1,000 per donkey, to be high.

Also, interviewed livestock farmers from LGAs indicated low awareness of the registration of animals. This was partly attributed to inadequate awareness campaigns during the registration assignment. This implies that,

the activity was initiated without assessing its practicability in terms of budgeting for the activity implementation and affordability of set rates by livestock farmers.

In addition to that, the audit assessed the actual number of livestock registered in four LGAs visited. It was noted that, the LGAs managed to register 18% of livestock before the activity was stopped in 2022<sup>2</sup>. **Figure 3.4** provides the details of the registration status of the visited LGAs.

**Figure 3.4: Livestock Registration and Traceability Status in Visited LGAs**



*Source:* Auditors' Analysis of the Registration and Traceability Reports from LGAs, 2024

**Figure 3.4** indicates that the registration and traceability activity was better at Tanganyika District Council, where 248,851 out of 407,027 (equivalent to 61% of the target) were registered. In addition, the findings indicate that the Bariadi District Council did not register any livestock, while the Kongwa and Handeni district councils achieved 11% and 0.3% of the targets, respectively.

<sup>2</sup> The Government stopped the registration of livestock in 2022 after complains from livestock farmers

Investigations on the causes of low achievement with regard to livestock registration at Bariadi and Handeni District Councils revealed that these councils did not budget for the implementation of this activity because the activity was set by MLF in 2021 and came in the midst of a budget cycle. Hence, the two LGAs ended at the contract signing stage with electronic ear-tag suppliers without progressing further until when the government stopped the activity.

Furthermore, it was noted that no livestock premises were registered as per the requirement of section 6 of the Registration and Identification Act, 2010.

### (ii) Only 25% of the LGAs Conducted Registration and Identification of Livestock

The audit noted that only 46 LGAs, equivalent to 25% of the 184 LGAs, registered their livestock country-wide. Similarly, the audit noted the same scenario in the visited RS in Tanga, Simiyu, Katavi and Dodoma regions. In these regions, it was noted that only 17 out of 29 LGAs, equivalent to 59%, implemented the activity for registration and traceability of livestock, as indicated in Table 3.4.

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**Table 3.4: Number of LGAs that Conducted Registration and Identification of Livestock in the Visited Regions**

Name of the region	Number of LGAs	Number of LGAs Conducted Registration and Identification of Livestock	Percentage of LGAs
Tanga	10	6	60
Simiyu	6	0	0
Katavi	5	5	100
Dodoma	8	6	75
<b>Total</b>	<b>29</b>	<b>17</b>	<b>59</b>

*Source:* Auditors' Analysis of the Registration and Identification Reports, 2024

As depicted in Table 3.4, the registration and identification activities were inadequate in LGAs from the visited regions. The highest performance in livestock registration and identification process was found in the Katavi region, where all 5 LGAs conducted the activities, while the lowest

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performance was noted in the Simiyu Region, where no LGA conducted the livestock identification and registration activities. Moreover, the audit revealed that Dodoma and Tanga managed to identify and register their livestock at 75% and 60%, respectively.

### **3.4.2 The Livestock Registration, Identification, and Traceability System was not Operational**

The audit noted that neither the Ministry of Livestock nor LGAs had a system for the registration, identification, and traceability of livestock. It was noted that livestock registration data were collected manually and recorded in the Open Data Kit (ODK)-software (a data collection kit), software with limitations in data analysis and visualization. Generally, the audit noted that the Ministry and LGAs lacked automated systems for the identification and registration of livestock. This is contrary to section 4(1) of the Livestock Identification, Traceability and Identification Act of 2010 and its regulations of 2011, which insist on the establishment of an effective livestock registration and identification system.

Moreover, it was noted that, the previously collected data were not cleaned, which affected their reliability. Aspects like premises and data on the actual number of livestock owned by livestock farmers were not accurately provided by farmers. In addition to that, the collected information was not yet synchronized with the electronic ear tags due to a lack of scanners to read the electronic ear tag stored in a barcode format.

Generally, reading of the electronic ear tags was done manually, requiring the reader to know the numbers on each tag. As a result, a total of TZS 60 million spent at the MLF to cover procurement and development of the registration and traceability system did not attain the value for money since the objective was not attained.

This implies that, the collected data for 5,068,617 livestock were not used in planning for the provision of livestock extension services. Moreover, the previously collected information could not be migrated to the new system which the MLF started developing.



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### **3.4.3 Livestock Registration Officers at LGAs did not Effectively Register, Identify, or Trace Livestock**

The audit noted that, among the visited LGAs, Kongwa and Tanganyika District Councils did not have designated livestock registration and identification officers to ensure traceability. This was against section 12(1) of the Livestock Registration, Identification and Traceability Act No 12 of 2010, which requires LGAs within its organisational structure to designate one of its officers to be a livestock identification, registration and traceability officer.

The audit noted through the review of the appointment letters that Bariadi and Handeni DC had designated Identification and Registration Officers. However, both districts did not manage to register the planned 430,176 and 140,474 livestock, respectively, from 2021/22 to 2022/23, in which guidelines for identification, registration and traceability were formulated and cascaded to LGAs

Insufficient appointment of designated officers for livestock registration and identification leads to inadequate implementation of registration, identification and traceability of livestock in the respective LGAs.

### **3.4.4 Insufficient Awareness Creation among Livestock Farmers on the Registration, Identification and Traceability of Livestock**

Through a review of MLF Medium Term Strategic Plan, 2021/22-2025/26 and the annual action plan of the LGAs, it was noted that there were no plans to conduct training for livestock farmers on the registration, identification and traceability of livestock. Further, reviewed progress reports from Bariadi DC and Handeni DC noted that, awareness campaigns were not conducted as required. As a result of this, livestock farmers were not reached for livestock Registration awareness campaigns.

This is contrary to Para 5.6 (vii) of the Livestock Identification Registration and Identification Guidelines, 2022, which requires Local Government Authorities to create awareness among all stakeholders to ensure that livestock identification, registration and traceability are implemented.

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Without conducting an awareness campaign, farmers may not understand the importance of livestock registration, resulting in low participation in the livestock registration process. This observation was also made by the livestock farmers during interviews.

### **3.5 Inadequate Human resources, Financial Infrastructure and Working Facilities for Provision of Extension Services**

The audit noted the following regarding resources for the provision of livestock extension services:

- Livestock Extension Officers were insufficient, inadequately trained, or not effectively distributed to provide extension services at all levels;
- Working tools for extension services were neither sufficient nor well-maintained across all levels of LGAs;
- Funds for Extension services were not sufficiently disbursed to enhance these services;
- Equipment for breeding improvement was inadequately functioning or maintained;
- The infrastructures for the provision of extension services were not insufficiently developed and inadequately maintained at all levels of LGAs; and
- The established WARC and Livestock Farmer Field Schools were not adequately equipped or functioning as intended for technology transfer.

The details for each observation are presented in subsequent sub-sections:

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### 3.5.1 Insufficient Number of Livestock Extension Officers to Undertake Livestock Extension Services in the Country

Assessment of the availability of livestock extension services indicated that neither the Ministry of Livestock and Fisheries nor PO-RALG could ensure sufficient availability of livestock extension officers in the country. This was contrary to Para 2.4.2 of the guidelines for the provision of livestock extension services, which requires responsible ministries to ensure that extension staff at all levels are adequate, knowledgeable, skilled and highly motivated.

The audit assessment revealed the following :

#### a) There was a 67% Shortage of Livestock Extension Officers in the Country

The audit, through the review of the Agriculture Master Plan, 2024, and Livestock Sector Transformation Plan (LSTP) of 2022/23-2026/27, noted that there was a shortage of extension officers in the country. It was further noted that there were only 4,406 extension officers compared to the demand of 13,279 Extension officers. This indicates a shortage of 8,873 extension officers, equivalent to 67% of the required number of livestock extension officers in the Country. **Table 3.5** indicates the trend of the available number of livestock extension officers versus those required in Five Financial Years.

**Table 3.5: Number of Available Livestock Extension Officers Across the Country from 2019/20-2023/24**

Financial Year	Required Livestock Extension officers	Available Livestock Extension Officers	% Gap
2019/20	13,279	3,642	73
2020/21	13,279	3,642	73
2021/22	13,279	3,642	73
2022/23	13,279	4,406	67
2023/24	13,279	4,406	67

*Source:* Auditors' Analysis of Staff Establishment for Livestock Extension Officers, 2024

As indicated in **Table 3.5**, there was a minor decline in the livestock extension officers, with a gap of 6% in 2022/23. The analysis indicated that 764 extension officers were recruited in 2022/23 in coordination with MLF, but no recruitments were done under PO-RALG in the other years.

The audit further reviewed the status of Livestock Extensionists available versus requirement and found that there is a shortage of extension officers in visited Regions, as the next section elaborates.

**b) Presence of a Shortage of Livestock Extension Officers in the Visited Regional Secretariats by 37%**

Analysis of the extent of the Livestock Extension Officers’ shortage further revealed that the number of Livestock Extension Officers at RSs was low by 37%, as depicted in **Table 3.6**.

**Table 3.6: Assessment of Livestock Extension Officers Required at the Visited Regions as of June 2024**

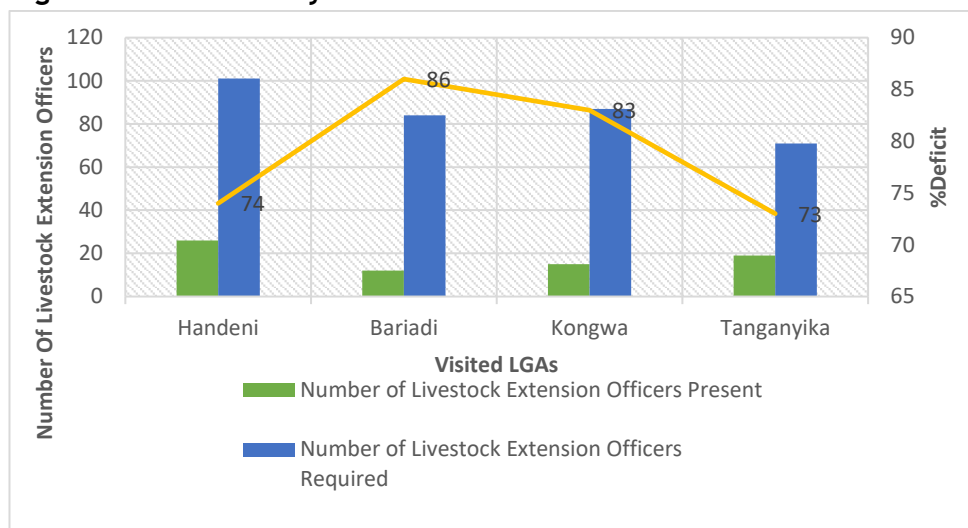
Region	Number of the required Livestock Extension Officers	Number of Livestock Extension Officers Available	Gap in Percentage
Tanga	822	271	67
Simiyu	398	98	75
Dodoma	432	233	46
Katavi	210	84	60
Total	1862	686	63

*Source:* Auditors’ Analysis of the Status of Available Extension Officers from the Regional Secretariats, 2024

As shown in **Table 3.6**, it can be noted that Simiyu Region had a Livestock Extension Officers’ gap that reached 75%, while Dodoma had a gap of 46%.

Further assessment at the LGA level revealed that, Bariadi, Handeni, Tanganyika and Kongwa DCs had a total of 72 out of 343 extension officers, making a deficit of 79%. **Figure 3.5** presents the required vs available number of Livestock Extension Officers in the visited LGAs.

**Figure 3.5: Availability of Livestock Extension Officers in Visited LGAs**



*Source:* Auditors' Analysis on the Reports from LGAs Visited, 2024

As shown in **Figure 3.5**, the shortage of Livestock Extension Officers stood between 73% and 86% in the LGAs visited. Bariadi and Kongwa experienced the highest deficiency with 86% and 83% of the gaps, respectively.

Further, the audit analysis of Livestock Extension Officers per the village in the visited LGAs noted that the existing ratio exceeded the required ratio of 1:1. **Table 3.7** provides details of the Ratio of Livestock Extensionists present Versus Villages served.

**Table 3.7: Ratio of Livestock Extensionist Present Versus Villages Served**

LGA	Total Number of Livestock Extension Officers Available	Total Number of Villages present	Number of Extensionists per Village	Required ratio
Bariadi	12	84	1:7	1:1
Tanganyika	19	71	1:4	1:1
Handeni	26	91	1:4	1:1
Kongwa	15	87	1:6	1:1

*Source:* Auditors' Analysis of the Reports from LGAs visited, 2024

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From **Table 3.7**, it can be noted that in Bariadi, one (1) livestock extension officer was responsible for seven villages (1:7), followed by Kongwa, where an extension officer was responsible for six villages (1:6), far from the recommended ratio of one officer per village (1:1). Tanganyika and Handeni had a better ratio of one officer for every four villages (1:4), but this was still inadequate. These shortages meant officers were handling too many villages, making it difficult to provide proper services like vaccinations, disease control, and farmer training. Due to the geographical dispersion between villages, providing timely and quality extension services to all villages becomes challenging.

