



# Public Private Partnerships Framework to benefit the Foot and Mouth Disease Vaccine Value Chain in Eastern Africa

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Any error or omission in this text is that of the author. The text does not constitute and does not substitute for obtaining counsel and further guidance on any of the issues discussed in this text.

## ACRONYMS AND ABBREVIATIONS

AU-IBAR	African Union–Interafrican Bureau for Animal Resources
BMGF	Bill & Melinda Gates Foundation
BOT	Build Operate Transfer
CAHW	Community Animal Health Workers
CIRAD	French Agricultural Research Center for International Development
EAC	East African Community
EuFMD	European Commission for the Control of Foot and Mouth Disease
FAO	Food and Agriculture Organization of the United Nations
FMD	Foot and Mouth Disease
ICPALD	IGAD Centre for Pastoral Areas and Livestock Development
IGAD	Intergovernmental Authority on Development
MENA	Middle East and North Africa
OIE	World Organisation for Animal Health
PCP	Progressive Control Pathway
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public-Private Partnership
PPP Unit	Public-private partnership unit is an organisation responsible for promoting, facilitating and/or assessing Public-private partnerships in their territory. PPP units can be government agencies, or semi-independent organizations created with full or part government support
USP/PIP	Unsolicited Proposals/Private Initiated Proposals
VPP	Veterinary Paraprofessional
VVC	Vaccine Value Chain

## EXECUTIVE SUMMARY

The main goal of this PPP Framework is to create awareness about the benefits that Public-Private Partnerships (PPPs) could bring to the Foot and Mouth Disease Vaccine Value Chain (FMD VVC) in Eastern Africa - from production, purchasing, distribution, delivery, vaccinations and post-vaccination monitoring and evaluation– to complement the delivery of the following three objectives of the AgResults Foot and Mouth Disease Vaccine Challenge Project:

1. Development of high-quality FMD vaccines, tailored for the Eastern African strains
2. Increased vaccine production and regional purchases to create greater market stability and reduce price
3. Development of a private sector model for buying and distributing FMD vaccines, to complement public sector efforts

The scope of the PPP Framework includes the customisation of the OIE PPP Handbook into a practical framework that can be further developed into appropriate commitments by stakeholders in the FMD VVC.

The framework has been developed through a desktop literature review of PPPs in Eastern Africa and through survey questionnaire responses – conducted between July to October 2020 - from both public and private sector stakeholders in the target countries of Burundi, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda. The responses were compiled and then stakeholder validation of the findings was conducted virtually through group discussions with the respective country stakeholders between January to March 2021.

The aim of the survey feedback and validation exercises was to identify the existing knowledge of PPPs in general, capture the national policies, strategies, laws, regulations, and structure of PPPs in the target countries, as well as to identify key challenges and opportunities for PPP formation.

An overwhelming need for PPPs in the FMD VVC is established, for effective control and management of FMD in the Eastern African region. Several opportunities in the areas of production, purchasing, distribution, delivery, vaccination, and post-vaccination monitoring exist for PPPs. If sustainable PPPs are to be successfully established, there is also a need to overcome some infrastructural challenges and to establish legal frameworks and administrative units within the veterinary domain.

The hope is that this framework will serve as a catalyst for future PPP arrangements in the FMD vaccine value chain and help initiate PPPs in the veterinary domain in general.

## SECTION 1: BACKGROUND INFORMATION

### 1.1 AgResults Foot and Mouth Disease Vaccine Challenge Project

The AgResults Foot and Mouth Disease (FMD) Vaccine Challenge Project (the ‘Project’) is an eight-year, US\$17.68 million prize competition that supports the development and uptake of high-quality FMD vaccines tailored to meet the needs of Eastern Africa, targeting in particular: Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda. The prize is structured as a cost-share that reduces the cost-per-dose for buyers, enabling public and private sector actors to better combat FMD through more consistent purchases of the new vaccines. The Project aims to encourage pharmaceutical companies around the world, including regional or local companies, to develop, register and commercialize high-quality FMD vaccines tailored for the needs of Eastern Africa.

Specific objectives of the Project include:

- 1 Development of high-quality FMD vaccines, tailored for the needs of Eastern Africa
- 2 Increased regional vaccine production and regional purchases to create greater market stability and reduce price
- 3 Development of a private sector model for buying and distributing FMD vaccines, to complement public sector efforts

Even with a suitable vaccine developed for Eastern Africa, the private sector is unlikely to engage in vaccine distribution in most of the region if current policy and market conditions remain in place. Governments control FMD vaccine purchasing in most of the Eastern African countries, and their purchasing decisions are primarily driven by FMD outbreaks and budget constraints, resulting in unreliable market demand and erratic supplies of vaccines when needed.

This document forms the basis of a Public-Private Partnership (PPP) Framework, designed to complement the delivery of the three objectives of the Project. The main goal of the PPP Framework is to create awareness about the benefits that PPPs could bring to the FMD Vaccine Value Chain (FMD VVC) in Eastern Africa - from production, purchasing, distribution, delivery, vaccination and post-vaccination monitoring and evaluation - that would complement current public sector efforts, resulting in improved vaccine accessibility for farmers and greater market stability. The aim is for this framework to serve as a catalyst for future PPP arrangements in this domain.

### 1.2 Benefits of Public-Private Partnership (PPP)

In 2017, the OIE (World Organisation for Animal Health) in collaboration with CIRAD (French Agricultural Research Centre for International Development) and with support from the Bill & Melinda Gates Foundation (BMGF), developed the [OIE PPP Handbook](#) that presents the typology and PPP guidelines in the veterinary domain. These guidelines present an opportunity to develop impactful and sustainable PPPs to improve the quality of veterinary

services worldwide, while building robust and sustainable animal health systems that contribute to the health and well-being of human populations.

#### *1.2.1. Definition of a Partnership*

As defined in the OIE PPP Handbook, PPP is a “joint approach in which the public and private sectors agree on responsibilities and share resources and risks to achieve common objectives that deliver benefits in a sustainable manner”. The establishment of PPPs contribute to a more efficient and effective use of both public and private sector resources, notably by creating synergies through an active and structured collaboration. PPPs also help to improve access to services whilst balancing the development and geographical presence and influence of each sector in the country.

According to such definition, all partners would engage in the collaboration by:

- Investing their respective resources (e.g., time, knowledge and expertise, research and technological development, funding, and core assets)
- Acknowledging mutual benefits as an integral aspect to the engagement
- Sharing of risks in achieving the common objective
- In general, partnerships would involve some level of public communication and recognition and are based on mutually agreed commitments (e.g., letters of intent; exchange; or agreement; Memorandum of Understanding or other legal agreements) even though the formality level, or its specificity, may vary.

#### *1.2.2. Benefits of PPP to Public Sector*

The public sector is the part of the economy composed of both public services and public enterprises that is under the mandate of national, state (county), provincial or local government. Public enterprises, or state-owned enterprises, are self-financing commercial enterprises that are under public ownership. They sell various public goods and services and usually operate on a commercial basis. Public sector uses cost–benefit analyses in both its decision making and impact assessment of activities. This may include both financial and non-financial cost and benefits of activities. Public sector considers both societal and environmental benefits, allowing for a more comprehensive focus on impacts. Potential benefits of a PPP to public sector include:

- Real-time knowledge, technology transfer and innovations in vaccine development, production, and delivery models through partnership with private sector.
- Sharing of best industry practices.
- Movement away from slow incremental changes towards transformational changes on key VVC activities.
- Resource mobilisation and financial flows into geographical areas, industries and sectors that are currently under-financed.
- Opportunities for co-financing vaccination activities and projects.
- Proactive and efficient access to vaccines and cost-effective vaccination campaigns.

#### *1.2.3. Benefits of PPP to Private Sector*

The private sector ranges from micro enterprises to cooperatives to multinationals, encompassing the entire business sector. It includes for-profit enterprises, regardless of size, ownership, or structure, as well as private financial institutions, trade associations and

organizations that represent private sector interests and individual private professionals, such as livestock producers, veterinarians and veterinary paraprofessionals (VPPs).

