FCDC

COMMON PROGRAMME FRAMEWORK FOR LIVESTOCK DISEASES CONTROL FOR THE FCDC REGION

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FOR LIVESTOCK DISEASES CONTROL FOR THE FCDC REGION

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@ Sector Forum for Agriculture and Livestock (SFAL) of the Frontier Counties Development Council

Acknowledgments: FCDC would like to acknowledge the support of all the actors during the development of this document. Our appreciation goes to the veterinarians and animal health technicians for their enthusiastic participation in the critical discussions; your insights and experiences greatly enriched this document. The last and not least we are grateful to the Embassy of Switzerland for funding all the processes that allowed the development of the Common Programme Framework for Livestock Disease Control (CPF-LDC) in the FCDC region. In particular, we acknowledge Yusuf Gedi, Wajir County CEC for agriculture, livestock and fisheries for spearheading this noble initiative and funding the first workshop which was held in Almond Hotel Garissa.

FOREWORD

The Frontier Counties Development Council (FCDC) region represents the counties of Turkana, Marsabit, Isiolo, Tana River, Garissa, Lamu, Wajir, Mandera, Samburu and West Pokot and forms the largest shared platform between counties in Kenya The FCDC counties suffer the burden of endemic livestock diseases that causes considerable economic losses to producers in these counties. The economic losses related to diseases arise through losses of revenue from restrictions in animal movement and trade, and costs of control measures (including treatments), which can be prohibitive and have negative impacts on livestock, markets and have socio-economic influence and public health concerns. Further, some of these diseases are zoonotic and have a significant impact on public health and nutrition.

Effective control of livestock diseases is therefore critical for the FCDC counties as they are dependent on livestock as a source of food, livelihoods and as a driver of the local economy. These counties enjoy a comparative advantage in livestock and livestock products trade, the sub-sector offers an opportunity for increased employment and household incomes, but trade restrictions and losses associated with livestock diseases limits its potential.

This Common Programme Framework for Livestock Disease Control in the FCDC Region takes cognizance of the growing challenge of livestock diseases and their impacts on the livelihoods of households in the county, significant health hazards of livestock diseases and their impacts on household food security. Furthermore, since agriculture is one of the principal functions devolved under the 2010 constitution, the county governments have greater powers to make decisions regarding programme planning and implementation and bears the full responsibility for the decisions made for the sector.

In the preparation of the Framework, we have received immense cooperation and support from several individuals, professional experts, NGOs, private sector actors and veterinary professionals in the public services. The Framework was developed with the support of consultants (Drs Mohamed M Yussuf, Pauline Gitonga and Laban MacOpiyo) in consultation with SDC, USAID, SIDAI, ACDI/VOCA, KLMS, ILRI, KEVAVAPI, KMT, VSF-Suisse and the County Directors of Veterinary Services, Turkana, Marsabit, Isiolo, Lamu, Tana River, Garissa, Wajir and Mandera, and their staff.

The Coordinator, Sector Forum for Agriculture and Livestock (SFAL) organised the consultative workshops, and the Swiss Embassy provided the funding through the FCDC Livestock Sector Strengthening Project and the Department of Agriculture, Livestock and Fisheries, Wajir County.

We hope this Framework helps enhance the control of livestock diseases in the FCDC counties, as it focuses on building on and improving our current system of disease control, investing more in the prioritization and coordination of the current efforts. The successful implementation of the Framework contributes to the overall goal of improving food security, trade, public health, and livelihoods of households in the FCDC counties. We, therefore, call on our partners and stakeholders to join us in this noble initiative. This Framework is not intended to be prescriptive, but rather a flexible conceptual framework and should be considered a “living document” and is open to feedback, additions and revisions based on changing needs.

Chairman

Sector Forum for Agriculture and Livestock

Coordinator SFAL & Project Manager LSS

Sector Forum for Agriculture and Livestock

EXECUTIVE SUMMARY

Livestock disease control plays a crucial role in ensuring that the health and welfare requirements for animal production and trade are properly adhered to and that food and other products produced from animals are safe for use

Over the years, new challenges have emerged. Some diseases, which were of minimal importance a decade ago, have made a drastic global impact on animal and public health while foot and mouth disease, avian influenza and antimicrobial resistance, have recently presented new challenges. In addition, more emphasis has recently been placed on animal welfare for production and trade.

Trading conditions have changed radically as the volume of trade in animal products has increased, locally, regionally and globally. It is vital that county governments provide leadership to ensure that ASAL regions' are positioned effectively, to protect both animal and human health and to ensure economic growth and wealth generation.

The purpose of this Common Framework for Livestock Disease Control for the FCDC region (2019 – 2022) is to provide direction for the improvement on the delivery of disease control services to higher standards in the FCDC region. It will facilitate the establishment of priorities that are consistent with an agreed foundation and strategic pillars and the revision of, and agreement on, acceptable and appropriate standards. In this manner, the Framework will ensure consistency with key priority outcomes of the county governments in the region to ensure a seamless, consistent and equal access to services. A thorough analysis of the current livestock disease control services delivery highlighted several shortcomings. This Framework thus charts a new direction for the rendering of efficient and effective livestock disease control services, supporting broader societal and governmental strategic objectives.

Specifically, the strategy aims to:

- Improve on technical capabilities needed to address current and new animal health, welfare and production issues
- Support acquisition of sufficient financial capital to attract adequate human resources and retain professionals with technical and leadership skills
- Promote and strengthen collaboration and coordination between the 10 FCDC region county governments including a partnership with the private sector
- Create and maintain a recognized animal and public health environment to facilitate access to local and international markets

The Framework envisions a cohesive, and proactive animal health services. It is based on the current national legal framework and the stakeholder consultation on the Livestock Diseases Management. The Framework has also been developed with the mission to promote the wellbeing of animals and humans by creating systems and mechanisms for the provision of effective and efficient disease control services with the capacity to prevent, detect, contain and eliminate animal and public health risks.

The suggested pillars for a transformed Livestock Disease Control framework in the FCDC region includes:

Pillar 1: Disease surveillance, Reporting and Laboratory Diagnosis;

Pillar 2: Veterinary Pharmaceuticals and vaccines;

Pillar 3: Disease Control and Treatment;

Pillar 4: Veterinary Services Governance;

Pillar 5: Veterinary Services Infrastructure;

Pillar 6: Livestock Identification and Traceability System (LITS);

Pillar 7: Animal Welfare;

Pillar 8: Animal Resources Statistics, Information, and Communication and

Pillar 9: Institutional Development and Knowledge Management.

The FCDC region has identified and agreed on the following six (6) priority diseases; Peste des Petits Ruminants (PPR); Contagious Caprine pleuropneumonia (CCPP); Contagious Bovine Pleuropneumonia (CBPP); Sheep and Goat Pox (SGP); Camel Pox, and Rift Valley Fever. The Framework will be implemented through the National Livestock Disease Control Committee with Nine Permanent Agendas in line with the nine pillars. The committee will meet at least once every three months.

The Framework is subject to periodic review and has been approved by the ten County Directors of Veterinary Services who will provide leadership and oversight to ensure the framework remains relevant, aligned to the national priorities, and is implemented with livestock sector stakeholders. The County Directors of Veterinary Services will form the Task Group that will drive the coordinated implementation of the Framework, monitor progress, identify opportunities and collectively support its effective delivery.

ACRONYMS AND ABBREVIATIONS

ASALs	Arid and Semi-Arid Lands
ARIS	Animal Resources Information System
AU-IBAR	African Union Inter-African Bureau for Animal Resources
CBPP	Contagious Bovine Pleuropneumonia
CCPP	Contagious Caprine Pleuropneumonia
CDVS	County Director of Veterinary Services
CIDPs	County Integrated Development Plans
CPF	Common Programme Framework
CPF-LDC	Common Programme Framework-Livestock Diseases Control
CVIL	Central Veterinary Investigation Laboratory
DSRO	Disease Surveillance and Reporting Officer
FCDC	Frontier Counties Development Council
FMD	Foot and Mouth Diseases
EDE	Ending Drought Emergencies
IGAD	Inter-Governmental Authority on Development
ICPALD	IGAD Centre for Pastoral Areas and Livestock Development
FAO-UN	Food and Agricultural Organisation of the United Nations
GDP	Gross Domestic Product
KDVS	Kenya Director of Veterinary Services
KLWS	Kenya Livestock and Wildlife Syndromic Surveillance System
Kshs	Kenya Shillings
LIMS	Livestock Information Management System
LITS	Livestock Identification and Traceability System
SDC	Swiss Agency for Development and Cooperation
LSS	Livestock Sector Strengthening Project
SOPs	Standard Operating Procedures

CONTENTS

1.0 INTRODUCTION

The livestock sector is the driver of economic development in the FCDC counties and makes a substantial contribution to food security, general economy, and health within these counties. Beyond the direct role in providing food and generating income, livestock also serves as a store of wealth, collateral for credit and an essential safety net during times of crisis. The sector accounts for 80% of these counties economies and provides livelihoods to 90% of the population.1 In addition, livestock makes a substantial contribution to households food and income security, as well as offering a means of accumulating wealth and collateral for credit and safety net during times of crisis. The sector has seen substantial growth driven by increasing demand for livestock and livestock products by the growing population, international trade and changing consumer preference from plant to animal-based proteins diets2.

Despite the importance of the sector across the region, its development has not been supported by a harmonized and coordinated livestock development policy and strategy. A number of livestock diseases have become endemic. Livestock movements within these counties and across Somalia, Ethiopia and South Sudanese borders for migration (pasture and water) and markets are some of the factors contributing to the growing risks of emergence and persistence of livestock diseases in these counties. The emergence and persistence (endemic status) of livestock diseases in these counties have had enormous economic and social costs. It is therefore imperative that the region strengthens livestock disease prevention and control efforts to ensure food security and promote economic development.

Recognizing this gap, the region's County Directors of Veterinary Services spearheaded the development of the Common Programme Framework for the Livestock Disease Control in the FCDC counties. The Framework provides guidance and direction in the efficient and effective delivery of livestock disease control activities within the FCDC counties. It follows the need for livestock disease control as has being recognized by the government in a number of current and previous strategies and policy papers including the Economic Recovery Strategy for Wealth and Employment Creation, 2003 – 2007 and the Strategy for Revitalizing Agriculture (SRA), 2004–2014, and Kenya's Vision 2030 flagship project Ending Drought Emergencies (EDE) that is being implemented by the Ministry of Devolution and Planning. Specifically, the EDE pillar 4 initiative recognises the control and prevention livestock diseases as one of the key mitigating strategies to ensure sustainable livelihoods for drought-prone communities.3 The Framework is also consistent with key priority areas identified by FCDC region as outlined in their respective County Integrated Development Plans (CIDPs).

The FCDC region represents the counties of Turkana, Marsabit, Isiolo, Tana River, Garissa, Lamu, Wajir, Mandera, Samburu and West Pokot and forms the largest shared platform between counties in Kenya. The region covers 61% of Kenya's land mass and hosts 51% of the national livestock herd (95% of camels, 30% of cattle, 55% of sheep, 58% of goats, and 58% of donkeys) as shown in Table 1. These livestock resources are shared between counties as they move within and between the counties and across into neighbouring countries of Somalia, Ethiopia and South Sudan for pastures, water and markets.

Livestock is regarded as a cultural heritage and is used to accomplish many cultural and traditional practices such as marriage, dowry and religious sacrifices. It also provides livelihoods, food and incomes to 593,717 households (123,191 in Turkana, 56,941 in Marsabit, 31,326 in Isiolo, 47,414 in Tana River, 22,184 in Lamu, 58,940 in Garissa, 88,574 in Wajir and 125,497 in Mandera) majority of them who live in rural areas.4 Even urban populations are dependent on livestock either directly as a source of food or indirectly as a source of incomes and revenue through markets. Unfortunately, these livestock resources are characterized by low productivity due to under-nutrition, the high prevalence of diseases, relatively low genetic potential for productive traits, poor management practices and weak market infrastructure. Livestock diseases have been the biggest hindrances to ensuring livestock productivity and health.

[1] Kenya National Bureau of Statistics (KNBS) 2010. Kenya 2009 Population and Housing Census

[2] A.K. Kahi, C.B. Wasike and T.O. Rewe (2006). Beef production in the arid and semi-arid lands of Kenya Constraints and prospects for research and development. Outlook on Agriculture. 35:3. pp 217–225.

[3] Republic of Kenya, Ministry of Devolution and Planning (2016). Ending Drought Emergencies (EDE) Common Pro gramme Framework.

[4] Kenya National Bureau of Statistics (KNBS) 2010. Kenya 2009 Population and Housing Census

TABLE 1: LIVESTOCK POPULATION DISTRIBUTION IN FCDC REGION

County	Camels	Cattle	Sheep	Goats	Donkeys
Turkana	832,462	1,534,612	3,517,151	5,994,861	558,187
Marsabit	203,320	424,603	960,004	1,143,480	63,861
Isiolo	39,084	198,424	361,836	398,903	22,189
Tana River	48,882	269,894	272,852	484,220	17,590
Lamu	47	81,200	15,626	68,178	2,572
Garissa	236,423	903,678	1,224,448	2,090,613	75,178
Wajir	533,651	794,552	1,406,883	1,866,226	115,503
Mandera	930,819	1,076,978	1,632,824	3,929,747	191,664
FCDC Total	**2,824,688**	**5,283,941**	**9,391,624**	**15,976,228**	**1,046,744**
National	**2,971,111**	**17,467,774**	**17,129,606**	**27,740,153**	**1,813,213**
FCDC % of National	95%	30%	55%	58%	58%

Source: Kenya 2009 Population and Housing Census

Little is known about the burden and incidence of the many notifiable livestock diseases in the FCDC region. While diseases such as Foot and Mouth Disease (FMD), Rift Valley Fever (RVF), Contagious Bovine Pleuropneumonia (CBPP), Contagious Caprine PleuroPneumonia (CCPP), Sheep and Goat Pox (SGP) and camelpox are endemic, in recent years, diseases such as Peste des Petits Ruminants (PPR) and Camel Sudden Death (CSD) have also emerged. The endemicity of these diseases adds to the existing vulnerability of the region's population that is already burdened by frequent climatic shocks such as droughts and floods. Furthermore, it is estimated that the increasing human and livestock population and deterioration of rangeland resources will increase the interaction between humans and livestock, resulting in the emergence of zoonotic diseases. This will further be worsened by increased globalisation of livestock trade and their products that will result in the rapid geographical expansion of the diseases.

Livestock diseases have serious implications on animal productivity and public safety with many of these diseases having zoonotic implications.[5] The frequent outbreaks of livestock diseases remain one of the key complaints by pastoralists in any public forum. Most of the county governments indicate that they lack adequate control strategies, infrastructure and resources to curb the frequent outbreaks. While the counties continue to allocate resources for control the diseases, these efforts have not yielded significant impacts due to the irregular and un-coordinated control activities that does not take into consideration the mobile nature of livestock across the FCDC region.

