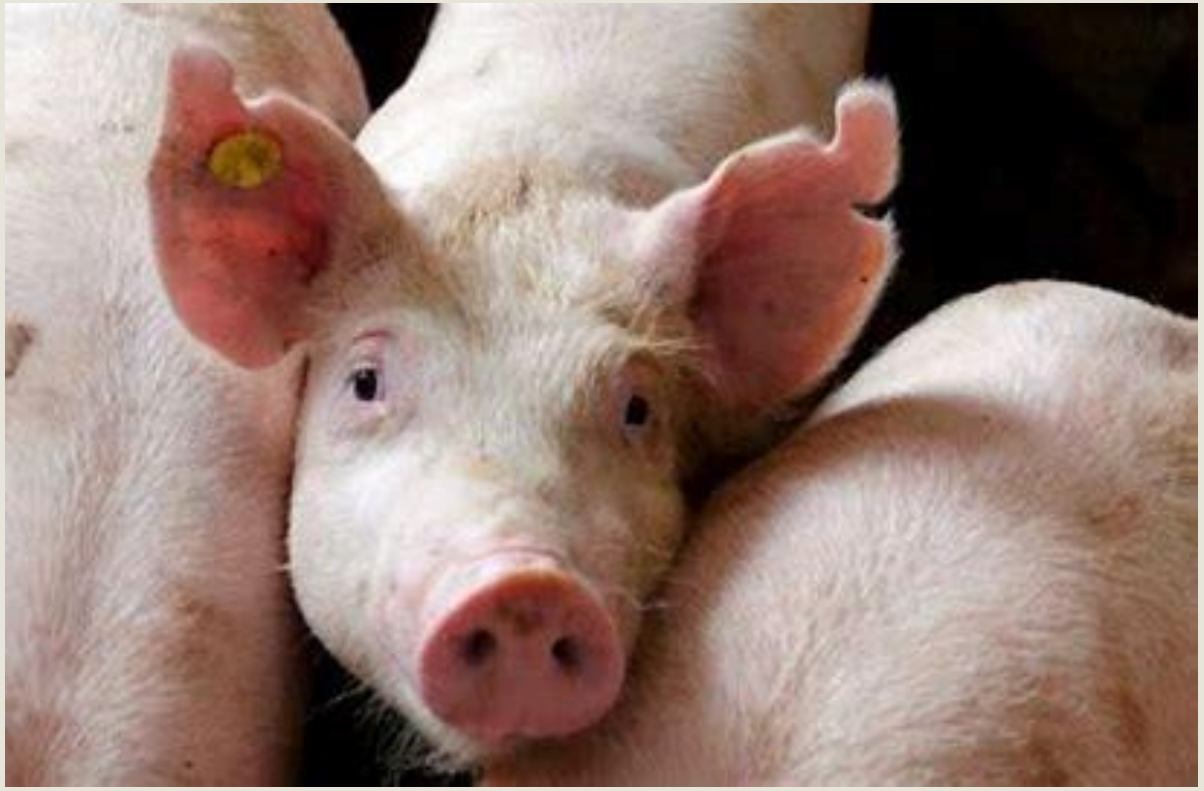
WOAH standards and guidelines on African Swine Fever



Dr Bolortuya Purevsuren
WOAH SRR SEA

World Organisation for Animal Health
Founded in 1924
Organisation mondiale de la santé animale
Fondée en 1924
Organización Mundial de Sanidad Animal
Fundada en 1924

WOAH STANDARDS

WOAH GUIDELINES

WOAH COMMUNICATION MATERIALS

Terrestrial Animal Health Code (TAHC)

Volume I
User's guide and
Horizontal chapters

Volume II
Disease-specific
chapters

https://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/

CHAPTER 1.1 Notification of diseases and provision of epidemiological information

1.Member Countries shall make available to other Member Countries, through WOAH, whatever information is necessary to *minimise the spread of important animal diseases*, and their pathogenic agents, and to assist in achieving better worldwide control of these diseases.

Article 1.1.3.

Veterinary Authorities shall, under the responsibility of the Delegate, send to the *Headquarters*:

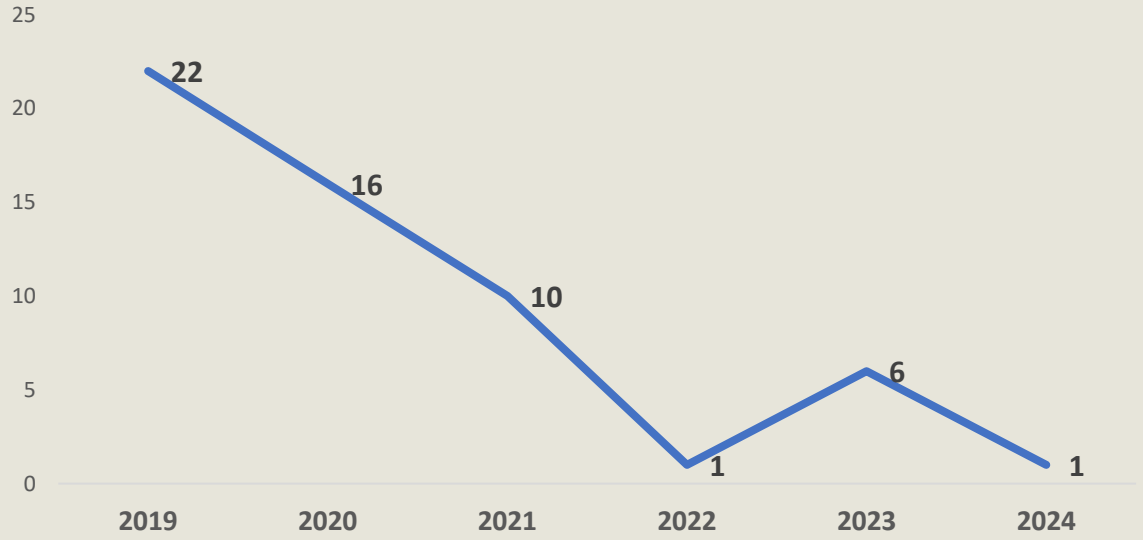
1.in accordance with relevant provisions in the disease-specific chapters, *notification*, through the World Animal Health Information System (WAHIS) or by fax or email within 24 hours, of any of the following events:

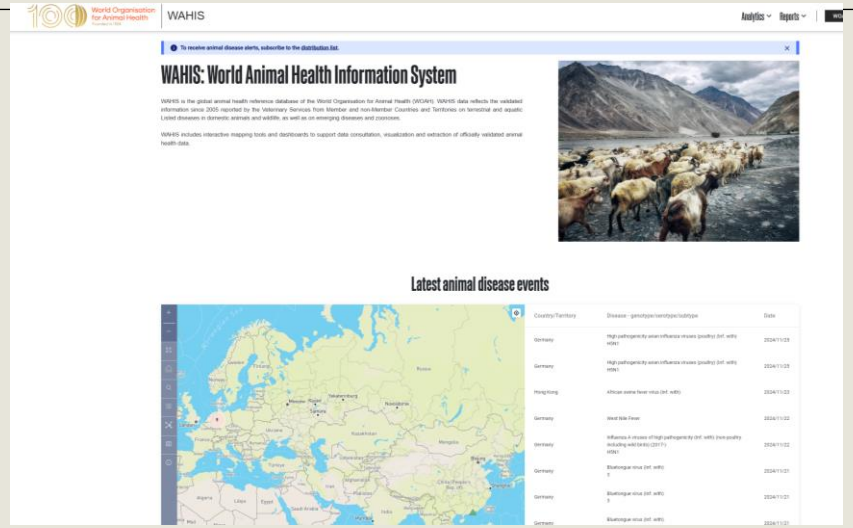
1. first occurrence of a *listed disease* in a country, a *zone* or a *compartment*;
2. recurrence of an eradicated *listed disease* in a country, a *zone* or a *compartment* following the final report that declared the event ended;
3. first occurrence of a new strain of a pathogenic agent of a *listed disease* in a country, a *zone* or a *compartment*;
4. recurrence of an eradicated strain of a pathogenic agent of a *listed disease* in a country, a *zone* or a *compartment* following the final report that declared the event ended;
5. a sudden and unexpected change in the distribution or increase in incidence or virulence of, or morbidity or mortality caused by, the pathogenic agent of a *listed disease* present within a country, a *zone* or a *compartment*;
6. occurrence of a *listed disease* in an unusual host species;

