Moetapele Letshwenyo

OIE Sub-Regional Representative for Southern Africa

An overview of African Swine Fever (ASF) in Southern Africa

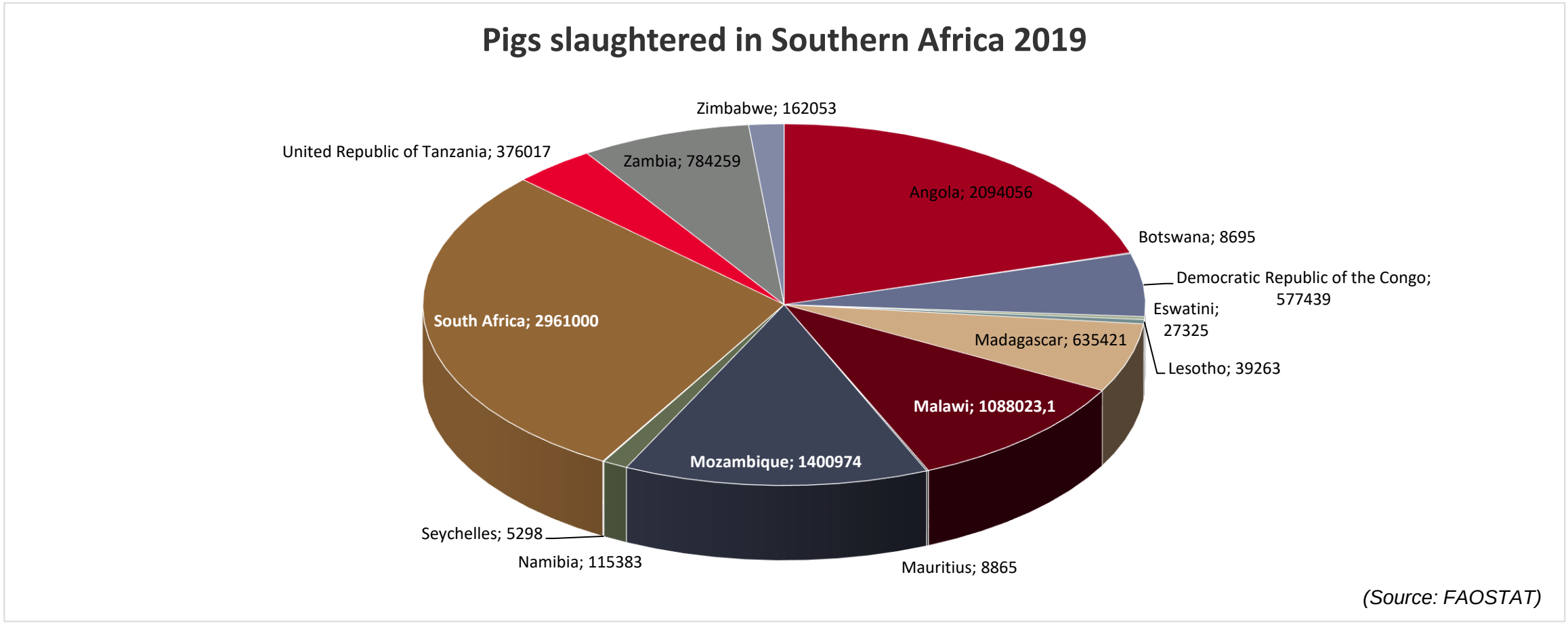
Regional training course (Africa)
Import risk analysis for African swine fever
9 November – 14 December 2021

Organisation Mondiale de la Santé Animale
World Organisation for Animal Health
Organización Mundial de Sanidad Animal

PIG PRODUCTION & FARMING IN SOUTHERN AFRICA

- Africa's pig population constitutes around 5% of the global pig population.
- The pig sub-sector in Southern Africa is relatively small.
- South Africa is the 3rd largest producer in the continent.
- Informal pig keepers, small-scale and emerging farmers, medium-scale commercial, large-scale Intensive production
- Livelihood of rural communities

PIG PRODUCTION & FARMING IN SOUTHERN AFRICA



(Source: FAOSTAT)

THE CHALLENGES OF PIG FARMING IN SOUTHERN AFRICA

- Diseases - TADs e.g. **ASF**
- Weather condition
- Water availability
- Housing & farm security
- Poor management
- Low productivity
- High feed cost
- Unorganized marketing
- Waste management
- Religious and cultural beliefs
- Inadequate slaughter facilities
- Poor breeding stock,
- Inadequate extension service

AFRICAN SWINE FEVER – GENERAL INFORMATION

- Severe, contagious, hemorrhagic viral disease
- High Mortality (100%)
- Endemic in Southern Africa
- No vaccine
- Involvement of wild hosts
- Large free-ranging populations of domestic pigs
- Biosecurity and stamping-out
- Housing & farm bio-security

AFRICAN SWINE FEVER – OIE STANDARDS

Terrestrial Code Online Access

PDF

CHAPTER 15.1.

INFECTION WITH AFRICAN SWINE FEVER VIRUS

Article 15.1.1.

General provisions

Suids are the only natural non-arthropod hosts for African swine fever virus (ASFV). These include all varieties of *Sus scrofa* (pig), both domestic and *wild*, and African *wild* suid species including warthogs (*Phacochoerus* spp.), bushpigs (*Potamochoerus* spp.) and the giant forest hog *(Hylochoerus meinertzhageni)*.

