

Feasibility study for the establishment of FMD-free fresh meat producing cattle subpopulations in Zimbabwe

STDF/PPG/550

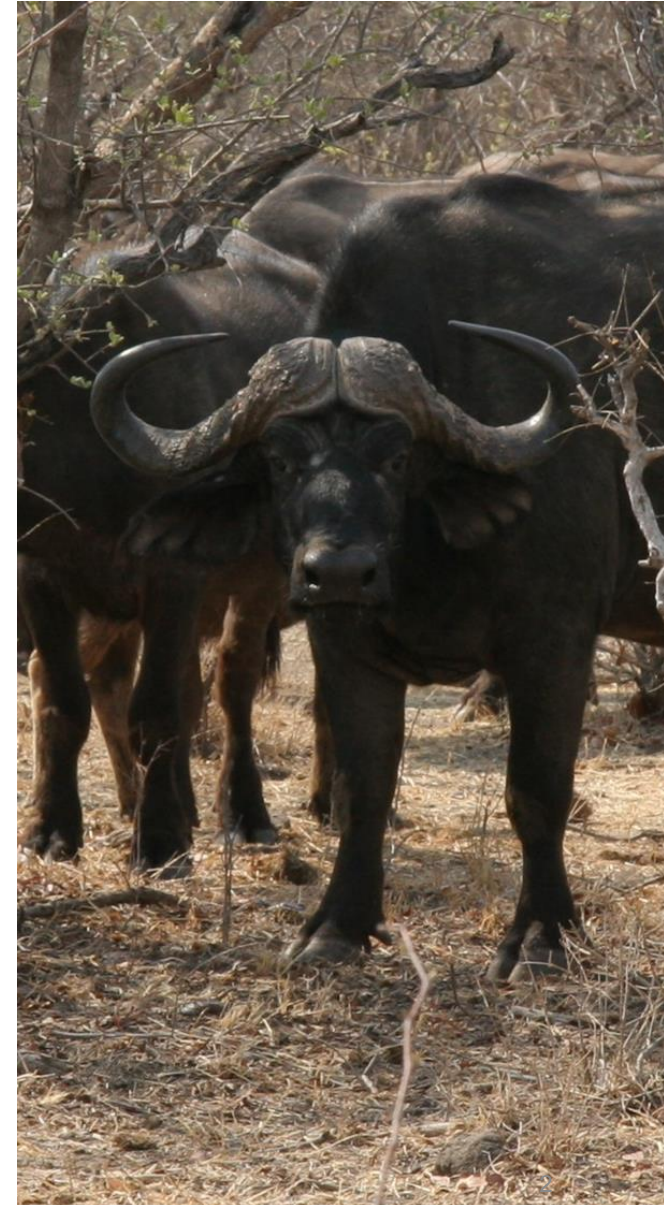
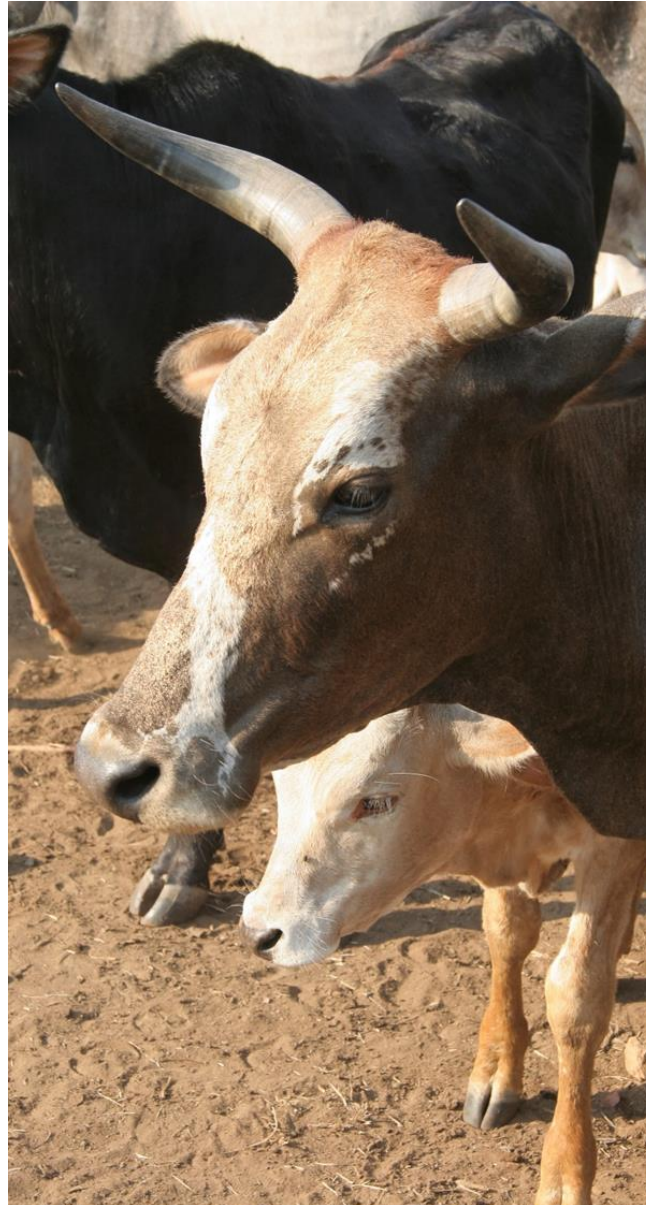
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Outline