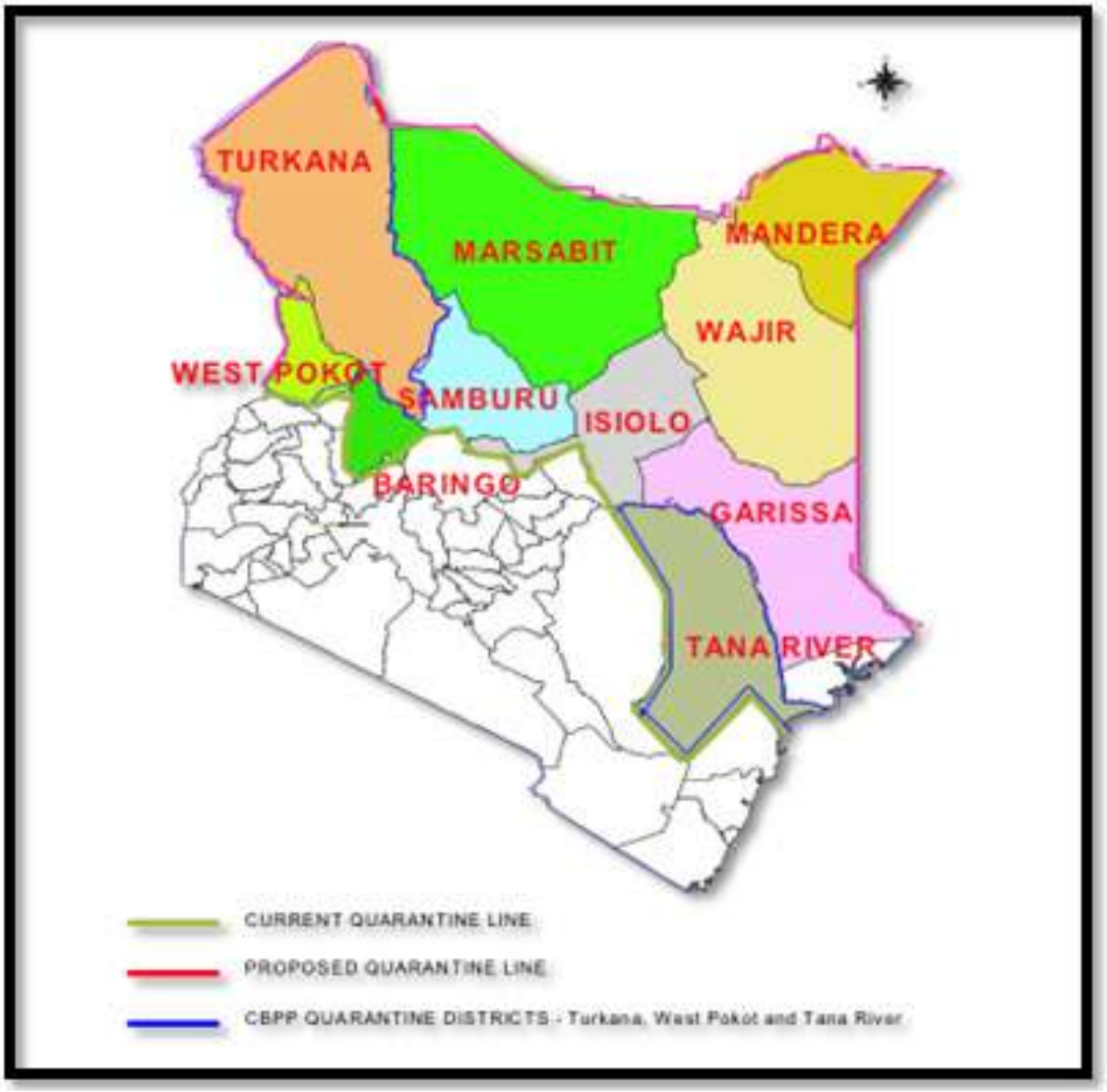
In addition, the inadequate involvement of all key players in the livestock sector, weak information sharing and lack of integrated and coordinated guidelines for managing diseases also hampers effective livestock disease control efforts. Amidst all these challenges, laboratory capacity for diagnosis of diseases is inadequate and limited human and financial resources are limited. Consequently, though some successes have been achieved, the gains have not been sustained. Without a comprehensive national, regional (FCDC) or even county-specific strategy for prevention, control and management of livestock diseases, the situation is likely to remain the same. There is, therefore, need for a comprehensive and harmonized approach to tackle livestock diseases in the FCDC region.

The Government has put in place a number of strategic policy measures in the past to improve the performance of the livestock sector, and disease control is one the measures. The current livestock services consist of the National (State) and County Veterinary Services, and Kenya has an elaborate legal and regulatory framework for management of livestock diseases in Kenya. The system is hugely focused on the detection and response to livestock diseases. Livestock producers, market actors and other stakeholders have major roles in working to implement complementary preventive measures and manage non-reportable diseases and emerging health issues.

[5]Zoonotic disease is any disease or infection which is naturally transmissible from animals to humans. It is estimated that 75% of the pathogens that afflict human beings originated from animals.

Provisions and regulations are existing under the Animal Diseases Act, CAP 364, 1972 (revised 1989) that provides the Director of Veterinary Services with a range of sanitary powers. A number of diseases are declared notifiable and their suspicion or confirmation has to be reported to the respective County Director of Veterinary Services and the Director of Veterinary Services who notify the public of the occurrence of the disease and the measures that need to be taken for its management. The Director of Veterinary Services must report the occurrence of a notifiable disease to the World Organization for Animal Health and trading partners at the earliest possible time.[6]

FIGURE 1: CBBP QUARANTINE LINE



Source: Stephen G. Mbogoh and Joseph M. Gathuma (2012): Methodological Issues and Applications in Economic Evaluation of Alternative Livestock Diseases Control Strategies: The Case of the CBPP Quarantine Line in North-Eastern Kenya.

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The Northern Counties (including all the FCDC counties and Baringo) are endemic for most of the diseases such as CBPP. As a result, a quarantine line (Figure 1) was put in place to help prevent the spread of diseases from the arid and semi-arid areas (ASALs) to the rest of the country. The CBPP quarantine line (CQL) was designed to be one of the key measures in the control of the CBPP in Kenya and entails livestock movement restrictions, thus constraining unfettered livestock marketing. The sanitary measure indicated that all cattle passing through the CBPP cordon, whether for slaughter, fattening or breeding, had to be detained for at least twelve weeks while they underwent three CBPP tests.

[6]Republic of Kenya, Ministry of Agriculture, Livestock and Fisheries: Kenya Veterinary Policy; April 2015

Though not exhaustive (and sometimes routine or regular) some of the key livestock disease control strategies implemented in the FCDC counties are:

- Investigation and diagnostic services, inspection of animals and approval of premises such as farms, hatcheries, breeding centres, quarantine stations, animal markets and sale yards
- Development of legal and policy framework including the Animal Diseases Control Act, Livestock and Veterinary Policy, Veterinary Surgeons and Veterinary Para-Professional Act among others
- The existence of disease surveillance guidelines and contingency plans for some priority diseases such as RVF
- Inspection of live animals before slaughter, and carcasses after slaughter, at slaughterhouses and major markets;
- Certification of animal products;
- Approval of processing facilities and enforcement of control measures.

It must be noted that Kenya has a national surveillance system for livestock disease. However, it has not been effective due to a number of reasons, including differences in the prioritization of diseases and approaches to disease control in the neighbouring countries, while the porous border makes it easier for these diseases to be introduced into the country.

The FCDC intends on taking advantage of the devolution process to act as a catalyst and trigger for sustainable development and prosperity in the region. As these counties have experienced the persistence of endemic livestock diseases, which is also a primary concern to the County Governments of FCDC, there is a need to prioritise and pursue the control of these diseases. The process of developing this FCDC-wide Framework represents one of the first attempts that priority livestock diseases are controlled across the FCDC counties.

While currently, eradication of livestock diseases is not economically and practically feasible, the counties should pursue options for sustained mitigation of impacts of these diseases. Consequently, the purpose of this Framework is to provide guidance and direction in the efficient and effective delivery of livestock disease control activities. In addition, the Framework will be useful in funding priorities and decision making about establishing government and non-government supported interventions. Finally, the successful implementation of the Framework will contribute to the overall goal of improving food security, trade, public health, and livelihoods of households.

As indicated earlier, since livestock diseases are a shared burden between the FCDC counties, the counties will need to determine their disease control priorities. The Framework will then be achieved by pursuing first enhanced disease surveillance, prevention and control for the priority diseases, and secondly, facilitating collaboration between the veterinary services and stakeholders in the different counties. This will need to be based on efficient and effective veterinary services, have political support and sustainable source of funding, including government, development partners and the private sector. In addition, the implementation will need to be supported by effective legislation, an understanding of the epidemiological situation of diseases, diagnostic facilities with adequate capacity, effective traceability system, and better use of vaccination and other disease response mechanisms.

One strategy used by all developed countries to effectively deliver veterinary services is a clear division of responsibilities between the public and private sector as outlined below.

Division of responsibilities between public and private sector

Services under public sector responsibility
1. Formulation of national livestock policies (creates an enabling environment for private sector).
2. Ensuring the health of the national herds (surveillance, compliance monitoring, quarantine, quality control of drugs and vaccines, emergency planning, reporting to international agencies and neighbouring countries).
3. Elaboration of regulations governing animal production, processing and marketing activities.
4. Regulating and accreditation of the veterinary profession, training, research, diagnostics and business practices (ethical practice of public and private veterinary professionals).
5. Inspections and control of livestock inputs and products for food safety purposes.
6. Import and export certification.
Services under shared public and private responsibility
1. Disease diagnosis and reporting
2. Compulsory testing
3. Tick and Tsetse control
4. Food hygiene and inspection
5. Continuous education and training
6. Notifiable disease control
7. Disease emergency response
8. Research
9. Animal management advice and extension
Services under the responsibility of the private sector
1. Clinical diagnosis and treatment
2. Production and distribution of drugs and vaccines
3. Breeding – Artificial insemination and embryo transfer
4. Management of herd health and production programmes

Source: FAO-UN (1997): Principles for rational delivery of public and private veterinary services with reference to Africa

2.0 PILLARS OF THE FRAMEWORK

The overall aim of the veterinary services in the FCDC counties is to improve the competitiveness of the livestock sector and contribute to the attainment of key priorities of the county government in food security and incomes of the local populations.

The proposed Framework for Disease Control, 2019 – 2022 is organized under nine pillars.

Pillar 1: Disease surveillance, Reporting and Laboratory Diagnosis focuses on strengthening the collection, analyses, interpretation of data and dissemination of information to relevant users;

Pillar 2: Veterinary Pharmaceuticals and Vaccines

Pillar 3: Disease Control and Treatment

Pillar 4: Veterinary Governance

Pillar 5: Veterinary Services Infrastructure

Pillar 6: Livestock Identification and Traceability System (LITS)

Pillar 7: Animal Welfare

Pillar 8: Animal Resources' Statistics, Information, and Communication

Pillar 9: Institutional Development and Knowledge Management

The implementation plan will encompass the entire FCDC counties, including livestock producers, veterinary professionals, actors within livestock and livestock products market system, NGOs, private animal health providers, researchers, and other stakeholders. The institutional mechanism for disease control will be under the respective County Directors of Veterinary Services with the involvement of these stakeholders. Within the Framework, the nominated leader of each Pillar and Component will be responsible for the planning, coordination with the relevant stakeholders, implementation and reporting on the Pillars and Components. As the Framework aims to create and maintain active collaboration between stakeholders, it proposes the establishment of an "FCDC Livestock Disease Control Coordinating Unit" which will continue to evolve, enhance, and refocus livestock disease control programs to meet existing and impending challenges.

The Framework recognizes the opportunities for private-public partnership in delivering on the key outputs of the Framework. Furthermore, in a conducive enabling environment, there are opportunities for public-private partnerships (PPPs) in the area of disease control that offers 'win-win' benefits.7 Engaging and coordinating with the private sector will, therefore, be an essential ingredient when developing a livestock disease control system.

[7]Philippe Ankers and Phil Harris, Towards Safer World: Animal Health and Biosecurity.

Pillar 1: Disease Surveillance, Reporting and Laboratory Diagnosis

The FAO Manual of Infectious Disease Surveillance defines surveillance as "all regular activities aimed at ascertaining the health status of a given population with the aim of early detection and control of animal diseases of importance to national economies, food security and trade." It is the continuous, systematic collection, analysis and interpretation of health-related data needed for planning, implementation and planning of programs. As it enables early detection and management of animal diseases, surveillance and diagnostics are key components of the national animal health system. Disease surveillance enables the detection of the nationally significant livestock diseases providing necessary information for disease control and reporting requirements.

Kenya undertakes surveillance of the internationally important livestock diseases. Surveillance is a key competence of the Department of Veterinary Services as per the Guidance of the Veterinary Services Delivery and is a critical element of the national animal health system. However, by the end of 2013, the counties had taken charge in delivering veterinary services previously handled nationally by the Director of Veterinary Services. Among these included disease surveillance and disease control, provision of clinical services and facilitation of trade in animals and animal products. Laboratory diagnostic services remained a national function. Within the FCDC counties, the surveillance activities is achieved through both active and passive disease surveillance activities by the county veterinary services supported by the national diagnostic services.

The Framework identifies the following key priority areas for improving surveillance activities across the FCDC region:

1. Participatory disease surveillance of agreed-upon priority diseases to establish a baseline situation of these diseases in the FCDC counties;

2. Comprehensive, coordinated surveillance of these diseases, supporting attempts to prioritize control interventions;

3. Routine Regional quarterly surveillance exercise coupled with regular reporting and feedback to the stakeholders;

4. Strengthening surveillance activities through slaughterhouses and slabs, especially for diseases that present laboratory diagnostic difficulties such as CBPP. This will require investments in meat inspection training for the staffs and recognition of characteristic lesions and regular inspection of the slaughter facilities.

5. Harmonization of the existing reporting systems developed by the different partners, development of a platform for sharing surveillance information across the FCDC counties, and strengthening networks for sample collection and result sharing

6. Strengthening diagnostic capacity and capability to support surveillance activities

7. Strengthened capacity for field response to disease outbreaks and of producers and livestock sector stakeholders awareness of the surveillance activities

8. Designating of County Disease Surveillance and Reporting Officers across the FCDC region tasked with leading disease surveillance and reporting and sharing of disease information;

9. Capacity building of staff in disease outbreak investigations and monitoring and surveillance, specifically those impacting trade and animal exports; and

Strengthening and institutionalizing of the current practice of implementing rumour registers across the FCDC region and sharing of the collected information.