The primary function and interest of the private sector is to sell products and services and generate profits. Private sector actors take measures to reduce risks to their business performance and seek opportunities to improve their businesses. Potential benefits of a PPP to private sector include:

- Better ability to understand, assess, measure and predict the impacts of their operations and their value chains.
- Development of sustainable value chains, eventually leading to decreased risks and more robust supply chains.
- Improvement to the bottom line and lower costs of financing, as the value of the business improves, and risks are mitigated.
- Clarity and predictability to business environments and less market uncertainty.
- Increased investments on research and innovations that improve the sustainability of operations.
- Clearer visibility into market opportunities, which can improve response to emerging client demand.
- Improved ability to prepare and plan operations resulting from increased predictability and businesses' competitiveness.

### 1.3 PPPs in Agriculture and the Veterinary Domain

As per the OIE PPP Handbook, and based on PPP experiences reported by OIE members throughout the world, there are three types of PPP arrangements that could be applicable in the veterinary domain:

#### 1.3.1 Transactional PPP Model

Under this model applied to FMD vaccination, the government procures specific animal health products and/or services from private veterinary service providers, usually private veterinarians, veterinary paraprofessionals (VPPs), and Community Animal Health Workers (CAHWs) in the vaccination campaigns and undertaking post-vaccination monitoring. This model addresses 'downstream' challenges of vaccination campaigns. A case example is the Tunisian government's delegation of prophylactic vaccination programs for notifiable diseases to the private sector (under a "Sanitary Mandate"), which was launched in 2006.

#### 1.3.2 Collaborative PPP Model

This is a joint commitment between the public sector and end-user beneficiaries to deliver mutually agreed policies/outcomes. In this arrangement, the public sector works with end-user beneficiaries, such as producer associations, to address the inherent challenges in the value chain. This model often involves capacity building, improved facilities, and services required to deliver the required outcome. A case example is the collaborative partnership in Namibia between the Meat Board of Namibia (MBN) and the Directorate of Veterinary Services, which allowed an FMD outbreak to be rapidly contained in 2015.

### 1.3.3 Transformative PPP Model

This agreement is aimed at the establishment of sustainable capabilities to deliver otherwise unattainable major programmes. In this model, the public sector partners with national/multinational private sector companies to deliver on set objectives that require a substantial amount of time and resources. This approach usually encompasses a broad scope from upstream (product development and manufacturing, diagnostic capabilities, etc.) to downstream (vaccine delivery, vaccinations, and sero-surveillance). A case example is the Boehringer Ingelheim Animal Health (multinational) manufacturing partnership with Botswana Vaccine Institute (public enterprise).

## 1.4 Foot and Mouth Disease (FMD) Vaccine Value Chain

The livestock vaccine value chain (including FMD vaccines) consists of manufacturers, laboratories, importers, distributors, retailers and vaccinators (veterinarians, VPPs, CAHWs and the end-users, who are commercial and smallholder livestock farmers). As a notifiable and transboundary disease, FMD is highly regulated through the office of Director of Veterinary Services (DVS)/Chief Veterinary Services (CVS), with full mandate for FMD management and control in the country. Each player in the vaccine value chain plays a key role for efficient delivery of vaccines and effective management and control of the disease.

The introduction of PPPs in the FMD VVC inherently means inclusion of private sector players, to complement the existing public sector efforts. This will need to be planned and implemented in close collaboration with the relevant government stakeholders (DVS/CVO and regulatory bodies) who are entrusted with the mandate to manage and control notifiable diseases (including FMD). As each country is unique, it will be necessary to develop a PPP Framework that is customised in partnership with key public and private stakeholders, with the aim of significantly increasing the uptake of high-quality FMD vaccines and the coverage efficiency of vaccination campaigns, thereby safeguarding livestock producers and their respective countries from the negative consequences of FMD.

## 1.5 Challenges and Opportunities in the FMD VVC in Eastern Africa

Currently, FMD vaccine procurement in Eastern Africa is dominated by governments (public sector) who utilise tendering processes and ad hoc direct purchase. Suppliers (manufacturers/distributors) submit price quotes for delivery of products to scheduled government locations and subsequent vaccination campaigns are then carried out by government veterinary officers. This current model has several challenges that lead to inefficiencies in FMD control. The challenges described below are also key opportunity areas for PPPs.

1. ***Currently there is no fully registered, quadrivalent vaccine available that addresses all the regional risks***

Need development, registration, and production of high-quality vaccines relevant to the region.

**Opportunity Area:** PPP arrangement between local (govt) manufacturer and an international vaccine manufacturer.



2. ***Challenges with serotyping and vaccine matching***

Limited facilities, budgets, and infrastructural mechanisms to carry out effective virus serotype and vaccine matching.

***Opportunity Area:*** PPP with vet labs (private and self-financing government lab) to help with capacity building and equipment upgrades.

3. ***Long vaccine supply lead times***

FMD vaccine production process takes two to three months, and vaccine delivery adds another delay. This issue is exacerbated by the typically reactive approach to FMD control.

***Opportunity Area:*** PPP with FMD vaccine manufacturer and distributor for preorder and supply of vaccines and/or supporting the process of demand forecasting.

4. ***Limited efficacious vaccine supply chains***

FMD vaccines need a cold chain distribution process to maintain efficacy.

***Opportunity Areas:*** (1) PPP with vaccine manufacturer(s) to invest in enhanced public sector cold chain, (2) PPP to outsource cold chain distribution to private sector (private distributors, private veterinarians, and VPPs) and (3) PPP with livestock producers or producer associations.

5. ***High costs of vaccination***

Public sector vaccination campaigns typically carried out by government vets with high costs incurred to facilitate travel to remote areas.

***Opportunity Area:*** (1) PPP with private veterinarians and VPPs and (2) PPP with livestock producers or producer associations.

6. ***Limited post-vaccination monitoring***

Difficult to measure the effectiveness of the vaccination campaigns.

***Opportunity Area:*** (1) PPP with VPPs (under supervision of private veterinarians, to ensure proper coordination, data analysis, and subsequent plan of actions) and veterinary diagnostic laboratories and (2) PPP with livestock producers or producer associations.

## 1.6 Purpose, Scope and Objectives of the PPP Framework

### 1.6.1 Purpose of the PPP Framework

The World Bank recommends the ‘development of a conducive framework for PPP to reflect the dynamics and iterative process supported by different functions and stakeholder actors (the Government, the private sector and the communities) in a specific region/country in question, rather than superimposing successful PPP models to other regions. Within the Eastern Africa region, PPPs are a relatively new concept, particularly for the veterinary domain, and have been used mostly for infrastructural development (road infrastructure, building of dams, sports facilities, bridges, etc.).

A framework provides a basic structure for a system, concept, or text. The framework is not an end but a means to an end and can also be a reference for subsets of frameworks that are further developed to cover certain facets of a public-private partnership (legal framework, procurement

framework, etc.). A framework is useful as a reference guide for organizations (both public and private sectors) interested in developing a PPP. It can also be used as a communication and engagement platform for prospective investors.

### *1.6.2 Scope and Objectives of the PPP Framework*

The scope of the PPP Framework includes the customisation of the OIE PPP Handbook into a practical framework that can be further developed into appropriate commitments by stakeholders in the FMD vaccine value chain (e.g., letters of intent; exchange; or agreement; memorandum of understanding or other legal agreements), even though the formality level, or its specificity, may vary. It will address the challenges and opportunities of PPPs in the FMD VVC, relevant to the unique FMD control situation in each of the Project's target countries (Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda).

The PPP Framework itself is meant to be *descriptive* and not *prescriptive* – meaning it will describe PPP options available (focused on FMD VVC and the pros and cons), but not prescribe which country should adopt which option. The framework is intended to be applicable to any FMD VVC context in other geographies (not just the Eastern African region).

The main goal of the PPP Framework (as specified in section 2.1) is to create awareness about the benefits that PPPs could bring to the FMD VVC in Eastern Africa. Specific objectives of the framework include the following, in the context of benefitting the FMD VVC in Eastern Africa:

1. To contribute to knowledge of PPPs and elaborate on existing PPP policies, laws, and terms of agreements.
2. To establish the landscape and enabling environment for PPPs
3. To identify challenges and opportunities for PPPs
4. To map key stakeholder institutions, agencies and organisations in the public and private sectors
5. To create awareness and serve as a catalyst for future establishment of new PPP arrangements

## SECTION 2: PPP FRAMEWORK

To give an overview and deeper understanding of PPPs in Eastern Africa, the framework content is presented in the below subsections featuring:

- i. Desktop literature review of PPPs in Eastern Africa
- ii. Stakeholder survey and feedback responses
- iii. Validation of survey findings

### 2.1 Desktop Literature Review of PPPs

This section of the framework seeks to present desktop studies and review of existing knowledge of PPP in general and capture the national policies, strategies, laws, regulations and structure of PPPs in the target countries.

