



The Kingdom of Lesotho

**Ministry of Agriculture and Food Security
Department of Livestock Services**

**Peste Des Petits Ruminants (PPR)
Control and Eradication Strategy**

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LIST OF ACRONYMS

AfDB	Africa Development Bank
AU-IBAR	African Union Inter-African Bureau for Animal Resources
BVI	Botswana Vaccine Institute
CIRAD	Centre for International Research in Agriculture Development
COMESA	Common Market for Eastern and Southern Africa
DLS	Department of Livestock Services
DSA	Development Strategic Areas
DVO	District Veterinary Officer
EMA-I	Event Mobile Application
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GCES	Global PPR Control and Eradication Strategy
GDP	Gross Domestic Product
IAEA	International Atomic Energy Agency
IFAD	International Fund for Agricultural Development
LENAFU	Lesotho National Farmers Union
LNWMGA	Lesotho National Wool and Mohair Growers Association
MAFS	Ministry of Agriculture and Food Security
NGOs	Non-Governmental Organisations
OIE	World Organisation for Animal Health
PMAT	PPR Monitoring and Assessment Tool
PPR	Peste des petits ruminants
PPRV	Peste des Petits Ruminants Virus
PVE	Post Vaccination Evaluation
PVS	Performance of Veterinary Services
TADs	Trans-Boundary Animal Diseases
SADC	Southern African Development Community
SOPs	Standard Operating Procedures
TCP	Technical Cooperation Programme
WAMPP	Wool and Mohair Promotion Project

FOREWORD

Livestock production and trade are the major sources of livelihoods and income in the Agricultural sector in Lesotho. In particular, wool and mohair production and marketing are important enterprises in the economy of Lesotho. However, the occurrence of livestock diseases within Lesotho and in neighbouring countries poses a threat to the livestock industry. The Government of Lesotho recognises livestock as an important source of household income and a high priority is attached to animal disease control, modernising and commercialising the livestock industry. In this regard, the Government of Lesotho fully supports Global, Pan-African and regional initiatives to control and eradicate key livestock diseases that hinder livestock production and trade.

Peste des Petits Ruminant (PPR) is a highly contagious viral disease of small ruminants. PPR has high mortality and morbidity rates in affected animals. In 2010, Ministers responsible for animal resources in the African Union Member States recommended that the African Union Inter-African Bureau for Animal Resources (AU-IBAR), Regional Economic Communities (RECs) and partners, should take the necessary measures to support AU Member States to eradicate PPR from Africa. In 2011, the Food and Agriculture Organisation (FAO) of the United Nations and the World Organisation for Animal Health (OIE), declared PPR as the second animal disease targeted for global eradication. In 2013, OIE adopted a resolution to establish PPR as a disease with official status recognition and encouraged countries to engage in PPR control and eradication programmes. Subsequently the FAO and OIE jointly developed and launched the PPR Global Control and Eradication Strategy (PPR-GCES) in 2015 and the PPR Global Eradication Programme (PPR-GEP) in 2016.

At the Pan-African level, AU-IBAR aligned the Pan-African Strategy for the Control and Eradication of PPR and other priority diseases of small ruminants to the Global PPR Strategy in 2015. Since then, AU-IBAR, FAO and OIE in partnership with RECs have provided financial and technical support to countries in Africa for the development of regional and national PPR eradication strategies and five-year action plans. Lesotho has received support from AU-IBAR for the development and validation of this strategy by stakeholders.

Lesotho has never recorded any outbreaks of PPR in its history and the country is entirely surrounded by the Republic of South Africa which is officially recognised by the OIE as free from PPR. Lesotho is thus well placed to achieve OIE recognition of PPR free status. This requires the generation of adequate epidemiological evidence and information to support the application to be made by Lesotho to OIE for PPR free status recognition.

The Food and Agriculture Organisation (FAO) of The United Nations is assisting The Government of Lesotho through technical assistance to the Ministry of Agriculture & Food Security for the execution of a Technical Cooperation Project (TCP): “Strengthening animal disease surveillance in Lesotho”.. Among the core activities of this TCP is active surveillance for Peste des Petits Ruminants (PPR) with a view of providing data to attain OIE PPR free status recognition, for which my Ministry is targeting 2020.

This Strategy will accelerate our Country’s commitment in its quest to achieve PPR free status and thus contribute to the eradication of PPR by 2030, which is in line with the SADC (regional), Pan-African and global strategies. It will also contribute towards achieving the objectives of key national policies and strategies, namely, the Agricultural Sector Strategy (2003), the Food Security Policy (2005), the Agricultural Investment Programme, the Agricultural Policy, the Agricultural Subsidy Policy and the National Action Plan for Food Security [NAPFS (2006)]. To address the issue of food security and poverty reduction, the PPR strategy will enhance the potential of the Livestock component as sheep and goats are a major source of exports to international markets bringing much needed income to rural communities, especially smallholder farmers and boosting economic growth in general thus improving livelihoods and creating employment.

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Minister of Agriculture and Food Security

EXECUTIVE SUMMARY

Peste des petits ruminants (PPR) is a highly contagious viral disease of small ruminants that is associated with high morbidity and mortality. It is characterized by the sudden onset of depression, fever, discharges from the eyes and nose, sores in the mouth, disturbed breathing and cough, foul-smelling diarrhoea and death (Spaulding, Rovid-Spickler and Dvorak, 2009). The clinical signs of PPR closely resemble those of rinderpest and it is closely related to measles and canine distemper (Parida et al., 2015). It was first described in Côte d'Ivoire in West Africa in 1942. Gradually it was realized that several clinically similar diseases occurring in other parts of West Africa shared the same cause. Investigators soon confirmed the existence of the disease in Nigeria, Senegal and Ghana. (Abubakar et al., 2009). For many years it was thought that it was restricted to that part of Africa until a disease of goats in the Sudan, which was originally diagnosed as Rinderpest in 1972, was confirmed to be PPR. The true extent of the disease has only become apparent in recent years and is still being clarified. The realization that many of the cases diagnosed as Rinderpest among small ruminants in India may, instead, have involved the PPR virus, together with the emergence of the disease in other parts of western and South Asia, point to its ever-increasing importance.

This disease is spreading in Africa. Recent reports indicate outbreaks in Southern African Development Community (SADC) countries such as the United Republic of Tanzania, Angola and the Democratic Republic of Congo. This disease has economic and social consequences leading to food insecurity, poverty and loss of livelihoods by the rural small-scale farmers wherever it occurs. Diseases of small ruminants play an important role in the livelihoods of rural communities and the economy of Lesotho because their presence can negatively impact the production and productivity of small ruminants, which play a pivotal role in earning foreign exchange for Lesotho due to their importance in the export trade.

Transboundary animal diseases of economic importance such as Peste des Petits Ruminants (PPR) can have devastating consequences to the fibre Industry in Lesotho if effective prevention and control measures are not put in place. The country can lose

access to international markets in the event of an outbreak of PPR. This would result in heavy economic losses to individual farmers in particular and the economy of the country in general hence the need for a national PPR strategy. To deal with the threat, the Government of Lesotho with assistance from development partners prepared this PPR Control and Eradication Strategy. The Strategy is composed of sections detailing the rationale for PPR prevention and control; the status and potential impacts of PPR in the country and the current capacity and activities to prevent and control the disease. Therefore, this document outlines the PPR strategic prevention, control and eradication framework as well as a five-year action plan for the period 2018 to 2022 to achieve PPR free status recognition by OIE. The goal is to provide guidelines to prevent the introduction of PPR into Lesotho and its spread within the country and to other neighbouring countries in the SADC region.

CHAPTER ONE

I Introduction

The Lesotho National Agricultural and Food Security Investment Plan (NAFSIP) is the medium-term (2014-2018) strategic plan of the Government of the Kingdom of Lesotho (GOL) towards achieving sustainable agricultural growth, poverty reduction and food security in the country. It is an initiative embedded within the framework of the New Partnership for Africa's Development (NEPAD) Comprehensive Africa Agriculture Development Programme (CAADP). NAFSIP is fully aligned with the goals of the Lesotho National Strategic Development Plan (NSDP) (2012), Budget Speech to Parliament - (2012/2013) and carries existing strategies and Policies forward (Agricultural Sector Strategy, the Subsidy Policy and the Food Security Policy (2005–2017)).

The Department of Livestock Services (DLS) is one of the departments under the Ministry of Agriculture and Food Security. The Department's mandate is to control animal diseases and encourage proper livestock management practices by farmers. The Department plays a significant role in the facilitation of the transboundary movement of livestock and animal products, which in turn facilitate access to international markets for Lesotho commodities of animal origin. The Department is divided into two divisions namely Animal Health and Production. The former is divided into five sections namely; Epidemiology, Laboratory and Diagnostics, Poultry Diseases, Theriogenology and Veterinary Public Health, while the latter is divided into six sections namely; Fisheries, Small Stock, Cattle, Poultry, Equines, and Piggery. The Animal Production Division deals generally with the facilitation of breeding stock procurement for farmers, the management and husbandry practices for the different animal species, while the Animal Health Division deals with livestock disease diagnosis and control (prevention and eradication).

Development of the Livestock sector is in line with Lesotho National Vision 2020, which aims to attain food security and poverty reduction along with sustainable resource management as the main priorities of the government.

Diseases of small ruminants play a significant role in the livelihoods of rural communities and the economy of Lesotho because their presence can negatively impact on the production and productivity of small ruminants, which play a pivotal role in earning foreign exchange for Lesotho due to their importance in the country's export trade.

The purpose of the PPR strategy for Lesotho is to maintain constant surveillance to ensure that there are mechanisms in place to prevent the introduction and spread of the disease into the country and to neighbouring states with a view to fulfilling the overall objective of PPR eradication by 2030 in alignment with the Global, Pan African and regional Strategies.

