

Country Name -KENYA

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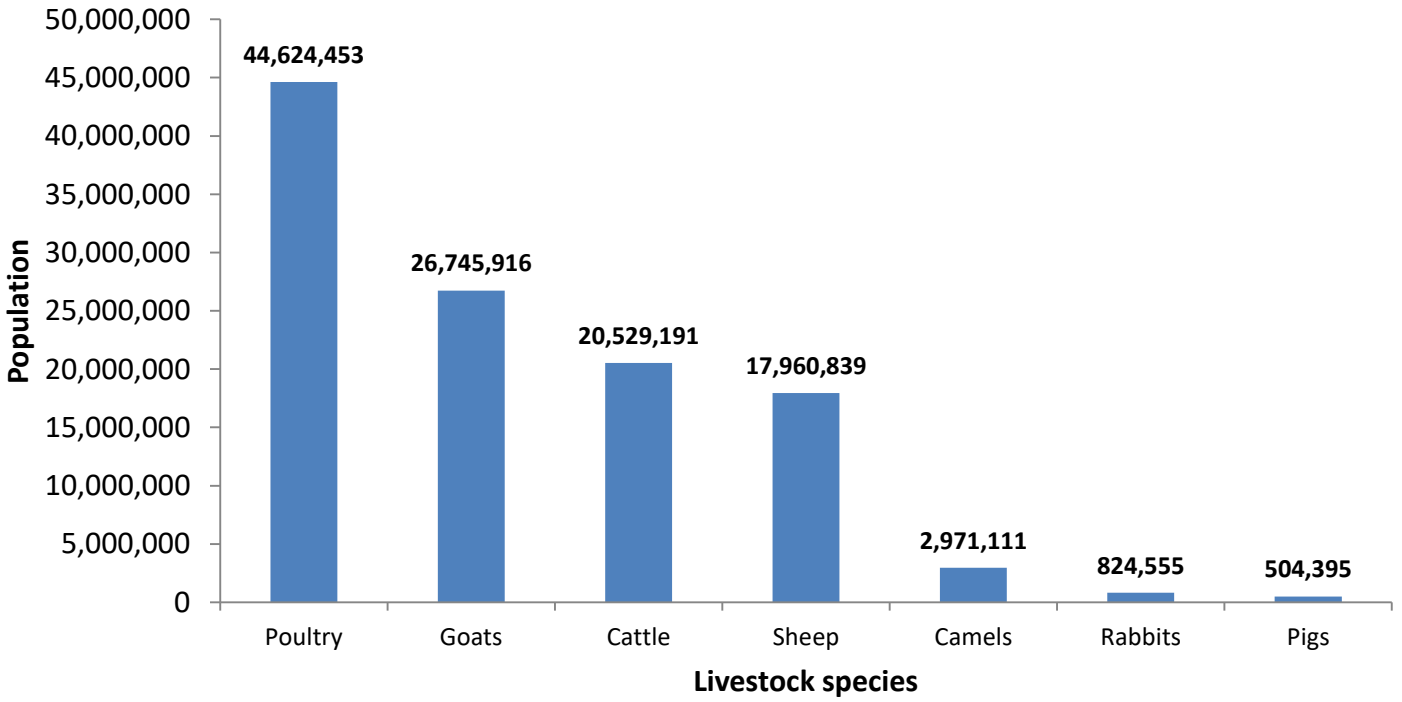
Organization-Directorate of Veterinary Services