2. *weekly reports* subsequent to a *notification* under point 1 above, to provide further information on the evolution of the event which justified the *notification*. These reports should continue until the *listed disease* has been eradicated or the situation has become sufficiently ***stable*** that six-monthly reporting under point 3 will satisfy the obligation of the Member Country. For each event notified, a final report should be submitted;
3.six-monthly reports on the absence or presence and evolution of *listed diseases* and information of epidemiological significance to other Member Countries;
4.annual reports concerning any other information of significance to other Member Countries.

ASF Immediate Notification and Follow up reports (ASEAN)

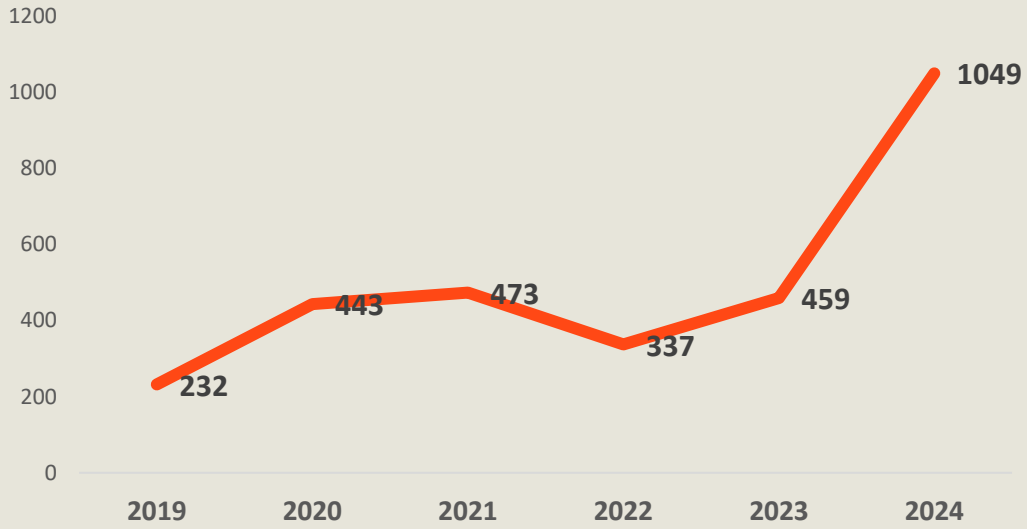
IMMEDIATE NOTIFICATION





Year	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
2019	2	1	16		1	1			1
2020			10		5	1			
2021				9	1				
2022								1	
2023		1			2		2	1	
2024								1	