- **Shortage of 38% of Veterinary Officers at LGAs and 42% at RS Level**

A review of the Country List of Veterinary Officers prepared by MLF, noted that 42% of the Regional Secretariats did not have Veterinary Officers to undertake different veterinary activities. Moreover, 114 LGAs, equivalent to 66% of 184 LGAs, had livestock veterinary officers. This is below the standard and contrary to Section 43 of the Veterinary Act Number 16 of 2003, which requires that veterinary professionals effectively perform the designated veterinary services.

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This resulted in veterinary services such as treatment and vaccination carried out by Livestock Extension Officers (animal scientists). Treatment by non-veterinary officers jeopardizes animal lives and general public health. In addition, animal scientists are not regulated by any board as Veterinary Officers. Therefore, it was difficult to hold them accountable in case of mishaps.

The reason for the insufficient number of veterinary officers in the country was noted to be inadequate recruitment and inadequate use of paraprofessionals in the area of shortages. It was further noted that most communities practise traditional/pastoralist livestock keeping; hence, they migrate from one area to another for grazing.

### 3.5.2 Insufficient Training for Livestock Extension Officers in the Visited LGAs

The audit noted that LGA did not sufficiently provide training to Livestock Extension Officers. Kilosa DC planned only one training from 2019/20 - 2023/24 but did not execute it. Handeni DC planned 20 training sessions but implemented nine, leaving a variance of 11 unexecuted training programmes. In contrast, Bariadi DC met all its planned training goals, executing all 31 sessions without any variance, while Kongwa DC and Tanganyika DC neither planned nor executed the training, contrary to Para 2.5.1(xi) of the Guidelines for the Provision of Extension Services, 2011 which requires LGAs to recruit and build capacity of livestock extension officers.

This finding implies that livestock extension staff did not undertake regular refresher training courses to acquire updated knowledge according to technological and economic changes. **Table 3.8** depicts planned training and training executed from the sampled LGAs.

**Table 3.8: Planned Training Vs Training Executed from Sampled LGAs**

District Council	Financial Years	Planned Training Sessions	Executed Training Sessions	Variance
Kilosa	2019/20 - 2023/24	1	0	1
Handeni	2019/20 - 2023/24	20	9	11
Kongwa	2019/20 - 2023/24	1	1	0
Tanganyika	2019/20 - 2023/24	0	0	0
Bariadi	2019/20 - 2023/24	31	31	0

*Source:* Auditors Analysis using information submitted from LGAs, 2024

Based on **Table 3.8**, it was indicated that training activities were noted to be fully implemented at Kongwa DC and Bariadi DC, whereas Tanganyika did not plan for training livestock extension officers. Kilosa DC did not carry any training, while Handeni DC, on the other hand, implemented 9 out of the 20 planned training for livestock extension officers.

Further inquiry regarding the reasons for the insufficient training of livestock extension officers noted the following:

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- **Reallocation of Funds**

Reviewed revenue collection implementation reports from Local Government Authorities noted that, LGAs retained 15% from the livestock revenues, but they diverted the money to other functions, such as education and water, instead of using it for the intended functions of developing the livestock sector. A detailed description of the amount of funds retained in LGAs but not used for developing the livestock sector is indicated in section 3.5.6(iv) of this report.

### **3.5.3 Inadequate Provision and Maintenance of Working Tools for Livestock Extension Services**

Para 2.8.1 of the Guidelines for the Provision of Livestock Extension Services, 2011, requires the Ministry of Livestock and Fisheries and LGAs to ensure adequate logistic support. It requires LGAs to undertake a needs assessment to identify logistic requirements in terms of transport, extension kits and other working facilities at national, regional and LGA levels. Moreover, the guidelines require the facilitation of the operation and maintenance of all allocated facilities.

The assessment of the provision and maintenance of working tools for livestock Extension Services, revealed the following:

#### **66% of Livestock Extension Officers were not Provided with Motorcycles**

Based on the assessment at the national level by 2024, it was noted that the Ministry of Livestock and Fisheries managed to supply only 1,500 out of 4,406 motorcycles demanded to facilitate servicing Livestock Extension Officers across the country. The motorcycle distribution covered only 34% of the existing demand.

Inadequate coverage in motorcycle distribution implies that more than half of the existing livestock extension officers lack transport facilities to assist them in reaching remote areas of livestock farmers when needed and when doing routine extension services.

The further analysis of this matter in the visited RS and LGAs revealed the following:



**(i) 29% of Livestock Extension Officers in the Four Visited Regions were not Provided with Motorcycles**

A review of the status of the availability of transportation facilities, 2024, noted that 29% of Livestock Extension Officers in the visited regions had a shortage of motorcycles that reached 29%. This finding implies that livestock extension officers could not cover their jurisdiction areas in a timely manner when needed and during their daily routines. Details of the Motorcycle availability gap are as indicated in **Table 3.9**.

**Table 3.9: Status of Availability of Motorcycles to Livestock Extensionists in the Visited Regions**

Region	Number of Motorcycles Required	Number of Motorcycles available	Percentage Available
Simiyu	98	49	50
Tanga	271	65	24
Dodoma	230	59	26
Katavi	84	28	33
Total	<b>683</b>	<b>201</b>	<b>29</b>

*Source:* Auditors' Analysis of the Transportation Assessment Reports, 2024

The audit compared the number of extension officers with motorcycles in relation to the coverage of villages and streets in the visited regions. According to the Livestock Extension Guidelines, 2011, one livestock Extension Officer was supposed to serve one village/street. Despite this provision, it was observed that only one motorcycle was available to serve 13 villages and/or streets in the Tanga region. The 1:13 ratio was the smallest serving ratio compared to 1 motorcycle per 1 village in the Katavi region. **Table 3.10** indicates the serving ratio per region visited.

**Table 3.10: Ratio of Livestock Extension Officers with Motorcycle per Villages Served**

Region	Total Number of extension officers with Motorcycles	Total Number of village/streets	Coverage of motorcycles per Villages Served
Simiyu	49	471	1:10
Tanga	65	822	1:13
Dodoma	59	782	1:13
Katavi	201	215	1:1

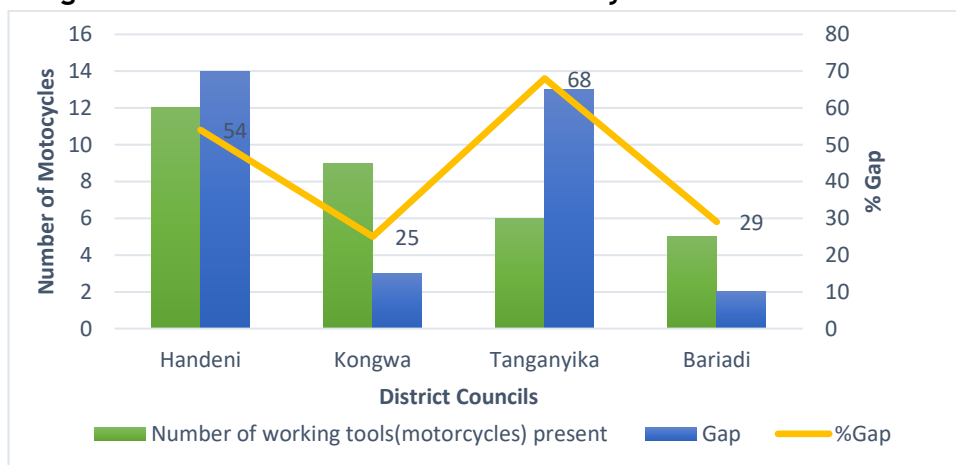
*Source:* Auditors' Analysis of Transportation Assessment Report and PO-RALG Data on Villages and Streets in Respective Regions, 2024

Table 3.10 shows that Katavi had 201 officers and 215 villages, meaning each officer had at least a motorcycle to cover one (1) village. In contrast, Simiyu had 49 officers and 471 villages, so each officer covered ten (10) villages, while Tanga (65 officers, 822 villages) and Dodoma (59 officers, 782 villages) each had one (1) motorcycle for every 13 villages.

**(ii) 54% of Livestock Extension Officers in the Selected LGAs Lacked Motorcycles**

Analysis of the availability of motorcycle facilities done for the visited LGAs, revealed a shortage of 74% of these facilities, with a range varying from 29% to 74% (see Figure 3.6).

**Figure 3.6: Status of the Available Motorcycles at the visited LGAs**



*Source:* Auditors' Analysis of Transport Analysis Report from LGAs, 2024

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**Figure 3.6** depicts the severity of transportation challenges. Based on this Figure, Misungwi and Kilosa had a transportation facility shortage of more than 70%, while Kongwa was noted to have the lowest deficit as it had a motorcycle shortage of 25%.

The audit noted that the shortage of motorcycles was caused by low priorities at the local government level to enhance the revenue generation sectors such as livestock and agriculture. However, the interviewed LGA officials explained that more efforts are directed into service sectors such as health and education instead of livestock and agriculture. As indicated in previous sections of this report, 15% of retention revenues collected from sources related to livestock were not used for matters related to the enhancement of the livestock sector. This observation implies that priority was not given to this sector.

Moreover, there was no coordinated commitment by the PO-RALG and MLF to narrow the gap in the distribution of transportation facilities at the LGAs. The audit did not find any strategy from the PO-RALG regarding the efforts to reduce the transportation facilities gap despite having a core function of capacity building at RS and LGAs. As a result of the existing gaps, livestock farmers who needed livestock extension services could not get them in a timely manner and in other instances, they could not get them completely. Inadequate or absence of extension services provision close to livestock keepers coupled with the wide geographical coverage and the spatial distribution of livestock keepers impede the provision of extension services.

#### **3.5.4 Inadequate Availability of Livestock Dip-tank Infrastructures**

The audit also noted various gaps in relation to the availability of Livestock Dip-tank Infrastructures. These are explained in details below:

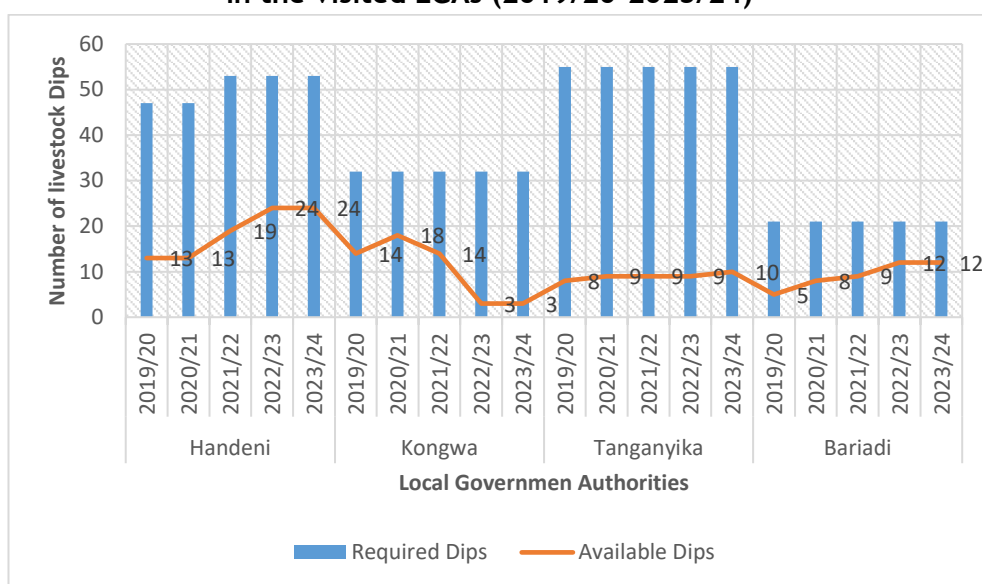
##### **(i) Shortage of Livestock Dip Tanks in the Country was 65%**

The review of the status of constructed livestock dips in the country found that the Ministry had a total of 2901 dips in all regions, where 2,730 dips were operational, while 147 dips were not operational. This finding implies that the country had a shortage of 5,756, which is equivalent to 66% livestock dip-tanks, which falls short of the required construction of 8,657

livestock dips in the country by 2026/27 as detailed in Annex 2 of Livestock Transformation Plan, aimed at strengthening animal health.

Furthermore, the audit analysed the trend of construction of livestock dips by looking at the required numbers against available dips at the visited Local Government Authorities. The findings revealed that, none of the LGAs had their demand for dips during any of the five years under review. Details are presented in **Figure 3.7**.

**Figure 3.7: Trend of the Available versus Required Livestock Dip Tanks in the visited LGAs (2019/20-2023/24)**



*Source:* Auditors' Analysis using dip-tank need analysis, 2024

**Figure 3.7** indicates that all LGAs lacked sufficient dips for their livestock in all Financial Years assessed. The further assessment indicated that, Kongwa DC had the lowest number of operational dips with the declining trend for the Financial Year 2022/23 and 2023/24. Handeni DC had the highest number of dips with increasing trends for a similar Financial Year. Katavi DC had a constant demand and a slight increase in the number of operational dips within five years of assessment.

## (ii) 39% of Livestock Dip-tank Infrastructures in the Visited Regions were not Operational

During the audit visit to Simiyu, Tanga, Dodoma, and Katavi regions, it was found that 39% of the available livestock dip tanks (147 out of 380) were not operational. Dodoma had the highest percentage of non-functional dip tanks at 56%, followed by Simiyu at 40% and Katavi at 32%. Tanga recorded the lowest proportion, with only 11% of its dip tanks not operational. This highlights significant challenges in maintaining livestock dip tank infrastructures in the visited regions.