TABLE 2: Results Framework for Disease Surveillance, Reporting and Diagnostic Services Framework

<table>
<tr><td colspan="2">OVERALL OUTCOME:
The capacity to undertake disease surveillance, reporting and laboratory diagnosis for prevention, control and response improved.</td></tr>
<tr><td>COMPONENT 1:

Capacity for detection and management of notifiable livestock diseases in FCDC through passive/active disease surveillance is enhanced</td><td>COMPONENT 2:

A more coordinated approach for diseases surveillance adopted</td></tr>
<tr><td colspan="2">RESULTS</td></tr>
<tr><td>1. Mobile-based e-surveillance systems upgraded

2. Targeted 3-tier training of pastoralists, CDRs & frontline officers on syndromic disease surveillance

3. Institutionalized rumour registers in sub-counties

4. Expanded disease reporting network to include agro- vets/ other private animal health service providers, meat inspectors, livestock market actors and KWS

5. Established platform for sharing reports within counties (between FCDC CDVSs).</td><td>1. Coordinated quarterly routine active surveillance for priority diseases across the FCDC region (PPR, CCPP, CBPP, SGP, FMD, LSD, RVF, camelpox, Rift Valley Fever) conducted</td></tr>
<tr><td colspan="2">IMPLEMENTATION ARRANGEMENTS:</td></tr>
<tr><td colspan="2">Direct implementation of these activities will fall under the respective County Directors of Veterinary Services, under whose leadership for disease surveillance and reporting is managed by the designated County Disease Surveillance and Reporting Officer.

An FCDC wide coordinated regular disease surveillance for the identified important diseases will also be undertaken.</td></tr>
<tr><td colspan="2">FINANCING MECHANISMS:</td></tr>
<tr><td colspan="2">Respective county government will allocate resources to the responsible Ministry and County Service Units to finance the Framework activities. Additionally, as some of the activities under the Pillar are shared responsibilities, potential funding should also be sought nationally from the national surveillance programs

The Sector Forum for Agriculture and Livestock in collaboration with the FCDC Livestock Disease Control Coordinating Unit will play the coordinating role in joint initiatives.</td></tr>
<tr><td colspan="2">TOTAL BUDGET: KSHS. 662 MILLION</td></tr>
<tr><td>Kshs. 218 m</td><td>Kshs. 444 m</td></tr>
</table>

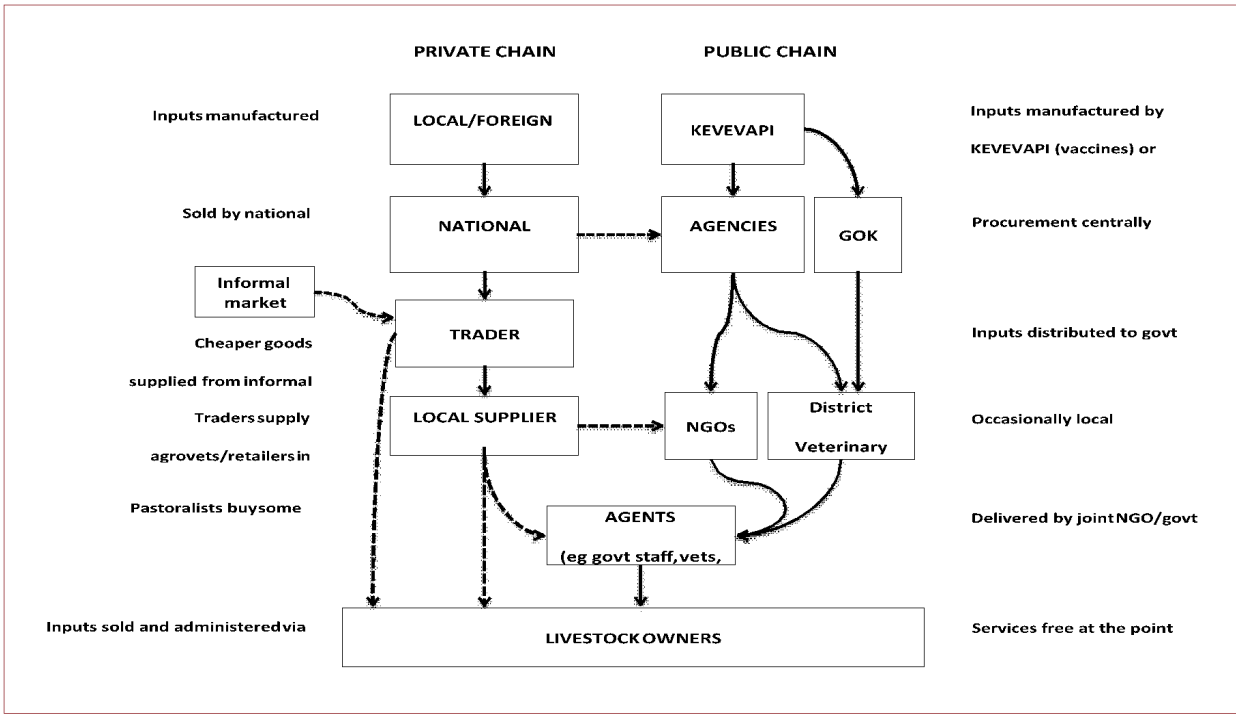
Pillar 2: Veterinary Pharmaceuticals and Vaccines

Veterinary medicines constitute an important input in the scheme of animal health and welfare and providing quality and sustainable animal health inputs to communities is key to reducing losses and human health risks associated with animal diseases.

The supply of animal health inputs which involves production, quality control, marketing and distribution of the products and eventual use at the farm level is among the increasing number of functions that have been transferred to the private sector. Whereas in other parts of the country there have been a number of providers who have established themselves privately, the service provision in FCDC region has stagnated or deteriorated because the private sector is not yet vibrant – availability of professionals and infrastructure, seasonality of demand, livestock densities and economies of scale contributed to market failures in private sector development. Unfortunately, as the pastoral production is a low input system, the volumes of demand created are not adequate to sustain a private veterinary practice and the government delivers animal health inputs at highly subsidized rates. Figure 2 provides a schematic outline of the current public and private sector distribution channels of animal health inputs.

The Government generally provides highly subsidized vaccines for the control of the most important diseases such as transboundary animal diseases (TADs). However, considering logistical and resource challenges for the public veterinary services, few vaccines reach the livestock producers in the FCDC counties. There are a number of challenges hindering access to vaccines, including constraints in vaccine production capacities for some vaccines supplied by KEVEVAPI, especially during a crisis, producers' reluctance to pay for and depend on public services for vaccinations, lack of cold chain facilities in rural areas where there is demand for vaccines due to lack of power, technical requirements in vaccine handling and delivery, and policy issues related to handling of vaccines.

FIGURE 2: PRIVATE AND PUBLIC DISTRIBUTION CHAIN FOR ANIMAL HEALTH INPUTS



Source: *REGAL – IR (2014) Time to Change: The impact of recent livestock emergency interventions on the future of sustainable service delivery in Northern Kenya. Report prepared by Wellspring Development Ltd with field research by Dr. Hussein Mahmoud and Dr. Mohamed Yussuf*

To address some of the above challenges, the Framework recognizes the need to address the systemic constraints within the input service provision. Some of the following key activities are identified as being important in that direction:

Recognize and enable the private practitioners contributions to developing and improving efficient veterinary services;

Addressing the disincentives to private sector entry into input distribution, such as misuse of subsidies;

Investing in public infrastructure and other business enabling an environment that would reduce the transaction costs and attract investment in the region and livestock sector;

Addressing disincentives to private sector inputs/service providers such as the provision of animal health inputs by government and NGOs, and rampant availability and sale of counterfeit products in the market that makes private provision sufficiently unprofitable as they reduce the volume of remaining demand for inputs;

Facilitating the development of innovative business models that utilizes the existing infrastructure and capacities while leveraging on the use of technology;

Strengthening extension and awareness of the use and risks of inputs among livestock producers and stakeholders;

Strengthening the County Directors of Veterinary Services to carry out the delegated responsibility of ensuring compliance of veterinary pharmaceutical products;

Enhance inspectorate & regulatory services for veterinary inputs through domestication of inspectorate services at county levels (using appropriate county legislation);

Research and development on Drug residues in livestock products, i.e., meat and milk. Enhance sample collection for testing drug residues in livestock products

1. Establishment of a regional vaccine bank to ensure rapid supply of emergency stocks of vaccines in cases of outbreaks;

2. Strengthening cold chain systems for vaccines, including the use of solar technologies for vaccine storage in outlying areas, and training of the public and private service providers in cold chain system maintenance;

3. Pursuing and strengthening public-private partnership models in the delivery and supply of vaccines;

4. Conducting proactive campaigns and awareness on the benefits of vaccine use and uptake, and of preventive services;

5. Support legislation and policies at the regional level that are conducive to improve uptake and vaccination coverage to stimulate public and private investment in vaccine development; and

6. Investments in innovation and vaccine research for new vaccine solutions, including the development of new vaccines (e.g., a single vaccine to control multiple diseases to reduce delivery costs) and thermostable vaccines (reduce cold chain costs).

TABLE 3: Results Framework for Veterinary Pharmaceuticals and Vaccines

OVERALL OUTCOME: Access to safe, effective and quality pharmaceuticals, vaccines and diagnostic products at county, sub-county and ward levels improved		
COMPONENT 1: access and use of quality veterinary pharmaceuticals among livestock producers is enhanced	**COMPONENT 2**: monitoring, inspection & regulation of veterinary inputs is enhanced	**COMPONENT 3**: Community capacity for sustainable uptake of vaccines (vaccine is for prevention and prevention is better than cure) is enhanced
RESULTS		
1. Increased number of legally registered outlets 2. Improved supply and use of quality and affordable veterinary vaccines among livestock keepers	1. Domesticated inspectorate & regulatory services at county level 2. Drug residues in livestock products, i.e., meat and milk monitored	1. Undertake community awareness of use and risks of misuse of inputs among livestock producers and stakeholder
IMPLEMENTATION ARRANGEMENTS:		
Enhancing of access and utilization of veterinary inputs involves a large number of activities carried out by public and private sector actors, including national and county government, livestock producers and animal health professionals.		
FINANCING MECHANISMS:		
Animal health extension and public services will be financed by the respective counties, while livestock producers will pay for private goods and services.		
TOTAL BUDGET: KSHS. 466 MILLION		
Kshs. 193 m	Kshs. 159 m	Kshs. 114 m

Pillar 3: Disease Control and Treatment

Livestock disease control has not been very effective in the FCDC region. A more coordinated, strategic approach is becoming increasingly more important for a number of reasons. First, since agriculture is a devolved function, counties are increasingly under pressure to safeguard their livestock herds, as diseases present an ever-changing risk to their economy and food security, especially considering the rate of livestock movement across borders for markets, water and pasture.

A decisive emphasis on timely and FCDC – wide synchronized vaccination is a basic concept which is proposed in this Framework. The long-term benefits of these approaches are high, as three to five years of decisive and well-timed vaccination will bring down the incidence of diseases in these counties. The current practice of non-routine limited areas vaccination has little impact on reducing diseases incidences. The significant limitation of vaccine availability, resources, workforce and administrative/ political willingness to undertake regular and harmonized vaccination across the counties makes it prudent to identify and target priority diseases with high impacts. Of particular importance, the following diseases are identified for prioritization: PPR, CCPP, CBPP, SGP, Camelpox, and Rift Valley Fever.

Additionally, given that livestock within the FCDC counties are kept under pastoral production systems, livestock diseases more easily and rapidly spread through the movement of animals and animal products. The management of risk for disease spread via these movements is essential for goals of disease reduction and eradication to be achieved. The current status of compliance and enforcement of livestock movement, quarantines and border control does not meet the adequately legislative requirements. The Framework recommends the progressive implementation of more effective and holistic compliance with these functions, coupled with the better engagement of stakeholders and instituting of comprehensive outbreak management system.

Finally, tsetse and tick are among the most important constraint to rural development as they are vectors of diseases such as trypanosomiasis and tick-borne diseases. Despite the implementation of vector control activities, tsetse and ticks remain a challenge. The incidence of tsetse and other vector-borne diseases has been escalating and past control approaches have been unsustainable.

The Framework recognizes that there exists an opportunity for gradually reducing the burden of livestock disease infection and enhancing vector control in the FCDC region. To this end some of the key priority activities will be:

1. Regular and harmonized annual vaccination policy across the FCDC region targeting economically important diseases, including PPR, SGP, CCPP, CBPP at appropriate seasons for 3 – 5 years with a minimum coverage of 80% to achieve a 90% herd immunity;

2. Strengthening the availability of resources and the epidemiological capacity of the county veterinary services is a major prerequisite for undertaking the recommended regular and harmonized annual vaccinations;

3. Undertaking of high impact vaccination and other disease control interventions to reduce livestock diseases;

4. The regular and high impact vaccination should be supported by regular sero-surveillance to determine the effectiveness of the vaccination exercises;

5. The undertaking of strategic management of zoonotic diseases such as brucellosis and rabies, and epidemics such as rift valley fever;

6. Strengthened collaboration with neighbouring countries and regional and international organizations for the control and eradication of TADS, zoonosis and other important diseases learning from rinderpest experience;

7. Addressing the supply chain constraints in access to vaccines through the establishment of a single FCDC-wide vaccination depot or partnering with private input providers to keep strategic vaccines reserves;

8. Meeting the cold chain requirements of the counties and investing in alternative technologies such as solar systems for cold chain maintenance; and

Investments in FCDC – wide coordination mechanisms to harmonize the disease control activities within the region.

For livestock movement control, the framework seeks the:

1. Strengthening of TADs control along international borders by posting animal health personnel at strategic entry points and equipping them with TADs testing capability.

2. Designating migratory routes and border inspection points and procedures, and instituting veterinary measures: veterinary checks including laboratory testing;

3. Instituting of biosecurity measures at border control points and response plan in case of identification of new cases and outbreaks;

4. Upgrading and improving the quarantine systems to ensure that it meets the international standards;

5. Protection, securing and establishing livestock movement and handling facilities along border and stock routes, including holding grounds and crushes

To control disease vectors, the following are proposed:

1. Enhance community publicity and awareness creation on the importance of vector control.

2. Enhance veterinary extension on the usage of insecticides/pesticides

3. Develop and maintain vector control infrastructure.

4. Harmonize routine vector control efforts across the FCDC counties.

5. Review and domesticate policy on judicious use of acaricides (SFAL develops a prototype policy for all FCDC counties.)