In preparation for the submission of a dossier to OIE for PPR free status recognition, Lesotho formulated a concept-note for PPR surveillance to solicit financial and technical support from development partners. Since 2014, efforts have been made to sensitize the Lesotho National Farmers' Union (LENAFU) as farmers' mother body. The Lesotho National Wool and Mohair Growers Association (LNWMGA) was specifically targeted through presentations during their annual general conferences and other fora such as livestock district shows, national shows and trade fairs. In addition, small stock farmers were sensitized using different approaches such as public gatherings, conferences, shearing and small stock disease control campaigns. Other stakeholders such as abattoir, slaughter slab operators, livestock traders, border control personnel, animal transporters and livestock auction points were also sensitized about PPR.

CHAPTER TWO

2 *The Rationale for PPR eradication*

2.1 **The context**

2.1.1 *Basic Information on the Country*

Lesotho is situated in the Southern part of Africa completely surrounded by the Republic of South Africa specifically bordering with the following Provinces: The Free State Province which shares the longest boundary to the north, west and south west whilst to the east and north east is Kwazulu Natal Province. The Eastern Cape

Province forms the shortest boundary to the south. The human population of Lesotho is estimated at 2.2 million Inhabitants (Bureau of Statistics Lesotho, no date) Lesotho is defined one of the least developed countries in the world with an estimated 58% of the population living below the poverty datum line. The country has a total land mass of 32,000 km² sq. The land mass is divided into four agro-ecological zones based on climate and elevation (Fig 2-1): The Mountains (59%), Foothills (15%), Lowlands (17%) and Senqu River Valley (9%). Approximately 10% of the land area is arable, with the remainder of the country is dominated by rangeland suitable for extensive livestock farming.

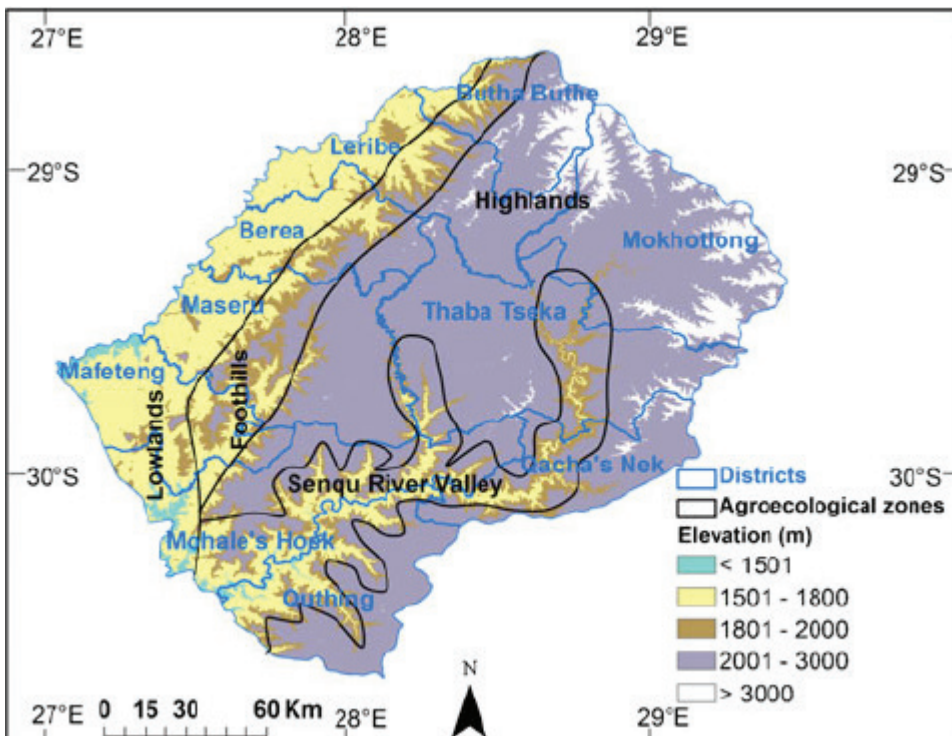


Figure 2 1: Agro-ecological zones of Lesotho (Moeletsi and Walker, 2013)

The majority of the Basotho population are engaged in agricultural activities and live on subsistence farming. However, the agricultural sector makes a relatively small contribution to the country's GDP of 16.5%, which has been on the decline over the past few years. In tandem, the livestock sector's contribution has also been on the decline from 6.5% in 1981 to 6.2% in 2005 with the exception of wool and mohair that earn the country foreign exchange.

The animal production sector is poorly developed and earmarked by the Government of Lesotho as a priority area. The animal population is estimated at 461,573 cattle, 2,041,479 sheep, 972,701 goats, 38,689 pigs, 124,788 donkeys and 64,410 horses (Bureau of Statistics, 2015). Livestock productivity is low in terms of off-take and animal fibre principally due to poor animal health and husbandry, low conception rates, weak lambing/kidding, weaning, and retarded growth. Low wool and mohair production are directly related to low joining ratios, poor nutrition, infertility of the breeding stock, and inadequate husbandry. Stock theft is widespread and has affected most households especially in areas adjacent to the border with the Republic of South Africa. Rangelands are either under-or over-grazed, there are about 124 woolsheds scattered around the country.

Administratively, Lesotho is divided into ten (10) districts namely Maseru, Botha-Bothe, Leribe, Berea, Mafeteng, Mohale's Hoek, Quthing, Qacha's Nek and Mokhotlong (Fig 2-2), each headed by a district administrator. The veterinary districts services are aligned to this administrative set up under the supervision of District Agricultural Officers. The District Veterinary Officer (DVO) is based at the headquarters of the district. The veterinary Competent Authority of Lesotho is represented by the Directorate of Livestock Services (DLS) which is part of the Ministry of Agriculture and Food Security (MAFS). DLS is headed by a Director who is accountable to the Principal Secretary (PS) of the Ministry. The Director is selected based on merit from a list of veterinarians and animal production specialists who are known to have scientific competence, field experience and a recognised personality. The DLS is directly responsible for two technical divisions namely, Veterinary Services (VS) and the Animal Production divisions. There is also support services, which include Accounts, Human resources and Stores. Under the VS division, there are five sections; Veterinary Public Health, Poultry Diseases, Laboratory and Diagnostics, Epidemiology and Data Management and Theriogenology. The VS division has the authority and mandate to conduct animal diseases surveillance, diagnosis and control. Currently, the VS maintains an establishment register of 663 technical staff members comprising: Veterinary officers (13); Livestock officers (23); Livestock Health Technicians (83) and Livestock attendants (535). MAFS practices a Unified Extension System (UES) which currently maintains 6 – 8 Agricultural Resource Centres (ARCs) within each district staffed by technical specialists administratively

headed by a District Agricultural Officer (DAO). Under each ARC there are 3 – 4 Sub-Centres (SCs) staffed by field-level Agricultural Assistants (AAs). The AAs are general facilitators in extension service delivery, covering a broad range of topics with support from technical specialists at ARCs and District levels under the general direction of the DAO.

To facilitate disease surveillance, control and extension services delivery, the country is divided into ten districts veterinary clinics which are aligned to the administrative districts. Each district is technically supervised by a District Veterinary Officer (DVO), who is a university graduate holding a Bachelor of Science in veterinary medicine working with the District Animal Production Officer (DAPO) who holds degree in General Agriculture or Degree in Animal Health. Within the ARCs are Area Extension Officers (AEO) who hold Degrees in General Agriculture. For matters pertaining to disease surveillance and control, they are all supervised by the DVOs. At the third tier, sub-centres are under the supervision of the Area Technical Officers-Livestock (ATO-L), who are diploma holders in General Agriculture, the ATO-Ls report directly to the AEOs and indirectly to the DVOs. All these cadres operating at field level are supported by Agricultural Assistants (AAs), who hold Certificates in Agriculture.



Figure 2 2 : Ten Administrative Districts of Lesotho (Lepheana et al., 2018)

The Epidemiological and Data Management section within the VS plays a pivotal role in disease surveillance, monitoring and control. The unit is headed by a veterinary professional, who has a postgraduate degree in veterinary epidemiology. The unit is centralised at DLS headquarters to ensure coordination of field activities between the Headquarters, the field services and the central veterinary laboratory. The main functions of the Epidemiology unit are to coordinate disease surveillance and control activities, collate and analyse disease information, maintain an animal disease information management system, design and implement sampling strategies for notifiable diseases, implement and monitor import/exports controls, and produce and submit disease situation reports to regional and international organisations such as the Southern African Development Community (SADC), African Union Inter-African Bureau for Animal Resources (AU-IBAR), World Organisation for Animal Health (OIE) and the Food and Agriculture Organisation (FAO) of the United Nations.

The Central Veterinary Laboratory (CVL) is also centralised at headquarters and is mandated to carry out the confirmatory diagnosis of infectious animal diseases as reported and submitted by field veterinary personnel and the farming community. The laboratory is headed by a professional veterinarian supported by a laboratory technologist and a laboratory technician. Due to technical, logistical and infrastructural constraints, the CVL activities are currently confined to limited diagnostic testing protocols for diseases that are more prevalent in the country. These currently include: The Rose Bengal and Milk Ring Tests for Brucellosis, Fluorescent Antibody Test (FAT) and Direct Rapid Immuno-Histochemical Test (DRIT) for Rabies, Enzyme Linked Immunosorbent Assays (ELISA), Radioimmunoassay, Bacterial Culture Techniques and Light & Fluorescent Antibody Microscopy. On the bench laboratory personnel have been trained on Molecular Techniques and are awaiting installation of equipment to commence testing using these techniques.

Where the national CVL has no capacity for testing, arrangements are made with OIE reference laboratories regionally and internationally. Specifically, for Transboundary Animal Diseases (TADs) prevalent in the region such as FMD, samples are sent to Onderstepoort Veterinary Institute (OVI) in the Republic of South Africa (RSA) and the Botswana Vaccine Institute (BVI) in Botswana. Currently, the national CVL does

not have capacity to test for PPR. However, arrangements have been made with the OIE/FAO reference laboratory for PPR in CIRAD, France for the testing of samples for PPR.