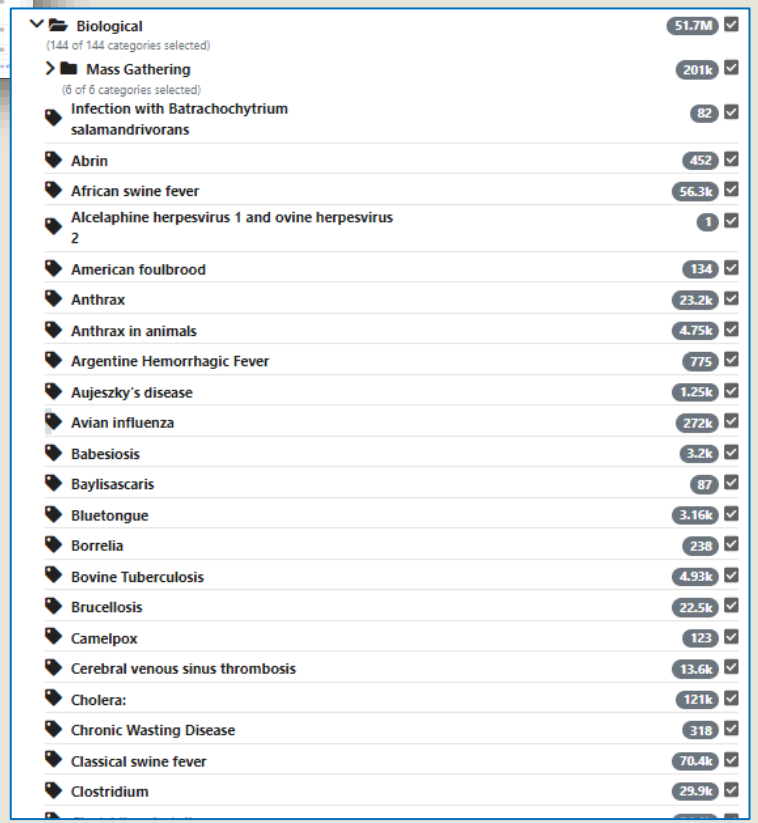
FOLLOW UP REPORTS

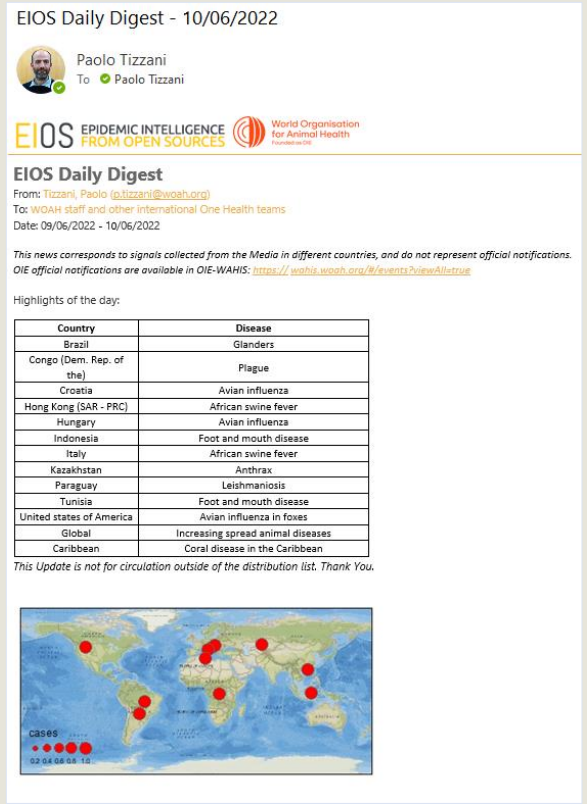


WOAH epidemic intelligence activity in Asia-Pacific using EIOS

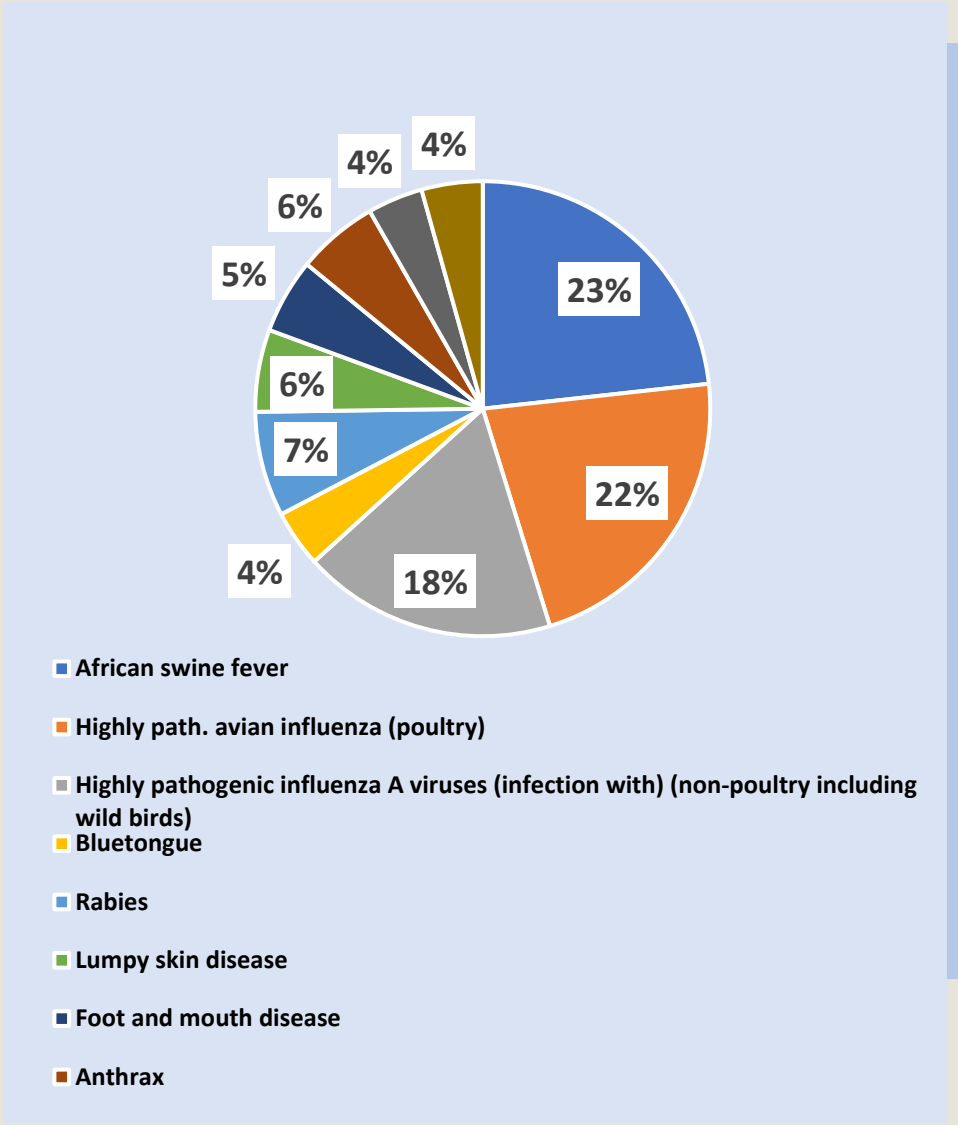
EIOS EPIDEMIC INTELLIGENCE FROM OPEN SOURCES

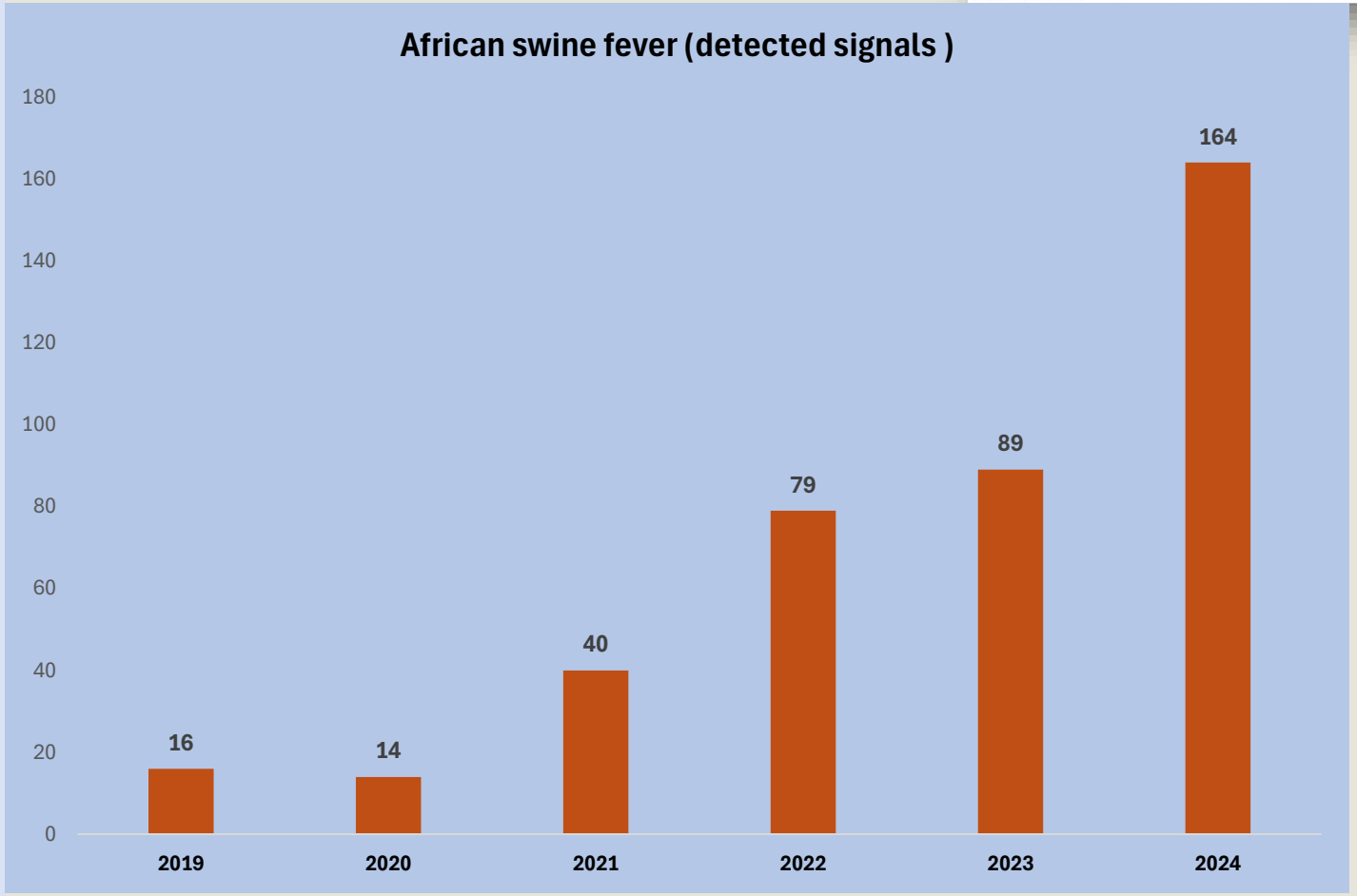
EIOS fosters a global public health intelligence collaboration, uniting stakeholders and leveraging open-source data for early detection and response to public health threats under a One Health, all-hazards approach. WHO leads this multi-stakeholder initiative under its Health Emergencies Programme. As a global collaboration, the EIOS initiative is governed by a Coordination Group with representatives from various organisations; **WOAH** is one of the organisations.





