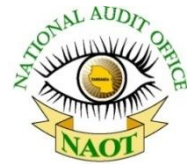




**THE UNITED REPUBLIC OF TANZANIA
NATIONAL AUDIT OFFICE**



**PERFORMANCE AUDIT REPORT ON THE PREVENTION AND
CONTROL OF LIVESTOCK DISEASES**

AS IMPLEMENTED BY

**THE MINISTRY OF LIVESTOCK AND FISHERIES AND PRESIDENT'S
OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**



**REPORT OF THE CONTROLLER AND AUDITOR GENERAL OF THE UNITED
REPUBLIC OF TANZANIA**

March 2020



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LIST OF ABBREVIATIONS AND ACRONYMS

ASF	:	African Swine Fever
CBPP	:	Contagious Bovine Pleuropneumonia
CCPP	:	Contagious Caprine Pleuropneumonia
DC	:	District Council
DVO	:	District Veterinary Officer
DVS	:	Director of Veterinary Services
ELISA	:	Enzyme Linked Immunosorbent Assay
FAO	:	Food and Agriculture Organization
FMD	:	Foot and Mouth Disease
FPA	:	Fluorescent Polarization Assay
GDP	:	Gross Domestic Products
OIE	:	World Organization for Animal Health
LGAs	:	Local Government Authorities
LSD	:	Lumpy Skin Disease
MC	:	Municipal Council
MDA	:	Ministry, Department and Agency
MoLF	:	Ministry of Livestock and Fisheries
MTSP	:	Medium Term Strategic Plan
PM	:	Post mortem
PCR	:	Polymerize Chain Reaction
PO-RALG	:	President's Office - Regional Administration and Local Government
PoE	:	Point of Entry
RS	:	Regional Secretariats
SAI	:	Supreme Audit Institution
SDGs	:	Sustainable Development Goals
TVLA	:	Tanzania Veterinary Laboratory Agency
TZS	:	Tanzanian Shillings
ZVC	:	Zonal Veterinary Centers
SAT 1	:	Southern Africa Territories 1
SAT 2	:	Southern Africa Territories 2

PREFACE

Section 28 of the Public Audit Act No. 11, 2008, authorizes the Controller and Auditor General to carry-out Performance Audit (Value-for-Money Audit) for the purposes of establishing the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministry, Department and Agency (MDA), 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 His Excellency the President of the United Republic of Tanzania, Dr. John Pombe Joseph Magufuli and through him to Parliament the Performance Audit Report on the Prevention and Control of Livestock Diseases.

The report contains findings of the audit, conclusions and recommendations that have focused mainly on the assessment of the prevention and control of livestock diseases as performed by the Ministry of Livestock and Fisheries and President's Office - Regional Administration and Local Government (PO-RALG).

Managements of the Ministry of Livestock and Fisheries and the President's Office - Regional Administration and Local Government were given the opportunity to scrutinize the factual contents of the report and come up with comments on it. I wish to acknowledge the audited entities for the very useful and constructive discussions we had about the audit.

My Office intends to carry-out a follow-up audit at an appropriate time regarding actions taken by the audited entities in relation to the recommendations of this report.

In completion of the assignment, the office subjected the report to the critical reviews of *Dr. Abdu Amman Hayghaimo*, retired Director of Veterinary Services, MoLF and former OIE Delegate, and *Professor Dominic Mukama Kambarage*, Professor of Veterinary Medicine, Sokoine University of Agriculture who together came up with useful inputs on improving the output of this report.

This report has been prepared by Ms. Yuster D. Salala - Team Leader and Ms. Asimuna M. Kipingu - Team Member under the supervision and

guidance of Ms. Esnath H. Nicodem - Ag. Chief External Auditor, Mr. George C. Haule - Assistant Auditor General and Mr. Benjamin M. Mashauri - Deputy Auditor General.

I would like to thank my staff for their commitment in the preparation of this report. My thanks should also be extended to the audited entities for their cooperation with my office which facilitated timely completion of this report.



Charles E. Kichere
Controller and Auditor General
United Republic of Tanzania
March, 2020

EXECUTIVE SUMMARY

Background

Tanzania ranks second in Africa in terms of cattle population with 32.2 million cattle, thereby accounting for approximately 1.4% of the world's cattle population and 11% in Africa. Tanzania also ranks third in Africa in terms of sheep and goat populations. Tanzania too has large grazing land resources. However, despite these resources, the sector contributes a mere 7.6% to the overall Gross Domestic Products (GDP). Among the factors leading to low contribution of the sector to the economy include; poor breeding policies and programmes; limited pasture/feed and water resources; poor value adding and marketing systems; low farmers' knowledge, poor husbandry practices and high disease burdens linked with gross weaknesses in veterinary service supply chain.

The Audit has been conducted with the main objective of examining whether the Ministry of Livestock and Fisheries (MoLF) and President's Office - Regional Administration and Local Government have effectively prevented and controlled livestock diseases in order to enhance livestock production, productivity and safe utilization of animal products.

The audit mainly focused on the functioning of surveillance systems for identifying and reporting disease outbreaks in the country; assessing whether livestock keepers have an access to animal health services and inputs; preventive measures in managing livestock diseases are in place and functioning as expected; and if monitoring and evaluation mechanisms for the prevention and control of livestock diseases are periodically conducted and contribute to performance improvements.

The period covered by the audit was from 2013/14 to 2018/19. This period was selected because there have been increased occurrence of livestock diseases such as CCPP, CBPP and FMD for the years 2016, 2017 and 2018.

The following is the summary of major findings, conclusion and recommendations developed from this performance audit:

Main Findings

Increased occurrence of livestock diseases

Through the review of epidemiology reports, the audit noted that, MoLF has inadequately prevented and controlled the outbreak and spread of livestock diseases. The rate of livestock diseases has been decreasing at a very low pace for the past three years for the two diseases which are CBPP and FMD while cases increased for the three diseases which are ASF, CCPP and LSD.

The audit noted that, the low pace of decrease in livestock diseases was caused by inadequate mechanisms to prevent and control livestock diseases. This was enunciated by insufficient support by MoLF and PO-RALG to LGAs to prevent and control livestock diseases.

Inadequate Surveillance System

The audit noted that surveillance system which is important for the prevention and control of livestock diseases is inadequate as demonstrated by the following factors:

- (a) *Outdated surveillance and reporting:*** the audit noted that, the current reporting system in surveillance is to a large extent paper base (95%) which takes long time to prepare and dispatch to the next administration, instead of being electronically (web based). This led to delayed reporting of livestock diseases. Similarly, the current surveillance system does not timely capture data from livestock keepers, wildlife and private sector hence contributing to delayed response to events of animal and public health importance.
- (b) *Delays in the identification and reporting of cases:*** the audit noted delays in reporting cases of livestock diseases for more than 48 hours in the five sampled LGAs. The delays in reporting of diseases were accelerated by poor communication between the livestock keepers and the Livestock Field Officers, lack of motivation and working tools such as laptops, desktop and internet facilities at the grass root level; absence of web-based disease surveillance and reporting at District, Village and Wards levels, and absence of technical personnel in some areas of LGAs.

Inadequate laboratory confirmation system

The audit noted that the laboratory confirmation system was not effectively functioning. This was due to:

- (a) ***Scarcity of TVLA centers:*** The audit noted that laboratory stations were mainly accessible by the livestock keepers at the urban areas particularly those in regions where the zonal offices are stationed. Tanzania Veterinary Laboratory Agency has a total of 11 stations in zones out of which only 8 stations are linked to Zonal Veterinary Centers while three stations are not.
- (b) ***Inadequate capacity of the TVLA centers:*** The audit noted that, Tanzania Veterinary Laboratory Agency have disproportion capacity in terms of personnel and equipment. However, the shortage of personnel in some of the TVLA stations was caused by uneven allocation of the technical personnel at TVLA stations. The worst-case scenario was observed at Iringa Zonal Office with the ratio of 1,137 samples per one technical personnel per year, while Tabora Zonal Office had the ratio of 94 samples per one technical person per year.
- (c) ***Lack of important equipment for sample collection at the LGAs:*** During the site visits at the LGAs and Zonal Veterinary Centers the audit team observed that Veterinary Officers lacked working gears such as samples collection kits, surgical kits and medical kits. These apparatuses are important in collecting samples and accelerates diagnosis which is key for control of the livestock diseases. All the visited LGAs did not have the important equipment for sample collection and storage.
- (d) ***Failure of the LGAs and DVS to meet laboratory costs:*** The audit noted that since the introduction of diagnostic fees at TVLA, it had been difficult for the livestock keepers to use the laboratory confirmation system. The set fees were not even met by the LGAs and the Director of Veterinary Services. As a result; most LGAs use Research Institutes such as SUA. Other diagnoses were based on visual observations. Through review of TVLA Annual Report 2016-2019, it was observed that DVS Office owes a total of TZS 48.47 million to TVLA on matters regarding diagnosis of various samples.

Lack of timely feedback on the reported cases

The audit team noted that there has been a practice of not giving timely feedback on the reported cases of livestock disease from ZVC to District Veterinary Officer to the livestock keeper. The audit further noted that, feedback was mostly given on the reported cases of trans-boundary and Zoonotic animal diseases such as Anthrax and African swine fever while leaving aside other parasitic diseases such as helminthes and mange.

Inadequate Access to Quality and timely veterinary Services and Inputs to livestock keepers

The audit noted that there were inadequate access of quality veterinary services and inputs to livestock keepers in some LGAs. This was evidenced by lack of animal health service centres at LGA levels. Also, the audit noted insufficient veterinary professionals and paraprofessionals whereby 70 out of 185 LGAs do not have Veterinary Doctors. Ward livestock Field Officers were below 30% for the entire country. Paraprofessional insufficiency was enhanced by improper allocation of the paraprofessional which did not consider the workload in the LGAs.

The existing preventive measures for livestock diseases are not functioning as expected

The audit noted that, the existing preventive measures for the prevention and control of livestock diseases were not functioning as expected. This was enunciated by low vaccination coverage in the country which is below 10%, and for the period of 2016 and 2017 the coverage was below one percent. This was caused by unorganized and uncoordinated vaccination programs; inadequate and untimely availability of vaccines at LGAs; under-reporting of the vaccination data and inadequate cold chain system for vaccine storage.
Incomplete

Inspections at the Ports of Entry

The audit team noted that there were partial inspections at the Ports of Entry as evidenced at Tanga Port whereby inspectors would inspect the animals but not the animal products which were imported in the country. This was manifested by insufficient inspections done in the containers

received at the port. The audit noted that inspections were not conducted as required due to inadequate non-identification of the Ports of Entry, insufficient personnel and technical expertise and non-availability of infrastructures and facilities to aid inspections.

Inefficient implementation of the dipping strategy

The audit team noted that despite the efforts of the Ministry of Livestock and Fisheries in the provision of acaricides, dipping of livestock was not fully implemented because many dips were in bad conditions and most of them were not working effectively. There were also insufficient number of dipping infrastructures whereby in the 5 visited LGAs there were 86 dips, out of which only 39 were operational while 23 were in bad conditions and slightly operational whilst 30 were completely damaged and not operational.

Lack of coordination between MoLF, PO-RALG and Local Government Authorities

The audit noted minimal coordination of the measures to prevent and control livestock diseases among key actors. This was enunciated by inadequate information sharing between MoLF, PO-RALG and other stakeholders due to unclear chain of command between the parent Ministry and respective LGAs.

Poor implementation of the collective plans between MoLF, PO-RALG and LGAs

The audit noted that, although PO-RALG and LGAs have been involved in the planning for the prevention and control of livestock diseases, they were left behind on the implementation of those plans.

For instance, during the training of EMA-i DVOs and RVOs were involved but other Field officials from PO-RALG were not informed nor involved. This is despite that PO-RALG is responsible for coordinating all the activities implemented at the Regional and LGA levels.

Ineffective Monitoring and Evaluation of the measures for the Prevention and Control of Livestock Diseases

The audit noted that MoLF has developed various plans for monitoring and evaluating the mechanisms for prevention and control of livestock diseases. However, there was not a single monitoring activity that was conducted during the financial years of 2016/17 and 2017/18 because of lack of funds. No funds were disbursed in the mentioned financial years.

Also, there was inadequate monitoring of activities regarding the prevention and control of livestock diseases in the year 2018 since budget plans that were developed by the Ministry of Livestock and Fisheries did not cover monitoring of important aspects on prevention and control of livestock diseases. There were only budget plans for the provision of vaccines and health services to livestock at lower levels (mainly LGA, ward and villages).

Overall Audit Conclusion

Based on the findings of this audit, it is concluded that, the Ministry of Livestock and Fisheries and PO-RALG have not effectively prevented and controlled livestock diseases in order to enhance livestock production, productivity and safe utilization of animal products.

This is evidenced by increased occurrence of livestock diseases as seen in CCPP which increased by 804% and LSD by 327%. For the other sampled diseases such as CBPP and FMD the rate of livestock diseases have been decreasing in a very low pace for the past three years. This was caused by inadequate mechanisms for prevention and control of livestock diseases and little support extended to LGAs by MoLF and PO-RALG on the prevention and control of livestock diseases.

Audit Recommendations

The audit issued recommendations to be implemented in order to improve the performance of MoLF and PO-RALG in the prevention and control of livestock diseases as follows:

Recommendations to the Ministry of Livestock and Fisheries

The Ministry of Livestock and Fisheries should:

- i) Establish proper mechanisms for the quality control of imported vaccines in order to prevent introduction of new strains of the viruses and diseases that will be difficult to control;
- ii) Review surveillance reporting system and ensure provision of effective laboratory confirmation systems to livestock keepers and early identification and reporting of cases;
- iii) Strengthen the capacity of TVLA to produce vaccines in order to reduce importation of vaccines which may be incompatible with Tanzanian environment;
- iv) Strengthen inspections of livestock and livestock products at Ports of Entries (both official and unofficial);
- v) Improve coordination, flow of information and communication between Ministries, Regional Secretariats, and LGAs by strengthening infrastructure for information sharing among them; and
- vi) Develop Key Performance Indicators for measuring the performance of the Directorate of Veterinary Services in the prevention and control of livestock diseases.

Recommendations to the President's Office - Regional Administration and Local Government

The President's Office - Regional Administration and Local Government should:

- i) Ensure that LGAs strengthen their efforts for prevention and control of livestock diseases;
- ii) Ensure timely access to quality services and inputs to livestock keepers for disease control;
- iii) Create awareness to livestock keepers on mechanisms for prevention and control of livestock diseases;
- iv) Establish a mechanism which will ensure that all LGAs prioritize development of needed infrastructures and availability of the required vaccination for prevention and control of livestock diseases;
- v) Support control of movement of livestock from one place to another in order to prevent spread of livestock diseases;

- vi) Facilitate RS to monitor and make follow-up on the performance of LGAs in prevention and control of livestock diseases; and
- vii) Improve coordination, flow of information and communication between Ministries, Regional Secretariats and LGAs.

CHAPTER ONE

INTRODUCTION

1.1 Background

The livestock industry in Tanzania has an important role to play in accelerating rural economic growth and building the national economy. This stems from the fact that Tanzania ranks second in Africa for cattle population with 32.2 million cattle, thereby accounting for approximately 1.4% of the worlds' cattle population and 11% in Africa. Tanzania also ranks third in Africa in terms of sheep and goat populations. It is also worth noting that out of the total 94 million hectares of land resource, 60 million hectares are rangelands, which are utilized for grazing of animals¹. However, despite the huge animal resource base and grazing land size, the sector contributes merely 7.6% of the overall Gross Domestic Products (GDP).

This sector has undergone a lot of changes which included adoption of economic structural adjustment policies and programmes to allow for private sector participation in national development. The changes led to reduced access to services, especially in rural areas as public services were withdrawn when the private sector was still at an infant stage. This emanated from disbandment of regional and district veterinary clinics and veterinary centres in rural areas.

Decentralization and Devolution also added extra pressure because of various forms of neglect of players. As a result of these changes, the country has a number of players in disease surveillance, prevention and control programmes. These are Ministry of Livestock and Fisheries (MoLF) and President's Office - Regional Administration (PO-RALG), Regional Secretariats (RS), Local Government (LGA) and the private sector.

The pattern of progression of zoonotic diseases is evident from the high and rising cost of controlling zoonoses in the country. Thus, effectiveness of zoonotic disease control requires early detection at the source of the disease in animals, an early and accurate diagnosis, and rapid disease control measures. The more effective

¹ Tanzania Livestock Modernization Initiatives (2015) and National Livestock Policy (2006).

an approach is, the more lives it will save, and the higher the benefits in terms of avoided losses. Authorities too often start looking for the disease in animals and undertake diagnostic and control efforts only after human cases and deaths have been observed².

Poor disease control and weak emergency preparedness have resulted in many diseases being endemic and causing immense animal losses. Examples of endemic diseases and those of great concern include Contagious Bovine Pleuropneumonia (CBBP), Contagious Caprine Pleuropneumonia (CCPP), peste des petitis ruminants (PPR), Foot and Mouth Disease (FMD), rabies, Lumpy Skin Disease (LSD), African swine fever (ASF), Marek's disease, Newcastle disease (ND), brucellosis, Rift Valley fever (RVF), and East Coast fever (ECF)³. In some areas like in Northern Tanzania and Southern Highland zones, anthrax is increasingly becoming a major threat.

Animal diseases significantly hinder the development of the livestock sector and also expose producers to high livelihood risks. Diseases have direct (mortality and morbidity) and indirect effects; they interfere with the quality and value of animal source food products or services that are consumed on-farm, and those sold or returned to the natural environment⁴.

1.2 Motivation for the Audit

The audit was motivated by the following factors:

(i) Prevalence of livestock diseases which hinder the growth of the sector

For the last 5 years, Tanzania experienced recurrence of animal diseases in different parts of the country. For instance, in year 2015 the number of outbreaks of livestock diseases was 329 involving 32 disease conditions and 24,231 clinical cases causing 5,864 deaths. This situation affected a large number of livestock. Hence, it affected livestock production, productivity and safe utilization of animal products.

² National Livestock Policy, 2006

³ Ibid

Reports have shown that over 50% of livestock in northern Tanzania tested positive for *Brucella abortus* (Crump et al. 2013).

Also, the report of status of Foot and Mouth Diseases written by Michael J. Madege (2018) from the Ministry of Livestock and Fisheries stated that, young animals' mortality caused by Foot and Mouth Diseases may be as high as 50%. The report further revealed that FMD is widespread in traditional livestock production systems in Tanzania and multiple outbreaks occur every year due to type O, A, SAT1 and SAT2 viruses, causing considerable concern amongst livestock owners.

(ii) Inadequate control of livestock diseases

According to the Ministerial Circular by the Minister of Livestock and Fisheries of 2017 on the Control of Livestock Diseases in the country, there is inadequate control of livestock diseases in the country. This has accelerated decline in the productivity of the livestock sector and low contribution in the GDP. According to the same document, almost every year 40% of calves die due to tick borne diseases..

(iii) Animal health services through disease control and prevention are important drivers of livestock production and productivity

The Animal Health Strategy and Vision for Tanzania of 2016 indicated that improved animal health would contribute to:

- a) on-farm profitability by providing quality extension services that meet the needs of livestock farmers and other stakeholders, improving animal health services delivery in order to control and eradicate diseases and minimize losses;
- b) ensure food quality and safety by increasing production, processing and marketing of livestock products to meet national nutritional requirements; and
- c) enhance the international competitiveness of Tanzania's livestock and related products through promotion of commercial production of high quality beef in intensive and extensive (ranching, pastoral and agro-pastoral) systems.

(iv) Promotion of National Livestock Policy

According to the National Livestock Policy (2006), improving animal health services delivery will control and eradicate diseases, minimize losses and improve livestock productivity.

Veterinary services encompass delivery of animal health services, control and eradication of trans-boundary animal diseases, and control of vector and vector borne diseases. The main aim of animal health services is to control, eradicate and prevent animal diseases. Calves die due to tick borne diseases.

Control of Trans-boundary Animal Diseases (TADs) is of great economic importance and is therefore the responsibility of the Government.

