

Swine Disease Global Surveillance Report

Worldwide pork production is highly interconnected by trade between countries and markets which could increase the risk of introduction of foreign pathogens into the US.

PROJECT

The aim of these reports is to have a system for near real-time identification of hazards that will contribute to the mission of assessing risks to the industry and ultimately, facilitate early detection and identification, or prevent occurrence of events, in partnership with official agencies, and with our international network of collaborators.

Monthly reports are created based on the systematically screening of multiple official data sources, such as government and international organization websites, and soft data sources like blogs, newspapers, and unstructured electronic information from around the world, that then are curated to build a raw repository. Afterward, a group of experts uses a multi-criteria rubric to score each event, based on novelty, potential direct and indirect financial impacts on the US market, credibility, scale and speed of the outbreak, connectedness, and local capacity to respond average is calculated. The output of the rubric is a final single score for each event which then it is published including an epidemiological interpretation of the context of the event.

These communications and the information contained therein are for general informational and educational purposes only and are not to be construed as recommending or advocating a specific course of action.



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Swine Disease Global Surveillance Report

Tuesday, February 7 to Monday, March 6, 2023

Reports Highlights

- **First ASF outbreak report in Singapore:** 17th nation in Asia affected by the disease since its first incursion in China in 2018.
- **Another ASF case in domestic pigs in Germany:** the 8th outbreak in domestic pigs reported in Brandenburg.
- **Nipah virus in Bangladesh:** a concerning increase in Nipah virus infections since mid-January -- 10 cases confirmed already, making it the largest outbreak since 2015. *Nipah virus fact sheet* [LINK](#)

OUTBREAKS BRIEF

R	Location	Date	Dx	Impact
2	Northwestern region, Singapore	2/5	ASF	Case detected in wild boar carcass in a national park
2	Eastern state of Brandenburg, Germany	2/27	ASF	Smallholder's farm - 11 animals affected
1	Calarasi county (southeast region, bordering Bulgaria), Romania	2/7	ASF	Commercial farm - over 16,000 pigs affected
1	Leova district (south of the country), Moldova	2/20	ASF	Three backyard herds
1	Iloilo towns, The Philippines	2/8	ASF	Multiple smallholders' farms - 52 cases
1	East Nusa Tenggara, Indonesia	2/8	ASF	31 new cases detected in the province
1	Penang province, Malaysia	2/14	ASF	Three new cases reported in commercial farms -- over 14,000 pigs slaughtered
1	Bharatpur district, Nepal	2/28	ASF	12 farms affected - Over 2,800 pigs dead
1	Sheung Shui near the border with mainland China, Hong Kong	2/11	ASF	45 cases in a farm - over 100 slaughtered
1	Gangwon Province, South Korea	2/12	ASF	Outbreak in a commercial farm with over 2,000 pigs

Outbreaks described in the table above are colored according to an assigned significance score. The score is based on the identified hazard and potential to affect the US swine industry. Rank (R) Blue: 1 - no change in status; Red: 2 - needs extra attention as the situation is dynamic; Black: 3 - requires consideration or change in practices to reduce exposure to the US swine industry. A map with the location of the events reported is available at the end of this report.

African Swine Fever

EUROPE

According to an EU ADIS report, from February 9 to March 1, 17 outbreaks in domestic pigs were reported by five countries, namely Germany, Moldova, Romania, Serbia, and Ukraine. Compared to the previous month, two more countries reported outbreaks (Germany and Ukraine).

During the same period, 685 ASF outbreaks were reported in wild boars by 11 European countries (Czech Republic, Estonia, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Romania, Serbia, and Slovakia). Bulgaria, Greece, Moldova, and North Macedonia, in turn, have not reported further outbreaks. Most cases were reported in Poland (n=233), Germany (n=117), and Italy (n=102). In addition, Russia reported seven ASF outbreaks to WOA. H.