For the purposes of this chapter, a distinction is made among:

For the purposes of the *Terrestrial Code*, African swine fever (ASF) is defined as an *infection* of suids with ASFV.

The following defines the occurrence of *infection* with ASFV:

1. ASFV has been isolated from samples from a suid;

OR

2. antigen or nucleic acid specific to ASFV has been identified in samples from a suid showing clinical signs or pathological lesions suggestive of ASF or epidemiologically linked to a suspected or confirmed *case* of ASF, or from a suid giving cause for suspicion of previous association or contact with ASFV;

OR

3. antibodies specific to ASFV have been detected in samples from a suid showing clinical signs or pathological lesions consistent with ASF, or epidemiologically linked to a suspected or confirmed *case* of ASF, or giving cause for suspicion of previous association or contact with ASFV.

For the purposes of the *Terrestrial Code*, the *incubation period* in *Sus scrofa* shall be 15 days.

Standards for diagnostic tests are described in the *Terrestrial Manual*.

Article 15.1.2.

Safe commodities

When authorising import or transit of the following *commodities*, *Veterinary Authorities* should not require any ASF-related conditions, regardless of the ASF status of the *exporting country* or *zone*:

1. *meat* in a hermetically sealed container with a F0 value of 3 or above;
2. gelatine.

Other *commodities* of suids can be traded safely if in accordance with the relevant articles of this chapter.