Table 3.11 provides the status of Livestock Dip Infrastructures in the visited Regions.

**Table 3.11: Status of Livestock Dip tanks**

LGA	Number of Dip Tanks Available	Number of Dip Tanks not Operating	Percentage of Non-operating Dip Tanks
Simiyu	155	62	40
Tanga	82	9	11
Dodoma	124	70	56
Katavi	19	6	32
Total	380	147	39

Source: Auditors' Analysis of Information from Regional Secretariats, 2024

### 3.5.5 Maintenance of Livestock Dip-Tanks

The audit also assessed the status of the maintenance of livestock dip-tank infrastructures in the visited regions. The audit findings in this aspect revealed the following:

#### (i) Non-operational Dip Tanks Decreased Nationwide

The audit revealed a significant decline in the percentage of non-operational livestock dip tanks at the national level, dropping from 72% in 2019/20 to 6% in 2023/24. This improvement resulted from the Ministry of Livestock's release of TZS 12.5 billion over the past five financial years for the maintenance and construction of dip tanks in LGAs. Table 3.12 depicts the operational status of livestock dips across the Country.

**Table 3.12: Operational Status of Livestock Dips at the Country Level**

Financial Year	Number of Operational Dips	Number of Non-operational Dips	Non-operational Dips (%)
2019/20	1,738	1,245	72
2020/21	1,983	850	43
2021/22	2,203	510	23
2022/23	2,644	288	11
2023/24	2,901	171	6

Source: Auditors' Analysis of Dip-tank Need Analysis, 2024

**(ii) 29% of Dip-tank Infrastructures in the Visited LGAs were not Operational**

The audit noted a total of 84 dip tanks, in which 60 dips, equivalent to 71%, were operating. Bariadi DC and Tanganyika DC had the highest percentage of non-operating dips at 43% and 40%, respectively; Handeni DC had 37% non-operational dip tanks, while Kongwa had only 7% of its dip tanks non-operational. Table 3.13 depicts the operational status of livestock dip infrastructure in the visited LGAs.

**Table 3.13: Operational Status of Livestock Dip Infrastructure in the Visited LGAs as of July 2024**

LGA	Number of Available Dips	Number of Non-operational dips	Non-operational Dips (%)
Bariadi	21	9	43
Handeni	24	9	37
Kongwa	29	2	7
Tanganyika	10	4	40
Total	84	24	29

Source: Auditors' Analysis using livestock dips records from LGAs, 2024

During the site visit, the audit observed dip tanks that were completely obsolete and abandoned and others that were operating but needed some maintenance, as depicted in Photos 3.1(a) and (b).

**Photos 3.1(a) and (b): Non-operational and operational dip-tank at Bariadi DC**



**Reasons for the Existence of Non-operational Dip Tanks**

Reviewed progress reports from the visited LGAs indicated that, the discontinued operation of dip tanks resulted from several causes, including:

**(a) Inadequate Water Infrastructure**

Through site visits, it was found that livestock dips had been constructed in areas with no water sources nearby to fill the dips and mix them with acaricides. As a result, the livestock farmers, through the dip committee, were supposed to buy water. This practice was costly in terms of time and finances, something which interfered with scheduled dipping intervals in some instances, hence exposing animals to ticks and tick-borne diseases.

**(b) Unavailability of Maintenance Funds for Livestock Dips**

It was noted that, LGAs could not set and release adequate funds to renovate the livestock dips.

### (c) Non-functioning Dip Committees

A review of the status Report, 2024 of operational dips at the LGAs visited showed that 24 out of 60 dip-committees formulated could not function. Interviewed officials from the LGAs pointed out that the committees lacked the capacity to manage the contributions from the livestock farmers who used the dips. Because of that, the committees did not have money to buy acaricides and water for dipping livestock. Table 3.14 provides a detailed analysis of the number of functional committees in the visited LGAs.

**Table 3.14: Detailed Analysis of the Number of Functional Committees in the Visited LGAs**

LGA	Number of Available Dips	Number of Dips with the Functional Committee	Number of Dips without Committee
Bariadi	21	12	9
Handeni	24	15	9
Kongwa	29	27	2
Tanganyika	10	6	4
Total	84	60	24

Source: Auditors' Analysis using livestock dips records from LGAs, 2024

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Table 3.14 indicates that out of 84 dip tanks, 60 (71%) had committees, while 24 (29%) did not, making it harder to maintain and use the tanks. Committees helped to ensure that the tanks were properly used and maintained. Therefore, the lack of committees made it harder to keep the tanks in good condition and make them effective in tick control and prevent exposure of livestock to a risk of diseases and death.

- **Insufficient Supply of Dipping Acaricide to Local Government Dip-tanks**

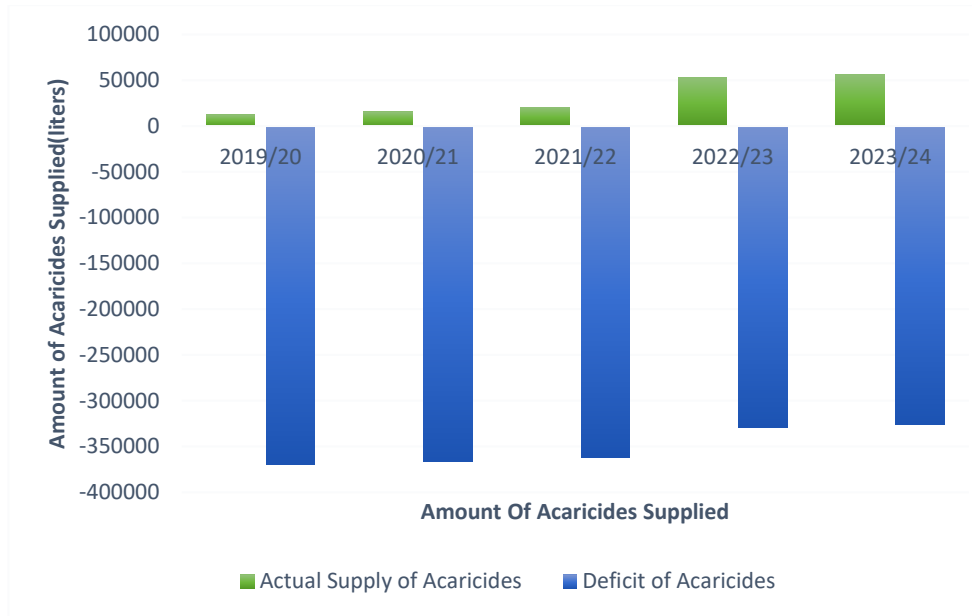
The Ministry of Livestock and Fisheries has set a subsidy in the year 2019/20-2023/24 for procuring and supplying acaricide to LGAs for use in livestock dipping. Over the five-year period since the subsidy began, the Ministry managed to supply a total of 157,399 litres.

The audit noted that the amount supplied was only 8% of the amount required to dip livestock at the recommended interval of every two weeks.



Figure 3.8 indicates the amount of acaricides supplied in the country over five Financial Years.

**Figure 3.8: Actual Supply of Acaricides in Livestock Dips 2019/20-2023/24**



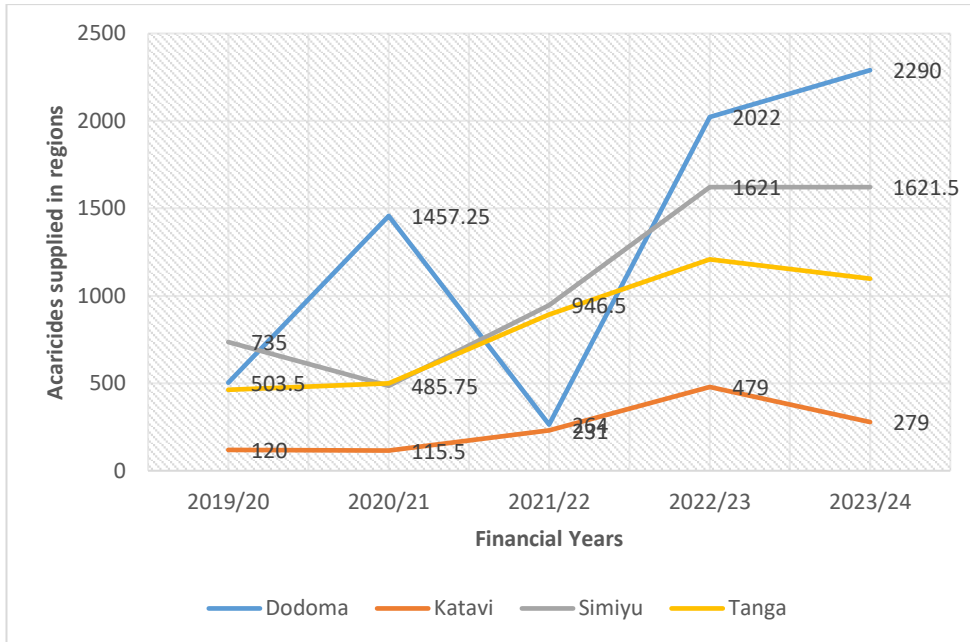
Source: Auditors' Analysis of Acaricide Supply Reports, 2024

It can be noted from Figure 3.8 that there was a consistent deficit in acaricide supply for livestock dips from 2019/20 to 2023/24. Despite noted increase, particularly in 2022/23, the supply remained insufficient to meet demand, with the largest deficit of 369,626 litres in 2019/20.

The supply of acaricides in the visited regions of Dodoma, Katavi, Simiyu, and Tanga was also analysed. The audit noted that the amount of acaricides supplied to livestock farmers to control tick-borne diseases increased gradually from the financial year 2019/20 for Dodoma, Simiyu and Tanga regions. The supply of acaricides was lower for the Katavi region than for other regions visited. The reason behind this was the low number of functional livestock dips and a low prevalence of tick-borne related diseases compared to other regions.

Figure 3.9 shows the trend in the supply of acaricides for livestock dip-tanks in the visited LGAs.

**Figure 3.9: Trend of Supplied Acaricides (Litres) in Livestock Dip-tanks at LGAs visited**



Source: Auditors Analysis of Acaricide Supply Reports, 2024

To offset the supply gap in the MLF, the dip committees were supposed to coordinate the contributions that were supposed to be paid by livestock farmers to ensure the sustainability of dips. However, all the Livestock Extension Officers at LGAs were not able to strengthen the dip committees to ensure that they open bank accounts and supervise their operations.

- **Impact of Inadequate Availability of Dip-tanks on the Provision of Extension Services**

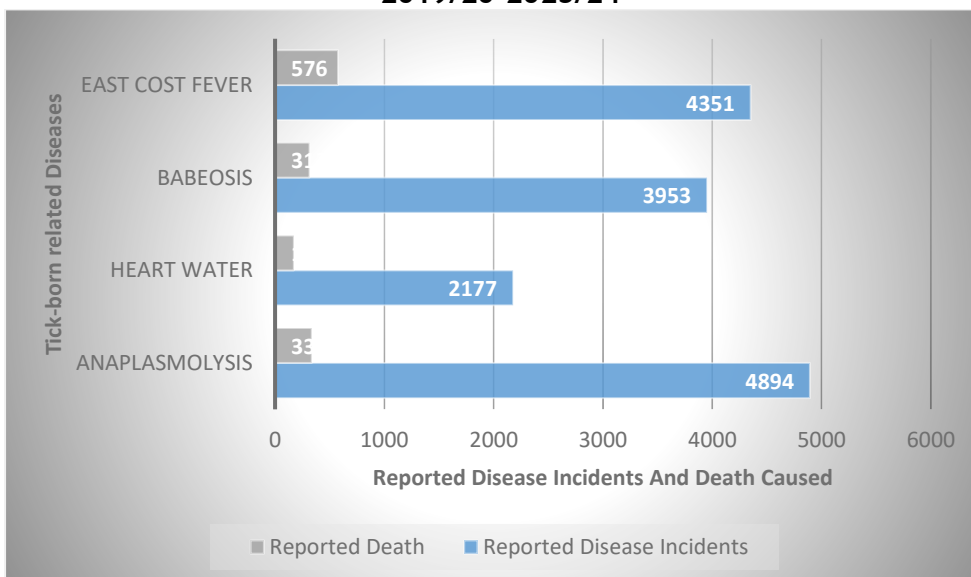
Non-functional dip tanks hinder the provision of livestock extension services, ultimately affecting animal health, productivity, and farmer incomes. Specifically, inadequate availability of dip-tank infrastructures has the following effects:

- **Increased Disease Spread**

Insufficient supply of livestock dipping services normally results in the persistence of tickborne-related diseases such as east-cost fever (ECF), Babesiosis, Heart-water, and Anaplasmosis. For example, a review of the

livestock disease incidences extracted from the MLF database noted that the total reported tick-borne related disease incidents reached 15,375 in the year 2019/20-2023/24, with the deaths reaching 1398 livestock. **Figure 3.10** details the Reported Tick-borne-Related Incidents and their Respective Deaths.