Map 1. African swine fever outbreaks distribution in domestic pigs in Europe: February 1, 2023 - March 7, 2023
(Source: FAO [EMPRES-i](#))

Regional highlights:

- **Germany | February 27: an 8th pig farm infected with ASF.** The farm is located near the city of Cottbus in the Brandenburg state and had 11 pigs on site. This brings the total of ASF outbreaks in domestic pigs in Brandenburg state to five: the first outbreak was in July 2021, when a backyard farm got infected, and the last detection in Brandenburg state happened in early July 2022; at that time, a farm of 1,300 pigs got infected in the Uckermark district. For Germany as a whole, the detection marks the 8th discovery. The other three outbreaks appear to have been one-off infections in Mecklenburg-Vorpommern, Baden-Württemberg, and Lower Saxony.
- **Romania | February 7: an outbreak was confirmed on a commercial farm in Calarasi, a county in southeast Romania that borders Bulgaria.** On a farm with a population of 16,097 pigs, eight died, and the rest were slaughtered. Nine significantly smaller outbreaks affecting 35 pigs were reported across the country.
- **Moldova | February 20: three outbreaks in domestic pigs were reported in the Leova district in the south of the country.** Thus, from February 10 to February 17, two outbreaks in the village of Tomai and one in the village of Covurlui in the Leovsky district were confirmed.

This is the first report in the region since October 2021. Meanwhile, in the Central Region, after single outbreaks, the ASF situation has recently been declared as “resolved” in Nisporeni and Orhei districts by Moldova’s authorities.

- **Italy | February 23: African swine fever is spreading among the wild boar population in the North of the country.** Since December 27, 2021, overall, 259 positive cases have been reported in Piedmont and 124 in Liguria. With the cases of Capriata d’Orba, the municipalities in which at least one positivity to ASF has been observed rises to 62. For the moment, the disease seems to be limited to wild boars in some areas of the country: Sardinia, Piedmont, Liguria, and north of Rome. Still, significant concerns exist regarding the disease reaching the commercial pig population in Lombardy and Emilia-Romagna, which could have significant consequences.

Good news for Sardinia

Historical background

The disease has been endemic on the island since 1978. Eradication programs have been underway for 40 years, and an "extraordinary plan" was launched in 2015. Over the past seven years, disease control and eradication measures have mainly targeted the animals responsible for the persistence of the virus on the island: domestic pigs, wild boars, and illegal free-ranging pigs (a specific challenge in Sardinia). Steps were also taken to follow up on several Commission audit recommendations. As a result, the number of ASF outbreaks in Sardinia has drastically decreased, as confirmed by the latest Commission audit in 2021 and by new data from the Italian authorities.

UPDATE | Lifting the embargo on the movement of pigs and pork products outside the Sardinia Region

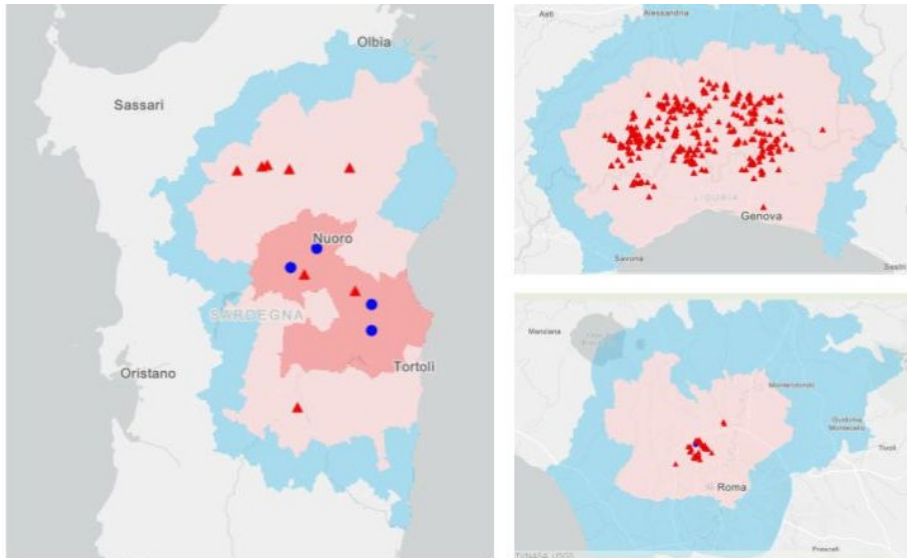
On March 3, authorities from Sardinia released a communication stating that the exceptions to the movement of pig animals and products were operational for certified farms in the areas of the island classified as not yet free from ASF according to the provisions for Sardinia by the European Commission which last December decreed the end of the total embargo, which began in 2011. It contains exceptions for the movement of live animals, slaughtering, and meat and by-products.

