The IGAD Regional Peste des Petits Ruminants (PPR) Progressive Control and Eradication Strategy

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ABBREVIATIONS AND ACRONYMS

AGDP	Agricultural Gross Domestic Product
ARIS	Animal Resource Information System
AU-IBAR	African Union- Inter African Bureau for Animal Resource
AU-PANVAC	African Union - Pan African Veterinary Vaccine Centre
CCPP	Contagious Caprine Pleuro-Pneumonia
EAREN	Eastern Africa Regional Epidemiology Network
ECTAD	Emergency Centre for Trans-boundary Diseases
EU	European Union
FMD	Foot and Mouth Disease
GDP	Gross Development Product
GHoA	Greater Horn of Africa
GF-TADs	Global framework for the progressive control of TADs
IAEA	International Atomic Energy Agency
IGAD	Inter Governmental Authority on Development
ILRI	International Livestock research Institute
LPI	Livestock Policy Initiative
MS	Member States
NARS	National Diagnostic Laboratories and National Agricultural Research Services
NGOs	Non-governmental Organizations
OIE	World Organisation for Animal Health
PCP-FMD	Progressive Control Pathway for FMD
PCP-PPR	Progressive Control Pathway for PPR
PPPs	Public Private Partnerships (PPPs)
PPR	Peste des Petits Ruminants
PPP	Purchasing Power Parity
PVS	Performance of Veterinary Services
RBM&E	Results Based Monitoring and Evaluation
RC	Reference Centre
RL	Reference Laboratory
RP	Rinderpest

RVF	Rift Valley Fever
SERECU	Somali Ecosystem Rinderpest Eradication Coordination Unit
SGP	Sheep and Goat Pox
SHARE	Support the Horn of Africa Resilience
SMP-AH	Standard Methods and Procedures – Animal Health
SOPs	Standard Operating Procedures
SRDs	Small Ruminant Diseases
TAD- Info	Trans-boundary animal Diseases Information System
WAHID	World Animal Health Information Database
WAHIS	World Animal Health Information System

FOREWORD

The IGAD region with a membership of 8 countries has a surface an area of 5,209,722 km² of which 65% is arid and semi-arid. The region has a human population of 238,990,000 with an estimated livestock resource base of more than 520 million of which about 35% are small ruminants. The major economic driver of the IGAD Member States is agriculture, with livestock contributing an estimated 57% of the regional *Agricultural Gross Domestic Product (AGDP)*. IGAD region is the only region on the continent of Africa that is self-sufficient in its meat requirements. The region is the leading exporter of live animals, contributing 42% of the continent's exports. Livestock trade connects countries through intra-regional markets and improvement of this aspect is considered a key driver for economic development and integration in the region.

With an estimated 242 million small ruminants raised in the IGAD Region, the importance of small ruminant production as a form of commercial livestock production can hardly be underestimated. Small ruminants contribute more than 80% of the livestock exports from the IGAD region and provide a vast range of products and services, including milk, meat, skins, and wool throughout the year. They are cheaper to buy compared to larger animals, they reproduce rapidly and are easily sold for cash or exchanged for other staples. In addition to this, they adapt well to pastoralist and agro-pastoralist ecological systems common in the Horn of Africa. Due to this, women and disadvantaged households often rely on them. They are an important means to rebuild herds after environmental and political shocks. Thus, small ruminants are an important component of pastoral coping mechanism.

Peste des petits ruminants (PPR), or small ruminant plague, a viral disease primarily affecting goats and sheep is the major constraint to productivity. The disease is widespread globally and is now endemic most IGAD Member States. The socio-economic losses associated with PPR mainly result from the high case fatality rates. The co-existence with other small ruminant diseases such as sheep and goat pox, contagious carprine pleura-pnemonia, brucellosis, endo- and ecto-parasites compounds the problem and the socio-economic losses. The existing technical tools are sufficient to enable the progressive control of PPR to commence; however, a few challenges remain in the way for the Horn of Africa region.

Against this backdrop, a consultative workshop on PPR held in Addis Ababa in September 2012 within the framework of "*Support the Horn of Africa Resilience (SHARE)* initiative" identified the need to develop a regional framework for the progressive control of PPR and other small ruminant diseases with a view to harmonizing disease control programmes among beneficiary countries. Subsequently, IGAD and *African Union- Inter African Bureau for Animal Resource (AU-IBAR)* with financial support from the *European Union (EU)* through the project "Improving animal disease surveillance in support of trade in IGAD Member States" undertook to develop a regional strategy within the framework of the continental strategy from which national programmes would be drawn and customized. This strategy was developed through a consultative process spearheaded by a consultant and two working groups whose membership included representatives of MS, IGAD, AU-IBAR, the *Pan African Veterinary Vaccine Centre (AU-PANVAC),* OIE, FAO and the *International Livestock Research Institute (ILRI)*. The strategy is intended to be a living document. In tandem, the policies and legislation to deliver the strategy will need regular review to ensure that they remain fit for the purpose.

In this regard, I wish to thank the IGAD Member States, ICPALD, AU-IBAR, AU-PANVAC, FAO-ECTAD, FAO Ethiopia, and ILRI for their commitment, time and material support, and European Commission for their financial support. I am also grateful to Dr. Dickens Malanga Chibeu, the consultant who spearheaded the consultative process, members of the regional PPR technical committee and regional PPR Control Coordination Committee.

Dr. Solomon Munyua

Ag. ICPALD, Director

1. INTRODUCTION

1.1 Purpose and scope

This document describes a regional framework for the control and eradication of *peste des petits ruminants (PPR)* in the *Intergovernmental Authority on Development (IGAD) region*. It also provides for the improvement of small ruminant animal health service delivery systems as a springboard for controlling other country specific priority small ruminant diseases (SRDs) such as *sheep and goat pox (SGP)*, *contagious caprine pleuro-pneumonia (CCPP)*, brucellosis and endo and ecto-parasites.

1.2 Approach

Since PPR is a trans-boundary disease that is endemic in nearly all the IGAD member countries, its control and eventual eradication will require a phased and regionally co-ordinated approach. However, the responsibility for implementing disease control programmes in the different countries directly remains with the respective Governments.

2. BACKGROUND ON IGAD REGION

2.1 The IGAD Region

The IGAD region consists of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. The region covers 5,209,722 km^2 of which about 35% is agricultural and forest land. The rest is arid and semi-arid. The region has a human population of 238,990,000 with a 2013 average *Gross Development Product (GDP), Purchasing Power Parity (PPP)* per capita of USD 1,533, varying from USD 488 in Eritrea to USD 2,730 in Sudan. [1] The livestock resource base in the region is estimated at more than 520 million of which about 35% are small ruminants.[2]

2.2 Significance of livestock

2.2.1 Contribution of livestock to regional economy

The major economic driver of the IGAD MS is agriculture. Livestock in the IGAD region contributes an estimated 57% of the regional *Agricultural Gross Domestic Product (AGDP)*. Although Africa is a net importer of livestock products, the IGAD region is the only region on the continent that is self-sufficient in its meat requirements. The region is the leading exporter of live animals, contributing 42% of the continent's exports. Small ruminants contribute more than 80% of the livestock exports from the IGAD region.[3] Livestock trade connects countries through intra-regional markets and improvement of this aspect is considered a key driver for economic development and integration in the region.