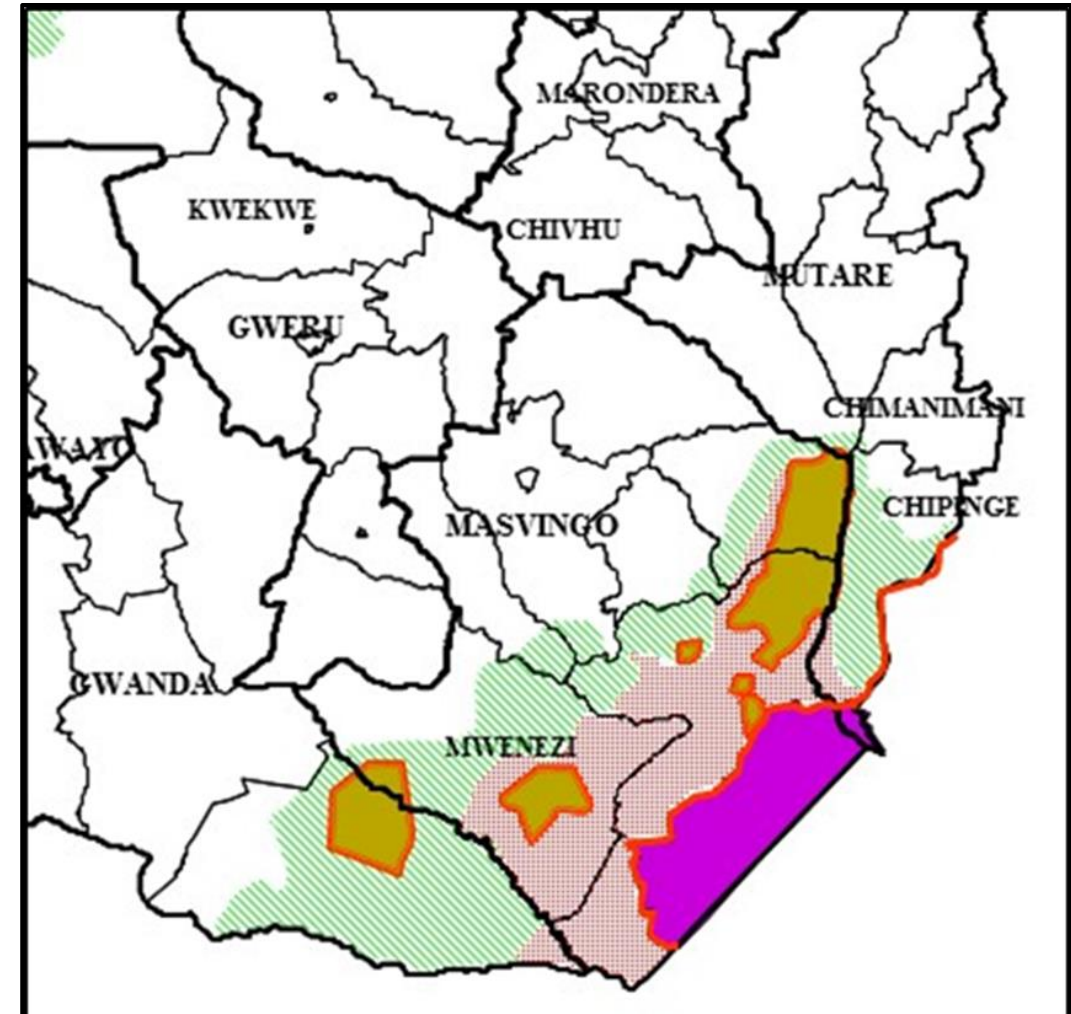
- AU-IBAR pilot project
- Commodity Based Trade (CBT) Beef production
- FMD in Zimbabwe
- Foundations for CBT (Lessons from Namibian study tour)
- Situation analysis results
- Recommendations: short term and medium to long term