Hence, enhancing efficiency and effectiveness of veterinary services and controlling trans-boundary animal diseases are prerequisite for improving animal health in the country, which will ultimately improve economic well-being of Tanzanians.

(v) Lower contribution of livestock sector to economy of Tanzania

Tanzania Livestock Modernization Initiatives Report of 2015 extrapolated that Tanzania has outstanding natural resources for livestock development that include resilient livestock breeds, extensive rangelands and diverse natural vegetation. Among the 94 million hectares of land resources in the country, 60 million hectares are deemed suitable for grazing.

Despite these resources, the livestock sector is performing below its potential. The livestock sector was targeted to contribute not less than 7.7% to the country's GDP in 2017/2018⁵. However, its contribution to the national GDP for that year was only 6.9%.

Furthermore, it was noted that the annual growth rate of the sector in the financial year 2017/2018 was low at 2.6% against an expected rate of not less than 2.8 %.

⁵ Economic survey 2017, Ministry of Finance and Planning, July 2018

The report further describes that, the growth for the large part reflects increases in the numbers of livestock rather than productivity gains. The sector is severely constrained by low livestock reproductive rates, high mortality and disease prevalence.

(vi) Promoting the attainment of Sustainable Development Goals

A report by International Livestock Research Institute (ILRI) of 2016 narrated that, Livestock are relevant and central to achieving many of the Sustainable Development Goals (SDGs).

The growing demand for livestock products in developing countries is driven by population growth, higher incomes and urbanization. This represents a huge opportunity for hundreds of millions of poor smallholder livestock farmers, processors and marketers, and especially women who need to meet that market demand and rise out of poverty. Livestock products (meat, milk, eggs) also provide essential nutrients that contribute to food and nutritional security. Small amounts of animal-sourced foods if in the diets of children improve not only their physical development but also their cognitive and learning abilities.

Therefore, improving the efficiency of livestock production in developing countries, especially the productivity per animal, can double livestock productivity while halving its adverse environmental impacts, including reducing emissions of greenhouse gases, in those countries.

1.3 Design of the Audit

1.3.1 Audit Objective

The main audit objective was to assess whether the Ministry of Livestock and Fisheries and President's Office - Regional Administration and Local Government have effectively prevented and controlled livestock diseases in order to enhance livestock production, productivity and safe utilization of animal products.

Specific objectives of the audit were to assess whether:

- a) surveillance system for identifying and reporting diseases outbreaks in the country was functioning as planned;
- b) livestock keepers have access to animal health services and inputs;
- c) preventive measures in managing livestock diseases were in place and functioning as expected;
- d) main stakeholders effectively coordinate efforts for prevention and control of livestock diseases: and
- e) monitoring and evaluation of mechanisms for prevention and controlling livestock diseases are periodically conducted and contribute to performance improvements.

Detailed audit questions and sub-questions are presented in **Appendix 2**:

1.3.2 Scope of the Audit

The main audited entities were the Ministry of Livestock and Fisheries and the President's Office - Regional Administration and Local Government. These two ministries are responsible for instituting preventive measures and controlling livestock diseases in the country.

The focus of the audit was on the measures taken by the government to prevent and control livestock diseases in the country. This included:

- assessment of the surveillance system,
- accessibility to the animal health services and inputs,
- preventive measures,
- and monitoring and evaluation mechanisms taken to control livestock diseases.

Data were collected from MoLF and PO-RALG. Collected data were used to examine the practices used by the two ministries in addressing technical and administrative matters for an effective prevention and control of livestock diseases.

Furthermore, data was collected from the selected Regional Secretariats and Local Government Authorities because they are key the implementers of most of the activities on prevention and

controlling livestock diseases in their respective areas of jurisdiction.

The audit covered a period of 5 financial years from July 2013/14 to June 2018/19. This period was selected so as to get insights on the government performance in preventing and controlling livestock diseases. The period is also selected because there have been increased occurrences of livestock diseases such as CCPP, CBPP and FMD for the year 2016, 2017 and 2018⁶.

1.3.3 Assessment Criteria

In order to assess the adequacy of measures taken by MoLF and PO-RALG to prevent and control livestock diseases, assessment criteria were drawn from different sources such as policies, legislations (Acts and Regulations), guidelines and strategic plans from the audited entities. These include the National Livestock Policy of 2006, Local Government (District Authorities) Act, 1982 R.E 2002, Animal Disease Act No. 17 of 2003 and MoLF Strategic Plans (2012/13- 2016/17).

Below are the assessment criteria for each of the specific audit-objective:

Status for preventing and controlling livestock diseases

According to the Animal Disease Act, No 17 of 2003, the Ministry of Livestock and Fisheries through the Department of Veterinary Services has a role of instituting measures for surveillance and control of diseases; safeguarding health of livestock, protecting public health and promoting trade of safe livestock and their by-products. The Act provides pathways for reporting and dealing with diseases including aspects of quarantines. It also spells out measures for carrying out inspections.

Furthermore, the Local Government (District Authorities) Act of 1982 (Revised Edition of 2002) requires PO-RALG through LGAs, to provide services for the improvement of livestock management and overseeing control of keeping, moving, destroying and selling of livestock so that their keeping or use does not become a public nuisance or injurious to mankind and his health.

⁶ Epidemiology reports from Ministry of livestock and Fisheries

Efficient Surveillance System for Identifying Livestock Diseases

MoLF's Strategic Plan (2012/13 -2016/17) requires Disease-Surveillance networks to be strengthened by the Directorate of Veterinary Services. The strategic plan requires the Director of Central Veterinary Laboratory to build the directorate's capacity to timely diagnose diseases through strengthening its centres.

Veterinary Investigation Centres (VICs) were required to be periodically rehabilitated and strengthened to have the capacity for timely detection of livestock diseases. In addition, the National Livestock Development Policy of 2006 states that the government through MoLF should strengthen infrastructure and technical support services for the veterinary laboratory system.

According to the Animal Diseases Act No. 17, 2003, the animal owner is required, within 24 hours to report the matter regarding livestock diseases to the nearest paraprofessional/veterinarian, who is then required to report the matter to the veterinary authority at the district level.

According to guidelines for surveillance of zoonotic diseases for human and animal health, MoLF is required to provide feedback to recipients so that corrective measures can be timely taken to avoid further spread of animal diseases. In addition, through Section 11(8)(6) of the Local Government (District Authorities) Act, 1982, LGAs are required to provide services for the improvement of livestock by ensuring adherence to the set regulations.

Also, the National Livestock Policy of 2006 requires the government through MoLF to strengthen infrastructure, facilities and technical support service for the veterinary laboratory system. Furthermore, MoLF's Strategic Plan (2012/13 - 2016/17) required Veterinary Investigation Centres (VICS) to be periodically rehabilitated and strengthened to have the capacity for timely prevention and control of livestock diseases.

According to guidelines for surveillance of zoonotic diseases for human and animal health, the Ministry is required to provide feedback to recipients so that corrective measures can be timely taken and avoid further spread of animal diseases. Through Section 11(8)(6) of the Local Government (District Authorities) Act, 1982,

LGAs are required to provide services for the improvements of livestock by ensuring adherence to the regulations set on livestock, animal health as well as supporting animal based livelihood.

Pathways for information capture and transmission along the veterinary service supply chain is also implied in the inter-ministerial MoU. This was signed in 2000 in order to operationalise the D by D system.

Accessibility of animal health services and inputs

The National Livestock Development Policy (2006) calls for the provision of veterinary services that comply with the requirements of OIE standards. Thus, MoLF has to ensure compliance to international standards and conventions on all matters related to provision of veterinary services, notably surveillance and control of livestock diseases. The OIE standards require that veterinary services encompass delivery of animal health services; control or eradication of trans-boundary animal diseases, vector and vector borne diseases and, other diseases of economic importance; zoo-sanitary inspectorate services; veterinary public health and food safety services.

The MoLF's Strategic Plan (2012/13 -2016/17) did set the target for the Ministry to provide support to LGAs in order to build their technical and professional capacity. This support was through training and provision of needed tools to efficiently deliver quality services to livestock farmers for the purpose of controlling diseases and encouraging international trade. The Strategic Plan further requires MoLF to improve access to quality services, including reviewing and disseminating guidelines for ensuring access to quality inputs. This further requires DVS to build requisite capacities at the levels of the Ministry and LGAs in enhancing disease surveillance and response systems.

The National Livestock Development Policy (2006) requires MoLF to strengthen technical support services on Trans-boundary Animal Disease control and eradication. Furthermore, the same policy requires the Ministries to encourage and support manufacturing, importation and distribution of quality veterinary medicines. In view of this, the policy requires the Ministries to undertake efforts to promote private veterinary services delivery while embracing private-public partnerships.

On the other hand, the inter-ministerial MoU spells out the roles of LAGs and RS pertaining to disease information capture, collation and submission to MoLF and PO-RALG. It also spells primary roles of MoLF in providing materials needed by experts in performing their duties including veterinary service provision and in ensuring that experts are available to man the sector. This includes placement of extension officers at ward or village level.

Implementation of Preventive Measures in Livestock Diseases

According to the World Organization for Animal Health (OIE) for effective prevention of animal disease, the coverage of the vaccination should not be less than 80% of the targeted animal population. In addition, for the purpose of controlling introduction of diseases, an Inspector, as provided for in the Animal Disease Act No 17 of 2003, shall inspect, count, examine, mark for identification, test, vaccinate, treat, disinfect or take samples from any animal, animal product, animal waste, fodder or fitting or any item or receptacle.

The policy also requires livestock keepers to not move animals on foot or by use of a vehicle outside the inspectors' area of jurisdictions without a permit. In addition, in accordance with the Animal Disease Act, DVS is required to issue official position on the method to be used in disease diagnosis, control, treatment, disposal and quarantine for each notifiable disease and cause the same to be published in print media yearly.

The National Livestock Development Policy (2006), on the other hand, requires the Ministries (MoLF and PO-RALG) to strengthen zoo-sanitary infrastructure and inspectorate services at Points of Entry (PoE) in order to prevent introduction and spread of livestock diseases in the country. The policy also requires the Ministries to strengthen infrastructure for control of tick, tick-borne diseases, tsetse flies and trypanosomes.

Coordination efforts on the prevention and control of livestock diseases

PO-RALG's Strategic Plan for the period 2017-2021 provides for improvement in information flow and communication of its business through provision of linkages with Central and Sector Ministries, Development Partners and Non-State Actors (NSAs) to RSs, LGAs and other stakeholders. It also provides for promotion and monitoring the implementation of the Decentralization by Devolution (D by D system) in Central and Sector Ministries. The inter-ministerial MoU also echoes the responsibilities of various parties on matters related to disease reporting, detection and response.

Monitoring and Evaluation of the Existing Mechanisms for the Prevention and Control of Livestock Diseases

The Ministry of Livestock and Fisheries has the role of monitoring and evaluating sector performance and enforce legal and regulatory framework for the control of animal diseases and pests. In addition, according to MoLF's Action Plan (2018/2019), the Department of Policy and Planning is required to monitor and evaluate performance of executive agencies and other institutions under the Ministry.

According to the Monitoring and Evaluation System of Tanzania, Key Performance Indicators are essential elements and these include outcome, output, process and input indicators. The indicators form the basis for determining indicator baseline values, indicator target values, data sources, data collection instruments, frequency of collecting data and, the Unit or Division responsible for collecting baseline data, monitoring the indicators and collecting data.

Also, in the strategic planning process, sector ministries and LGAs are required to develop a results framework that would include outcome, output, process and input indicators in the Results Framework. Moreover, Monitoring and Evaluation Systems Framework requires institutions that would have undertaken M&E and key stakeholders to have access to M&E reports with an intention of ensuring that they address weaknesses for future improvements.

1.4 Methods for Sampling, Data Collection and Analysis

Methods for sampling, data collection and analysis used in this audit are as provided below:

i) Sampling Methods

First, regions were ranked based on the number of livestock whereby three scales were used i.e. high, medium and low. Regions were also ranked based on the reported number of diseases where by eight diseases were used as a criterion to rank.

Thus, the main criterion for selection of study regions was a combination of the following:-

- a) number of livestock; and
- b) number of reported or observed cases of livestock diseases.

In addition, two other aspects were considered

- a) access to disease diagnostic services (i.e. presence or closeness of Zonal Veterinary Laboratory Centre Centre), and
- b) presence or closeness to Port of entry.

To have a countrywide representation of regions with all the factors; purposive sampling was used to select 5 regions representing those with high, , medium and low number of livestock and reported diseases. The variation was thus in reference to animal numbers.

From above analysis, the selected regions visited for audit purposes were Rukwa, Manyara, Tanga, Mara and Lindi.

The analyses for the selection of those five regions are shown on **Appendices 3 and 4.**

At the grass root level, the audit involved one LGA from each selected region and main criterion was the number of livestock. The selected LGAs that were audited were Mbulu DC, Musoma DC, Kilwa DC, Sumbawanga DC, and Handeni DC.

ii) Methods for Data Collection

The audit team used three methods of data collection to gather information from the audited entities and stakeholders; *Interviews*, *Documentary reviews* and *Observations* as detailed below:

(a) Documentary review

The audit team reviewed various documents from the Ministry of Livestock and PO-RALG as well as selected RS and LGAs. TVLA, ZVCs and selected Animal Healthcare facilities were also included in the audit. The reviewed documents covered the period under the audit i.e. from July, 2014 to December, 2019. This enabled the audit team to get comprehensive and relevant information on the prevention and control of livestock diseases in the country.

The reviewed documents included planning documents, performance and progress reports and monitoring and evaluation reports. The list of the documents that were reviewed is appended as **Appendix 5**.

(b) Interviews

Interviews were conducted to confirm or provide explanations to the information gathered from the reviewed documents. The rationale was to give additional information in cases where clarity in the formal documents was missing. Interviews further provided context and additional perspectives to the information gathered through document reviews. Interviews were conducted with officials in respective departments and sections of MoLF and PO-RALG. The list of officials that were interviewed with the corresponding reasons for being interviewed is appended as **Appendix 6**.

(c) Observation

The audit team visited five purposefully selected dips in order to observe their functionality and one entry point in order to have an insight about its operations. As such, the audit team took notes on the quality of the selected dips and other livestock disease control facilities as compared to the reported quality status. The team also reviewed available documents in selected entry points on matters related to inspections, facility maintenance, instruction books etc.

The audit team also visited facilities for storage of vaccines and conducted stock taking of inventories such as refrigerators, surgical kits, sample collection kits and computers. The audit team similarly evaluated the status of transport facilities and took notes and photos to demonstrate the actual situation. The list of items is appended in Appendix 7

iii) Methods of Data Analysis

The audit used both quantitative and qualitative data analysis methods, whereby, for quantitative analysis, trends, ratios, graphs, cross tabulations and averages were used. Also in some cases quantitative analysis through the computation of means, modes and standard deviations was applied. For qualitative data analysis, context and thematic methods were used.

Further, *Qualitative data* were described, compared and correlated to the findings as compared to audit objective. The analysis involved looking for categories such as events, descriptions, consistencies or differences in order to develop theory from the gathered data.

Likewise, qualitative responses to assess the adequacy of the surveillance system, the effectiveness of the control mechanisms in livestock and adequacy of the monitoring and evaluation mechanism in managing livestock diseases were categorized and coded based on the main themes identified under each audit question.

Collected data were then entered to a spreadsheet that was finally used to explain and answer the ‘why’ questions. Simple pie-charts graphs were used to describe and compare the proportion under each main theme identified.

1.5 Data Validation Process

The Ministry of Livestock and Fisheries and the President’s Office-Regional Administration and Local Government were given the opportunity to go through the draft audit report and comment on the figures and information presented. They confirmed on the accuracy of the figures and information being presented in the audit report.

Furthermore, the information was cross-checked and discussed with experts on the field of animal diseases to ensure validation of the information obtained.

1.6 Standards Used for the Audit

The audit was conducted in accordance with the International Standards of Supreme Audit Institutions (ISSAIs) issued by the International Organization of Supreme Audit Institutions (INTOSAI).

The standards require that the audit is planned and performed in order to obtain sufficient and appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives.

1.7 Structure of the Audit Report

The subsequent sections of this report cover the following chapters:

Chapter Two presents the system, process and relationship among key stakeholders involved in the process for ensuring effective prevention and control of livestock diseases in the country.

Chapter Three presents the audit findings based on the specific objectives of this audit.

Chapter Four provides audit conclusions.

Chapter Five outlines recommendations to be implemented towards improving the effectiveness in preventing and controlling livestock diseases in the country.

CHAPTER TWO

SYSTEM FOR PREVENTION AND CONTROL OF LIVESTOCK DISEASES IN TANZANIA

2.1 Introduction

This chapter provides the description of the system for prevention and control of livestock diseases, policy and legal framework governing the area, roles, responsibilities of the key players and processes guiding prevention and control of livestock diseases.

2.2 Policy and Legal Framework

2.2.1 National Livestock Development Policy

The National Livestock Development Policy of 2006 explains the intentions of the government and other stakeholders to meet the challenges in the livestock industry; with one of the key areas being surveillance and livestock diseases. The Policy aims at stimulating development in the livestock industry in order to increase rural and national economy and, improve food security while promoting environmental conservation.

The policy recognizes that diseases constitute one of the main constraints limiting the development of Tanzania's livestock industry. It says that *'There is a high prevalence of livestock diseases in the country such as Trans-boundary Animal Diseases(TADS), vector borne, zoonoses and emerging diseases that presents big challenges for developing the livestock industry'*.

Furthermore, the policy calls for provision of veterinary services that comply with the World Organisation for Animal Health (OIE) standards and guidelines in line with the requirements of international animal disease control and trade. The policy goal is to encourage the development of commercially oriented, efficient and internationally competitive livestock industry which cannot be attained without adequate control of livestock diseases.

2.2.2 Governing Laws and Regulations

Legislations governing the prevention and control of Livestock Diseases

Prevention and control of livestock diseases is mainly governed by two main statutes namely; the Animal Disease Act of 2003 and the Local Government (District Authorities) Act of 1982. These are supported by the requirements of Veterinary Act No 16 of 2003.

a) Animal Disease Act, No. 17 of 2003

It makes provision for control of animal diseases through monitoring the production of animal products and movements of animals. It spells out the mandates of DVS; measures for checking livestock diseases; powers of inspectors; compulsory measures for preventing animal diseases and general provisions on control of animal diseases.

Animal Diseases Regulations, 2005

The Regulations were made from the Animal Disease Act of 2003 and provide for the appointment of inspectors. Among the objectives of the Regulations are to keep exotic animal/ zoonotic diseases out of Tanzania and improve veterinary public health status. The Regulations further explain duties of the owner of the animals and powers of inspectors in the prevention and control of livestock diseases through monitoring movement of animals, inspecting the animals and animal products, imposing quarantines and mounting vaccination programmes.

b) Local Government (District Authorities) Act of 1982

According to Section 118 (2)(f) of the Local Government District Authorities Act, LGAs have been given a mandate to prohibit or regulate the movement of any livestock in or through any area and, provide for the licensing, control and destruction of dogs in order to control spread of diseases. Also, according to Section 11(8)(6) of the same Act, LGAs have been given the responsibility to provide services for the improvement of livestock.

c) Veterinary Act No. 16 of 2003

The Veterinary Act requires all veterinarians, paraprofessionals and paraprofessional assistants to be registered, enrolled and enlisted respectively and to comply with yearly retention requirements. It also prescribes practice facility standards and academic credentials for staff manning the facility in order to guarantee provision of quality services to animal keepers. It also spells the requirements of code of conduct and ethics through its regulations. Running quality practice facilities that are manned by competent service providers is thus key to quality service delivery; early detection and reporting of diseases in order to support prompt responses.

(d) The Local Government Laws (Miscellaneous Amendments) Act, 2006

This spells out that veterinarians are technically and professionally accountable to MoLF and their works need to be facilitated by the ministry in order to ensure that the quality veterinary services are provided to farmers. Therefore, their competence and compliance in disease reporting, surveillance and response in line with the general requirements of the Animal Disease Act No 17 of 2003 and the Veterinary Act No 16 of 2003 are supposed to be ensured through innovative monitoring and evaluation frameworks conducted by Ministry of Livestock and Fisheries.