2.2.2 Contribution of livestock to national economies

At the MS level, livestock contribution to the AGDP in the year 2000 was estimated at 87.4% in Djibouti; 56.5% in Eritrea; 32.5% in Ethiopia; 52.4% in Kenya; 88.2% in Somalia; 61.8% in Sudan (inclusive of Sudan and South Sudan) and 19.8% in Uganda. The share of livestock in the overall GDP (%) was estimated as 3.1% in Djibouti; 9.7% in Eritrea; 17% in Ethiopia; 10.4% in Kenya; 23% in Sudan

1 *http://www.tradingeconomics.com/countries (World Bank)*
2 *FAOSTAT 2013.*
3 *FAO Global Perspective Studies Unit*

and 8.1% in Uganda.[4] In 2012, there was an estimated increase of 350% above official 2009 estimates of the contribution of livestock to agricultural GDP in Ethiopia;[5] 18% in Sudan;[6] 87% in Uganda;[7] and 150% in Kenya.[8] Using official statistics compiled before the independence of South Sudan, livestock has in recent years consistently provided more than 60% of the estimated value added to the agricultural sector in Sudan, and is a substantially more important contributor to agricultural GDP than crop farming.[9] The livestock share of exports in Sudan has considerably grown from less than 10% in the 1960s to just less than 50% in 2012.

2.2.3 Role of small ruminants in livelihoods support

Livestock play a major role in the livelihoods of over 70% of the population in the IGAD. With an estimated 242 million small ruminants raised in the IGAD Region[10], the importance of small ruminant production as a form of commercial livestock production can hardly be underestimated. Small ruminants provide with a vast range of products and services, including milk, meat, skins, and wool throughout the year. They are cheaper to buy compared to larger animals, they reproduce rapidly and are easily sold for cash or exchanged for other staples. In addition to this, they adapt well to pastoralist and agro-pastoralist ecological systems common in the Horn of Africa.[11] Due to this, women and disadvantaged households often rely on them. They are an important means to rebuild herds after environmental and political shocks. Thus, small ruminants are an important component of pastoral coping mechanism.

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4 *Vivien Knips, 2004. Livestock Sector Report Horn of Africa: Review of the Livestock Sector in the Horn of Africa (IGAD Countries)*

5 *Roy Behnke IGAD LPI Working Paper No. 01 – 12, The Contribution of Livestock to the Ethiopian Economy*

6 *IGAD LPI Working Paper No. 01 – 12, The Contribution of Livestock to the Sudanese Economy*

7 *Roy Behnke and Margaret Nakirya (2012).The Contribution of Livestock to the Ugandan Economy (IGAD LPI Working Paper No. 02 – 12) 2012.*

8 *Roy Behnke IGAD LPI Working Paper No. 01 – 12, The Contribution of Livestock to the Kenyan Economy*

9 *Roy Behnke IGAD LPI Working Paper No. 01 – 12, The Contribution of Livestock to the Sudanese Economy*

10 *FAO STAT 2013*

11 *FAO (2012) Taming the "goat plague" in the Horn of Africa. http://www.fao.org/africa/sfe/sfe-news/detail-news/en/c/161345/?no_cache=1*

3. RATIONALE FOR THE REGIONAL STRATEGY

3.1 Peste des Petits Ruminants

3.1.1 Disease epidemiology

Peste des petits ruminants (PPR), or small ruminant plague, is a viral disease primarily affecting goats and sheep. The PPR virus is also known to cause fatal disease in camels[12] and asymptomatic infection in cattle and wildlife. The disease was first described in 1942 by Gargadennec and Lalanne when they investigated a previously unreported syndrome in sheep and goats in Côte d'Ivoire. Because of its clinical and pathological resemblance to rinderpest (RP) or *peste bovine* in French, they called the disease *'peste des petits ruminants'* (PPR). It was soon recognized in other French West African colonies such as Dahomey (now Benin) and Senegal. More than a decade later, workers in Nigeria studied a syndrome that occurred primarily in goats and was variously named stomatitis-pneumoenteritis-complex, pseudo-rinderpest, or *'kata'*. The disease was subsequently recognized in Central and Eastern Africa, the Middle East, South Asia in 1970s, 80s and 90s respectively. Thereafter it appeared in Central Asia and most recently (2010) it entered China. In Africa today, PPR is widespread and has been confirmed as far south as Angola (2012) and Democratic Republic of Congo (DRC) in 2005, Kenya (2006), Uganda (2007), and Tanzania (2008) and as far north as Morocco (2008), Tunisia and Algeria (2011).[13] The Comoros were infected in January 2012. All the IGAD Member States have reported PPR except for Djibouti. [14, 15]

The sero-prevalence levels of PPR are usually difficult to interpret as antibody levels are compounded by ongoing vaccination campaigns and the epidemiological setting (endemic or epizootic). In general, sheep are relatively more resistant to the disease than goats. Several serological surveys have recorded higher prevalence of antibody in sheep than in goats, a fact attributable to higher case mortality rates in goats. In Ethiopia, sero-

12 *Abdelmalik Ibrahim Khakafalla et al, Acta tropica . 11/2010; 116(2)*

13 *World Organisation for Animal Health (OIE), WAHID (2014). http://www.oie.int/wahis_2/public/wahid.php/Wahidhome/Home. Consulted on August 26, 2014.*

14 *World Organisation for Animal Health (OIE), WAHID (2014). http://www.oie.int/wahis_2/public/wahid.php/Wahidhome/Home. Consulted on August 26, 2014.*

15 *African Union (AU-IBAR) ARIS Database (2014). Consulted on August 26, 2014.*

prevalence is very heterogeneous across regions and even more across *weredas*, with sero-prevalence rates ranging from 0% to 52.5% in 2008.[16] Following the historical reports of mysterious illnesses and deaths in goats in the Karamoja sub-region of Uganda in April, 2007 and subsequent confirmation of PPR in July, 2007; a serological survey reported an indicative caprine PPRV exposure rate of 63.2% by 2009 in the 4 affected districts of the sub-region.[17]

Morbidity and mortality rates in epizootic outbreaks are often very high. For instance, in Nigeria, mortality rates ranging from 20 to over 90 per cent have frequently been reported, whilst rates of only 4 to 5 per cent were recorded in what are considered to be a true endemic area.[18]

In wildlife, the scientific consensus at this point in time is that wildlife species might serve as a sentinel for PPRV circulation in domestic animals and that the role of buffalo or other species (as reservoir, or as vector) needs further investigation. There is indeed some evidence that buffalo can carry and transmit virus based on PCR and evidence of sero-conversion at herd level.

3.1.2 Disease impacts

As a disease of small ruminants, the severity of PPR impacts depends on the complex roles played by small ruminants and epidemiological status of the disease. The socio-economic losses associated with PPR mainly result from the high case fatality rates. In naïve population, such as was the case in the 2006–2011 outbreaks in Kenya, Tanzania, Uganda, and DR Congo, morbidity as high as 73 % was reported with severe impacts on livelihoods.[19] The outbreaks resulted in better-off households slipping into poverty, while the poor and very poor became impoverished. In Kenya, an estimated livestock asset loss due to 2 years of PPR virus circulation ranged from 52 to 68 %

16 *Waret-Szkuta, A.; Roger, F.; Chavernac, R.; Yigezu, L.; Libeau, G.; Pfeiffer, D.U. & Guitián, J. (2008) Peste des Petits Ruminants (PPR) in Ethiopia: Analysis of a national serological survey. BMC Veterinary Research 2008, 4:34*

17 *Mulindwa, B.; Ruhweza, S.P.; Ayebazibwe, C.; Mwiine, F.N.; Muhanguzi, D. & Olaho-Mukani, W. (2011) Peste des Petits Ruminants serological survey in Karamoja sub region of Uganda by competitive ELISA. Vet World. 2011; 4(4): 149-152*

18 *Rossiter, P.B. Peste des petits ruminants (2004). In : Coetzer, J. A. W., Tustin, R. C. (eds). 2004. Infectious Diseases of Livestock, 2nd edn, Oxford University Press, Cape Town.*

19 *FAO (2009) The impact of peste des petits ruminant on livelihoods in the arid and semi-arid lands of Kenya. ECTAD-Nairobi Working Paper 2012*

depending on the wealth categories. The disease caused *inter alia* shifts in food consumption, food availability, and income sources and in the process affected food security particularly of the poor and marginalized segments of society. The livestock-derived income dropped by 99 % for poor and very poor households, by 55 % for the middle wealth groups and 42 % among the well-off households. Most households were unable to maintain a sustainable flock size and without mitigation measures being implemented, many were expected to drop out from pastoralism, in an environment that supports very little else in terms of livelihoods; resulting in increased long-term dependency on food aid and a drain on the national resources. In Ethiopia, FAO estimated that losses associated with PPR reached an average of USD 375 per flock per year, for an average flock size of 143 small ruminants (an average loss of more than USD 2 per animal).