2.1.2 Small ruminant production systems

Livestock farming in Lesotho is primarily subsistence and based on an extensive communal grazing system. Sheep and goats play a pivotal role in rural economies due to the wool and mohair fibres export industry. Farmers are therefore the custodians of the animals, ensuring their day to day management and wellbeing. Over many years, the government of Lesotho has implemented various schemes and programmes aimed at teaching farmers modern animal husbandry techniques, dipping, vaccinations and dosing regimens. DLS has also organised educational tours for farmers to neighbouring South Africa to expose them to farm management practices adopted in that country.

2.1.3 Population and distribution of PPR susceptible species

Lesotho has an estimated population of nearly three million sheep and goats distributed throughout the country (Table 2-1)

Table 2 1: Distribution of Sheep and Goats in Lesotho (2014)

District	Number of sheep	Number of goats
Berea	94,557	41,734
Mafeteng	124,818	14,091
Maseru	181,650	108,941
Mohale's Hoek	210,846	184,555
Quthing	244,754	103,635
Qacha's Nek	42,081	27,701
Leribe	342,770	200,957
Butha-Buthe	179,181	54,243
Mokhotlong	204,694	72,891
Thaba-Tseka	406,124	106,952
Total	2,031,475	915,700

(Bureau of Statistics, 2015)

2.1.4 PPR Risk factors along the small ruminants' value chain

In Lesotho there is a formal market for the wool and mohair value chain whereby small ruminants move from different areas to woodsheds for shearing. There is also an informal market whereby farmers shear animals at their homesteads and transport wool for sale in different places such as by the road-side and stores cross border to neighbouring South Africa. The sale of live animals is through auctions at marketing centres and informally by the road sides, at slaughter slabs, through back yard slaughter and individual purchases for traditional ceremonies

The movement of animals and animal products within the country is regulated through a permit system in accordance with the Stock Theft Act (2000) and an internal animal movement protocol issued by DLS. The movement of livestock is therefore controlled through a two-way permit system: the first permit issued by the chiefs, referred to as a "Bewys", states the full particulars of the stock and authorises change of ownership or possession of the stock. In accordance with section 9 (1) of the Stock Theft Act, A person shall not convey stock from an area under the jurisdiction of one chief to another unless the person has a Bewys in respect of the stock. Furthermore, the act prohibits conveyance, delivery or acceptance of stock at night time (between sunset and sunrise); the second is a veterinary movement permit, issued by the Veterinary Authority that authorises the movement of livestock subject to a clinical examination of the animals to be moved. For the purpose of transboundary movement of small ruminants the Lesotho Veterinary Authority is responsible for issuance of import and export permits.

The importation of livestock and livestock products into Lesotho is regulated under the Importation of livestock and export of livestock and livestock products Act (Amendment Act No. 21 of 1984). In accordance with this Act, all citizens and non-citizen living in Lesotho may import animals and animal derived products, which are considered to be safe, into Lesotho. Importation is subject to compliance with relevant import requirements, as stipulated on a veterinary import permit issued by the DLS. Veterinary import permits are produced by the veterinary import permit office within the DLS. The import permits are developed in accordance with relevant chapters of section 5 of the OIE Terrestrial Animal Health Code (TAHC). Specific conditions on

the permits are set in accordance with relevant articles of Chapter 14.7 of the OIE TAHC. It must be emphasized that Lesotho does not import Sheep and Goats and products derived thereof, from countries or zones infected with PPR.

In order for one to apply for a veterinary import permit, the relevant application for the importation of the specific animal or animal product must be completed. The forms are obtainable from the permit office of the Director of Livestock Services. Once the application is approved, the permits are usually issued within 3 to 5 working days. Permits are valid for a limited time and for one consignment only. A veterinary health attestation/certificate appended to the import permit must be completed and signed by a qualified veterinarian authorized by the Veterinary Competent Authority of the exporting country. Upon arrival into Lesotho, an original veterinary import permit, with a completed health certificate must be presented to the Lesotho Agricultural Officer at the port of entry. All consignments deemed not to meet all import requirements are not allowed entry.

Currently, Lesotho only authorizes imports of sheep and goats and their products from the Republic of South Africa, which is a country officially recognised by OIE as free from PPR on a historical basis.. Consequently, the imported sheep and goats are not required to undergo a quarantine or isolation period with respect to PPR.

2.2 *Current Status and Impacts of PPR*

2.2.1 *Current PPR-GCES Stage*

Lesotho is one of SADC countries at a low-risk of PPR exposure because of its favourable geographic location being surrounded by the Republic South Africa which is officially recognised as free from PPR. Lesotho's current PPR-GCES status is at stage I an assessment (including serological surveillance) of the PPR status is being undertaken together with awareness creation on the disease and its potential impacts. Historically, Lesotho has relied on RSA for all its imports of livestock and livestock products. Specifically, Lesotho relies on RSA for importation of Stud Merino sheep and Angora goats for the purposes of improving its national wool and mohair producing flocks. All imports are regulated through the issuance of import permits, which require

that animals should be certified to have not shown clinical signs of PPR on the day of shipment and were kept in a PPR free country or zone since birth or for at least 21 days prior to shipment, in accordance with Chapter 14.7.8 of the OIE Terrestrial Animal Health Code (TAHC).

2.2.2 PPR situation in the country and in neighbouring countries/region

As a landlocked country, Lesotho is fortunate to be neighbouring countries that are officially recognised as PPR free by OIE. Currently, RSA, Swaziland and Botswana are recognised by the OIE as officially free from PPR while Namibia is recognised as free on a zonal basis. Angola, Zambia, Malawi and DR Congo are regarded as countries at high-risk of PPR infection from the Democratic Republic of Congo, with which they share borders. However, Lesotho does not import livestock and livestock products from these countries.



Figure 2 3: PPR Distribution Across Africa (Parida et al., 2016)

2.2.3 Impact of PPR

Smallholder farmers in the rural areas are the most vulnerable as well as other wool and mohair farmers who derive their livelihoods through the sale of fibre and animals. The country at large will suffer economic loss in the event of a PPR outbreak since small ruminants constitute a large portion of the livestock contribution to the national GDP. Women and youth would be severely impacted because they are the most vulnerable in the society.

Rural communities own the majority of large and small ruminants and sheep and goats are the most important in the livestock sector in terms of earning foreign exchange for Lesotho through the export of wool and mohair to international markets. During the 2014/2015 shearing season, members of the Lesotho Wool and Mohair Growers Association, which represents 56,388 members (mainly smallholder farmers), exported 3,648 251.90 Kg of wool valued at M194,960,784.80 (US\$17,071,872.57) and 417,356.0 kg of mohair valued M50,614,409.00 (US\$4,432,084.85) (BKB, 2017) respectively, the wool and mohair that is marketed by private traders amounts to approximately M100 000 000 (US\$10 000 000).

Due to the above earnings that go direct to small holder farmers and other groups that derive their livelihoods from the rearing of small ruminants it is evident that any PPR outbreak will impact negatively with catastrophic economic losses. All sectors along the value chain will be affected that include consumers, traders, and transporters

Transboundary diseases of economic importance such as peste des petits ruminants (PPR) can have devastating consequences to the wool and fibre Industries in Lesotho if effective control measures are not put in place. The country could lose access to international markets in the event of an outbreak of PPR resulting in heavy economic losses to individual farmers in particular and to the economy of the country in general.

Table 2 2: Road Map for PPR eradication in Lesotho

	2018	2019	2020	2021	2022	2023	2024	2025	2030
Stage 1									
Stage 2									
Stage 3									
Stage 4									
Stage 5									

PPR has never been reported in Lesotho. In addition, South Africa the only country with which Lesotho shares all borders, is recognised as free from PPR by OIE. There is therefore a possibility for Lesotho to progress from stage 1 to stage 4 following the on-going epidemiological assessment that includes the testing of serum samples for antibodies to PPR virus. It is anticipated that Lesotho will be able to apply to OIE for the recognition of PPR free status by 2020.

2.3 Current capacity and activities to control PPR

2.3.1 Laboratory diagnostic system

There is one Central Veterinary Laboratory (CVL) that has very old and dilapidated infrastructure that cannot accommodate some of the equipment to be used for diagnostic testing. However, there are ELISA and molecular equipment in good condition. Other equipment and the water system are old and may not provide reliable results. In addition, the CVL is under-staffed with only one veterinarian, a technologist and a technician. As a result, several tests are not done, or carried out properly. The current personnel have received training but still lack skills in some important areas including PPR diagnosis. Most funding for the laboratory is provided by the government of Lesotho but this is insufficient to meet the needs for improved diagnostic testing. Hence shortages of resources needed such as reagents and transport are frequently experienced. Additional funding from projects and donors assists with the procurement of some laboratory equipment and training of personnel. Although the CVL has no capacity for testing for PPR, arrangements are in place with OIE reference laboratories regionally and internationally to enable the testing of samples from Lesotho.

Among the differential diagnosis for PPR, only pneumonic pasteurellosis and bluetongue are considered endemic in Lesotho and the former is diagnosed by bacteriological identification.

The dilapidated CVL building does allow for the process of accreditation and none of the tests currently performed therein are accredited. There is also no quality assurance system currently in place.

There are two satellite veterinary laboratories situated in the northern and southern regions of the country. These have no equipment and hence do only minor operations such as serum separation and sample storage and packaging for delivery to the CVL. Private veterinary institutions have no laboratories of their own and rely on the CVL for some sample testing.

The main gaps in the CVL include: dilapidated structures, inadequate laboratory staff of different cadres, lack of reagents and transport and the absence of a quality management system. In addition, the laboratory is operating without a clear policy direction. However the DLS has developed a draft policy that will address this gap one validated and implemented..