2.2.3 National strategic frameworks

The inter-ministerial Memorandum of Understanding, which is aimed at operationalizing the decentralization by devolution spells out the roles of Ministry of Livestock in formulating policy and legal frameworks; undertaking leadership in imposing quarantines and disease control; making sure that vaccines and other resources are available and guaranteeing better staff deployment systems. The Memorandum of Understanding also requires LGAs to provide monthly livestock information, including disease data to Ministry of Livestock through Regional Secretariats.

On the other hand, the Presidential Circular of 2002 forbids animal trekking in order to minimize disease spread and compels LGAs to allocate 15% of revenue collected from livestock levy to support the activities of the Livestock Department at the LGA level.

2.3 Roles and responsibilities of key players

2.3.1 The Ministry of Livestock and Fisheries

The Ministry of Livestock and Fisheries (MoLF) is responsible for issuing regulations that spell-out measures for checking and handling outbreaks of livestock disease including technical steps to be taken in order to effect quarantine and spell out epidemiological demarcations for buffer zones or areas and infected areas.

MoLF ensures adherence to guidelines on control of livestock diseases through monitoring and evaluations done by the Directorate of Veterinary Services and several inspections which are done by inspectors on their areas of jurisdiction. Also, MoLF creates awareness on the strategies set for controlling livestock diseases as a mechanism to ensure implementation.

In accordance with the requirements of the Animal Disease Act No. 17 of 2003, the Ministry of Livestock through the Directorate of Veterinary Services has the following roles:

- (i) Formulate, review and harmonize veterinary services policy, legislation, guidelines and standards;
- (ii) Develop and maintain lists of all notifiable diseases;
- (iii) Categorize diseases into lists according to criteria prescribed in the legislation;
- (iv) Issue official position on the method to be used in the diagnosis, control, treatment, disposal, quarantine, for each notifiable disease;
- (v) Establish and maintain a national veterinary laboratory system;
- (vi) Regulate the use of veterinary drugs, animal pesticide, vaccines and other related products;
- (vii) Facilitate appointment of Inspectors for duties related to the Animal Diseases Control;
- (viii) Monitor the implementation of veterinary services in the country;
- (ix) Build capacity of professional staff in the veterinary services;
- (x) Develop, publish and share animal health status reports to stakeholders;
- (xi) Regulate animal welfare; and

- (xii) Establish and maintain the National Livestock Identification, Registration and Traceability System.

Veterinary Council of Tanzania

Ministry of Livestock and Fisheries, through the Veterinary Council of Tanzania and in line with the requirements of Veterinary Act No. 16 of 2003, have the following key mandates that influence the national standing in disease control:-

- (i) registering veterinarians and veterinary specialists, veterinary practices; enrolling paraprofessionals and enlisting paraprofessional assistants
- (ii) requiring veterinary practice facility to offer quality services to animal keepers.

It is also worth noting that, MoLF is the custodian of the livestock sector and occupies the centre stage for guaranteeing provision of quality veterinary services, including coordinating disease diagnosis and control.

2.3.2 President's Office - Regional Administration and Local Government

The President's Office-Regional Administration and Local Government (PO-RALG) through LGAs has the responsibility for the provision of services for improvement of livestock health and production, to prevent or control keeping, movement, destruction and sale of livestock, birds, so that their keeping or use does not become a public nuisance or injurious to health.

Regional Secretariats and Local Government Authorities which reports to PO-RALG are responsible for operationalizing all matters regarding prevention and control of livestock diseases in their respective areas of jurisdictions as guided and facilitated by sector Ministries.

2.3.3 Regional Secretariats (RSs)

The mandates of Regional Secretariats (RS) among other roles, is to co-ordinate and provide advices on the control and prevention of livestock diseases in the region. They also compile and collect livestock data from LGAs for onward transmission to MoLF and PO-RALG. In addition, RSs have the role of providing preliminary feedbacks and strategic advices to LGAs if deemed appropriate as

enunciated in the inter-ministerial MoU for operationalizing the D by D system.

Regional Secretariat acts as link points between the Ministry of Livestock and Fisheries, PO-RALG and Local Government Authorities on technical matters and between PO-RALG and LGAs for all matters. They therefore have a critical role to play in disease information capture, surveillance and control.

2.3.4 Local Government Authorities (LGAs)

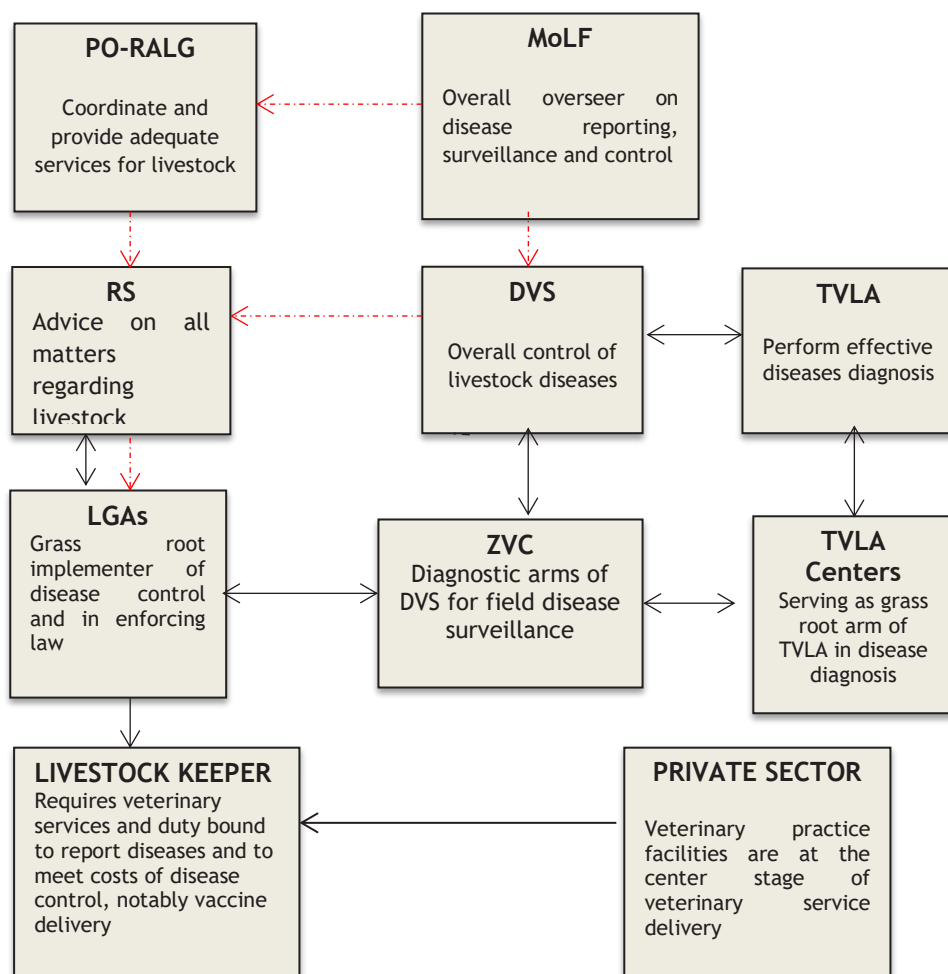
The Local Government (District Authorities) Act, Section 11(8)(6) of 1982 stipulates that one of key LGA's responsibilities is to provide services in order to improve animal health. This is done by the District Veterinary Officers (DVO) who oversees all matters related to livestock diseases at district level i.e. veterinary services including disease surveillance and control. Furthermore, in accordance with inter-ministerial MoU and the Local Government Laws (Miscellaneous Amendments) Act, 2006, DVOs are technically answerable to MoLF although administratively accountable to LGAs. Technical answerability of DVOs to MoLF provides a good platform for improved execution of disease control strategies.

2.3.5 Private Sector

The National Livestock Development Policy (2006) states that control of non-Trans-boundary Animal Diseases (non-TADs) is the responsibility of the private sector. It is generally accepted that control of all major diseases should be shouldered by animal keepers. This is the basis for the Ministerial Circular of 2017 and the proceedings of the stakeholders' workshop of 2017 that compel animal keepers to meet the costs of vaccine delivery.

Also, the Ministry of Livestock and Fisheries through Veterinary Council of Tanzania as per the requirements of the Veterinary Act No. 16 of 2003, is responsible for quality assurance of veterinary practices and in collaboration with Tanzania Medicine Equipment and Drugs authority (TMDA), guarantees supply of quality inputs by private sector actors. As stated above, MoLF also has a role of controlling livestock diseases by ensuring that livestock keepers have access to inputs and quality veterinary services.

Figure 2. 1: Relationship between key actors on the Control of Livestock Diseases



Source: Auditors' Analysis (2019)



2.4 Resources for Prevention and Control of Livestock Diseases

2.4.1 Funding for the Prevention and Control of Livestock Diseases in the Ministry of Livestock.

Table 2.1 shows the total amount of funds that were allocated for prevention and control of livestock diseases, disbursement versus what have been planned by the Ministry of Livestock and Fisheries.

Table 2. 1: Funding for Prevention and Control of Livestock Diseases

	2015/16	2016/17	2017/18
Planned (Million TZS)	421.317	4525.32	4851.24
Actual (Million TZS)	380.38	3012.10	4257.69
Percentage (%)	90	67	88

Source: MoLF's Budget Implementation Reports (2015/16 -2017/18)

From Table 2.1, it can be deduced that for the last three years, the Ministry of Livestock and Fisheries received no more than four-fifth of its budget. An exception is for financial year 2016 where only two-thirds of the budget was received. The audit team was not provided with reasons for reduced disbursement of funds in 2016.

Further analysis was made to establish the amount received at the LGA level. Table 2.2 shows the results of the analysis made by the audit team for the five visited LGAs.

Table 2. 2: Funding of the Control of Livestock Diseases in LGAs

LGA	2016/2017		2017/2018		2018/2019	
	Planned (mil TZS)	Disbursed (mil TZS)	Planned (mil TZS)	Disbursed (mil TZS)	Planned (mil TZS)	Disbursed (mil TZS)
Handeni DC	0	0	0	0	16.107	0
Musoma DC	0	0	5	2	10	2.3
Kilwa DC	100.974	0	38	0	44.6	0
Sumbawanga DC	20	0	5.272	0	11.224	3.039
Mbulu DC	8.466	0.336	54.594	13.34	47	8.195

Source: LGAs's Budget Implementation Reports (2015/16-2017/18)

Table 2.2 shows that disbursement of funds for the five LGAs was not consistent. In some years, funds were not disbursed at all and for the years when funds were disbursed, the disbursement was half of what was budgeted for. For some years, Handeni and Musoma DCs did not prioritize the disease control activity in their work plans and as such no budget was allocated for activities related to disease control.

2.4.2 Staffing Level for Diseases Control

The staffing level at the Ministry of Livestock and Fisheries

The information on staffing level on the whole chain of diseases prevention and control in the Ministry of Livestock and Fisheries is presented in Table 2.3.

Table 2. 3: Staffing Level for Surveillance and Disease Control in DVS

Sections	Needed (Number)	Available (Number)	Available (%)
Veterinary Public Health and Inputs	7	5	71
Zoo Sanitary Inspectorate and Animal Welfare	10	4	40
Trans boundary Animal Diseases	10	3	30
Tick and Vector Borne Diseases	7	4	57
Zonal Veterinary Centre, Check Points and Quarantine Station	316	128	41

Source: MoLF's Staffing Level, 2018/19

The analysis of staffing levels as shown in Table 2.3 shows the gap between the needed number of officials and those available. It was evident that some sections have large deficits, which ranged between 30 - 50%. This situation mainly related to sections dealing with zoo-sanitary inspectorate and animal welfare; trans-boundary animal diseases as well as ZVCs and Points of Entry.

The staffing level at PO-RALG and RS

The information on staffing level at PO-RALG, RS and LGA levels that are responsible for prevention and control of livestock diseases are presented in Table 2.4.

Table 2. 4: Staffing Level for Disease Control at PO-RALG and LGAs

PO-RALG	Needed(Number) ⁷	Available (Number)	Available (%age)
PO-RALG	3	2	67
Regional Secretariat	26	15	58
Local Government Authorities	12,756	2,146	17

Source: PO-RALG Staffing Level, 2018/2019

The analysis of staffing level from Table 2.4 shows that there is a gap between the number of needed staff and those available at PO-RALG, RS and LGAs. However, the gap is bigger for LGAs than PO-RALG and RS. In fact, RS have a shortfall of 11 veterinarians and LGAs have a shortfall of 70 veterinarians and serious shortage of extension staff.

2.4.3 Population of Livestock in the country

Tanzania has types of livestock which comprises of cattle, goats and sheep, dogs, pigs, donkey etc. Table 2.5 designates the statistics of three types of livestock namely cattle, goats and sheep from all regions in the mainland Tanzania.

⁷ According to staff compliment of the Ministry of Livestock

Table 2. 5: Population of Livestock⁸ (2018)

Region	Number of livestock	Region	Number of livestock
Arusha	4,432,679	Morogoro	1,794,253
Manyara	4,424,066	Kilimanjaro	1,639,765
Mwanza	4,092,094	Pwani	1,247,414
Tabora	3,964,150	Kagera	1,239,913
Simiyu	3,694,557	Kigoma	995,419
Mara	3,559,380	Iringa	956,487
Singida	3,391,639	Katavi	904,904
Dodoma	3,356,553	Lindi	606,070
Shinyanga	3,241,410	Ruvuma	465,767
Geita	3,163,767	Njombe	415,397
Mbeya	2,879,176	Mtwara	264,570
Tanga	2312311	Dar Es Salaam	52,442
Rukwa	1,878,450		

Source: Epidemiology reports from MoLF, 2018

From Table 2.5, Arusha region has the highest number of livestock, whereas Dar es Salaam has the least despite daily huge influxes of slaughter animals destined for the local markets.

2.5 Process for the Prevention and Control of Livestock Diseases

Control of livestock diseases involves keeping track of trends of animal health, identifying the causes of disease outbreaks and adopting innovative responses. This includes access to health care and inputs, surveillance and disease prevention measures.

2.5.1 Access to health services and inputs to livestock keepers

Animal health services are crucial for the welfare of livestock. Previously each Region and Districts had their Animal Health Services Centres which were operated by the Government. These were manned by veterinarians and supported by paraprofessionals. The Government also had veterinary facilities at divisional/ward level that were at the centre stage of delivering extension and veterinary services in rural areas.

⁸ Livestock includes cattle, sheep and goats

But, in the year 2006, the centres were closed. After the closure, the Private Sector became mandated to undertake delivery of animal Health services and had to build their own Centres/clinics and drug outlets. This was due to modernization and decentralization of the veterinary services in the country. Thus, following the government decision to embrace the private sector, all these facilities were abandoned.

The Private Sector is now responsible for the provision of the veterinary -services and livestock inputs under the close supervision of the Ministry of Livestock and Fisheries.

Livestock keepers are expected to have a smooth access to those health services centres for immediate assistance the moment they notice that an animal is sick or when they need routine vaccination programmes.

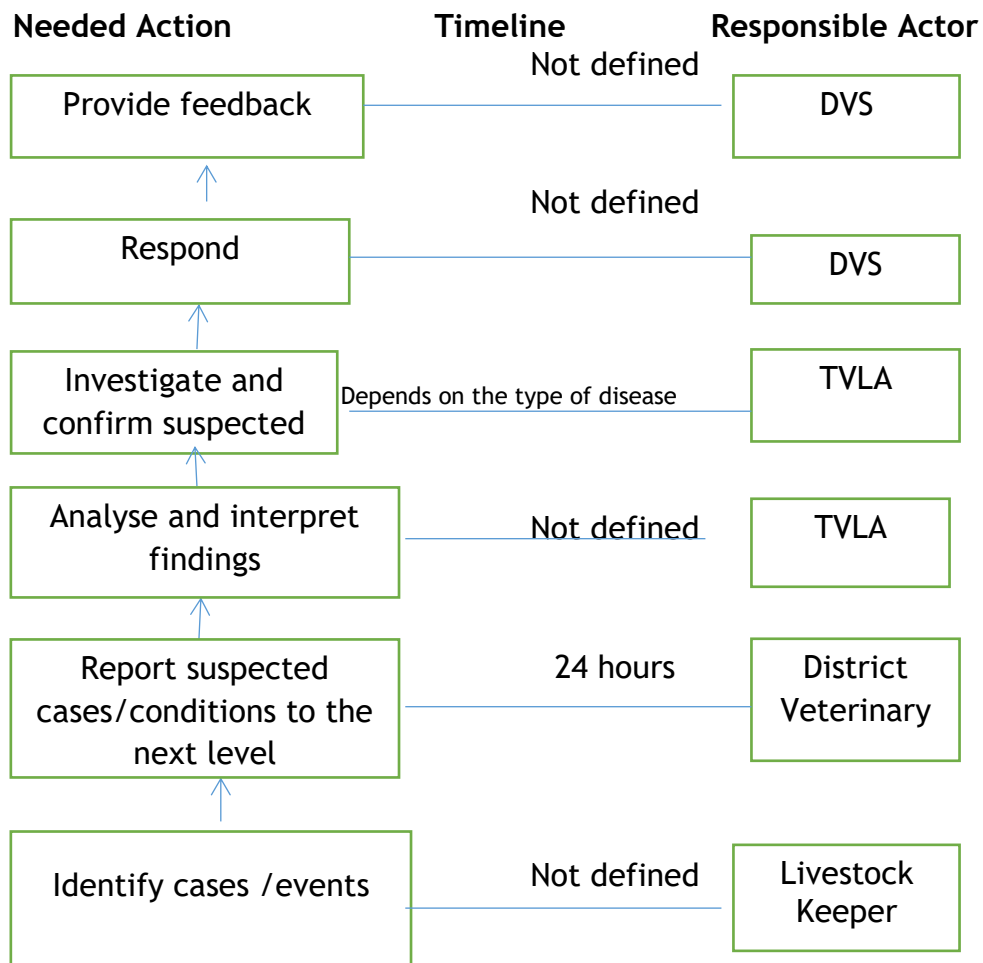
2.5.2 Surveillance services for control of livestock diseases

Surveillance has the main purpose of undertaking early detection of the disease outbreak. The sooner the disease outbreak is found before it makes progress along its epidemic curve, it becomes easier and better to undertake control measures.

Surveillance system includes the activities from the identification of disease by a livestock keeper whereby the livestock keepers should report to the next authority mainly the Livestock Field Officer or District Veterinary Officer. Private Sector who is working closely with the Livestock Keeper should also report disease outbreaks to DVO as soon as detected on behalf of their clients.

The responsible officer is then required to investigate the case and when necessary confirm the suspected case through laboratory diagnosis. Following confirmation or otherwise, the DVO shall impose a quarantine upon informing Director of Veterinary Services. This process thus involves various actors as indicated on Figure 2.2 below.

Figure 2. 2: Surveillance Process for Livestock Diseases



Source: Guidelines for surveillance of prioritized Zoonotic Diseases (2018)

Figure 2.2 shows the entire chain of information flow regarding suspected cases of animal diseases; from the farmer to the Directorate of Veterinary Services with their assigned timelines

2.5.3 Prevention of animal diseases

Prevention of animal diseases entails putting measures that are geared at not allowing a disease to enter into a defined ecosystem or country. Prevention process includes aspects related to inspections done at the Point of Entries such as Airports and Ports or slaughter facilities etc., quarantining newly introduced animals or banning introduction of animals and products. It may also involve carrying out strategic vaccination.

a) Vaccination

Animal vaccinations are carried out in order to produce immunity against certain diseases. Most of the notifiable diseases and others are often controlled through strategic vaccination. Vaccination can also be a conduit for eradication of diseases. In the past, MoLF was the main player and driver for disease control. However, after adoption of economic structural adjustment programmes, the key player for vaccine delivery has become the private sector. Under the D by D system, control of diseases is now being shouldered by various players ie MoLF, PO-RALG, RS, LGAs and the private sector players

There are also other important activities such as animals identification and traceability. These activities may significantly improve the effectiveness of activities such as: the management of disease outbreaks, vaccination programs, surveillance, early response and notification systems, animal movement controls, inspection, certification, fair practices in the utilization of veterinary drugs, feed and pesticides at farm level.

b) Inspection at Points of Entry

Inspection at the entry point covers inspection of the documents, animals and animal products. Inspection of the documents includes assessing information provided in the documents, including any vaccination requirements, validity etc. Animals are inspected to establish their health status and this involves visual assessment and detailed physical examination as well as taking samples for laboratory diagnosis. On the other hand, inspection of animal products involves assessing the packaging materials, information provided, evidence for leakage and intactness of seals, cold chain status and expiry dates.