High PPR impacts are also reported outside the IGAD region. In Nigeria, an outbreak that occurred in 1979 killed 10-20% of the national small ruminant flock and losses were estimated at USD 75 million. Ahmed Salem El Arbi[20] in Mauritania estimated the economic losses associated with PPR in an endemic setting, characterized by high morbidity and low mortality at USD 5 million for a population of 15 million small ruminants, which is around USD 0.3 per head. The losses were due to mortalities, abortions and production losses, as well as control measures. Cost benefits analysis of PPR control outside IGAD region, show high returns to investment. For example vaccination of 89% of the stock in Mauritania may reduce the losses by 86% to a mere USD 700,000, mostly representing the cost of the vaccine. A cost benefit analysis conducted in Niger in 1993 concluded that an investment of USD 2 million on vaccination would generate USD 24 million in return for a five year PPR vaccination programme.

Impacts of PPR on post producer value addition activities in local marketing chains are less compared to productivity losses. It has been estimated that 10% of the total impact of the disease is on trade and public expenditure and 90% on herd productivity. However, in cases where internal small ruminant trade is significant, trade impacts could be higher than productivity losses particularly due to spillover in the connected sectors of the economy.

20 *FAO (2013) Enquête sur l'impact économique de la PPR en Mauritanie. Ahmed Salem El Arbi, consultant. TCP/RAB/3302. FAO SNE Tunis.*

From experience of the trade bans imposed by Middle-Eastern countries on livestock and livestock products from the Horn of Africa due to two successive *Rift Valley Fever (RVF)* outbreaks in 1998-1999 and 2000-2002, the impact of PPR on international small ruminant trade could be substantial. Small ruminants contribute more than 80% of the livestock export from the IGAD region.[21] Prior to the bans, the size of the export market from Somalia to Saudi Arabia and the United Arab Emirates was estimated at around USD 600 million, with Saudi Arabia representing 66% of the total. The bans led to the collapse of the main Somali livestock market. Losses for the livestock industry were estimated at USD 109 million and USD 326 million, for the first and second ban respectively. The government also directly incurred a loss of USD 45 million from foregone export taxes and docking fees. At the same time, livestock exporters lost a net cumulative profit of USD 330 million, whereas producers estimated their annual losses at over USD 8 million. Hence, the successive RVF-related trade bans impacted the employment rate, the public treasury, the exchange rate of national currency and thus, the price of imported goods, inducing a general inflationary pressure and important socio-economic upheavals. Other impacts originated in the closure of markets inside East Africa as part of national disease control strategies. In Kenya, the closure of the Garissa Market, which is a major outlet for Somali and Ethiopian livestock, resulted in a more than 25% decrease in the price of cattle inducing a total loss of USD 10 million for the value chain.[22] Whereas PPR, CCPP, SGP and brucellosis individually or combined may not currently affect trade in the same way, the benefits of maintaining the inter-regional trade are considerable and can only benefit from a better control of livestock diseases.

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21 *Nicolas Antoine–Moussiaux, Véronique Chevalier, Marisa Peyre, Shaif Abdo Salem Abdullah, Pascal Bonnet & François Roger (2012) Economic impact of RVF outbreaks on trade within and between East Africa and the Middle East. In : Proceedings of the GF-TADs (FAO & OIE) inter-regional conference on Rift Valley Fever in the Middle East and the Horn of Africa : challenges, prevention and control, November 12 - 15th, 2012, Mombasa, Kenya. English. OIE, Paris.*

22 *Nicolas Antoine–Moussiaux, Véronique Chevalier, Marisa Peyre, Shaif Abdo Salem Abdullah, Pascal Bonnet & François Roger (2012) Economic impact of RVF outbreaks on trade within and between East Africa and the Middle East. In : Proceedings of the GF-TADs (FAO & OIE) inter-regional conference on Rift Valley Fever in the Middle East and the Horn of Africa : challenges, prevention and control, November 12 - 15th, 2012, Mombasa, Kenya. English. OIE, Paris.*

3.1.3 Prospects for control / eradication

The etiologic agent of PPR is a member of the *Morbillivirus genus* and a close relative of *rinderpest (RP)* virus, a disease of cattle that has recently been globally eradicated. The eradication of RP was aided by features of the disease and available tools that contributed to successful control. There was only one sero-type of the virus and single doses of live attenuated RP vaccines conferred life-long protection against all strains of the virus. There was no carrier state: infection was short lived and resulted in either death or life-long immunity in recovered animals. The virus did not survive for long outside the animal host: it was readily destroyed by heat, sunlight, chemicals and disinfectants. Thus, the virus needed a continuous source of new susceptible animals to survive. Proven diagnostic tests were available.

PPR shares all these characteristics. At the level of animal health institutions, the eradication of RP has created an increased awareness and capacity for coordinated control interventions based upon sound epidemiological approaches that are driven by socio-economic incentives. In addition, considerable progress was made to enhance surveillance capacities, regulatory environments as well as private sector and community participation. Thus, the existing technical tools are sufficient to enable the progressive control of PPR to commence.

3.1.4 Challenges in control / eradication

Whereas from a technical point of view, effective and efficient tools are available for the control and indeed, eradication of PPR from the Horn of Africa, many challenges remain including:[23] [24]

- The need for improved knowledge on the epidemiology of PPR including its transmissibility (R_0) in different population settings and host species;
- The need for more socio-economic knowledge (impact and incentives for surveillance and control) in order to inform the progressive control strategy;

23 *Second Global PPR Research Alliance Meeting, April 2013, Nairobi Kenya*

24 *Online conference "Establishment of a PPR Global Research and Expertise Network" or PPR-GREN, organised by FAO and OIE and moderated by Dr. Paul Rossiter, for which the proceedings will be published soon.*

- The development of improved tools such as thermo-stable vaccines and pen-side diagnostics;
- The imperative of ensuring timely access to quality vaccines;
- The need to build technical and institutional capacities in all affected countries in the IGAD region, in particular training on various aspects of PPR disease recognition, sampling, diagnosis, epidemiology and control;
- Small ruminant stakeholders are less organised and more often than not operate informally and with less clout *vis a vis* other livestock sub-sectors.
- The need for targeted vaccination in time and space at critical control points to achieve sufficient flock immunity to interrupt virus transmission;
- A larger proportion of small ruminant population in the region is highly mobile
- The coordination of public-private-partnership (PPP) and commercial approach to mobilize private sector delivery agents and investment in vaccination campaigns;
- The fact that in PPR endemic situations or where there are long intervals of time between epizootics, the awareness of farmers about the disease may fade over time, especially where communication and public awareness programmes default leading to poor acceptance of PPR vaccination campaigns by farmers, most of whom operate according to a low input – low output production system leaving little margin for cost-recovery in vaccination campaigns;
- The challenges posed by mild forms of PPR that are the norm in endemic situations;
- The bigger burden of animal diseases as a whole (other SRDs);
- The knowledge gaps in the distribution and level of occurrence of some of the diseases (CCPP) and their impact;

- Legal framework to tackle PPR as a notifiable disease as well as effectively enforce control measures including stamping out, movement control, vaccination and bio-security.;
- The need to secure and sustain adequate resources (finance, logistical and manpower etc);
- The ever-evolving security situation in some regions.