2.3.2 Surveillance system

The Epidemiology Section within the VS plays a pivotal role in disease surveillance, monitoring and control. The Section is headed by a veterinary professional, who has a postgraduate degree in veterinary epidemiology. The Section is centralised at the DLS headquarters to ensure coordination of activities with the Director, the field services and the CVL. The main functions of the Epidemiology section are to coordinate disease surveillance and control activities, collate and analyse disease information, maintain the animal disease information management system, design and implement sampling strategies for notifiable diseases, implement and monitor animal and animal products import/export controls, and produce and submit disease situation reports to regional and international organisations such as the SADC, AU-IBAR, OIE and FAO.

The Epidemiology Section as a centre for livestock data, is fed with data from the Districts through the District Veterinary Officers from all the 10 Districts who are required to provide information monthly or as the need arises.

The flow of information is from the villages whereby the AAs report any unusual behaviour of animals at the ARCs and the reports are sent to the DVO. DVOs send monthly reports to the Epidemiology section. This information is compiled as monthly, quarterly, six monthly and annual reports. Other data sources are the other DLS Sections such as the Laboratory, national abattoir, slaughter slabs, other aligned Departments from other Government Ministries such as the Ministry of Small Business, Marketing and Cooperatives - Department of Marketing, Ministry of Forestry Range and Soil Conservation- Department of Range, Ministry of Trade and Industry- Department of Trade. The Private Veterinarians play a very important role as data sources. Other sources of data are farmers' associations related to livestock activities such as LNWMGA and LENAFU, as well as the National University of Lesotho - Faculty of Agriculture, the Lesotho Agricultural College, The Research Department of Agriculture and non-governmental organizations (NGOs). All data will be analysed by the Epidemiology section and feedback is made available to the districts and all relevant stakeholders for information sharing.

The Epidemiology Section within the Department of Livestock Services plays a pivotal role in disease surveillance, monitoring and control, however challenges such as capacity building at the Epidemiology Section and districts, infrastructure and equipment such as computers and printers, internet connection, data capture mobile utilities and means of storage of data are vital requirements. The weak communication system poses a risk and may delay response to emergency situations and result in poor feedback to stakeholders. Continuous and regular training of all involved at the different levels is required. The safe keeping of data at the Epidemiology Section and in the districts is vital.

2.3.3 Control and prevention

PPR surveillance in Lesotho is integrated into the routine passive surveillance for all notifiable and endemic diseases. Farmers, the general public and private veterinarians are compelled by law to report any sick animals to their nearest veterinary office.

The dip-tanks and woolsheds, which are well distributed throughout the country serve as epidemiological units. Livestock attendants and Agricultural Assistants have an opportunity to inspect animals during annual dipping and vaccination campaigns. Sheep and goats are routinely dipped for mange at least three times a year, while fibre shearing is done at least twice a year, once in sheep and once in goats. These activities provide the veterinary services an opportunity to come into contact with all small stock in Lesotho at least three times in a year. Any clinical signs suspicious of a notifiable disease trigger a direct report to the respective District Veterinary Officer.

2.3.4 Legal Frame Work

The primary legal instrument for the prevention and control of animal diseases, including PPR, is the Stock Diseases Proclamation No. 10 of 1896, supported by the Stock Diseases Regulation Notice No. 42 of 1910. This legislation was subsequently amended to the Stock Diseases Amendment Act No. 18 of 1984. Other legal frameworks that support the surveillance, prevention and control of animal diseases include:

- Importation of livestock and export of livestock and livestock products (Proclamation No. 57 of 1952);

- Importation of livestock and export of livestock and livestock products (Amendment Act No. 21 of 1984);

- Public Health (abattoirs regulation) Legal Notice No. 27 of 1970;

- Veterinary Surgeons Act No. 13 of 1973

- Dangerous Medicine Act No. 21 of 1973.

- Range Management and Grazing Control Regulations of 1980, amended in 1986.

In addition, the MAFS is in the process of finalizing the Livestock Policy Draft 2018, which will pave way for the enactment of the Animal Production, Health and Welfare Draft bill (2018) into law which will repeal all the fragmented pieces of legislation currently applied. The Livestock Policy, the Animal Production and Welfare Bill and the Livestock Strategic Plan 2017-2020 are already in draft form awaiting stakeholders' validation and submission to cabinet for approval and subsequently to Parliament for debate and enactment.

2.3.5 Stakeholders' Involvement

.Farmers at different levels being subsistence and semi-commercial livestock farmers are a major stakeholder in disease surveillance, reporting and control. At the field level, farmers are in daily contact with livestock attendants, agricultural assistants and livestock health technicians at the dip-tank and woolshed levels. Farmers are able to report disease incidents to these field technicians, who in turn report the incidents to the DVO depending on the complexity of the cases. The LNWMGAs provide a more formal link between the farmers and the DLS. Through the LNWMGAs, the DLS is able to mobilise farmers for disease surveillance, vaccination and dipping campaigns. The mother body of all farmers' organizations is the Lesotho Farmers Union (LENAFU) that represents the interests of all groups and individuals.

The private veterinary sector in Lesotho faces challenges in that it is very small with a membership of only 3 private veterinarians in the whole country. Most private veterinary practices offer small animal veterinary clinical services and therefore are concentrated within the urban centres. It is a requirement that all veterinarians and veterinary paraprofessionals be registered with the Lesotho Veterinary Council, including those in the private sector. At least one private veterinarian is a member of the Council. Through the Veterinary Surgeons Act (No.13 of 1973) all veterinarians practicing in Lesotho are mandated to report incidences of notifiable animal diseases that include PPR to DLS.

Awareness campaign activities start with partnerships between the DLS and all relevant stakeholders especially small ruminant farmers and other farmers in general. There are different fora where the department interacts with farmers; at the Agricultural Resource Centre level, extension officers such as AA's, ATO's-L sit in the farmers planning committees where they plan animal management activities that include disease control measures such as annual vaccinations. All the resource centres submit their plans to the district headquarters whereby the DVO, DAPO and the Farmers' District Committee (FDC) meet and finalise the district disease control plan.

All the 10 districts make their own annual farmers' training plans and proceed to hold such training activities. Technical backstopping is provided by the DLS headquarters staff on request from districts.

Apart from meetings and farmers' trainings, MAFS has a fully- fledged information services unit that disseminates information related to disease control using different communication media such as radio and TV programmes, talk shows, newspapers, magazines, flyers, and as well as social media (SMS, WhatsApp, Facebook and Twitter) The key gaps and weaknesses in the implementation of diseases prevention and control measures include: limited budget support, poor communication amongst stakeholders resulting in uncoordinated efforts and sometimes different stakeholder commit resources in different areas while the purpose might be the same resulting in a waste of resources.

2.4 Other small ruminant priority diseases (current status and prospects for control)

In Lesotho other priority diseases of small ruminants are Bluetongue, sheep scab, helminthiasis, enterotoxaemia (pulpy kidney), anthrax and respiratory diseases.

Control Program Vaccination

For bluetongue and enterotoxaemia the Department of Livestock Services has developed an annual vaccination plan and encourages farmers to purchase vaccines on their own. Occasionally when the budget permits the government procures vaccines for farmers and charges them on a cost recovery basis.

Vaccination against anthrax is compulsory due to its zoonotic nature. The government of Lesotho purchases vaccines and make them available to farmers through annual vaccination campaigns organised by the DLS. Sometimes vaccination is free of charge depending on the availability of funds, alternatively farmers are charged a very small fee just to cover the vaccination costs.

Sheep scab is a notifiable disease in Lesotho and it is a disease of economic importance due to its negative economic impact on fibre production in the event of an outbreak. The DLS supervises annual control measures against sheep scab through use of injectable acaricides. Control of helminthiasis is done through an annual dosing plan that encourages farmers to dose their sheep and goats six times a year using broad spectrum anti-helmintics.

CHAPTER THREE

3 Organisation of Veterinary Services

The Veterinary Competent Authority of Lesotho is represented by the Directorate of Livestock Services (DLS) which is part of the Ministry of Agriculture and Food Security (MAFS). DLS is headed by a Director who is accountable to the Principal Secretary (PS) of the Ministry.

The DLS is directly responsible for two technical divisions namely, Veterinary Services (VS) and the Animal Production divisions. A third division deals specifically with Administration. Under the VS division, there are five sections; Veterinary Public Health, Poultry Diseases, Animal Disease Diagnostic and Laboratory services, Epidemiology and Data Management as well as Theriogenology. The VS division has the authority and mandate to conduct animal diseases surveillance, diagnosis and control.

Lesotho is a member of the OIE and complies with provisions of both the TAHC and the Terrestrial Manual. Confirmed outbreaks of notifiable diseases are reported routinely and six-monthly reports submitted as required. In accordance with chapter 3.2 of the TAHC, Lesotho requested and was accorded an OIE PVS evaluation mission in June 2007 followed by an OIE PVS Gap Analysis mission in 2011. The recommendations from the mission reports have served as guidance for the DLS to continually improve its veterinary services.

	Date when conducted	Level of confidentiality*	Comments (if any)
OIE PVS initial evaluation	June 2007	Report was shared with the OIE and Donors	Report was shared with the OIE and Donors and its now due for follow up
OIE PVS Follow up evaluation	Not yet done	Not yet done	Due for follow up
PVS gap analysis	September 2011	Report was shared with the OIE and Donors	Report was shared with the OIE and Donors and its now due for follow up

	Date when conducted	Level of confidentiality*	Comments (if any)
Veterinary Legislation Identification Mission	January 2013	Report was shared with the OIE and Donors	Shared with stakeholders and Draft Review of Vet Legislation done
Other OIE capacity building activities (; laboratory mission; twinning programmes)	Not yet conducted	Not yet done	PPR samples sent to CIRAD

CHAPTER FOUR

4 PPR Strategic Eradication Framework

4.1 Guiding Principles

The guiding principles for the control and eradication of PPR will be based on risk analysis, disease surveillance, disease investigation and laboratory diagnosis, quality assurance of vaccines, effective vaccination and post vaccination evaluation. The main objectives is to attain OIE recognition of PPR free status for Lesotho. Any introduction of the disease if into the country will be rapidly controlled and eradicated to avoid spread to neighbouring countries.