A Border post, as defined by standards for operating procedures for zoo-sanitary inspection constitutes any airport, or port or railway station or road station-point open to international trade of animals, animal products and other types of commodities. For the purpose of diseases control, the Border post should have the following facilities:- space for office and essential provisions that are necessary to inspection and these include working tools, transport, and competent staff.

c) Dipping of Livestock

Dipping is intended to control TBDs and trypanosomiasis which constitute the main cause of morbidities and mortalities in animals. Because of this, dipping was first adopted during the colonial era. Although dipping used to be successful when the government used to shoulder the supply of acaricides and deployment of staff to man the dip tanks and farmers dipping animals for free, following the withdrawal of public services, dipping rates plunged. This led to immense animal losses due to vector-borne diseases.

As a result of this trend, during the Fourth Phase Government, MoLF embarked on provision of subsidized acaricides. Although there was some improvement, dipping rate was not satisfactory. The Fifth Phase Government has now crafted an alternative support to vector and vector-borne disease control. MoLF is now providing free acaricides for filling the tanks twice in a year, with farmers shouldering costs of replenishing the tanks.

Under this scheme, LGAs are expected to construct or rehabilitate dip tanks; mobilize animal keepers; work with communities to provide water for dip tanks and supervise formation of dipping committees. MoLF is supposed to carry out M and E to assess effectiveness of the scheme.

2.5.4 Monitoring and Evaluation of Control of Livestock Diseases

Ministry of Livestock and Fisheries has a role of monitoring and evaluating sector performance and enforce legal and regulatory framework for the control of animals, pests and diseases. It is also responsible for setting out plans for monitoring and control of livestock diseases with the identified list of Key Performance Indicators (KPI) for measuring performance.

According to the Action Plan (2018/2019) of the Ministry of Livestock and Fisheries prepared by the Department of Policy and Planning, DPP is required to monitor and evaluate performance of executive agencies and Institutions under the Ministry.

According to the country's Monitoring and Evaluation System, whenever monitoring and evaluation activities are to be carried out in Tanzania; then Key Performance Indicators must be put in place. This component includes outcome, output, process and input indicators.

Furthermore, the indicators form the basis for determining indicator baseline values, indicator target values, data sources, data collection instruments and frequency of collecting data. The Unit or Division responsible for collecting baseline data and monitoring of the indicators must ensure that they are working with the actual values.

In the strategic planning process, MDAs and LGAs are required to develop a Results Framework that would include outcome, output, process and input indicators. That would form the basis of day to day M&E work for the MDAs and LGAs.

CHAPTER THREE

AUDIT FINDINGS

3.1 Introduction

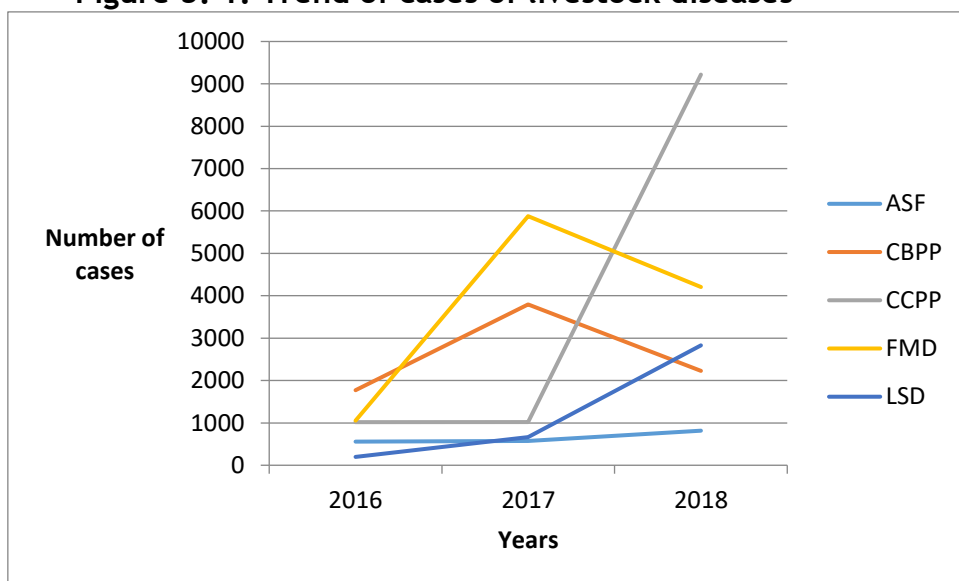
This chapter presents the audit findings on the performance of MoLF and PO-RALG in the prevention and control of livestock diseases in the country. The findings focused on assessing the effectiveness of the mechanisms used in the prevention and control of various livestock diseases based on audit questions presented in chapter one.

3.2 Increased occurrence of livestock diseases

Animal Diseases Act, 2003 requires the Ministry of Livestock and Fisheries through the Department of Veterinary Services to institute measures for preventing and controlling livestock diseases, safeguarding of livestock health, protecting public health and promoting safe trade of livestock and their by products. On the other hand; the Local Government (District Authorities) Act of 1982 requires the President's Office - Regional Administration and Local Government (PO-RALG) through LGAs to provide services for the improvements of livestock and to oversee, prevent, control the keeping and movement of animals, destruction and sale of livestock and their products.

According to the review of epidemiology reports prepared by the Ministry of Livestock and Fisheries, despite the existence of livestock diseases in the country, efforts by MoLF have not successfully managed to prevent and control the outbreaks and spread of some of the livestock diseases in the country. Figure 3.1 shows the trend of reported cases of livestock diseases for a period of three years from 2016 to 2018.

Figure 3. 1: Trend of cases of livestock diseases



Source: MoLF's Epidemiology reports (2016-2018)

Figure 3.1 shows that for three consecutive years from 2016 to 2018; the prevalence rates of some of the livestock diseases such as Contagious Bovine Pleuropneumonia and Foot and Mouth Diseases have been decreasing at a very slow pace while cases for other three diseases increased. These were African Swine Fever, Contagious Caprine Pleuropneumonia and Lumpy Skin Disease. Further, the figure shows that there has been an increase for diseases such as ASF which increased by 43%, CCPP by 804% and LSD by 327%. Statistics have shown MoLF managed to control CBPP which decreased by at least 41%.

However, the audit could not establish if the decrease was due to controls by MoLF or the disease subsided as it assumed an endemic status and livestock keepers lost interest to report and vaccinate.

Increased cases of livestock diseases lead to the following consequences:

a) Low Livestock Production

The audit team also noted that a high diseases prevalence in adult animal increases the existence of diseased to offspring because of maternal transmission. One of the example is the Review report of status of Foot and Mouth Diseases written by Michael J. Madege

(2018) from the Ministry of Livestock and Fisheries which stated that young animal's mortality caused by Foot and Mouth Diseases increased as high as 50%.

Review of Tanzania Livestock Modernization Initiatives Report (2015) revealed that livestock sector is severely constrained by high disease prevalence and mortality rates which led to low livestock production. Also, the review of the government circular of 2017 on the control of livestock diseases revealed that almost every year 40 % of the calves die due to diseases caused by ticks.

b) Low Livestock Productivity

The audit team noted that increased livestock diseases hampers productivity of the livestock sector. It was noted that livestock diseases accelerated the following:

(i) Existence of low quality meat

Livestock diseases often lead to loss of animal body condition and decreased carcass weight, thereby the animal eventually fetching low prices in the market chain. In addition, organ or whole carcass condemnation rates because of diseases also pose additional losses to traders

(ii) Decreased milk production and value

Most livestock diseases result in reduced milk production due to anorexia or inappetence and other pathophysiological factors thereby denying farmers incomes accrued from milk sales. If animals are treated, drug withdrawal requirements also pose additional losses due to the need to discard milk during three-five days post treatment.

Infectious agents that cause mastitis or udder infections also lead to reduced milk production and losses attributed to drug withdrawal requirements. Thus, for poor resource smallholder dairy farmers, this constitutes an immense threat to their livelihood. The same applies to animal keepers in rural areas who also rely on milk sales to meet their daily household needs.

(iii) Existence of inferior hides and skins

Ticks and other pests often damage the skin of the animals through their bites. Mites, fleas and lice too are of concern when it comes to quality of hides and skins.

TBDs and trypanosomiasis are the most common health constraints of animals in Tanzania which leads to a poor quality of hides and skins. Bites from ticks, flea, mites, lice and other pests are of major concern to value chain actors, notably those involved in the leather industry.

(iv) Loss of draught or working animals.

Some of the resource poor small-holder farmers in places like the Lake and Northern zones are heavily dependent on oxen and the donkey as draught animals in ploughing fields and ferrying farm produce and other forms of goods to and from markets. The animals are also heavily relied upon in carrying water, charcoal, firewood, building materials as well as being means for transport of sick people and children to schools located in hard to reach areas.

The animals thus play a crucial role in reducing the drudgery of the woman and the girl who shoulder most of household tasks. The animals thus have a lot of socio-cultural and economic values to rural communities. Loss of these animals is a major setback to the social wellbeing of resource poor people in rural areas and to food security.

(v) Increased costs of veterinary services

Diseases also cost farmers a lot in terms of costs related to diagnosis, treatment and control through services offered by private practitioners. For resource poor farmers, this further denies them decent livelihood due to spending their meagre financial resources to treat animals or embark on control measures.

For notifiable diseases, the government is also forced to allocate funds to contain and control the diseases. When the country embarks on disease eradication, the costs are even higher. The nation also experiences further losses as it is forced to import needed drugs and vaccines.

d) Utilization of low quality animal products

The audit team noted that diseases cause wastage of animal products such as meat and hides because of condemnation of these products aimed at avoiding unsafe utilization.

Furthermore, the audit noted that low pace of decrease of livestock diseases was caused by inadequate mechanisms for preventing and controlling livestock diseases in the country. This was enunciated by the following reasons:

3.2.2 Weak Support by MoLF and PO-RALG to prevent and control livestock diseases

According to Animal Diseases Act, 2003 the Ministry of Livestock and Fisheries through the Department of Veterinary Services has a role of instituting measures for preventing and controlling livestock diseases, safeguarding of livestock health, protection of public health and promoting safe trade of livestock and their by-products.

Furthermore, the Local Government (District Authorities) Act of 1982 requires the President's Office - Regional Administration and Local Government (PO-RALG) through LGAs to provide services for the improvement of livestock and overseeing livestock operations to prevent or control the keeping, movement, destruction and sale of livestock.

The audit noted weak support offered to LGAs on matters related to disease surveillance and control. Despite responsibilities being well prescribed in the inter-ministerial MoU that was geared at operationalising the decentralisation by devolution, the support is still weak. Reviews of annual reports of MoLF revealed that the only support offered to LGAs by the Ministry was on the provision of subsidized or free acaricides.

Also, interviews held with officials responsible for livestock management from PO-RALG revealed that efforts made by the MoLF and PO-RALG through LGAs to provide services for prevention and control of livestock diseases were inadequate as provision of acaricides only catered for TBDs.

The other support was on training on diseases reporting (Table 3.1). These initiatives were regarded to be inadequate due to the fact that there are a couple of crucial requirements that relate to availability and delivery of vaccines needed for control of major diseases.

Table 3. 1: Support offered to LGAs by MoLF for the Financial Year 2016-2019

Kind of Support	Implementing Institution	Planned to be supported/covered	Actual number that were supported
Training on reporting of diseases (EMAI)	FAO, MoLF	185 LGAs	89 LGAs
Provision of Acaricides	MoLF	185 LGAs	185 LGAs
Rehabilitation of dips	MoLF	161 Dips	0 Dips

Source: MoLF's Annual reports 2016-2019

Table 3.1 shows that between 2016 and 2019 no LGA was supported on the rehabilitation of damaged and non- operational dips. However, in the year 2019/20 some funds were sent to LGAs for rehabilitation of 41 dips.

Again, in the same period MoLF managed to train officers on reporting of diseases from only 89 LGAs which is less than 50% of all LGAs officers that were scheduled to be trained. Observations made in the visited LGAs showed that no LGA uses EMA-i system in reporting incidences of livestock diseases as it was not covered in the trainings.

Furthermore, weak support has been indicated by the failure of MoLF to abide to the principles prescribed in the inter-ministerial Memorandum of Understanding. The required support was in terms of provision of material resources to sector staff such as sample collection kits, surgical and medical kits to Veterinary Officers and Veterinary Paraprofessionals. The required support would have enabled them to discharge their mandates and professional requirements in relation to disease reporting, investigation, detection, responses, inspection as well as enforceability of laws.

We noted in some cases where livestock officers purchased the needed working and protective gears from the veterinary input providers to enable them to perform sample collections. This

resulted into delays in responding to the outbreaks of livestock diseases especially when a livestock keeper could not afford to buy the necessary materials for sample collection.

3.3 Lack of robust Surveillance System to detect and confirm livestock diseases

MoLF's Medium Term Strategic Plan 2012 - 2017 required Epidemic-surveillance network to be strengthened.

According to the interviews held with officials from Directorate of Veterinary Service (DVS) and In-charge of Zonal Veterinary Centers, epidemic surveillance which is important for prevention and control of livestock diseases was regarded to be inadequate.

Inadequate surveillance system is thought to be due to the following;

3.3.1 Lack of robust surveillance and reporting systems

For adequate surveillance and reporting MoLF should design a web based reporting system capable of capturing critical information on diseases timely from wildlife and private sectors.

It was revealed that, currently the Ministry is developing a surveillance strategy to be used for the whole country. However, the officials from the Ministry of Livestock and Fisheries revealed that, the current surveillance and reporting system is not web-based, it is to a large extent paper based (95%) which takes long time to be prepared and dispatched to the next administration instead of being electronically (web based).

This led to delayed reporting of livestock diseases. The officials further revealed that, the current surveillance process does not timely capture data from livestock keepers and the private sector in general hence contributing to delayed response to events of animal diseases and other risks on public health.

Review of MoLF surveillance system revealed that, major gaps identified in the present system included high dependence on paper-based reporting system resulting in under-reporting of up to 90%, in-completeness and late delivery of animal diseases

information to the central unit of the Ministry of Livestock and Fisheries for decision making. .

Furthermore, the audit noted that the institutionalization and formalization of the operations within the surveillance system were not full interlinked. For example, laboratories were not interlinked to the epidemio-surveillance unit and thus not efficient when sharing information or test results.

Also, the audit noted workforce incapacity on basic epidemiology matters including developing tools to support outbreak investigations and antimicrobial resistance (AMR) surveillance were not practiced. Incapacitated workforce were manifested by lack of investigation services at the LGA level and increased antimicrobial resistance.

3.3.2 Delay in the Identification and reporting of Diseases

Animal Diseases Act No. 17, 2003 requires the owner of the animal to report the matter regarding any livestock disease within 24 hours to the nearest paraprofessional/ veterinarian who in turn is also required to report the matter to the veterinary authority at the district level after receiving a report from the owner.

The audit noted that cases of outbreaks of notifiable diseases were reported by making telephone calls and not surveillance reports; a practice that poses difficulty in tracking the data. The audit also revealed that the available reports and data did not include reports of non-notifiable diseases.

During the site visits to the selected LGAs the audit further noted that the 5 visited LGAs did not have internet facilities to enable them to report on the status of diseases. LGAs instead used paper work (paper documentation) to report on the outbreaks of livestock diseases which took long time to prepare and dispatch to the next administrative destination.

This led to delays in the reporting of diseases contrary to the requirements of the Animal Disease Act of 2003 which requires the reporting to take not more than 24 hours. Table 3.2 shows the extent of delays in reporting the prevalence of livestock diseases from the 5 visited LGAs.

Table 3. 2: Analysis of Delayed Reporting Time

LGA	Standard Time (hrs)	Actual Time (hrs)	Time Delayed
Kilwa DC	24	72	48
Sumbawanga DC	24	72	48
MbuluDC	24	48	24
Musoma DC	24	36	12
Handeni DC	24	Never reported	-

Source: Auditors' analysis on the interview with LGAs officials (2019)

From Table 3.2 above, 4 out of 5 sampled LGAs revealed to experience delay in reporting cases and incidence of livestock diseases ranging between 24 and 48 hours. One of the LGAs has never reported any diseases for a period of more than three years.

In-charge of the Zonal Offices of MoLF explained that reporting of diseases usually takes more than 48 hours compared to the required 24 hours standard time. This was due to poor communication between the livestock keepers and the field officers. Most of the time, reporting of disease outbreaks from the grass root level is done after the death of animals. Animal deaths is what triggers disease reporting rather than clinical cases.

It was further noted that delays in reporting of prevalence of livestock diseases was accelerated by poor communication between the livestock keepers and the Livestock Field Officers, lack of motivation and working tools such as laptops, desktop and internet facilities at the grass root level. These are further described below:

Poor communication between the livestock keepers and the Livestock Field Officers.

The audit found out that it takes a long time for the livestock keepers to communicate any case to Livestock Field Officers from the time when they first saw signs of an outbreak because of the fear of being charged prices for the provision of the service from the Livestock Field Officers (LFOs). Sometimes they also fear to consult the LFO because the drugs that will be prescribed might be very expensive. Consequently, this has sometimes led to poor communication between the livestock keepers and LFOs.

Lack of motivation

Through interviews held with officials in 5 visited LGAs, the audit team noted that Livestock Officials were not effectively performing

their duties and nobody was reporting them to their higher authorities. Lack of motivation and poor working facilities are the main reasons. In all 5 visited LGAs they had no means of transport such as motorcycles to facilitate movement to reach livestock keepers in rural areas and no support was provided to field officers to enable them reach peripheral areas for their daily operations.

Lack of working tools

The audit found out that livestock field officers are not supplied with the needed working tools such as sample collection kits, veterinary kits, protection gears and internet facilities as well as laptops for report writing. They were also not provided with transport facilities so as to enable them to move from one area to another.

Consequently, it denied the possibility of Livestock Officers to exercise their routine duties of reaching the livestock keepers timely and providing them with the anticipated support.

Lack of real time reporting application

Furthermore, delays in reporting was also accelerated by absence of web-based disease surveillance and reporting facilities at District, Ward and Village levels; absence of technical personnel in some areas of District Councils as well as little knowledge of reporting systems for Veterinary paraprofessional due to inadequate capacity building in disease surveillance and reporting.

Also, interviews held with the Veterinary Officers from the 5 visited LGAs revealed that, some of the LGAs use outdated surveillance methods which is paper based in reporting incidences of livestock diseases instead of EMA-i which is a modern and fast system developed for reporting livestock diseases which relies on the availability of internet.

This in turn increased delays in the identification of cases of livestock diseases. For instance the established EMA-i system covers only 89 out of 185 LGAs which is equivalent to 48 percent of all LGAs in the country. However, it was noted that the visited 89 LGAs who were not using EMA-i system they were not carrying out assessments on the use of EMA-i system in the already covered 89 LGAs.

The audit team also noted that delays in reporting cases of livestock diseases led to delays in responding to diseases hence posing a risk

of further spreading of the livestock diseases and even deaths to a large number of livestock in a particular area.

Review of the surveillance strategy revealed that the noted weaknesses on the livestock diseases surveillance system was mainly caused by the following factors;

a) Absence of veterinary and paraprofessional officers in some wards and districts

The audit noted that given the large number of livestock population and the vastness of the country; there are wards and districts with no technical personnel (veterinary and para-professional officers) responsible for conducting surveillance of livestock diseases and other related measures for controlling them.

Out of 12,756 needed Veterinary Officers only 2,146 are available in different locations. This means that there was an absence of 83% Veterinary and Para-professional officers. This is as seen in Table 3.9.

b) Absence of robust web-based disease surveillance and reporting systems

The audit team noted that there is no web based surveillance system which would make it easy for fast reporting and tracking of livestock diseases which would facilitate fast and better planning for responding on the livestock diseases outbreaks.