6. Encourage private sector/or public to manage vector control infrastructure (public-private partnership).

7. Monitoring of acaricides efficacy alongside disease control activities.

8. Recruit additional technical staff (including zoologists)

Robust animal health extension and clinical services are required for disease control and treatment. Traditionally, animal health extension and clinical services in Kenya were provided by the government staffs employed within the public sector. However, Kenya liberalized its agricultural input and output markets in the early 1990s following the introduction of reforms in the sector (funded by World Bank and other agencies). The private sector has made significant inroads in marketing animal health inputs, seed, fertilizers, and crop protection products. Unfortunately, whereas in other parts of the country there have seen a number of providers who have established themselves within the private sector, the service provision in Northern Kenya has stagnated or deteriorated because the private sector was not yet vibrant – inadequacy of professionals and infrastructure, seasonality of demand, livestock densities and economies of scale have contributed to market failures in private sector development.

To improve the efficiency and coverage of the animal health extension and clinical services, the Framework recognizes opportunities provided by emerging technologies and tools to reach larger populations in remote areas. Some of the key activities and interventions recommended include:

1. The use of community-based radios and FM stations, which have been set up recently by NGOs, the private sector and county governments;

2. The use of mobile technology for extension service delivery mode – mobile service providers in Kenya have developed some SMS platforms for dissemination of extension and livestock market information;

3. Revitalizing of the Agricultural and Pastoral Training Centres to develop extension (locally adaptable) and train extension agents;

4. Recognize and enable the private practitioners' contributions to developing and improving efficient animal health extension and clinical services; and

5. Increasing the numbers and capacities of public extension services providers

TABLE 4: Results Framework for Disease Control and Treatment

OVERALL OUTCOME The quality and efficiency of animal disease prevention, control and response is enhanced			
COMPONENT 1: Livestock disease control implementation strategies and activities are strengthened and coordinated	**COMPONENT 2:** Animal health extension and clinical services in the FCDC counties are strengthened and coordinated	**COMPONENT 3:** Public-private partnership in clinical services & extension provision enhanced	**COMPONENT 4:** Livestock movement control/ quarantine (including cross-border control points) improved
RESULTS			
1. Domesticated policy on judicious use of acaricides 2. Routine and synchronized vaccinations across FCDC counties for priority diseases using common vaccination calendar undertaken 3. Constructed and maintained incinerators in all FCDC counties for waste disposal and integrated pest management 4. Innovative and smart subsidy products such as voucher systems during emergencies developed and implemented	1. Educational and awareness materials on insecticides / pesticides use developed and disseminated 2. Extension through Pastoral Field Schools/Farmer Field Schools and other innovative mechanisms such as mobile phone technologies implemented.	1. Partnerships and training to private sector to enhance their last mile delivery of animal health services established	1. Establish livestock movement border control points (inter-county, across counties and cross-border). 2. Harmonized livestock movement permits across FCDC counties developed
IMPLEMENTATION ARRANGEMENTS			
Different institutions and organizations coordinate the different components of the Pillar, though all are implemented by the respective County Directors of Veterinary Services (CDVS). Activities will need to be coordinated by the CDVS within each county and by the FCDC Livestock Disease Coordinating Unit within SFAL whenever harmonized approaches are to be undertaken.			
FINANCING MECHANISMS			
Animal health extension and public services will be financed by the respective counties, while livestock producers will pay for private goods and services. Vector control activities though coordinated (and partially funded by) KENTTEC rely largely on resources from the Director of Veterinary Services and Development Partners. While financing from these sources will remain critical, there will be need to advocate and set aside funding from the county government and innovative producer payment systems e.g. introduction of levies payable by the livestock producers, as some of the vector control activities are more a private good and highly localized. Similar funding mechanisms (a mix of public and private financing) will need to pursued for components under animal health and extension services, while resources for supporting livestock movement control, especially border control, will remain a national function. Counties with international borders are similarly expected to contribute towards protection their herds from international incursion of transboundary animal diseases.			
TOTAL BUDGET: KSHS. 878 MILLION			
Kshs. 589 m	Kshs. 88 m	Kshs. 51 m	150m

Pillar 4: Veterinary Governance

Veterinary services must comply with international standards for the safety of international trade in animals and animal products and disease surveillance. The OIE Performance of Veterinary Services (PVS) is accepted as the global process to assist countries in reaching international Veterinary Services (VS) standards.

The improvement of the overall veterinary governance, when implemented in a well-coordinated manner across the FCDC region will reduce the occurrence of livestock diseases. In considering the governance of livestock disease control, the Framework concentrates on two key ingredients in developing functional livestock disease control system in the FCDC region: human resource development for accessible and sustainable quality veterinary services; and animal health regulation and policy.

Currently, human resource capacities for disease control across the FCDC counties are low. For example, there are only 44 veterinarians, 51 livestock officers, 102 animal health assistants, 5 laboratory technicians and 19 hides and skins officers in the public services (Table 5). Further, both the public and private services fail to ensure geographic representation and coverage of services, with higher concentration in urban centres, thus affecting the availability, affordability and accessibility of services and inputs to producers in the FCDC counties.

TABLE 5: Public Veterinary Services Human Resource Capacity in The FCDC Region

County	No of Wards	Vets	Los	AHAs	Lab Tech	Hides/ Skins	Zoologist	Total
Garissa	30	7	12	14	2	7	0	**42**
Wajir	30	4	5	16	0	4	0	**29**
Turkana	30	14	1	14	0	1	0	**30**
Mandera	30	4	15	7	1	0	0	**27**
Isiolo	10	3	6	9	0	1	0	**19**
Tana River	15	5	3	17	0	3	0	**28**
Lamu	10	3	1	7	1	1	0	**13**
Marsabit	20	4	8	18	1	2	0	**33**
Total	**175**	**44**	**51**	**102**	**5**	**19**	**0**	**221**

FAO-UN recommends a ratio of one veterinarian per 100,000 livestock units which will result in the **FCDC** counties having an increased number of veterinarians supported by an adequate number of veterinary para-professionals. In this regard the Framework proposes:

1. Recruitment and training of additional human resources across the FCDC region to address the gaps (see Tables 6 and 7);

2. Provision and strengthening of the skills and core competencies required in public and private veterinary services, especially in disease surveillance, reporting, diagnostic, emergency preparedness and response;

3. Improvement and expansion of accessibility of animal health services to producers through partnerships with private sector. For example, the county governments should consider engaging the private sector in offering some services on their behalf;

4. Facilitate the engagement of private sector in the delivery of animal health services through enhancing public-private-partnerships; and

5. Collaborate with development actors and NGOs in supporting service provision and implementing capacity development program.

TABLE 6: Proposed Human Resource Capacity for Public Veterinary Services in FCDC Region

County	No of Wards	Vets	LOs	AHAs	Lab Tech	Zoologist	Hides / Skins	Total
1. Garissa	30	8	18	16	3	1	0	**46**
2. Wajir	30	11	25	14	3	0	2	**55**
3. Turkana	30	3	29	16	3	1	6	**58**
4. Mandera	30	13	15	23	2	0	7	**60**
5. Isiolo	10	6	4	1	3	0	2	**16**
6. Tana River	15	4	12	0	3	0	0	**19**
7. Lamu	10	6	9	3	3	1	2	**24**
8. Marsabit	20	9	12	2	2	0	3	**28**
TOTAL	**175**	**60**	**124**	**75**	**22**	**3**	**22**	**306**

Key: Vets- Veterinary surgeons; LOs-Livestock Officers; AHAs- Animal health Assistants; Lab tech- Laboratory Technicians.

In addition, the Framework identified challenges pertaining to the scope of veterinary services considering the additional skills and specializations required by the veterinary service for efficient and effective service delivery. For example, the early detection of animal diseases calls for competent veterinary field epidemiologists who know how to rapidly gather information from animal owners and wildlife experts in the field; and to investigate, assess, analyse and report the findings effectively. The Framework, therefore, recommends the recognition of these specializations and skills in addition to vacancies in the services. While the need for conducting a more detailed human resource audit in the provision of public veterinary services was identified, some of the key competencies and skills to support the development of livestock disease control skills identified during the development of the Framework are shown in Table 7.

Table 7: Additional Skills and Competencies Required to Effectively Deliver Veterinary Services in FCDC Region

Key skills and competencies for Veterinarians	Key skills and competencies for Para-Professionals
• Laboratory Techniques • Disease Surveillance • Senior Management Courses • LEGS • Postgraduate = MSc and PhD	• Laboratory Techniques • Management Courses • Diploma, BVM • Meat Inspection • Artificial Insemination • Meat Grading and Abattoir Management

With regard to animal health regulation and policy, the FCDC region county governments will be encouraged to pursue the development of a common animal disease control bill (Mandera has a prototype bill) that will mirror the national efforts. The harmonised animal diseases control bill will reflect the FCDC region commitment to formulating a proactive, coherent and integrated livestock disease control strategy that will focus on reducing disease burden and reduce the vulnerability of FCDC communities through securing their livestock assets. In this area, the Framework, therefore, proposes the following

1. Support for revision of the Kenya Veterinary Policy.
2. Develop and adopt a harmonised FCDC regional Animal disease Control bill and Livestock disease control strategy.

TABLE 8: Results Framework for Veterinary Services Governance

OVERALL OUTCOME Improved human capacity, regional regulatory frameworks and coherency of strategies and plans for disease prevention, control and response	
COMPONENT 1: Human resource capacity for Livestock Disease Control is enhanced	**COMPONENT 2**: Improved enabling policies & supportive legislative frameworks on Livestock Disease Control
RESULTS	
1. Recruit additional animal health experts to address gaps in delivery of better animal health services 2. Undertake a capacity and training needs assessment using OIE guidelines to identify gaps that need to be addressed to improve service delivery. 3. Train animal health surveillance, clinical, laboratory and rapid response staff.	1. Develop and adopt harmonised county animal disease control and preparedness bill 2. Develop and adopt county plans and SOPs for animal disease control and pandemic preparedness 3. Support review of the Kenya Veterinary Policy in compliance with the current OIE standards
IMPLEMENTATION ARRANGEMENTS:	
The respective County Public Service Boards will take the lead in facilitating the empowerment of Department's to manage the said functions and to put in place system for recruiting the right skilled personnel, train and develop its staffs, allocate adequate funding for training and capacity development and put in place conducive human resources policies and practice in place. The SFAL for FCDC region will coordinate the development of harmonized county animal disease control and preparedness bills.	
FINANCING MECHANISMS:	
The County Executive Committee Member responsible for Finance will need to ensure that adequate funds for HRD programmes are availed on a timely basis to ministries and departments. However, training programs and legislation development require additional support by the development partners, other agencies, and the private sector.	
TOTAL BUDGET: KSHS. 336 MILLION	
Kshs. 155 m	Kshs. 171 m

Pillar 5: Veterinary Services Infrastructure

During the 2011 OIE-PVS gap analysis in Kenya, it was revealed that while the country had suitable physical infrastructure at all levels (national and county) to support veterinary service delivery, financial and technical mechanisms to maintain them was significantly lacking.

The FCDC region has two functional Regional Veterinary Investigative Laboratories (RVIL) that are under the KDVS as laboratory functions have not been devolved. The first is the Mariakani RVIL that serves the coastal region which includes Lamu and Tana River counties. This Regional laboratory has two satellites laboratories at Ukunda and Witu. The second is the Garissa RVIL that serves the regions of Garissa, Wajir, Mandera and Tana River. Turkana, Isiolo and Marsabit Counties access Karatina regional laboratory. Isiolo and Marsabit counties have functional county laboratories that are single rooms that do not meet the minimum laboratory safety standards. All the RVIL have a chronic shortage of funds and human capacity. This has forced all FCDC counties to rely on the main central laboratory based in Kabete, Nairobi for disease agent confirmation or sero-surveillance.

This pillar provides a common strategy around which all stakeholders can renew their efforts to enhance veterinary service delivery through infrastructure investment. The Pillar seek to strengthen three infrastructure areas;

1. Strengthening surveillance and laboratory diagnostic infrastructure
2. Strengthening disease preventive and control infrastructure
3. Strengthening public health, trade and value addition infrastructure

Towards this end, the pillar seeks the establishment of:

1. All ten counties adopt a single E-Surveillance infrastructure that will allow syndromic surveillance and disease outbreak reporting. The adopted system will enable sharing of disease information between FCDC region members and with the Kenya director of veterinary services department as mandated by OIE;
2. Ten laboratories in the FCDC region that are staffed and equipped to support surveillance and disease outbreak investigation activities.
3. Specimen processing and basic testing facilities (sometimes referred to as satellite labs) in each county. In addition to supporting basic testing, the role of these facilities is to have minimal processing and packing equipment to allow safe and reliable transport of specimens: a centrifuge, transport media, slides, a refrigerator and freezer and packing material.

Additionally, the CDVS in the FCDC region have developed a minimum required infrastructures to support livestock disease prevention and control (drawing on best practices from the region) which will form the basis of the expected results from this component. The desired infrastructure includes:

1. Each FCDC region county department of veterinary services has purchased four appropriate vehicles (4-wheel drive with in-built fridges that can run with the vehicle battery).
2. Lamu to have two beach bikes and 1-speedboat;
3. FCDC region counties have expanded headquarters veterinary staff offices and build at least one veterinary office in each sub-county. The offices will have modern furniture and computers;
4. Strategic establishment and decentralisation of Cold chain infrastructure (cool boxes, freezers and fridges with a large capacity to allow minimal vaccine bulking) at headquarters and sub-county offices. The cold chain infrastructure should be connected to the main grid and with backup solar panels and generator at headquarters, while at sub-county the main power supply or back up can be solar panels;

5. FCDC region county has at least one Holding ground/ quarantine station legally recognised and secured;

6. Each FCDC region county has constructed or rehabilitated at least 2 fixed crushes in each ward and purchased at least four mobile crushes;

7. Each FCDC region county has constructed one spray race at each sub-county level and at major markets in the county;

8. A department within Kenya Agriculture and Livestock Research Organization (KALRO) in Marsabit and Garissa that focuses on Camel health and production research created.

