

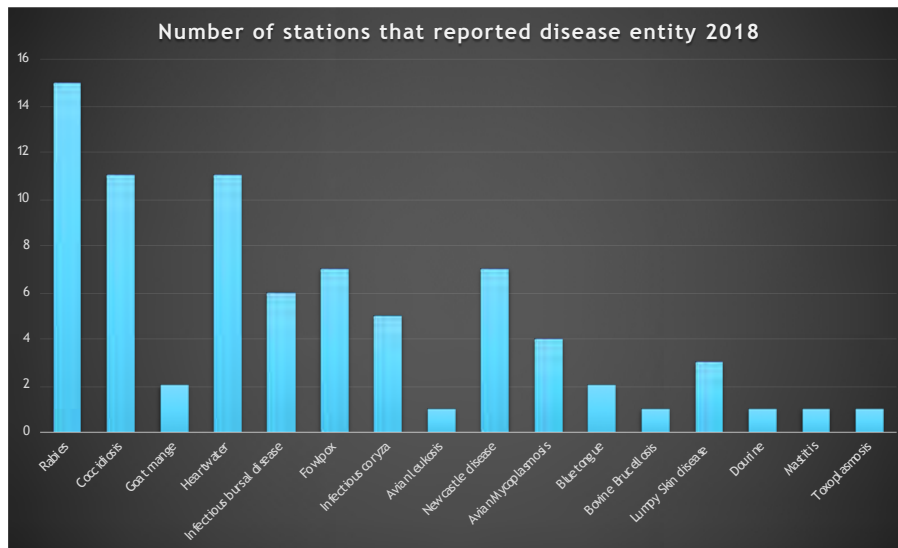
BOTSWANA ANIMAL HEALTH SITUATION (TADS)

PRESENTATION TO THE KAZA TFCA ANIMAL HEALTH SUB-WORKING GROUP
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12TH JUNE, 2019
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Presentation outline

- ▶ Number of stations reporting disease entity in 2018
- ▶ Southern Africa livestock / Wildlife diseases of economic importance
- ▶ Transboundary animal diseases of regular concern
- ▶ 1. Foot and mouth disease
 - ▶ Disease control zones in Botswana
 - ▶ Recent History of FMD in Botswana
- ▶ 2. Peste des petit ruminants
- ▶ 3. Contagious bovine pleural pneumonia
- ▶ 4. Rabies
- ▶ 5. Newcastle disease
- ▶ 6. Bluetongue
- ▶ 7. Brucellosis
- ▶ Conclusion

Out of 17 stations



Southern Africa livestock / wildlife diseases of economic importance

Disease	Etiology	Vector / transmission	Animal Species involved	Reservoir host	Zoonotic	Economic importance	Notifiable
FMD	Aphthovirus	Direct & indirect contact	Cloven hoofed ungulates	Buffalo	No	Important	N
Rinderpest	Paramyxovirus	Direct & indirect contact	All ungulates	cattle	No	Important (disease eradicated)	N
LSD	Bovine herpesvirus	Arthropod, e.g. <i>Byoma fasciata</i> , <i>Stomoxys</i> spp	cattle, giraffe, waterbuck, eland, hippo, oryx, impala, bushbuck, wildebeest	Nil	No	Important	N
Rift valley fever	Phlebovirus genus	Arthropod borne e.g. mosquitoes	Cattle, sheep, goats, buffalo, elephant, hippo, blesbok, springbok	Possibly buffalo, elephant, hippo	Man	Important	N
Bluetongue	Orbivirus	Arthropod borne e.g. <i>Culicoides</i> spp	Most African artiodactyls, elephant, rodents	Host to host transmission, no reservoir	No	Important	N
African Horse sickness	Orbivirus	Arthropod borne virus	Zebra, domestic donkeys and horses	Possibly rodents	No	Important	N
African Swine fever	Asfivirus	Soft tick - <i>Ornithodoros moubata</i>	Domestic pigs	warthogs and bush pig	No	Important	N