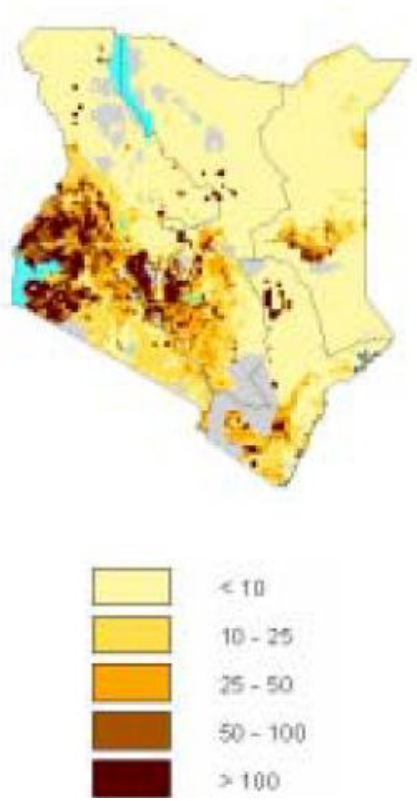


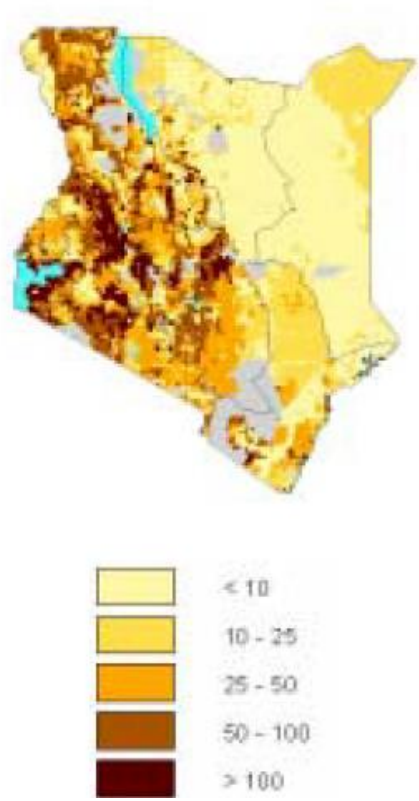
Progress along stage 1-Componenet 1 -Livestock population in Kenya (Source: Ministry of Agriculture, Livestock and Fisheries, 2016)





Progress along stage 1-Componenet 1-Livestock density-cattle sqkm (left) and small ruminants sqkm

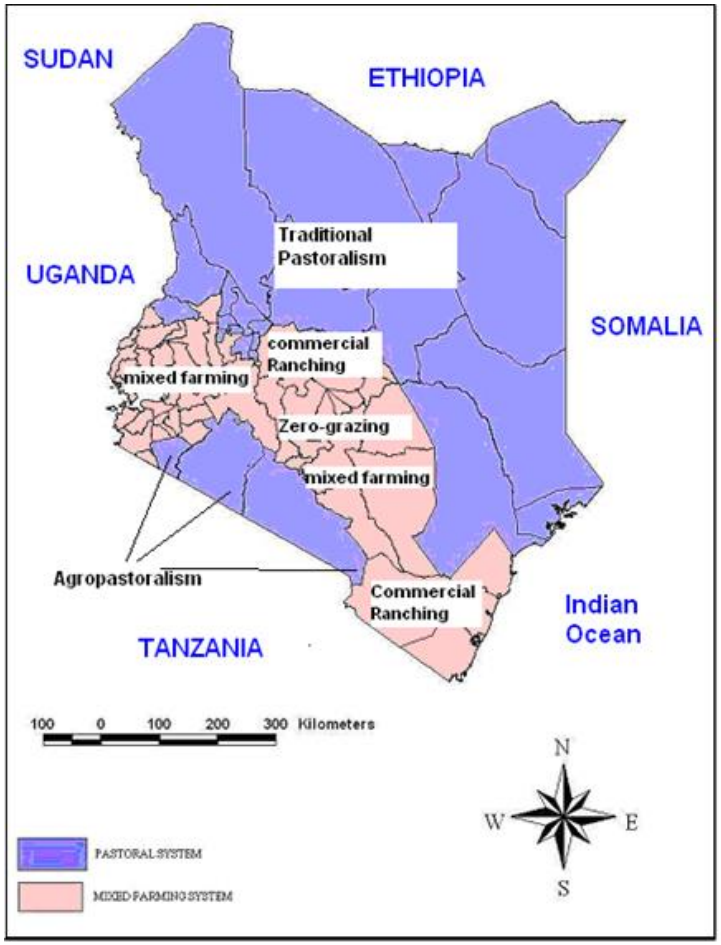






Progress along Stage 1 - Component 1-Livestock

Production systems



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Progress along stage 1-Componenet 1- Value chain analysis results