#### 2.1.1 Financing of PPPs

Public Private Partnerships are usually financed in three ways (see Table 1 below):

- a) State Financed Model  
Public sector fully finances the PPP and contracts the private sector to deliver the mandate of public goods/services. In this set up the public sector establishes the need for a PPP and the respective PPP framework to engage with the private sector.
- b) Hybrid Financed Model  
Both public and private sector partner in financing the PPP. This can be initiated by either party with mixed funding for the project and mutual agreements on recouping of investments.
- c) Private Financed Model  
Private sector fully finances the PPP and is given a mandate from the public sector. Recovery private sector investments comes from users provided with the public goods/service. This arrangement is mostly initiated by private sector through Unsolicited Proposals (USP)/Private Initiated Proposals (PIP).

Table 1: Public Private Partnership Financing Models

State Model	Hybrid Model	Private Model
<ul style="list-style-type: none"> <li>• State funding (100%)</li> <li>• Infrastructure ownership by the state (100%)</li> <li>• Infrastructure operations and maintenance by the state</li> <li>• Private sector employed only as consultants</li> <li>• Government own skills base</li> <li>• Private sector retains its own skills base to maximize revenue and financial sustainability</li> <li>• Inefficient and prolonged projects (scope creep of projects)</li> <li>• Ineffective costing of projects - benefit to private sector or consultants</li> <li>• State both a referee and player</li> </ul>	<ul style="list-style-type: none"> <li>• Mixed funding between the state and private sector</li> <li>• Infrastructure ownership by the state</li> <li>• Infrastructure maintenance outsourced</li> <li>• Knowledge and skills transfer between the private and public sector</li> <li>• Room for innovation and creativity</li> <li>• State focusses on the regulation of the private sector</li> <li>• Operational efficiency and cost optimisation are achieved</li> <li>• Projects are completed within scope, on time and within budget</li> </ul>	<ul style="list-style-type: none"> <li>• Private funding (100%)</li> <li>• Private ownership of the infrastructure (100%)</li> <li>• Private sector carries the full costs and risks of the projects</li> <li>• State plays an effective regulator in the interest of consumers and users (public interest)</li> <li>• Private sector retains skills to maximize revenue, profits and future business (sustainability)</li> <li>• Strategic social infrastructure, i.e. water, energy, sanitation, etc., are controlled by the private sector</li> </ul>

Source: <https://ppp.worldbank.org/public-private-partnership/agreements>

### 2.1.2 Legal and Administration of PPPs in Eastern Africa

The Public-Private Infrastructure Advisory Facility (PPIAF) is a multi-donor technical assistance facility supported by the World Bank and aimed at helping developing countries improve the quality of their infrastructure through private sector.

The PPIAF has been involved in establishment of PPP units in Eastern Africa. These are organizations or offices responsible for promoting, facilitating and/or assessing PPPs in their territory. PPP units can be government agencies or semi-independent organizations (created with full or partial government support). They provide regular status updates on PPP development and performance in their respective countries.

As per the PPIAF, to date most of the PPPs implemented in Eastern Africa have been related to infrastructural development in energy, transport, housing and water sectors. Available information estimates that a feasible PPP is in the range of USD \$50M budget, but again this has been mostly in the infrastructure sectors. Feasibility studies could be done to establish what would be viable in the agriculture/veterinary domain.

Below is a summary of legal and administrative structure of total PPPs undertaken in Eastern Africa (source: <https://ppiaf.org/countries>):

Country	PPP Activity to Date
Burundi	2 PPP activities since 2013. No dedicated PPP unit. The Public-Private-Dialogue (PPD) Secretariat oversees PPP issues.
Ethiopia	6 PPP activities since 2013. The Public Private Partnership Proclamation No. 1076/2018 (“PPP Proclamation”) has an expanded scope to include all PPP procurements made by both public bodies and public enterprises. The PPP Proclamation establishes the PPP Directorate General (PPP-DG) to be located within the Ministry of Finance and Economic Cooperation.

Kenya	18 PPP activities since 2011. PPP policy statement first issued in 2011 and PPP Law Act established in 2013. The PPP unit, which acts the secretariat and technical arm of the PPP committee, is under the Ministry of Finance
Rwanda	7 PPP activities since 2011. Law N°14/2016 of 02/05/2016 governs PPPs in Rwanda and PPP unit is under the Rwanda Development Board.
Tanzania	13 PPP activities since 2012. National PPP policy drafted in 2009, PPP Act enacted in 2010. PPP unit is under Prime Minister's Office – Tanzania Investment Centre.
Uganda	8 PPP activities since 2012. PPP Law (Act 2015) enacted in 2015. The PPP unit under Ministry of Finance – Planning and Economic Development.

The legal and administrative structures for PPPs in Eastern Africa are limited to sectors of infrastructure development, energy and water, while the PPP units are mainly housed in ministries of finance and economic development. There is need for establishment of links between the respective PPP units to the agriculture/veterinary sectors to be able to create an enabling environment for PPPs in the FMD VVC. PPIAF recommends the establishment of such PPP units in respective government institutions (ministries, departments, federal/local governments and appropriate offices) to champion and access PPPs that are beneficial to the respective stakeholders.

## 2.2 Stakeholder Survey and Feedback Responses

On June 23 2020, the European Commission for the Control of Foot-and-Mouth Disease (EuFMD) and the World Organisation for Animal Health (OIE), in collaboration with the French Agricultural Research Centre for International Development (CIRAD), launched an online course: “[Applying Public-Private Partnerships to the Control of FMD and Similar Transboundary Diseases](#)”. Public and private sector representatives from the AgResults FMD Project target countries (Burundi, Ethiopia, Kenya, Tanzania, Rwanda, and Uganda) were invited to participate in this course, along with the Project team. The course covered a range of topics, such as exploring needs and identifying opportunities for PPPs, building a business case for PPPs, and developing an enabling environment for sustainable PPPs.

Following on this course the Project team conducted a PPP survey questionnaire with the course participants from the region and other stakeholders, to capture the existing views and current landscape of PPPs in the respective countries. The main purpose was to compile information on the existing landscape, challenges, and opportunity areas to inform areas of needed support and development for future PPP arrangements.

From July to October 2020, a total of 121 stakeholders were contacted to provide perspectives on PPPs in their respective countries. In total, 45 responses were received, representing 47% public sector stakeholders and 53% private sector stakeholders.

The data was collected and compiled with respect to the five (5) specific objectives of the PPP Framework (section 1.5.2). Common emerging trends, challenges, and opportunities, as well as unique situations related to PPPs in the target countries, were captured through simple

descriptive statistical data (overall percentages, specific in-country occurrences, and descriptive narrations). See **Annex 1** for collated raw data of survey responses.

The survey response data is presented based on both regional feedback and specific country feedback, with respect to the ten topics addressed by the survey questionnaire:

- i. Current roles of the public and private sector in FMD control in the country
- ii. Gaps in public sector provisions for FMD control
- iii. Awareness of existing PPP arrangements in the FMD VVC
- iv. Need to establish PPPs for FMD VVC
- v. Existence of a national legal framework for PPPs in the FMD VVC
- vi. The key challenges for developing PPPs in the FMD VVC
- vii. Favourability of general frameworks for law and business practice (enabling environment) for PPPs
- viii. Existence of policies to promote PPPs in the veterinary domain
- ix. Organisational capacities to engage with PPP in both the public and private sectors
- x. Areas of support that are needed to enable the establishment of PPPs in the FMD VVC

### 2.2.1 Regional (Eastern Africa) Level Feedback Output

The data presented in this section provides an overview of the Eastern African region with regards to general landscape, opportunities, challenges and areas of support needed for establishment of PPPs.

#### *a). Establishing the landscape and enabling environment for PPPs*

This section of the questionnaire sought to capture information about the existing landscape and enabling environment in the target countries with regards to PPPs in the FMD VVC.