3.3 Strategy formulation process

Against the foregoing, a consultative workshop on PPR held in Addis Ababa in September 2012 within the framework of "*Support the Horn of Africa Resilience (SHARE)* initiative[25]" identified the need to develop a regional framework for the progressive control of PPR and other small ruminant diseases with a view to harmonizing disease control programmes among beneficiary countries. Subsequently, IGAD and *African Union- Inter African Bureau for Animal Resource (AU-IBAR)* with financial support from the *European Union (EU)* through the project "Improving animal disease surveillance in support of trade in IGAD Member States" undertook to develop a regional strategy within the framework of the continental strategy[26] from which national programmes would be drawn and customized. The ongoing effort by the *Food and Agriculture Organisation of the United Nations* (FAO) and the *World Organisation for Animal Health* (OIE) in formulating a global strategy for the progressive control of PPR within the framework of GF-TADS was to be another point of reference. Going forward, this strategy was developed through a consultative process spearheaded by a consultant and two working groups[27] whose membership included representatives of MS, IGAD, AU-IBAR, the *Pan African Veterinary Vaccine Centre (AU-PANVAC)*, OIE, FAO and the *International Livestock Research Institute (ILRI)*. The strategy is intended to be a living document. In tandem, the policies and legislation to deliver the strategy will need regular review to ensure that they remain fit for the purpose.

25 *The SHARE Initiative facilitates the progressive control of PPR and other priority small ruminant diseases in pastoral areas of Djibouti, Ethiopia, Kenya and Somalia.*

26 *The Pan African Strategy for the Progressive Control of Peste des Petits Ruminants, developed by AU-IBAR and ILRI in 2010*

27 *Regional PPR Control Coordination Committee (CCC) and Technical Experts Committee (TEC)*

4. STRATEGIC FIT

The IGAD regional framework is adapted from the continental and global strategies (the latter being still in the making) and is consistent with the following:

- The *Comprehensive African Agriculture Development Programme* (CAADP)
- The Africa pastoral policy framework
- The Pan African Programme for the Control of PPR and other Small ruminant diseases endorsed by the 9th Conference of Ministers responsible for Animal resources in Africa.
- *Global Framework for the progressive control of TADs* (GF-TADs)
- The IGAD regional policy framework for animal health and trade

5. OBJECTIVES AND COMPONENTS

5.1 Overall objective

The overall objective of this strategy is to contribute to food security, nutrition, poverty alleviation and resilience of livestock-dependent communities in the IGAD region.

5.2 Specific objective

The specific objective of this strategy is to progressively control and eradicate PPR in the IGAD region in order to enhance small ruminant productivity and production, and improve trade.

5.3 Main components

a) Progressive control and eradication of PPR

b) Improvement of small ruminant health service delivery system

6. GUIDING PRINCIPLES

6.1 Phased approach

Given the endemic status of PPR in the region, a phased approach is preferred in order to gain a better understanding of the epidemiology and drivers for the disease, allowing for the sequential application of appropriate control measures. Thus, embracing value chain and risk analysis tools, the approach will culminate in a series of stages targeting certain geographic areas, ecosystems or farming systems, giving priority to the most affected flocks and species or those at high risk.

6.2 Adaptive management

An adaptive management approach that maximizes the uptake of lessons learnt during the implementation of the strategy will be taken. The technical and institutional strategy will be updated regularly to ensure maximum relevance to current knowledge and experience.

6.3 Enabling research

In line with the adaptive management approach, a number of learning and research activities will be undertaken to enhance the institutional capacity, technical tools and ability to target interventions. The socio-economic context in which PPR progressive control is to be undertaken will require up-dating so that interventions are delivered in a manner that allows socio-economic forces to effectively drive the programme to a successful and sustainable outcome. Thus, the control programme will be knowledge and technology-driven as it will depend on emerging information and knowledge coming out of research activities and lessons learned from implementation of the programme. It will capture and incorporate new technologies as they become available such as improved diagnostics and vaccines (thermostable and combined vaccines) to enhance and support the control programme.

6.4 Self sustaining mechanisms for animal health services delivery

Animal health service delivery includes a range of activities to prevent, detect and mitigate diseases. From this perspective, animal health service delivery for small ruminants includes surveillance, diagnostics, treatment, vaccination

and bio-security actions in order to reduce the risk of and contain outbreaks of PPR and other SRDs. The global eradication of rinderpest provided a tangible goal that helped to drive innovations in the delivery of animal health services. These innovations included new partnerships to deliver surveillance and control services under the overall management and supervision of veterinary authorities and should continue as part of the progressive control of PPR. Thus, control programmes will only be effective and sustainable if they are based on efficient veterinary services that comply with the quality standards described in Chapters 3.1 and 3.2 of the OIE Terrestrial Animal Health Code and on strong partnership between stakeholders in both public and private sectors.

6.5 Regional coordination

One of the lessons learnt from the global eradication of rinderpest is that effective coordination adds value to animal health investment by channelling otherwise divergent activities towards a coherent, sustainable, and focused objective. The role of regional coordination will be to convene inclusive dialogue to define and refine strategies, harmonize approaches within the region and with other regions and assist in the process of governance including the development of policies, regulations and legislation. Thus, coordination will entail knowledge management and information exchange; guidance on monitoring and evaluation activities; and strong action to advocate for programme support in technical, political and financial terms at all levels. A sense of ownership among stakeholders will strongly contribute to the success of coordinated programmes. Above all, the strategy will be implemented in the context of continental and global PPR frameworks and OIE principles, standards and guidelines.

6.6 Strategy tailored to address other priority SRDs at national level

Depending on country priority, PPR control and eradication will be combined with other control activities including vaccination against CCPP, SGP, and brucellosis and the provision of therapeutic services for the control of ecto- and endo-parasites and other endemic diseases impacting on small ruminant productivity. This will increase efficiency, broaden impact and encourage greater participation. The choice of the additional disease(s) will be based on the needs of each country.

6.7 *Ecosystem approach*

An ecosystem approach with enhanced coordination and harmonization of activities together with regular exchange of information between veterinary services of neighbouring countries as was the case with the AU-IBAR *Somali Ecosystem Rinderpest Eradication Coordination Unit* (SERECU) project is to be encouraged. For the *ad hoc,* an ecosystem is a defined geographical area/ zone occupied by one or more closely related ethnic communities and their livestock and adjacent areas into which these animals are moved for pasture or trade purposes. The livestock population in such an area therefore constitutes a continuum that is epidemiologically uniform, regardless of the national boundaries. Possible ecosystems include the Somali Ecosystem (Djibouti, Ethiopia, Kenya and Somalia), Karamoja Ecosystem (Ethiopia, Kenya, South Sudan and Uganda), and Nile Ecosystem (Ethiopia, South Sudan and Sudan). Other ecosystems for consideration are those that are shared with other Regional Economic Communities (RECs) such as the Maasai Ecosystem (Kenya and Tanzania) and Darfur Ecosystem (Sudan, South Sudan, Central Africa Republic and Chad).

7. DISEASE CONTROL TOOLS AND MEASURES

The tools and measures that will be used for implementing the two components of the strategy are discussed below.