**Figure 3.10: Reported Tick-borne-Related Incidents and Deaths - 2019/20-2023/24**



**Source:** Auditors' Analysis on the Disease Incidents and Deaths Informations from MLF 2019-2024

As depicted in **Figure 3.10**, the total reported tick-borne related disease incidents were noted to be higher for Anaplasmosis (4898 incidents), although it caused fewer deaths when compared to east-coast fever (4351 incidents), which had slightly lower reported incidents, but it caused more death rates.

The assessment indicated that the observed incidents were due to inadequate awareness among livestock farmers about the importance of adhering to the dipping scheme. It was further noted that disease incidences for the livestock were caused by insufficient or lack of operational dipping facilities in the LGAs.

Dip tanks are essential for controlling external parasites that cause diseases such as tick-borne illnesses. Non-functional dip tanks lead to higher infestation rates, increasing animal mortality and reducing productivity.

### 3.5.6 Inadequate Funding for Extension Services

Para 2.8.2 of the Guidelines for The Provision of Livestock Extension Services, 2011, requires the MLF and PO-RALG to allocate adequate funding for livestock extension services through the normal budgetary allocations, and other stakeholders like development partners, NGOs and the private sectors, to also contribute to extension services provision.

In relation to funding for Extension Services, the following were noted:

#### (i) Shortage of Funds for Livestock Extension Services at the MLF

Livestock extension services were implemented under the Directorate of Research, Training and Extension (DRTE). A Review of the MLF Annual Progress Report (2019/20-2023/24) revealed that the average amount of funds released to the Directorate of Research, Training and Extension was 56% of the approved budget. The annual amounts planned and the amount released are presented in Table 3.15.

**Table 3.15: The Amount Planned Versus Released at the Directorate of Research Training and Extension**

Financial Year	Amount Budgeted (TZS)	Actual Amount Released (TZS)	% Released
2020/21	1,738,678,887	1,785,568,564	103
2021/22	1,469,685,216	1,312,062,113	89
2022/23	7,530,348,000	4,263,585,257	57
2023/24	7,658,989,800	2,443,897,486	31

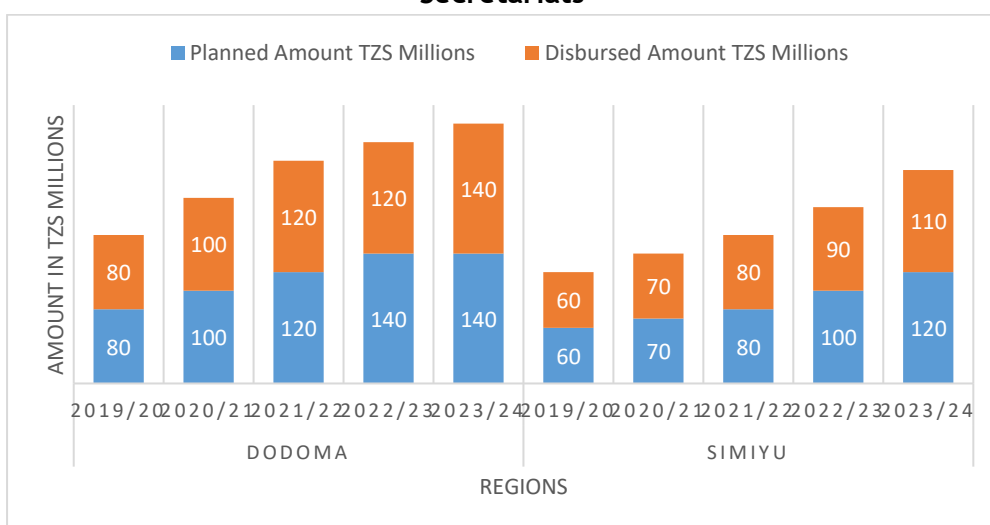
Source: MLF Annual Progress Report, 2019/20-2023/24

Table 3.15 shows an increased budget for the last two years as it was elevated to more than TZS 7 billion from 2020/21-2023/24. However, the funding trend of extension services at the Ministry level was declining, dropping from 103% in 2020/21 to 31% in 2023/24.

## (ii) Insufficient Funding for Extension Services at RS Levels

Further assessment was done to assess the funds disbursed to the Regional Secretariats. It was noted that the amount of funds disbursed increased in the Dodoma region for all reference years, except for 2023/24, when it dropped. Moreover, the funding at Simiyu was noted to be below that of Dodoma, although it also increased from one financial year to another, as detailed in **Figure 3.11**.

**Figure 3.11: Funding for Livestock Extension Services at Regional Secretariats**



**Source:** Auditors' Analysis using Budget Implementation Reports from RSs, 2019/20-2023/24

## (iii) Inadequate Disbursement of Budgeted Funds for Livestock Extension Services at the LGAs

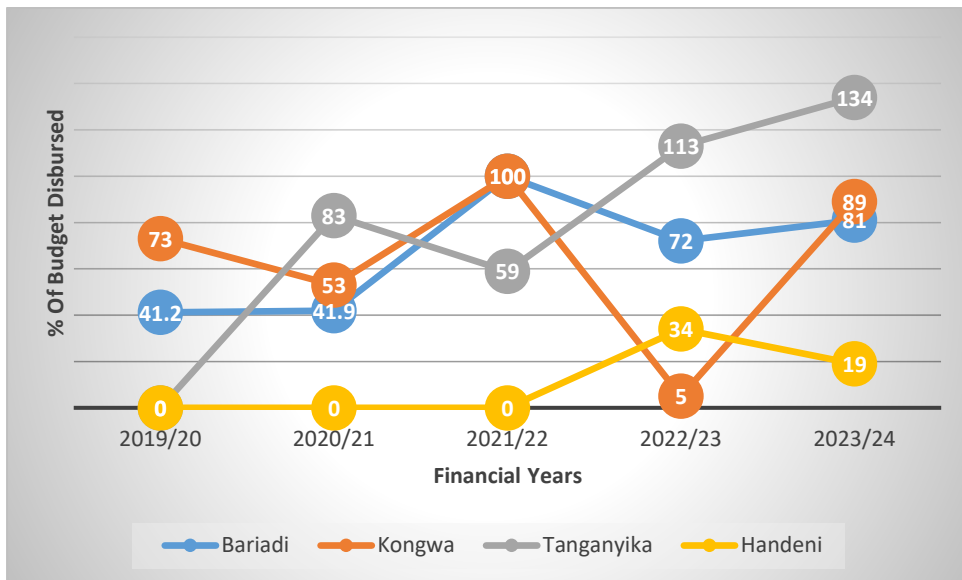
A review of the Budget Implementation Report from the LGAs, 2019/20-2023/24, showed a fluctuating trend of the budget release to cater for different extension services.

As shown in **Figure 3.12**, the percentage disbursed at different LGAs fluctuated from year to year. Handeni DC did not receive any funds for three years from 2019/20 to 2021/22 and received less than 50% of the approved budget in the years 2022/23 and 2023/24. Tanganyika DC was noted to have

an increasing trend of disbursements during the last two years of 2022/23 and 2023/24.

Bariadi DC initially had an increasing disbursement trend, reaching 100% for the financial year 2021/22. Followed by a decline in 2022/23 and a slight increase in 2023/24.

**Figure 3.12: Disbursement Trend of Budgeted Funds for Livestock Extension Services**



*Source:* Auditors' Analysis using Budget Implementation Reports from LGAs, 2019/20-2023/24

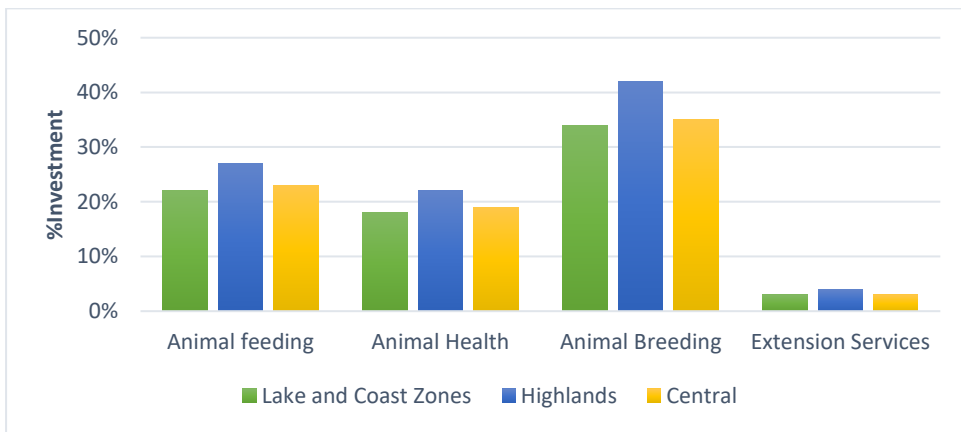
The following were the reasons for the insufficient disbursement of Funds for Extension Services:

**(i) Extension Services were not Prioritized in the National Livestock Master Plan**

The audit noted from the Livestock Master Plan (2017/18-2021/22) that the highest investment across the Lake and Coast Zones, Highlands, and Central regions was directed towards animal breeding, particularly in the highlands, with nearly 40% of the total funds allocated. Animal feeding and animal health received moderate and balanced funding across all zones. Though there is no benchmark on how much should be disbursed for extension

services, extension services received minimal investment in every zone compared to other activities, indicating that these services were not prioritized. The audit noted that funds disbursed for extension services in all three livestock zones were less than 6% of the total investments envisaged. **Figure 3.13** depicts the comparative assessment of investment in different areas of interventions.

**Figure 3.13: Comparative Assessment of Investment in Different Areas of Interventions**



*Source:* Auditors' Analysis of data from Livestock Master Plan, 2017/18-2021/22

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Based on **Figure 3.13**, the investment initiatives prioritized animal breeding activities, while the livestock extension services received the least interventions. Underfunding of extension services had negative implications for the implementation of the plan as it limited the capacity to provide farmers with essential training and support. Generally, inadequate investment in extension services is likely to result in low productivity in the livestock-keeping sector.

**(ii) Extension Services were not Prioritized in the Livestock Sector Transformation Plan (LSTP)**

The audit noted through the review of the Livestock Sector Transformation Plan of 2022 that the funding amount set for extension services was lower compared to other components. According to the Plan, the livestock sector planned to spend TZS 1.94 trillion in five years from the Financial Year 2022/23 to 2026/27.

The amount set for livestock extension services was found to be lower as it had only 2.2% of the total budget, compared to, for example, the range-land component, which occupied 45% of the total transformational budget.

### (iii) Insufficient Funding Commitments in the Livestock Transformation Plan

The Audit noted a significant deviation from the funding commitment of the Livestock Sector Transformation Plan. For the financial year 2022/23, only 31% amounting to TZS 4,263,585,257 of the planned amount of TZS 13,968,320,030 was released. This trend continued in 2023/24, where only 28.4% (2,443,897,486 TZS) of the budgeted 8,584,400,000 was disbursed. **Table 3.16** depicts the funding priorities in the Livestock Sector Transformation plan.

**Table 3.16: Funding Priorities at the Livestock Sector Transformation Plan**

Financial Year	Amount of Extension Services Funds Planned to be Released Annually in (LSTP)	Actual Amount of Funds Released in Annual Reports	Released Funds (%)
2022/23	13,968,320,030	4,263,585,257	31
2023/24	8,584,400,000	2,443,897,486	28
<b>Total</b>	<b>22,552,720,030</b>	<b>6,707,482,743</b>	<b>30</b>

*Source:* Auditors' Analysis of the LSTP and its Implementation Report, 2024

Table 3.16 shows that the amount released to cater for extension services ranged from 28 to 31%, and the average amount of the released funds for the two years of plan implementation is 30%. The audit noted that the gaps between the planned and released funds negatively impact funding priorities for the livestock sector, leading to inadequate achievement of extension services goals and the overall goals of the LSTP.

Further review of the Livestock Sector Transformation Plan noted that the plan did not indicate the source of funds. Because of that, the transformation plan was inadequately implemented, which led to direct negative consequences during the implementation of extension services.



### (iii) LGAs Insufficiently Retained 15% of its Resources from Livestock Revenues

Assessment made by the audit noted that, in 9 LGAs, a total of TZS 7,383,801,019 was collected from different livestock sources for five years. This implies that, LGAs were supposed to retain 15%, equivalent to TZS 1,107,570,153. However, only TZS 829,930,786 was retained and could not retain TZS 277,639,367. This retention was equivalent to 11.2%, and it was contrary to the Presidential decree of 2002, which requires all local government authorities to set aside 15% of proceeds from livestock and plough back to livestock development sector development purposes.

Factors put forth by officials from Kilosa, Handeni, Bariadi, Kongwa, and Tanganyika when interviewed were that LGAs had fluctuating priorities that needed funds, while in other cases, they primarily focused on basic services, namely education, health, and water. In that regard, the audit was informed that much of the revenues collected from the economic sectors, such as livestock, was spent in those service areas. Details of the amount collected versus the amount retained are depicted in Table 3.17.