Feasibility study target: AU-IBAR CBT pilot project

AU-IBAR pilot proposals:

- To produce CBT beef within FMD vaccination zone bordering Gonarezhou NP
- Cattle population 280,000 → 30,000 intended for CBT programme
- Foundations
 - 6 mth FMD vaccinations
 - Individual ID and traceability (LITS)
 - Movement control and records
- Establish project partnerships, identify CBT compliant abattoirs and farmers
- Original budget \$200,000, subsequently \$100,000



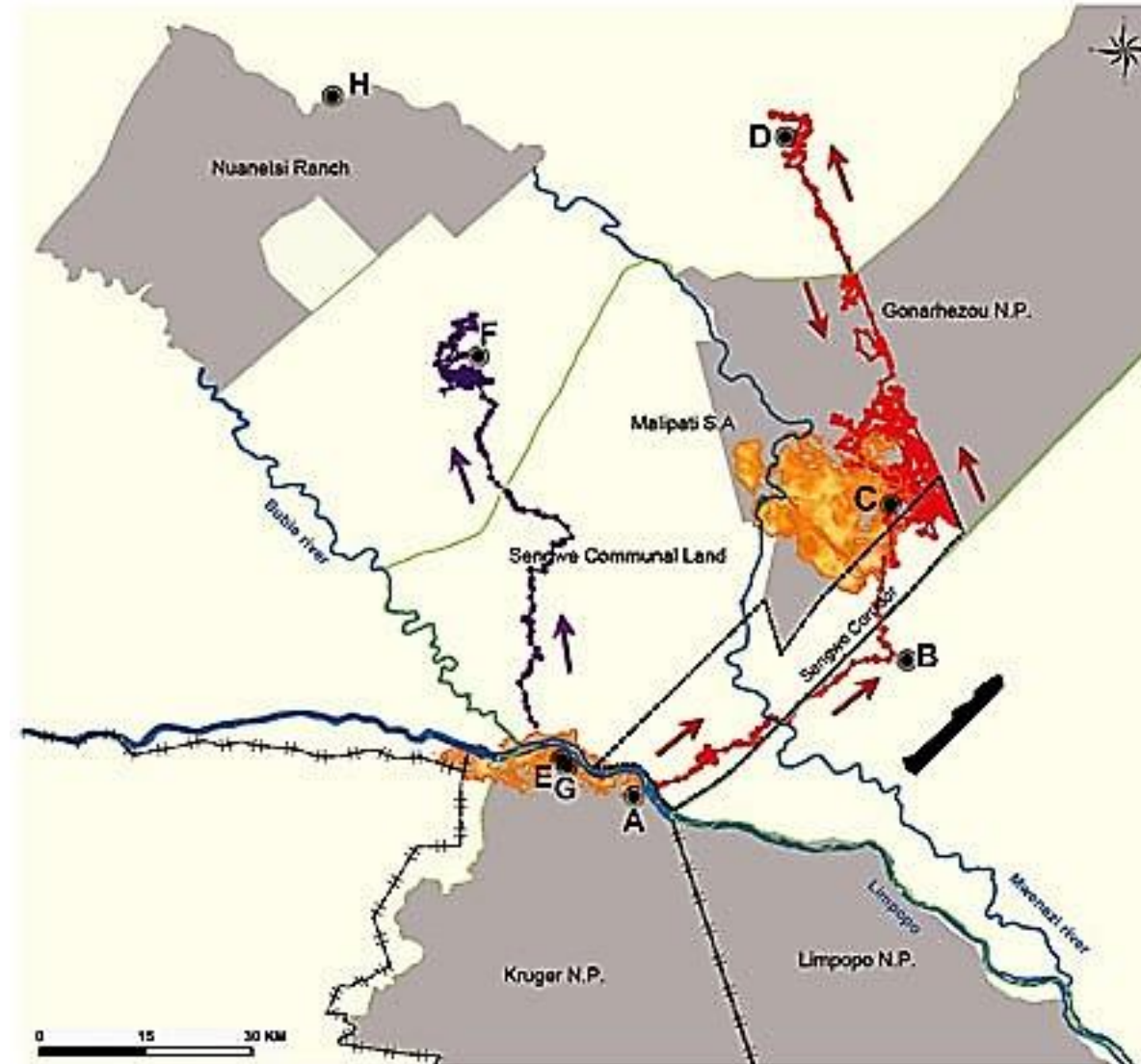
CBT Beef Production

- Non-Geographic trade standard for beef exports from non-FMD free countries/ zones, through a value chain approach to FMD risk management
- “Very low risk” from matured (chilled $>2\text{C}/ 24 \text{ h}$, $\text{pH}<6$), deboned and deglanded beef
- Additional mitigation measures will reduce to “negligible risk” (Paton et al., 2010)
- Forms the basis of 2015 OIE’s TAHC Article 8.8.22
- Clause 1c) Meat originates from animals which “*were kept for the past 30 days in an establishment, and that **FMD has not occurred** within a 10 kilometre radius of the establishment during that period, or the establishment is a **quarantine station***”
- FMD occurrence = FMD case = animals infected with the pathogen, with or without clinical signs (includes wildlife)
- Significance?



FMD in Zimbabwe

- ▶ Limited to SAT serotypes 1, 2 & 3
- ▶ African Buffalo (*Syncerus caffer*) maintenance host and reservoir for spillover, mild or subclinical symptoms.
- ▶ Fencing of GNP is 90% absent
- ▶ Free ranging movements of buffalo beyond TFCA (Caron et al., 2016)
- ▶ Frequent movement of cattle into game areas for grazing and water
- ▶ With free movement of buffalo, cannot confirm “*FMD has not occurred*”
Therefore a quarantine station is only option