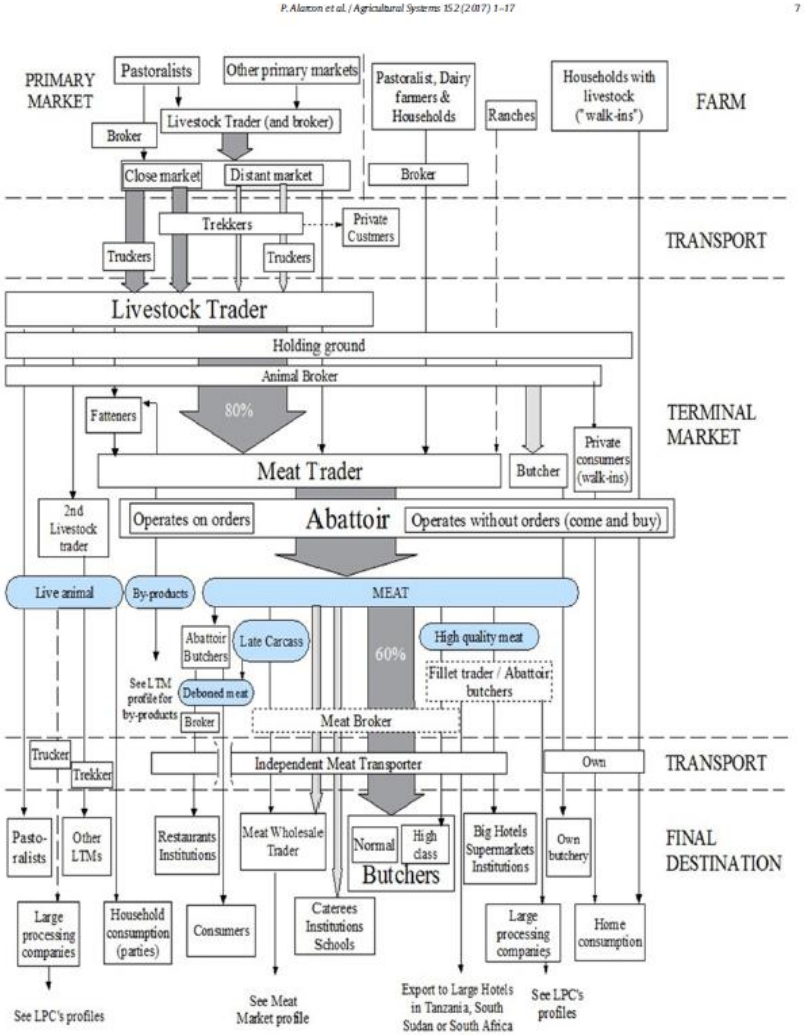
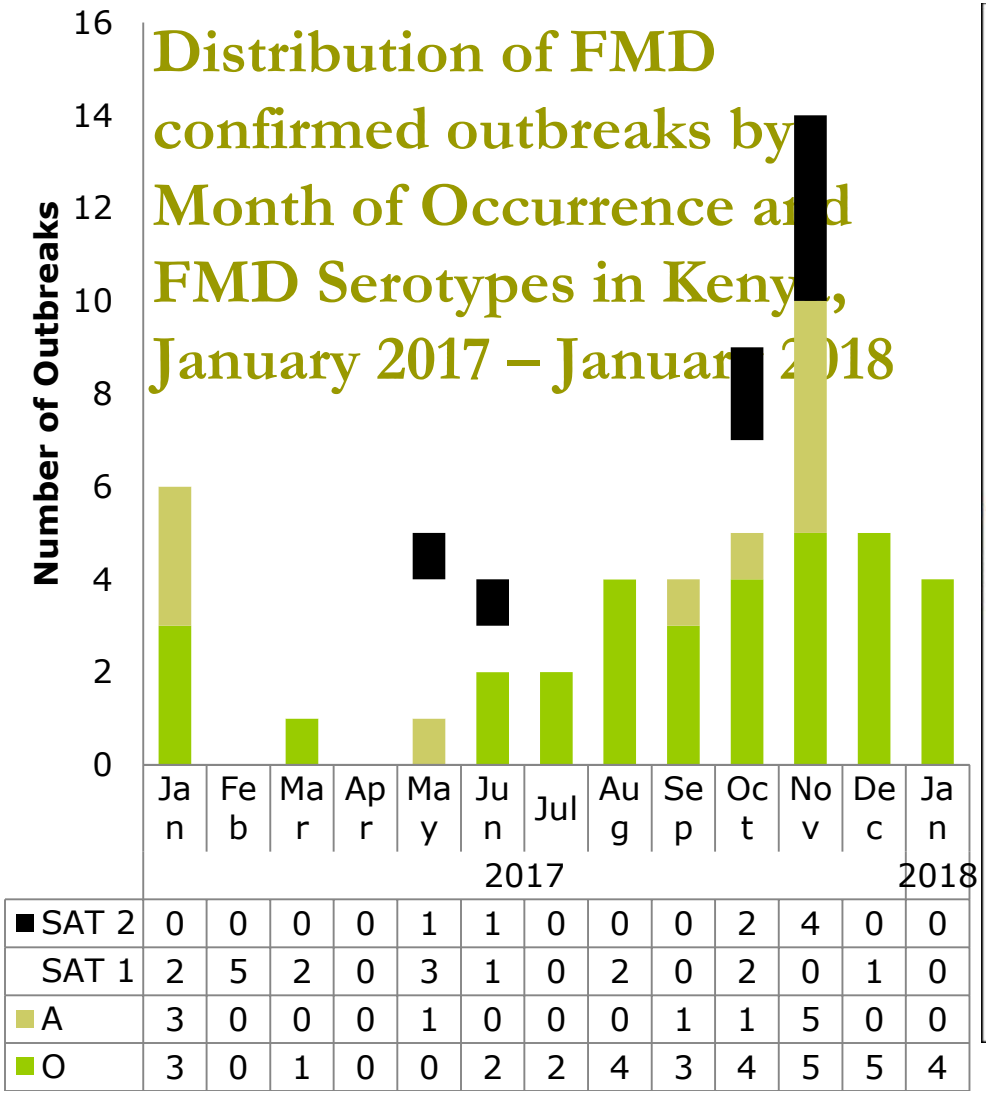