**Table 3.17: Comparison of the Amount Collected versus the Amount Retained for Sector development for LGAs**

LGA	Total Revenue Collected (TZS)	15% to be Retained (TZS)	Actual Amount Retained (TZS)	Amount not Retained (TZS)
Misungwi DC	650,669,379	97,600,407	97,600,406	0
Sengerema DC	327,500,000	49,125,000	0	49,125,000
Longido DC	1,031,978,430	154,796,765	0	154,796,765
Hanang DC	495,235,357	74,285,304	174,081,000.	-99,795,696
Monduli DC	62,965,500	9,444,825	0	9,444,825
Simanjiro DC	2,144,961,138	321,744,171	204,095,000	117,649,171
Kongwa	346,000,261	51,900,039	225,527,592	-173,627,553
Handeni DC	404,728,686	60,709,303	45,853,500	14,855,803
Tanganyika DC	743,363,607	111,504,541	0	111,504,541
Bariadi DC	1,176,398,661	176,459,799	82,773,288	93,686,511
<b>Total</b>	<b>7,383,801,019</b>	<b>1,107,570,153</b>	<b>829,930,786</b>	<b>277,639,366</b>

Source: Auditors' Analysis Using Revenue Collection Reports from LGAs, 2024

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As depicted in **Table 3.17**, a total of TZS 277,639,366 was not retained from the livestock revenues to develop the livestock sector.

Despite the requirements, the LGAs of Sengerema, Monduli, Longido, and Tanganyika did not retain any amount to develop the livestock sector. Meanwhile, Kongwa and Hanang which retained more than 15%. And the rest of the LGAs retained the amount, which was less than 15% required.

### **3.5.7 Insufficient Equipment for Breeding Improvement Activities**

To implement Objective E in the Strategic Plan 2021/22-2024/25, the Ministry of Livestock and Fisheries intended to improve sustainable livestock production and productivity. The strategic plan indicates the intention to promote massive livestock breed improvement through natural breeding selection and artificial breeding. The audit noted the following with regard to equipment for breeding:

- (i) Inadequate functioning of plants to produce liquid Nitrogen in Artificial Insemination Centres; and
- (ii) Artificial Insemination Kits for Extension Services were not Procured and Distributed

Detailed description of these observations is provided hereunder:

#### **i) Limited Functioning of Plants to Produce Liquid Nitrogen in Artificial Insemination Centers**

The audit noted that all eight (8) Artificial Insemination centres had plants to produce liquid Nitrogen, an essential chemical used to store the semen at -196C without being distorted for five years, 2019/20-2023/24. Out of the eight centres listed, only the NAIC AI centres of Arusha and Mwanza had Liquid Nitrogen Plants. To be specific, NAIC had one (1) working unit (Nobblegen LNP 240), while Mwanza's Stirlin-1 Economy J0423 was also functional. This being the case, the centres lacked the capacity to consistently provide insemination services, which was central to their purpose contrary to Para3.4.5 of Objective E in the Strategic Plan 2021/22-2024/25 of the Ministry of Livestock and Fisheries, which intends to improve sustainable livestock production and productivity. Thus, the Ministry established Livestock Artificial Insemination Centres to assist livestock

farmers in visiting and obtaining knowledge regarding livestock breeding improvement. Furthermore, artificial insemination centres were established to offer insemination services to livestock keepers needing breeding improvement. The functionality status of the liquid Nitrogen Plant of the Artificial Insemination (AI) Centres across various regions is presented in **Table 3.18**.

**Table 3.18: Functionality Status of Liquid Nitrogen Plant of Artificial Insemination Centers**

Artificial Insemination Center	Availability of Liquid Nitrogen Plant	Functionality Status
NAIC	1 Nobblegen LNP 240 1 StirLIN-1 Compact J0422	1 Working, 1 Not Working
Mwanza A.I	1 Stirlin-1 Economy J0423	Working
Dodoma A.I	1 Strilin-1 Economy J0555	Not Working
Kibaha A.I	1	Not Working
Lindi A.I	1 Crymoch Lnp 120	Not Working
Uyole A.I	1	Not Working
Katavi A.I	1	Not Working

*Source:* Report of Functionality Status Report of Liquid Nitrogen Plant as Provided by the Ministry of Livestock and Fisheries, 2024

Based on **Table 3.18**, the liquid Nitrogen Plant of the Artificial Insemination (AI) centres are not functional across various regions. The presence of non-functional centres across regions affects access to insemination services and adds time and financial burdens to livestock farmers from affected areas like Dodoma, Lindi, and Kibaha, who need to travel long distances to reach functional centres.

It was noted that, in other areas, they used liquid nitrogen from the hospitals; however, the liquid is of low quality, and normally it renders insemination unsuccessful.

The audit noted that Kilosa and Handeni District Councils had Artificial Insemination kits. However, they had problems getting liquid nitrogen unless refilled at the National Artificial Insemination Centre (NAIC) in Arusha, Tanganyika DC and Bariadi, DC, which lacked Artificial Insemination (AI) equipment altogether.

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The audit noted that, from the National Artificial Insemination Centre, the Ministry of Livestock and Fisheries had inadequately maintained the functionality status of the AI equipment in its AI Centres. The plant for liquid nitrogen could not be repaired to remain functional. An analysis of data from interviews with officials from the Ministry of Livestock and Fisheries pointed out that the tools and equipment installed during the colonial era were not replaced.

**ii) Artificial Insemination Kits for Extension Services were not Procured and Distributed**

An assessment of the achievements reached within three years since the plan became operational noted that the Ministry of Livestock and Fisheries, through NAIC, had not adequately implemented the intended objectives. Although the implementation time frame had not yet concluded, there was a risk that the intended results might not be achieved, contrary to Para 5.1.1 of the Livestock Sector Transformation Plan, which required the Ministry of Livestock and Fisheries to improve the artificial insemination centres to achieve improvement of the animals' genetics.

A review of the plan showed that the activities envisaged were to be conducted from 2022/23 to 2025/26. As depicted in Table 3.19, the Ministry through NAIC did not procure any cylinder with a capacity of 35 and 60 litres, nor did it purchase and distribute the insemination doses for livestock semens.

**Table 3.19: Status of Implementation of AI Activities as Suggested by LSTP**

Aspect	Planned number	Actual activity implemented by 2024
Doses for Semen Livestock	300,000	No evidence suggesting the activity was implemented
Cylinder with capacity of 35 and 50 litres	21	No evidence suggesting the said capacity of 35 and 50 cylinders to have been implemented
Inseminating cattle per year	500,000	No evidence suggesting the activity was implemented
Providing training on Artificial Insemination to Extension Officers in LGAs	920	No evidence suggesting the activity was implemented

*Source:* Livestock Sector Transformation Plan, 2022 and Progress Report from MLF, 2024

This situation could ultimately lead to a continuation of inadequate livestock extension services to farmers by livestock extension officers. The insufficient procurement of liquid Nitrogen for Artificial Insemination centres has resulted in the declining number of inseminated cattle in the country for the five years of this assessment.

### 3.5.8 There was a 12% Decline in Animal Improvement through Artificial Insemination

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The audit assessed the number of livestock that had been improved through artificial insemination over the past five years. The review of budget speech of May 2024 indicated that the total number of inseminated cattle has decreased from 76,612 in 2019/20 to 67,355 in 2023/24, which was a decline of 12% at the National level. This was contrary to Annex 2 of the Livestock Sector Transformation Plan, 2022, which set a goal of inseminating 2,000,000 cattle by 2023/24. The detailed trend of livestock inseminated at the National level is indicated in **Figure 3.14**, while the detailed trend of cattle inseminated in visited regions is indicated in **Figure 3.15**.

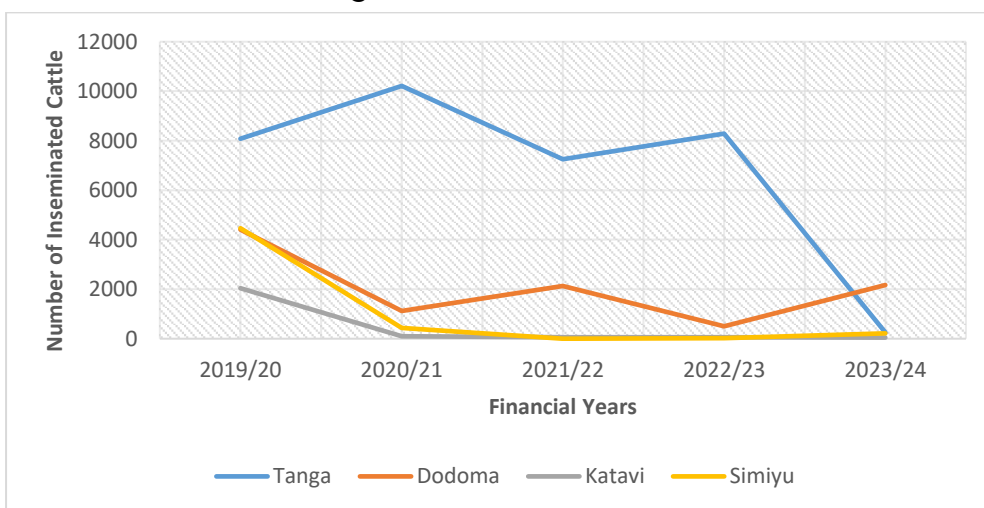
**Figure 3.14: Trend of Number of Livestock Inseminated 2019/20-2022/23**



Source: Auditors' Analysis Using Budget Report, 2023

As indicated in **Figure 3.14**, nationally, the number of cattle inseminated decreased, except for the first two years, when there was an increasing trend. This finding implies that the strategy for NAIC was not effective in improving livestock productivity via artificial insemination.

**Figure 3.15: Trend of Number of Livestock Inseminated in Visited Regions 2019/20- 2022/23**



Source: Auditors' Analysis of the Budget Report, 2023

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Based on **Figure 3.15**, the audit noted that the number of cattle inseminated in 2019/20 was large in all regions visited. However, the following year, the number of cattle inseminated increased while there was a sharp decline in other regions. Furthermore, the audit noted a decline in the number of cattle inseminated in subsequent years.

### **3.5.9 Non-operational Management of Ward Agricultural Resource Centres (WARCs) and Inadequate Establishment of Livestock Farmers Field Schools (LFFS)**

The audit noted the following with regard to the establishment and management of ward agricultural resource centres (WARCs) and livestock farmers' schools:

#### **(i) Non-operational Ward Agricultural Resource Centres (WARCs)**

The audit noted through the review of the WARC status report for 2024 that only 23 out of 248 Ward Resource Centres (equivalent to 9%) were functioning contrary to the Agricultural Sector Development Programme II (ASDP-II), which requires each LGA to establish and operate at least one Ward Agricultural Resource Centre for each ward so that farmers can access resources, training, and support necessary for obtaining technologies, information, and advice.

The main reason provided by respondents was that the LGAs neither planned nor allocated funds to construct, equip and operate the WARCs. Moreover, the audit did not find a strategy for building and operating WARCs in LGA plans.

The inadequate functioning of WARCs reduced the opportunity for livestock farmers to learn about new and appropriate technologies together. Because of this, livestock keepers continued with traditional methods of handling livestock as the dissemination of knowledge to livestock keepers was impaired.

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(ii) **Only 14% of the Livestock Farmers' Field Schools (LFF) were Established**

A review of Annual Operational Plans and Annual Implementation Reports indicated that the Ministry established a total of 66 Livestock Farmer Field Schools (LFF). This was equivalent to 14% of the intended number, contrary to the Ministry of Livestock and Fisheries Five-Year Strategic Plan, 2021/22-2025/26, which planned to establish a total of 827 Livestock Farmers Schools by June 2026 and planned to reach 487 Livestock Farmers Field Schools by June 2024. **Table 3.20** shows the number of established livestock Farmers' Field Schools from 2019/20-2023/24.

**Table 3.20: Status of Livestock Farmers Field Schools (2019/20-2023/24)**

Year	Required LFFS to be established	Established LFFS	Attainment%
2019/20	103	25	5
2021/22	107	2	2
2022/23	120	10	8
2023/24	150	29	19
Total	480	66	14

*Source:* Auditors' Analysis of the MLFs Annual Operational Plans and Annual Implementation Reports, 2019/20-2023/24

As indicated in **Table 3.20**, only 14% of the planned LFFs were established. The assessment indicated an increase in the number of established LFFs in 2023/24 as the attainment reached 19% of the targeted LFFs. Similarly, the audit noted a contradiction between the Livestock Transformation Plan, which aimed to establish a total of 830 Livestock Farmers Field Schools (LFFSs) by June 2025, and the Ministerial Strategic Plan, which indicated a target of 827 (LFFSs) by June 2026. This was noted to be caused by insufficient funding to cater for livestock extension services in the LGAs. Consequently, this gap contributed to an impairment of accessibility of extension services from the extension officers since the LFFs had the capacity to train more than one livestock farmer, and they would simplify the extension officers tasks in offering the services.



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### **3.6 Ministry of Livestock and Fisheries and PO-RALG did not Monitor Services Provided by the Local Government Authorities**

During the audit, it was noted that neither RS nor PO-RALG visited the LGAs to monitor the extension services that they provided. There were no reports provided indicating that the Ministry of Livestock and Fisheries and PO-RALG conducted monitoring services to assess the performance of the Local Government Authorities. This was contrary to Para 2.3.1 of the Strategic Plan (2021/22-2025/26). Furthermore, this was contrary to the functions stipulated in an organization structure of MLF that requires the Ministry to monitor the quality of extension services provided and stipulates that the PO-RALG, among other roles, should ensure monitoring of the services such as livestock extension services to promote their quality. Specifically, the audit noted the following:

#### **3.6.1 There were no Sufficient Monitoring Reports from RS and LGAs**

Tanga Region monitored the activities at the LGAs. The audit team was provided with quarterly progress reports which consolidated the activities done and the performance percentage. The same could not be found in the other visited RS.