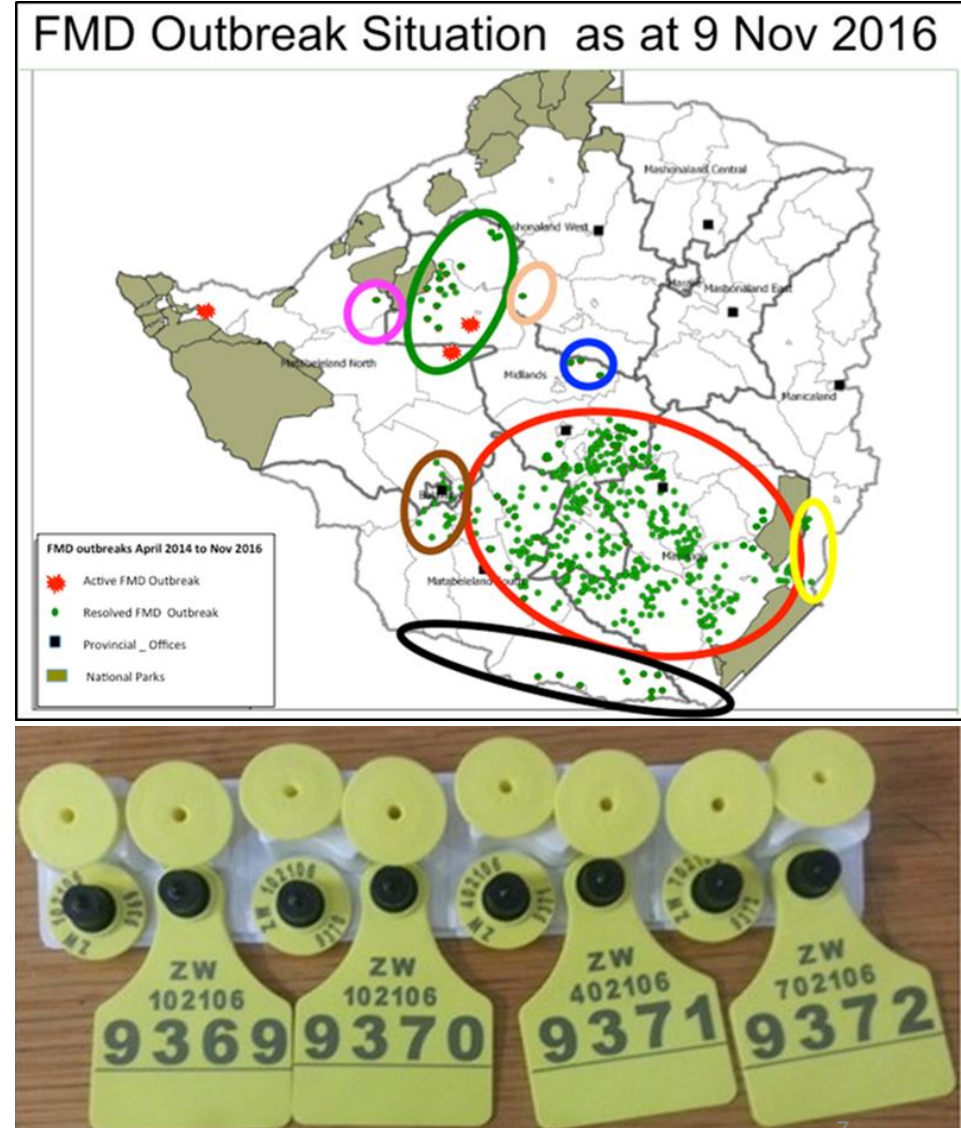
Other foundations to support CBT beef production: Lessons learnt from Namibian study tour to Katima Mulilo

- LITS for individual livestock ID (Namibia: electronic, nationwide and compulsory but benefits acknowledged)
- Vaccination programme of consistent twice yearly vaccination, dependent on LITS (Namibia: Free, mandatory 3 x's/y & OIE endorsed)
- Enforceable Movement control measures, dependent on LITS
- Ability to meet export market requirements (quantity, quality and additional non-CBT specifications)



Situation analysis and areas for inputs in Chiredzi district

- > **Vaccination:** National programme exists but not yet OIE endorsed.
 Aim: 2-3x's a year. Chiredzi: 50% coverage once a year.
- > **Outbreaks:** OIE National figures:
 2013=9 2014=87 2015=150
 Blamed on poor vac coverage and illegal movement of animal during outbreaks
- > **LITS-LMAC:** non-electronic and not compulsory but affordable at \$1.11/head, used by commercial producers and previously by export producers
- > **Movement control:** Paper permits and police clearance certificates, not individual animal ID, open to misuse and fraud
- > **Export Market** for CBT beef from Zimbabwe is not yet explored or established