7.1 Progressive control and eradication of PPR

The PPR progressive control and eradication framework is a step-wise approach that integrates four sequential phases in line with the *Pan-African Programme for the Progressive Control of PPR* (PCP-PPR). It uses a risk-reduction approach in which activities at each stage are appropriate to mitigate the risk of PPR in small ruminants. Before moving from lower to higher stages, it is essential to fulfil the requirements of the previous stage related to: i) an improved knowledge of the epidemiology of the infection in the target country ii) initial implementation of the targeted mitigation and control measures towards specific risk groups iii) extension of mitigation and control measures at population level. The four phases are:

- Epidemiologic and socio-economic assessment
- Control
- Eradication
- Verification of absence of PPR and OIE accreditation of PPR free status

Phase 1: Epidemiologic and socio-economic assessment

The objective of Phase 1 is to gain a better understanding of the PPR epidemiological situation within the local socio economic context. To achieve this, the following activities will be necessary:

- Analyze the existing disease surveillance data and information from different sources and identify gaps in epidemiological data and information.
- Undertake further epidemiological studies to obtain the additional requisite data and information.
- Concurrently conduct baseline studies to update the socio-economic impacts of the disease.

- Analyze epidemiological and socio-economic data to develop risk maps as a basis for zoning the country to facilitate appropriate disease control interventions in the next phase (Phase 2.)
- Develop an effective communication strategy to assure stakeholder participation.

This phase will last 2- 3 years.

Phase 2: Control

The objective of this phase will be to reduce the incidence of PPR in endemic foci and other high risk populations/ zones and prevent further spread into free areas on the basis of delineation conducted in the previous phase. This will be achieved through:

- Targeted vaccinations in high risk zones. Depending on the epidemiological situation, the targeted vaccinations should be carried out in a concise time period to achieve high flock immunity.
- Post vaccination sero-monitoring carried out to assess the effectiveness of the vaccinations.
- In the free areas, the main focus will be to prevent incursions and maintain freedom from PPR through sanitary measures and surveillance.
- Enhance the participation of producers and other stakeholders by means of joint programmes, communication and operational funding.
- Raise awareness among all value chain actors on sanitary measures.
- Improve animal health service delivery systems and make use of improved technologies for disease detection and control (including rapid pen-side diagnostic tests, quality assured thermostable PPR vaccines and the combination of PPR control interventions with interventions for other priority diseases of small ruminants) in order to enhance the attainment of the objective of this phase.
- Use cumulative surveillance data to revise the risk maps and concurrently refine the targeting of control interventions in order to embark on eradication.

This phase will last 2-3 years.

Phase 3: Eradication

Phase 3 will consolidate the gains from the previous phase leading to a progressive reduction in outbreak incidence (in previously high risk zones) and roll-back of the disease/ expansion of the disease free zone culminating in eradication of PPR virus. Overall, the phase will focus on enhancing disease surveillance and early detection and response interventions in areas where the disease will continue to persist. For each cluster of infection or outbreak, a plausible explanation should be found through outbreak tracing and is followed up by immediate measures and post-outbreak surveillance, and review of the impact of control measures (vaccination, bio-security).

Activities during this phase will include bio-security measures, community awareness campaigns, surveillance including participatory disease surveillance and sentinel surveillance, and development and activation of emergency preparedness and contingency plans. Others will include further development of an enabling environment for disease control activities and appropriate interventions for other SRDs.

To move to the phase 4, there should be a body of evidence that PPR virus is not circulating endemically in domestic small ruminants within the country/ zone. Each new outbreak is shown to originate outside of the country or zone, not originate within. At this stage, a MS may apply to the OIE for the endorsement of its national PPR control programme. This phase will last 2-3 years.

Phase 4: Verification of eradication and OIE accreditation of PPR free status

The aim of this phase will be to verify eradication of PPR leading to OIE accreditation of freedom for a country or zone (*OIE Terrestrial Code* chapter 14.7.- Infection with *peste des petits ruminants* virus). Thus, entry to this phase could be on a countrywide basis following full roll-back in phase 3 (whole country is presumed to be free) or on zonal basis (where distinct free and infected zones exist). The phase will entail intensified surveillance activities including random surveys for proof of absence of PPR. Emergency preparedness and contingency planning will be further strengthened.

This phase will last 4-6 years.

7.2 Regional roadmap

A regional roadmap is essential because it will assist countries to determine their stage in order to demonstrate how the region can move forward to eliminate PPR. From the outset, all the IGAD MS except Djibouti will implement all the four phases, but the actual duration in each phase by a particular country will be informed by the epidemiological and socio-ecological considerations in each MS. It will not be necessary for historically free countries to implement the lower phases, but could join in phase 4 or 3 and follow OIE guideline and procedures for attaining historical freedom from PPR. Regional roadmap meetings will be useful for exchange of information, coordination, and stimulation, reviewing of progress and addressing challenges.

7.3 Value chain and risk analysis

Understanding the value chain of small ruminants will help in the control and eradication of PPR. Value chain analysis will entail understanding the livestock production system and how stakeholders operate and the decisions they make within the livestock production systems, while risk analysis will seek to evaluate disease risks within the livestock production systems and the measures required to reduce those risks. Already, small ruminant value chains in the IGAD region have been identified through different studies. The available information can assist in identifying critical control points and the subsequent design of appropriate interventions. Where gaps exist, further epidemiological studies and risk assessments should be conducted to inform interventions. Thus, the combination of value chain (mapping and economic) and qualitative epidemiological risk analysis will be useful in the planning and implementation of PPR control and eradication programmes.

7.4 Epidemiological surveillance

PPR control and eradication will be underpinned by an effective epidemiological surveillance system that provides guidance on priorities and targets for the application of interventions at both national and regional levels. At the national level, the surveillance system should consist of general surveillance activities (figure 1) reinforced by the provisions of Chapter 1.1 on Notification of Disease and Epidemiological Information and Chapter 1.4 on

Animal Health Surveillance in the *OIE Terrestrial Code* as well as PPR specific surveillance guidelines.

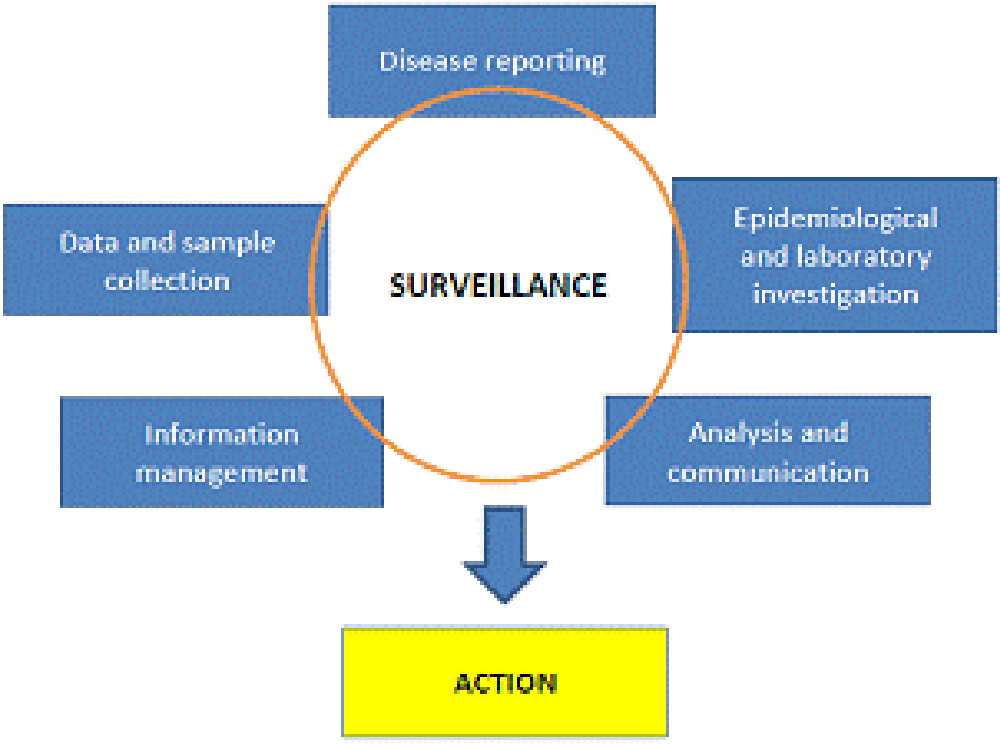

Figure 1: Essential components of a surveillance system

Strengthening the national epidemiological capabilities and capacity to design appropriate epidemiological studies to promote more extensive use of the epidemiological methods will be necessary. A central epidemiology unit with a strong laboratory, responsible for collecting, analysing and disseminating the information generated through the implementation of field and laboratory activities is preferred.