Moreover, it was noted that the LGAs had no plan to visit and monitor the wards to assess the adequacy of the livestock extension services provided. The Ward Livestock Extension Officials used to send the reports on a monthly basis, where the reports were to be compiled at the LGAs.

The audit found no evidence suggesting that the District Livestock Extension Officials visited wards. The District Livestock Extension Officials visited Wards when there was an urgent matter, such as the rising conflict between livestock keepers and farmers, national campaigns such as vaccination, etc.

In relation to this, the following findings were further noted:

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**(i) Inadequate Monitoring Strategies to Cover the Extension Activities in the Country**

The audit noted that PO-RALG had not effectively established strategies to track the implementation of the status of issued directives and guidelines. Responses made by PO-RALG indicated that the execution of monitoring activities was not adequate, as only Njombe and Iringa regions were covered.

To cater for this inadequacy, all activities falling under the ASDP II were required to be centrally coordinated at the Prime Minister's Office. Despite that, the reviewed ASP-II Report, 2023 indicated that, the Joint Program Fund was not yet established. The establishment of a joint fund is crucial, as it would have helped, among other things, to facilitate the activities of coordination and monitoring.

**(ii) Uncoordinated Reporting Structures**

The audit noted that the existing reporting structure has resulted in inadequate monitoring of extension services. The livestock extension officers had no direct link with the sector ministry as they are employees of PO-RALG through Local Government Authorities.

To enhance the provision of livestock extension services in the country, the Ministry of Livestock prepared the guidelines for the provision of livestock extension services, namely the Guidelines for the Provision of Livestock Extension Services, 2011. These guidelines stipulate the roles and responsibilities of each stakeholder. Among other things, the guidelines, in para 2.5.2, stipulate that MLF and PO-RALG should monitor the quality of extension services provision by LGAs. Despite such provision, no reports were submitted to the auditors regarding monitoring of extension activities under LGAs.

It was revealed that the Livestock Extension Officers in different LGAs perform other functions unrelated to extension services, such as revenue collection, supervision of force account projects, and other emerging activities. As a result of this, records of activities related to extension services were missing in these authorities.

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### 3.6.2 Inadequate Exchange of Information between PO-RALG and MLF

PO-RALG, being the overseer of the RS and LGAs, lacked a database of livestock facilities, and when requested, they also requested the same information from Local Government Authorities. This indicates that PO-RALG does not have sufficient information regarding the provision of extension services at the LGA level.

This was contrary to Para 2.1.1 (iii) of the guidelines for the provision of Livestock Extension Services, 2011, which requires close collaboration among all the stakeholders, including timely information sharing through the exchange of reports, joint workshops and seminars.

Ministry of Livestock and Fisheries and the PO-RALG had inefficiently established formal mechanisms for exchanging and sharing information regarding the implementation of livestock extension services. As a result, these two ministries were found to be working in isolation. This was evidenced in a review of the Implementation Report on Agricultural Sector Development Strategy, 2023. The report indicated that, there was a limited scope of participation of stakeholders, an issue that, among others, could have been resolved by having strategic working groups (Thematic Working Groups) led by Sectoral Ministries.

It was noted that the Ministry of Livestock and Fisheries inadequately shared the livestock source data with the PO-RALG and vice versa. For example, the data regarding the number of motorcycles, artificial insemination kits, and livestock-dip tanks were present at the Ministry of Livestock and Fisheries; however, the same information could not be provided when requested from PO-RALG. Therefore, PO-RALG lacked information regarding Livestock Extension Services, which is pivotal for its role as overseer of the sector.

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## CHAPTER FOUR

### AUDIT CONCLUSION

#### 4.1 Introduction

This chapter provides the conclusions of the audit based on the audit objectives and findings presented in this report. The conclusions are categorised into two main parts: general and specific audit conclusions.

#### 4.2 General Conclusion

The Audit Team acknowledges the efforts made by the Ministry of Livestock and Fisheries and PO-RALG in the management and provision of extension services. However, several inefficiencies were noted that call for more interventions for further improvements. The fact that livestock extension services activities are among the essential elements required to revamp the country's economy through its contribution to the GDP, improvements are of vital importance.

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Generally, it is concluded that the Ministry of Livestock and Fisheries and the President's Office - Regional Administration and Local Government have not managed to ensure adequate management and provision of extension services in the Country. The extension services provided are inadequate, as only 10% of the households in the Country are getting livestock extension services. Moreover, there is an uneven distribution of Livestock Extension Officers, as the existing statistics show that the livestock extension officer-to-farmer ratio is 1:2,800, significantly lower than the World Bank's recommendation of 1:500. Despite the noted gap, the audit acknowledges several government initiatives, including the Ugani-kiganjani, m-kilimo and other electronic services intended to bridge the extension gaps.

The audit further concludes that the extension services are inadequately provided, and in fact, the actual population of livestock in the country is assumed and approximated as no livestock census has been done since the last census of 1988. There is fluctuation in the number of livestock being

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served by an extensionist since no registration and identification have been made. In that sense, livestock extension officers cannot know exactly the livestock population to be served, especially during the implementation of critical programmes such as vaccination campaigns. Despite the effort put forth by the Ministry of Livestock and Fisheries regarding the provision of working facilities such as motorbikes and veterinary kits to extension officers, there is inadequate priority put forth to secure adequate resources for the extension services at both ministries and Local government Authorities. Motorcycles are insufficient, and no mechanism is set forth to ensure adequate handling and servicing. Furthermore, the livestock extension officers are still few to the extent that they do not cover all wards and all villages. The present extension officers are inadequately equipped with newly emerging skills to keep them updated and relevant. Moreover, neither of the two responsible ministries monitors the quality of extension services provided at a grassroots level.

#### **4.3 Specific Audit Conclusions**

##### **4.3.1 The Ministry of Livestock and Fisheries and PO-RALG do not Adequately Provide Training to Livestock Farmers**

The training activities for livestock farmers are inadequately done. Local Government Authorities are not planning for the training of livestock farmers in their annual plans. Training is normally done when the need arises. However, no training needs analysis is conducted to identify gaps among the livestock farmers that could form a training basis in LGAs.

Livestock farmers are dispersed in different places, and no clear means have been set to ensure their convergence for training. This is because Livestock Farmers Field Schools (LFFs) and Ward Agricultural Resource Centers inadequately operate, absent or not working in other areas. It was found that the Ministry of Livestock and Fisheries has formulated only 14% of all LFFs that were needed for five years.

The Ministry of Livestock could not train livestock farmers despite having a budget for that activity in their strategic plan. The amount of funds set for farmers' training activities was inadequately disbursed. As a result, livestock farmers are left with their traditional knowledge of livestock keeping.

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#### **4.3.2 The Ministry of Livestock and Fisheries and PO-RALG do not have an Efficient Process for Identifying, Registering, and Tracing Livestock for Extension Services**

The audit concludes that the livestock identification, registration, and traceability process was inefficient even before the activity was stopped. There is no established system at all levels to help implement the registration, identification, and traceability activity in the country, despite having guiding laws for the identification, registration and traceability of livestock, livestock owners and their premises. It can be concluded that the activity planning was inadequate and that there were no adequate preparations before the executions even though the LGAs had the budget for it and the specific legal instrument (Act) was present for more than ten years.

There is, therefore, a risk of an increase in transboundary diseases in the country since there is no identified system for undertaking livestock registration, identification, and traceability when crossing from one location to the next. Furthermore, as a country, we cannot secure foreign markets for selling our livestock and products since the livestock at the auctions lacks records and cannot be tracked.

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#### **4.3.3 The Ministry of Livestock and Fisheries and PO-RALG do not Prioritize the Provision of Adequate Resources (Human Resources, Funds, Infrastructure, and Working Facilities) for Quality Extension Services**

The audit has noted that the Ministries of Livestock and Fisheries and the President's Office - Regional Administration and Local Government are giving low priority to livestock extension services in terms of financing the provision of working facilities and ensuring supportive infrastructures.

The livestock extension services are inadequately provided as there is inadequate coverage of villages to be served. There is a shortage of motorcycles by 37% at the regional and 54% at the Local Government levels. Livestock extension officers are not able to cover their jurisdiction area as much time as needed and/or during their daily routines. It is concluded that the serving ratio of motorcycles is high and does not meet the requirement of one motorcycle per officer. Moreover, there is inadequate coordination commitment aiming to narrow the motorcycle gap at LGAs between the parent Ministry the PO-RALG, and the leading Ministry, the (MLF). There is no strategy from the PO-RALG regarding reducing the transportation gap despite having a core capacity-building function at RS and LGAs.

In addition to that, the audit is of the view that the facilities for artificial insemination centres are inadequately improved. Liquid nitrogen is not produced in several centres as there is obsolete equipment. This compromises the overall quality of semen stored for future use.

Funding for livestock extension services is notably low, even in national livestock plans. The current level of funding for extension services in Tanzania is insufficient to provide adequate coverage for all groups of farmers, especially those who are resource-poor and at the subsistence level.

Further, the Local Government Authorities also inadequately prioritise livestock extension services as they seldom retain 15% to develop the livestock sector. The retained amount of 8.5% was lower to fund different activities such as training, buying transportation facilities and other capacity-building programs.

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Moreover, it is concluded that the livestock extension services are inadequate because the number of livestock extension officers is minimal. The distribution of livestock extension officers cannot cover all wards and seldom covers all villages. There is a gap of 66%, 76% and 54% for livestock extension officers at national, regional, and LGA levels, respectively.

The Audit Team appreciates the efforts put forth by the government through the Ministry of Livestock and Fisheries to construct and renovate livestock dip tanks and supply acaricides. However, it is concluded that the single-month supply of acaricides by the Ministry is not enough to meet the demand bearing in mind that the livestock farmers currently depend only on the amount supplied by the Ministry.

#### **4.3.4 The Ministry of Livestock and Fisheries and PO-RALG does not Monitor the Quality of the Extension services at the LGA level**

The audit concludes that neither the MLF nor the PO-RALG adequately monitors the quality of livestock extension services at the LGAs. The RSs do not send the annual reports to the PO-RALG unless it is requested. It is further concluded that despite being an extended arm of the PO-RALG, the Regional Secretariats do not monitor the livestock extension services done at the LGAs unless there is an issue that needs immediate attention. It is true that the supervision visits are conducted, however, the frequency of the visits is inadequate, and the related activities during the visits are ineffectively conducted.

There is a lack of awareness of the key features that are necessary for the proper conduct of supervision visits. The frequency of the visits and criteria for deciding on the visits' coverage are not explicitly known.

In addition, the audit concludes that the MLF and the PO-RALG are working in isolation as they lack an established formal mechanism for exchanging and sharing information regarding the implementation of livestock extension services. The MLF does not share with the PO-RALG extension-related data and vice versa.



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## CHAPTER FIVE

### AUDIT RECOMMENDATIONS

#### 5.1 Introduction

This chapter provides recommendations to the Ministry of Livestock and Fisheries and President's Office - Regional Administration and Local Government (PO-RALG) on what should be done to improve their performance in the management and provision of livestock extension services. The audit findings indicated areas that need further corrective actions to effectively manage activities for the livestock extension services in the country.

Based on the principles of the 3Es (Economy, Efficiency and Effectiveness), the National Audit Office believes that to improve the management and provision of livestock extension services in the country, the recommendations made in this report need to be fully implemented.

#### 5.2 Audit Recommendations

##### 5.2.1 Adequate Provision of Livestock Extension Services (Training and Backstopping Services) to Livestock Farmers to Enhance their Skills

The Ministry of Livestock and Fisheries, in collaboration with the President's Office - Regional Administration and Local Government, are urged to:

- a) Conduct regular and detailed needs assessments for livestock farmers to ensure that training programs are prepared and implemented so as to address the actual gaps and enhance skills to livestock farmers.

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### **5.2.2 The Process for Identifying and Registering Traceability of Livestock for Efficient Extension Services**

Ministry of Livestock and Fisheries, in collaboration with the President's Office - Regional Administration and Local Government are urged to:

- a) Develop a comprehensive and cost effective registration identification and traceability system that involves all relevant stakeholders to ensure smooth implementation of the registration, identification and traceability activities.
- b) Establish an affordable registration fee and create a payment process that is convenient for all livestock farmers.

### **5.2.3 Provision of Adequate Human Resources, Funds, Infrastructure and Working Facilities for Quality Extension Services**

The Ministry of Livestock and Fisheries, in collaboration with the Ministry of President's Office - Regional Administration and Local Government, are urged to:

- a) Develop and implement the training programs to equip extension officers with updated knowledge of livestock farming;
- b) Set aside adequate funding to ensure that the Livestock Extension Officers are equipped with sufficient working tools that will assist in the provision of livestock extension services in their areas adequately;
- c) Increase availability and adequate coverage of Livestock infrastructures such as livestock dips, water supply infrastructure and Artificial insemination facilities to improve the provision of services to livestock farmers; and
- d) Develop viable solutions to address the shortage of Livestock Extension Officers in order to effectively cover the existing deficit in the country.