Situation analysis and areas for inputs in Chiredzi district (2)

> **Abattoirs**

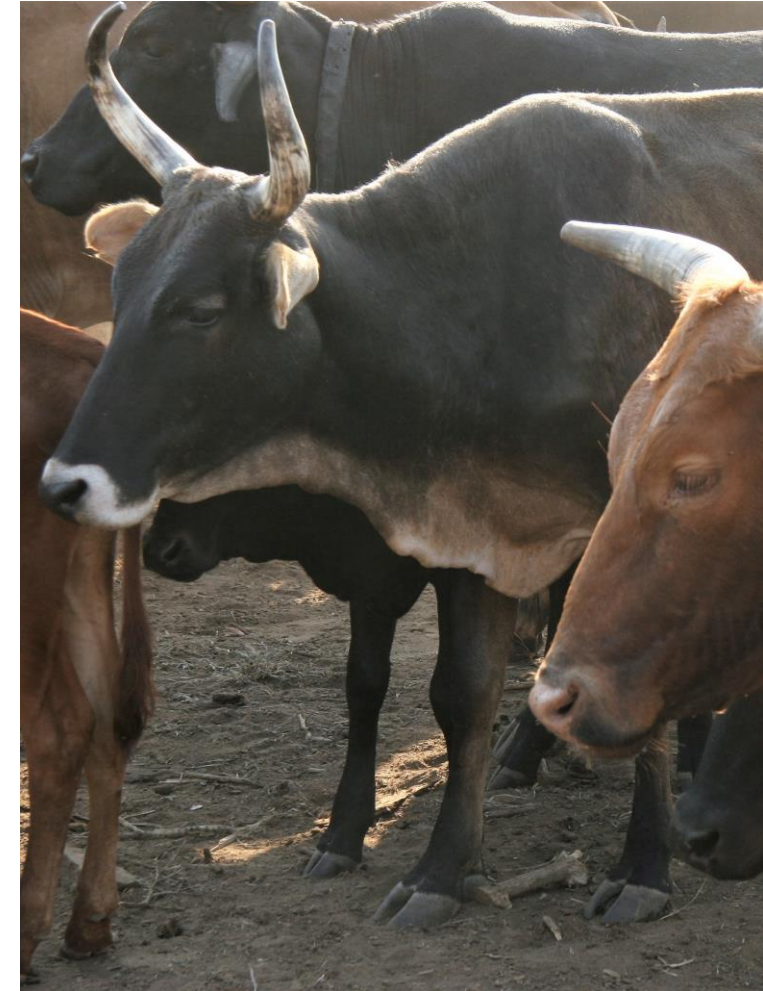
- Small, privately owned with low throughput, currently lack capacity for post slaughter CBT processing

> **Feedlots**

- Private or abattoir linked, some community managed
- Pen fattening for better grading and slaughter prices
- Narrow margins: Feed costs up to \$3/day- 2016

> **Local communal farmers**

- Own >90% of the cattle, Av herd 9.6 head, off-take <1.2% (Chiredzi data '16)
- Wealth indicator and source of capital ("*safer than money in the bank or your pocket*")
- Sales are need-based to meet significant costs, most via agents
- Sell at end of productive life: Super & Choice grades =15%



Recommendations

> **Consider smaller scale pilot project within the same area around Chiredzi**

Location and boundaries dependent on

- Quarantine choice:

- a) develop existing private feedlots into veterinary quarantine station or

- b) transport 100km to existing vet quarantine station in Mbizi, Mwenezi district

Catchment area and cattle population dependent on

- Resources, partnerships and additional funding to deliver vaccines and livestock identification.