AFRICAN SWINE FEVER – GF-TADs

GF-TADs
GLOBAL FRAMEWORK FOR THE PROGRESSIVE CONTROL OF TRANSBOUNDARY ANIMAL DISEASES

Food and Agriculture Organization of the United Nations

WORLD ORGANISATION FOR ANIMAL HEALTH

ABOUT | EVENTS | GLOBAL | REGIONAL | ASF | FMD | PPR | RINDERPEST | RESOURCES

GF-TADS AND ASF

- THE GLOBAL INITIATIVE FOR THE CONTROL OF ASF

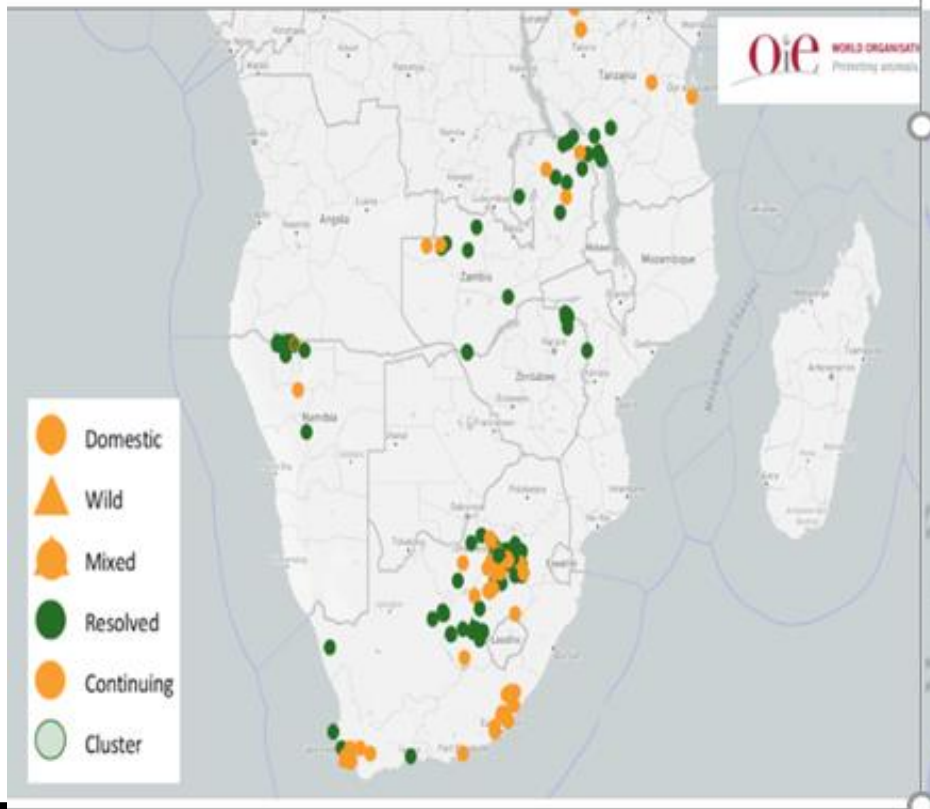
African swine fever at a glance

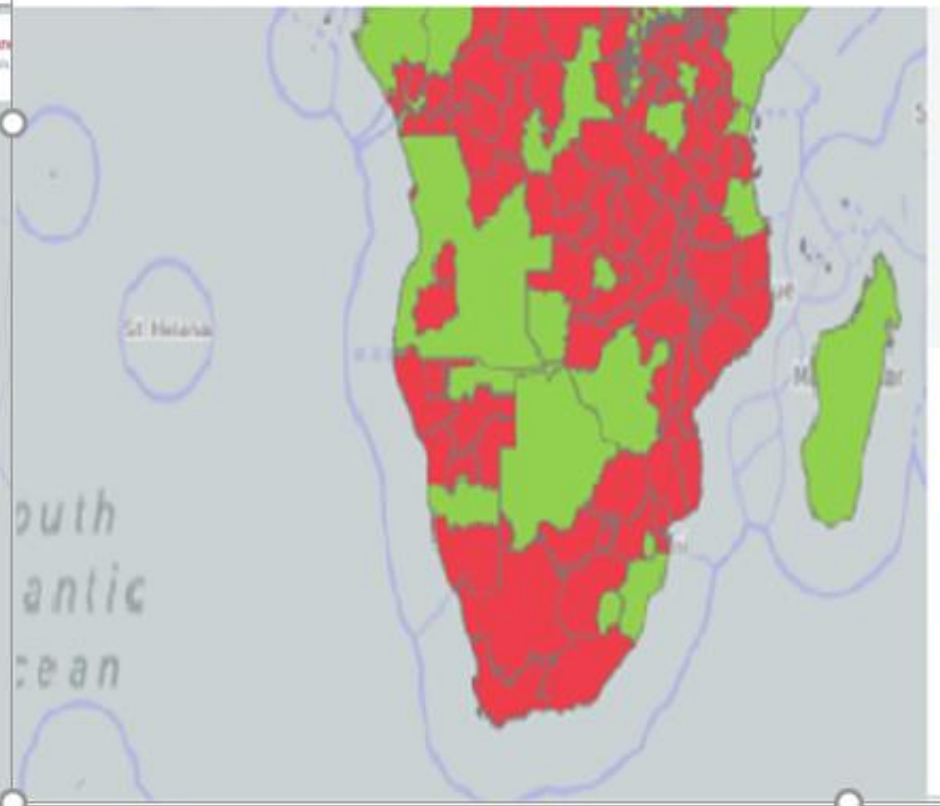
African swine fever (ASF) is a contagious disease of domestic and wild pigs. The number of countries and territories affected by ASF has increased in recent years, with notifications from

RELATED LINKS

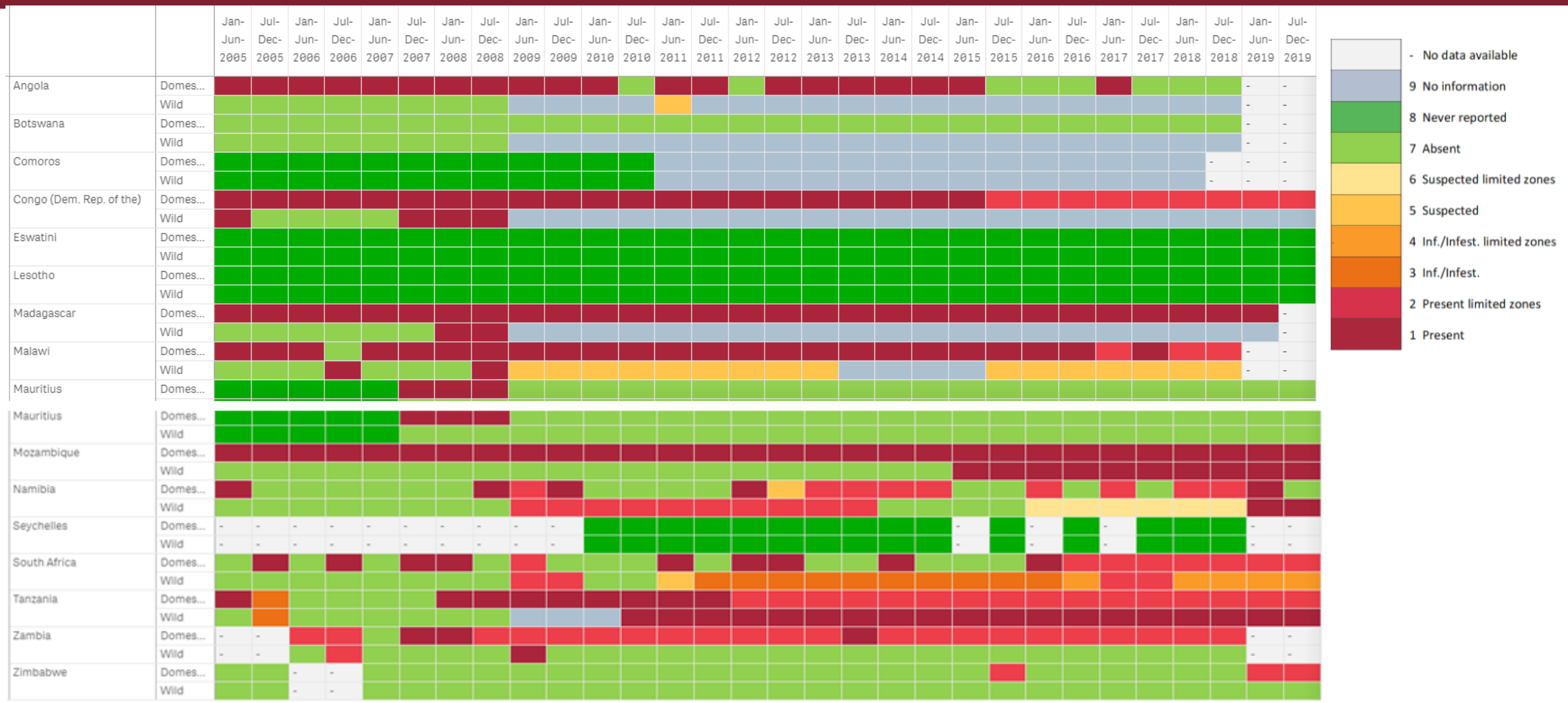
- OIE webpage on ASF
- OIE 'ASF kills pigs' awareness campaign
- FAO webpage on ASF
- SGE on ASF for Europe
- SGE on ASF for Americas
- SGE on ASF for Asia
- African swine fever: An unprecedented global threat - A challenge to livelihoods, food security and biodiversity. Call for action **[event]**
- STOP ASF: Public and private