Southern Africa livestock / wildlife diseases of economic importance

Disease	Etiology	Vector / transmission	Animal Species involved	Reservoir host	Zoonotic	Economic importance	Notifiable
Rabies	Rhabdovirus	Bites from infected hosts	All warm blooded animals	Sylvatic cycle in carnivorous spp	Man	Important	N
Brucellosis	Brucella abortus	Direct & indirect	herbivores	Nil	Man	Important	N
Tuberculosis	M.bovis M.avium M.tuberculosis	Direct & indirect contact	All animals	Nil	Man	Important	N
Anthrax	B.anthraxis	Direct / indirect contact	All herbivores	Contaminated Environment	Man	Important	N
Heartwater	Cowdria ruminantium	ticks	Domestic herbivores /	Ticks, guinea fowl, tortoise	No	Important	
Malignant Catarrhal Fever - (MCF)	Gamma herpesvirus	Direct & indirect contact	Domestic cattle, deer, antelope, Buffalo	Wildebeest	No	Important	N
PPR	Paramyxovirus	Direct & indirect contact	Small domestic & wild ruminants	Nil	No	Important	N

Southern Africa livestock / wildlife diseases of economic importance

Disease	Etiology	Vector / transmission	Animal Species involved	Reservoir host	Zoonotic	Economic importance	Notifiable
Trypanosomiasis	T. brucei, T.vivax, T.rhodesiensis	Tsetse flies	Wild animals & domestic animals	Wild animals	Man	Important	N
Theileriosis	T. parva T. mutans	ticks	Domestic cattle	buffalo	No	Important	N
Avian influenza	Orthomyxovirus	Direct & indirect contact	Domestic birds Wild birds / waterfowls	Wild birds	Man	Important	N

TRANSBOUNDARY ANIMAL DISEASES OF REGULAR CONCERN

1. FOOT AND MOUTH DISEASE
2. PESTE DES PETIT RUMINANTS (PPR)
3. CONTAGIOUS BOVINE PLEUROPNEUMONIA (CBPP)
4. RABIES,
5. NEWCASTLE DISEASE/AI
6. BLUETONGUE
7. BRUCELLOSIS

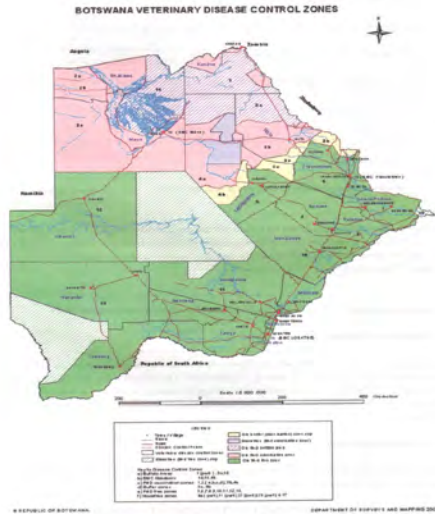
1. FOOT AND MOUTH DISEASE

- ▶ Disease Control Zones
- ▶ Recent History of FMD in Botswana

OIE FMD Free zones
5 independent FMD free zones added to the already existing free zones (3b, 3c, 4a, 6, 7 [Recent addition])



DISEASE CONTROL ZONES



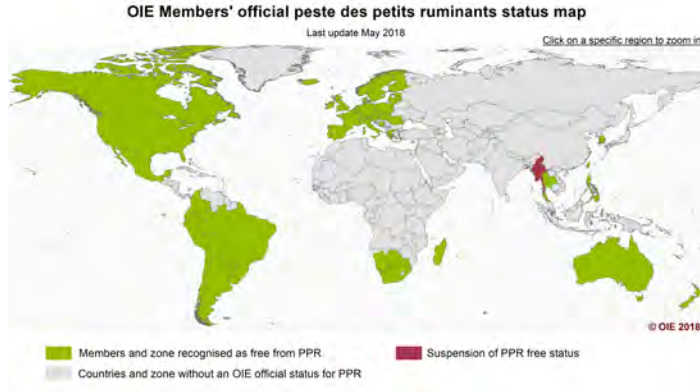
2018

RECENT HISTORY OF FMD OUTBREAKS IN BOTSWANA

Area affected	Year	Zone type	Control Strategy
Matlasele	2002	FMD free Zone	Culling
Botswana	2003	FMD free Zone	Culling
Hamamatsepe	2005	Controlled area	Vaccination
Ditlasepe	2005	FMD free Zone	Vaccination
Mutheshe	2006	Controlled area	Vaccination
Indu/Nang/Goatse	2007-2015, 2017-2018	Controlled area	Vaccination
Shakame	2008 / 2014	Controlled area	Vaccination
Hea/bo	2008	FMD free Zone	Culling
Ditlasepe	2011, 2013	FMD free Zone	Containment
Zone 7	2013	FMD free Zone	Vaccination