4.1.1 Risk based approach

The risk based approach that the country will take is under the primary legal instrument for the prevention and control of animal diseases, including PPR. (The Stock Diseases Proclamation No. 10 of 1896, supported by the Stock Diseases Regulation Notice No. 42 of 1910 which was subsequently amended to Stock Diseases Amendment Act No.18 of 1984. These pieces of Legislation call for risk analyses that include movement control of animals into and out of the country, surveillance (active and passive), especially at the high-risk areas, distribution of susceptible populations (primarily goats and sheep). There is need for PPR risk assessments in places such as livestock auction sales, communal grazing areas, water holes, animal shows and trade fairs. The results of the risk assessments will be used to target interventions appropriately to minimize the likelihood of the introduction and spread of PPR in Lesotho.

4.1.2 Cross border approach

Lesotho, being completely surrounded by South Africa, has strong ties with its neighbour in animal disease prevention and control. There is constant and continuous information exchange about the status of PPR and other diseases between the two countries; both countries have signed a memorandum of understanding on issues related to disease control, the movement of livestock and livestock products between the two countries and sanitary measures in general. Therefore, all cross-border livestock movements are accompanied by a stock movement permit issued by the Veterinary Services Authorities from either side of the border after conducting risk assessments.

A platform for cross border sharing of information on disease outbreak intelligence requires to be strengthened through scheduled quarterly meetings held by liaising committees of border control agencies of the two countries.

Surveillance along the national borders should be intensified to monitor and curb illegal livestock movements. Measures such as building of quarantine facilities at border entry points to screen and clear animals for trade will be considered at all borders for both countries. In addition, linkages between the Heads of Department of Agencies at the border that include the police, health officers, animal health inspectors, immigration officers and custom officers will be strengthened.

4.1.3 Control of other national priority small ruminant diseases (SRDs)

In Lesotho, other small ruminants priority diseases (SRDs) are Bluetongue, sheep scab, helminths, enterotoxaemia (pulpy kidney), respiratory diseases and anthrax, which affect production and productivity of small ruminants with negative impacts on the livelihoods of rural communities especially smallholder farmers. Good husbandry practices will be encouraged among the farmers in order to control these diseases in conjunction with PPR.

The other priority diseases of small ruminants can be diagnosed and controlled simultaneously both at the field and laboratory levels, during mass gatherings of animals such as in vaccination campaigns, shearing, trade fairs and agricultural shows. Clinical observation can randomly be done and suspicious animals be further investigated

by collecting samples for laboratory testing. Blood serum samples taken for PPR surveillance can be used for the assessment of the other diseases as well.

4.1.4 *Self-Sustaining Mechanisms for Animal Health Services Delivery*

Lesotho is a member of the OIE and complies with provisions of both the TAHC and the Terrestrial Manual. Confirmed outbreaks of notifiable diseases are reported routinely and six-monthly reports are submitted as required. In accordance with chapter 3.2 of the TAHC, Lesotho requested and was accorded an OIE PVS evaluation mission in June 2007 followed by an OIE PVS Gap Analysis mission in 2011 and a Veterinary Legislation mission in 2013. The recommendations from the mission reports have served as guidance for the Veterinary Authority to continually improve its veterinary services. The MAFS has undertaken a review of the Livestock Policy and Veterinary Legislation that await validation by stakeholders..

It is the priority of the Government of Lesotho to pull all its efforts towards developing the agricultural sector by engaging key stakeholders in the goat/sheep value chain in the eradication programme for PPR in an effort to ensure sustainability of the activities. The Wool and Mohair Promotion Project (WAMPP) as one of its first project led by LNWMGA will play a very significant role in PPR prevention and the control of other priority small ruminant diseases.

The farmers will be trained on PPR recognition in flocks including other priority diseases, intelligence gathering, reporting, animal husbandry good practices, basic bio-security principles and practices, movement control and other preventive measures that would protect their flocks and herds. The training will include Community Animal Health Workers, Extension Agents, traders and all relevant stakeholders.

There is a strong partnership between farmers' in the private sector especially wool and mohair sector partners, the DLS and private veterinarians in disease control measures and the same partnership will be forged while engaging in PPR prevention and control

Government will continue to provide policy frameworks, monitoring, coordination, disease investigation, reporting, quality control and guidance to the private veterinary services to ensure their involvement in the eradication of PPR.

The government will create a budget line for PPR control and will put in place mechanisms to involve stakeholders in the mobilization of resources to ensure sustainability.

4.1.5 Adaptive Management

Lesotho has experience in conducting animal disease surveillance (active and passive) such as Food and Mouth Disease whereby the country obtained and has maintained OIE official recognition of FMD free status without vaccination since 2009. There have been previous remarkable lessons learned during other global animal disease control programmes such as Rinderpest eradication. The PPR Eradication programme in Lesotho will make use of these lessons to efficiently target interventions. Other lessons will be drawn from the programme for the Management of TADs in the SADC region (SADC-TADS Project) that included priority diseases like CBPP, FMD and HPAI, the SPINAP-Prevention and Control of HPAI etc.

The implementation strategy for PPR eradication will include other SRDs as well.

4.1.6 Partnerships

The main partner in the implementation of the PPR strategy in Lesotho is the Ministry of Agriculture and Food Security (MAFS) through the Department of Livestock Services and the Department of Field Services which provide technical advice and extension as well as infrastructural development services to small stock farmers. Ministries of Planning and Finance are strategic partners while the Ministries of Defence and Police will assist with enforcement of control measures imposed such as movement control and quarantine.

There is a need to strengthen the partnerships between the scientists and researchers as well as institutions such as the Lesotho Agricultural College, Department of Agricultural Research and the National University of Lesotho to enhance their

participation in training and research on PPR.

Private veterinarians are important strategic counterparts in disease management and control and the Lesotho Veterinary Authority can authorise and engage them to execute some official roles when dealing with PPR and other diseases issues such as endorsing movement permits on behalf of the government.

The Wool and Mohair Growers Association and the Lesotho Farmers Union as custodians of animals and the Department of Livestock Services are partners with the government in the prevention of PPR.

Development partners, regional, continental and global bodies will help with financial assistance and technical expertise to ensure the successful implementation of the PPR strategy in Lesotho.

4.2 Results Framework

4.2.1 Overall Objective

To safeguard the contribution of sheep and goats to the national economy and the livelihoods of the citizens of Lesotho.

4.2.2 Specific objectives

The specific objectives are as follows:

- To attain OIE PPR free status
- To enhance the control of other priority disease of small ruminants (SRDs) in Lesotho
- To strengthen veterinary services for prevention, diagnosis, and eradication of PPR.

4.2.3 Expected outputs and activities

- a. PPR status established in the country
 - formulate and implement an overall monitoring strong surveillance system (Active and passive components)
 - create PPR awareness

- recruit qualified personnel
- control movement of livestock in and outside the country (border control)
- b. National PPR freedom status attained
 - prepare dossier and submit to the OIE
- c. PPR disease freedom maintained
 - conduct passive and active surveillance
 - conduct risk assessment
 - collect and test samples in the laboratory
 - sample processing
 - laboratory diagnosis
 - annual submission of PPR Status report to the OIE
- d. Other SRD's controlled
 - conduct vaccination campaigns
 - train farmers on disease recognition
 - train staff on disease recognition
 - train all value chain actors
 - create awareness campaigns on SRD's
 - capacitate laboratory and epidemiology units with necessary equipment for SRD's control
- e. Veterinary services strengthened
 - train staff on laboratory diagnosis methods
 - train staff on surveillance (active and passive)
 - strengthen communication strategies on diseases outbreaks
 - procure vehicles
 - provide infrastructure
 - procure laboratory and epidemiology equipment
 - strengthened coordination of relevant experts within veterinary profession

4.2.4 Coordination, Management, and Partnerships

The national PPR coordination committee will be established. The committee will be chaired by the Director Livestock Services. Other members will be derived from the key stakeholders such as the LNWMGA, the LENAFU, and Veterinary Authority. This committee will be in charge of decision making regarding national operations and

logistics relating to the implementation of this strategy.

There will be a team of experts who will act as an advisory body to support information sharing, communication and networking with research institutions and other scientists within and outside the country.

In each District there will be a committee headed by the DVO. The DVO will be in charge of all the District operations and reporting to the Department of Livestock-Veterinary Authority. Farmers groups will be included in the District committees.

For diagnostics, the CVL will be responsible for sample processing. It is anticipated that the satellite District laboratories will be functioning in order to facilitate sample collection, packaging, and shipping to CVL.

Other partners such as AU-IBAR, FAO, World Bank, EU, SADC, AfDB, IFAD, and others will be fully engaged in the areas of capacity building, strengthening of government veterinary services, logistical support and the strengthening of the veterinary laboratory network and diagnosis. Support from these agencies will be efficiently coordinated and harmonized in order to prevent duplication.

CHAPTER FIVE

5 *Monitoring and Evaluation*

The Department of Livestock Services will develop the Monitoring and Evaluation M&E plan for the PPR eradication programme. An M & E System will serve the following purposes:

- Provide Government and other stakeholder with up-to-date information on the state of implementation of the Lesotho PPR Strategy;
- Assess whether the implementation of the strategy is on track towards attaining the planned developmental objectives of the country.
- identify flaws in the design or implementation of the activities outlined in the strategy

Each activity designed under the strategy will have SMART indicators with a detailed logical framework to track progress applying the PPR Monitoring and Assessment Tool (PMAT). Such indicators will include:

- Number of staff trained on PPR recognition and control
- Number of laboratory staff trained
- Number of meetings on stakeholder cross border control conducted
- Number of staff trained on surveillance
- Number of farmers sensitized on PPR
- Number of samples collected
- Number of samples processed
- Active and passive surveillance reports

A mid-term evaluation of the strategy implementation will be conducted by a consultant in 2020 while an overall evaluation of the strategy will be conducted at the end of the strategy's tenure.