"A fundamental step for our companies in the livestock sector," declared the President of the Region. "(...) work has been carried out which allows us today to apply the derogations, restoring certainty to breeders and operators of veterinary services responsible for controls, in compliance with the legislation and protecting the producers, who, in recent years, have faced sacrifices to obtain certification of farms, thus contributing to the collective effort for the eradication of the virus and to the result achieved at a community level."

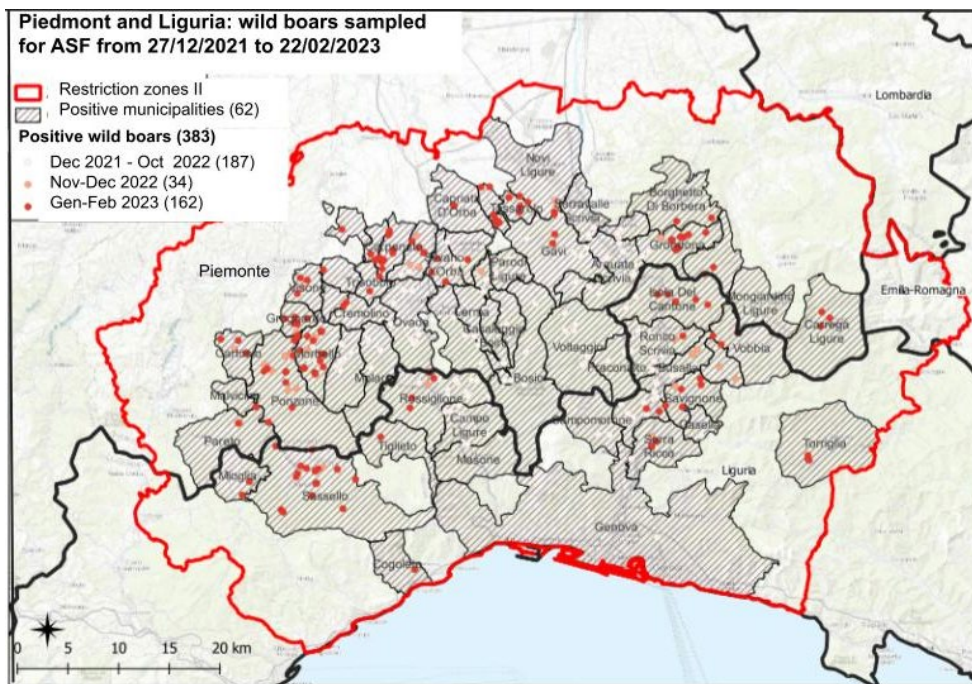
European Commission's provision

With the [implementing regulation](#) adopted on December 16, 2022, by the European Commission, the total embargo on the export of meat ends for Sardinia. The restrictive measure - caused by ASF - lasted 40 years. For the first time in decades, the trade in Sardinian pigs and pig products will be authorized in some areas without health restrictions, under the control of the competent authorities. As stated in the Brussels [press release](#), these new measures also subject other areas to lighter restrictions than the previous ones, with one localized area still remaining subject to stricter conditions on the movement of pigs and pig products from the island. According to the Minister of Agriculture and Food Sovereignty and Forestry, with the regionalization of the territory, most of Sardinia is placed outside the risk zone. The restrictions will remain only in some areas, but in these cases, the handling and marketing of the products will be regulated by guidelines being developed by the Ministry of Health in agreement with the Sardinia Region.

Map 2 shows the distribution of ASF cases in the Sardinia region between January 1, 2022, and March 7, 2023.