Epidemic intelligence-Rumour (news tracking)





Chapter 1.4.Animal health surveillance (General)

Article 1.4.1.	Introduction and objectives
Article 1.4.2.	Definitions
Article 1.4.3.	Surveillance systems
Article 1.4.4.	Surveillance methods
Article 1.4.5.	Early warning systems
Article 1.4.6.	Surveillance for freedom from infection or infestation
Article 1.4.7.	Surveillance in support of disease control programme

Surveillance in support of disease control

- Important component of disease control programme
- Determine distribution and occurrence
- Assess progress and decision-making
- Spatial and temporal distribution of
  - Prevalence or incidence
  - Morbidity and mortality
  - Quantification of risk factors
  - Frequency distribution of lab results
  - Frequency distribution of disease in wildlife

CHAPTER 15.1. Infection with African swine fever virus

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:

– domestic and *captive wild* pigs, permanently captive or farmed free range, used for the production of *meat*, or other commercial products or use, or for breeding;

– *wild* and *feral* pigs;

– African *wild* suid species.

All varieties of *Sus scrofa* are susceptible to the pathogenic effects of ASFV, while the African *wild* suids are not and may act as reservoirs of the virus. Ticks of the genus *Ornithodoros* are the only known natural arthropod hosts of the virus and act as reservoirs and biological *vectors*.

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*.

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*.

CHAPTER 15.1. Infection with African swine fever virus

Safe commodities

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

1) heat-treated *meat products* in a hermetically sealed container with a F_0 value of 3 or above;
2) gelatine;
3) extruded dry pet food;
4) *protein meal*.

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

Article 15.1.3.

General criteria for the determination of the ASF status of a country, zone or compartment

1) ASF is a *notifiable disease* in the entire country, and all suids showing clinical signs or pathological lesions suggestive of ASF are subjected to appropriate field and *laboratory* investigations;
2) an ongoing awareness programme is in place to encourage reporting of all suids showing clinical signs or pathological lesions suggestive of ASF;
3) the *Veterinary Authority* has current knowledge of, and authority over, all domestic and *captive wild* pig *herds* in the country, *zone* or *compartment*;
4) the *Veterinary Authority* has current knowledge of the species of *wild* and *feral* pigs and African *wild* suids present, their distribution and habitat in the country or *zone*;
5) for domestic and *captive wild* pigs, an appropriate *surveillance* programme in accordance with Articles 15.1.28. to 15.1.31. and 15.1.33. is in place;
6) for *wild* and *feral* pigs, and for African *wild* suids, if present in the country or *zone*, a *surveillance* programme is in place in accordance with Article 15.1.32., considering the presence of natural and artificial boundaries, the ecology of the *wild* and *feral* pig and African *wild* suid populations and an assessment of the likelihood of ASF spread including taking into account the presence of *Ornithodoros* ticks where relevant;
7) the domestic and *captive wild* pig populations are separated by appropriate *biosecurity*, effectively implemented and supervised, from the *wild* and *feral* pig and African *wild* suid populations, based on the assessed likelihood of spread within the *wild* and *feral* pig and African *wild* suid populations, and *surveillance* in accordance with Article 15.1.32.; they are also protected from *Ornithodoros* ticks where relevant.

Article 15.1.3- Article 15.1.27

- ✓ Country or zone and Compartment free from ASF
- ✓ Establishment of a containment zone within a country or zone free from ASF
- ✓ Recovery free status
- ✓ Recommendations for importation from countries, zones or compartments *free and non* from ASF (pigs,semens,embroys, fresh meat and meat products and other products)
- ✓ Procedures for the inactivation of ASFV in (swill, meat, casings, skins and bristles, litter and manure)

CHAPTER 15.1. 28 Introduction to surveillance

Articles *15.1.28. to 15.1.33*. provide recommendations for *surveillance* for ASF, and are complementary to Chapters 1.4. and 1.5. The impact and epidemiology of ASF may vary in different regions of the world, as does the routine *biosecurity* in different production systems.

Surveillance design should be considered as:

– the role of swill feeding;
– the impact of different systems of production of domestic and *captive wild* pigs;
– the role of *wild* and *feral* pigs and African *wild* suids on the maintenance and spread of the disease;
– whether *Ornithodoros* ticks are present and the role they may play in the maintenance and spread of the disease;
– the lack of pathognomonic gross lesions and clinical signs;
– the occurrence of carriers;
– the genotypic variability of ASFV.

CHAPTER 15.1. 28 Introduction to surveillance

Surveillance strategies:

Type of surveillance :

Dynamic surveillance to detect and manage ASFV effectively

Methods

•Random/non-random approaches: clinical, virological, serological

•Targeted sampling for high-risk areas:

- Wild/feral suid proximity
- Farms feeding swill
- Outdoor pig rearing

Risk Factors

•Past outbreaks, pig movements, demographics

Adaptation

•Adjust strategies for increased ASFV risk:

- Outbreaks in import zones
- Rising prevalence in wild/feral suids
- Cross-border infections, tick involvement

•**Clinical Surveillance**

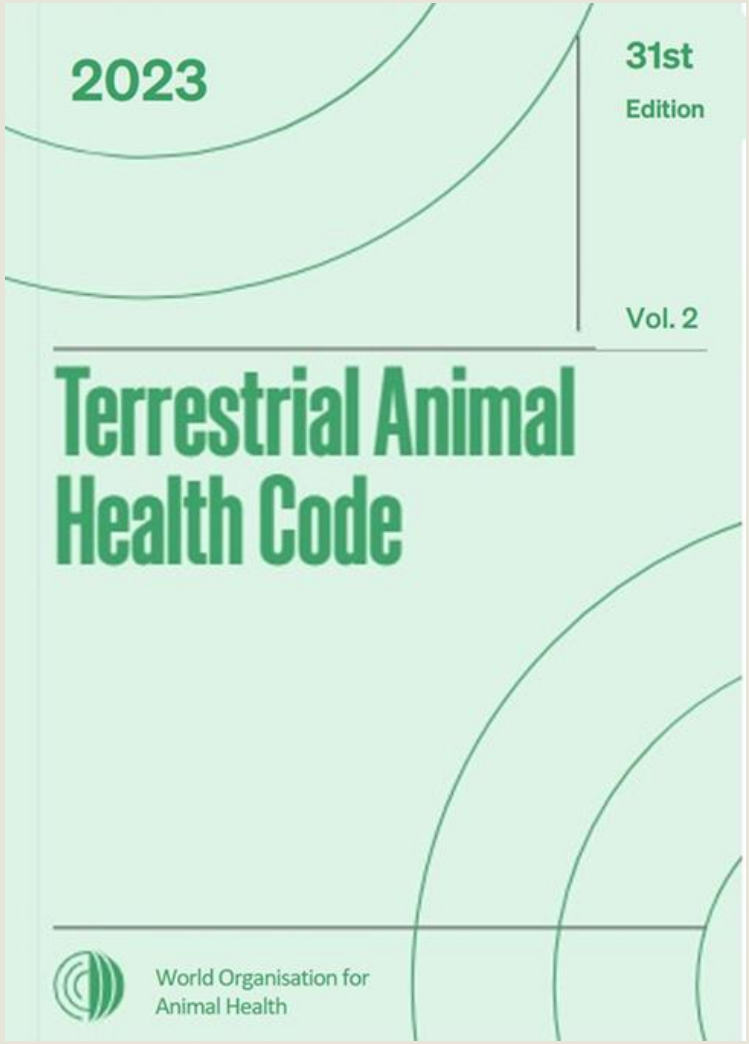
- ✓ Detects ASF through severe clinical signs and pathology.
- ✓ Useful for early detection, especially with high mortality cases.
- ✓ Supplemented with serological and virological methods due to similarities with other diseases.