Information for tracking progress will be obtained from various sources including the following key actors:

- LNWMGA
- LENAFU
- Bureau of Statistics for data
- Department of Livestock Services for data (LIMS, ARIS, WAHIS, EMA-I)
- Ministry of Small Businesses, Marketing and Cooperatives- Department of Marketing
- Ministry of Forestry, Range and Soil Conservation- Department of Range Management
- Livestock Traders
- Livestock inspectors

CHAPTER SIX

6 Estimated Budget (in US Dollars) for the National PPR Strategy for Lesotho

Items	Budget						Total
	Year 1	Year 2	Year 3	Year 4	Year 5		
Epidemiology							
(Stage 1-4)	Equipment		50'000	30'000	20'000	20'000	
	Surveillance	100'000	100'000	50'000	50'000	50'000	
	Transport	300'000	100'000	50'000	50'000	50'000	
Vaccination							
(Stage 2)	Vaccines		150'000	100'000	50'000	50'000	
	Equipment		50'000	30'000	20'000	10'000	
	Operations		100'000	30'000	30'000	30'000	
Laboratory							
(Stage 1-4)	Diagnostic kits	50'000	50'000	20'000	20'000	20'000	
	Equipment	100'000					
	Transport	100'000	50'000	30'000	30'000	30'000	
	Sample processing and Shipment	30'000	30'000	30'000	20'000	20'000	
Control of Other Ruminant Diseases							
		200'000	100'000	100'000	100'000	100'000	
Capacity Building (Stage 1-4)							
	Training/Studies	50'000	50'000	50'000	50'000	50'000	
Communication							
	Coordination	50'000	50'000	50'000	50'000	50'000	
	Sensitization	100'000	50'000	50'000	40'000	40'000	
	Personnel	80'000	80'000	80'000	80'000	80'000	
	Regional Meetings	50'000	50'000	50'000	50'000	50'000	
OIE dossier Preparation and Submission							
					40'000		
Sub-Total		1'110'000	1'090'000	750'000	700'000	650'000	4'300'000
Contingency (10%)							
		111'000	109'000	75'000	70'000	65'000	430'000
Total		1'221'000	1'199'000	825'000	770'000	715'000	4'730'000

CHAPTER SEVEN

7 Resource Mobilization

Implementation of the PPR strategy will require resources and detailed costed programmes. A potential source of funds is the farmers themselves who are the target development beneficiaries. Government funding will be critical in putting the strategy into action. The Government will continue to pay salaries of all personnel in the PPR prevention and eradication programme. The WAMP's main purpose is to promote wool and mohair through improvement of animal health and production, improvement of rangelands and the marketing of wool and mohair. The WAMP will support the Veterinary Services DLS in the prevention and eradication of PPR and the control of other small ruminant priority diseases.

The veterinary service has been performing poorly due to insufficient funds to control diseases of small stock. This has negatively affected the productivity of sheep and goats. The WAMP puts emphasis on women and youth development to stabilize livelihoods. Other potential development partners include: NGOs – EU, FAO, IFAD, World Bank, Philanthropists, AU-IBAR, OIE, UNDP, UNICEF, WHO, WFP, WTO, and AfDB.

The building of farmers' capacity and developing clear business cases in the livestock sector, will attract the interest of private investment line banks and other lending institutions to the sector. The Government of Lesotho is expected to play a key role in de-risking the sector and designing appropriate risk sharing mechanisms and appropriate loaning facilities e.g. concessional loans.

Communication is a means of informing, educating, convincing, guiding and motivating individuals, groups and institutions on the basis of interactive exchanges about certain issues. The private sector and all livestock sector stakeholders, members of the livestock policy hub, the Veterinary Association and farmers' meetings will be held in order to solicit financial support for the PPR prevention programme and the control of other diseases of small ruminants.

The World Organisation for Animal Health (OIE) recognizes the important role that communication plays in the achievement of animal health and livestock production goals at national and global levels. Effective dissemination of information during routine, high risk, disease outbreaks and crisis situations in the veterinary and livestock sector is paramount.

Internet platforms;WhatsApp, Facebook, twitter, SMS, voice communication, pamphlets, flyers, billboards, radio, electronic and print media, visibility materials, emblems, TV and drones are some of the means of communicating synchronized and tailored messages to the veterinary and livestock sector stakeholders that will be used to advocate for PPR eradication.

ANNEXES

Annex 7 I: Logical Framework

National Strategy description		Objectively verifiable indicators	Means of verification	Assumptions
Goal	<ul style="list-style-type: none"> To safeguard the contribution of sheep and goats to the national economy and the livelihoods, incomes and food security of the citizens of Lesotho. 	<ul style="list-style-type: none"> Increase in Small ruminants contribution to national GDP PPR freedom 	<ul style="list-style-type: none"> Records of national economic indicators 	<ul style="list-style-type: none"> Willingness by all role players to collaborate in implementation of PPR Strategy Availability of lucrative markets
Purpose	<ul style="list-style-type: none"> To verify the eradication of PPR in Lesotho, enhance the control of other priority diseases of small ruminants and strengthen veterinary services 	<ul style="list-style-type: none"> Freedom from PPR by 2021 	<ul style="list-style-type: none"> OIE certificate of PPR free status OIE reports Surveillance reports 	<ul style="list-style-type: none"> Willingness by government and other partners to support the initiative Availability of resources
Outputs	<ul style="list-style-type: none"> PPR status established PPR introduction prevented PPR eradication verified in the country PPR free status maintained Other SRD's controlled Veterinary Services strengthened 	<ul style="list-style-type: none"> Results of PPR serological survey Results of disease outbreak investigations prevalence and incidence of other SRDs reduced by 10% No. of staff trained in veterinary services No. of Veterinary infrastructure improvements 	<ul style="list-style-type: none"> Reports and records Surveillance reports Surveillance reports Reports and records OIE official recognition OIE reports and website Laboratory reports and records 	<ul style="list-style-type: none"> Availability of resources Availability of staff and budget for logistics PPR incursion does not occur in Lesotho

National Strategy description		Objectively verifiable indicators	Means of verification	Assumptions
		<ul style="list-style-type: none"> No. of diagnostic kits availed to the CVL No. Samples collected and tested No of laboratory proficiency tests Performed No. of laboratories and diagnostic tests accredited No. of policies and legal frameworks reviewed for PPR, SRDs and veterinary services 		
Activities	<ul style="list-style-type: none"> Disease surveillance Laboratory diagnosis Capacity building in Lab, field and epidemiology Veterinary infrastructure improvements Awareness creation Vaccination (if indicated following assessment) Preparation and submission of dossier to OIE for PPR status recognition 	<ul style="list-style-type: none"> Number of different reports Number of samples received and processed Number of trainings conducted Number of Veterinary facilities improved Number of public gatherings held Number of radio, TV, and other social media messages 	<ul style="list-style-type: none"> Surveillance reports Laboratory reports Reports Reports and minutes Reports Vaccination coverage reports Dossier Records Reports and records PPR Dossier for disease free status recognition by OIE OIE Reports 	<ul style="list-style-type: none"> Availability of resources PPR incursion does not occur in Lesotho

National Strategy description		Objectively verifiable indicators	Means of verification	Assumptions
	<ul style="list-style-type: none"> • Procurement of vehicles for field and laboratory activities • Procurement of laboratory equipment • Annual PPR freedom status confirmation report submission to OIE 	<ul style="list-style-type: none"> • Number of animals vaccinated (if indicated) • Number of vehicles purchased • Number and types of lab equipment and reagents procured • Annual PPR status reports to OIE 	Costs Epidemiology: \$..... Vaccination: \$..... Laboratory: \$..... Control of other small ruminant diseases: \$..... Capacity Building: \$..... Communication: \$..... OIE Dossier preparation and submission:..... Total Costs: \$.....	

Annex 7 2 :Action Plan for the First 5 Years

1. Introduction

The global strategy for PPR entails four stages that Lesotho will follow in order to prevent, control, and eradicate the disease in accordance with the general principles. The four stages respond to a combination of decreasing levels of epidemiological risk and increasing levels of prevention and control. Active surveillance will be conducted to determine the status of the disease in the Country. The results of the surveillance will determine the presence or absence of the disease. Should PPR be inadvertently introduced into the country, the mass vaccination of sheep and goats to control and eradicate the disease will be conducted. In the scenario that there is no disease, the country will focus on prevention of the introduction of the disease into the country. The four stages to be followed are as follows:

Stage 1 – assessment stage of the epidemiological situation of the disease

Stage 2 – mass nationwide vaccination campaign from 2 to 3 years

Stage 3 – focus mainly on high risk areas and on new additions for 2 years

Stage 4 –the Country provides evidence of presence or absence of virus circulation and that the country is ready to apply for official freedom status from the OIE

Each stage is characterized by technical elements such as;

- Disease surveillance
- Diseases diagnostics
- Prevention and control (vaccination, improved biosecurity etc.)
- Legal framework
- Stakeholder involvement

2. Objectives and approach:

2.1 Goal

To safeguard the contribution of sheep and goats to the national economy and the livelihoods, incomes and food security of the citizens of Lesotho.

2.2 Purpose

- The purpose of this Action Plan is to mobilize stakeholders and partners in Lesotho to initiate actions to verify the eradication of PPR, enhance the control of other priority diseases of small ruminants and achieve an improvement of veterinary services necessary to sustain these actions in Lesotho.

2.3 Specific Objectives

- To establish the status of PPR in Lesotho.
- To prevent the introduction of PPR into the country.
- To achieve PPR free status recognition by OIE.
- To strengthen veterinary services for the prevention, diagnosis and control of PPR and other small ruminant diseases.