TABLE 9: Results Framework for Veterinary Services Infrastructure

OVERALL OUTCOME Veterinary systems to support animal disease surveillance and control reinforced at the regional and county levels.
COMPONENT 1: Network of laboratories and veterinary facilities for providing timely and reliable diagnostic services, disease reporting, prevention and control are established and strengthened
RESULTS
1. Construct (or upgrade) and maintain animal disease diagnostic laboratories to provide timely and reliable diagnostic services 2. Establish and maintain standardised veterinary offices at the county and sub-county levels. 3. Purchase cold-chain systems for counties and sub-counties to ensure efficacy and efficient delivery of vaccines to the field 4. Construct fixed crushes and crush pens in all wards 5. Purchase vehicles and motorcycles to support service delivery 6. Establish a holding grounds/quarantine stations in each county
IMPLEMENTATION ARRANGEMENTS:
SFAL and CDVS from FCDC region will lobby their respective governors, county assemblies and development partners to set up the County Veterinary Services Development Fund (CVSDF). Guidelines on fund establishment and modalities for fund disbursement can be adopted from the Exchequer and Audit act Cap 412 legal notice No.109 of May 1996
FINANCING MECHANISMS:
SFAL will lobby the ten-county governments to allocate 10% of their total county budget to the livestock sector, of this amount, 20% will be allocated to CVSDF.
TOTAL BUDGET:
KSHS. 2,203 MILLION

Pillar 6: Livestock Identification and Traceability System (LITS)

The Livestock Identification, Registration and Traceability System (LITS) aims "to satisfy domestic and international consumer requirements on safety and quality of animals and animal products" which will be partly achieved through "building an efficient and sustainable system for livestock identification and registration to achieve farm to fork traceability and secure livestock assets."8

The livestock sector in the FCDC region has significant potential to contribute to household food security and economic growth of the region. However, the sector is burdened with constant outbreaks of TADs which hinder access to regional and international trade. The establishment of a functional LITS, therefore, has the potential to address this key recurring problem. This strategic pillar will contribute to addressing the challenges in the management of animal health, compliance and enforcement, traceability of animals and animal products and improving market access.

To be able to effectively monitor disease status, the FCDC region requires a harmonised animal identification and traceability system. Currently, it's only Isiolo County that has piloted LITS on 20,000 herds of cattle. In all the other FCDC Counties livestock are only identified using traditional brand marks. However, the brand marks are mostly similar and, in most cases, destroy the quality of hides and skins. There is also need for FCDC member counties to learn from the successes and failures of previous interventions as they strive to harmonize their LITS initiative. Countries that have successfully implemented a national LITS programme have shown that the livestock industry can demonstrable direct benefits to them. In the FCDC context, the LITS programme should leverage on incentives such as facilitating access to lucrative regional and international markets, deterring cattle rustling and accessing subsidized animal health inputs such as vaccines and anti-parasitic products.

This Framework, therefore, proposes the following three elements towards the development of functional livestock identification and traceability system that enhances disease control, trade and food safety in FCDC region.

1. Adopting the National Livestock Identification & Traceability (LITS) Strategy;
2. Increasing awareness of LITS benefits within FCDC region;
3. Phased implementation of a LITS programme within FCDC region

[8] The draft National Livestock Identification, Registration and Traceability Strategy

TABLE 10: Results Framework Livestock Identification and Traceability

OVERALL OUTCOME: A livestock identification and traceability system (LITS) to support efficient and effective disease control is established.	
COMPONENT 1: An enabling legislative/regulatory framework for Livestock Identification & Traceability (LITS) established	COMPONENT 2: A functional Livestock Identification & Traceability (LITS) system developed
RESULTS	
1. Adopt the National Livestock Identification & Traceability (LITS) Strategy	1. Conduct trainings on the management and use of livestock identification and traceability system (LITS) 2. Create public awareness about the livestock identification and traceability system (LITS)
IMPLEMENTATION ARRANGEMENTS:	
Implementation will be done over a period of four years in incremental and phased manner. County DVS will spearhead the awareness campaign of the electronic ear tags and/or visual tamper-proof ear tags as the prescribe technologies and liaise with the county government to roll out LITS. The CDVS together with SFAL secretariat will also facilitate the formation of the County SFAL Livestock Control Disease Coordinating Unit in each of the ten counties. This task force will coordinate LITS programme, report progress and maintain its database.	
FINANCING MECHANISMS:	
SFAL secretariat and County SFAL Livestock Disease Control Coordinating Unit will develop modalities for mobilisation and allocation of resources from national and county governments, private partners and donor agencies. To ensure that branding is sustainable a subsidised branding fee will be charged to the livestock keeper	
TOTAL BUDGET: KSHS. 466 MILLION	
Kshs. 344 m	Kshs. 122 m

Pillar 7: Animal Welfare

This pillar seeks to improve animal welfare legislation and standards and ensure that animal keepers fulfil their responsibilities.

Kenya since independence has a law that regulates how animals should be handled and raised, the prevention of cruelty to animals Act CAP 360 (Amended in 2012) has been lauded as one of the most comprehensive animal welfare law in Africa. However, the law is outdated and does not comply with OIE animal welfare standards of 2016. Furthermore, the law is not anchored in any institutional framework and therefore has challenges in enforcement and implementation. This has further been compounded by devolution of veterinary, animal husbandry and animal welfare services to the county governments. The county governments, especially in ASAL areas, have many competing needs to address. This means that animal welfare issues will have to be side-lined in favour of more urgent socio-economic issues such as providing basic needs such as healthcare, education and infrastructure. Recognising this gap, the Director of Veterinary Services (DVS) in collaboration with key animal welfare partners has drafted the Animal Welfare Bill and in 2017 supported the development of the Kenya national animal welfare strategy and action plan (2017-2022).

The Kenya Animal Welfare strategy focuses on four areas:

1. Development and review of policy, legislation and institutional framework for animal welfare;

2. Strengthening communication, awareness and advocacy on animal welfare;

3. Promotion of education, training, research and capacity building on animal welfare amongst all stakeholders;

4. Development of a sustainable implementation framework for animal welfare programmes

The county governments are expected to mainstream animal welfare practices in their livestock policies and service delivery. However, only Mandera of all the 10 FCDC counties has an animal welfare bill (2013). The county of Lamu has best practices in animal welfare viz. donkey hospital and animal welfare clinic for cats and dogs, conducts regular public awareness and sensitization campaigns on responsible animal ownership. The county government has also purchased a prodder to assist traders in markets to load animals in trucks. To create incentives to adopt best practices in donkey husbandry, Lamu county has an annual event that rewards donkey owners who have maintained healthy animals throughout the year.

Lamu county has also mainstreamed animal welfare guidelines in the livestock policy by adopting OIE guidelines on transportation of poultry. The current animal welfare threats in FCDC region include;

1. The resource-based conflict between livestock keepers and crop farmers, livestock that trespass farms are slashed inflicting fatal or debilitating wounds;

2. Low animal welfare knowledge on the link between humane slaughter and good meat quality. The FCDC region generally has poor slaughter practices in county slaughter slabs and slaughterhouses with most animals watching others being slaughtered. In some instances, the lack of proper restraining infrastructure results in a violent struggles before death. There is also a religious aspect to lack of adoption of stunning with most Muslim counties indicating that stunning is against their religious faith. All counties indicated there were no designated sites for disposal of carcasses and this had resulted in infringement of surrounding communities human welfare right to a clean environment

3. Transportation of small stock and poultry is still a big challenge as most are transported in vehicles not designed for animal transport and in most instances are placed on top of carriers or in boots of public service vehicles mainly buses. No county has specialised vehicles to transport animals to the main terminal markets in Nairobi.

4. Stray dogs and hyenas biting or killing livestock is a growing menace in all counties. The CDVS department and communities use baits to kill these animals. The CDVS's indicated that

communities are now using Ivermectin to bait the dogs or hyenas. The communities use pieces of meat or parts of a carcass that has been laced/injected with the drug. The drug causes the hyenas to go blind.

5. Mistreatment of livestock often occurs in the hands of traders through beating or trekking long distances without food and water. Traders have been observed to suffocate cattle who have become too weak to stand by cupping their hand over the muzzle. This elicits an adrenaline rush that will get the animal up.

6. The compensation scheme when wildlife attack livestock is too low to buy replacement animals. There is need to lobby for revision of the compensation schemes guidelines and fee.

This pillar seeks to establish an animal welfare unit with relevant expertise within the counties. Their responsibilities and tasks will be to update the two relevant Acts, provide independent review for animal welfare legal disputes, develop a communication, compliance and enforcement programme (based on the new legislation) and develop capacity in animal welfare science. Actual extension and enforcement in the field should be undertaken by field veterinarians (including private) and para-veterinary professionals in the relevant domains (e.g., slaughter welfare standards, farm welfare standards during farm visits, transport welfare standards during border inspection and movement control activity, etc.) The pillar also seeks to support the development/adoption of updated animal welfare legislation. Animal welfare at abattoirs will be included in independent meat inspection and the welfare aspects at stunning, for traditional and religious slaughter and during transport investigated /researched and guidelines developed.

The pillar will provide a framework that will work towards Integrating animal welfare guidelines and standards in FCDC region institutions and veterinary service delivery. The pillar has three elements:

1. Mainstreaming OIE animal welfare standards in county legislation, policies and veterinary services delivery programmes;

2. Strengthening advocacy, awareness and communication on animal welfare across livestock value chains in FCDC region.

TABLE 11: Results Framework for Animal Welfare

OVERALL OUTCOME Animal welfare improved.	
COMPONENT 1: Animal welfare standards mainstreamed into the county institutions and legislation	**COMPONENT 2**: Awareness on Animal welfare standards enhanced
RESULTS	
1. Adopt the animal welfare bill model by Kenya Law Reform Commission 2. Develop work plans, budgets, SOPs and M&E for implementation and mainstreaming of animal welfare programmes	1. Undertake training and education programmes for staff and communities on raising standards of animal care 2. Develop communication and advocacy materials on animal welfare 3. Undertake advocacy and knowledge sharing events to improve Knowledge, Attitudes, and Practices on animal welfare
IMPLEMENTATION ARRANGEMENTS:	
The county directors of veterinary services will assign an officer to spearhead the animal welfare activities in the department. The officer will be in charge of mainstreaming OIE animal welfare guidelines in policies, strategies and programmes. The officer will also ensure adherence to the laid down animal welfare standards.	
FINANCING MECHANISMS:	
County veterinary services director in collaboration with SFAL secretariat will lobby and mobilise resources from government, the private sector and development partners to support animal welfare activities.	
TOTAL BUDGET: KSHS. 267 MILLION	
Kshs. 139 m	Kshs. 128 m

Pillar 8: Livestock Resources Statistical Information and Communication System

Timely and good-quality information about livestock resources are needed in order to understand the livestock population situation, support decision-making and planning, and respond quickly in any emergency. An information management system that allows robust analysis of livestock data and sharing of information among relevant agencies at national, county and international levels is of vital importance in not only prevention and control of animal diseases and zoonoses but also for planning for development of the livestock sector. The information management systems should interface with existing regional and international animal information systems such as Animal Resource Information System (ARIS) of AU-IBAR and Analysis of data from World Animal Health Information System (WAHIS) of OIE.

Due to budgetary and human capacity constraints, the county livestock production sections are no longer collecting data on livestock population dynamics and production. The counties were currently relying on secondary data from abattoirs and livestock markets as well as the 2009 census data to make projections and estimates. The 2009 census estimated that Kenya's livestock resource base was composed of approximately 60 million animals, comprising of 29 million indigenous and exotic chicken, 10 million beef cattle, 3 million dairy and dairy cattle crosses, 9 million goats, 7 million sheep, 0.8 million camels, 0.52 million donkeys and 0.3 million pigs. Mandera is the only FCDC region county that has conducted a livestock census in 2014/15. Mandera estimates that it has 1,016,790 camels, cattle 863,625 cattle, 3,415,484 goats, 1,164,238 sheep, 208,126 donkeys, 56,874 indigenous chicken and 23,388 beehives. The data collection method used cannot, however, be immediately verified and more information to understand the method used and type of data collected is required.

The chronic lack of animal resources information, particularly surveillance data from African countries prompted AU-IBAR under its Knowledge management programme to support the development of an animal resource data management database, the Animal Resources Information System (ARIS).

ARIS I was launched in 2002 and was able to demonstrate the importance of having a common platform to report diseases and generate reports. In 2012, ARIS II was launched as a cost-effective Livestock Information Management System (LIMS). The new ARIS allowed member states to generate, validate, store, analyse and submit different types of data on animal resources using an online web-based system, thus providing real-time information.

After devolution, most counties, however, felt they wanted to be in charge of managing the data generated from their jurisdiction and did not support further adoption of ARIS II because it did not present a smartphone-based app. It is under this background that several initiatives have been launched in FCDC region. All initiatives are based on the use of smartphones to collect disease outbreak and conduct syndromic surveillance, electronic surveillance (E-surveillance). FAO-UN and Kenya's Directorate of Veterinary Services (KDVS) in 2013 adopted EpiCollect which is an open source platform that enables real-time data collection using mobile applications such as tablets and smartphones.

The success of EpiCollect is evidenced by the increase in the number of counties reporting disease outbreaks to KDVS. In the FCDC region, the counties of Lamu and Garissa are among the top 3 of the 47 counties consistently reporting diseases using the EpiCollect platform. The main challenge is that EpiCollect is hosted on a cloud server; this means the data is subject to data breaches. In addition, the system has a frequent service outage due to challenges in internet connectivity. A recent E-surveillance initiative of an ILRI's AVCD project, dubbed E-wallet has trained county animal health staff who then trained Community Disease Reporters (CDRs). The CDRs have been provided with smartphones to report disease syndromes. The reports are displayed on a digital dashboard that is used to monitor syndrome trends and trigger response interventions when a critical cluster of symptoms is reached. The county government and sub-county animal health personnel are tasked with early response responsibility. The main challenge with the E-wallet initiative is that it is not linked to the KDVS, who is the only OIE authority in a country tasked with generating official reports concerning livestock disease status in the country and its regions. In addition, the E-wallet is only in 2 counties (Turkana and Marsabit), unlike the EpiCollect system which is in all FCDC counties.

The FCDC region will need to select a LIMS system that can integrate livestock disease information, production and market information, as this will allow more robust data analysis hence better decision making. Creation of such a system requires significant human and financial resources. FCDC member counties will, therefore, need to utilise already existing and proven LIMS.