AFRICAN SWINE FEVER IN SOUTHERN AFRICA

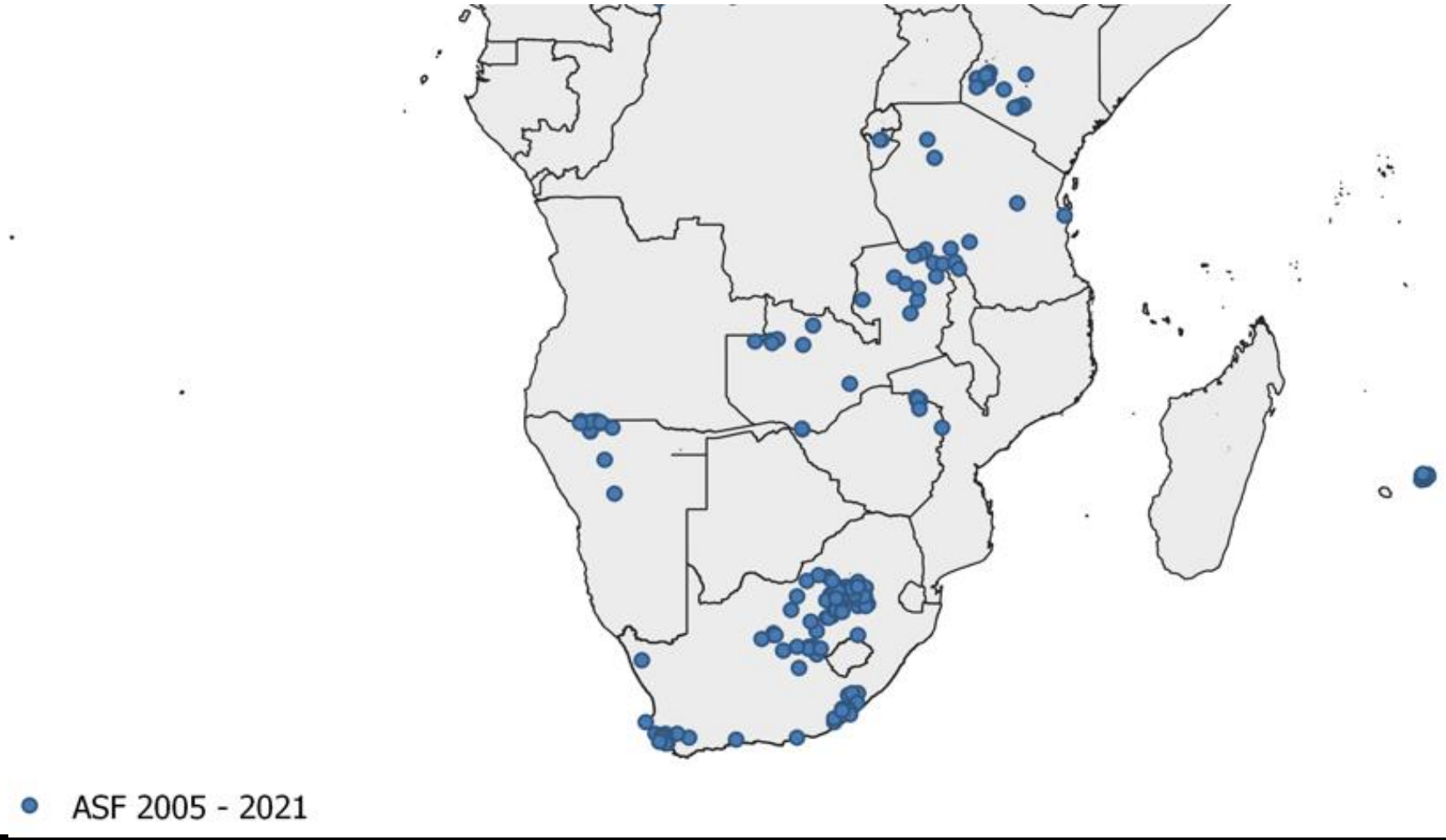




AFRICAN SWINE FEVER IN SOUTHERN AFRICA (OIE - WAHIS)