•**Virological Surveillance**

- •Identifies the virus for early detection and differential diagnosis.
  - ✓ Clinically suspected cases, risk populations, follow-up of seropositive results,

- **Serological Surveillance**
  - ✓ Detects antibodies to identify past or ongoing infections.
  - ✓ Indicates recovered or carrier animals.
  - ✓ Ineffective for early detection but valuable for long-term monitoring.
  - ✓ Can use sera from other surveys if statistically valid.
- **Wild and Feral Suids Surveillance**
  - ✓ Focuses on virus and antibody monitoring in populations with limited clinical observation opportunities.

Zoning and Compartmentalisation



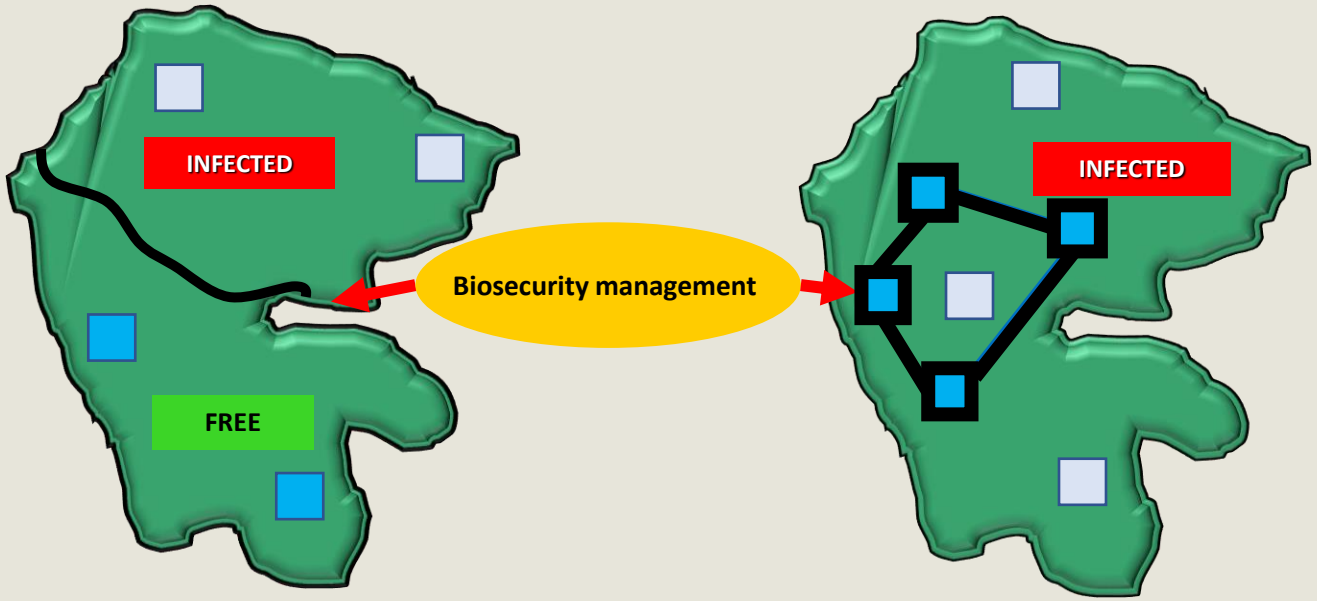
Volume I.

Chapter 4.4 Zoning and compartmentalisation

- ✓ Principles for defining and establishing a zone /compartment
- ✓ Definition –free, infected, protected, containment zones
- ✓ Bilateral recognition of country or zone status by trading countries

Zoning and compartmentalisation

Zoning and Compartmentalisation application



Zoning

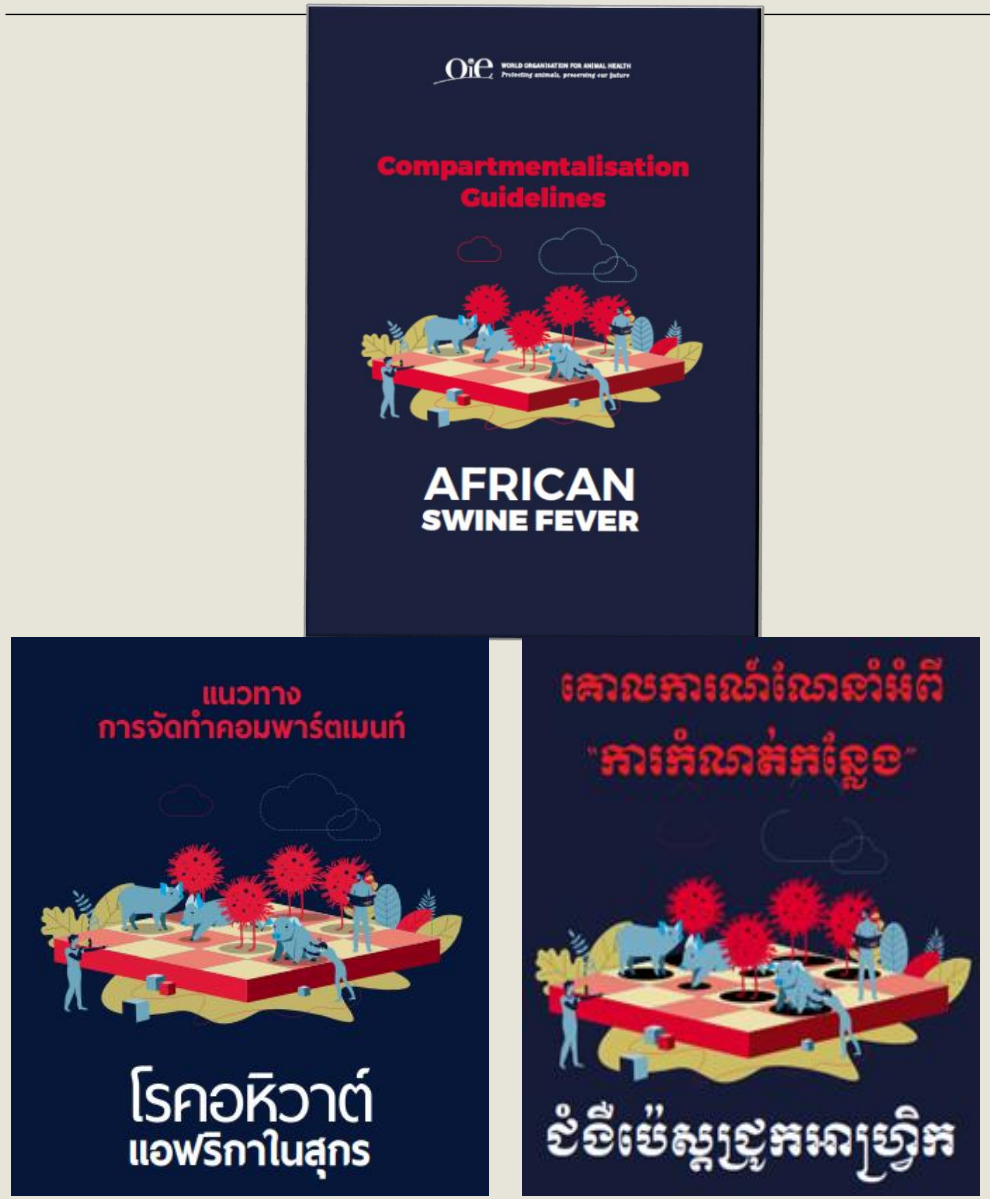
Zones are primarily defined based on geography (e.g. natural or legal boundaries)