Kenya Director of Veterinary Services (KDVS) together with Washington State University (WSU) is launching a new comprehensive LIMS which is an electronic syndromic surveillance system dubbed the 'Kenya Livestock and Wildlife Syndromic Surveillance System' (KLWSSS). The new system will build on the EpiCollect platform and improve on it as it will have the server based at the KDVS instead of the cloud. The KLWSSS will not only allow syndromic reporting but will also allow input of tentative diagnosis, data verification and editing starting from sub-county, county and KDVS level. The KLWSSS will also have modules that will allow laboratory results input and in the future livestock market producer and consumer information as well as abattoir production information.52

The purpose of pillar 8 is to provide a harmonized data collection, analysis and reporting system for FCDC region in conjunction with Kenya Director of Veterinary Services (KDVS). Pillar 8 has the following three elements:

1. Common Livestock Information Management System (LIMS) for the FCDC region;

2. Identification of a minimum set of livestock item core data that will be used to guide FCDC region priority areas of interventions;

3. Common Communication strategy for the FCDC region.

TABLE 12: Results Framework for Animal Resources Statistical Information and Communication

OVERALL OUTCOME Evidenced-based planning and service delivery for animal disease prevention, control and response improved	
COMPONENT 1: Livestock disease information management system developed	**COMPONENT 2:** Livestock diseases communication materials developed and disseminated
RESULTS	
1. Develop an Integrated web-based livestock disease information management system for monitoring of events of epidemiological significance 2. Undertake continuous routine collection analysis and dissemination of data and information 3. Undertake training for county government staff on management and use of the animal health information system platform	1. Conduct animal health exhibitions, information sharing and awareness events
IMPLEMENTATION ARRANGEMENTS:	
SFAL secretariat to engage KNBS to train FCDC county data officers on data identification, collection, analysis and reporting. SFAL secretariat to organise a roundtable discussion between KNBS and FCDC veterinary and livestock departments ensure tools to collect 2019 livestock data can comprehensively capture pastoral production systems unique setting. Additionally discussion about how FCDC counties can engage with ongoing processes such as the Kenya Livestock and Wildlife Syndromic Surveillance System' (KLWSSS) with be reviewed. County SFAL Livestock Disease Control Coordinating Unit will spearhead the communication component that will be in charge of promoting FCDC region CPF-LDC activities at local, national and international levels.	
FINANCING MECHANISMS:	
County SFAL Livestock Disease Coordinating Unit in collaboration with SFAL secretariat will lobby and mobilise resources from government, the private sector and development partners to support pillar 8 result-based activities.	
TOTAL BUDGET: KSHS. 226 MILLION	
Kshs. 204 m	Kshs. 22m

Pillar 9: Institutional Development and Knowledge Management

This pillar will aim at sustaining a long-term and coordinated approach that will ensure the successful implementation of the common programme framework for livestock disease control in the FCDC region. Pillar 9 activities will facilitate a supportive enabling environment as well as provide the evidence base for decision-making. This pillar framework has three components, i.e. institutional strengthening, coordination and knowledge management each of which is discussed below:

9.1 Institutional strengthening

There are currently a number of challenges to the institutional strengthening and mainstreaming livestock disease control agenda in the counties. These include:

- Limited awareness of the need to mainstream livestock disease control as well as the type of activities mean many disease control activities are not considered in planning within CIDP and are lumped together as vaccination activities
- Poor legislative provision or poor enforcement of existing legislation,
- Limited technical capacity to integrate disease control measures in Development Plans

While mainstreaming LDC is the responsibility of relevant County Government Department, the approach taken should prioritize the most critical sectors.

The strategy to mainstream LDC has four elements:

- Building widespread and general awareness of disease risk information and strategies to reduce risk: CDVS is the nodal agency for LDC with a wealth of information and a need to develop and disseminate lessons learned and good practices on every aspect of LDC. This should be incorporated into mainstreaming guidance.
- Assessing key sectors and areas of the county: This assessment will identify where LDC mainstreaming will have greatest impact and identify the major constraints to its successful implementation. For example, detailed assessments should consider the likelihood of future climate impacts as well as historical outbreak information. They should also consider where progress has already been made on mainstreaming and attempt to cover areas which are neglected
- Raise awareness of the specific constraining issues in the sector and develop operational guidance and training for mainstreaming jointly with the key players in the sector. This would include private sector actors,
- Networking and informing other development actors: Partner with donors, development partners and relevant private sector bodies to ensure that disease analysis and implementation of guidance and legislation is a criteria for all new projects funded.

9.2 Coordination

In a multi-government and multi-actor activity like Livestock Disease Control, coordination is extremely vital at various levels – policy, programme design and implementation at macro-, meso- and micro-levels. Kenya has a long history of cooperation and coordination between a number of LDC actors in the development and humanitarian fields. The long-term experience with the seasonal vaccination campaigns is an example of how multi-agency action can be effective and sustainable over the years.

Multi-government and multi-agency coordination is needed for a number of reasons. First, concerted and coordinated action is often the most effective way to deliver consistent services and programs for a set of stakeholders characterised by a high variety of resources, expertise and focus. Second, coordination avoids duplication of efforts and redundant allocation of resources and projects. It also favours proper prioritization of funds, resources and activities. Third, various stakeholders often have access to different sources of information. Pooling such information is very important both for disease control and for developmental planning.

This Common Programme Framework recognizes the importance of coordination by stating that " Multi-County Coordination, Community based organizations, the private sector and humanitarian organizations, such as UN agencies, Donors, NGOs, professional institutions, etc… play important roles in the implementation of Livestock Disease Control strategies. Such a technical group called SFAL exists at the meso (FDCD regional) level and has tried to perform a significant coordination role. It is important that these forums are also reinforced by the decentralized structure of the county governments, e.g. sub-county and ward levels. The proposed high levels of autonomy of county and local levels of government in planning and implementing livestock disease control creates the need for multi-government coordination to happen also at federal and regional levels.

A big step towards coordinated response in livestock disease control at the FCDC county-level is the SFAL that provisions a specialized multi-county institutional structure for the agricultural sector departments within the FCDC counties.

Nevertheless, it should be appreciated that these efforts towards coordinated LDC need to be built upon, strengthened and taken forward.

The strategy to achieve the coordination goals will be based on the following points:

- The decentralized nature of LDC coordination will be reinforced and guided by the evolving coordination needs and thrust of this CPF;
- Autonomy in defining the task of relevant institutions will be assured as long as such is within the broad frame of a county governmental mandate, ensuring that activities and functions are defined by the needs and circumstances of all participating entities.
- Linkages and cooperation with existing coordinating institutions will be encouraged;
- Established county government structure, especially sector task forces, must be strengthened and should serve as the primary node for LDC coordination.

9.3 Knowledge Management

Research and documentation of best practices should always be at the centre of development practices. Well-analysed research and documentation will help policy makers to take informed decision not only to review existing interventions but also design future programmes that meet needs and interests of vulnerable community. Research results, as well as best practices that needs to be scaled up, can easily be communicated to broad array of stakeholders via different modalities such as awareness-raising forum, media houses, etc. Therefore, findings of research can serve as key inputs/evidences to undertake meaningful communication and awareness raising in areas of LDC.

To have meaningful communication on LDC issues, key stakeholders should get required information in the right time and right place including all logistical as well financial support deemed important. Therefore, experiences need to be consolidated and scaled up. The SFAL should have a more proactive and leading role in the creation and dissemination of LDC awareness-raising activities. LDC stakeholders should be connected in platforms for the sharing of information on a growing body of experiences and lessons learned in LDC interventions.

The strategy and approach of the Knowledge Management component is based on the following points:

- Engagement of research and academic institutions;

- Consolidation and communication of best practices that need to be scaled up;
- Establishment of a SFAL LDC Knowledge Management website as a hub for the promotion of LDC knowledge and research;
- Extensive use of national media such as television, radio and newspapers for raising awareness;
- Promotion of public events such as the LDC day and the LDC Policy and Practice Forum;
- Ensure products for the promotion of LDC considers cultural sensitivities and are translated in different languages;
- Information sharing and networking with private sector agencies who have an incentive to support LDC research or who could benefit from research findings, for example, private sector input supply companies and others

TABLE 13: Results Framework for Institutional and Knowledge Management

OVERALL OUTCOME Strengthened regional and county institutions, multi-sectoral coordination networks and knowledge management for animal disease prevention, control & response.		
COMPONENT 1: **Livestock disease control institutions strengthened**	**COMPONENT 2**: Disease control coordination structures created	**COMPONENT 3**: Knowledge management on Livestock Disease Control improved
RESULTS		
1. Incorporate and streamline relevant veterinary system functions at different administrative levels (county, sub-county and ward)	1. Establish and activate livestock disease control coordination forums at various levels (national, county and sub-county) 2. Strengthen the capacities of stakeholders forum for livestock disease control	1. Support research projects on livestock diseases 2. Generate, document and disseminate experiences and good practices on livestock diseases in FCDC counties
IMPLEMENTATION ARRANGEMENTS:		
The coordination of the Framework activities will be done through the SFAL. FCDC- SFAL will play the overall role of providing a platform to coordinate, mobilise stakeholders and resources. At the county level, the County SFALs through the county SFAL Livestock Disease Control Unit will coordinate CPF-LDC activities and ensure regular communication of progress as well as monitor and evaluate impacts. The CDVS from each county will offer technical direction for the CPF-LDC activities. All staff in the county veterinary departments together with state and non-state actors will be involved in the successful implementation of the Framework.		
FINANCING MECHANISMS:		
The mobilization of resources will be coordinated through the FCDC-SFAL Secretariat, who will work together with the existing County financial management systems to disburse the funds to support CPF-LDC implementation in the FCDC region.		
TOTAL BUDGET: KSHS. 129 MILLION		
Kshs. 50 m	Kshs. 30 m	Kshs. 99 m

INSTITUTIONAL AND LEGAL FRAMEWORK

The Kenya National Livestock Policy outlines the institutional and legal arrangement for the livestock sector in Kenya. The Ministry of Agriculture, Livestock and Fisheries (Ministry of Pastoral Economy and Fisheries in Turkana County) has the responsibility of creating an enabling environment for livestock disease control in the FCDC region. This is achieved through the Department of Veterinary Services and supporting national and county institutions that are involved in policy and governance of the sector, such as the Kenya Veterinary Board and Directorate of Veterinary Medicines. The Department of Veterinary Services enforces veterinary disease investigation and diagnosis, veterinary extension services, animal health inspectorate services, quality assurance, vector control, zoonotic disease control and veterinary epidemiology, food safety (of animal origin), hides and skins improvement and leather development, breeding and genetics, certification to meet the international sanitary and zoosanitary requirements in line with the WTO guidelines, policy, monitoring and evaluation of animal health programmes, and animal welfare.

Due to various challenges in the delivery of animal health services, livestock disease control across the FCDC region has not been effective, thus resulting in endemicity of livestock diseases in the region. To address these challenges, the Framework recognizes the need to restructure the services delivery harmonizing and coordinating activities across the FCDC region while introducing additional human resources, competencies and skills to support control efforts, and recognizing the role of other institutions and stakeholders, especially private sector in disease control.

On the legal framework, a weakness exists in the enforcement of the existing regulations (in disease control, service provision, and extension, and regulation of veterinary pharmaceuticals and vaccines among others). There is, therefore, the need to address these weaknesses by reviewing the existing legislation, and where necessary put in place FCDC – wide harmonized county Bills and Acts to streamline the operations of the sector.

Mobilizing financing for the Framework will be critical for its success. Unfortunately, the livestock sector in the FCDC region though considered a driver of the local economy has not been receiving adequate funding from the county governments. The counties have allocated minimal resources to this sector, between 2 - 4% of their total funds to the livestock sector on average. The highest share allocation to the livestock can be found in Tana River with 15% and the lowest in Isiolo (2015/16). Towards this end, the respective FCDC county governments must make necessary efforts to mobilize adequate financial resources for the implementation of the Framework, including development partners, the private sector and livestock producers.

3.1 Programme Management and Implementation

The implementation plan will encompass the entire FCDC region composed of livestock producers, veterinary professionals, actors within the livestock and livestock products marketing system, NGOs, private animal health providers, researchers and other stakeholders. Naturally, the institutional mechanism for disease control will be under the respective County Directors of Veterinary Services who will coordinate the involvement of these stakeholders. Within the current framework, the nominated leader of each Pillar and Component will be responsible for planning, coordination with the relevant stakeholders and implementation as well as reporting on each of the Pillars and its Components. The Framework aims to create and maintain active collaboration between stakeholders and for this purpose the SFAL Livestock Disease Coordinating Unit will be formed in each county. The Framework recognizes the opportunities for private-public partnership in delivering on the key outputs of the Framework.

3.2 Resource Mobilization Plan

The FCDC region earns 80% of its revenue from the livestock sector. However, most member counties only allocate less than 4% of their total annual budget to the livestock sector. This allocation is insufficient to run and sustain veterinary services. Also, a recent capacity needs assessment conducted in five FCDC counties found that disbursement of allocated funds often faced chronic delays with all CDVS noting that funds allocated to their departments were found only on paper.

The SFAL County Executive Committee (CEC) members of agriculture and livestock will spearhead resource mobilisation and will strive to engage and lobby the Governors and Members of County Assembly (MCA) to allocate at least 10% of the county's annual budget to the livestock sector. This is in line with the Comprehensive Africa Agriculture Development Programme (CAADP) Maputo (2003) and Malabo (2014) declarations. To ensure financial self-reliance of the livestock sector that will help realise the FCDC region CPF-LDC, the following revenue sources will be explored;

- The county veterinary departments will develop project proposals and submit them for funding and/or implementation by the private sector and donor partners.

- The CECs will advocate for setting up of an administrative body that will manage the livestock sector taxes/cess revenues collected. This body will develop financial instruments and agreements that will work out the revenue percentage to be reinvested into the livestock sector.

- Remittances from the diaspora - remittance is money sent by a person in a foreign land to his or her home country. The central bank of Kenya now recognises remittances as an important contributor to the country's growth and development. The bank estimated that by the end of 2016 remittances by Kenyans in the diaspora stood at Shilling 177 billion. The diaspora remittances had surpassed other sources of foreign exchange earners such as tea, horticulture and tourism. However, to encourage private investment in the livestock sector, the county government needs to advocate for some of the remittances to be invested in the livestock sector. A major incentive is ensuring that free livestock inputs are not offered to livestock keepers during vaccination campaigns; this will avoid undermining private sector investments.

- Revise the current fee charged by the county veterinary department as they conduct their regulatory and supervisory mandate such as meat inspection, branding (LITS), livestock market and sales yard health certification and movement permit provision.

- The adoption of the FCDC regional Common Programme Framework for Livestock Diseases Control will open up avenues for financial and technical support from Regional Economic Communities (RECs) such as IGAD and development/ international institutions such as AU-IBAR, FAO-UN, African Development Bank and World Bank. Support to set up quarantine stations to enhance disease control and surveillance can also come from private companies located in the Middle East and North Africa (MENA) countries dealing in live livestock and meat importation. This can be done by having a working agreement between FCDC member counties through SFAL and the Red Sea Livestock Trade Commission (RSLTC).

3.3 Coordination Mechanisms

Ideally, the proposed framework should be coordinated at the FCDC level because of the cross county and cross-border impacts of livestock diseases. Nationally, there has been attempts to coordinate cross-border livestock policies, including livestock disease control; however, these initiatives remain weak and will need further development. At FCDC level, the Framework recommends the development of FCDC – wide coordination mechanisms involving all the County Directors of Veterinary Services from the region, with inputs and leadership of the Director of Veterinary Services. As the Framework aims to create and maintain active collaboration between stakeholders, it, therefore, proposes the establishment of an "FCDC Livestock Disease Control Coordinating Unit" which will continue to evolve, enhance, and refocus livestock disease control programs to meet existing and impending challenges.