AFRICAN SWINE FEVER IN SOUTHERN AFRICA



AFRICAN SWINE FEVER HISTORY & PRESENT-SOUTHERN AFRICA

Country	ASF known presence	Species confirmed[a]	Current status
African region			
Sub-region: Eastern, Central and Southern Africa			
Present			
Angola	1932 to present	Domestic pigs	Endemic
Botswana	1979 to present	Warthogs; rarely pigs	Endemic in warthogs
Burundi	Isolates 1984, 1990	Domestic pigs	Endemic
Cameroon	1982 to present	Domestic pigs	Endemic
Central African Republic	2010 to present	Domestic pigs	Endemic
Chad	2010 to present	Domestic pigs	Endemic
Congo (Brazzaville)	Before 1975 to present	Domestic pigs, warthogs[b]	Endemic
Congo (DRC)	1939 to present	Domestic pigs	Endemic
Ethiopia	2011–2014	Domestic pigs	Unknown
Kenya	1914 to present	Warthogs, pigs	Endemic
Madagascar	1998 to present	Domestic pigs	Endemic
Malawi	1932 to present	Domestic pigs, warthogs	Endemic
Mozambique	1954	Warthogs, pigs	Endemic
Namibia	1920s	Warthogs, pigs	Endemic in warthogs
South Africa	1926 to present	Warthogs, pigs	Endemic in warthogs
Rwanda	482 outbreak reports	Domestic pigs	Endemic
Tanzania	1914 to present	Warthogs, pigs	Endemic
Uganda	1983 to present	Warthogs, pigs	Endemic
Zambia	1912 to present	Warthogs, pigs	Endemic
Zimbabwe	1970s to present	Warthogs, pigs	Endemic in warthogs
Historic			
Mauritius	2007–2008	Domestic pigs	Free (SD 2012)
São Tomé e Principe	1979–1980; 1992	Domestic pigs	Free

Source: Mary Louise Penrith 2020. Review: Current status of African swine fever CABI Agric Biosci; https://doi.org/10.1186/s43170-020-00011-w

AFRICAN SWINE FEVER - MOZAMBIQUE

- ASF first reported in 1954 (clinically) in the Angonia District of Tete Province as well as in Beira, Sofala Province
- The first laboratory-confirmed outbreak occurred in 1960 in Mutarara District of Tete Province
- Annual outbreaks of ASF in the northern provinces of Mozambique from 1978 onwards
- ASF restricted to the central and northern provinces until 1994
- ASF first occurred south of the Save River for first time in 1994.
- The disease is currently present and endemic

ASF outbreaks by Tanzania and its eight neighboring countries from 2005 to 2019.

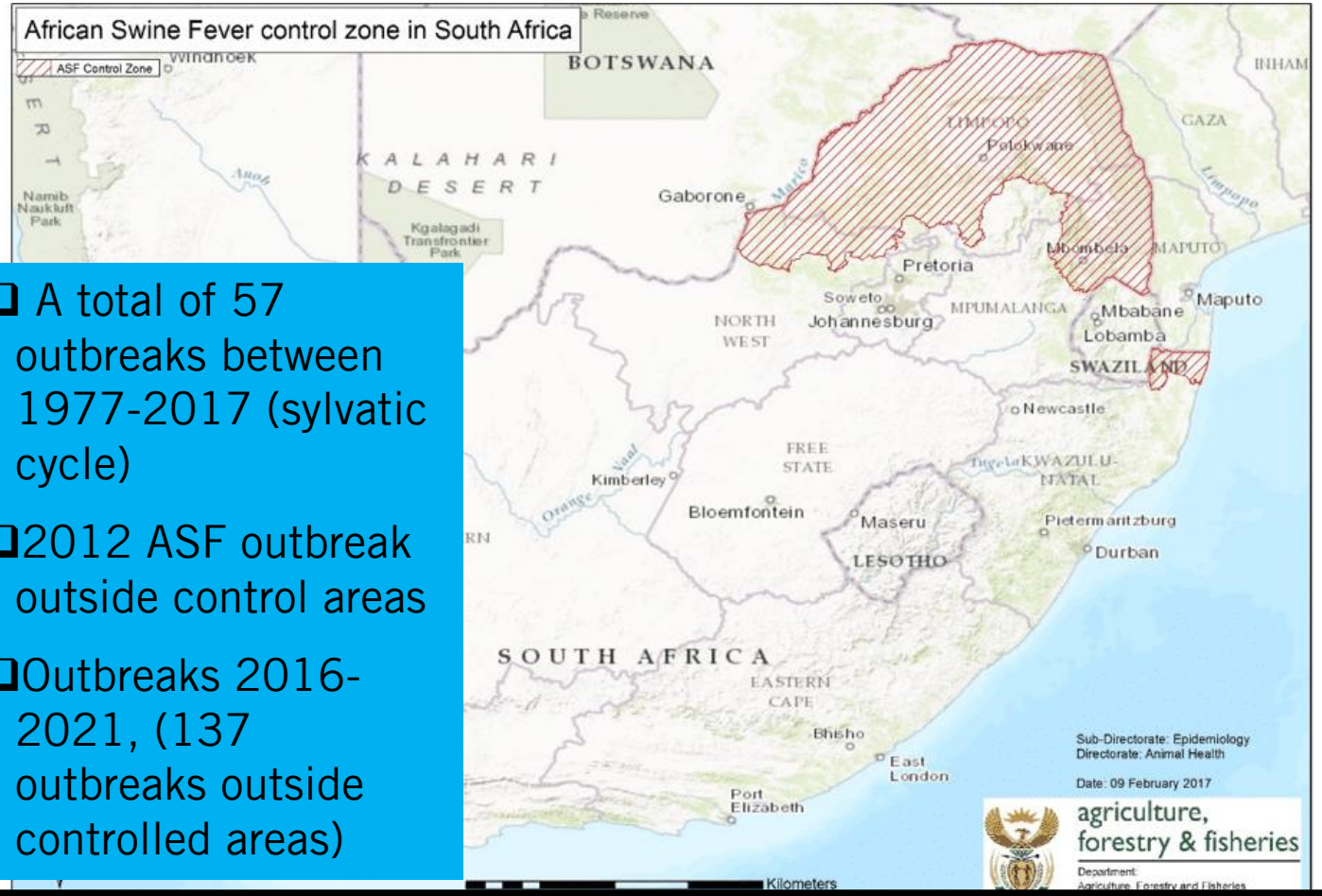
Time Period	Country	Number of Outbreaks	Number of Cases	Number of Deaths	Case Fatality Rate (%)
2005–2009	Tanzania	5	956	738	77.19
	Rwanda	134	7057	5863	83.08
	Burundi	-	-	-	-
	Malawi	86	16,973	10,785	63.54
	DRC	81	1413	1329	94.05
	Mozambique	78	6715	5194	77.35
	Zambia	43	1570	1271	80.95
	Kenya	9	924	549	59.41
	Uganda	3	401	181	45.13
	Subtotal	439	36,009	25,910	71.95
2010–2014	Tanzania	41	4957	4275	86.24
	Rwanda	200	3553	1068	30.06
	Burundi	1	159	26	16.35
	Malawi	139	80,437	77,896	96.84
	DRC	191	153,692	140,493	91.41
	Mozambique	42	3136	2391	76.24
	Zambia	44	3835	2381	62.08
	Kenya	6	203	167	82.26
	Uganda	10	622	473	76.04
	Subtotal	674	250,594	229,170	91.45
2015–2019	Tanzania	43	4981	3067	61.57
	Rwanda	47	593	532	89.71
	Burundi	28	3633	560	15.41
	Malawi	19	1813	1666	91.89
	DRC	237	35,407	35,038	98.95
	Mozambique	38	1239	936	75.54
	Zambia	42	5966	5025	84.23
	Kenya	3	231	223	96.53
	Uganda	18	1276	612	47.96
	Subtotal	475	55,139	47,659	86.43
	Grand total	1588	341,742	302,739	88.58