Map2. Confirmed ASF cases in wild boars and domestic pigs from 1/1/2022 to 7/3/2023 in Sardinia, Liguria, and Lazio regions: red triangle represents cases in wild boars, the blue circle represents outbreaks in domestic pigs (Source: [National epidemiological bulletin](#))



Map 3. Cumulative confirmed ASF cases in wild boars in Liguria and Piedmont regions (Source: [Experimental Zoophyloxy Institute](#))

ASIA

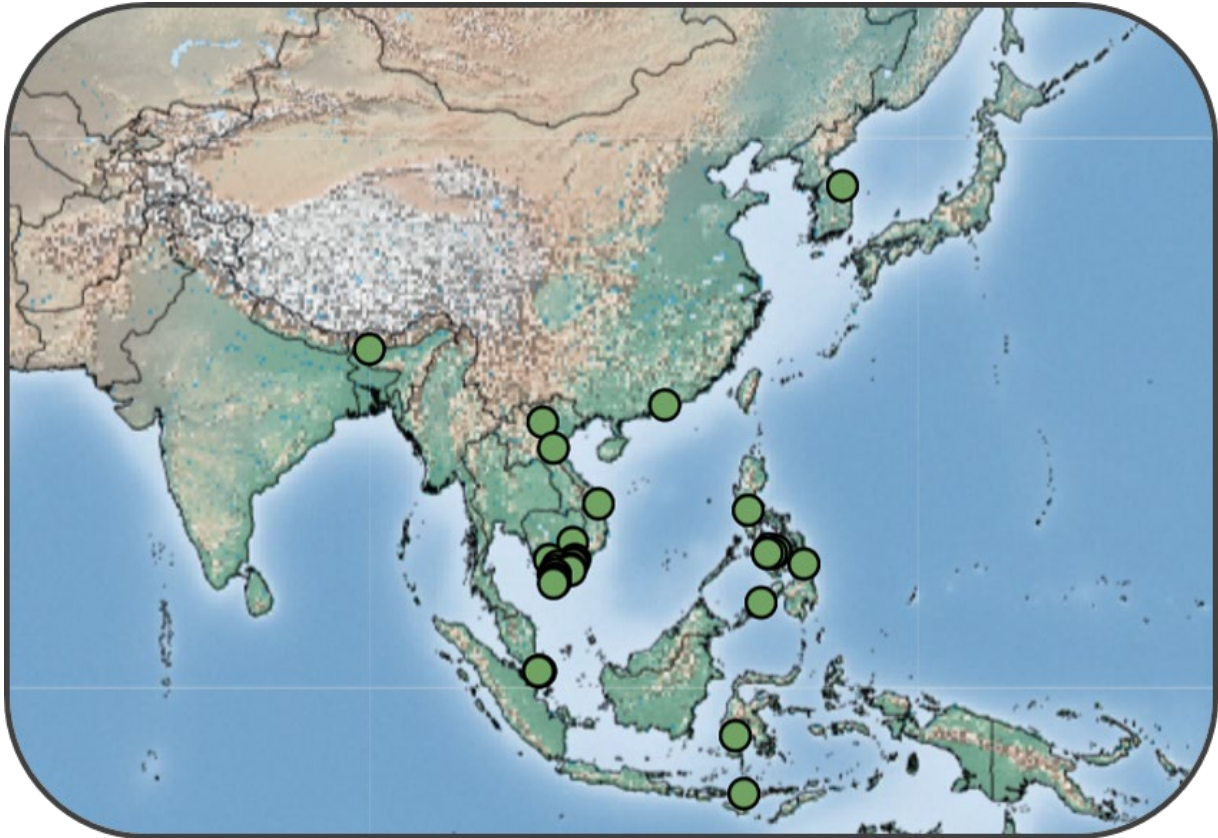
New African swine fever outbreaks in domestic pigs were reported in nine countries (Bhutan, Hong Kong Special Administrative Region, India, Indonesia, Malaysia, Nepal, The Philippines, Republic of Korea, and Vietnam) between February 4 and March 6, 2023. During this period, Singapore reported its first ASF in wild boars.