The audit team further noted that MoLF relied on the EMA-i system of reporting despite that the Ministry has never made any follow up on how many LGAs are using the EMA-i in reporting incidence of livestock diseases.

c) Lack of knowledge of reporting systems

The audit team noted that delays in reporting cases of livestock diseases was also caused by lack of knowledge of existing reporting systems by the veterinary paraprofessionals due to the fact that they were not exposed to it. They haven't been trained on how it is supposed to function and what are their roles in diseases surveillance and reporting. For instance, 4 out of 5 visited LGAs were not trained on the reporting of livestock diseases.

Also, the audit noted that, surveillance objectives and procedures for priority diseases such as Transboundary Animal Diseases (TADs) and Priority Zoonotic Diseases (PZDs) have not been formalized and standardized. This is because the Ministry of Livestock have not yet prioritized the said activities and in turn this has affected identification and reporting of the diseases by the veterinary officers.

3.3.3 Inadequate laboratory Confirmation system

National Livestock Policy of 2006 states that In collaboration with other stakeholders the Government will strengthen infrastructure, facilities and technical support services for the veterinary laboratory system. Also MTSP 2012 -2017 required Veterinary Investigation Centres (VICS) to be rehabilitated and strengthened.

The laboratory confirmation is critical on livestock disease surveillance system. But, officials from the Directorate of Veterinary services pointed out that the laboratory confirmation system is not functioning adequately. This was illustrated by the following factors:

a) Inaccessible Tanzania Veterinary Laboratory Agency stations

The audit noted that most laboratory stations in the rural areas are not easily accessible by the livestock keepers. The situation is different in urban areas where accessibility is high, particularly in regions where the zonal offices are stationed. For instance, the Lake Zone office is required to serve 6 regions which are far apart from each other.

Also, the audit noted that due to some regions being far away from ZVC the collected samples were being transported to TVLA Head Office situated at Temeke in Dar es Salaam for diagnosis. The initial plan was to diagnose those livestock diseases at the TVLA stations that were located within their zones. The collected samples were of great assistance to veterinary officers in confirming existence or non-existence of a particular livestock disease. This step would have enabled the officials to come up with a plan of action to address identified problems.

The confirmation of diseases is done mostly on considering the salient features of a particular disease and the visible signs. Table 3.3 shows the average distance (in kilometres) between the TVLA station and the 5 visited LGAs.

Table 3. 3: Assessment of distance of sampled LGAs against TVLA Centers

Sampled LGA	TVLA Center	Distance from TVLA (km)
Sumbawanga DC	Sumbawanga	95
Handeni DC	Tanga	158
Mbulu DC	Arusha	182
Musoma DC	Mwanza	250
Kilwa DC	Mtwara	265

Source: Auditors' analysis (2020)

Table 3.3 shows the distance which livestock keepers should travel in order to receive laboratory services where unfortunately all the TVLA centers are located in towns and livestock keepers are located in rural areas.

Also, the audit team noted that Tanzania Veterinary Laboratory Agency has a total of 11 diagnostic centers in the entire country which are divided in zones. Out of 11 only 8 centers were linked to Zonal Veterinary Centers while 3 stations namely Kigoma, Tanga and Sumbawanga were not.

Currently, DVS undertakes diagnosis through analyses done by TVLA. DVS no longer has diagnostic facilities and relies on the competence and motivation of TVLA. Often, the functions of the DVS are compromised mainly because of limitation in financial resources.

b) Capacity shortage of the TVLA stations

Through the Interviews held with MoLF's officials revealed that, TVLA have capacity shortage in terms of personnel and equipment. Further, the audit noted that the TVLA were suffering from the shortage of personnel and reagents used to diagnose animal diseases.

Review of the annual report of the Directorate of Surveillance and Diagnostic Services of TVLA revealed that TVLA centres have deficits on the number of technical and support staff. The shortage is

reflected by the sections that are found in many laboratories such as Parasitology, which has got three sections namely, entomology, helminthology and protozoology. Each of the sections may require at least three persons. But currently each section has an average of one staff.

Bacteriology Department has two sections namely mycology and bacteria sections; whereas pathology has general pathology including post mortem and histopathology sections.

In total there are seven sections, if each one of them has 3 staff (Senior, middle Cadre, and a technician) for the 10 diagnostic laboratories, 210 technical staff were needed. Currently, the total number of technical staff is 102 in the entire country.

However the audit team noted that shortage of personnel in some of the TVLA stations has been caused by uneven allocation of the technical personnel at TVLA stations as shown in Table 3.4.

Table 3. 4: Analysis of the Staff at TVLA Centers

TVLA Centre	No. of technical staff	Samples tested per year	Ratio of samples tested per technical staff
Kigoma	4	63	1:15
VVBD Tanga	19	1,153	1:61
Mtwara	5	312	1:62
Tabora	5	473	1:94
CVL	35	4616	1:131
CIDB	12	5,297	1:441
Dodoma	5	549	1:549
Arusha	5	3,547	1:709
Mwanza	8	8,290	1:1,036
Iringa	3	3,411	1:1,137

Source: Auditors' analysis from TVLA Annual Reports (2019)

Table 3.4 shows the ratio of samples per technical personnel in the TVLA centers where the worst case scenario is seen in Iringa with a ratio of 1137 samples per technical personnel per year while Kigoma has the ratio of 15 samples per technical person per year.

This shows a huge disproportion in the distribution of workload among different centers. The workload in Iringa centre is 76 times

higher than that of Kigoma centre but the number of staff at Kigoma centre is higher than that of Iringa centre.

Also, the inadequate capacity of TVLA was reflected on the type of diagnosis performed by TVLA centers as shown in Table 3.5 below;

Table 3. 5: Types of Diagnosis as Performed by TVLA Centers

Centre	PM	Mic r	ELISA	FP A	PC R	Cell cult ure	Experi m. animal s	Ra pid test	Fee d	Perfor mance (%)
CIDB	x	x	v	x	v	v	x	x	x	33
Kigoma	v	v	x	x	x	x	x	v	x	33
Mtwara	v	v	No kit	x	x	x	x	v	x	33
Tabora	v	v	No kit & Softwar e	x	x	x	x	v	x	33
Mwanza	v	v	No kit	x	v	x	x	v	x	44
Iringa	v	v	No kit	x	v	x	x	v	x	45
Dodoma	v	v	v	x	v	x	x	v	x	56
Arusha	v	v	v	x	v	x	x	v	x	56
Tanga	v	v	x	x	v	x	v	v	x	56
CVL	v	v	v	v	v	x	v	v	v	89

Source: TVLA's Progress Report (2018)

Key:

V = Present

X = Absent

From Table 3.5, 6 out of 9 TVLA stations were able to perform diagnosis test at less than 50% while the central station located at Temeke in Dar es Salaam performed at 89%.

The main contributing factors for most of TVLA centers performing lowly includes increased provision of blind treatments offered to livestock due to inaccessible TVLA stations as elaborated above and the following factors:

Absence of important equipment for sample collection at the LGAs

Furthermore, during the site visits at the 5 selected LGAs the audit team observed that Veterinary Officers were lacking working gears and equipment such as sample collection, sample storage, surgical and medical kits, which are important in collecting samples and accelerate diagnosis of livestock diseases in order to prevent and control livestock diseases.

Through the interview held with the Veterinary Officers from the visited LGAs revealed that when a need arise the livestock officer purchases the needed equipment from the veterinary input providers to enable them to perform sample collection. The reason for lack of necessary working tools was given as Ministry being unable to provide the necessary working tools to the Veterinary Officers. This resulted into delays in responding to disease outbreaks especially when livestock keepers cannot afford to purchase the necessary materials for sample collection.

Failure of the LGAs and DVS to meet laboratory costs

Interviews with MoLF officials from the DVS revealed that, since the introduction of diagnostic fees to the TVLA, it had been difficult for the livestock keepers to use the laboratory confirmation system. The officials revealed that, the set fees were not even met by the LGAs as a result most LGAs use the research institutes such as the Sokoine University of Agriculture (SUA) for their services.

Others basically conduct visual observations which are cheap even though its effectiveness in confirming the existence or non-existence of livestock diseases is still questionable. As a result, disease diagnosis across the country has continued to rely very much on symptoms observation, which is not reliable and could lead into misdiagnosis and mistreatments.

Furthermore, review of the budgets for the period of 2016/17-2018/2019 and the Interviews held with the District Veterinary Officials revealed that, sufficient funds were not set aside for covering investigation of reported cases of outbreaks of livestock diseases at TVLA. The livestock keepers are supposed to cover all costs of diagnosis of livestock diseases right from initial sample collections to the final laboratory tests conducted to confirm existence of disease.

The audit team noted through the interviews held with livestock keepers that they are unable to pay since most of them cannot afford the cost for that service.

The audit team further noted that even DVS could not afford to cover for cost of some of the diagnosis tests which were conducted

at TVLA stations due to shortage of funding as shown in Table 3.6 below.

Table 3. 6: Debts for diagnostic tests conducted by TVLA for samples submitted by DVS

Types of diagnosis debt	2016/2017	2017/2018	2018/2019
Cost of Viral diseases (TZS)	13,485,000	29,002,000	4,300,000
Cost of bacterial diseases(TZS)	900,000	90,000	690,000
TOTAL	14,385,000	29,092,000	4,990,000

Source: TVLA progressive reports

Table 3.6 shows the debts which DVS owes TVLA. It was obvious that DVS could not afford to pay for diagnosis tests which were important in the performance of prevention and control of livestock diseases.

Also, the review of the action plans for implementing recommendations on the improvements on animal health and on building technical capacity of the MoLF found out that there is a structural or administrative problem in allocating the Investigation Centers kept under TVLA. Whereas the duties of TVLA were elaborated as carrying out diagnoses and the provision of vaccines and were reporting to TVLA headquarters; the VIC staff were carrying out surveillance of the livestock diseases according to the Animal Disease Act of 2003 and were reporting to DVS.

This led to a long chain of reporting delays in responding to the outbreaks of livestock diseases and could be responsible for accelerating a speedy spread of livestock diseases in the country.

3.3.3 Lack of feedback on the reported cases

According to the Guideline for Surveillance for priority Zoonotic Diseases for Human and Animal Health; feedback shall be provided as soon as feasible so that the recipients remembers would carry out activities to be sustained or corrected.

The audit team noted that there has been a practice of not giving timely feedback on the reported cases of livestock diseases. This was noted through the interviews held with DVOs that they gave feedback verbally on some reported cases in their respective wards.

The audit further noted that, feedback was mostly given on the reported cases of trans-boundary diseases such as anthrax and African Swine Fever while ignoring those of prevalent types such as helminthes and mange.

Officials from PO-RALG-Livestock Sector revealed that, ineffective feedback was caused mainly by ineffective communication system between the livestock keepers, DVOs and ZVCs. Also, the same officials revealed that, MoLF did not establish a clear communication system for feedback provision on the prevention and control of livestock diseases.

3.4 Failure to access and provide quality and timely veterinary services and inputs to livestock keepers.

Medium Term Strategic Plans for the period from 2012-2017 required MoLF to improve access to quality services and inputs to livestock farmers for disease control; The National Livestock Policy states that the Government through MoLF has to encourage and support manufacturing, importation and distribution of quality veterinary medicines.

The audit team noted that it was difficult to access quality veterinary services and inputs by livestock keepers. This was more applicable with animal keepers located in rural areas. The responsible factors were as follows:-

Lack of animal health service centers at LGAs

The audit team noted that despite outbreaks of livestock diseases, there are insufficient animal health centers countrywide. There is only one teaching animal hospital/clinic situated at Sokoine University of Agriculture. Veterinary clinics at regional and district levels and veterinary centres in rural areas were abandoned following adoption of economic structural adjustment policies. Prior to closure of these critical vet-centres there were veterinary clinics with budgetary provisions and necessary kits at each of the LGAs in the country.

Most of the private veterinary clinics are currently situated in urban areas while there are very few veterinary clinics in rural areas where most of the livestock keepers live This was also reflected in the

Tanzania Livestock Master Plan 2017/18-2021 as a challenge facing the livestock industry in the country.

The audit team also noted that under the private sector the animal health centers and clinics have turned themselves to livestock inputs suppliers instead of providing clinical services to the livestock. This development was mentioned and its cause was due to a lack of mechanisms for regulating the performance of the animal health centers run and managed by the private sector.

Furthermore, it was also noted that , in some LGAs private health centers were situated a long distance far away from the livestock keepers, a fact that necessitates the ward veterinary officials to examine and treat animals without undergoing laboratory examinations.

Through the observations made by the audit team it was further found out that 80 % of the 5 visited LGAs have no Animal Health Centers or Clinics as indicated in Table 3.7 below.

Table 3. 7: Distribution of Animal Health Services Centres and Input Suppliers

LGA	Number of animal health centers present	Number of livestock
Kilwa DC	1	76,035
Sumbawanga DC	0	504,600
Mbulu DC	0	586,207
Handeni DC	0	844,875
Musoma DC	0	927,441

Source: Auditors' Analysis 2019

From Table 3.7 the audit team noted that 4 out of 5 visited LGAs had no animal health service centres only one LGA which is Kilwa DC, had animal health service centre which was constructed in 2011 but has no facilities installed to make it operational.

The audit team also noted that at the country level most of the LGAs did not have centres for animal health due to collapse of regional, district veterinary clinics and centres that led to the presence of inadequate diagnostic facilities in the country.

Table 3.8 (a) and (b) below show the ratio of input suppliers to that of livestock and the maximum distance travelled to seek or receive the services of input in the visited LGAs.

Table 3. 8(a): Ratio of livestock per Input Supplier

LGA	No of Input Suppliers	No of livestock	Ratio of livestock per input supplier
Musoma DC	0	927,441	-
Kilwa DC	9	76035	1:8448
Sumbawanga DC	17	504,600	1:29682
Handeni DC	7	844,875	1:120696
Mbulu DC	2	586,207	1:293104

Source: Auditors' Analysis 2019

From Table 3.8(a) it was noted that 1 out of 5 visited LGAs had no input supplier at all. Musoma DC stands out as the worst case as it has 927,441 livestock which do not have any input supplier at all to serve them. Mbulu DC is second which had 293,104 livestock served by one input supplier.

Table 3.8 (b): Maximum distance from LGAs to the Input Supplier

LGA	No. of Input Suppliers	No of livestock	Maximum Distance from the LGA to the closest input supplier (km)
Musoma DC	0	927,441	Not applicable
Sumbawanga DC	17	504,600	10
Handeni DC	7	844,875	40
Mbulu DC	2	586,207	100
Kilwa DC	9	76035	135

Source: Auditors' Analysis 2019

Kilwa DC had the worst case scenario where input suppliers were found almost 135 km from the livestock keepers and the best case scenario was found at Sumbawanga DC where livestock keepers travel only 10 km to seek the needed services.

Hence, during the outbreaks of livestock diseases, livestock keepers were forced to buy unprescribed antimicrobials (drugs) and treat the affected livestock. This in turn led to inappropriate use of veterinary drugs which contributed to the wide spread of antimicrobial resistance.

As noted above, lack of veterinary centres in rural areas has been greatly contributing to gross inaccessibility to quality services by

livestock keepers. This was according to the interviews held with officials from the MoLF.

Also, observations made by the audit team found out that there were 2 abandoned health centers in the visited 5 LGAs. They were abandoned buildings initially used by the veterinary health service centers staff before they were closed and handed over to the custodianship of PO-RALG where they are now being used as workers houses. This process has also contributed to lack of veterinary centers at the LGA level.

Insufficient number of Veterinary professionals and paraprofessionals

During the process of controlling and preventing of livestock diseases, District and Regional Veterinary Officers play important roles since they are the ones who provide technical assistance on tackling livestock diseases.

However, the review of the staffing list of the 5 visited LGAs revealed that there is insufficient number of veterinary professionals and paraprofessional in the covered areas. Review of the overall staffing list for veterinary officers in the country revealed that 70 out of 185 LGAs do not have veterinary doctors and ward livestock officers are below 30% for the entire country.

Table 3.9 shows the extent of shortage of veterinary professionals and paraprofessionals in each of the 5 visited LGAs.

Table 3.9: Availability of Veterinary Professionals in the Visited LGAs

LGAs	Available Veterinary Professionals	No. of livestock
Kilwa DC	0	76,035
Sumbawanga DC	0	504,600
Mbulu DC	0	586,207
Handeni DC	0	844,875
Musoma DC	1	927,441

Source: Auditors' analysis of the staffing levels of the visited LGAs

From Table 3.9 only 1 out of 5 LGAs had a qualified veterinary officer. The remaining LGAs are lacking veterinary officers. It can be seen that most LGAs have got more than a half million livestock that need to be attended by a well-qualified veterinary officer.

Musoma DC which has got one veterinary officer who is supposed to attend almost 1 million livestock at any point in time.

Insufficient number of paraprofessional was noted to be enhanced by improper allocation of the paraprofessional officers as evidenced in Table 3.10.

Table 3.10: Availability of Paraprofessionals in the Visited LGAs

LGA	Available Paraprofessional	Number of Livestock	Workload ratio
Mbulu DC	9	586,207	1:65134
Sumbawanga DC	17	504,600	1:29682
Handeni DC	30	844,875	1:28162
Musoma DC	49	927,441	1:18927
Kilwa DC	10	76035	1:7603

Source: Auditors' analysis of the workload ratio levels of the visited LGAs

From Table 3.10 worst case scenario is seen at Mbulu DC where one paraprofessional personnel, serves an average of 65,134 livestock while in Kilwa DC one paraprofessional serves only an average of 7,603 livestock. It means the workload of paraprofessionals at Mbulu DC is 9 times higher than at Kilwa DC. This is an improper allocation of paraprofessionals in different LGAs.

Furthermore, From the 5 visited LGAs the audit team also noted that insufficient number and unequal allocation of veterinary professionals led the livestock keepers to treat animals by themselves due lack of veterinary paraprofessional and this practice could greatly contribute to the spread of microbial resistance.

Unavailability of veterinary professionals impaired the performance of paraprofessionals in reporting and investigating cases of livestock diseases due to lack of follow-up.

Meagre Disbursement for animal health services

The audit team noted a meagre budget allocated for the provision of services needed to improve the livestock sector in LGAs. LGAs were instructed by PO-RALG to allocate 15% of their revenue for development of livestock sector but none of the visited LGAs did so.

This accelerated the deterioration rate of the existing infrastructure mainly dips and crushers in the LGAs because of treating the livestock infrastructures as of low and minimal priority.

Also, the review of the Tanzania Livestock Master Plan 2017/18 to 2021 revealed the intention of the government to transform the livestock sector. The plan shows only 19% of the investment was allocated to animal health.

The Interviewed officials from MoLF-DVS -Livestock section revealed that, the investment allocated to cater for animal health is minimal compared to the activities required for prevention and control of the livestock diseases as well as maintenance of animal health.

The officials further revealed that, none budgeting for animal health slowed down the implementation of the activities regarding prevention and control of livestock diseases in the LGAs. Lack of budget allocation in LGAs has been attributed to non-prioritization of the livestock health matters.

3.5 The malfunctioning existing preventive measures for livestock diseases

MoLF's Strategic Plan (2012/13 -2016/17) requires DVS to build capacity for timely control of livestock diseases through

- rehabilitation and strengthened Veterinary Infrastructure
- strengthened Veterinary public health regulatory and inspection services
- development and implementation of the plan for animal diseases and vectors controls,

The audit noted that the existing measures for prevention and control of livestock diseases were not functioning as expected. This was enunciated by the following factors:

3.5.1 Low vaccination coverage in the country

For effective prevention of animal diseases; the World Organization for Animal Health (OIE) requires that the coverage of the vaccination should not be less than 80% of the whole population of livestock.

The audit however noted that vaccination is a key factor in controlling of major diseases but the national standing was found to

be extremely low. For instance, it was found out that for a period of three years, MoLF had not conducted vaccination programmes at all. It was apparent this was left to LGAs, who in turn had no funds to cater for this task. Although, it is known that LGAs have no budget, MoLF too did not set aside a substantial budget for vaccination programmes for major diseases, such as notifiable and trans-boundary diseases.