Hakizimana, J.N.; Yona, C.; Kamana, O.; Nauwynck, H.; Misinzo, G. African Swine Fever Virus Circulation between Tanzania and Neighboring Countries: A Systematic Review and Meta-Analysis. Viruses 2021, 13, 306. https://doi.org/10.3390/v13020306

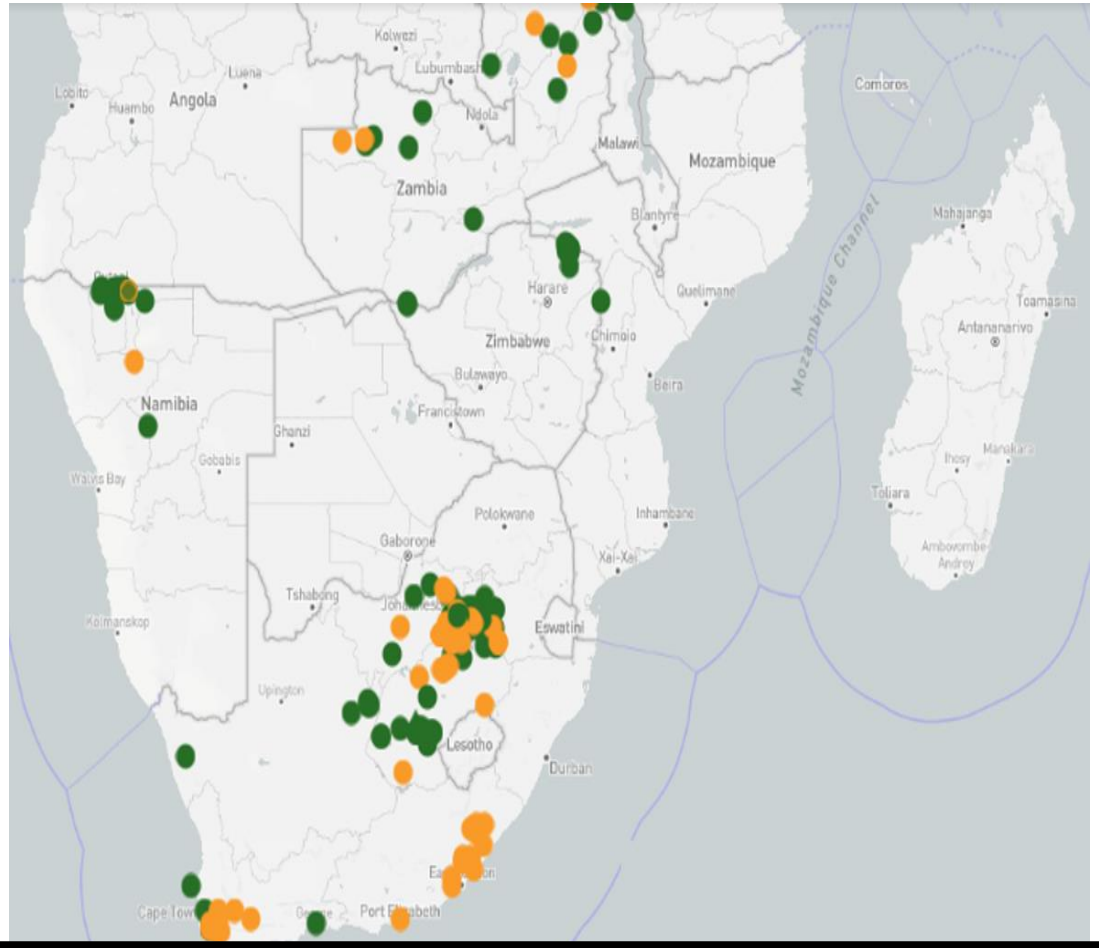
AFRICAN SWINE FEVER - ZIMBABWE

- No ASF outbreaks reported in Zimbabwe between 1993–2014.
- ASF reported 2015 and 2019