#### *i. Current roles of the public and private sectors in FMD control*

Across the region, the public sector is seen to play crucial roles in:

- a. Surveillance, virus characterization and mapping (64%), as well as organizing of FMD control campaigns and carrying out vaccinations (64%)
- b. Purchase and supply of FMD vaccines (55%)
- c. Regulations and directives for control of animal disease, including FMD (44%)

In general, the private sector plays three critical roles:

- a. Carrying out vaccinations on private farms (36%)
- b. Reporting outbreaks (notification) and taking animals for vaccination (33%)
- c. Importation and delivery of FMD vaccines (31%)

## *ii. Gaps in public sector provisions for FMD control*

In general, 96% of stakeholder responses acknowledged gaps in current public sector provisions for FMD control in the target countries. The most common gap responses include:

- a. Poor vaccine supply and vaccination coverage (42%)
- b. Reactive and ad-hoc procurement of vaccines (24%)
- c. Lack of capacity at local/regional and federal level (18%) and lack of involvement of private sector in FMD control (18%)

## *iii. Awareness of existing PPP arrangements in the FMD VVC*

Most of the stakeholders (80%) were not aware of any existing PPP arrangements in the FMD VVC in their country, while 20% reported some cases of PPPs in some sectors of the veterinary domain. These were cited in Ethiopia, Kenya, Rwanda, and Tanzania.

## *iv. Need to establish PPPs for FMD VVC*

Nearly all the stakeholders (96%) expressed the need for PPPs in FMD VVC. The main reasons given include:

- a. A well-structured PPP would ensure effective FMD control (51%)
- b. PPPs would ensure sustainable supply and availability of FMD vaccines in the country (42%).

## *v. Existence of a national legal framework for PPPs in the FMD VVC*

The non-existence of a national legal framework for PPPs in the FMD VVC was reported by 69% of the stakeholders in the target countries and constituted a majority of respondents from all the countries, except Uganda where the majority of respondents reported the existence of a national legal framework that could be applicable in the FMD VVC.

## *vi. Key landscape and enabling environment challenges for developing PPPs*

The most common identified challenges in developing PPPs are:

- a. Unclear policies and absence of a legal framework (29%)
- b. Trust issues between the public and private sectors (20%)
- c. Budget shortage/limitation (18%)

## *vii. Whether the general frameworks for law and business practice (enabling environment) are favourable for PPPs.*

Most of the respondents (69%) stated that the general enabling environment (for law and business practice) was favourable in their country.

## *viii. Existence of policies to promote PPPs in the veterinary domain*

53% of the respondents reported existence of policies to promote PPPs in the veterinary domain, while 47% reported a lack of policies to promote PPPs in veterinary domain.

*ix. Organisational capacities to engage with PPP in both the public and private sectors.*

A large percentage of respondents (73%) reported the existence of organisational capacities to engage with PPP in both the public and private sectors.

*x. Areas of support that are needed to enable establishment of PPPs.*

The most common areas of support identified include:

- a. Training, raising awareness and advocacy of PPPs (53%)
- b. Development of an institutional framework, legal framework, and a PPP Technical Unit (47%)
- c. Support with cold chain material to be used in field by vaccinators (20%)

*b). Challenges and opportunities for PPPs in the FMD vaccine value chain*

This section of the questionnaire sought to capture stakeholders' perspectives on the key challenges and opportunity areas for establishment of PPPs in the FMD VVC for their respective countries.

*Key Challenges in the FMD VVC*

The major common challenges identified include:

- a. Lack of high-quality vaccines relevant to the region (73%).
- b. Need for cold chain distribution to maintain vaccine efficacy (73%).
- c. Limited facilities for serotyping and vaccine matching (71%).
- d. Limited post-vaccination monitoring (68%).

*Opportunity area(s) for PPP arrangements to benefit the FMD VVC*

The most common opportunity areas identified include:

- a. Vaccine distribution (71%).
- b. Delivery and vaccinations (67%).
- c. Vaccine production (60%).
- d. Laboratory testing (60%).



*c). Mapping of key stakeholder institutions, agencies, and organisations in the public and private sectors*

The stakeholders were asked to map out the key public and private stakeholder institutions and organisations that are critical in establishment of PPPs in the FMD VVC.

<i>Key Public Sector stakeholder</i>
<ol style="list-style-type: none"><li>1. Ministry of Agriculture / Department of Livestock / Director of Veterinary Services has been identified as a stakeholder (89%).</li><li>2. National Veterinary Laboratory and Research Institution (71%).</li><li>3. National Drug Authority (36%).</li></ol>
<i>Key Private Sector stakeholder</i>
<ol style="list-style-type: none"><li>1. Veterinary distributors, and pharmacies (73%).</li><li>2. Veterinarian and animal health extension workers are key stakeholders (73%).</li><li>3. Dairy producers/farmers/pastoralists (58%).</li><li>4. Veterinary professional associations (31%).</li></ol>

In conclusion the initial survey questionnaire feedback received from key stakeholders in the region indicate an overwhelming need for PPPs in the veterinary domain and the framework survey establishes challenges in the formation of PPPs as well as points out key major opportunities for PPPs that would guide further discussions on PPP formations in the region.

*2.2.2 Individual Target Country Feedback Output*

The above regional feedback gives a broad overview of information on PPPs. However, each of the target countries has unique characteristics in FMD control and existing landscape that further informs priority areas and opportunities for PPPs in the FMD VVC. In this section an in-depth profile of each country is given to further elaborate on the existing PPP scenarios and opportunities.

**Burundi**

Very low response rate from Burundi presents a challenge to inform on PPP development in the country. Only one public sector stakeholder responded, while desktop review resulted in minimal information relevant to Burundi. Additional outreach efforts carried out in the second phase of stakeholder engagement were also not successful.

**Ethiopia**

Summary of legal structure: The Public Private Partnership Proclamation No. 1076/2018 (“PPP Proclamation”) is the guiding policy on PPPs in Ethiopia. This proclamation has an expanded scope to include all PPP procurements made by both public bodies and public enterprises. The PPP Proclamation establishes the PPP Directorate General (PPP-DG) to be located within the Ministry of Finance and Economic Cooperation.

The survey questionnaire received responses from 63% of contacted public sector stakeholders and 47% of private sector stakeholders.

With regards to the landscape and enabling environment for PPPs, the key roles of public sector are to carry out surveillance, conduct virus characterization and mapping, and purchase and supply FMD vaccines. The private sector plays a role in FMD outbreak notification and transport of proprietary cattle for vaccination, but no clear role in FMD control. All respondents agreed that there are gaps in FMD control, and the major gap identified was poor vaccine supply and vaccination coverage.

The majority of respondents were not aware of any PPPs in the FMD VVC, while some indicated awareness of PPPs in poultry and livestock abattoirs within the veterinary domain. The need for PPPs was unanimously agreed upon as a way of helping to ensure effective FMD control in the country. Most respondents said there was no national legal framework for PPPs in the FMD VVC and that the challenges to establish such PPPs include the need for PPP Technical Unit establishment in the Ministry of Agriculture and provision of free services (vaccines/vaccinations) by the government.

The key support needed for establishment of PPPs in the FMD VVC is the development of an institutional framework, legal framework and a Technical Unit in the Ministry of Agriculture.