Compartmentalisation

Compartments are primarily defined by biosecurity management practices

- Assist Member Countries wishing to **establish and maintain different subpopulations** within their territory
- Applied in accordance with the measures in the **relevant disease chapter**(s)
- **To regain free status** following a disease outbreak, follow the recommendations in the relevant disease chapter
- Outlines a process through which trading partners may recognize such subpopulations, best implemented by gaining agreement **prior to outbreaks**

ASF compartmentalisation Guideline

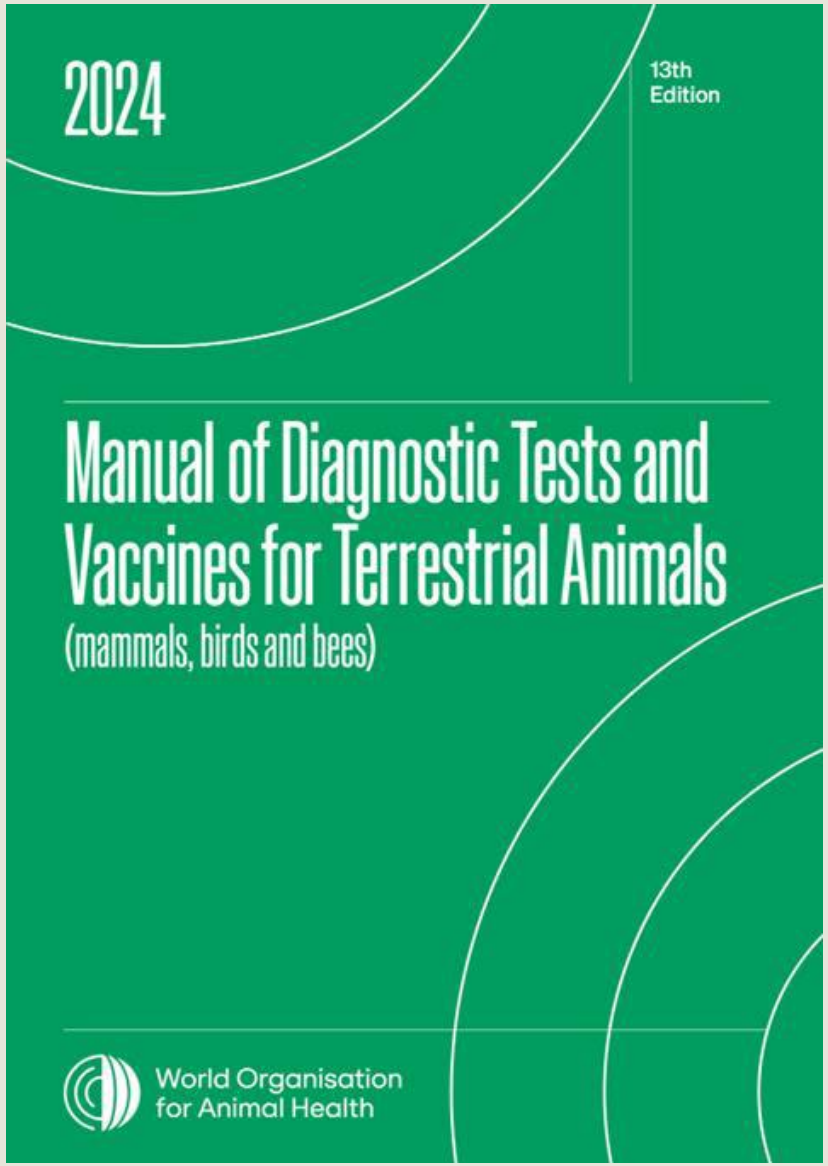


- ✓ **Tool** to establish and maintain a swine compartment free from ASF for the purposes of facilitating **safe national and international trade**, and promoting **disease prevention and control**

- ✓ For Veterinary Authorities, private sector, third parties and technical service providers

- ✓ Based on WOAH International Standards

- ✓ Table of content
  - Part 1. Principles and implementation
  - Part 2: Appendices and Tools
  - Part 3: Compartmentalisation in practice
  - Part 4: End Matters



Chapter 3.9.1. Africal swine fever (infection with African swine fever virus)- (version adopted in May 2021)

ASF is not a zoonotic disease and does not affect public health (Sánchez-Vizcaíno *et al.*, 2009).

ASFV should be handled with an appropriate level of bio-containment, determined by risk analysis in accordance with Chapter 1.1.4 *Biosafety and biosecurity: Standard for managing biological risk in the veterinary laboratory and animal facilities.*

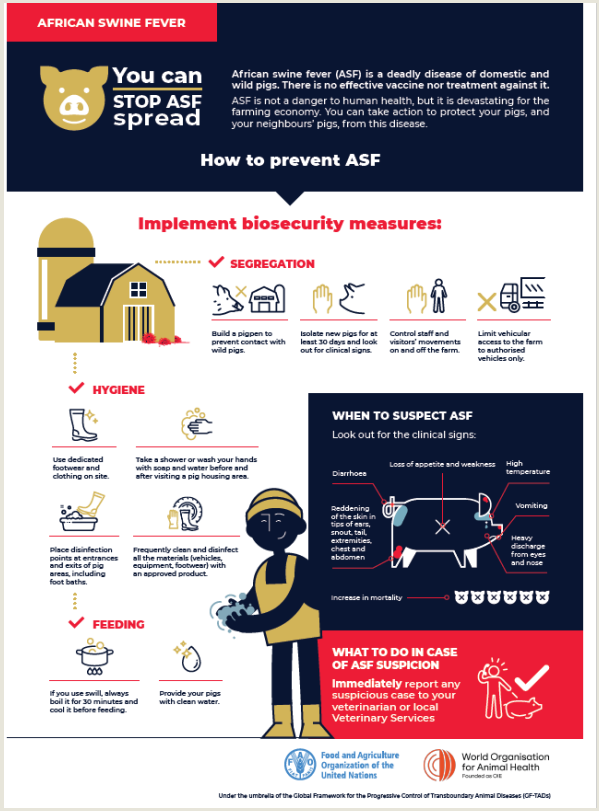
B. DIAGNOSTIC TECHNIQUES

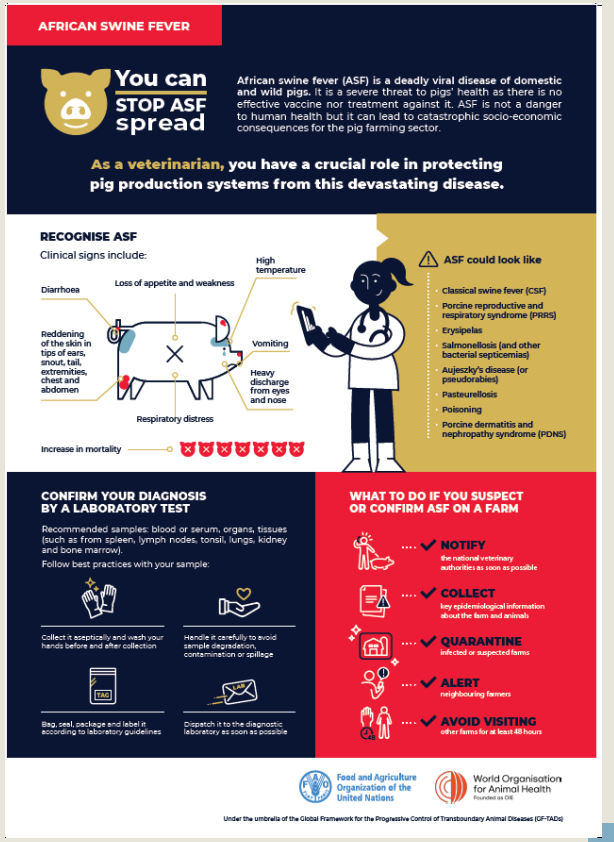
Table 1. Test methods available for the diagnosis of bovine anaplasmosis and their purpose