> **LITS**

- For pilot project: existing LMAC adequate and affordable for short term

Recommendations (2)

- > **Consider two options for processing carcasses for CBT beef**
 - Existing private abattoirs in Chiredzi (need investment in facilities and veterinary staff for CBT processing)
 - Veterinary Certified sealed transport, 450 km to existing processing plant in Bulawayo

- > **Research to identify market potential for CBT beef (regional or overseas)**
 - Also consider co-existing market requirements (quality, quantity, consistent supply, organic, grass fed, conservation friendly etc.)
 - Use results as evidence to gain interest and commitment from partners

Recommendations (3)

- **Use market research results to develop support programme for communal farmers to meet export demands and preconditions**
 - Improve extension services
 - Improve access to subsidised inputs, infrastructure and facilities
- **Participatory Research to better understand livestock keeping behaviour**
 - Incentivise commercialisation of livestock keeping and higher off-take rates vs need-based selling of cattle
 - Options for mobile banking (e.g.M-Pesa in East Africa)



Recommendations: Medium to long term

- **Significant and sustained investment in veterinary and livestock extension services to:**
 - Secure sufficient vaccine stocks to provide twice yearly vaccination
 - Fill vacancies in veterinary and livestock production staff to deliver vaccination, surveillance and extension services

- **Nationwide compulsory electronic LITS (Nam-LITS)**
 - Essential for movement control, used to support vaccination and stock & diptank records
 - Farmers benefit from return of lost/stolen livestock

- **Establish longer term markets for CBT beef**

With thanks to

Staff at Department of Livestock and Veterinary Services

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Dr Peter Vimiso, Dr John Makwangudze, Mr Bothwell Makodza (Dr Justin Yule: Namibian DVS host)

All other stakeholders for participation and inputs

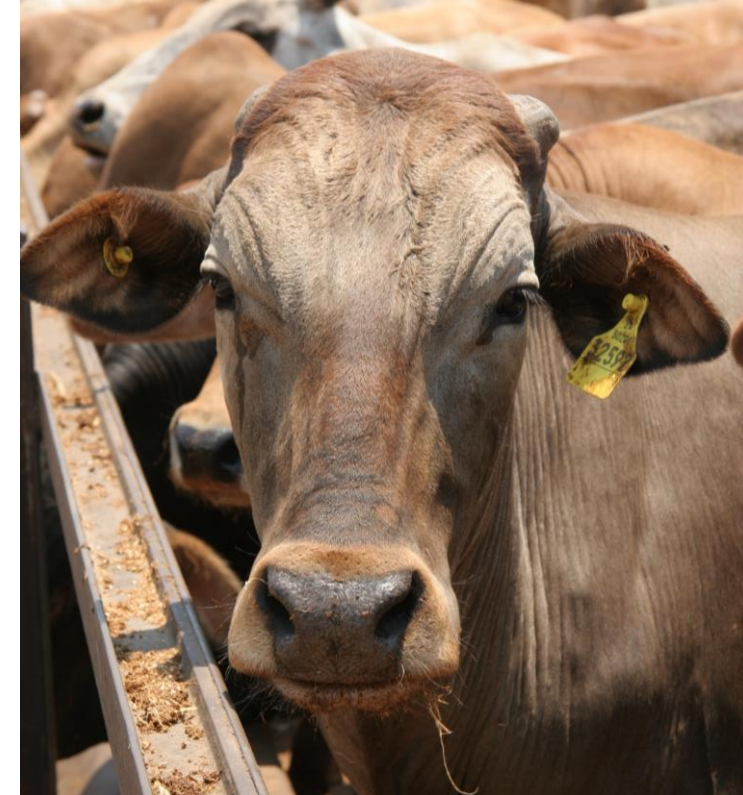
FAO and EU Livestock Development project, LMAC, private abattoir and feedlot owners, wildlife and conservation authorities and community conservancy members and local communal farmers

Academic colleagues (RVC, Liverpool University)