Countries will share information during regional roadmap meetings as well as through the existing *Eastern Africa Regional Epidemiology Network (EAREN).*

7.5 Diagnostic tests

Effective and reliable laboratory diagnostics are indispensable at the regional level. However, basic capacities on serological diagnosis are essential in all countries. Out of the eight IGAD Member States, four (Ethiopia, Kenya, Sudan

and Uganda) have full capacities for PPR diagnosis. It is expected that these laboratories will provide regional support in PPR diagnosis and training. The standards that should be applied to diagnostic tests and vaccines should be those in the latest edition of the *OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals.* Networks for standardized diagnostics were a significant contributor to the success of rinderpest eradication and will be replicated for PPR. Thus, networking should promote the use of bench-marked tests and allow data to be compared with confidence across diverse ecological zones and production systems. This will add value to surveillance data and facilitate risk-based targeting. The existing global network of OIE/FAO *Reference Laboratories (RLs)* and *Reference Centres (RCs)* for PPR will play a major role in supporting regional and national networks in terms of additional expertise and finance. These networks should include other SRDs in their activities as appropriate.

7.6 Vaccines, vaccination and sero-monitoring

Vaccination programmes for PPR will utilize vaccines produced as per the *OIE Terrestrial Manual.* It will be important to ensure that only vaccines that have passed quality tests at the AU-PANVAC are used in the control programmes.

Only PPR vaccine produced from the Nigeria 75/1 strain will be used. This vaccine has been shown to be safe and effective. Currently, thermostable PPR vaccine is not commercially available. Adoption of thermostable vaccine manufacturing technology for commercial PPR vaccine production will enable greater coverage.

There is a need to assess the vaccine requirements for the IGAD region *vis a vis* the adopted vaccination strategy based on risk-targeting. Thus, to achieve eradication given the large size of small ruminant populations in Africa and the rates at which these populations replace themselves places high demands on vaccination programmes. As about 50% of a small ruminant population is new each year, flock immunity is unlikely to increase using a strategy of repeated annual vaccination campaigns. Large numbers of vaccinations may be required even in targeted programmes and these vaccinations may need to be delivered in a concise time period to achieve high flock immunity. Considering that the small ruminant population is estimated at 242 million in the IGAD region, and considering the current status of the disease, it is

expected that 45% of the population will be vaccinated twice during the eradication programme.

To evaluate the efficacy of the vaccination, countries are encouraged to conduct sero-monitoring. Currently there are two tests available and AU-PANVAC is developing two more tests. It is important that countries use OIE certified tests. IGAD shall harmonize the tools that will be used in sero-monitoring of PPR vaccinations.

7.7 Multi-disease approach

PPR vaccination programmes should be combined as much as possible with vaccinations against other national priority small ruminant diseases. This is particularly important in the case of SGP and brucellosis where vaccination or recovery from natural infection results in life-long immunity. On the other hand, even though vaccination against CCPP protects vaccinated goats from clinical disease for only one year, its epidemiology resembles that of PPR, making it an ideal candidate for a combined vaccination campaign.

An inactivated CCPP vaccine produced in Kenya with saponin as an adjuvant is recommended for CCPP control. The vaccine protects vaccinated goats from clinical disease for only one year. Similarly for SGP, the Kenya strain is recommended. In the case of brucellosis, vaccination should focus on the young (3-6 months) using *Brucella melitensis* REV1. A single dose provides life time prevention even though adults may require a booster, but with a reduced dose.

Prophylactic and curative treatment for external and internal parasites should be considered as an integral part of small ruminant health programme.

7.8 Communication and awareness

Effective communication with stakeholders for awareness creation will be crucial to the success of controlling and eradicating PPR. The line Ministries of Livestock will work closely with IGAD-ICPALD to formulate knowledge management and communications plan for implementation of the respective national strategies drawing guidance from the ICPALD information sharing, learning and knowledge generation strategy and existing related national strategies. Overall, awareness will aim to:

- Enhance understanding among livestock keepers, traders, veterinary services and policy makers of their respective roles;
- Create adequate incentives and partnerships for service delivery by enhancing public-private- community veterinary service delivery while promoting effective participation of the community (livestock-owners) and the private sector.

Member States will utilize the most appropriate media, formats and languages at different levels to ensure effective communication on the strategy and its implementation.

7.9 Standard methods and procedures

In order to ensure harmony and uniformity, countries are urged to use the standard methods and procedures that have been developed for PPR under the *Standard Methods and Procedures – Animal Health (SMP-AH) project* for the *Greater Horn of Africa (GHoA).*

7.10 Research

In line with the adaptive management approach, a number of learning and specific research and update activities will be undertaken to enhance the institutional capacities, technical tools and ability to target interventions. Underpinning this is the need for a clear and up-to-date understanding of the socio-economic context in which PPR progressive control and the control of other SRDs are being undertaken so that interventions are delivered in a manner that allows socio-economic forces to effectively drive the programme to a successful, sustainable outcome.

Targeted research will be necessary in the following areas:

- Economic analysis of the impacts, benefit-cost of progressive control, cost-effectiveness of control options, and incentives for economic contribution and participation
- Research on the epidemiology of PPR to better understand transmission dynamics, the different roles of wildlife and livestock species, production systems, ecosystems and pathogen lineages with the goal of identifying critical points and optimal methods of intervention at critical control points.

- Action research and policy dialogue on public-private-community partnerships to deliver control and surveillance services. Questions include the best use of community animal health service delivery systems (including Community animal health workers), gender issues, and the role of producers' associations, non-governmental organizations or other civil society actors in service delivery. The goal is to develop and test new business models for the sustained, commercialized delivery of disease control services

- Good diagnostic tools exist. However, refinement and elaboration of diagnostics will add value to the range of existing tools. Work to define minimal performance characteristics of diagnostic assays and establish bench-marking procedures for diagnostic networks is needed. Standardization of tools should include tests for confirming outbreaks, tracking molecular epidemiology, supporting diagnostics for the field (pen-side tests) and sero-monitoring of vaccinated flocks.

- The currently recognized vaccine based on the Nigeria 75/1 strain of attenuated PPR virus has been found to be safe and effective in both research trials and during widespread field use. This technology is more than sufficient for the initiation of progressive control activities. However, improvements in vaccine thermostability and the ability to distinguish between animals immune through vaccination and those that are immune due to recovery from natural infection would be advantageous.

    - Several approaches to thermostable vaccines have been described to the level of proof of concept. More work is needed to compare alternative approaches and to develop a full database on thermostability as an evidence base to support the confident roll out of a thermostable vaccine on a broad scale.

    - Research to develop a marked vaccine and complementary serological tests as part of a DIVA strategy for vaccines based on the Nigeria 75/1 strain will be supported.

    - Research to develop combined vaccines for the control of PPR and other priority SRDs.