The stakeholders identified the key challenges in the FMD VVC as:

1. Need for high-quality vaccines relevant to the region
2. Limited facilities for serotyping and vaccine matching
3. Need for cold chain distribution to maintain vaccine efficacy
4. High cost of vaccination campaigns

The stakeholders identified these key opportunity areas for PPPs in the FMD VVC:

1. Vaccine production /manufacturing
2. Vaccine importation and distribution (upstream)
3. Vaccine delivery & provision of vaccinations (downstream to farmers)
4. Laboratory testing and serotype matching

Three key stakeholder institutions in each of the public and private sectors were identified for establishment of PPPs in the FMD VVC:

#### *Public sector stakeholders*

1. Ministry of Agriculture/Vet Department and Livestock Directorate
  - to offer planning and scheduling of vaccine campaigns and evaluation
2. National Veterinary Laboratory and Research Institution
  - for serotyping, FMD outbreak investigation, and post vaccination monitoring
3. Vaccine production centre
  - for producing FMD vaccine in a PPP arrangement

#### *Private sector stakeholders*

1. Private veterinarians and animal health extension workers
  - for vaccination and education on FMD control
2. Dairy producers/farmers/pastoralists
  - to vaccinate their animals (under supervision of a licensed vet)
3. Veterinary distributors and pharmacies

- as importers, distributors and retailers of FMD vaccines

*AgResults FMD Project Team analysis:* in conclusion, FMD management and control is important for Ethiopia to ensure food security for its own growing population, to support the health of its large cattle population and to help achieve the target of exporting both meat and live animals to the Middle East and North Africa (MENA) livestock markets. The following recommendations were offered by the HEARD Project (Health of Ethiopian Animals for Rural Development) in a workshop report written about PPPs for veterinary service delivery (20 June 2019):

1. Veterinary statutory body to be established before implementing PPPs
2. Veterinary service rationalization road map and other relevant legislations to be endorsed to facilitate the implementation of PPPs
3. Establishment of task forces led by the Ministry of Agriculture (and other stakeholders) to establish how to apply PPPs
4. Demand should be analysed to identifying areas where the private sector can function and collaborate

Ethiopia, with its large livestock population and the key role livestock plays in GDP contribution to the economy, presents several opportunities for PPP establishment along the FMD VVC. These PPP opportunities include:

1. Manufacturing of FMD vaccines
2. Vaccination campaigns and post-vaccination monitoring, utilising VPPs and CAHWs
3. Improvement of laboratory services, disease surveillance and serotype matching, in collaboration with private institutions.

To realise these partnerships, the challenges identified in this framework must be addressed to facilitate PPP formations in the FMD VVC.

## **Kenya**

Summary of legal structure: the PPP policy statement was first issued in 2011 and the PPP Act was established in 2013. The PPP unit, which acts as the secretariat and technical arm of the PPP committee, is under the Ministry of Finance.

The survey questionnaire received responses from 27% of contacted public sector stakeholders and 73% of private sector stakeholders.

With regards to the landscape and enabling environment for PPPs, the key roles of the public sector are to organize FMD campaigns, carry out vaccinations, manage purchase and supply of FMD vaccines, conduct virus characterization and mapping, regulate and control vaccines distributed and used in the country, and produce vaccines. The private sector's role is limited to distribution and retailing of FMD vaccines and carrying out vaccinations at private farms. All respondents agreed that there are gaps in FMD control, and the major gaps identified are poor vaccine supply and vaccination coverage, and reactive procurement of vaccines based on outbreaks.

The majority of the respondents were not aware of any PPPs in the FMD VVC, while some indicated that the DVS has allowed the private sector to play a role in distribution of veterinary products. The need for PPPs was agreed upon as a way of ensuring sustainable supply of FMD vaccines and ensuring good and effective FMD control. Most respondents said there was no national legal framework for PPPs in the FMD VVC and that the challenges to establish such

PPPs include the existence of free service provision (vaccines/vaccinations) by the government and trust issues between the public and private sectors.

The key support needed for establishment of PPPs in the FMD VVC is training, awareness creation and advocacy of PPPs in the FMD value chain as well as further development of an institutional framework, legal framework and/or PPP Technical Unit in the Ministry of Agriculture.

The stakeholders identified the key challenges in the FMD VVC as:

1. Need for high-quality vaccines relevant to the region
2. Need for cold chain distribution to maintain vaccine efficacy
3. Long vaccine supply lead times

The stakeholders identified these key opportunity areas for PPPs in the FMD VVC:

1. Vaccine distribution
2. Vaccine production/manufacturing
3. Post-vaccination monitoring
4. Laboratory testing

Three key stakeholder institutions in each of the public and private sectors were identified for establishment of PPPs in the FMD VVC:

*Public sector stakeholders*

1. Ministry of Agriculture/Vet Department and Livestock Directorate
  - to offer planning and scheduling of vaccine campaigns and evaluation.
2. National Veterinary Laboratory and Research Institution
  - for serotyping, FMD outbreak investigation, and post vaccination monitoring.
3. Vaccine production centre
  - for producing FMD vaccine in a PPP arrangement.

*Private sector stakeholders*

1. Private veterinarians and animal health extension workers
  - for vaccination and education on FMD control
2. Dairy producers/farmers/pastoralists
  - to vaccinate their animals (under supervision of a licensed vet)
3. Veterinary distributors and pharmacies
  - as importers, distributors, and retailers of FMD vaccines

*AgResults FMD Project Team analysis:* in conclusion, FMD management and control is important for Kenya as a way of ensuring food security for its own growing population and to support the health of its large cattle population. The country's well-developed dairy sector is most impacted by FMD outbreaks. The Kenyan government also has plans for meat and live animal exports for both the Middle Eastern and European markets that require strict conformity to FMD regulations. The Kenyan private sector already does genetic exports for cattle breeding, though this has been constrained by FMD outbreaks.

Through private sector engagement with the DVS office (by Sidai, VISAK and other partners) a circular was released from the DVS Office, in February 2020, that offered clarification on the private sector's role in distribution and vaccinations in the Kenyan veterinary domain. Though all notifiable diseases, including FMD, are categorised as public domain, such

engagements and communications are a welcome development in bringing mutual collaborations between the public and private sectors.

Kenya's public vaccine manufacturer, KEVEVAPI, is the main supplier of FMD vaccines in the region. There are opportunities for PPP establishment in the FMD VVC identified in this framework, including:

1. Capacity building for vaccine manufacturing and technology transfer with public manufacturing institution.
2. Vaccination campaigns and post-vaccination monitoring conducted by VPPs/CAHWs.
3. Laboratory services, disease surveillance and serotype matching provided by private institutions.

To realise these partnerships, the challenges identified in this framework must be addressed to facilitate PPP formations in the FMD VVC.

## **Rwanda**

Summary of legal structure: Law N°14/2016 of 02/05/2016 is the guiding policy that governs PPPs in Rwanda. The PPP unit is under the Rwanda Development Board.

The survey questionnaire received a balanced response of 50% each from public and private stakeholders.

With regards to the landscape and enabling environment for PPPs, the key roles of the public sector are to manage purchase and supply of FMD vaccines, carry out surveillance, conduct virus characterization and mapping, and regulate and control the vaccines distributed and used in the country. The private sector only plays the role of vaccinations in private farms under supervision of licensed veterinarian. All respondents agreed that there are gaps in FMD control, and the major gaps identified were lack of private sector involvement in the VVC and lack of capacity at the local and regional levels.

The majority of the respondents were not aware of any PPPs in the FMD VVC. The need for PPPs was unanimously agreed upon as a way of helping to ensure sustainable supply and availability of these vaccines in the country. Most respondents said there was no national legal framework for PPPs in the FMD VVC, but some mentioned the SPAT4 Strategic Plan for Agricultural Transformation (2018-2024) as giving guidance for PPPs. The challenges to establish such PPPs included unclear policies and absence of a legal framework and need for cold chain distribution.

The key support areas needed for establishment of PPPs in the FMD VVC are training, awareness creation, advocacy, strengthening the laboratory capability for serotyping and post vaccination monitoring, and development of an institutional framework, legal framework and PPP Technical Unit.

The stakeholders identified the key challenges in the FMD VVC as:

1. Need for cold chain distribution to maintain vaccine efficacy
2. Need for high-quality vaccines relevant to the region
3. Limited facilities for serotyping and vaccine matching
4. Limited post-vaccination monitoring

The stakeholders identified three key opportunity areas for PPPs in the FMD VVC:

1. Vaccine importation and distribution (upstream)
2. Vaccine delivery & provision of vaccinations (downstream to farmers)
3. Vaccine purchasing/budget

Three key stakeholder institutions in each of the public and private sectors were identified for establishment of PPPs in the FMD VVC:

*Public sector stakeholders*

1. National Drug Authority
  - for registration and quality assurance
2. Ministry of Agriculture/Vet Department and Livestock Directorate
  - to offer planning and scheduling of vaccine campaigns and evaluation.
3. National Veterinary Laboratory and Research Institution
  - for serotyping, FMD outbreak investigation, and post-vaccination monitoring.