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The President's Office - Regional Administration and Local Government is urged to:

- a) Device a mechanism where LGAs will retain and utilize the recommended portion of the revenues accrued from the livestock resources to be used for livestock sector development.

#### **5.2.4 Monitoring the Quality of the Extension Services Provided at the LGAs**

Ministry of Livestock and Fisheries, in collaboration with the Ministry of President Office - Regional Administration and Local Government, are urged to:

- a) Implement capacity building and monitoring roles for the regional secretariats and local government authorities as required by the existing legal instruments in order to ensure adequate management and provision of livestock extension services.



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## APPENDICES



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## Appendix 1: Responses from the Audited Entities

This part provides the responses from the two audited entities: the Ministry of Livestock and Fisheries (MLF) and the President's Office - Regional Administration and Local Government (PO-RALG). The responses are divided into two parts, namely general and specific comments from the audited entities. These responses are prescribed below:

### Appendix 1(a): Responses from the Ministry of Livestock and Fisheries (MLF)

#### General Comment

The Management of the Ministry of Livestock and Fisheries has reviewed the main findings of the performance audit on the provision of Extension Services in Tanzania. The management will address all areas facing challenges by formulating strategies and plans and taking appropriate measures. Key identified areas that need action include inadequate provision of livestock extension services training to livestock farmers, improving the process of identifying, registration and traceability of livestock extension services, providing priority on the provision of adequate resources for quality extension services and improving monitoring of the quality of extension services provided at LGA level. The Ministry anticipates that addressing the highlighted issues would increase the livestock sector's contribution to national development and enhance its productivity.

#### Specific Comments

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
<b>To improve adequate provision of livestock extension services and training to livestock farmers to enhance their skills</b>				
1	Conduct regular and detailed needs assessments for livestock farmers to ensure that training programs are prepared and address the actual	The Ministry developed Guidelines for Extension Services in 2011, and the aforementioned Guidelines are currently under	1. To review the Extension Guidelines (2011), which will guide on how to conduct regular and detailed needs	July 2025 - June, 2028

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
	gaps and skills to be provided to livestock farmers.	review to accommodate missed issues.	<p>assessments for livestock farmers in the government and private sector.</p> <p>2. Establish Livestock Classes during National Exhibitions (Nane Nane, Saba Saba and World Food Day) to provide education to livestock farmers</p> <p>3. To promote the establishment of Farmer Field Schools (FFS) and demonstration plots to Local Government Authorities so as to enable hands-on skills for livestock farmers</p>	
<b>To improve the process for identifying, registering and traceability of livestock for extension services</b>				
2	Develop a comprehensive and cost effective	The Ministry implements animal	1. Engage all stakeholders during the	March 2025 - June 2028

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
	registration identification and traceability system that involves all relevant stakeholders to ensure smooth implementation of the registration, identification and traceability activities.	identification and registration in two phases. The first phase was done using hot iron branding. The second phase, which is under implementation, is done by Ear tag, where 5,000,000 cattle have been identified and registered.	development and Use of the Livestock Identification, Registration and Traceability System System.  2. Conduct Pre-test before full implementation	
<b>To put priority on the provision of adequate resources (Human, Funds, infrastructure and working facilities) for the quality extension services</b>				
3	Develop and implement training programs to equip extension officers with updated knowledge of livestock farming.	Management conducted a Refresher Course for 1,558 Livestock Extension Officers in 184 LGAs during the 2022/20223-2023/2024 financial years. The number will increase in the coming years, depending on the availability of financial resources. Also, the Ministry will advise LGA to conduct refresher	1. Develop and implement participatory training programs that will equip extension officers with updated knowledge of livestock farming in both the government and private sector.  2. Conduct refresher courses to cover a large number	July 2025 - June, 2030



S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
		courses at district, ward and village levels.	of Extension Officers.  3. To advise LGA to conduct refresher courses to cover a large number of Extension Officers.	
4	Set adequate funding to ensure the Livestock Extension Officers are equipped with sufficient working tools that will assist in the adequate provision of livestock extension services in their areas.	The Ministry, each financial year allocates an adequate budget for the provision of extension services according to the budget ceiling. We will continue to allocate appropriate budget amounts for the provision of extension services.	Allocate adequate funds to ensure Livestock Extension Officers are equipped with sufficient working tools that will assist in the adequate provision of livestock extension services in their areas.	July 2025 - June, 2030
5	Increase availability and adequate coverage of Livestock infrastructure such as livestock dips, water supply infrastructure and Artificial insemination facilities to improve	The Ministry each financial year allocates an adequate budget for the provision of extension services according to the budget ceiling. We will continue to allocate	1. The Ministry will continue to allocate adequate funds according to the ceiling level provided by the Ministry of Planning.	July 2025 - June 2030

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
	the provision of services to livestock farmers.	appropriate budget amounts to Increase availability and adequate coverage of Livestock infrastructure such as livestock dips, water supply infrastructure and Artificial insemination facilities to improve the provision of services to livestock farmers.	2. Increase availability and adequate coverage of Livestock infrastructure such as livestock dips, water supply infrastructure and Artificial insemination. 3. The Ministry will advise LGAs to allocate 15% return from Livestock revenue to Construct and Maintain Livestock Infrastructures.	
6	Develop a solution to address the shortage of Livestock Extension Officers in order to effectively cover the existing deficit in the country.	The Ministry has done and will continue to allocate funds and other efforts to ensure that Extension Officers provide extension services to many Livestock Farmers in time and increase coverage areas of serving farmers. In a	1. The Ministry of Livestock and Fisheries will negotiate with the President's Office - Regional Administration and Local Government to employ more Extension Officers to	July 2026 - June, 2030

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
		<p>period of two financial years, the Ministry procured 1,500 Motorcycles for Livestock Extension Officers, established 236 Farmer Field Schools (FFS, Use Digital Extension (M-KILIMO, Ugani Kiganjani, etc) and use media such as Radios, Television Community Networks to provide extension services in the country.</p> <p>1. The Ministry of Livestock and Fisheries will negotiate with the President's Office - Regional Administration and Local Government to employ more Extension Officers to address the matter.</p>	<p>address the matter.</p> <p>2. To engage the Private Sector in providing extension services in the country.</p> <p>3. To Strengthen the provision of extension services through Information Technology</p>	

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
		<p>2. To engage the Private Sector in providing extension services in the country.</p> <p>3. To strengthen the provision of extension services through Information Technology</p> <p>July 2026 - June, 2030</p>		
<b>To improve monitoring of the quality of the provided extension services at the LGA level</b>				
7	Implement capacity building and monitoring roles for the regional secretariats and local government authorities as required by the existing instruments to ensure adequate provision of livestock extension services.	The Ministry of Livestock and Fisheries (MLF) ensures that capacity building and monitoring roles for the regional Secretariats and local government authorities are required by the existing instruments to ensure adequate provision of livestock extension. This is done through:	<p>(i) To accomplish and implement the Performance contract between the Ministry and RS, LGAS;</p> <p>(ii) To strengthen the linkage between PO-RALG, RS and LGAs by conducting bi-annual meetings;</p>	January 2025 - June 2028

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
		<p>i) Veterinary Council of Tanzania, which was established under Veterinary Act No 16 of 2003. According to this Act, the Veterinary Council is responsible for regulating the performance of veterinary professionals, paraprofessionals, and paraprofessional assistants, as well as for regulating veterinary practice facilities. Also Veterinary Council of Tanzania do the followings:</p> <p>(a). Effect registration enrolment and enlistment of veterinary professionals, paraprofessionals and paraprofessional assistants,</p>	<p>(iii) To engage the Private Sector in providing extension services delivery through Public Private Partnership (PPP); and</p> <p>(iv) To strengthen the use of ICT in the provision of extension service delivery through M-Kilimo; Ugani Kiganjani and EMA-i (Event Mobile Application);</p> <p>(v) To enforce Veterinary Act No 16 of 2003.</p>	

S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
		<p>(b). Monitor the performance of veterinary professionals, paraprofessionals and paraprofessional assistants</p> <p>(c). Recognize qualifications, training facilities, training institutions and colleges</p> <p>(d). Collaborate with other relevant institutions or bodies in accrediting courses of training curriculum, which provide qualifications for registration, enrolment and enlistment of veterinary professional and paraprofessional and paraprofessional assistants</p> <p>(e). Arrange and conduct qualifying examinations to</p>		

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S/No	Recommendation	MLF Comments	Action(s) to be taken	Timeline
		establish competence in the veterinary education and practice		



## Appendix 1(b): Responses from the President's Office Regional Administration and Local Government (PO-RALG)

### General Comment

Both the Government and Private Sector provide Livestock Extension Services in the country. For the purpose of having explicit performance of the provision of Livestock Extension services, there is a need to assess both Sectors as there is a gap in obtaining data on extension services provided by Private Sectors. Nevertheless, Livestock Farmers' demand for extension services is individual based on problems encountered by the Livestock Farmer who request extension services from Livestock extension officers in their area who usually conduct various extension activities on a routine basis, including advisory services, meat inspection, vaccination, disease control and artificial insemination. Hence the main challenge could be the reporting System.

### Specific Comments

S/N	Recommendation	PO-LARG Comments	Action(s) to be taken	Timeline(s )
<b>To improve adequate provision of livestock extension services training to livestock farmers to enhance their skills</b>				
1	Conduct regular and detailed needs assessments for livestock farmers to ensure that training programs are prepared and address the actual gaps and skills to be provided to livestock farmers.	Need assessment for Livestock Farmers is important to come up with interventions that will be sustainable. PORALG has the Improved Opportunities and Obstacles to Development (O& OD) as a participatory planning approach	PORALG will direct the Regional Secretariat to remind LGAs to use O & OD during planning to identify actual Livestock farmers' needs, and LGAs prepare training programs	2025/2026



S/N	Recommendation	PO-LARG Comments	Action(s) to be taken	Timeline(s)
		that can create an actual approach.		
<b>To improve the process for identifying and registering the traceability of Livestock for</b>				
2.	Develop a comprehensive and cost effective registration identification and traceability system that involves all relevant stakeholders to ensure smooth implementation of the registration, identification and traceability activities.	This system is crucial for modernizing the livestock sector and acquiring a significant export market, but its implementation received opposition from some stakeholders, though the guidelines for implementation outline the responsibilities of relevant stakeholders. The exercise was stopped by the Government, giving room to MLF to review the process and come up with an appropriate system to be agreed by both parties.	PORALG will Collaborate with MLF to review the guidelines. Communicate with Regional Secretariats to direct LGA to continue sensitizing Livestock farmers on the importance of registration, identification and traceability	2025/2026
<b>To improve the provision of adequate resources Human, Funds, infrastructure and working facilities for quality extension services</b>				

S/N	Recommendation	PO-LARG Comments	Action(s) to be taken	Timeline(s )
3.	Develop and implement training programs to equip farmers and extension officers with updated knowledge of livestock farming.	MLF performs its mandated functions of technical backstopping by allocating the budget to support LGA in performing livestock extension services.	PORALG will Continue to communicate with Regional Secretariats to insist on budgeting and disbursement of 15% of its own source revenue obtained from Livestock revenue for implementing livestock activities.	2025/2026
4.	Set and release adequate funding to ensure the Livestock Extension Officers are equipped with sufficient working tools that will assist in the adequate provision of livestock extension services in their areas.	MLF performs its mandated functions of technical backstopping by allocating the budget to support LGA in performing livestock extension services.	PORAL will Continue to communicate with Regional Secretariats to insist on budgeting and disbursement of 15% of its own source revenue obtained from Livestock revenue for implementing livestock activities.	2025/2026
5.	Increase availability and adequate coverage of Livestock	MLF performs its mandate of technical	PORALG will Continue to communicate	2025/2026

S/N	Recommendation	PO-LARG Comments	Action(s) to be taken	Timeline(s)
	infrastructure such as livestock dips, water supply infrastructure and Artificial insemination facilities to improve the provision of Services to livestock.	backstopping by allocating the budget to support LGA in performing livestock extension services.	with Regional Secretariats to insist on budgeting and disbursement of 15% of its own source revenue obtained from Livestock revenue to increase livestock infrastructure	
6.	Device a mechanism where LGAs will retain and utilize the recommended portion of revenues coming from the livestock resources to be used for the Livestock Sector Development.	MLF, in collaboration with PORALG, put in place a possible way to ensure the disbursement of the recommended portion.	PORAL will Continue to communicate with Regional Secretariats to insist on budgeting and disbursement of 15% of its own source revenue obtained from Livestock Levies for implementing livestock activities	2025/2026
7.	Implement the capacity building and monitoring roles to the Regional Secretariats and Local Government	PORALG, in collaboration with the Sector ministry to implement capacity building and monitoring	MLF AND PO-RALG allocate a budget for Monitoring and formal reporting of Livestock	2025/2026

S/N	Recommendation	PO-LARG Comments	Action(s) to be taken	Timeline(s )
	Authorities as required by the existing instruments in order to ensure adequate provision of Livestock Extension Services.		extension activities.  Conduct and Coordinate Regional Economic and productive Sector meetings.  Compilation of quarterly reports from RS and LGAs.	
8	Develop a solution to address the shortage of Livestock Extension Officers in order to effectively cover the existing deficit in the country.	MLF, in collaboration with PO-RALG, can also leverage the existing opportunities of private-sector livestock extension service providers and strengthen Ugani-kigajani.	PO-RLAG will direct Regional Secretariats to continue to plan and budget for personnel enrolment to fill vacant gaps.	2025/2026

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## Appendix 2: Audit Questions and Sub-Questions

This part provides details of the audit questions and sub-questions used in this audit.