3. Action Plan

3.1 Components and Activities

Component 1: Enabling Environment Promotion

Lesotho is one of the SADC countries at low risk area because of its favourable geographic location being completely surrounded by the Republic of South Africa (RSA) which has been declared free from PPR. Historically, Lesotho has relied on RSA for all its imports of livestock and livestock products specifically for importation of Stud Merino sheep and Angora goats for the purposes of improving its national wool and mohair. PPR can have devastating consequences on the fibre Industry in Lesotho if effective prevention and control measures are not put in place; the country can lose access to international markets in the event of an outbreak of PPR resulting in heavy economic loss to individual farmers in particular and economy of the country in general.

The spread of PPR into the SADC region poses a threat to the wool and mohair industry in the country. To deal with this threat, the Government of Lesotho requested technical assistance from the Food and Agriculture Organisation (FAO) to implement a Technical Cooperation Programme (TCP) which aimed to develop a national strategy for PPR prevention, control and eradication and the control of other priority small

ruminant diseases that is aligned to the Pan African and Global strategies for the prevention, control and eradication of PPR and other small ruminant diseases.

In addition, AU-IBAR supported and guided a team of experts from Lesotho to draft the national strategy for the eradication of PPR and the control of other priority diseases of small ruminants during a write-shop held in Naivasha, Kenya from 4-7 April 2018. Following this, a national stakeholders' validation workshop was convened in Maseru in November 2018 to strengthen understanding of PPR in the country. The wool and mohair value chain players showed interest in supporting the programme including the WAMPP project.

The following activities will be undertaken:

Subcomponent 1.1: PPR strategy and technical plans

- Setting up of a National PPR Coordinating Committee (NPCC) in order to lead the process administratively
- Setting up of the National Research and Expertise Network on PPR as technical advisory body
- Development of the National document for PPR prevention, control, and eradication.
- A Consultative workshop of key Stakeholders to validate the National PPR Control Strategy document
- Deployment of PPR dossier
- Development of a 5 year action plan
- Development of SOPs for laboratory procedures, training, quarantine, and surveillance.

A 5-year PPR prevention, control, and eradication programme will commence from 2018 to 2022. The first 5 years of the programme will be mainly for capacity building on laboratory and field operations, organizational development of all relevant parties in the structure, working groups such as the National PPR Coordinating Committee, the National Research and Expertise Network on PPR (technical committee) establishment, stakeholder meetings/ public gatherings, carrying out an epidemiological assessment to ascertain the presence or absence of PPR status, carrying out preventative and control measures to eradicate the disease.

Subcomponent 1.2: Stakeholder awareness and engagement

The target groups for the awareness and engagement are all those involved in the value chain. Strengthening participation through participatory kind of workshops, public gatherings, seminars and advocacy meetings will be vital to the success of the programme. The major stakeholders being the Farmer Associations in particular LNWMGA, LENAFU, Range Management Associations (RMAs), Marketing groups, DLS, National University of Lesotho (NUL), Lesotho Agricultural College (LAC), Central, Sheep and Goats farmers (women and youth), Private Veterinarians, Non-governmental Organisations, and Trade-based Association. In order to facilitate smooth deliberations, there will be meetings, information sharing through documentations such as pamphlets and other appropriate extension materials.

Subcomponent 1.3: Legal framework

The primary legal instrument for the prevention and control of animal diseases, including PPR, is the Stock Diseases Proclamation No. 10 of 1896, supported by the Stock Diseases Regulation Notice No. 42 of 1910. This legislation was subsequently amended to the Stock Diseases Amendment Act No. 18 of 1984. Other legal frameworks that support the surveillance, prevention and control of animal diseases include:

- Importation of livestock and export of livestock and livestock products (Proclamation No. 57 of 1952);
- Importation of livestock and export of livestock and livestock products (Amendment Act No. 21 of 1984);
- Veterinary Surgeons Act No. 13 of 1973
- Dangerous Medicine Act No. 21 of 1973.
- Range Management and Grazing Control Regulations of 1986, amended in 1986
- There is also the Animal Production, Health and Welfare Draft Bill 2016, that is expected to be enacted into law before the end of 2019. This will repeal all the existing fragmented legal frameworks that address disease control including PPR.

Subcomponent 1.4: Strengthening Veterinary Services

The Veterinary services are mandated to protect animals through well-enforced laws and regulations that form good basis of good veterinary governance, reduce losses caused by animal diseases, tracking animal diseases transmissible to humans. To

achieve all these, there is a system in place with staff at different levels with various capacities to carry out their roles and functions. There is a coordination of activities and information from the districts to Head Quarters. The information flows from Livestock Improvement Centre (LIC) to the Resource Centre (RC) from FC to District Veterinary clinic onwards to the national at DLS. The department has a diagnostic laboratory at However, a limitation in the flow or availability of resources has created gaps in the effective implementation of these activities. The strategy has identified areas which will contribute to strengthening the veterinary services in the country. Some of these areas are:

- Staff knowledge and skills-Training (epidemiology, field and laboratory)
- Staffing levels
- Laboratory equipment and reagents
- Transport- Motor-vehicles and for the field and laboratory staff
- Infrastructure
- Lab Equipment and field
- Communication mechanism (no Network) hence early warning mechanism lacking
- Lack of SOPs on PPR and other SRDs

Component 2- Support to the diagnostic and surveillance systems

The Central Veterinary Laboratory (CVL) is also centralised at headquarters and is mandated with confirmatory diagnosis of infectious animal diseases as reported and submitted by field veterinary personnel and the farming community. The laboratory is headed by a professional veterinarian supported by a laboratory technologist and a laboratory technician. Due to technical, logistical and infrastructural constraints, the CVL has currently confined its activities to limited diagnostic testing protocols for diseases that are more prevalent in the country. These currently include: The Rose Bengal and Milk Ring Tests for Brucellosis, Fluorescent Antibody Test (FAT) and Direct Rapid Immuno-histochemical Test (DRIT) for Rabies, Enzyme Linked Immunosorbent Assays (ELISA), Radioimmuno Assay, Bacterial Culture Techniques and Light & Fluorescent Antibody Microscopy. On the bench laboratory personnel have been trained on Molecular Techniques and are just awaiting installation of equipment to commence testing. However, the lab is very much under staffed.

Where the national CVL has no capacity for testing, arrangements have been made with OIE reference laboratories regionally and internationally. Specifically, for Transboundary Animal Diseases (TADs) prevalent in the region such as FMD, samples are sent to Onderstepoort Veterinary Institute (OVI) in RSA and Botswana Vaccine Institute (BVI) in Botswana. Currently, the national CVL does not have capacity to test for PPR. However, arrangements have been made with OIE/FAO reference laboratory for PPR in CIRAD, France. The contact person is Dr Geneviève Libeau. The VVL's building is very old hence the need to rebuild a new one. Regarding the equipment the CVL has received a lot of the latest equipment supported by IAEA.

Subcomponent 2.1: Epidemiological assessment

The Epidemiological and Data Management section within the VS plays a pivotal role in disease surveillance, monitoring and control. The unit is centralised at DLS headquarters to ensure coordination of activities with the Director, the field services and the central veterinary laboratory. The main functions of the Epidemiology unit are to coordinate disease surveillance and control activities, collate and analyse disease information, maintain an animal disease information management system, design and implement sampling strategies for notifiable diseases, conduct epidemiological assessment and research, implement and monitor import/exports controls, and produce and submit disease situation reports to regional and international organisation such as Southern African Development Community (SADC), African Union Inter-African Bureau for Animal Resources (AU-IBAR), World Organisation for Animal Health (OIE) and Food and Agriculture Organisation (FAO). The section is under staffed and there is no infrastructure to house the section under one roof. No internet connection. The programme will see to it that the internet is connected which also connect the District Vet Clinics as well.

Subcomponent 2.2: Strengthening of surveillance systems and laboratory capacities

The national epidemio-surveillance network needs to be strengthened through the following:

- Training on risk assessment, disease reporting and surveillance including disease investigation and reporting.

- Procurement of equipment and consumables
- Active surveillance for PPR

National Laboratory and mini-district' laboratories need to be capacitated and strengthened.

Subcomponent 2.3: Epidemiology and laboratory networks

There is an Epidemiology section and a Laboratory at the national/ Head Quarters' level. There is need to strengthen collaboration with the laboratories in the districts as well for smooth service delivery. These networks will be key in the surveillance, control and eradication of PPR in the country.

Component 3- Measures towards PPR eradication

Subcomponent 3.1: PPR Preventive and Control Measures

Although Lesotho borders only with the Republic of South Africa (RSA), a country recognised as free from PPR by the OIE, It is still within the interest of Lesotho to implement measures to prevent entry and confirm the absence of PPR in the country. On the other hand initiating the process towards the attainment of PPR free status recognition by OIE is vital. The potential negative economic impact of the disease on the wool and mohair industries needs to be considered and the strengthening of veterinary services undertaken to be able to prevent, control and eradicate PPR in the country. Lesotho will therefore conduct both active and passive PPR surveillance to establish its status.

When the national PPR surveillance establishes absence of the disease, Lesotho will proceed with the process of applying for PPR free status recognition by the OIE. However, if the surveillance indicates the presence of PPR infection, Lesotho will proceed to institute measures for its control and eradication.

The Control and eradication process will consist of activities over a period of three (3) years. Among others the activities will include

- PPR awareness campaigns

- Livestock movement controls
- Stamping out of infected herds if the affected area is small
- Mass vaccination of sheep and goat populations
- Farmer and staff training
- Pre and post vaccination monitoring
- Control of other small livestock diseases
- Application for PPR disease freedom

Subcomponent 3.2: Demonstration of PPR freedom

The Demonstration of PPR free status depends on the surveillance results indicating the presence or absence of the disease. In the absence of the disease, application for PPR free status recognition will be made to OIE. Upon attainment of PPR freedom, the need to maintain the PPR free status will require the following activities:

- Awareness creation
- Surveillance (passive and active)
- Risk Assessment
- Annual submission of PPR Disease Freedom Dossiers to the OIE

Subcomponent 3.3: Control of other small ruminant diseases in support of PPR eradication

The 1 other priority small ruminant diseases (SRDs) in the country will be dealt with concurrently with PPR to ensure a healthy and highly productive population of sheep and goats. Animal welfare considerations will be emphasized in order to protect animals through well-enforced laws and regulations.