Further, the audit team noted that coverage of vaccination is still below 10 percent as shown in Table 3.10 and Table 3.11 which is very low compared to the requirement of OIE (set standard) of vaccinating 80% of available livestock in the country.

Review of the budget speech of the Ministry of Livestock for the financial year 2018/19 indicated that the total number of cattle vaccinated against different diseases for the year ended 2017 was very low compared to the total number of cattle available in the country.

Also, interviewed officials from MoLF (DVS) revealed that, only one third of all the livestock has been vaccinated since 2016 while leaving the two-third of the livestock un-vaccinated. The officials further revealed that, the remaining one third was mainly carried out on poultry while only one percent of cattle were vaccinated. Table 3.11 shows the coverage of vaccine for the financial year 2016.

Table 3. 11: Coverage of the Vaccinated Cattle

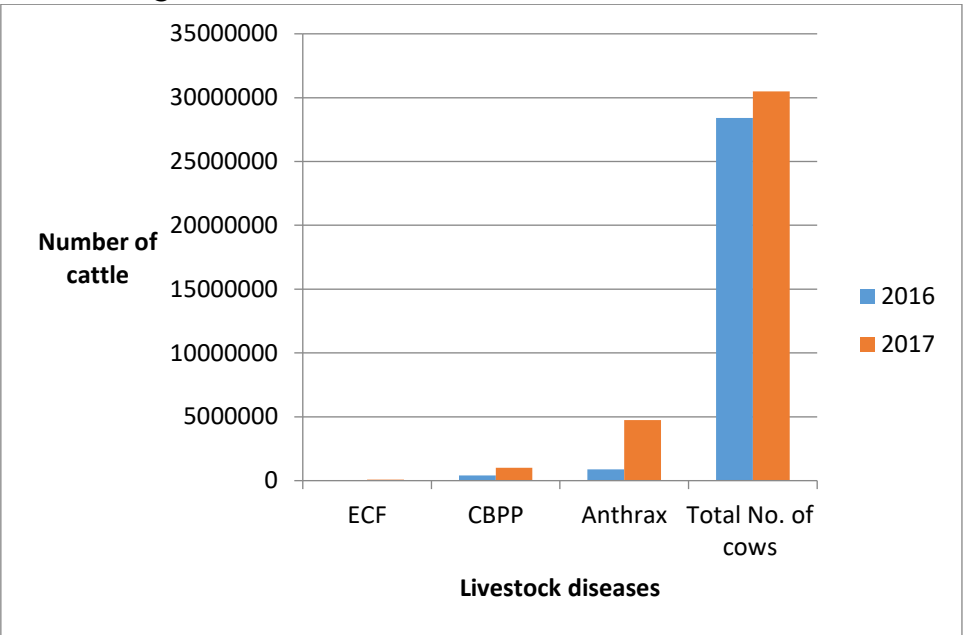
Items	2016	2017
ECF	0	88,000
CBPP	409,286	1,020,000
Anthrax	882,100	4,750,000
Total number of cattles	28,400,000	30,500,000

Source: MoLF budget speech 2016 and 2017

Table 3.11 shows the percentages of vaccinated cattles in reference to ECF, CBPP and anthrax. The table shows that coverage of vaccination for three diseases was very low. As also depicted in Figure 3.2, there were notable increases in coverage for CBPP and anthrax and low increase for ECF, although overall, the coverage was still low in comparison to total numbers of animals. However, these ratios should be taken with caution as anthrax is said to be a

problem in the Northern Zone and Southern Highlands areas whereas CBPP is currently showing an upsurge nationwide.

Figure 3. 2: Trend of livestock diseases in cattle



Source: MoLF’s budget speeches 2016 and 2017

Figure 3.2 shows the number of vaccinated cattle for each of 3 livestock diseases with respect to the total number of cattle in the country where for all the three mentioned diseases the number is still low which portrays inadequate prevention of livestock diseases.

The audit team analyzed the reasons for inadequate coverage of vaccine in the country and noted the following factors as the root causes;

a) *Unorganized and uncoordinated vaccination programs*

The officials revealed that, although the procurement of vaccines was left in the hands of the private sector, the Ministry of Livestock and PO-RALG through LGAs are still responsible for coordinating the vaccination programs in their areas of jurisdictions.

However, the coordination has been possible only for diseases that the central ministries directly dealt with, the so called diseases of national interest. The response of livestock keepers to other

vaccines has been very low due to several challenges such as the need for the assurance of the quality of the vaccines by the MoLF.

Review of the annual operation plans prepared by the Ministry of Livestock revealed no massive vaccination programmes were coordinated by the MoLF.

No funds were set aside for the purchase of the vaccines and implementation of vaccination activity for the last three years. Lack of understanding on the responsibilities regarding vaccination activities among authorities (MoLF, PO-RALG, LGAs, livestock keepers) has contributed to disorganized and uncoordinated vaccination programs.

For instance interview with livestock keepers revealed that they were hesitant to use the imported vaccines because there was a case in the past involving a livestock keeper who vaccinated their cattle with CBPP vaccines and the cattle died one after the other. When the veterinary professionals visited the site they found out that the vaccines used were of substandard.

Furthermore, the interviewed veterinary officials revealed that, some of the imported vaccines contained more than one strain which was not common in Tanzania and that might have led to the introduction of new diseases.

In addition, the interviewed TVLA's officials revealed that, the imported vaccines have a couple of challenges such as the use of strains which were not found in the country. This as was the case with the imported New Castle Disease vaccine with Lasota which had more virus strains as compared to only I-2 strain prevailing in Tanzania.

They further elaborated that the vaccine caused significant poultry deaths. This was caused by inadequate research done on the identification of the disease's strains found in different parts of the country. This might have paused the risk of introducing new strains of diseases that the country might fail to control thereby creating dependency on the imported vaccines.

b) Under-reporting of the vaccination activities

The audit team noted that low number of vaccinated livestock is accelerated by under-reporting of the activities on the vaccinated livestock by the private sector, paraprofessional and veterinary officers from the wards and LGAs. The reason is due to the failure of officials from wards and LGAs to submit the monthly and weekly reports to the Zonal Veterinary Centers as expected.

Table 3.12 shows the number of wards which did not report on the vaccination activities in their respective wards thereby inflating the number of unreported vaccinated livestock.

Table 3. 12: Reporting on Vaccination Activities in Visited LGAs

LGAs	Total number of wards	Wards which report frequently	Wards with no report
Musoma DC	21	21	0
Kilwa DC	23	23	0
Sumbawanga DC	27	17	10
Mbulu DC	18	7	11
Handeni DC	21	0	21

Source: Auditors' analysis 2017/2018

Table 3.12 shows that in the 5 visited LGAs, 42 out of 110 wards did not report frequently on the activities regarding vaccinated livestock in their areas. Kilwa DC conducted vaccination activities through a campaign which was donor funded programs and that's why they always had updated data and information on the vaccinated livestock collected during the campaign.

Under reporting of the vaccination activities was mainly attributed to a lack of proper system for tracking the number of livestock that have been vaccinated from the lower levels and private sectors. It was also noted that there are no data for the vaccinated livestock on ECF disease for the year 2016.

The audit noted that due to inexistence of a well-defined reporting mechanism of private sector on matters regarding vaccination of livestock, it had been very difficult for LGAs to get that kind of information from the private sector.

c) Insufficient and non-availability of Vaccines at the LGAs

The Veterinary Officers from the Ministry of Livestock and Fisheries and experts from SUA revealed that LGAs did not provide the required vaccines at the required time. For instance during the vaccination period the livestock keepers faced a challenge of non-availability of vaccines. Normally, there is a calendar for undertaking vaccinations for each disease but it was not being followed. The practice showed that the vaccines were only ordered and became available when there was an outbreak of diseases in the LGAs.

Same officials however revealed that even when the vaccines were available, they were very expensive and unaffordable. FMD vaccine was currently costing livestock keepers more than TZS 1,000 per cattle. Prior to 2016 these vaccines were dispensed free of charge.

Due to high costs most farmers fail to vaccinate their livestock in accordance to issued Ministry of Livestock and Fisheries vaccination calendar.

The officials further revealed that the provision of vaccines was left in the hands of private sector enterprises that are mainly located in urban areas and their focus is on generating profit. They only concentrate on selling vaccines that are associated with regular disease outbreaks that most of the livestock keepers vaccinate when the outbreaks occur.

This impairs the timely availability and quality of vaccination provided in the rural areas. For instance, during the emergency of the Rift Valley Fever, the Ministry of Livestock and Fisheries did not supply the needed vaccines at the required time. To the contrary the vaccine was brought by Melinda and Gates Foundation two weeks after the outbreak of diseases while the practice requires that the vaccines be dispensed as soon as possible after the outbreak of disease.

d) Inefficient distribution network and cold chain system for vaccine storage

The audit team noted that, since the government phased out animal health facilities, there had been inefficient distribution and storage of the vaccines at the LGA level. This did not only affect the

distribution of the vaccines but also affected the quality of the vaccines that were provided. Table 3.13 shows the status of cold chain systems for vaccine storage.

Table 3.13: Status of Cold Chain Systems in the Visited LGAs

LGA	Total number of wards	Fridges		Cool box	
		Available Number	Ratio per wards	Available Number	Ratio per wards
Kilwa DC	23	0	-	0	-
Mbulu DC	18	1	1:18	6	1:3
Handeni DC	21	2	1:10	3	1:7
Sumbawanga DC	27	1	1:27	3	1:9
Musoma DC	21	1	1:21	1	1:21

Source: LGA's Inventory Report

From Table 3.13 it can be seen that from the 5 visited LGAs, Kilwa DC had a worst case scenario with the poorest ratio as it had no single refrigerator out of the required four and had no any cool box at all out of the required five. Also, during the site visits at Handeni DC the audit team noted that the two refrigerators were not used for quite a long time due to lack of vaccination programs at Handeni DC.

Musoma DC has the second worst scenario ratio where the whole district depended on only one refrigerator and one cooler box to store vaccines.

3.5.2 Few and incomplete Inspection at Point of Entry

According to the OIE Standard for Operating Procedures (SOPs), zoo sanitary inspection requires an Inspector to inspect, count, examine, mark for identification, test, vaccinate, treat, disinfect or take samples from any animal, animal product, animal waste, fodder or fitting or any item or receptacle for the purpose of controlling introduction of diseases into the country

The audit team noted that there were fewer and incomplete inspections at the Points of Entry as evidenced at Tanga Port where the inspector would inspect the animals but not the imported animal products entering in the country through that Port. This was manifested by fewer inspections carried out to containers received at the port. The responsible veterinary officer further revealed that the inspections were not conducted as required due to the following factors;

a) *Ineffective identification of the Point of Entries*

The audit team noted that the Ministry of Livestock and Fisheries has not effectively identified the Points of Entry for the purpose of allocating the needed Inspectors. It was evidenced by the review of the Point of Entries provided by the Ministry whereby despite the recognition of the unofficial ports, they were not included in the list of Point of Entries and as a result no Inspectors were allocated to them. For instance, in Tanga region Ports like Sahare, Mkwaja and Kipungwi were not seen in the list even though they are major points for importing and exporting livestock and animal products.

Interviewed Officials from Ministry of Livestock stated that the reason for delays in the identification of Point of Entry is due to a lengthy process required to announce the Point of Entry ports through the Government Gazette, which they claimed to have plans to do so. However, on further probe, their claim was not seen in their plans.

b) *Shortage of personnel and technical expertise*

It was also noted that inspections at the entry points were insufficiently conducted due to the shortage of inspectors with the required technical expertise. Also, the interviewed Zonal In-charges revealed that, sometimes the Ministry of Livestock and Fisheries utilized veterinary officials from LGAs to form part of the inspection team when those officers were available.

The officials further revealed that, although they were using operation ZAGAMBA which involves patrolling at the livestock auctions and other unofficial entry points, the task was difficult due to insufficient personnel.

Review of the available number of inspectors compared to the number of permits issued in the zones for the purpose of importing or exporting livestock and livestock products reveals that there is unequal allocation of the inspectors since they allocated inspectors without considering corresponding workload at the Point of Entries as shown in Table 3.14

Table 3.14: Workload of inspectors in the zones

Nos	Name of Zone	Number of Inspectors	Number of permits	Ratio of permits per inspector
1	Western	1	-	-
2	Southern	2	-	-
3	Central	3	-	-
4	Southern Highlands	3	45	1:15
5	Eastern	264	2138	1:93
6	Northern	13	1277	1:98
7	Lake Zone	3	2501	1:833

Source: Annual Reports from MoLF

Table 3.14 shows inadequate allocation of inspectors at Lake Zone where the workload is too high compared to the Eastern Zone. It can also be seen from the table that Southern zone had issued zero import and export permits as the zone is unauthorized to conduct import and export activities. The Western Zone could not do that due to a low number of inspectors who can issue permits. This was revealed by the officials from MoLF.

The Ministry of Livestock and Fisheries was also required to identify various Points of Entries and allocate inspectors by considering factors such as demand and workload. Review of the list of Inspectors allocated revealed that, the allocation of inspectors did not consider the demand and workload of a particular Point of Entry.

For instance, Namanga entry point which is the busiest Point of Entries had only one inspector while Tanga had two inspectors. This shows that the allocation did not pay attention to the corresponding workloads.

It was also noted that in some points of entries there were fewer inspectors than the required number while other points of entries had none. Officials from MoLF further revealed that, more efforts have been directed to the Harbours and Airports compared to other Points of entries located at the borders.

The noted imbalance in allocation of inspectors to the point of entries was mainly attributed to allocating inspectors without evaluating the corresponding workload at the point of entries.

c) *Non-availability of infrastructures and Facilities to aid inspections*

National Livestock policy states that the Government will strengthen zoo sanitary infrastructure and inspectorate services.

The Ministry of Livestock and Fisheries is required to ensure that Ports of Entry and border posts are facilitated and allocated with the required infrastructures such as office space, quarantine centers, mini-laboratory and medical kits.

It was noted that in many entry points there was lack of key infrastructures such as offices to accommodate the inspectors especially in areas such as Mbwani in Dar es Salaam region. Proper equipped offices are necessary for inspectors to sit down and spend considerable time to plan and report the results of their inspections.

Furthermore, through the observations done by the audit team at the sampled Ports of Entry namely, Tanga Port and Kisesya border post we noted that there were no facilities found in their respective areas that would assist inspectors to perform their duty effectively. These were facilities such as office space, quarantine center, medical kit and mini laboratory which are critical for effective inspections.

Additionally, all the visited entry points had no mini- laboratories to test the livestock or their products. Inspectors focused mainly on matters related to permits issued and contents there in. This was observed to render the inspection less effective in overseeing the controlling and preventing aspects.

It was noted that critical issues such as assessing the status of health of livestock and the quality of livestock products for any inspection with intention of controlling and preventing livestock diseases were not covered during the inspection. By the Inspectors paying more attention on the permits only; it is evident that the Ministry was more focusing on the revenue collection and not the quality of inspections done at the entry points.

3.5.3 Inadequate implementation of the dipping strategy

National Livestock Policy states the Government will strengthen infrastructure for control of tick, tick-borne diseases, tsetse flies and trypanosomiasis.

The Ministry of Livestock in collaboration with PO-RALG is supposed to adequately implement the dipping strategy by strengthening infrastructures for control of ticks, tick-borne diseases and tsetse flies by provision of acaricides.

The audit team also noted that despite the efforts provided by the Ministry of Livestock and Fisheries in the provision of acaricides, the dipping of livestock was not effectively implemented due to presence of few dips which were not only in bad conditions but most of them were not working. This is indicated by the following factors;

a) *Large numbers of dipping infrastructures are in bad condition*

The audit revealed that, there are few dips at the LGAs compared to the number of livestock. Veterinary Officials from the 5 visited LGAs indicated that, some of the available dips are damaged and others are in poor condition while others are operational though in a bad condition. Table 3.15 shows the number of dips and their status from the 5 visited LGAs.

Table 3.15 : Status of Dips in the Visited LGAs

LGA	Total number of dips	Number of good and operational dips	Number of dips In bad condition but operational	Number of damaged and not operational dips
Kilwa DC	3	2	0	1
Handeni DC	12	7	3	2
Musoma DC	36	13	15	8
Sumbawanga DC	11	3	1	7
Mbulu DC	24	10	4	10

Source: Auditors analysis 2019

Table 3.15 shows that from visited 5 LGAs, out of a total 86 available dips, 35 are operational, 23 though they are operational but they

are in bad condition, whilst 29 were severely damaged and rendered non-operational. Thus, the audit indicates that almost 50% of the dips are damaged.

This was noted to contribute to the existence of ticks and tick-borne diseases that could be easily eliminated by dipping livestock. Poor functionality of dip tanks is likely to negatively impact on the scheme and eventually result into increased occurrence of TBDs and trypanosomiasis. However the audit also came across work plans for rehabilitation of 161 dips planned to be implemented by MoLF.

The reason for this was infrastructures had been abandoned for such a long time.

b) Insufficient number of dipping infrastructures

Our analysis to assess the sufficiency and efficient use of dipping infrastructure which was made in the 5 visited LGAs as shown in Table 3.16, indicated that the worst case scenario was seen at Sumbawanga DC where only one dip was serving 168,200 livestock due to most of the remaining dips being damaged. The best case scenario was seen at Mbulu DC followed by Musoma DC.

Table 3.16: Analysis of working dips with the number of livestock

LGA	Working Dips	No of Livestock	Workload ratio
Kilwa DC	2	76035	1:38,017
Mbulu DC	14	586,207	1:41,871
Musoma DC	13	927,441	1:71,341
Handeni DC	7	844,875	1:120,696
Sumbawanga DC	3	504,600	1:168,200

Source: Auditors' analysis (2019)

Table 3.16 shows that Sumbawanga DC has the lowest number of working dips and a large number of livestock. Assuming that the dips will be operational throughout the day, only 460 livestock can be dipped per day and it will take 365 days for the whole livestock population in Sumbawanga DC to have a single dip.

The audit team further noted that consequences for having distant dips contributed to the increased cases of tick-borne diseases (TBD) which retards weight gains. It also impairs cattle health leading to lowered calving rates, condemned carcass and organs, downgraded meat, decreased milk production, inferior hides and skins and

enhanced costs of veterinary services (drugs, laboratory diagnosis, surveillance).

3.5.4 Uncontrolled movements of animals

Animal Disease Act No. 17 of 2003 requires that no person shall move an animal on foot or by use of a vehicle outside the Inspectors' area of jurisdiction without a permit.

The audit noted that despite the huge movements of livestock from one area to another mainly in search of pasture and water, there had been little efforts by the Ministry of Livestock and Fisheries, and PO-RALG to control the livestock movements. The officials from the Ministry revealed that, the uncontrolled movements of livestock were mainly caused by the following factors;

a) *Slow identification and registration of livestock at the LGAs*

Despite the requirement of the National Livestock Development Policy of 2006 to identify and register the livestock, the exercise has been lagging behind. The pace is too slow. This is exemplified by the fact that only 17,558,108 animals were branded, identified and registered by the end of March 2019.

The audit further established that animal registration was documented in form of hard copies which are difficult to update and that only 4,660 animals were registered in the data base. This is further exemplified by the data obtained from Musoma DC which showed that only 59,877 animals out of 927,441 were registered. The scenario in Musoma is indicative of the slow national trends for animal registration in the country.

This low rate of animal registration poses difficulties in tracing the whereabouts of animals, identifying disease sources and controlling animal movements.

b) *Ineffective awareness creation to the livestock keepers on the control and prevention of livestock diseases*

PO-RALG officials revealed that, Ministry of Livestock and Fisheries Officials and those from PO-RALG did not effectively create

awareness to the livestock keepers on the spread of livestock diseases such as Foot and Mouths Diseases as well as the requirements for inspections and obtaining permits before moving the livestock from one area to another.

The main reason cited for ineffective creation of awareness to livestock herders regarding the prevention and control of livestock diseases is due to the livestock keepers staying far away in the forests with their livestock. It has become very hard to reach them. There is also no close communication between the livestock keepers and livestock field officers.