3.4 Monitoring and Evaluation

The Monitoring, Evaluation and Learning (MEAL) plan is the tool for the successful implementation of the FCDC regional Common Programme Framework for Livestock Diseases Control. The framework MEAL plan will be undertaken by a monitoring, evaluation and learning team that will be composed of two staff one from the SFAL secretariat and the other from the county SFAL Livestock Disease Control Coordinating Unit. The team will be regularly capacity built to ensure their skills are updated on various techniques of collecting data to measure CPF-LCD impacts at all levels of the livestock value chain as consultants will only be engaged where there is a capacity shortfall in the team, this will ensure sustainability. The MEAL team will provide technical leadership in all monitoring, evaluation, research, documentation and knowledge management and will conduct evaluations every quarter.

The Framework will include an ongoing review to assess the effectiveness of the interventions that are being applied, identify gaps in knowledge and adapt the objectives and methods as required. This will need to start with the establishment of baseline data of livestock diseases in the FCDC counties. The Framework, therefore, recommends a detailed and FCDC – wide participatory epidemiology study of the priority livestock diseases. In addition, as the Framework activities are implemented, there will be need to collect data on the process and impact indicators. This enables measurement of the effectiveness of interventions on epidemiological indicators such as incidence and prevalence and identifies areas needing strengthening.

This will focus on two key issues:

- Progress being made towards the 10-year goal of ending Disease emergencies, measured by the indicators for the overall Disease Control outcome

- Progress being made by each pillar of the Disease Control against the outcome indicators in its results framework.

Responsibility for monitoring and evaluating individual programmes and projects that contribute to the outcomes of each pillar rests with the implementing agencies concerned. Operational guidance on monitoring and evaluation will be provided by the SFAL Secretariat in the FCDC. Finally, in monitoring the Framework, the Ministry will work closely with the sector stakeholders to ensure stronger coordination and harmonization of activities undertaken by the development partners and NGOs involved in livestock development. An appropriate participatory M&E system will be established in order to ensure that the necessary corrective measures are taken at the right time during the implementation of projects and programmes in the sub-sector. To this end, a pro-active information management and information sharing system will be institutionalized.

3.5 Communication and Advocacy Plan

Effective communication with all stakeholders at both county and national levels will enhance awareness creation and will be crucial to the success of the FCDC region CPF-LDC. The communication and advocacy initiatives will be collaboratively spearheaded by SFAL secretariat and county SFAL Livestock Disease Control Coordinating Unit and will aim at:

1. Utilizing the most appropriate media, formats and languages to ensure effective communication to all livestock value chain actors. The communication will support awareness creation and adoption of the FCDC regional CPF-LDC as well as ensure all actors understand their respective roles.

2. Creating adequate incentives and public-private partnerships to invest in the FCDC region CPF- LDC activities.

3. Developing an ICT system that links FCDC region with national, regional and global laboratory and surveillance systems. This will improve disease status reporting and increase transparency. These two areas are critical to facilitate access to regional and international markets for live livestock and livestock products.

3.6 Risk Management Plan

One critical assumption that will fast-track implementation of the FCDC region Common Programme Framework for Livestock Diseases Control action is that funds will be readily available at the inception and that all procurement processes will be expedited. The successful implementation of the Framework will depend on cooperation and proper coordination between FCDC county governments through the county SFAL Livestock Disease Control Coordinating Units, national government, international and regional development partners.

This will ensure that the required funds are sufficient in amount and disbursed promptly to enable implementation of the planned activities. Another critical assumption is that there will be the political will to allocate national and county budgets to support the proposed activities as well as favourable macroeconomic policies directed towards the development of transport and communication infrastructure, especially in FCDC region. A Systematic Operations Risk-rating Tool (SORT) will be used to help FCDC region consistently assess and monitor risks across all operational instruments. The overall aim of SORT will be to identify risks that need to be focussed on and mitigated against. The risk level rating in the table below will regularly be revised in a participatory manner with inputs from counties and national livestock industry stakeholders.

TABLE 14: RISK ANALYSIS AND MITIGATION STRATEGIES

Risk Category	Risk Level Rating	Risk Mitigation Strategy
Political and governance interference at county and national levels due to change of regimes	High	Strong monitoring and evaluation system that will generate evidence of progress and justification for continued investment
1. Macroeconomic sector strategies and policies have many competing interests	High	CPF-LDC initiative will have the full support of the Pastoralist Parliamentary Group that will keep national priorities focused on the development of the ASALs as envisioned in Kenya's Vision 2030.
2. Capacity to implement the framework interventions and absorb the level of financing scale involved.	High	Each pillar includes investment in the human workforce and setting up systems that integrate the framework within the counties resource allocation and disbursement systems.
3. The government, the private sector and donor agencies continue to act independently.	Moderate	SFAL national Secretariat and County SFAL Livestock Disease Control Coordinating Unit will strategically target agencies whose policies and priorities are in line with the CPF-LCD programme. Signatories to the framework will ensure continued commitment to its principles and goals.

4.0 RESULTS FRAMEWORK

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
Impact: Livestock diseases are prevented and progressively controlled, in order to reduce the threat they pose on animal health, safe trade, food security, and livelihoods in FCDC counties	• For the priority animal diseases in FCDC region, number of affected counties in the current year of reporting • For the priority animal diseases in FCDC counties, the distribution of sub-counties and wards by *official disease status*	• Directorate of veterinary services • OIE DB: http://www.oie.int/animal-health-in-the-world/official-disease-status/ • WAHIS portal: Animal Health Data	• Increased and sustained political commitment by National and County government to Livestock Disease Control (LDC)
OUTCOME			
Outcome 1: The capacity to undertake disease surveillance, reporting and diagnosis for prevention, control and response improved	• The proportion (%) of counties that have implemented the E-Surveillance system • Number of officially reported cases in animal diseases as reported by the E-Surveillance system • Number of *officially reported outbreaks/events*, and their *spatial distribution* as reported by the E- Surveillance system • Existence of effective operating procedures in both public and private veterinary services	• Directorate of veterinary services • Analysis of data from World Animal Health Information System (WAHIS)	• National and County Governments remain committed to investing in Livestock Disease Control (LDC) • County authorities are willing to collaborate among themselves and the stakeholders involved in the detection and control of animal diseases • Community informants, private and public sector actors, media willing to report outbreaks
Outcome 2: Access to safe, effective and quality pharmaceuticals, vaccines and diagnostic products at county, sub-county and ward levels improved.	• Proportion of counties in the FCDC region that had no interruption in pharmaceuticals, vaccines and diagnostic products supply during the year • Number of officially reported outbreaks/events	• County veterinary service reports • Impact assessments • Veterinary Surveys • M&E	• County Governments remain committed to investing in Livestock Disease Control (LDC) • Private sector willing to invest in service provision of animal health

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
Outcome 3: The quality and efficiency of animal disease prevention, control and response is enhanced	• Number of cases reported of Priority animal diseases in animals • Number of officially reported outbreaks/events, and their spatial distribution	• Directorate of veterinary services • Analysis of data from World Animal Health Information System (WAHIS)	• County Governments remain committed to investing in Livestock Disease Control (LDC)
Outcome 4: Improved human capacity, regional regulatory frameworks and coherency of strategies and plans for disease prevention, control and response	• Proportion (%) of counties that have adequate technical staff for prevention and control of each priority animal disease • Proportion (%) of counties that have a Strategic Plan or Road Map for prevention and control of each priority animal disease. • Proportion (%) of counties that have adopted a harmonized vaccination strategy for each priority animal disease	• County annual development plans • County annual Budget Implementation Reports • County Gazette Supplement	• County Governments remain committed to investing in Livestock Disease Control (LDC) • County governments willing to critically reflect and develop/ revise existing policies
Outcome 5: Veterinary systems to support animal disease surveillance and control reinforced at the regional and county levels	• Number of Leading/Support Labs accredited for diagnosis and testing of the priority animal diseases. • Number of animal health labs that have become OIE or FAO Reference Centres or are recognized as a centre of excellence (e.g., Leading Regional Lab/Regional Support Lab). • Number of animal veterinary support infrastructure upgraded or established	• County veterinary service reports • County annual development plans • County annual Budget Implementation Reports	• County Governments remain committed to investing in Livestock Disease Control (LDC) • Availability of complementary funds in support of Livestock Disease Control (LDC)
Outcome 6: A livestock identification and traceability system (LITS) to support efficient and effective disease control is established	• Existence of an effective animal identification and traceability system • Number of animals with Animal ID and traceability system	• County veterinary service reports • County annual development plans • County annual Budget Implementation Reports	• County Governments remain committed to investing in Livestock Disease Control (LDC) • Availability of complementary funds in support of Livestock Disease Control (LDC)

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
Outcome 7: Animal welfare improved	• Number of effective actions on animal welfare implemented (technologies, human resources, research, animal care, etc.) • Number of animal welfare policies, strategies, legislation, investments, programmes and projects implemented	• County veterinary service reports • County annual development plans • County annual Budget Implementation Reports	• County Governments remain committed to investing in Livestock Disease Control (LDC)
Outcome 8: Evidenced-based planning and service delivery for animal disease prevention, control and response improved	• Number of statistical systems in place in the veterinary department that collect and analyse data for evidence-based policy decisions, programme design and research, as part of an integrated national system • Number of counties using updated and disaggregated data to monitor control and respond to priority animal diseases • Proportion of statistical data (disaggregated by occurrences, season, geographic location, etc) from the LIMS being used by counties	• Livestock disease information management system website • Veterinary service reports • County disease outbreaks statistics reports	• County Governments remain committed to investing in Livestock Disease Control (LDC)
Outcome 9: Strengthened regional and county institutions, multi-sectoral coordination networks and knowledge management for animal disease prevention, control & response	• Existence of active coordinating mechanisms for animal health control regional and at county level • Existence of an active Epidemiology Network • Number of information/ knowledge products produced and shared on animal diseases -control during the reporting period • Proportion (%) of Livestock Disease Control CPF recommendations to date that have been implemented	• Coordination meeting reports • Forum meetings reports • Veterinary service reports • Good practice documents • Publications • Disease control mag-azines, educational materials	• County Governments remain committed to investing in Livestock Disease Control (LDC) • County authorities are willing to collaborate with all the stakeholders involved in the detection and control of animal diseases

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
OUTPUT			
Output 1.1: capacity for detection and management of notifiable livestock diseases in FCDC through passive/ active disease surveillance is enhanced	• Existence of a functional and effective E - Surveillance system with improved data and risk analysis capabilities • Existence of effective operating procedures in both public and private veterinary services • Existence of database of notifiable diseases vaccination coverage. • Number of timely and reliable disease monitoring reports	• E-Surveillance web portal • County veterinary service reports	• County authorities willing to provide financial resources and suitable workforce in an acceptable technical environment
Output 1.2: A more coordinated approach for diseases surveillance adopted	• Establishment of inventory of notifiable disease database • Number of timely and reliable disease monitoring reports	• Baseline reports on disease situation • CDVS disease surveillance reports	• County authorities willing to provide financial resources and suitable human resources in an acceptable technical environment
Output 2.1: access and use of quality veterinary pharmaceuticals among livestock producers is enhanced	• Rate of vaccines use and coverage • Rate of prevalence of counterfeit products in local markets • Number of legally registered veterinary inputs service providers	• County veterinary service reports • County annual development plans • County annual Budget Implementation Reports	• County authorities willing to provide financial resources and suitable human resources in an acceptable technical environment • Private sector willing to invest in service provision of animal health
Output 2.2: monitoring, inspection & regulation of veterinary inputs is enhanced	• Availability of quality products in the market • Number of registered outlets and products available in the market	• County veterinary service reports • Inspectorate reports	• Adequate resourcing of testing services and development of partnership between DVS and county laboratory services
Output 2.3: Community capacity for sustainable uptake of vaccines (vaccine is for prevention and prevention is better than cure) is enhanced	• Uptake of vaccination and vaccination coverage • Reduction in prevalence of livestock diseases	• Baseline reports on disease situation • CDVS disease surveillance reports	• No occurrence of drought and security risks that leads to increased risk of animal diseases and epidemics due to forced movement, migration and overconcentration of herds

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
Output 3.1: Livestock disease control implementation strategies and activities are strengthened and coordinated	• Number of cases reported of Priority animal diseases in animals • Number of officially reported outbreaks/events, and their spatial distribution • Rate of coverage and access to extension and clinical services • Number of livestock quarantined, disposed or treated at the control points	• Directorate of veterinary services • Analysis of data from World Animal Health Information System (WAHIS) • County veterinary service reports • County annual development plans • County annual Budget Implementation Reports	• County authorities willing to provide financial resources and suitable human resources in an acceptable technical environment
Output 3.2: Animal health extension and clinical services in the FCDC counties are strengthened and coordinated	• Coverage and access to animal health and extension services • Reduction in prevalence of livestock diseases	• Baseline reports on disease situation • CDVS disease surveillance reports	• Sufficient capacities and resources for adequate animal health extension and disease control
Output 3.3: Public-private partnership in clinical services & extension provision enhanced	• Increase in access to clinical services and extension • Coverage and access to animal health and extension services • Reduction in prevalence of livestock diseases	• Baseline reports on disease situation • CDVS disease surveillance reports	• Effective private sector enabling environment and public sector resourcing and extension to increase the access and uptake of inputs
Output 3.4: Livestock movement control/quarantine (including cross-border control points) improved	• Number of animals/diseases quarantined and controlled • Reduction in prevalence of livestock diseases	• Baseline reports on disease situation • CDVS disease surveillance reports	• No occurrence of drought and security risks that leads to increased risk of animal diseases and epidemics due to forced movement, migration and overconcentration of herds
Output 4.1: Human resource capacity for Livestock Disease Control is enhanced	• Number of recruited technical staff • Number of persons trained	• County Public Service Board reports	

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
Output 4.2: Improved enabling policies & supportive legislative frameworks on Livestock Disease Control	• Number of thematic policy workshops/forums organized; • Number of policies reviewed and prioritised • Number of key stakeholders engaging in the policy and advocacy processes; • Number of thematic policies reformulated or developed.	• County veterinary service reports • County annual development plans • County annual Budget Implementation Reports • County Gazette Supplement	• County governments willing to critically reflect and develop/ revise existing policies • County authorities willing to provide financial resources and suitable human resources in an acceptable technical environment
Output 5.1: Network of laboratories and veterinary facilities for providing timely and reliable diagnostic services, disease reporting, prevention and control are established and strengthened	• Established and upgraded diagnostic laboratory capacity for animal diseases • Established and upgraded veterinary systems infrastructure	• County projects implementation reports • County annual Budget Implementation Reports • Training programmes reports	• County authorities provide financial resources and suitable human resources in an acceptable technical environment • Situation in target areas will not impede field and local delivery • Community are willing to participate in the disease control activities.
Output 6.1: An enabling legislative/regulatory framework for Livestock Identification & Traceability (LITS) established	• Number of LITS thematic policy workshops/forums organized; • Number of key stakeholders engaging in the Livestock Identification & Traceability (LITS) framework policy and advocacy process;	• County projects implementation reports	• County governments willing to critically reflect and develop/ revise existing policies