<b>Audit Question 1</b>	<b>To what extent are extension services accessible to all livestock farmers in the country?</b>
<i>Sub- Question 1.1</i>	Is the accessibility of extension services equitably distributed across the country?
<i>Sub-Question 1.2</i>	Are the strategies in place effectively implemented to facilitate the accessibility of extension services across the country?
<b>Audit Question 2</b>	<b>Do the Ministry of Livestock and Fisheries and PO-RALG adequately provide livestock Extension services (Training and backstopping services) to livestock farmers?</b>
<i>Sub- Question 2.1</i>	Are the Training and backstopping services sufficiently provided to livestock farmers so as to equip them with skills?
<i>Sub- Question 2.2</i>	Are the training and backstopping services effectively planned, taking livestock farmers across all levels into consideration?
<i>Sub- Question 2.3</i>	Are needs for livestock farmers sufficiently identified to enhance the planning and provision of extension services?
<b>Audit Question 3</b>	<b>Is the process for identification, registration and Tractability of Livestock functioning efficiently?</b>
<i>Sub-Question 3.1</i>	Are livestock identified, registered, and traced at all levels for the provision of extension services?
<i>Sub-Question 3.2</i>	Is the registration, identification, and tracing made timely to establish the livestock population for the provision of Extension Services?
<i>Sub-Question 3.3</i>	Is the system for livestock registration, identification, and traceability operating efficiently with timely updates and accurate livestock data?
<i>Sub-Question 3.4</i>	Are the appointed designated livestock registration officers at the LGA effectively registering, identifying and traceability livestock?
<i>Sub-Question 3.5</i>	Are livestock farmers trained to enhance awareness of the identification, registration, and Traceability of livestock activity?
<b>Audit Question 4</b>	<b>Do the Ministry of Livestock and Fisheries and PO-RALG prioritise provision of Resources (Human, Financial</b>

	<b>Infrastructure and working facilities) for the provision of Quality Extension services?</b>
<i>Sub-Question 4.1</i>	Are livestock extension officers available, adequately trained, and effectively distributed to provide extension services at all levels?
<i>Sub-Question 4.2</i>	Are the infrastructures for the provision of Extension Services sufficiently developed and maintained at all levels of LGAs?
<i>Sub-Question 4.3</i>	Are working tools for the provision of extension service sufficient and well-maintained at all levels of LGAs?
<i>Sub-Question 4.4</i>	Are funds for the provision of extension services available, effectively distributed, and efficiently utilized to enhance the provision of these services?
<i>Sub-Question 4.5</i>	Are the equipment for breeding improvement functioning and maintained adequately?
<i>Sub-Question 4.6</i>	Are the established WARC and Livestock Farmer Field School adequately equipped and functioning for technology transfer as intended?
<b>Audit Question 5</b>	<b>Do MLF and PO-RALG Monitor the Quality of the provided Extension services?</b>
<i>Sub-Question 5.1</i>	Do the Ministry of Livestock and PO-RALG monitor the quality of extension services provided at the LGA to enhance quality s?
<i>Sub-Question 5.2</i>	Is there a coordinated reporting structure between extension Officers at LGAs and the Sector Ministry?
<i>Sub-Question 5.3</i>	Is there adequate information sharing between the Ministry of Livestock and Fisheries MLF and PO-RALG?
<i>Sub-Question 5.4</i>	Is there an adequate standard for advocating the quality of extension services provided to livestock farmers?

### Appendix 3: Details of Livestock Data per each Region and Sampling Criteria

This part provides information regarding the number of livestock from each region and the selection criteria after being ranked.

Central Production Zone							
Region	Cattle	Ranking	Goats	Ranking	Sheep	Ranking	Selected Region
Singida	1,872,402	High	1,202,899	High	316,338	Medium	
Dodoma	1,812,427	High	1,224,708	High	319,418	Medium	Selected
Tabora	2,663,395	High	752,286	High	548,469	High	Not selected
Shinyanga	1,861,093	High	1,126,793	High	253,524	Medium	Not selected
Geita	2,130,412	High	883,565	High	119,790	Medium	Not selected
Tanga	1,205,168	Medium	860,757	High	246,386	Medium	Selected
Lindi	494,366	Low	111,704	Low	292	Low	Not selected
Rukwa	943,463	Low	358,180	Low	77,807	Low	Not selected
Coastal and Lake Production Zone							
Region	Cattle	Ranking	Goats	Ranking	Sheep	Ranking	
Simiyu	1,772,417	High	1,284,871	High	637,269	High	Selected
Pwani	765,814	Low	403,018	Low	78,582	Low	Not selected
Dar-es-salaam	25,082	Low	29,260	Low	2,998	Low	Not selected
Arusha	1,173,444	Medium	2,580,017	High	659,218	High	Not selected
Morogoro	866,080	Low	442,548	Low	485,625	Medium	Not selected
Mtwara	23,725	Low	205,124	Low	35,721	Low	Not selected
Kagera	1,094,524	Medium	651,054	High	94,335	Low	Not selected
Iringa	565,591	Low	326,171	Low	64,725	Low	Not selected
Mwanza	2,420,479	High	1,301,763	High	349,834	Medium	Not selected
Mara	2,157,667	High	984,515	High	417,198	Medium	Not selected
Kigoma	624,187	Low	320,545	Low	50,687	Low	Not selected

Highland Production Zone							
Region	Cattle	Ranking	Goats	Ranking	Sheep	Ranking	
Ruvuma	151,426	Low	305,257	Low	9,088	Low	Not selected
Manyara	2,201,670	High	1,779,423	High	443,973	Medium	Not selected
Mbeya	1,952,795	High	798,407	High	127,974	Medium	Not selected
Njombe	241,117	Low	160,504	Low	13,776	Low	Not selected
Katavi	683,916	Low	190,445	Low	30,543	Low	Selected

*Source:* Auditors' Analysis Using Annual Agriculture Sample Survey  
Crop and Livestock Report, 2016/17





#### Appendix 4: Details of Livestock Data per each LGA and Sampling Criteria

This part provides information regarding the number of livestock from each LGA and the selection criteria after being ranked.

Region	Local Government Authority	Number of Livestock (Cattle, Goats and Sheep)	Criteria	Reason for the Selection
Katavi	Mpanda MC	50,057	low	It was selected because it scored higher than other LGAs in the region
	Tanganyika DC	299,144	High	
	Mlele DC	115,691	Medium	
	Mpimbwe DC	229,850	High	
	Nsimbo	111,655	Medium	
Simiyu	Itilima	444,719	High	It was selected because it scored higher in the criteria. Further, there were other government interventions, such as the establishment of livestock hay fields.
	Maswa	825,198	High	
	Meatu	875,938	High	
	Busega	289,545	High	
	Bariadi	330,176	High	
	Bariadi-TC	130,576	Medium	
Dodoma	Bahi	364,925	High	It was selected because it is receiving extension services and livestock inputs from different places, including the Kongwa Ranch.
	Kongwa	288,348	High	
	Chamwino	327,364	High	
	Dodoma MC	227,132		
	Chemba	501,000	High	
	Kondoa	47,895	Low	
	Mpwapwa	384,354	High	
Tanga	Bumbuli	102,801	Medium	Scored higher, but it also had another added advantage of having livestock farmers shifted from Ngorongoro. The audit team wanted to assess the initiatives put forth by the government to accommodate the
	Handeni Dc	420,062	High	
	Handeni TC	66,851	low	
	Kilindi	565,130	High	
	Korogwe DC	696,692	High	
	Korogwe TC	15,154	low	
	Lushoto	203,492	High	
	Mkinga	135,727	Medium	
	Muheza	61,776	low	

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Region	Local Government Authority	Number of Livestock (Cattle, Goats and Sheep)	Criteria	Reason for the Selection
	Pangani	201,589	High	newly immigrated livestock farmers.
	Tanga CC	68,200	Low	

*Source:* Auditors' Analysis Using Annual Agriculture Sample Survey  
Crop and Livestock Report, 2016/17



## Appendix 5: List of Officials Interviewed and Reasons for Interviewing Them

This part indicates the list of officials interviewed and the reasons for interviewing them.

Entity	Department/Division/Section	Officer Interviewed	Reasons for Interviews
Ministry of Livestock and Fisheries	Research, Training and Extension Service	Head of Section and Officers Responsible Research and Extension Services	<p>To assess if the extent of the implementation of the functions vested on its directorate are effectively executed. Specifically, the audit intended to evaluate the:</p> <ul style="list-style-type: none"> <li>• Developed extension packages and methodologies.</li> <li>• Established demonstration farms and pilot initiatives.</li> <li>• Provided technical information on livestock development to the general public</li> <li>• Formation of livestock farmers' groups</li> <li>• Promotion made to the establishment and strengthening of livestock farmers through community-based initiatives.</li> <li>• Adequacy of supplied working facilities such as transportation, tablets, veterinary kits</li> </ul>

Entity	Department/Division/Section	Officer Interviewed	Reasons for Interviews
	Division of Veterinary Services	Director and Officers from the Division of Veterinary Services	<ul style="list-style-type: none"> <li>• Implementation of registration, identification and traceability activity in the country</li> <li>• Supply of the veterinary kits and to check the status of infrastructure, e.g. dip built in LGAs, to see whether they are completed, functional and meet the quality.</li> </ul>
	Division of Livestock Production and Marketing	Director and Officers from the Division of Livestock Production and Marketing	<p>To evaluate the implementation strategies during the:</p> <ul style="list-style-type: none"> <li>• Facilitation and provisional technical backstopping in processing, marketing and provision of information</li> <li>• Facilitation and provide technical backstopping in processing, marketing and provision of information</li> <li>• Promotion of quality livestock management practices</li> <li>• Promotion use of modern techniques and production of quality animals through artificial insemination, embryo transfer and feed-lotting</li> </ul>
PO-RALG	Regional Administration Offices (Simiyu, Tanga, Katavi and Dodoma)	Officials from the section of economy and production	<ul style="list-style-type: none"> <li>• To assess the effort made by the PO-RALG to ensure an adequate provision of technical backstopping to the local government.</li> <li>• The extent of Monitoring activities done to the LGAs</li> </ul>

Entity	Department/Division/Section	Officer Interviewed	Reasons for Interviews
			regarding the provision of extension services
	LGAs (Bariadi, Lake Tanganyika, Kongwa, Handeni)	Livestock Extension Officers District Veterinary Officer	<p>To assess the extent of extension services provided in their locality. Specifically, it intends to assess whether:</p> <ul style="list-style-type: none"> <li>• There was the assessment of resources such as funds, humans, and working facilities.</li> <li>• Quality of extension services provided, area of coverage, reporting and monitoring mechanisms put forth</li> </ul>

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## Appendix 6: List of Documents Reviewed and Reason for the Reviews

This part indicates the documents reviewed and the reasons for the reviews

Category of the documents	Title of the documents reviewed	Reasons for reviewing
Strategies, Initiatives and plans from MLF, PO-RALG and LGAs.	Different Livestock Management Plans and Initiatives: <ul style="list-style-type: none"> <li>• Livestock Sector Transformation Plan, 2022/23-2026/27</li> <li>• Tanzania Livestock Modernization Initiatives 2015</li> <li>• Tanzania Livestock Master Plan (2017/18-2021/22)</li> </ul>	<ul style="list-style-type: none"> <li>• To evaluate available plans and objectives envisaged to be covered to improve the provision of extension services in the country.</li> </ul>
Operational Documents	<ul style="list-style-type: none"> <li>• Action Plans Reports 2019/20 to 2023/24</li> <li>• Performance/Progress Report, 2019/20-2023/24</li> <li>• Internal Audit Reports 2019/20-2023/24</li> </ul>	<ul style="list-style-type: none"> <li>• To assess the adequacy of activities to provide quality extension services to the livestock industry.</li> <li>• To assess information about the annual implementation of quality extension services for the livestock industry.</li> </ul>
Database for the Livestock Extension Services	<ul style="list-style-type: none"> <li>• Database for the Extension services provided to livestock keepers within five years (2019/20-2023/24)</li> <li>• Database for extension officers present and their distribution pattern</li> </ul>	<ul style="list-style-type: none"> <li>• To assess the quantifiable data of livestock management that would be used to measure the provision of quality extension services in the country.</li> <li>• To assess the extent to which the Ministry of Livestock maintain and update the livestock</li> </ul>

Category of the documents	Title of the documents reviewed	Reasons for reviewing
	<ul style="list-style-type: none"> <li>• Database for livestock present in different regions</li> <li>• Data on estimated revenues generated from cattle auctions and other livestock resources within five Years (2019/20-2023/24)</li> </ul>	<ul style="list-style-type: none"> <li>• registration database databases</li> </ul>
Training Reports	<ul style="list-style-type: none"> <li>• Different Training Reports were executed for livestock farmers and extension officers.</li> </ul>	<ul style="list-style-type: none"> <li>• To assess whether livestock farmers and extension officers were trained in the management of livestock to improve the performance of the livestock sector in the country</li> </ul>



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