Marlynn Hopper

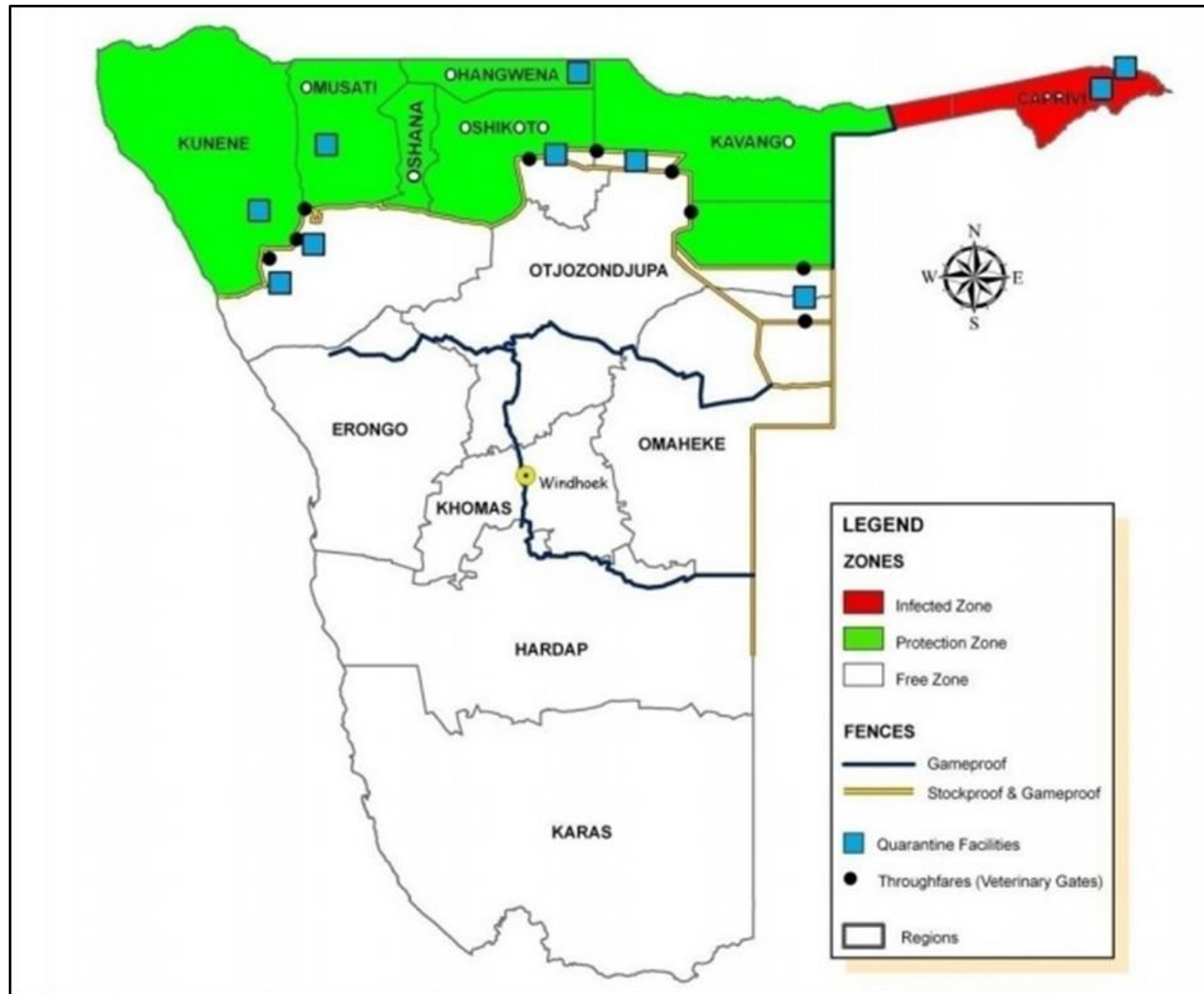


Standards and Trade
Development Facility



Namibian study tour: Katima Mulilo





Namibian Outbreak data (OIE)

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 (till June)
New FMD outbreaks	33	1	1	4	1	3	2	31	0	0