AFRICAN SWINE FEVER – SOUTH AFRICA



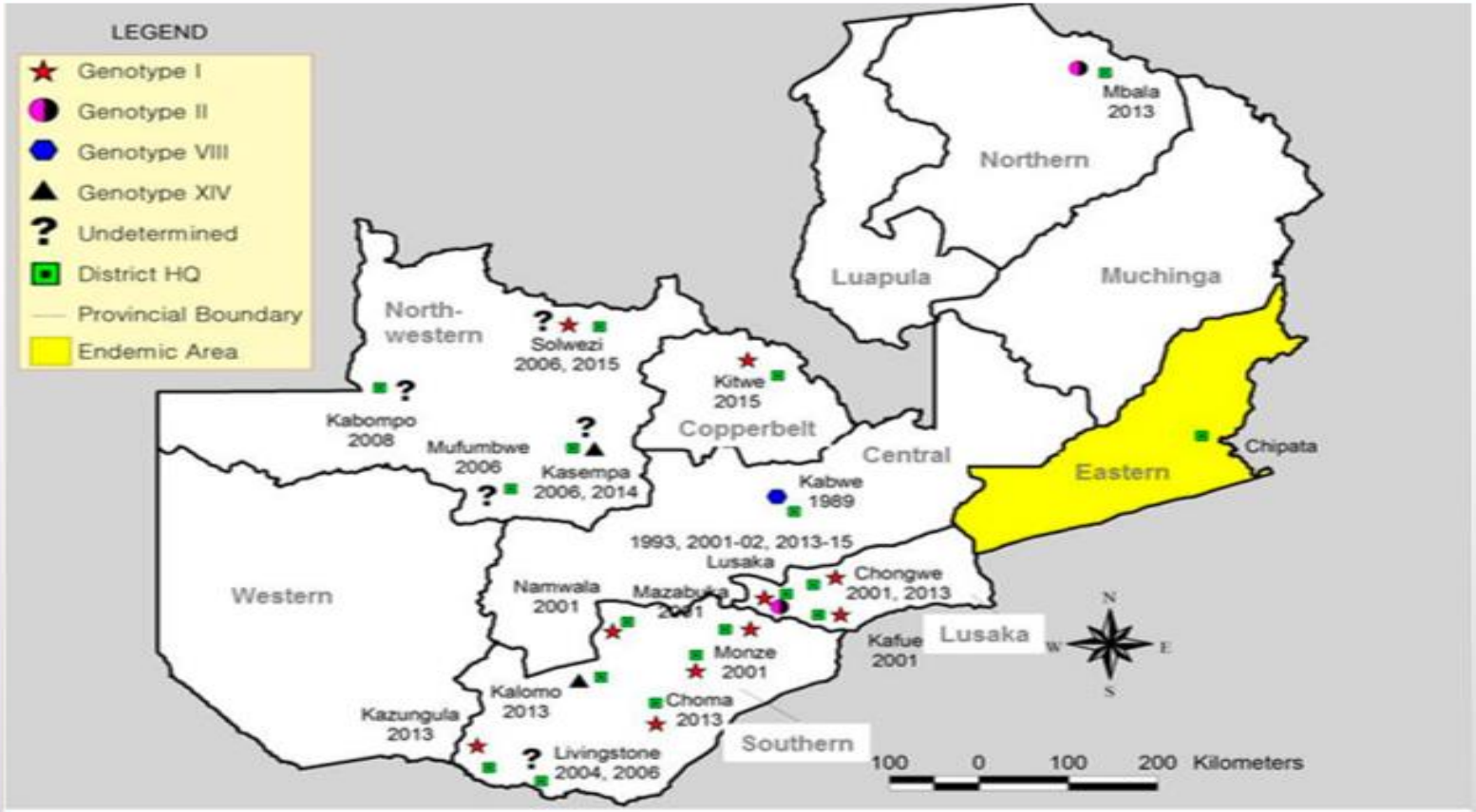
- A total of 57 outbreaks between 1977-2017 (sylvatic cycle)
- 2012 ASF outbreak outside control areas
- Outbreaks 2016-2021, (137 outbreaks outside controlled areas)



AFRICAN SWINE FEVER – ZAMBIA

- ASF was first reported in 1912 (Chipata District)
- ASF endemic in Eastern Province only.
- 1989, an ASF outbreak occurred in Central Province (Kabwe) for the first time.
- Since 1989, sporadic outbreaks occurred in almost all the provinces of the country.