Key research stakeholders in PPR and morbillivirus research are the reference laboratories recognized by the OIE, the FAO, ILRI, the Joint Division of FAO and the *International Atomic Energy Agency* (IAEA), *AU-PANVAC, National Diagnostic Laboratories and National Agricultural Research Services (NARS)* and academic institutions where appropriate. As in the past, the role of *non-governmental organizations (NGOs)* as a source of innovation and a valuable partner for action research and field validation of new approaches should continue.

7.11 Public private partnerships

Public Private Partnerships (PPPs) will be promoted in order to implement disease specific prevention and control strategies, with clearly defined roles and responsibilities for each partner. Leadership of the animal health system should remain in the hands of the public services with, when appropriate, delegation of public tasks to the private sector. Thus, national services are encouraged to work with private practitioners, veterinary associations, community-based organizations/programmes, producers and producer associations, NGOs as well as all other value chain stakeholders and trading partners to implement the strategy.

7.12 Capacity building

Institutional capacity building is important in the development of systems and infrastructure. The personnel in charge of implementing the programme should be appropriately trained and familiar with current knowledge of the diseases.

7.13 Emergency preparedness and contingency planning

When a country establishes a disease free zone, it will be expected to develop emergency preparedness and contingency plans for immediate action in fulfilling the provisions of Article 1.1.3.1of the *OIE Terrestrial Code*. Emergency response plans should be up to date, tested in simulation exercises and embedded in national legal frameworks. Emergency funds should be available to cover operational costs and indemnities. The chain of command and coordination with all key players and relevant support services when necessary should be well established to ensure control efforts are executed rapidly and with success.

7.14 Recognition of disease free status by OIE

In May 2013, the World Assembly of Delegates of the OIE adopted a revised Chapter 14.8 of the Terrestrial Code, with new articles defining the conditions for securing official PPR free status for a country or zone, enabling members to request for official endorsement of their national PPR control programmes (Resolution #29 adopted by the World Assembly of Delegates in May 2013, Amendments to the OIE Terrestrial Code). [28] These new standards serve as a specific tool and strong incentive to support control. Endorsement of a control programme will dovetail with the advanced stages of the progressive control framework. A country may henceforth progress and attain PPR free status as per the OIE standards, guidelines and recommendations. For the other SRDs, OIE standards, guidelines and recommendations will apply.

28 *World Organisation for Animal Health (OIE) (2013) – Chapter 14.8. Infection with peste des petits ruminants virus. Terrestrial Animal Health Code, 22nd edition, OIE, Paris.*

8. OPERATIONALIZATION OF THE STRATEGY

In order to operationalize the Regional Strategy for the Progressive Control and eradication of PPR in the IGAD region, the following key actions will need to be undertaken at the national and regional levels:

8.1 National level actions

8.1.1 Development / alignment of national PPR control and eradication strategies

The success of the regional strategy will rely on the sustainable implementation of agreed actions at the national level. This will necessitate the development or alignment of national strategies for the progressive control of PPR within each of the IGAD Member States. The national strategies should be prepared through consultative and participatory processes involving a wide cross-section of stakeholders in each Member State in order to raise awareness and enhance acceptance and by-in by the stakeholders from the initial stages. The expectations, roles and responsibilities of the stakeholder groups should be clearly agreed and reflected in the strategy documents. The Line Ministries responsible for Livestock development should lead the process in consultation with stakeholders using appropriate mechanisms to ensure the timely development of the national strategies. FAO-ECTAD, *IGAD centre for Pastoral and Livestock Development (ICPALD)* and AU-IBAR should provide technical back-stopping for strategy development in the Member States.

8.1.2 Development of national PPR control and eradication programmes

The commitment of public and private sector resources for implementation of the strategy will enhance its success. In particular, the allocation of public resources for key actions identified in the strategy will catalyse the implementation of the national strategies. Following the development of the national strategies, appropriate PPR control and eradication programmes should be developed in each IGAD Member State that outline the key actions to be undertaken, the stakeholders and institutions involved, the time-frames and modalities for carrying out the actions. These action plans should be integrated and budgeted within the overall action plans of the Line Ministries and other key stakeholder institutions.

8.1.3 Advocacy and resource mobilization

The Line Ministries and stakeholders should jointly plan and undertake advocacy to the key decision makers at the national levels in order to enlist their commitment and support for the implementation of the strategy and the action plans. In particular, they will need to vigorously engage the Ministries of Finance and National Planning for inclusion of the funding requirements for the action plan into the annual budgetary allocations of the line Ministries responsible for livestock. This will guarantee the provision of national resources to support the implementation of the action plans. Continued annual allocations in the national budgets over the duration of the action plans will support the sustainability of their implementation. The constant engagement of parliamentarians and other key decision makers especially from the livestock dependent communities will enhance the advocacy efforts.

In addition to the national budgetary allocations, the Line Ministries will endeavour to engage partners in the private sector, target communities and the donor community for the mobilization of additional resources to implement the national strategies and action plans. Project proposals on different components of the strategy could be prepared for possible funding and/or implementation by the different partners.

8.1.6 National implementation and coordination

In order to implement the PPR eradication programme, MS need to establish a *national coordination unit* (NCU) with the necessary staffing under the Veterinary Services. In this regard, the countries will designate a coordinator who will spearhead the programme at national level and liaise with regional technical offices. The ToRs for the NCU and the PPR national coordinator should be developed as part of the national PPR progressive control strategy.

8.1.7 Monitoring and evaluation and reporting

Appropriate monitoring and evaluation frameworks should be developed for the monitoring and evaluation of the national programme. These should draw from the IGAD framework as well as from best practices in other monitoring, evaluation and reporting frameworks available nationally, within the IGAD region and internationally. Harmonisation with the-ICPALD *Results Based Monitoring and Evaluation (RBM&E)* framework will facilitate the comparison

of the monitoring and evaluation results across all the participating Member States.

8.2 Regional level actions

8.2.1 Approval of the Strategy

In order to assure the political support and goodwill that are necessary to successfully launch and implement the strategy, ICPALD will engage the IGAD council of Ministers to endorse the strategy. Subsequently, the strategy will be presented to the IGAD summit for a decision by the Heads of State and Government of the IGAD region.

8.2.2 Partnerships and strategic alliances

To implement the strategy, ICPALD will need to develop effective partnerships and alliances to leverage the expertise and other resources needed to attain the objectives of the strategy. IGAD-ICPALD will need to partner with a large number of stakeholder organizations at different levels in the Member States, in other regions and internationally. ICPALD will cultivate the necessary partnerships with different institutions and organizations to mobilize the technical, financial and political support necessary for implementation of the strategy. Different partnerships will be developed based on a strategic analysis of the benefits of the partnerships in the progressive control and eradication of PPR in the IGAD region.

8.2.3 Resource mobilization

ICPALD will leverage its strategic partnerships for the effective mobilization of resources for implementation of the strategy. The following resource mobilization strategies and approaches will be utilized as outlined in the ICPALD Strategic Plan 2014 -2017:

(a) Continuing resource mobilization from bilateral and multilateral development partners including non-traditional development partners;

(b) Strengthening public-private sector partnerships for resource mobilization

(c) Each thematic area shall innovatively develop specific local resource mobilization, marketing and fundraising strategies.

8.2.4 Development of Regional PPR Control & Eradication Programme

At the regional level, this will be actualized through the formulation of fundable projects to address components of the strategy. Each project formulation should include activities for implementation at the local, national and regional levels with appropriate allocations of budgets to support the activities.

8.2.5 Coordination

Regular meetings will be convened with the IGAD Member States for harmonisation and coordination of interventions and approaches. The recently established IGAD *Coordination Committee* for the Control of PPR and other TADs, together with its technical committee will take on this role. Thematic networks covering different aspects of the strategy will be supported under the coordination of IGAD-ICPALD. Technical support will be enlisted from AU-IBAR, AU-PANVAC, OIE and FAO for the implementation of the activities of the networks.