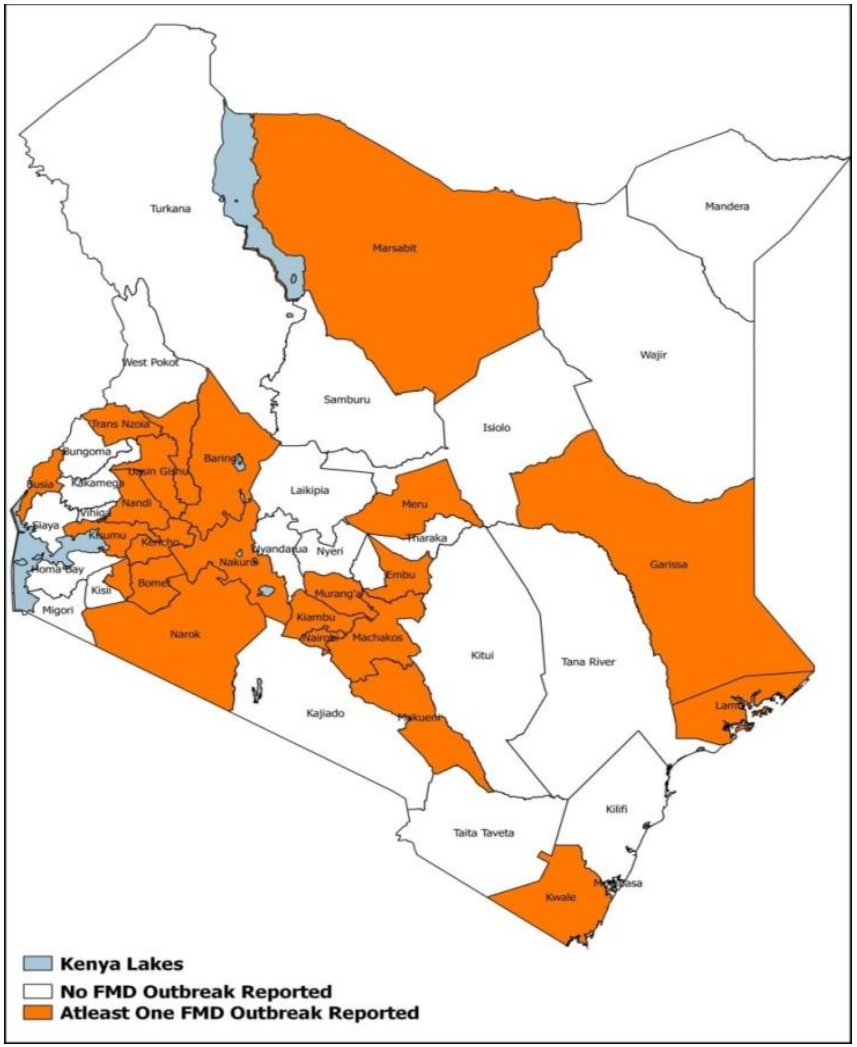
Fig. 4. People and product profile of the 'local terminal markets' operating in Nairobi. Footnote: Circles indicate commodities traded, arrows indicate the flows of products, dotted arrow indicate rare flows, boxes indicate people or places, and dotted boxes indicate occasional flow through. Late carcass refers to carcasses exposed for long hours or several days and that have suffered decolouration.