In addition, MoLF and PO-RALG do not have programmes designed to engage and effectively create awareness to livestock keepers about disease events and their roles in disease investigation and mitigation. Poor knowledge by livestock keepers characterizes the animal industry in the country and this is the main reason for the underlying sustenance of adoption of traditional husbandry practices.

3.6 Poor Coordination between MoLF, PO-RALG and Local Government Authorities

PO-RALG's Strategic Plan for the period 2017-2021 provided for improvement in the information flow and communication between Regional Administration, Local Government Authorities on PO-RALG's business through provision of linkage between Central and Sectors Ministries, Development Partners and Non-State Actors (NSAs) to RSs, LGAs and other stakeholders and promotion and monitoring of implementation of Decentralization by Devolution in Central and Sector Ministries

However, the audit team noted that there is a poor coordination on the prevention and control of livestock diseases in the country. This was enunciated by the following factors explained below;

3.6.1 Poor information sharing between MoLF, PO-RALG and other stakeholders

The audit team noted that flow of information on livestock diseases from LGA to the Regional Veterinary Officer has been poor due to unclear reporting chain. For instance, the Local Government Veterinary Officers were supposed to submit reports on livestock

diseases to ZVC and RVO but most of them submitted to ZVC and none of the reports were submitted to RVO.

It has been revealed that not submitting livestock diseases reports to RVO undermines the requirement of OIE standards in reference to the veterinary governance structure and the requirement for professional answerability. This is also not in line with the requirements of the inter-ministerial MoU that clearly spells out that LAGs are supposed to submit reports to RS, who compiles the regional data and carry out preliminary analysis prior to submitting to MoLF and PO-RALG. It is worth noting that this MoU was intended to set the platform for operationalisation of the decentralisation by devolution framework.

This poses a challenge in decision making at the regional level since RVO who is the main coordinator of veterinary issues in the regional set up is not well informed about critical development in LGAs that falls within his/her area of jurisdiction. It therefore undermines the set international standards as prescribed by OIE and implied in the inter-ministerial MoU.

The main factors contributing to non-submission of reports to RVO include:

a) Unclear reporting chains of command

District Veterinary Officers were instructed to share the reports with ZVC on livestock disease information in their area of jurisdiction and some of them thought that they do not need to share the same with the RVO. In the visited LGAs, the audit team observed that RVOs never made follow up on the livestock disease reports thinking that disease control is not their responsibility.

b) Ineffective sanctions

The audit team noted that there is no sanction imposed to LGAs who are not submitting reports to RVO. Furthermore, there was no proof of reminder letters being sent due to failure of submitting reports on livestock diseases in the 5 visited LGAs.

Also, the officials from the 5 visited LGAs revealed that, information has been shared but only on demand and some of the LGAs have not reported anything at all to neither ZVC nor RS for a period of three years. This could lead to questionable statistical accuracy on the status of livestock diseases in the country. This is because the

statistics issued at the national level are not originating from the lower levels of the government administration. This is due to the fact that other LGAs or regions do not know about their current statistics of livestock and concerned diseases.

Also, the interviewed MoLF-DVS officials revealed that, previously TVLA as a semi-autonomy organ was not submitting reports on livestock diseases to the Ministry. However, for the past six months TVLA started to submit the reports. Furthermore, MoLF's officials revealed that, although TMDA issues licenses to the livestock drugs and vaccine importers, it has not been sharing the relevant information with TVLA.

The audit team also noted that inadequate sharing of information was caused by lack of infrastructure such as a reliable platform to support information flow from one entity or stakeholders to another. The officials further revealed that, inadequate information sharing was also due to misunderstanding of the duties and responsibilities of key players after decentralization by devolution of the activities regarding prevention and control of livestock diseases in the country.

DVOs believe that they are supposed to share livestock diseases information with ZVC only while in reality RVOs are supposed to be informed about the status of livestock diseases in their area of jurisdiction. This to a large extent hampers the ability of different government entities to share information among them.

For instance currently, there is still some misunderstandings on who is responsible for the provision of necessary kits to the DVO, i.e. is it the mandate of MoLF or the LGAs for the veterinary officers to perform their duties effectively.

3.6.2 Uncoordinated implementation of the collective plans between MoLF, PO-RALG and LGAs

Interviewees from PO-RALG's Livestock Section revealed that, although PO-RALG and LGAs have been involved by the Ministry of Livestock and Fisheries in the preparations of plans for prevention and control of livestock diseases, it was noted that during the implementation of those plans they were not fully participating. For instance, during the training of EMA-i the DVO and RVO were

involved, but officials from PO-RALG were neither informed nor involved, despite the fact that PO-RALG is the Ministry responsible for coordinating all the activities implemented at regional levels.

Likewise, although the Ministry of Livestock and Fisheries was responsible for collecting all the information on the vaccination through LGAs, however no reports on vaccination have been issued to PO-RALG for future planning.

3.7 Inefficient Monitoring and Evaluation of Control of Livestock Diseases

According to the Animal Disease Act, MoLF is required to monitor and evaluate sector performance and enforce legal and regulatory framework for the control of animal, pests and diseases.

According to the Action Plan of the Ministry of Livestock and Fisheries its Department of Policy and Planning is required to monitor and evaluate performance of executive agencies and Institutions under the Ministry

The audit noted that MoLF has developed plans for Monitoring and Evaluating the mechanisms for prevention and control of livestock diseases. However, review of the annual plans from the Directorate of Veterinary Services revealed that there was no execution of monitoring for the financial years 2016 and 2017 since no disbursement of funds was done in these financial years.

There was also inefficient monitoring of activities on the prevention and control of livestock diseases in the year 2018 since the Ministry of Livestock and Fisheries plans did not cover monitoring of important aspects on prevention and control of livestock diseases. This included provisions of vaccines and health services to livestock keepers at lower levels mainly LGA, ward and village levels.

Furthermore, the audit noted that, Ministry of Livestock and Fisheries does not have Key Performance Indicators for measuring the performance of activities related to the prevention and control of livestock diseases as implemented by the Directorate of Veterinary Services. Interviews with the officials from the Directorate of Policy and Planning claimed that they have key

performance indicators which were not comprehensive and they were expecting to modify them from time to time.

Further review of action plans and progress reports from the Department of Policy and Planning revealed that monitoring aspect for 2016-2019 performance did not cover the activities under the Directorate of Veterinary Services, despite their target of monitoring and evaluating the performance of Executive Agencies and Institutions under the Ministry. Nevertheless, for the year 2018 only TVLA and LITA were covered and for years 2016 and 2017 only LITA was included in their plans.

MoLF officials revealed that, inadequate monitoring and evaluation of the prevention and control of livestock diseases was caused by shortage of funds. Table 3.17 shows the extent of disbursement of funds for M&E for the past three years.

Table 3. 17: Disbursement of Fund on Monitoring Activities of Agencies

Years	Budgeted fund (mil TZS)	Disbursed fund (mil TZS)	Percentage Disbursement (%)
2016/2017	5.560	0	0
2017/2018	11	0	0
2018/2019	30.9	15	51.4

Source: MoLF action Plan (2016-2018)

From Table 3.17 it is clearly seen that for the period from 2016 to 2018, the Department of Policy and Planning did not receive funds for M&E activities while for the year 2018 only 51% of the budget was disbursed. This amount enabled them to monitor only executive agencies and the aspect of disease control was not covered since they fall under the Directorate of Veterinary Services.

Lack of M&E to assess the performance of the efforts and mechanisms for livestock diseases prevention and control renders the Ministry unable to know the status of the deployed efforts and mechanisms to verify whether the prevention may be ineffective. For instance, the implementation of the dipping strategy was not evaluated and hence MoLF did not know whether the strategy was working effectively or not.

Furthermore, the audit noted that Regional Veterinary Officers did not monitor the implementation of the activities on the prevention and control of livestock diseases. They focused on livestock

productivity while livestock diseases caused accelerated decline in livestock productivity.

The audit team also noted that there was no communication of the results of M &E with relevant stakeholders such as TVLA and DVS for informed decision making. This anomaly impaired their ability to make further improvements in their operations.

CHAPTER FOUR

AUDIT CONCLUSION

4.1 Introduction

This chapter draws the audit conclusion. The basis for drawing the audit conclusions is the overall and specific objectives of the audit as presented in chapter one of this report.

4.2 General Conclusion

Based on the findings and as assessed by overall objective of the audit; it is concluded that the Ministry of Livestock and Fisheries and President's Office - Regional Administration and Local Government have not effectively prevented and controlled livestock diseases for enhancing livestock production, productivity and safe utilization of animal products.

This was evidenced by increased occurrence of livestock diseases as seen in CCPP which increased by 804% and LSD by 327%. For the other sampled diseases such as CBPP and FMD the rate of livestock diseases have been decreasing in a very low pace for the past three years.

The audit acknowledges government efforts on the provision of acaricides for prevention and control of livestock diseases caused by tse-tse flies and tick-borne diseases. However, more interventions are needed to further improve the prevention and control of livestock diseases.

This was caused by inadequate mechanisms for prevention and control of livestock diseases and insufficient support extended to LGAs by MoLF and PO-RALG on the prevention and control of livestock diseases

4.3 Specific Audit Conclusions

4.3.1 Inadequate Surveillance System

MoLF has inadequate surveillance system for identifying and reporting disease outbreaks. The current surveillance and reporting is to a large extent paper based (95%) which takes long time to prepare and dispatch it to the next administrative level, instead of being electronically (web based). This has led to delayed reporting of livestock diseases.

Inadequate surveillance was enunciated by delays in reporting of livestock diseases accelerated by poor communication between the livestock keepers and the Livestock Field Officers, lack of motivation and working tools such as laptops, desktop and internet facilities at the grass root level, absence of web-based disease surveillance and reporting at District, Village and Wards levels, absence of technical personnel in some areas of District Council, little knowledge of reporting systems for veterinary paraprofessional due to inadequate capacity in disease surveillance and reporting.

Further, inadequate surveillance was illustrated by ineffective laboratory confirmation systems caused by insufficient number of Tanzania Veterinary Laboratory Agency stations. Tanzania Veterinary Laboratory Agency has a total of 11 stations in 11 zones, but only 8 stations are linked to Zonal Veterinary Centers. There is also insufficient capacity within the Tanzania Veterinary Laboratory Agency stations in terms of personnel and equipment.

Currently, the total number of technical staff is 102 while the required number is 210. Also, 6 out of 9 stations performed less than 50% of diagnosis while the performance of the Central Veterinary laboratory was 89%.

On the other hand, lack of important equipment for sample collection at the LGAs (sample collection kits, surgical kits and medical kits) caused ineffectiveness of the laboratory confirmation systems which is a key to surveillance.

4.3.2 Lack of access to quality and timely veterinary services and inputs

The Ministry of Livestock and Fisheries did not ensure that livestock keepers have access to animal health services caused by lack of veterinary health service centres in LGAs as well as insufficient veterinary professionals and paraprofessionals. In the entire country, 70 out of 185 LGAs do not have veterinary doctors (37%). Ward livestock officers are below 30% of requirement. In addition, the inputs suppliers are located at long distances from the livestock keepers.

This was mainly caused by restructuring of the veterinary service systems and decentralization which led to several challenges such as unavailability of health service centers, late delivery of inputs and weak coordination of veterinary services from the District Veterinary Officers up to the livestock keepers. This has resulted to inappropriate use of veterinary drugs hence widespread of antimicrobial resistance.

4.3.3 The existing preventive measures for livestock diseases are not functioning as expected

The Ministry of Livestock and Fisheries has not ensured smooth functioning of the preventive measures for the livestock diseases. Coverage of vaccines in the country is below 10% which is contrary to the set standard by the World Organization for Animal Health of vaccinating 80% of the available livestock in the entire country.

The audit noted that the percentage coverage of vaccines as one of the very key preventive measures for the prevention of livestock diseases such as ECF, CBPP and anthrax is very low in the country.

This anomaly was caused by unorganized and uncoordinated vaccination programs as well as untimely availability of vaccines at the LGAs; low response of the livestock keepers to the vaccination programs was mainly caused by inadequate awareness and loss of trust on the quality and standard of the imported vaccines; phasing-out of the government animal health facilities which led to inefficient distribution and storage of the vaccines at the LGA level; and lack of cold systems at the LGAs that affect the quality of the vaccines.

The Ministry of Livestock and Fisheries did not conduct proper inspections at points of entry. The inspectors focused on inspecting the animals while leaving the livestock products which also may lead to spread of livestock diseases. Inspectors at the visited Point of Entries had no equipment for testing the health status of the livestock or the standard of the livestock products.

Furthermore, MoLF did not ensure availability of adequate infrastructures and facilities to aid inspection. Likewise, the allocation of inspectors did not consider the demand and workload of the particular PoE.

MoLF through LGAs inadequately implemented the dipping strategy due to unmaintained dipping infrastructures. In the visited LGAs out of 90 available dips, only 39 are operational while 34 dips are in bad condition but slightly operational whilst 17 dips are damaged and not operational at all.

The Ministry of Livestock and Fisheries has deployed insufficient efforts in controlling movements of livestock despite the huge movement of the livestock from one area to another mainly in search of pasture and water.

The Ministry of Livestock and Fisheries was found to have poor follow-ups of the registered livestock and livestock products as well as in updating the register on yearly basis. This poses difficulties in having the updated information of the number and whereabouts of the registered livestock.

4.3.4 Inadequate coordination between MoLF, PO-RALG and LGAs

MoLF and PO-RALG have not ensured proper information sharing between them and other stakeholders which pose risk in attaining a collective goal of preventing and controlling livestock diseases. This was because MoLF did not clearly define the reporting chain and flow of information on livestock diseases from LGA to the Regional Veterinary Officers.

For instance, the Local Government Veterinary Officers are supposed to submit reports on livestock diseases to ZVC and RVO. However, most of them submitted reports to ZVC only and not RVO. This poses a challenge in decision making at the regional level. Information is being shared only on a demand basis. Some of the

LGAs have never reported anything to neither ZVC nor RS for a period of three years. This led to uncertainty on the accuracy of the statistics on the status of livestock diseases in the country.

Moreover, MoLF did not ensure adequate information sharing between TVLA and Tanzania Medicine and Medical Devices Authority (TMDA) on licenses issued to the livestock drugs and vaccine importers. Inadequate information sharing was also due to misunderstanding of the duties and responsibilities of key players after decentralization by devolution in the prevention and control of livestock diseases.

4.3.5 Lack of proper Monitoring and Evaluation mechanisms for the prevention and controlling of livestock

The Ministry of Livestock and Fisheries has developed plans for monitoring but the plans do not cover important aspects regarding the prevention and control of livestock diseases such as the provision of vaccines and availability of health centres at LGA levels, which are key aspects for the prevention and control of livestock diseases.

Furthermore, MoLF did not develop Key Performance Indicators for measuring the performance of efforts at all levels of operations for the prevention and control of livestock diseases as implemented by the Directorate of Veterinary Services and other actors. This was caused by scarce disbursement of funds specifically for monitoring and evaluation of activities on livestock diseases.

For instance, MoLF's Department of Policy and Planning did not receive funds for M&E activities from the financial year 2016/17 to 2017/18. In 2018/19 they received only 51% of the budget, which was used to monitor the executive agencies under MoLF.

Regional Veterinary Officers did not monitor the implementation of the activities for the prevention and control of livestock diseases instead they focused on the livestock productivity. This impaired the ability to make proper planning for increasing livestock productivity which is affected by livestock diseases.

CHAPTER FIVE

AUDIT RECOMMENDATIONS

5.1 Introduction

This chapter contains recommendations to the Ministry of Livestock and Fisheries and President's Office-Regional Administration and Local Government Authority with regards to the prevention and control of livestock diseases in the country.

Weaknesses were noted on six main areas covering the current status of the livestock diseases in the country, surveillance system; access of quality and timely veterinary services and inputs to livestock keepers; functionality of the existing preventive measures for livestock diseases; coordination among the key actors; and monitoring and evaluation of the activities for prevention and control of livestock diseases.

We are of the view that, these recommendations need to be implemented to the fullest so as to improve government performance on the prevention and control the livestock diseases in the country. The National Audit Office believes that based on principles of 3Es of Economy, Efficiency and Effectiveness, these recommendations, if fully implemented so as to improve the productivity of the livestock sector.

5.2 Audit Recommendations to the audited entities

National Audit Office acknowledges the Government efforts through MoLF and PO-RALG towards improving health of the livestock in the country. However, MoLF needs to come up with more interventions to improve the efforts for prevention and control of livestock diseases, to ensure development and productivity of the livestock sector and enable it to have a significant contribution to the national GDP.

In addition, we provide the following specific audit recommendations:

5.2.1 Recommendations to the Ministry of Livestock and Fisheries

The Ministry of Livestock and Fisheries should:

- i) Establish mechanisms for the quality of imported vaccines in order to prevent introduction of new strains of the viruses and diseases that will be difficult to control;
- ii) Review surveillance strategy and ensure provision of effective laboratory confirmation system to livestock keepers and early identification and reporting of cases;
- iii) Strengthen the capacity of TVLA to produce vaccines in order to reduce importation of vaccines which may be incompatible with Tanzanian environment;
- iv) Strengthen inspection of livestock and livestock products at Point of Entries (both official and unofficial);
- v) Improve coordination, flow of information and communication between Ministries, Regional Secretariats and LGAs by strengthening infrastructure for information sharing among them; and
- vi) Develop Key Performance Indicators for measuring the performance of the Directorate of Veterinary Services in the prevention and control of livestock diseases.

5.2.2 Recommendations to the President's Office - Regional Administration and Local Government

The President's Office - Regional Administration and Local Government should:

- i) Ensure LGAs strengthen their efforts for prevention and control of livestock diseases;
- ii) Ensure timely access to quality services and inputs to livestock keepers for disease control;
- iii) Create awareness to livestock keepers on mechanisms for prevention and control of livestock diseases;

- iv) Establish a mechanism which will ensure that all LGAs prioritize development of needed infrastructures and availability of the required vaccination for prevention and control of livestock disease;
- v) Support control of movement of livestock from one place to another in order to prevent spread of livestock diseases;
- vi) Facilitate RSs to monitor and make follow up on the performance of LGAs in prevention and control of livestock diseases; and
- vii) Improve coordination, flow of information and communication between Ministries, Regional Secretariats and LGAs by strengthening infrastructure for information sharing among them.

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APPENDICES

Appendix 1: Responses from the Audited Entity

This part provides details on the general comment and the list of responses on the planned actions and implementation timelines based on the issued audit recommendations.

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

A: General Comment

The Ministry management concurs with the findings and recommendations raised by the Controller Auditor General (CAG) on performance of the Directorate of Veterinary Services on prevention and control of animal diseases in the country. It is in that understanding, the Ministry management promises to work on the remedy for each finding and each recommendation. Thus the Ministry submits the corrective action plans on matters related to the audit so as to improve performance of the prevention and control of livestock diseases in the country.

The Ministry management provides guidance and adequate support to the Directorate of Veterinary Services so as it can effectively perform the task of diseases prevention and control activities in the country in order to reduce or eliminates the problem especially the priority diseases of major economic importance. Prevention and control of priority diseases will greatly benefit the livestock industry by producing healthy livestock and good quality livestock products that will access national and international markets that are often hindered by rampant diseases.

The timely corrective measures to be taken will meet the requirements of World Animal Health Organisation (OIE), World Trade Organisation (WTO), Livestock Policy and National Livestock Master Plan for betterment of the animal health sector in Tanzania.