*Private sector stakeholders*

1. Veterinary distributors and pharmacies
  - as importers, distributors, and retailers of FMD vaccines
2. Dairy producers/farmers/pastoralists
  - to vaccinate their animals (under supervision of a licensed vet)
3. Veterinary associations for conducting public awareness campaigns
  - as importers, distributors, and retailers of FMD vaccines

*AgResults FMD Project Team analysis:* in conclusion, Rwanda is ahead of the rest of the region in terms of the PCP-FMD control strategy (at stage 3), with well-established biosecurity and livestock transport measures in place. The main threats for FMD outbreaks are located along the borders. The country plans to build up its livestock export markets (for both meat and live animals) and to boost its dairy sector to contribute to the economy and create greater food security. The key opportunities for PPP establishment in the FMD VVC are for FMD vaccine importation and distribution, vaccination campaigns and post-vaccination monitoring.

## **Tanzania**

Summary of legal structure: The National PPP policy was drafted in 2009 and PPP Act enacted in 2010. The PPP unit is under the Prime Minister's Office – Tanzania Investment Centre.

The survey questionnaire received responses from 33% of contacted public sector stakeholders and from 67% of private sector stakeholders.

With regards to the landscape and enabling environment for PPPs, the key roles of public sector are to issue regulations and directives for control of animal disease (including FMD), regulate and control vaccines distributed and used in the country, carry out surveillance, and conduct virus characterization and mapping. The private sector, on the other hand, plays a role in importation and delivery of FMD vaccines, vaccinations on private farms, and distribution and retailing of FMD vaccines. All respondents agreed that there are gaps in FMD control, and the major gap identified was poor vaccine supply and vaccination coverage.

The majority of the respondents were not aware of any PPPs in the FMD VVC, while some indicated awareness of PPPs between VPPs and local governments for vaccinations. The need

for PPPs was unanimously agreed upon to ensure good and effective FMD control and to provide sustainable supply and availability of these vaccines in the country. Most respondents said there was no national legal framework for PPPs in the FMD VVC and that the challenges to establish such PPPs include unclear policies, absence of a legal framework and lack of awareness on benefits and use of PPPs.

The key support areas needed for establishment of PPPs in the FMD VVC are training, awareness creation, advocacy, and development of an institutional framework, legal framework and/or PPP Technical Unit in the Ministry of Livestock and Fisheries.

The stakeholders identified the key challenges in the FMD VVC as:

1. Need for high-quality vaccines relevant to the region
2. Need for cold chain distribution to maintain vaccine efficacy
3. Limited facilities for serotyping and vaccine matching

The stakeholders identified four key opportunity areas for PPPs in the FMD VVC:

1. Vaccine production /manufacturing
2. Vaccine importation and distribution (upstream)
3. Vaccine delivery & provision of vaccinations (downstream to farmers)
4. Laboratory testing and serotype matching

Three key stakeholder institutions in each of the public and private sectors were identified for establishment of PPPs in the FMD VVC:

#### *Public sector stakeholders*

1. National Veterinary Laboratory and Research Institution
  - for local production of FMD vaccines
  - for serotyping, FMD outbreak investigation, and post vaccination monitoring.
2. Ministry of Livestock and Fisheries/Vet Department and Livestock Directorate
  - to offer planning and scheduling of vaccine campaigns and evaluation.
  - Tanzania Medicines and Medical Devices Authority (TMDA) for registration and quality assurance

#### *Private sector stakeholders*

1. Private veterinarians and animal health extension workers
  - for vaccination and education on FMD control
2. Veterinary distributors and pharmacies
  - as importers, distributors, and retailers of FMD vaccines
3. Dairy producers/farmers/pastoralists
  - to vaccinate their animals (under supervision of a licensed vet)

*AgResults FMD Project Team analysis:* in conclusion, Tanzania has the second largest cattle population in the region and the country is focused on improving its meat and dairy sectors. There is a need for FMD management and control to improve food security for a growing population and to tap into the country's potential for meat and livestock exports. Ongoing livestock plans have prioritised FMD as one of the thirteen Trans-boundary Animal Diseases, and among the top five notifiable diseases for public vaccination campaigns.

Tanzania presents a good opportunity for PPP establishment in the FMD VVC. Currently, there are informal PPPs between local (district level) governments and VPPs to assist with vaccination campaigns, while future opportunities exist for PPPs with:

1. Tanzania Veterinary Laboratory Agency (TVLA) for vaccine manufacturing/supply.
2. VPPs/CAHWs for vaccination campaigns and post-vaccination monitoring
3. Private institutions for laboratory services, disease surveillance and serotype matching

To realise these partnerships, the challenges identified in this framework must first be addressed.

## **Uganda**

Summary of legal structure: The Public-Private-Partnership Act was enacted in 2015, establishing the PPP unit under Ministry of Finance – Planning and Economic Development.

The survey questionnaire received a response from 57% of contacted public sector stakeholders and 43% of private sector stakeholders.

With regards to the landscape and enabling environment for PPPs, the key roles of public sector are to manage the purchase and supply of FMD vaccines and organize FMD campaigns and vaccinations. The private sector plays a role in FMD outbreak notification, transport of proprietary cattle for vaccination, and importation and delivery of FMD vaccines for government tenders. All respondents agreed that there are gaps in FMD control, and the major gaps identified were reactive and ad-hoc procurement of vaccines and poor vaccine supply and vaccination coverage.

The respondents were not aware of any PPPs in the FMD VVC. The need for PPPs was unanimously agreed upon as a way of helping to ensure effective FMD control in the country and to ensure sustainable supply and availability of these vaccines in the country. Most respondents agreed that there was national legal framework for PPPs, citing that the Public-Private-Partnership Act of 2015 provides the legal framework for any partnerships. The challenges to establish PPPs included budget limitations, trust issues between the public and private sectors and lack of government goodwill/support for PPPs.

The key support areas needed for establishment of PPPs in the FMD VVC were identified as training, awareness creation and advocacy of PPPs in the FMD VVC and budget allocation/financing of PPPs.

The stakeholders identified the key challenges in the FMD VVC as:

1. Limited facilities for serotyping and vaccine matching
2. Long vaccine supply lead times
3. Need for cold chain distribution to maintain vaccine efficacy
4. Limited post-vaccination monitoring

The stakeholders identified four key opportunity areas for PPPs in the FMD VVC:

1. Vaccine production /manufacturing
2. Vaccine delivery & provision of vaccinations (downstream to farmers)
3. Limited post-vaccination monitoring.
4. Laboratory testing and serotype matching



Three key stakeholder institutions in each of the public and private sectors were identified for establishment of PPPs in the FMD VVC:

*Public sector stakeholders*

1. Ministry of Agriculture/Vet Department and Livestock Directorate
  - to offer planning and scheduling of vaccine campaigns and evaluation.
2. National Veterinary Laboratory and Research Institution
  - for serotyping, FMD outbreak investigation, and post vaccination monitoring.
3. National Drug Authority
  - For registration and quality assurance

*Private sector stakeholders*

1. Private veterinarians and animal health extension workers
  - for vaccination and education on FMD control
2. Dairy producers/farmers/pastoralists
  - to vaccinate their animals (under supervision of a licensed vet)
3. Veterinary distributors and pharmacies
  - as importers, distributors, and retailers of FMD vaccines

*AgResults FMD Project Team analysis:* in conclusion, FMD management and control is important in Uganda to improve food security for its growing population and to access the MENA (Middle East and North Africa) livestock markets with both meat and live animals.

Uganda presents a good opportunity for PPP establishment in the FMD VVC, these include:

1. Collaborations PPP with public sector to import and distribute vaccines by private sector distributors/manufacturers.
2. PPPs with the VPPs/CAHWs for vaccination campaigns and post-vaccination monitoring.
3. PPPs with private institutions for laboratory services, disease surveillance and serotype matching.

To realise these partnerships, the identified challenges must first be addressed.

## 2.3 Validation of Stakeholder Survey Findings

The compiled responses from the PPP survey questionnaire (section 2.2) were validated through virtual group discussions with stakeholders from each country, between January to March 2021.

During the virtual validation exercise, 136 individual stakeholders were invited to validate country-specific information gathered in the questionnaire. The stakeholders were categorised into the following groups:

1. Public sector vets (including DVS/CVO offices and individual veterinarians)
2. Public sector institutions (Regulatory, Laboratory and Research institutions)
3. Private sector vets and institutions (Vet associations, individual veterinarians)
4. Private sector (Vaccine distributors)
5. Vaccine manufacturers (in both Public and Private sectors)

The stakeholders were also asked to provide input on the following questions, though responses were only received from stakeholders in Tanzania. This would indicate high interest by Tanzanian stakeholders for establishment of PPPs or lack of enough time by stakeholders in other countries to come up with ideas for PPP pilots.