Method	Purpose					
	Population freedom from infection	Individual animal freedom from infection prior to movement	Contribute to eradication policies	Confirmation of clinical cases	Prevalence of infection – surveillance	Immune status in individual animals or populations post-vaccination
Agent identification						
Virus isolation/ HAD test[a]	–	–	++	+++	++	–
FAT	–	–	++	++	+	–
ELISA for antigen detection	+	++	+	+	+	–
Conventional PCR	++	++	++	++	++	–
Real-time PCR	+++	+++	+++	+++	+++	–
Detection of immune response						
ELISA	+++	+++	+++	+	+++	–
IPT[b]	+++	+++	+++	+	+++	–
IFAT[b]	+++	+++	+++	+	+++	–
IBT[b]	++	++	++	+	++	–

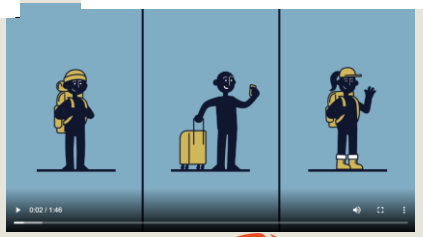
Key: +++ = recommended for this purpose; ++ recommended but has limitations;
+ = suitable in very limited circumstances; – = not appropriate for this purpose.
HAD = haemadsorption; FAT= fluorescent antibody test; ELISA = enzyme-linked immunosorbent assay; PCR = polymerase chain reaction; IPT= indirect immunoperoxidase test; IFAT = indirect fluorescent antibody test; IBT = immunoblotting test.
[a]As some current ASF virus isolates are non-haemadsorbing, negative HAD results should be confirmed using other tests such as PCR. [b]Recommended method as confirmatory serological test.

ASF Awareness Materials





ASF awareness posters, social media cards, videos targeting key sectors (travel, veterinarian, commercial pig farms, pig farmers, policy-makers, etc.), co-developed with FAO.

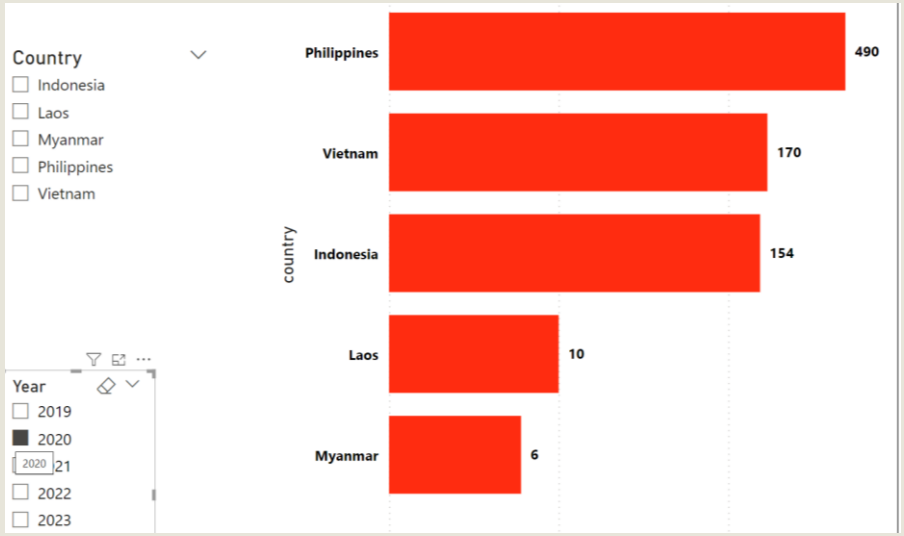


https://trello.com/b/GloiZoik/african-swine-fever-woah-fao

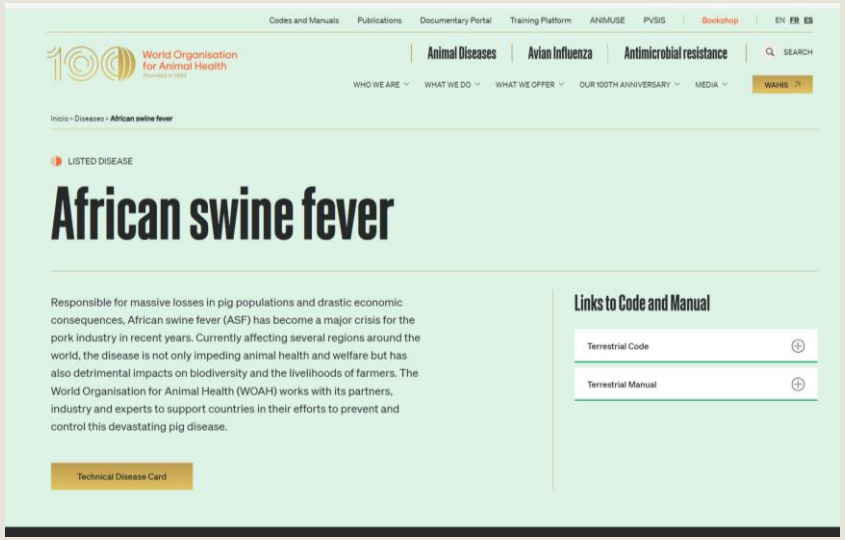
World Organisation for Animal Health
Founded as OIE

ASEAN ASF DASHBOARD DEVELOPMENT

- Real-time, dynamic dashboard
- Currently under development
  - Ongoing data cleaning and updates
- Data validation in progress
- Planned publication on ASEAN website (once ready)



GLOBAL ASF MONHTLY UPDATES



AFRICAN SWINE FEVER (ASF)

Situation Report 58

Period covered: October 2024

This report provides an update of the ASF situa according to the information shared wit WOAH.

Key highlights

- During the period covered by this report **one country in Europe** reported new ASF e while **one country in Asia** and **eight countries in Europe** updated their ongoing ever new outbreak was reported by countries/territories in Africa, the Americas and Ocea **new outbreaks** were reported in domestic pigs and **184** in wild boar, in Asia and Europ **5,054 animal losses**.
- Most of the outbreaks reported during the period are in **high density pig farming are**
- The number of outbreaks reported in domestic pigs and wildlife through imm notifications and follow up reports has been globally declining since July 2024, **outbreaks** were reported more than 10 km outside previously affected areas, up to **63** October some limited increase in the number of outbreaks reported has been obser wildlife.
- Since January 2022, **11 countries** have reported ASF as a first occurrence in the country, while **11 countries** have reported its spread to new zones.
- Since January 2022, more than **728,000 cases** in pigs and more than **25,800 cases** in wild boars have been reported, with more than **1,757,000 animal losses**.
- Since January 2022, **62 countries and territories (61 until last update)** have reported the presence of ASF.

Contextual information of the ASF situation by world region (1 January 2022-27 September 2024)

In total, during the period, ASF has been reported as present in five different world regions in 62 countries, affecting more than 728,000 pigs and more than 25,800 wild boars, with more than 1,757,000 animal losses. Further details, split by world region, are included in Table 2. During the period, no country/territory reported vaccination of pigs in response to the outbreaks.

Table 2. Summary of the number of outbreaks, cases and animal losses caused by ASF in the different world regions since January 2022.