Appropriate mechanisms and modalities for coordination with other RECs implementing similar programmes will instituted through the assistance of AU-IBAR and other AUC institutions.

8.2.6 Monitoring and evaluation of implementation and reporting

The RBM&E framework adopted by IGAD as the framework of choice for the monitoring and evaluation of IGAD projects will be adapted for the monitoring and evaluation of the PPR and other small ruminants diseases progressive control strategy. The reporting of progress, results, achievements and constraints during the implementation of the strategy will also follow the reporting guidelines and procedures including feedback mechanisms as outlined in the ICPALD Strategic Plan.

ANNEX 1: TOR Regional PPR Control Coordination Committee (CCC)

Regional Control Coordination Committee of Peste des Petit Ruminantes and other small ruminant diseases (PPR/SRDs-CCC) in IGAD Region

I. Context and rationale

Livestock sector in the IGAD region has substantial potential to contribute to food security and general economic viability and integration within the Greater Horn of Africa (GHoA). However the sector is seriously constrained by animal diseases. The trade bans often imposed on the Intergovernmental Authority on Development (IGAD) region by the major importing countries of the Middle East and Europe, on livestock imports due to concerns over trans-boundary animal diseases (TADs), have had significant impacts on the livelihoods of livestock dependent communities and livestock-related business enterprises. It is, therefore, imperative that the IGAD region strengthens disease prevention control efforts and find ways of sustaining and enhancing livestock-based trade and its benefits. As PPR and SRDs are trade-sensitive diseases, the IGAD Centre for Pastoral Areas and Livestock Development (ICPALD) plans, under STSD, to upscale the development of regional and national control strategies, which will include establishment of an IGAD coordination control committee (CCC) for the control of PPR and SRD, in an effort to ensure harmonization of PPR/SRD control programmes and to complement and fast-track implementation of the national SHARE PPR control programmes in pastoral areas of Djibouti, Ethiopia, Kenya and Somalia. STSD recognizes that the focus of SHARE country programme is on pastoral areas of only four (4) IGAD member states, which has necessitated that more emphasis be given to areas and member states (MS) not covered by SHARE initiative, in relation to PPR control and surveillance.

In a bid to address the challenges posed by inadequate responses and interventions to the control of endemic TADs and zoonoses in the IGAD region, the African Union Inter-African Bureau for Animal Resources (AU-IBAR), in partnership with IGAD, and with financial support from the European Union (EU), has developed a regional project entitled "*Improving animal disease surveillance in support of trade (STSDs) in IGAD Member States.*" The overall

objective of the STSDs project is to reduce the impact of TADs and zoonoses on food security, trade and resilience of livestock farmers. The two result areas of the project include (1) Systems for animal identification, traceability and health certification improved, and (2) Surveillance systems and disease control strategies at national and regional levels improved.

Under result area two, there is a provision to establish and operationalize the regional coordination PPR-CCC to coordinate the fragmented efforts of the various projects and efforts in the control of PPR and other SRD , harmonize approaches, exchange good practices and lessons and propose solutions for challenges.

II. Functions

The PPR/SRD CCC's objective is to provide strategic guidance and ensure harmonization of PPR/SRD control programmes.

- To create understanding on the existing status and national and regional activities on PPR CCC and other SRD
- To verify gaps and challenges in the control of PPR and other SRD
- Review and endorse the regional framework and national strategies for progressive control of PPR and other Small Ruminant Diseases and other relevant recommendations
- Ensure harmonization of PPR/SRD control programmes in the region
- To coordinate and exchange information on good practices and lessons to avoid duplication of efforts and improve complementarities on the control of PPR and other SRD in the region;
- Undertake the role of advocacy for buy-in and timely actions of the control and eradication programs

III. Composition and Membership

The PPR/RDS CCC shall be made up of the following, comprising of representatives of key regional and national institutions.

1. Directors of Veterinary Services /CVO/ from MS

2. IGAD/ICPALD
3. AUIBAR
4. FAO ECTAD
5. FAO representatives of four countries where SHARE PPR to be implemented
6. OIE
7. PANVAC

IV. Meeting frequency

The PPR_-CCC shall meet once a year, or more, as may be needed.

V. Coordination

The committee will be coordinated by IGAD/ICPALD.

ANNEX 2: TOR Regional PPR Technical Experts Committee (TEC),

Regional Technical Expert Committee on PPR and other Small ruminant Disease (SRD) (PPR/SRD TEC) in IGAD Region

I. Context and rationale

Livestock sector in the IGAD region has substantial potential to contribute to food security and general economic viability and integration within the Greater Horn of Africa (GHoA). However the sector is seriously constrained by animal diseases. The trade bans often imposed on the Intergovernmental Authority on Development (IGAD) region by the major importing countries of the Middle East and Europe, on livestock imports due to concerns over trans-boundary animal diseases (TADs), have had significant impacts on the livelihoods of livestock dependent communities and livestock-related business enterprises. It is, therefore, imperative that the IGAD region strengthens disease prevention and control efforts and finds ways of sustaining and enhancing livestock-based trade and its benefits. As PPR and SRDs are trade-sensitive diseases for which the IGAD Centre for Pastoral Areas and Livestock Development (ICPALD) plans, under STSD project, to upscale the development of regional and national control strategies, which will include establishment of a regional PPR and SRD technical expert committee for the control of PPR and other small ruminant diseases (SRD), established under the umbrella of the regional platform to provide technical inputs to the PPR/SRD-CCC and involve technical experts in the area of epidemiology, laboratory diagnosis and disease control who will be in charge of maintaining technical quality of the PPR control programmes and provide technical guidance to the PPR/SRD-CCC.

In a bid to address the challenges posed by inadequate responses and interventions to the control of endemic TADs and zoonoses in the IGAD region, the African Union Inter-African Bureau for Animal Resources (AU-IBAR), in partnership with IGAD, and with financial support from the European Union (EU), has developed a regional project entitled "*Improving animal disease surveillance in support of trade (STSDs) in IGAD Member States.*" The overall objective of the STSDs project is to reduce the impact of TADs and zoonoses

on food security, trade and resilience of livestock farmers. The two result areas of the project include (1) Systems for animal identification, traceability and health certification improved, and (2) Surveillance systems and disease control strategies at national and regional levels improved.

Under result area two, there is a provision to establish and operationalize the regional PPR-Technical committee to help on improving the technical quality of the PPR control programmes and to provide technical guidance to the PPR/SRD – CCC.

II. Functions

The regional technical expert committee on PPR and other SRD will have the following functions.

1. To create understanding on the existing status and national and regional activities and identify gaps and challenges on PPR and other SRD
2. To support the development of a regional framework and national strategies for progressive control of PPR and other Small Ruminant Diseases
3. Evaluate technical approaches and practices and propose technical recommendations improving harmonization, coordination and sharing of lessons for action in member states and at regional level

III. Composition and Membership

A PPR/SRD Regional Technical Expert Committee (PPR/SRD-TEC), will comprise regional and national experts who has experience in surveillance, epidemiology, laboratory diagnosis and control of PPR and other Small ruminant Diseases

Members of the PPR/SRD TEC shall be as follows:

1. Experienced PPR experts from MS
2. IGAD/ICPALD
3. AU-IBAR
4. AU-PANVAC

4. FAO ECTAD/country experts
5. ILRI
6. OIE
8. Others on need basis (IAEA, Pirbright, CIRAD, etc.)

IV. Meeting frequency

The PPR-TEC committee shall meet at least twice a year, just before the CCC meetings.

V. Secretariat

IGAD/ICPALD will assume the Secretariat, which shall convene all the meetings.