1. What actions/steps need to be undertaken to implement PPPs in your country?
2. Which PPPs would you recommend be implemented as a pilot in your country? Suggest priority PPP.
3. Recommended private and public sector organizations for PPPs above – provide name of organisation(s).

In summary, of the 136 invited, 42 stakeholders participated and contributed to the discussions from five out of the six target countries – outreach to stakeholders from Burundi was not successful. Information compiled from the questionnaire survey was validated, with stakeholders providing further clarifications and supporting information. See Annex 2 for a summary of the validation feedback received.

## SECTION 3: CONCLUSION & RECOMMENDATIONS

### 3.1 Conclusion

The livestock vaccine value chain (including FMD vaccines) consists of manufacturers, laboratories, importers, distributors, retailers, vaccinators (veterinarians, VPPs, CAHWs and the end-users who are commercial and smallholder livestock farmers). As a notifiable and transboundary disease, the management and control of FMD is highly regulated by the DVS/CVO office, and each country has its own mandate. Each actor in the vaccine value chain plays a key role to efficiently deliver vaccines and effectively manage and control the disease.

Currently, FMD vaccine procurement in Eastern Africa is dominated by governments (public sector) who utilise tendering processes and ad hoc direct purchase. Suppliers (manufacturers/distributors) submit price quotes for delivery of products to scheduled government locations and subsequent vaccination campaigns are then carried out by government veterinary officers. This current model has several challenges that lead to inefficiencies in FMD control.

The introduction of PPPs in the FMD VVC inherently means inclusion of private sector players to complement the existing public sector efforts. This needs to be implemented in close collaboration with relevant government stakeholders (DVS/CVO and regulatory bodies) who are entrusted with the mandate to manage and control notifiable diseases (including FMD). Each country's FMD control approach is unique and influenced by disease prevalence, prevailing veterinary laws and policies, internal food safety and external livestock trade.

In 2017, the OIE (World Organisation for Animal Health) in collaboration with CIRAD (French Agricultural Research Centre for International Development) and with support from the Bill & Melinda Gates Foundation (BMGF), developed the [OIE PPP Handbook](#) that presents the typology and PPP guidelines in the veterinary domain. These guidelines were used to inform the development of this PPP Framework in the FMD VVC. The scope of this PPP

Framework is to customize the OIE PPP Handbook into a practical framework that can be further developed into appropriate commitments by stakeholders along the FMD VVC, resulting in improved vaccine accessibility for farmers, greater market stability and ultimately better disease control and related economic benefits.

The PPP Framework – through stakeholder feedback - has identified a need for PPPs in the FMD VVC to allow effective management and control of FMD in the Eastern African region. Several PPP opportunities in the areas of production, purchasing, distribution, delivery, vaccination, and post-vaccination monitoring exist in the AgResults FMD Vaccine Challenge Project target countries (Burundi, Ethiopia, Kenya, Tanzania, Rwanda, and Uganda). However, if sustainable PPPs are to be established, countries need to overcome some infrastructural challenges and establish legal frameworks and administrative units within the veterinary sector.

### 3.2 Recommendations

Following the desktop reviews and consolidation of feedback from the various stakeholders in the veterinary sector, this PPP Framework offers four recommendations as a way towards establishment of PPPs in the Eastern African FMD VVC and the region's veterinary sector in general.

1. Further work should be undertaken by respective governments and development partners, in conjunction with the private sector stakeholders, to carry out capacity building, awareness creation and feasibility studies related to PPPs in the region. These efforts will help bring PPPs into practice and realize the benefits to effective management and control of FMD.
2. Concerted efforts should be made by the respective governments for establishment of in-country PPP units within their ministries of Agriculture and Livestock. These units would facilitate the initiation and coordination of PPP activities, as well as outreach to the private sector. Regular public-private sector interactions would help build trust and uncover needs and opportunities to collaborate.
3. There should be coordinated efforts by institutions to promote the PPP Framework and to initiate formation of PPPs in the region. These coordinated efforts by institutions such as The World Bank, OIE, FAO/EuFMD, AU-IBAR, IGAD-ICPALD, EAC, as well as donor, investor and development organisations, could help deliver beneficial PPPs in the FMD VVC and the broader veterinary domain.
4. Stakeholders in the region are encouraged to take the EuFMD online course on *Applying Public-Private Partnerships (PPP) in the Progressive Control of FMD and Similar Transboundary Animal Diseases*. The course offers a practical guide on a range of topics, such as exploring needs and identifying opportunities for PPPs, building a business case for PPPs, and developing an enabling environment for sustainable PPPs – thus offering a better understanding of the processes and challenges related to the formation of PPPs. <https://eufmdlearning.works/mod/page/view.php?id=14572>

The ultimate hope is for this framework to serve as a catalyst for future PPP arrangement in the FMD vaccine value chain and trigger initiation of PPPs in the general veterinary domain.

## SECTION 4: REFERENCES

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In addition to the above, numerous other publications were referenced for background material to this document.

## SECTION 5: ANNEXES

### Annex 1: Summary table of questionnaire survey feedback from stakeholders (will add as a PDF in final version of document)

### Annex 2: Summary of validation feedback

#### **Ethiopia**

- Need for Public Private Partnerships activities and office units to be cascaded to different ministries in Ethiopia.
- There is need to create enabling environment for PPP formations.
- Nationalisation of FMD PCP Roadmap not going well despite proclamation from higher authorities.
- Perception of public sector services being costly versus private sector services is not true, there is need to evaluate efficiency and effectiveness of services delivered.
- How do PPPs help in vaccine production centre/parastatal to produce high quality vaccines?
- Need to evaluate capacity of private sector to engage with public and how to bring every stakeholder on-board.
- Need to carry out analysis of ability to pay by owners of large animals (cattle).
- Need enabling environment for PPPs, current proclamation on PPPs in Ethiopia is designed for PPPs with a cost budget of \$50 Million (USD).
- Problem of export quarantine, where investment is not large enough for current set up of PPPs.

#### **Kenya**

- There was a circular which was released from the public sector (DVS Office in Feb 2020) but the challenges are: a) lack of awareness of this circular by private veterinarians, and b) lack of a platform for engaging the private sector.
- Government (public sector) engagement needs concrete legislation to guide on actions - this is currently missing for PPPs. Important to engage at the national level (DVS office).
- Post-vaccination monitoring will be greatly improved with involvement of private labs. Currently, there is only information on government labs, not on existence of private labs.
- The livestock producers and farmer associations are usually not well defined (proper address and location). What is well defined on the ground are the cooperative societies. It would be relevant to add the cooperative societies for PPP partnership.
- In Kiambu County, there is a challenge with the shortage of veterinary staff and involving the private sector in FMD control would be a great idea. Vaccine distribution by the private sector would ensure that the vaccine is available when needed.
- Aspect of PPP is a good idea. Challenge in Kakamega County is the sourcing of the vaccine. The vaccine is offered for free to farmers. Problem lies not only with the producer (supply side) but also with the way the county government manages its finances (procurement side). The county would prefer to deal government-to-government rather than dealing with the private sector.

- Consider opening this PPP engagement to registration or products. This is an area that has a lot of political interest.
- PPP should help in opening of markets for products and distribution even if they are locally manufactured.
- There are opportunities available for PPPs but there is a need to clearly state the role of private and public sectors in the PPP.
- FMD in Kenya is in the public domain, therefore a strong commitment is required from the public sector for PPPs to flourish.
- PPPs being cantered at the Ministry of Agriculture is good idea.
- Farmers and private vets have tried to access the vaccine but get very limited support from the public sector.
- Need to hasten the process of actualizing the PPP and put into action what has been collected, in order to realize the benefits
- Acknowledgement that the PPP Act lays a good foundation to actualize PPPs in Kenya.