- Complex marketing chains (cattle from primary market through middle men to secondary market and finally to the terminal live animal markets and individual farms).
- Transport mode of live animal from producers, secondary market to the final market and individual farms.

LAB confirmed FMD Outbreak Situation by County, January 2017 – January 2018, Kenya



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
SAT 2	0	0	0	0	1	1	0	0	0	2	4	0	0
SAT 1	2	5	2	0	3	1	0	2	0	2	0	1	0
A	3	0	0	0	1	0	0	0	1	1	5	0	0
O	3	0	1	0	0	2	2	4	3	4	5	5	4



Number of submissions to reference laboratories for full characterization

- Genetic characterization of Serotype O &SAT1 was done at the World Reference Lab (6 samples)
- Results from genetic characterization indicated the emergence of serotype O strains divergent from the current vaccine strain.
- The circulating strains belong to the EA2 topotype unlike the vaccine strain (O K77/78) which belongs to the EA1 topotype.
- SAT1 strain belongs to the same topotype (1) as the vaccine strain (T155/71).

Response to outbreaks

- Quarantine
- Biosecurity
- Vaccinations
- Surveillance
- Investigations — Epidemiological investigation
- Genetic characterization (Antigenic characterization – vaccine matching (Serotype O)

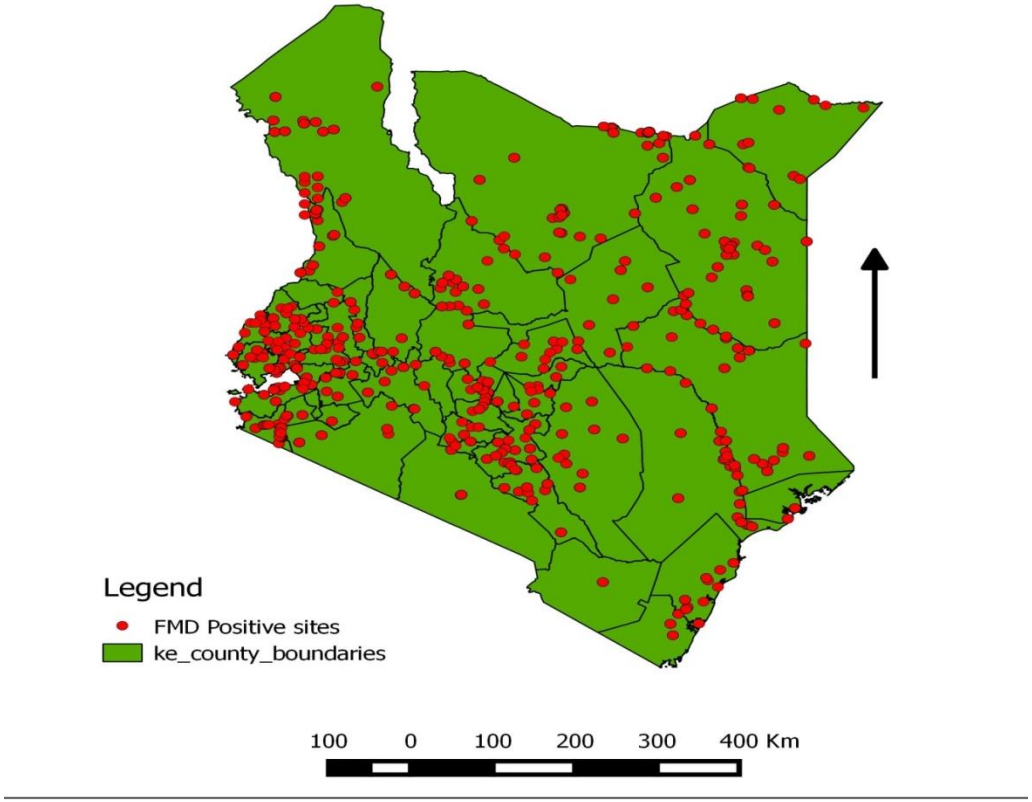


Passive surveillance

- A total of 65 outbreaks of FMD were reported in 23 of the 47 counties in the Country between January 2017 and January 2018.
- The highest numbers of outbreaks were reported in Nakuru County with 18 outbreaks; followed by 6 in Kiambu and Uasin Gishu; 4 in Nairobi and Garissa; 3 in Bomet and Baringo.
- Type O accounted for **29** outbreaks; followed by **18** due to SAT1; **11** due to serotype A and **7** due to SAT2
- In a total of 19 outbreaks, no virus was detected (NVD).



Active surveillance-FMD antibody Positive sites from national random survey on August 2016 (STSD Project)





Progress along Stage 1 - Component 1

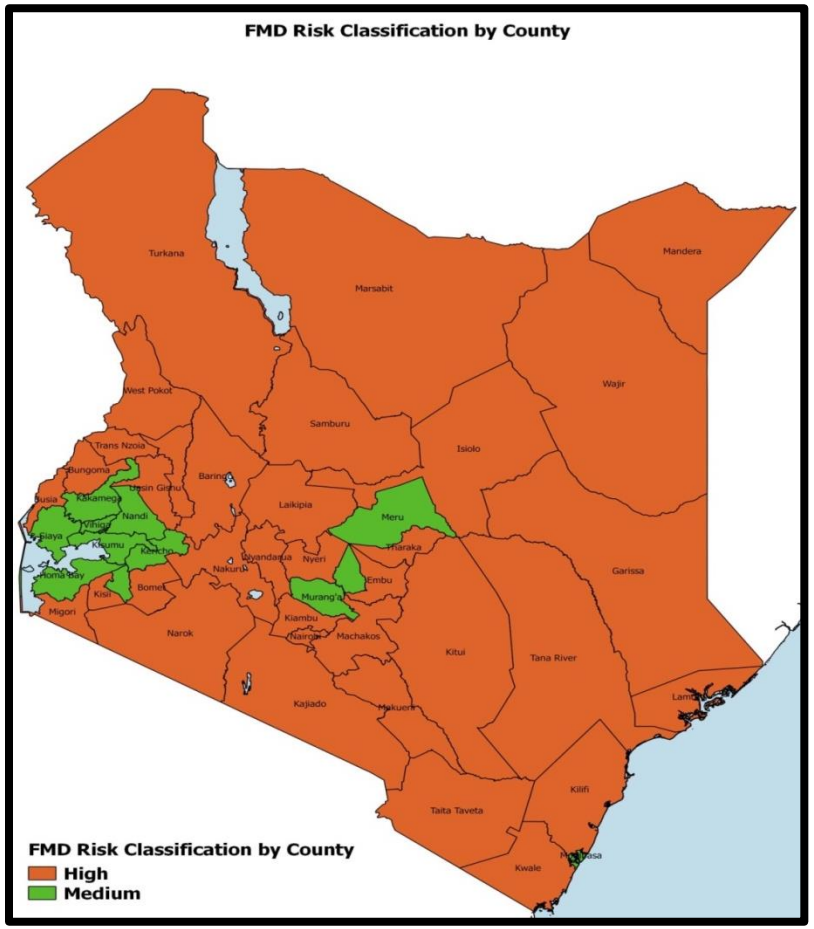
Socio-economic impact

- Few studies
- Two case reports in Nakuru county estimated losses due to FMD outbreaks in large herds of US$15,000 (Mulei et al., 2001) to >US$100,000 per farm (Kimani et al., 2005)
- Closure of a large livestock market has a large effect of the peri-unban poor, as 65% of the town (Garissa) depended upon the market for their livelihood (Yusef, 2008)
- Outbreak impact at farm level (Nick Lyons, 2012)