B: Responses on audit recommendations issued to MoLF

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implementation Timeline(s)
i	Establish mechanisms for the quality of imported vaccines in order to prevent	The Ministry concurs with the CAG recommendation. However, this function is mainly	• To Strengthen Tanzania Vaccine Institute (TVI) to produce all vaccines in the country (starting	2020/2021 to 2021/2022

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implementation Timeline(s)
	introduction of new strains of the viruses and diseases that will be difficult to control	performed by Tanzania Medicine and Medical Devices Authority (TMDA) as competent regulatory authority for medical and veterinary medicines and medical devices. Before registration of a new brand of vaccine TMDA performs some trials. The Ministry ensures only safe and quality veterinary inputs are registered to be sold in Tanzania	<ul style="list-style-type: none"> with vaccines for 13 priority diseases) • The Ministry has prepared Vaccine Bulk Procurement System so as to ensure easiness availability of quality vaccine at an affordable prices by the farmers • To promote investment environment for Private Investors to produce regulated vaccines within our country as with the case of Hester Biosciences Africa Limited 	
ii	Review surveillance strategy and ensure provision of effective laboratory confirmation system to livestock keepers and early identification and reporting of cases	The Ministry agrees with auditor's recommendations. The Ministry has been receiving inadequate funds that limits the exercise of surveillance and laboratory confirmation of cases in the country	<ul style="list-style-type: none"> • New Surveillance Strategy was prepared in 2019 • Currently, the Ministry is formulating regulations to govern Legal Epidemiological structure, • Utilizing e-GAV to incorporate Event Mobile Application Information (EMA-i) to enhance early identification, confirmation and reporting. • To establish an independent Epidemiological Unit within the Ministry structure, 	2020 to 2022

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implementation Timeline(s)
			<ul style="list-style-type: none"> • To scale up LGAs in using EMAi from current 81 LGAs to all 185 LGAs in the country, • To improve Laboratory Confirmation (inter-operability between EMA-i and Laboratory Information Management System-LIMS). 	
iii	Strengthen the capacity of TVLA to produce vaccines in order to reduce importation of vaccines which may be incompatible with Tanzanian environment	<p>The Ministry agrees with auditor's recommendations</p> <p>The Ministry has been receiving inadequate funds, hence slow pace to meet demand of production of the vaccines in the country</p> <p>- The Ministry has been capacitating TVLA to increase its vaccine production capacity so as to produce vaccines required for all the 13 priority diseases</p>	Establish livestock financing to have adequate budget line on Midterm Expenditure Framework (MTEF) for vaccines productions at Tanzania Vaccine Institute (TVI) under TVLA	2020/2021 to 2021/2022
iv	Strengthen inspection of livestock and livestock products at Point of Entries (both official and unofficial)	<p>The Ministry agrees with auditor's recommendations</p> <p>The ministry has 45 officially established border posts with 49 staff. At least 180 staff are required at all</p>	<ul style="list-style-type: none"> • To sustain patrolling via 'Nzagamba operations' strategy to reach un-official borders • The Ministry proposes to employ at least 4 staff (minimally) 	Year 2021, 2022 and 2023

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implement ation Timeline(s)
		established border posts. Hence this signifies understaffing leading to a slow pace to meet demand of needed inspection at official and non-official border posts	for each border post in order to have 24 hour inspection coverage and staff rotation. This is elucidated in MLDF 2009 SOP for zoo-sanitary inspection, and TRA requirements	
v	Improve coordination, flow of information and communication between Ministries, Regional Secretariats and LGAs by strengthening infrastructure for information sharing among them	The Ministry agrees with auditor's recommendations .	<ul style="list-style-type: none"> • Currently, the two Ministries have formed a joint task force and jointly discuss and resolve on stumbling working blocks • MLF is reviewing Veterinary Act (319) AND Animal Disease Act (156) to reinforce professional answerability • The Minister has recently appointed RVOs and DVOs in LGAs to improve and strengthen communication and working interactions between the two Ministries 	2020/2021
vi	Develop Key Performance Indicators for measuring the performance of the Directorate of Veterinary Services in the prevention and	The Ministry agrees with auditor's recommendations .	The Ministry has developed the following performance indicators: (i) Disease prevalence in the Country,	2020/2021

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implementation Timeline(s)
	control of livestock diseases		(ii) Number of vaccination campaigns, (iii) Number of operational dips in the country, (iv) Number of animals dipped per month, (v) Number of Animals Moved with Health Permits per month, (vi) Number of approved slaughter/abattoirs establishments, (vii) Number of Animals slaughtered in Registered slaughter facilities, (viii) Number of Veterinary Centres and Clinics, (ix) Number of Identified and registered animals, (x) Number of Veterinary Surgeon, Paraprofessionals and Paraprofessional Assistants directly working in animal health sector (Public and Private), and	

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implementation Timeline(s)
			(xi) Number of Animal Barriers along main stock routes.	
vii	Ensure timely access to quality services and inputs to livestock keepers for disease control	The Ministry accepts the recommendation and is ready to reinforce the workforce of the Veterinary Council of Tanzania (VCT), which is the Ministry Regulatory Unit responsible for spearheading quality veterinary knowledge, quality veterinary services and veterinary inputs in the country	<p>(i) The Ministry is lobbying for internship to be compulsory to all grandaunts of veterinary profession,</p> <p>(ii) Through the VCT, there evaluation of competence for veterinary grandaunts from outside Tanzanian Universities,</p> <p>(iii) The VCT performs registration of Veterinary surgeons, Paraprofessionals and Paraprofessional Assistants before they are allowed to practice in the field and are monitored on their daily performance on provision of veterinary services,</p> <p>(iv) There are annual subscription for retention of registration and this is accompanied by Continuing Professional Development</p>	2020, 2021 and 2022

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implementation Timeline(s)
			<p>(CPD) (v) To ensure availability of quality vaccines; the Ministry is currently formulating Vaccine Bulk Procurement System (VBPS) and regulated prices,</p> <p>(v) In order to have, timely available veterinary inputs such as medicines, acaricides and vaccines; the Ministry sensitizes private sector to invest in manufacturing of the veterinary inputs in Tanzania and discouraging importation of the same inputs,</p> <p>(vi) The DVS, RVCT, TPRI and TMDA are institutions that work for attesting for veterinary inputs quality before they can be used in livestock,</p> <p>(vii) RVCT and TMDA perform regular veterinary input suppliers inspection</p> <p>(viii) To complement the</p>	

SN	Recommendation	Comments from the Ministry of Livestock and Fisheries	Planned Action(s)	Implementation Timeline(s)
			Private Veterinary Clinics which are mostly in cities, the Ministry is re-establishing the Veterinary Clinics in all the Local Government Authorities in Tanzania so as to timely provide quality veterinary services and inputs to livestock keepers for disease control.	

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

A: General Comment

Close collaboration with the Ministry of Livestock & Fisheries (MoLF), PO -RALG will be able to strengthen the **linkage** between Sector Ministries by **coordinating** effectively MLF intended Developmental activities (**disease control included**) in Regional Secretariat (RS) and Local Government Authorities (LGAs).

B: Responses on audit recommendations issued to PO-RALG

S N	Recommendation	Comments from PO-RALG	Planned Action(s)	Implementation Timeline(s)
i	Ensure LGAs strengthen their efforts for prevention and control of livestock diseases	PO-RALG will continue to provide support through technical guidance, dips construction, strengthening Ward Committee managing dips, distribution of acaricides in respective LGAS	Collaborate with MLF to provide training, rehabilitation of dips, guide to Ward livestock management committee	April to June 2020
ii	Ensure timely access to quality services and inputs to livestock keepers for disease control	<ul style="list-style-type: none"> • PO-RALG will guide distribution of acaricides in respective LGAS • Supervision on proper use of acaricides & timely vaccination 	Collaborate with MLF & RS to support timely and proper use of acaricides	Start from July 21
ii	Create awareness to livestock keepers on	<ul style="list-style-type: none"> • Conduct training and workshop to 	collaborate with MLF & RS	July 2020

S N	Recommendation	Comments from PO-RALG	Planned Action(s)	Implementation Timeline(s)
	mechanisms for prevention and control of livestock diseases	livestock extension officers & veterinary officers <ul style="list-style-type: none"> Awareness meeting to the livestock keepers 		
iv	Establish a mechanism which will ensure that all LGAs prioritize development of needed infrastructures and availability of the required vaccination for prevention and control of livestock disease	Facilitate financial resources for infrastructure (Collaborate with MLF for infrastructure development)	PO-RALG will guide RS & LGA to set aside budget for infrastructure development	April 2020
v	Support control of movement of livestock from one place to another in order to prevent spread of livestock diseases	PO-RALG will support DVO & VO facility and administrative services to administer movement of livestock from one place to another	PO-RALG will coordinate and facilitate budget for related activities	July 2020
vi	Facilitate RSs to monitor and make follow up on the performance of LGAs in prevention and control of livestock diseases	Support RS with respective budget for monitoring and follow up on LGAs performance	PO-RALG facilitate budget RS	June 2020 -2021
vii	Improve coordination, flow of information and communication	PORALG will establish co-ordination & communication arrangement	<ul style="list-style-type: none"> Conduct regular sector meeting develop 	April 2020

S N	Recommendatio n	Comments from PO-RALG	Planned Action(s)	Implementatio n Timeline(s)
	between Ministries, Regional Secretariats and LGAs by strengthening infrastructure for information sharing among them	between MLF & LGA' s	communicatio n strategies <ul style="list-style-type: none"> • Conduct joint meetings and supervision 	

Appendix 2: Audit Questions and Sub-Questions

This part provides details for the questions which were involved during the Audit.

Audit Question 1	<i>To what extent have the Ministries (MoLF and PO-RALG) prevented and controlled livestock diseases in the country?</i>
Sub-question 1.1	<i>What is the status of animal diseases in the country?</i>
Sub-question 1.2	<i>What efforts have been employed by MoLF and PO-RALG in preventing and controlling livestock diseases to ensure productivity and safe utilization of animal products for past three years?</i>
Audit Question 2	<i>Does MoLF conduct adequate surveillance to timely identify and report on diseases outbreaks in the country?</i>
Sub-question 2.1	<i>Is there adequate surveillance strategy in the country</i>
Sub-question 2.2	<i>Are animal diseases timely reported?</i>
Sub-question 2.3	<i>Is there effective laboratory confirmation system?</i>
Sub-question 2.4	<i>Is a feedback on the reported cases effectively given?</i>
Audit Question 3	<i>Do livestock keepers have adequate access to animal health services and inputs?</i>
Sub-question 3.1	<i>Is there provision of animal health service centres in the LGA?</i>
Sub-question 3.2	<i>Is there adequate access of timely and quality services on the control of livestock diseases?</i>
Audit Question 4	<i>Are existing preventive measures for livestock diseases functioning as expected?</i>
Sub-question 4.1	<i>Is there adequate coverage of the vaccination in the entire country?</i>
Sub-question 4.2	<i>Is there adequate implementation of the planned inspection</i>
Sub-question 4.3	<i>Is the dipping strategy adequately implemented</i>
Sub-question 4.4	<i>Are the mechanisms for controlling movement of animals adequately enforced?</i>
Audit Question 5	<i>Do MoLF and PO-RALG effectively coordinate efforts for preventing and controlling livestock diseases in the country?</i>
Sub-question 5.1	<i>Is there adequate sharing of information between private sector, PO-RALG and MoLF on prevention and control of livestock diseases?</i>
Sub-question 5.2	<i>Is there adequate implementation of collective plans between private sector and MoLF on prevention and control of livestock diseases?</i>
Audit Question 6	<i>Do MoLF and PO-RALG monitor and evaluate existing mechanisms for controlling livestock diseases to ensure that its intended targets are achieved?</i>
Sub-question 6.1	<i>Are there plans to ensure effective monitoring and evaluation on mechanisms for preventing and controlling livestock diseases?</i>

Sub-question 6.2	<i>Do the Ministries effectively develop and make use of the key performance indicators for monitoring and evaluating the existing mechanisms for preventing and controlling livestock diseases</i>
Sub-question 6.3	<i>Are the results for M&E on prevention and control of livestock disease effectively communicated to all relevant stakeholders for informed decision making?</i>

Appendix 3: Selected Regions that were covered during the audit

This part provides details on how sampling was done based on the number of livestock, reported diseases and furthermore status of TVLA and Point of Entry was also considered.

Region	Ranks based Number of livestock	Ranks based on reported diseases	Status of TVLA	Status of Port	Chosen region
Arusha	H1	M5	1	1	
Manyara	H2	H8	0	0	Manyara
Mwanza	H3	M4	1	1	
Tabora	H4	M4	1	0	
Simiyu	H5	L3	0	0	
Mara	H6	H7	0	0	Mara
Singida	H7	L3	0	0	
Dodoma	H8	M4	1	0	
Shinyanga	H9	M4	0	0	
Geita	H10	L3	0	0	
Mbeya	M1	L3	0	1	
Tanga	M2	M5	0	1	Tanga
Rukwa	M3	M5	1	1	Rukwa
Morogoro	M4	M4	0	0	
Kilimanjaro	M5	L3	0	0	
Pwani	M6	L3	0	1	
Kagera	M7	L3	0	1	
Kigoma	L8	M4	0	1	
Iringa	L7	M6	1	0	
Katavi	L6	M5	0	0	
Lindi	L5	L3	0	0	Lindi
Ruvuma	L4	M4	0	0	
Njombe	L3	M4	0	0	
Mtwara	L2	M4	1	1	
Dar Es Salaam	L1	L3	1	1	

Source : Epidemiology Reports from MoLF, 2019

Key:

1 stands for presence

0 stands for absence

Appendix 4: LGAs that were covered during the audit

This part provides details on how LGAs were selected based on the number of livestock.

Region	LGAs	Number of Livestock	Chosen LGAs
Manyara	Babati Mji	88,527	Mbulu DC
	Hanang DC	752,206	
	Mbulu TC	508,122	
	Mbulu DC	586,207	
	Simanjiro DC	659,945	
	Kiteto DC	642,442	
	Babati DC	637,743	
Mara	Musoma TC	113,082	Musoma DC
	Bunda DC & TC	581,724	
	Butiama DC	419,311	
	Musoma DC	927,441	
	Serengeti DC	633,387	
	Rorya DC	558,734	
	Tarime DC & TC	594,892	
Lindi	Kilwa DC	76,035	Kilwa DC
	Lindi DC	46,118	
	Lindi MC	17,593	
	Liwale DC	33,139	
	Nachingwea DC	40,651	
	Ruangwa DC	30,311	
Rukwa	Kalambo DC	231,831	Sumbawanga DC
	Sumbawanga DC	504,600	
	Sumbawanga MC	183,948	
	Nkasi DC	501,071	
Tanga	Tanga CC	228,923	Handeni
	Korogwe DC	301,416	
	Korogwe TC	49,568	
	Handeni TC	242,303	
	Muheza DC	412,276	
	Handeni DC	844,875	
	Pangani DC	154,480	
	Mkinga DC	186,723	
	Kilindi DC	365,630	
	Lushoto DC	779,246	

Source: Auditors' Analysis (2019)

Appendix 5: Reviewed Documents

This part provides details on the documents that were reviewed and the reasons for review.

Category of the documents	Documents	Reasons for the review
Ministry of Livestock and Fisheries	<ul style="list-style-type: none"> Strategies and Annual plans Surveillance reports Budget implementation reports Quarterly and Annual progress reports 	<p>To obtain information on:</p> <ul style="list-style-type: none"> efforts made by the ministry to control livestock diseases in the country; Efficient functioning of the surveillance system; Effectiveness of preventive measures for livestock diseases; Accessibility of animal health services and inputs; Quality of coordination done by the Ministry; and Extent of monitoring and evaluation of the control of livestock diseases.
Tanzania Veterinary Laboratory Agency	<ul style="list-style-type: none"> Quarterly and Annual progress reports Strategic and annual plans 	Assess the performance of Tanzania Veterinary Laboratory Agency in controlling livestock diseases in the country
Zonal Veterinary Centre	<ul style="list-style-type: none"> Quarterly and progressive reports Surveillance reports Budget implementation reports 	Assess the implementation of surveillance system, accessibility of animal health services and inputs, preventive measure, monitoring and evaluation measures on controlling livestock diseases in the country
President's Office - Regional Administration and Local Government (PO-RALG)	<ul style="list-style-type: none"> Budget implementation reports Quarterly and Annual progress reports 	Assess implementation of available strategies by the PO-RALG in ensuring smooth coordination between the two ministries.(ie PO-RALG and MoLF)
Regional Secretariats(RS) and Local Government Authority (LGAs)	<ul style="list-style-type: none"> Quarterly reports of Livestock Department Budgets set aside for the prevention and control of livestock diseases (2013/14 - 2018/19) Performance reports on livestock sector Minutes of various meetings to discuss issues regarding prevention and control of livestock diseases District Annual Plans for livestock development 	<p>Examine the involvement of MoLF and LGAs in controlling livestock diseases.</p> <p>To obtain performance information on the:</p> <ul style="list-style-type: none"> surveillance system; status of the control in livestock diseases; and Accessibility of animal health services and inputs.

Source: Auditors' Analysis of the available documents (2019)

Appendix 6: Persons Interviewed and reasons for the Interviews

This part provides details on the interview persons and why they were interviewed.

Public Entity	Interviewed Persons	Reason(s) for the interview
Ministry of Livestock and Fisheries	a) Director: Veterinary Services b) 6 Principal Veterinary Officers in DVS	To obtain performance information on: <ul style="list-style-type: none"> • efforts made by the Ministry to control livestock diseases in the country • efficient functioning of the surveillance system • effectiveness of preventive measures for livestock diseases • accessibility of animal health services and inputs • quality of coordination done by the ministry • extent of monitoring and evaluation of the control of livestock diseases
	Director Tanzania Veterinary Laboratory Agency	Assess the performance of Tanzania Veterinary Laboratory Agency in controlling livestock diseases in the country
	In-charges of Sumbawanga Zonal Veterinary Offices and Inspectors at the PoE.	Assess the level of implementation of surveillance system, accessibility of animal health services and inputs, preventive measure and monitoring and evaluation measures on controlling livestock diseases in the country
President's Office - Regional Administration and Local Government (PO-RALG)	Principal Livestock Officers - Sector Coordination Unit	Assess the level of implementation of available strategies by the PO-RALG in ensuring smooth coordination between the two Ministries
Regional Secretariats	5 Senior Livestock Officer	Examine the involvement of MoLF and LGAs in controlling livestock diseases.
Local Government Authorities	5 District Veterinary Officers	To obtain performance information on the: <ul style="list-style-type: none"> • surveillance system; • status of the control in livestock diseases; and • accessibility of animal health services and inputs.
	21 Farmers	

Source: Auditors' Analysis (2019)

Appendix 7: Items Observed in the Visited LGAs

This part provides details on the items observed in the visited LGAs

LGAs	ITEMS	Reason(s) for the observation
Kilwa DC	1 dip located at Matandu Village	To obtain information on the implementation of the dip strategy, assess the quality of the dips.
	Fridge and cool box	To assess the cold chain in the Local Government Authority.
	Surgical kits, sample collection kits and Medical kits	Assess availability of the needed kits in the Local Government Authority.
	Computers and Internet facility	Assess availability of necessary working tools for reporting.
Handeni DC	1 dip located at Handeni village	To obtain information on the implementation of the dip strategy, assess the quality of the dips.
	Fridge and cool box	To assess the cold chain in the Local Government Authority.
	Surgical kits, sample collection kits and Medical kits	Assess availability of the needed kits in the Local Government Authority.
	Computers and Internet facility	Assess availability of necessary working tools for reporting.
Mbulu DC	1 dip located at masqaroda village	To obtain information on the implementation of the dip strategy, assess the quality of the dips.
	Fridge and cool box	To assess the cold chain in the Local Government Authority.
	Surgical kits, sample collection kits and Medical kits	Assess availability of the needed kits in the Local Government Authority.
	Computers and Internet facility	Assess availability of necessary working tools for reporting.
Musoma DC	1 dip located at kwibara village.	To obtain information on the implementation of the dip strategy, assess the quality of the dips.

LGAs	ITEMS	Reason(s) for the observation
	Fridge and cool box	To assess the cold chain in the Local Government Authority.
	Surgical kits, sample collection kits and Medical kits	Assess availability of the needed kits in the Local Government Authority.
	Computers and Internet facility	Assess availability of necessary working tools for reporting.
Sumbawanga DC	1 dip located at Ikozi village	To obtain information on the implementation of the dip strategy, assess the quality of the dips.
	Fridge and cool box	To assess the cold chain in the Local Government Authority.
	Surgical kits, sample collection kits and Medical kits	Assess availability of the needed kits in the Local Government Authority.
	Computers and Internet facility	Assess availability of necessary working tools for reporting.

Source: Auditors' Analysis (2019)