## **Rwanda**

- Need to establish what the formation of PPPs would bring to stakeholders in the veterinary sector in Rwanda.
- FMD issue in Rwanda is very problematic, especially in the border areas with neighbouring countries.
- Need to involve the Rwanda Council of Veterinary Doctors in PPP discussions to encourage participation of private sector.
- Government is still the main player in FMD control. This is key to maintaining professionalism and honesty in FMD control in the country.
- Viability and effectiveness of FMD vaccines will be key in successful PPPs.
- RAB (Rwanda Agricultural Board) is the technical implementation arm of the Ministry of Agriculture for Transboundary Animal Diseases (TADs) in the country.
- Virus serotyping, effective sampling, vaccine matching, and improved laboratory facilities is key in prevention of outbreaks.

## **Tanzania**

- Issues of vaccine are very political. Political declarations made by public sector officials can affect private sector investment in PPPs
- Concerns about PPP discussions being held with professional people; discussions need to involve farmers at the village level to see benefits.
- Perception by pastoralists communities in Tanzania on intention by government to use vaccination campaigns to reduce their number of cattle.
- Uptake of vaccines: if we bridge the gap of knowledge and transparency, livestock farmers will gain confidence to take up the vaccines.
- Private veterinarians are present in the village areas but not linked to government vaccination effort. There is a need to bridge this gap for successful vaccination campaigns.
- Government lacks resources to employ needed veterinary professionals. Recent announcements stated that government needs over 17,000 vets but can only recruit 3,500.

- Private sector is afraid of PPPs as they feel they can lose out and PPPs are not sustainable.
- Unavailability of data on livestock population and major risk areas affects prioritisation of vaccinations.
- Awareness of PPP is low in Tanzania.
- Discussions on PPP should involve all stakeholders, including players in the rural areas.
- There are some PPPs in Tanzania - involved in PPR vaccination campaigns.
- Major supplier of veterinary inputs, including vaccines and drugs, is the private sector.
- FMD is endemic in Tanzania, though the quantity of vaccines needed for effective control is not known – hence no immediate focus by private stakeholders.
- Compulsory FMD vaccination of cattle - including in pastoralist areas - will create opportunity to attract attention of private sector.
- Public sector cannot address all gaps in the veterinary sector. There is need for coordination of sourcing veterinary inputs and supplies in the country.
- Information from PPP Framework is good for informing on scope and areas for possible partnerships – each country at different stage of legal framework for PPPs.
- If we want to go beyond workshop discussions to implementation, then the element of trust between public and private sectors should be addressed, to bring stakeholders to the discussion table.
- Stakeholders (public & private) should not consider themselves as competitors but as collaborators to the control and management of FMD disease.
- Need to showcase and borrow from countries with successful PPPs in FMD control (example Botswana).

#### Additional Information Needed for PPP Framework development – Suggestion A

1. *What actions/steps need to be undertaken to implement PPPs in Tanzania?*
2. I think we need to discuss with Director of Veterinary Service (DVS) on implementation of PPP on FMD vaccine value chain. I hope the discussion will involve Tanzania Veterinary Laboratory Agent (TVLA) which is responsible for supplying vaccine.
  - Agreement on mode of operation (establish or build on the existing organization), then develop constitution or agreement on number of issues including leaders which will include private and public leaders. The secretary of the Tanzania PPP in Livestock will be DVS or Chief Executive of TVLA). Then develop a communication strategy to reach all stakeholders.
  - We can discuss in detail on how we can implement FMD vaccination by developing the requirement and funding of the project or develop business plan

3. *Which PPPs would you recommend be implemented as a pilot in Tanzania? Suggest priority PPP.*

Transactional PPP: Government to estimate doses of vaccine. Ask for private sector to import. Both public and private register the vaccine, assess storage facilities in both public and private through the country, launch vaccination campaign, vaccination is done by both public and private registered vets and VPP. Livestock owners pay for the cost of vaccination to Vet/VPP. Vets and VPP buy vaccine from storage facility (government), Government pay to importer of vaccine. Public conduct pre and post vaccination surveillance.



4. *Recommended private and public sector organizations for PPPs above – provide name of organization(s)*

TASAVO can initiate the process by discussing with both public and private on FMD VVC and PPP in livestock, later members can decide whether to establish new organization or make some review to existing organization to facilitate PPP.

Additional Information Needed for PPP Framework development – Suggestion B

1. *What actions/steps need to be undertaken to implement PPPs in Tanzania? List below*

- All involved parties to make sure that there is an appropriate transparency to all stakeholders at large with equal opportunities
- There should be agreed stakeholder's engagement that includes laid strategic communication, the benefits, outcomes and impacts of the delivered services should be well defined understandably and respected to all the stakeholders
- There should be commitment of the necessary resources that will ensure strong joint governance of the program and set out term of partnership that includes the duration of the program clearly stated in the joint contract

2. *Which PPPs would you recommend be implemented as a pilot in Tanzania? Suggest priority PPP.*

- TRANSFORMATIVE PPP (This is the priority PPP)
- TRANSACTIONAL PPP

3. *Recommended private and public sector organizations for PPPs above – provide name of organization(s)*

PRIVATE SECTOR

1. Ronheam International Company Limited (Based in Dar es Salaam, Eastern Zone)
2. ALPHA Veterinary Services (Based in Arusha, Northern Zone)
3. NJAMO Vet Consult (Based in Moshi Rural, Northern Zone)
4. Mawenzi Agro Vet (Based in Moshi, Northern zone)
5. OSOTWA Livestock Services (Based in Monduli n Northern Zone)
6. MAMTOI Agro Vet (Based in Coastal Region, Eastern Zone)
7. VETLIFE Consultant Limited (Based in Mbeya, Southern Highland)
8. HESTER Biosciences Limited (Based in Dar-es-Salaam, Eastern Zone)

PUBLIC SECTOR

District Councils: those that are operating in areas with a large number of Pastoralists. These districts are important with a good number of government ward extension officers)

OTHERS

1. Based Livestock Associations
2. Importers and distributors of animal health products (including vaccines)

Additional Information Needed for PPP Framework development – Suggestion C

1. *What actions/steps need to be undertaken to implement PPPs in Tanzania? List below*

- Define framework to stakeholders – sensitization and awareness
- Agree on framework



- Build a plan (steps)
  - Establish monitoring indicators (KPIs)
  - Establish a reporting system and feedback
  - Performance measurement
2. *Which PPPs would you recommend be implemented as a pilot in Tanzania? Suggest priority PPP.*
- PPP for notifiable diseases – FMD
  - PPP for CBPP
  - PPP for Brucellosis
  - PPP for LSD – Lumpy Skin Disease
  - PPP for PPR
3. *Recommended private and public sector organizations for PPPs above. Provide name of organization(s)*
- Ministry of Livestock – DVS office
  - District Veterinary Departments – DVO
  - Registered Animal health distributors
  - Registered Private vet clinics
  - Registered Private veterinarians

#### **Uganda**

- Beginning of the PPP work should start with massive education of the potential stakeholders within the veterinary sector.
- Relationship we have been having in control of FMD has largely been managed by the government.
- Currently there is serious shortage of drugs and there is an outbreak of FMD in about 6 districts and the government has no capacity to supply. This is where the private sector plays a big role.
- Need to carry out due diligence to identify potential players within the PPP framework. Recommended research institutes include: Naro, Makerere University, competent famers, cooperative societies and unions and private players who are already in the market and have been distributing drugs.
- Private players have a huge network of small drug dealers and farmers and can reach each corner of the country.
- Need to create viable literature on how the PPP can work.
- Crystallise the entry points under the PPP framework. The government has been doing the heavy lifting. Considering the key point of what would be the most viable entry point in Uganda to address the FMD issue.
- Need to carry out a study with FAO and those who do FMD work in Europe in districts with endemic issues to FMD. Found out the infrastructure for information sharing, reporting, access to vaccines is extremely weak.
- Both government and private sector do not have capacity to do full vaccination when it is necessary, no capacity to vaccinate religiously.

- Currently the strategy used by the government is ring vaccination. When there is an outbreak at point A, they vaccinate a ring of about 30Kms from where the outbreak is. Issue is how to define the ring and mapping out by the experts without external influence.
- There are many weaknesses but if there is a private institution working with the government there could be better approach and professionalism than what is currently there.
- There are many institutions responsible, i.e., Ministry of Agriculture, local government in charge of the vaccination. The more players, the better the services.
- PPP discussions to capture/include role of regulatory body - not well captured on the slide.
- Drug regulatory authority (National Drug Authority) key in importation, registration, and market authorization of vaccines in Uganda.