Identification of risk hotspots

Risk categorization

Risk Factors	High	Medium	Low
1. Production System			
a) Pastoralism	X		
b) Agro-pastoralism		X	
c) Sedentary			X
2. Livestock and livestock product Movement			
a) Trade		X	
b) Drought related (in search of pastures and water)	X		
c) Cattle rustling/insecurity	X		
3. Border Counties	X		
4. History of large numbers of previous outbreaks	X		
5. Bordering high risk county		X	





Control measures

- Vaccinations
- FMD is gazetted as a notifiable disease in Kenya. Notifiable diseases- are those diseases whose presence or suspicion must be reported to the DVS. These diseases have been gazetted by the Director under Cap 364 (animal diseases act).
- FMD control strategy was developed in, July 2012 and reviewed in Feb 2018 and validated by stakeholders on 20th June 2018
- The Strategy makes provision for structured ,surveillance, inspections, vaccinations and movement control in managing FMD.
  - has a strong focus on establishing disease free zones in the next 5-10 years.



Control measures…..

- Quarantines-adequate legislation
- Movement controls-movement permits for formal animal movements
- A national laboratory specifically for FMD is in place—support diagnoses, surveillance and internal vaccine quality control.
- A vaccine production institute-Kenya Veterinary vaccine production institute(KEVEVAPI) in place which is able to produce the required vaccines
- Awareness creation



Progress along Stage 1 - Component 2
Activities to strengthen the veterinary services

Critical competencies relevant to PCP-FMD Stage 1	Score required	Current score (OIE evaluation or self-evaluation)	Comments (if any) *(Self-evaluation since last OIE-PVS was in 2011-placed a request for PVS this year)*
I.2.A. Professional competencies of veterinarians	3	3	Trained at recognised universities
I.3. Continuing education	3	3	Mandatory for retention in KVB register
I.6.B. External coordination	3	2	Good working relationship with partners
II.3 Risk analysis	3	2	Competence available but data is limited
III.1 Communications	4	2	Disease reporting need to be strengthened through awareness creation
III.2 Consultation with stakeholders	3	2	National and county govts linkages to be strenthened
IV.1 Preparation of legislation and regulations	3	2	Slow progress in rewiew due to bureacracy



Synergies to control other TADs

- Implementation of FMD control strategy will go along way in addressing issues such as animal movements, animal identification, capacity building, cross border disease committees.
- The above issues will have the effect of controlling other TADS as most the risk factors are the same
- Most active surveys address more than one disease for example recent national active surveillance targeting FMD, CBPP, PPR and RVF



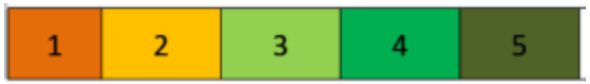
Gaps and request for support

- **Support in the implementation of FMD control and elimination strategy- resourse and expertise**
- **Comprehensive plan to gain insight into the epidemiology and socio-economic impact of FMD.**
- **Support in more studies in economic impact of FMD in various production systems more so in beef production areas**
- **Research gap in the role of wildlife ,small ruminants and pigs in FMD transmission**
- **Regional coordination**
- **Willingness to pay ?**



Provisional PCP-FMD Roadmap for {Kenya} 2017-2025

Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimation in 2012	1	1	1	1	1	1	1							
Estimation in 2018						1	1	2	2	2	2	2	3	3





Summary

- Kenya is committed in the control and eradication of FMD as witnessed by the development of the FMD strategy for FMD control, July 2012 and its review and validation in February 2018 and June 2018 respectively.

- Pastoral production system in more than 2/3 of the country which is complicated by porous borders is a major challenge to FMD control.

- There is a need for a regional approach in the FMD control and eradication for successfully moving forward along the PCP.

- Presence of huge wildlife populations, in particular the African buffalo which can play significant role in maintenance and spread of SAT serotypes of FMD virus



Summary…

- Risk based vaccination is practiced in Kenya whereby only cattle are vaccinated and hence the risk of other susceptible species remains source of infection. This is dictated by scarce resources. The role of these small ruminants and pigs in FMD transmission need to be fully understood

- The promulgation of 2010 constitution provided for two levels of government with distinct functions in FMD control. The disease control functions were devolved to County governments leaving the National government with policy formulation. A major challenge remains county political buy in as different counties give different priority to livestock and this has a bearing on resources allocated.

Ahsanteni sana.

Thank you!