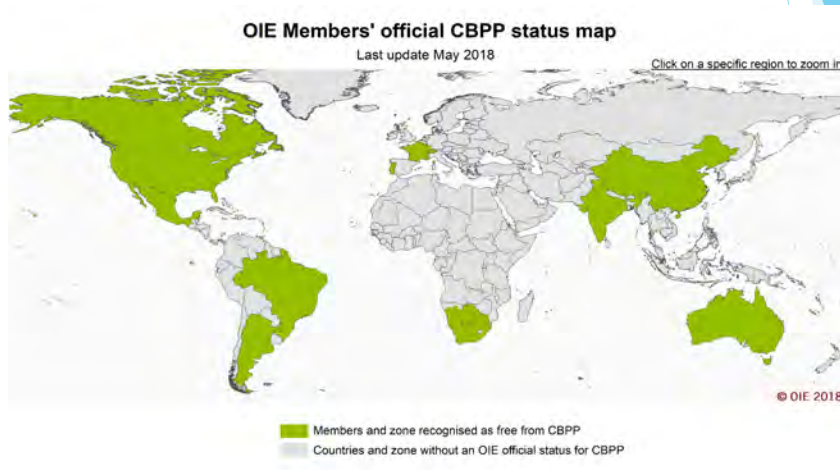
2. PESTE DES PETIT RUMINANTS

- ▶ 2017 Botswana obtained official freedom from PPR during the OIE
- ▶ Countrywide surveillance in small ruminants and wildlife ongoing



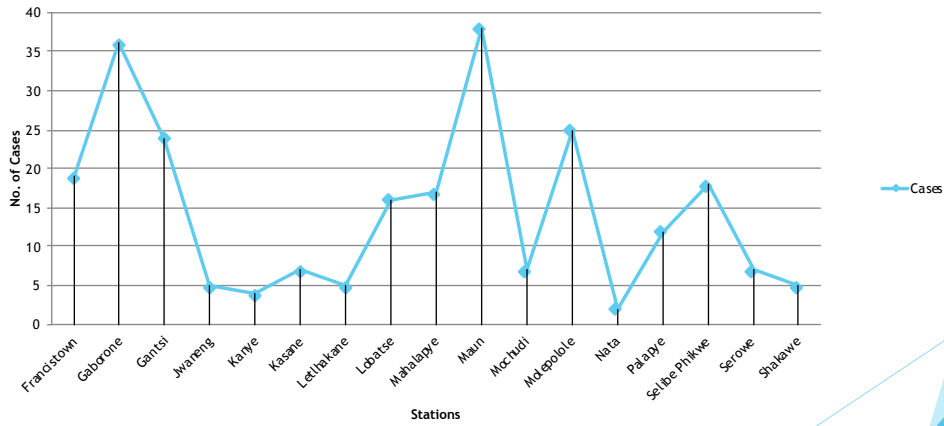
3. Contagious Bovine Pleural Pneumonia (CBPP)

- ▶ February 1995 – Outbreak in Shakawe – Eradicated by stamping out
- ▶ OIE Freedom since 1998



4. RABIES

Endemic - Figure below shows the trends for 2017 - 2018



5. NEWCASTLE DISEASE

Endemic – Samples tested for NCD are also screened for AI

Year	Station	Cases
2016	Kgalagadi	248
	Ngamiland	17
	Central	6
2017	Kgatleng	23
	Central	10
2018	Central	3
	Kgatleng	11

6. BLUETONGUE

- ▶ Endemic – Sporadic outbreaks



7. BRUCELLOSIS

Last annual vaccination in 2014
Since then – Sporadic cases reported as per table below
(2015 -2018)

Area	Bovine	Caprine
Lobatse	1	0
Kasane	8	0
Molepolole	0	1
Total	9	1

CONCLUSION

- ▶ Disease threats are real and should not be underestimated
- ▶ Regular surveillance for early detection of disease outbreaks
- ▶ Control measures need to be sustained
- ▶ Information sharing for enhancing preparedness
- ▶ Research – in diseases impacting animal health
- ▶ Climate change – Insidious ecological extinctions

Quotable quote

“ It’s impossible” said pride.
“ It’s risky” said experience.
“ It’s pointless” said reason
“Give it a try” whispered the heart.
- Anonymous