ASF in non-endemic areas of Zambia 1989-2015



Source: Edgar Simulundu et al. 2017. Review: The Epidemiology of African Swine Fever in "Nonendemic" Regions of Zambia (1989–2015): Implications for Disease Prevention and Control. Viruses 2017, 9, 236; doi:10.3390/v9090236

AFRICAN SWINE FEVER – MAURITIUS

- First and only introduction of ASF in 2007, introduction from Madagascar
- Eradication was confirmed through laboratory investigations
- Officially confirmed regaining freedom from ASF in 2008
- Genotype II, No sylvatic cycle

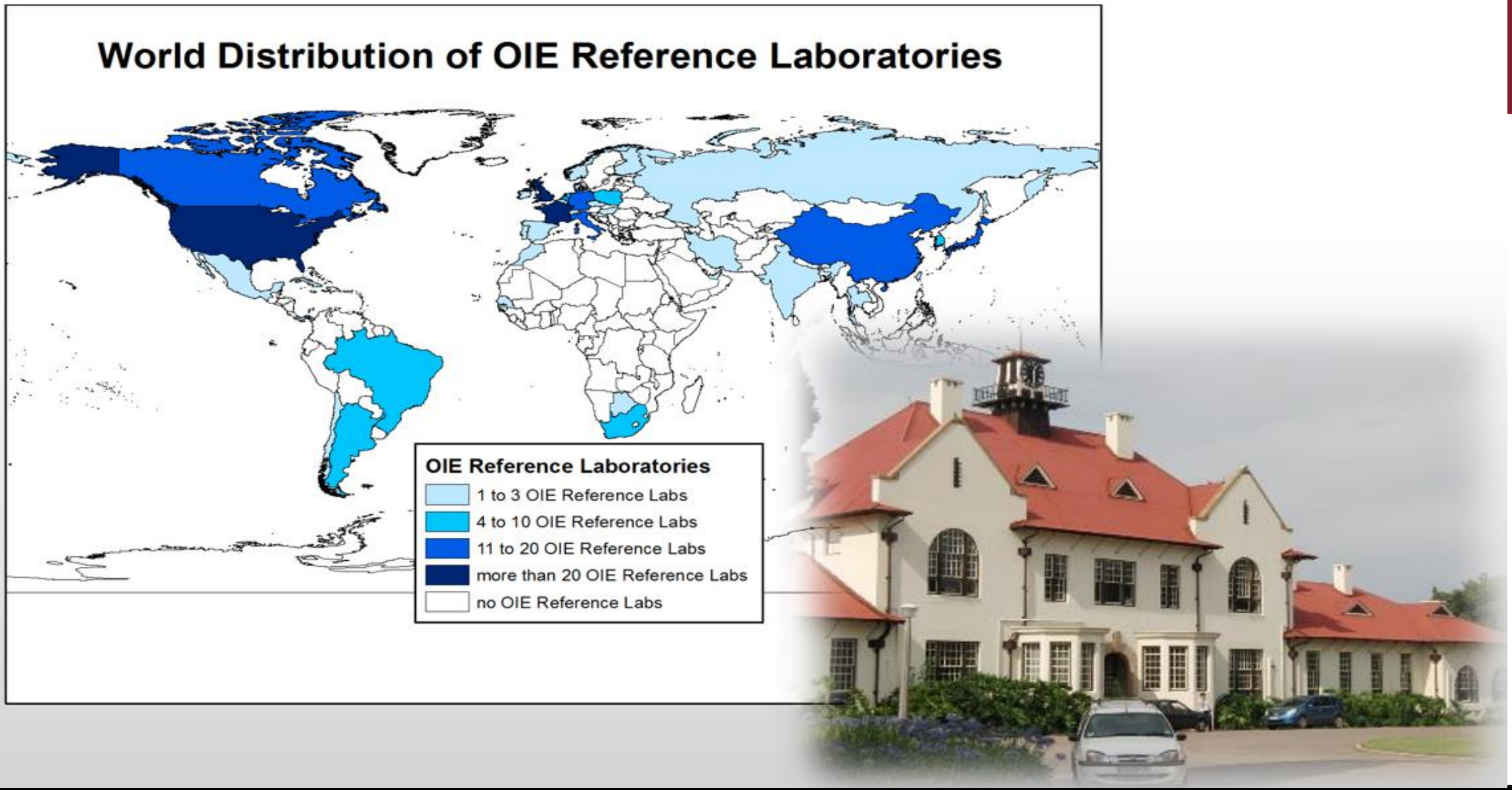
AFRICAN SWINE FEVER – MADAGASCAR

- Madagascar First reported 1998 (first cases 1997); introduction from Mozambique
- Endemic
- Genotype II; No sylvatic cycle

AFRICAN SWINE FEVER – MALAWI

- ASF is endemic in almost all its provinces.
- 227 ASF outbreaks (2005-2018) leading to 87,063 pig deaths

World Distribution of OIE Reference Laboratories



CONCLUSION

- ASF is endemic in southern Africa
- More prevalent in countries with high pig populations
- Presence of wild life reservoirs and vectors
- Need for effective separation between domestic pigs and wild hosts
- Need to invest in vaccine research

ACKNOWLEDGEMENTS

Dr Mohamed Sirdar, Programme Officer,
OIE Sub-Regional Representation for Southern Africa

GF-TADs
GLOBAL FRAMEWORK FOR THE PROGRESSIVE CONTROL OF TRANSBOUNDARY ANIMAL DISEASES

Food and Agriculture Organization of the United Nations

WORLD ORGANISATION FOR ANIMAL HEALTH

Thank you for your attention!

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