Component 4- Coordination, Management and partnerships

Subcomponent 4.1: National level

There will be a national coordinating committee on PPR control and eradication which will be chaired by the Director of Veterinary Services. Membership will be drawn from key stakeholders such as the LNWMGA, LENAFU, DLS, Department of Field Services (DFS), etc.

In addition to the NPCC, the National Research and Expertise Network on PPR, Technical Committee of Experts (TCE) will be put in place to function.

There will be support from the Districts as well (DFS) including laboratory (for diagnosis) and Epidemiology (for surveillance) (national and regional) who will be responsible for various components of the strategy.

Subcomponent 4.2: With Regional partners and programmes

Regional partners and programmes such as SADC, NGOs –SACCAU, IFAD, and others will be fully incorporated in the PPR Control and eradication programme at regional level.

Some of the activities under this subcomponent will include regional meetings on PPR prevention, control and eradication; cross border meetings; sharing of disease information amongst member states and carrying out joint disease prevention and control activities. The WAMP puts emphasis on women and youth development and to stabilize livelihoods.

Subcomponent 4.3: With Pan-African and Global Partners

Pan-African and Global partners such as the AU-IBAR, FAO, OIE, EU, FAO, IFAD, World Bank, Philanthropists, AU-IBAR, OIE, UNDP, UNICEF, WHO, WFP, WTO, AfDB, World Bank, EU and others will be fully engaged in the areas of capacity building, strengthening of government veterinary services, logistics support, strengthening of veterinary laboratory networks and diagnosis. Support from these agencies will be efficiently coordinated in order to prevent duplication, clashes of interest and a waste of resources.

3.2 Sustainability

- Sustainability will be achieved if the veterinary service is strong.
- The veterinary service must be equipped with resources in order to detect threats and accurately diagnose PPR and other SRDs
- The veterinary service in the field must be strengthened and capacitated with knowledge and resources to be able to properly carry out surveillance with the

backup of the Epidemiology and Laboratory units.

- The Country's legal framework for control of PPR and other SRDs of importance needs to be updated and clear to all stakeholders. There is also a need for a review of the national livestock policy.
- Government and other stakeholders need to provide resources and show great commitment towards the eradication of PPR that will improve small ruminants' health and consequently enhance the livelihood of the Basotho nation
- The strong partnership with stakeholders will assist towards constant and effective control of the small ruminant diseases.

3.3 Risks and assumptions

- The project team must take into consideration the influences beyond its control that will prevent the achievement of the plan's objectives.
- The team will continue to monitor the risks and assumptions made if they hold true, what new risks can emerge and what impact they can have on the plan.
- The team will manage or mitigate the risk of total absence of funds from the government by having other means of sourcing funds.

4. Funding, Monitoring and Evaluation and Communication

4.1 Funding

Items	Budget						Total
	Year 1	Year 2	Year 3	Year 4	Year 5		
Epidemiology							
(Stage 1-4)	Equipment		50'000	30'000	20'000	20'000	
	Surveillance	100'000	100'000	50'000	50'000	50'000	
	Transport	300'000	100'000	50'000	50'000	50'000	
Vaccination							
(Stage 2)	Vaccines		150'000	100'000	50'000	50'000	
	Equipment		50'000	30'000	20'000	10'000	
	Operations		100'000	30'000	30'000	30'000	
Laboratory							
(Stage 1-4)	Diagnostic kits	50'000	50'000	20'000	20'000	20'000	
	Equipment	100'000					
	Transport	100'000	50'000	30'000	30'000	30'000	
	Sample processing and Shipment	30'000	30'000	30'000	20'000	20'000	
Control of Othe Ruminant Diseases							
		200'000	100'000	100'000	100'000	100'000	
Capacity Building (Stage 1-4)							
	Training/Studies	50'000	50'000	50'000	50'000	50'000	
Communication							
	Coordination	50'000	50'000	50'000	50'000	50'000	
	Sensitization	100'000	50'000	50'000	40'000	40'000	
	Personnel	80'000	80'000	80'000	80'000	80'000	
	Regional Meetings	50'000	50'000	50'000	50'000	50'000	
OIE dossier Preparation and Submission							
					40'000		
Sub-Total		1'110'000	1'090'000	750'000	700'000	650'000	4'300'000
Contingency (10%)							
		111'000	109'000	75'000	70'000	65'000	430'000
Total		1'221'000	1'199'000	825'000	770'000	715'000	4'730'000

4.2 Monitoring and Evaluation

- Continuous monitoring will be done by the office of the DLS to ensure the programmes are being run efficiently and effectively as planned.
- This will entail the identification of responsible persons for every activity as well as seeing to it that the activities are done within the stipulated time frames.

- The risks that were envisaged and that may come unexpectedly should be taken into account and be addressed immediately so that they don't impact negatively on the implementation of the Action Plan.
- A mid-term evaluation will be carried out by external personnel while an end of term evaluation will be done following the eradication of PPR.

4.3 Communication and advocacy

- The Department (PPR Team) must strive to ensure support from the mother Ministry, MAFS, as well as other supporting Ministries such as Finance, Small Business Cooperatives and Marketing, Health, Gender & Youth and other stakeholders within the country so that the eradication of PPR is achieved.
- The working team must be appointed with a coordinator among them to ensure smooth communication from the top to bottom levels and vice versa.
- The sensitization and advocacy for successful control must be aimed at and done simultaneously with other prevailing priority national activities, e.g. youth & women empowerment with several opportunities of income generation and employment in the small ruminants' production value chain.
- The team must take advantage of the presence of other projects which are dealing with small stock directly such as IAEA and WAMPP to advocate strongly during those projects' activities or gatherings.
- Communication as a way to disseminate information to stakeholders can be done in several ways through workshops, radio and TV shows, flyers, pamphlets, brochures, posters and social media.

Appendix 7.3: Implementation of the Action Plan

Component 1: Enabling environment promotion

Action step descriptions	Department responsible	Date to begin	Date due	Resources required	Desired outcome	Remarks
Stake holder awareness and engagement	DLS	Jan 2018	Dec 2018	Financial resources to fund participation	Consultative forum (workshops) that will be conducted across the country	
Legal framework	DLS, Farmers representative and Private sectors	Jan 2018	Dec 2018	Budget	Development of livestock policy- animal production, animal health and welfare e draft bill	
Strengthening veterinary services	DLS	Jan 2018	Dec 2023	Budget, human resources, Infrastructure	Vet services will be strengthened through infrastructure development by capacitating laboratory through purchase of equipment, material and reagents. Construction of level 2 biosafety laboratory Training of laboratory staff on latest technological advances and recruitment of expectants in different field of laboratory diagnosis	

Component 2: Support to the diagnostic and surveillance systems

Action step descriptions	Department responsible	Date to begin	Date due	Resources required	Desired outcome	Remarks
Epidemiological assessment	Department of livestock Services	April 2018	Dec. 2023	Human and financial	Well functional epidemiology unit with baseline data and ability to conduct surveillance	
Strengthening of surveillance systems and laboratory capacity	DLS, DFS, Relevant stake holders along value chains	Jan 2018	Dec 2023	Reagents, equipment and well-trained staff	Reinforcement of active surveillances through clear plans to monitor border control, sales yards, farms, national shows auctions etc.	
Epidemiology and lab networks	DLS (epidemiology and lab sections)	Jan 2018	Dec 2019		Forge lab and epidemiology networks within the country and regionally by exchanging information and sending PPR samples to OIE PPR reference laboratories	

Component 3; Measures towards PPR eradication

Action step descriptions	Department responsible	Date to begin	Date due	Resources required	Desired outcome	Remarks
PPR preventive and control measures	DLS, DFS	June 2018	Dec 2023		The country will put in place clear mechanisms to ensure that PPR is not introduced into Lesotho and have clear contingency measures in place to control the disease in the event that it is accidentally introduced into the country	
Demonstration of PPR freedom	DLS	Jan 2018	Dec 2023		Demonstrations of freedom of PPR will be effected through a country wide active sero-surveillance and the preparation of a dossier for PPR free status recognition by OIE.	
Control of other SRD's in support of PPR eradication	DLS	Jan 2018	Dec 2023		Preparation and endorsement of plan to implement active surveillance of other SRD's simultaneously while inspecting animals for PPR	

Component 4; Coordination, Management and partnerships

Action step descriptions	Department responsible	Date to begin	Date due	Resources required	Desired outcome	Remarks
National level	DLS	May 2018	Dec 2022	Budget for communication	DLS will partner with farmers organization such as LENAFU, LNGMWA Will partner with other line Ministries i.e; Trade, Defense, Police, Finance Partner with all stake holders such as transporters, traders in order to ensure that there are synergies in the fight against PPR	
Regional partners and programs	DLS	January 2018	Dec 2023	Budget for communication, consultation and travel	The country will liaise with regional partners such as neighbouring countries to join efforts with the aim of collaborating towards eradication of PPR, more importantly Lesotho will liaise with SADC as the regional body for coordination of all Member States	
PAN African and global partners	DLS	January 2018	Dec 2023	Budget for communication, consultation and travel	In order to comply with the Pan-African and global strategies of eradicating PPR by 2030, there will be concerted efforts to interact and liaise our activities with continental partners such as AU-IBAR and global partners	

Action step descriptions	Department responsible	Date to begin	Date due	Resources required	Desired outcome	Remarks
					such as OIE, FAO, IAEA, IFAD, World Bank etc. to ensure that there is harmony and coordination in the fight against PPR	

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