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
Output 6.2: A functional Livestock Identification & Traceability (LITS) system developed	• Existence of a Livestock Identification & Traceability (LITS) legislation • Existence of a Livestock Identification & Traceability (LITS) legislation	• County annual Budget Implementation Reports • County veterinary service reports	• County authorities willing to provide financial resources and suitable human resources in an acceptable technical environment
Output 7.1: Animal welfare standards mainstreamed into the county institutions and legislation	• Number of policies and standards mainstreamed • Enacted animal welfare bill in place • Number of information sharing forums;	• County projects implementation reports • County annual Budget Implementation Reports • County veterinary service reports	• County governments willing to critically reflect and develop/ revise existing policies • County authorities willing to provide financial resources.
Output 7.2: Awareness on Animal welfare standards enhanced	• Number of thematic policy workshops/forums organized; • Enacted animal welfare bill in place • Number of information sharing forums; • Number of Animal welfare related projects informed by awareness and analysis.	• County projects implementation reports • County annual Budget Implementation Reports • County veterinary service reports	• County governments willing to critically reflect and develop/ revise existing policies • County authorities willing to provide financial resources.
Output 8.1. Livestock disease information management system developed **Output 8.2.** Livestock diseases communication materials developed and disseminated	• Existence of county livestock disease management portals/ website • Number of persons trained • Number of training materials developed • Number of notifications and reports produced and shared • Number of exhibitions, awareness events and knowledge sharing events conducted • Number of pamphlets, training manuals, flyers, radio interviews	• Livestock disease information management system website • Veterinary service reports • County Annual Development Plans	• County authorities willing to provide financial resources and suitable manpower • Counties willing to share information and utilise knowledge from the disease information management system

Intervention logic	Indicators	Sources of verification (SoV)	Assumptions
Output 9.1: Livestock disease control institutions strengthened **Output 9.2** Disease control coordination structures created **Output 9.3** Knowledge management on Livestock Disease Control improved	• Existence of functional veterinary institutions and structures at county, sub-county and ward levels • Number of cross-country coordination and information sharing forums • Number of thematic stakeholder forum workshops/meetings conducted • Number of research projects and consultancies completed • Number of documentation of lessons learned and good practices (by type) • Number of good practice documents disseminated to stakeholders;	• County Annual Development Plans • Coordination meeting reports • Forum meetings reports • Veterinary service reports • Good practice documents • Publications • Disease control magazines, educational materials	• County authorities willing to provide financial resources and suitable human resources • Counties willing to share information and utilise knowledge generated

ACTIVITIES AND BUDGET

Activities	Indicators	Sources of verification (SoV)	4-YEAR BUDGET 2019-22 (Kshs M)
Output 1.1: Capacity for detection and management of notifiable livestock diseases in FCDC through passive/active disease surveillance is enhanced			
1.1.1. Upgrade the mobile-based e-surveillance system	• Existence of a functional and effective E - Surveillance system with improved data and risk analysis capabilities • Existence of database of notifiable diseases vaccination coverage. • Number of timely and reliable disease monitoring reports	E-Surveillance web portal County veterinary service reports Disease incidence reports	47
1.1.2. Undertake a 3-tier training of pastoralists, CDRs & frontline officers on syndromic disease surveillance	• Number of training workshops/forums organized • Number of persons trained • Number of training materials developed	County veterinary service reports	250
1.1.3. Institutionalize rumour registers in sub-counties	• Existence of a standardized and functional rumour register for outbreak investigation	County veterinary service reports	7
1.1.4. Expand disease reporting network to include agro- vets/other private animal health service providers, meat inspectors, livestock market actors and KWS	• Private agro- vets/other animal health service providers disease reports	County veterinary service reports Disease incidence reports	117
1.1.5. Establish a platform for sharing reports within counties (between FCDC CDVSs).	• Existence of a functional and routinely updated portal for sharing disease information	County veterinary service reports Surveillance Website	23
Output 1.2: A more coordinated approach for diseases surveillance adopted			
1.2.1. Conduct coordinated quarterly routine active surveillance for priority diseases across the FCDC region (PPR, CCPP, CBPP, SGP, FMD, LSD, RVF, camelpox, Rabies and Brucellosis)	• Number of timely and reliable disease monitoring reports	County veterinary monthly, quarterly and annual service reports	218

Sub-total for Output 1			**662**
Output 2.1: access and use of quality veterinary pharmaceuticals among livestock producers is enhanced			
2.1.1. Increase in number of legally registered outlets	• Number of legally registered veterinary inputs service providers	• County veterinary service reports	14
2.1.2. Improve supply and use of quality and affordable veterinary vaccines among livestock keepers	• Rate of vaccines use and coverage • Rate of prevalence of counterfeit products in local markets	• County veterinary service reports	179
Output 2.2: Monitoring, inspection & regulation of veterinary inputs is enhanced			
2.2.1. Domesticate inspectorate & regulatory services at county level	• Rate of inspection visits undertaken	• County veterinary service reports	113
2.2.2. Monitor drug residues in livestock products, i.e., meat and milk	• Rate of prevalence of drug residues in livestock products in local markets	• County veterinary service reports	46
Output 2.3: Community capacity for sustainable uptake of vaccines is enhanced			
2.3.1. Undertake community awareness of use and risks of misuse of inputs among livestock producers and stakeholder	• Number of awareness events/forums organized • Number of persons trained • Number of awareness materials developed	• County veterinary service reports • Awareness creation materials	114
Sub-total for Output 2			466
Output 3.1: Livestock disease control implementation strategies and activities are strengthened and coordinated			
3.1.1. Domesticate policy on judicious use of acaricides	• Adopted policy on judicious use of acaricides	• County website • County Gazette Supplement	55
3.1.2. Conduct routine and synchronized vaccinations across FCDC counties for priority diseases using common vaccination calendar	• Number of intercountry cooperative routine vaccination events undertaken	• County veterinary service reports	415
3.1.3. Construct and maintain incinerators in all FCDC counties for waste disposal and integrated pest management	• The number incinerators constructed	• County veterinary service reports	89
3.1.4. Develop innovative and smart subsidy products such as voucher systems during emergencies	• Subsidy types developed • Subsidies distributed	• County veterinary service reports	30
Output 3.2: Animal health extension and clinical services in the FCDC counties are strengthened and coordinated			

3.2.1. Develop and distribute educational and awareness materials on insecticides/pesticides use	• Number of awareness materials disseminated	• County veterinary service reports	76
3.2.2. Implement extension through Pastoral Field Schools/Farmer Field Schools and other innovative mechanisms such as mobile phone technologies.	• Number of extension events undertaken • Number of farmers trained	• County veterinary service reports	12
Output 3.3: : Public-private partnership in clinical services & extension provision enhanced			
3.3.1 Establish partnership and train private sector to enhance their last mile delivery of animal health services	• Number of small-scale animal health service businesses implemented and sustained • Number of beneficiaries trained (by type of training)	• County veterinary service reports • Training reports	51
Output 3.4: Livestock movement control/quarantine (including cross-border control points) improved			
3.4.1. Establish livestock movement border control points (inter-county, across counties and cross-border).	• Number of active livestock movement border control points established	• County veterinary service reports • Border control infrastructure in place	123
3.4.2. Develop harmonized livestock movement permits across FCDC counties	• Number of common livestock movement permits issued in the last year	• County veterinary service reports	27
Sub-total			878
Output 4.1:: Human resource capacity for Livestock Disease Control is enhanced			
4.1.1. Recruit additional animal health experts to address gaps in delivery of better animal health services	• Number of technical staff recruited	• County Public Service Board reports	75
4.1.2. Undertake a capacity and training needs assessment using OIE guidelines to identify gaps that need to be addressed to improve service delivery.	• Training needs assessment report in place	• Training needs assessment report	15
4.1.3. Train animal health surveillance, clinical, laboratory and rapid response staff.	• Number of persons trained • Number of training materials developed	• Training reports • Training materials	65
Output 4.2: Improved enabling policies & supportive legislative frameworks for Livestock Disease Control			
4.2.1. Develop and adopt harmonised county animal disease control and preparedness bill	• Enacted county animal disease control and preparedness bills in place	• County website	141
4.2.2. Develop and adopt county plans and SOPs for animal disease control and pandemic preparedness	• Implementation plans documented • Approved county budget	• County Annual Development Plans • Approved county budget	22
4.2.3. Support review of the Kenya Veterinary Policy in compliance with the current OIE standards	• Number of thematic policy forums/workshops held	• Workshop reports	8

Sub-total			326
Output 5.1: Network of laboratories and veterinary facilities for providing timely and reliable diagnostic services, disease reporting, prevention and control are established and strengthened			
5.1.1. Construct (or upgrade) and maintain animal disease diagnostic laboratories to provide timely and reliable diagnostic services	• Established diagnostic laboratory capacity • Upgraded diagnostic capacity of existing laboratories. • Number of technical trainings provided.	• County veterinary service reports	200
5.1.2. Establish and maintain standardised veterinary offices at the county and sub-county levels.	• Number of standardised veterinary offices established	• County veterinary service reports	50
5.1.3. Purchase cold-chain systems for counties and sub-counties to ensure efficacy and efficient delivery of vaccines to the field	• Number of cold-chain systems established	• County veterinary service reports	25
5.1.4. Construct fixed crushes and crush pens in all wards	• Number fixed crushes and crush pens constructed	• County veterinary service reports	1350
5.1.5. Purchase vehicles and motorcycles to support service delivery	• Number of vehicles and motorcycles purchased	• County veterinary service reports	78
5.1.6. Establish a holding grounds/ quarantine stations in each county	• Number of holding grounds/ quarantine stations established	• County veterinary service reports	500
Sub-total for output 5			**2,203**
Output 6.1: An enabling legislative/regulatory framework for Livestock Identification & Traceability (LITS) established			
6.1.1. Develop a Livestock Identification & Traceability (LITS) policy/legal framework	• Enacted Livestock Identification & Traceability (LITS) bill in place	• County website • County Gazette Supplement	114
6.1.2. Develop a livestock identification and traceability system (LITS) using OIE guidelines for animal identification and traceability	• a livestock identification and traceability system (LITS) in place	• County website • County Gazette Supplement	230
Output 6.2: A functional Livestock Identification & Traceability (LITS) system developed			
6.2.2. Conduct trainings on the management and use of livestock identification and traceability system (LITS)	• Number of persons trained • Number of training materials developed	• Training reports • Training materials	100
6.2.3. Create public awareness about the livestock identification and traceability system (LITS)	• Number of communications and awareness materials (pamphlets, training manuals, flyers, radio interviews) produced	• County veterinary service report	22

Sub-total for Output 6			**466**
Output 7.1: Animal welfare standards mainstreamed into the county institutions and legislation			
7.1.1. Adopt the animal welfare bill model by Kenya Law Reform Commission	• Enacted animal welfare bill in place	• County website • County Gazette Supplement	129
7.1.2. Develop work plans, budgets, SOPs and M&E for implementation and mainstreaming of animal welfare programmes	• Implementation plans documented • Approved county budget	• County Annual Development Plans • Approved county budget	10
Output 7.2: Awareness on Animal welfare standards enhanced			
7.2.1. Undertake training and education programmes for staff and communities on raising standards of animal care	• Number of persons trained • Number of training materials developed	• Training reports • Training materials	55
7.2.2. Develop communication and advocacy materials on animal welfare	• Number of communications and advocacy materials (pamphlets, training manuals, flyers, radio interviews) produced	• County veterinary service report	23
7.2.3. Undertake advocacy and knowledge sharing events to improve Knowledge, Attitudes, and Practices on animal welfare	• Number of advocacy and knowledge sharing events conducted	• County veterinary service report	50
Sub-total			267
Output 8.1: Livestock disease information management system developed			
8.1.1. Develop an Integrated web-based livestock disease information management system for monitoring of events of epidemiological significance	• Existence of county livestock disease management portals/website	• County veterinary service report	74
8.1.2. Undertake continuous routine collection analysis and dissemination of data and information	• Number of notifications and reports produced and shared	• County disease communication reports	80
8.1.3. Undertake training for county government staff on management and use of the animal health information system platform	• Number of persons trained • Number of training materials developed	• Training reports • Training materials	50
Output 8.2: Livestock diseases communication materials developed and disseminated			
8.2.1. Conduct animal health exhibitions, information sharing and awareness events	• Number of exhibitions, awareness events and knowledge sharing events conducted • Number of pamphlets, training manuals, flyers, radio interviews conducted	• County government Veterinary service report	22

Sub-total for Output 8			226
Output 9.1: Livestock disease control institutions strengthened			
9.1.1. Incorporate and streamline relevant veterinary system functions at different administrative levels (county, sub-county and ward)	• Number of functional veterinary institutions and structures at county, sub-county and ward levels established/reinforced • Number of ToRs and SOPs developed for the veterinary structures	• County Annual Development Plans	50
Output 9.2: Disease control coordination structures created			
9.2.1 Establish and activate livestock disease control coordination forums at various levels (national, county and sub-county)	• Existence of an active disease control coordination forum • Number of cross-country coordination and information sharing forums • Number of cross-county disease control protocols established	• Coordination meeting minutes • Disease control guideline documents	10
9.2.2. Strengthen the capacities of stakeholders forum for livestock disease control	• Number of thematic stakeholder forum workshops/meetings conducted	• Forums reports • Programme reports	20
Output 9.3: Knowledge management on Livestock Disease Control improved			
9.3.1. Support research projects on livestock diseases	• Number of research projects and consultancies completed	• Reports	45
9.3.2. Generate, document and disseminate experiences and good practices on livestock diseases in FCDC counties	• Number of documentation of lessons learned and good practices (by type)	• Programme documentation • Veterinary service report	27
9.3.3 Biannual knowledge sharing meetings	• Number of biannual knowledge sharing meetings conducted	• Meeting minutes • Programme reports	15
9.3.4 Publications (Briefing papers, journals and reports)	• Number of publications [by type]	• Publications • Veterinary service report	8
9.4.5 Dissemination and access of disease control experiences (LDC magazine)	• Number of LDC magazines produced and shared	• LDC magazines • Veterinary service report	4
Sub-total			129
GRAND TOTAL			**5,523**

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