	Outbreaks		Cases		Losses*
	Domestic pigs	Wild boar	Domestic pigs	Wild boar	Domestic pigs
Africa	269	5	78,552		68,358
Americas	53	0	355	0	4,940
Asia	4,055	105	218,904	538	426,561
Europe	4,266	15,404	430,799	25,340	1,257,566
Oceania	0	0	0	0	0
Total	8,658	15,514	728,610	25,878	1,757,425

*Losses (deaths + animals killed and disposed of): this figure refers to losses in the establishments affected by the outbreaks and it does not include the animals culled in areas around the outbreak for controlling the disease.

The spatial distribution of outbreaks reported since January 2022 in domestic pigs and wildlife is shown in Figure 2.

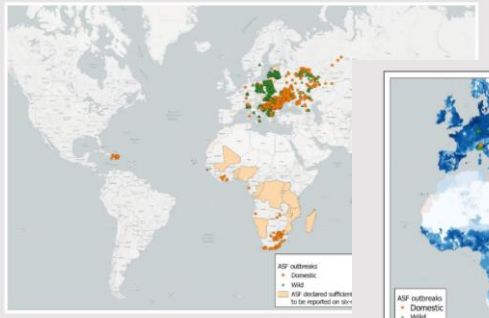


Figure 2. Map of ASF outbreaks which started during 01 Jan 2022 – 27 Sep 20

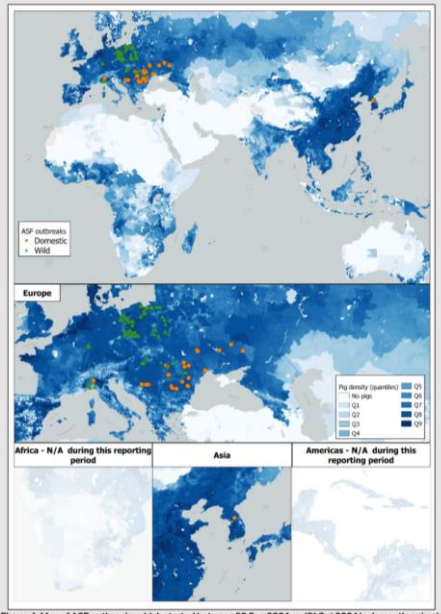
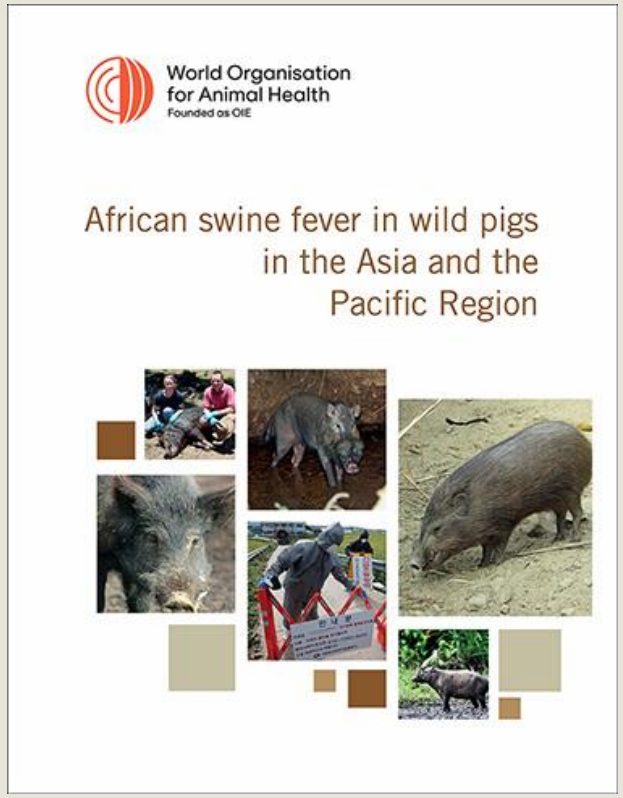
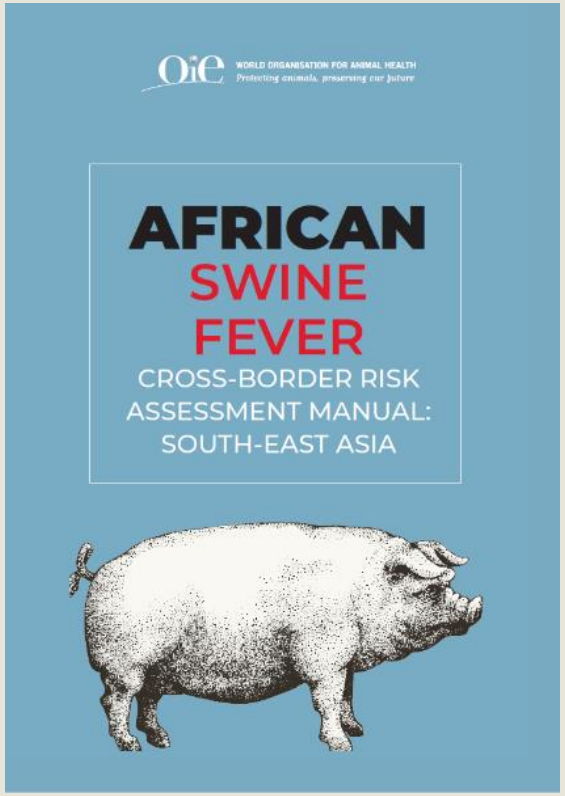


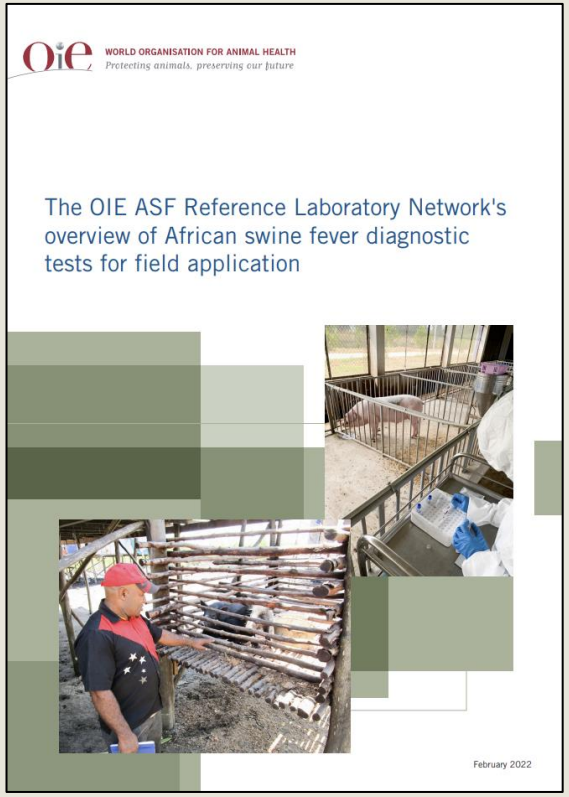
Figure 4. Map of ASF outbreaks which started between 28 Sep 2024 and31 Oct 2024 in domestic animals and wildlife. Zoomed views are provided as well. The density of pigs based on FAO GLW 4: Gridded Livestock Density (as of 2020) is shown in the background in shades of blue.

[African swine fever (ASF) – Situation Reports 58 - WOAH - World Organisation for Animal Health]

Reports and Guidelines







https://rr-asia.woah.org/en/projects/asf

SUMMARY

- ASF is one of the most detected signals by the Epidemic Intelligence Open-Source System
  - **Follow up reports are required or**
  - **Consider (tick) disease as “stable ”**
- WOAH standards offer a science-based toolbox for risk mitigation
- Guideline offers the practical implementation of compartmentalisation to facilitate safe national and international trade, and disease control
- ASF communication materials available in local languages

Thank you

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