Regional highlights:

South East Asia

- **Singapore | February 7: the city-state became the 17th nation in Asia to be affected by African swine fever.** The National Parks Board (NParks) confirmed the first ASF case in a wild boar carcass found in northwestern Singapore. Wild boars are native to Singapore and can be found in nature reserves, parks, and even in some urban areas. NParks are closely monitoring the health of wild boars in these areas through a bio-surveillance system in place. According to the agency, there are no pig farms in Singapore.
- **The Philippines | February 8: three more Iloilo towns report ASF, resulting in the slaughter of 52 pigs.** Currently, a total of 21 towns in Iloilo have ASF cases, of which 16 towns are classified as red zones and five towns are categorized as pink zones. Meanwhile, ASF reaches Capiz province. Thus, on February 23, all 18 samples from a backyard farm in Barangay Canapian in the municipality of Maayon were positive as per the test conducted by the Regional Animal Diseases and Diagnostic Laboratory (RADDL). Local authorities express concern about the slow spread of the virus in Panay Island and consider it necessary to conduct outreach among the population to prevent the spread of the virus. With the inclusion of Capiz as among the ASF-infected areas, only Antique and Aklan in Panay island remain ASF-free. Aside from Iloilo and Capiz, ASF has been recorded in two municipalities in Guimaras.
- **Indonesia | February 8: in East Nusa Tenggara, 31 more pigs suddenly died, raising concerns about the spread of ASF in the region.** Since December last year, the number of pigs that died in the province has risen to 349. According to the Animal Husbandry Service official, most pig deaths were suspected to be caused by ASF. Since December 2022, the ASF virus has spread to Kupang Regency, Kupang City, Ende Regency, East Flores Regency, Sikka Regency, Southwest Sumba Regency, West Sumba Regency, and North Central Timor Regency.
- **Malaysia | February 14: three more commercial pig farms in Penang report ASF outbreaks, bringing the total number of farms infected to 30 with a total population of 68,659 pigs.** Of the three, one pig farm infected was in the Seberang Prai Selatan (SPS), and two others were in the Seberang Prai Utara (SPU) district. On Jan 13, Penang declared the ASF outbreak in the state a "disaster" after cases were reported in 11 commercial pig farms in two districts, involving 25,000 pigs. To control and prevent the spread of ASF, the department is implementing the stamping-out policy through the culling of pigs in infected or suspect farms in the infection zone. The culling of infected pigs had been carried out since Jan 5 after the first case of ASF was detected, and, as of February 14, a total of 14,385 pigs from 14 affected farms have been slaughtered.

Based on the 2022 census, there are a total of 124 pig farms in four districts in Penang, with a total population of 267,348 pigs. The supply of pork in Penang remains sufficient, with 94 commercial pig farms free from ASF with a population of 198,586 pigs.



Map 4. African swine fever outbreaks distribution in domestic pigs in Asia: February 1, 2023 - March 7, 2023
(Source: FAO [EMPRES-i](#))

- **Nepal | February 27: over 2,800 pigs have died in Bharatpur district, southern central Nepal, due to ASF.** According to the Veterinary Hospital and Livestock Services Expert Centre, the disease incurred a loss of over Rs 62 million (\$750,000), spreading to four local levels and killing at least 2,873 pigs kept in the total 12 pig farms (three in Bharatpur metropolis-3, four in Ratnanagar, three in Ichhakamana and two in Khairahani). Having been detected eight months ago, the disease was reportedly confirmed on May 16, 2022.
- **Cambodia | February 17: Consumer Protection, Competition, and Fraud Repression Directorate-General (CCF) and the General Department of Animal Health and Production destroyed 1,760kg of illegally imported pork and frozen pig organs, which was discovered to be ASF-infected.** The meat was seized in Phnom Penh. CCF discovered several premises which were storing and selling non-compliant fresh and frozen meat products, which had no clear sources.

East Asia

- **Taiwan | February 10: following ASF detection, Taiwan raises fines on pork products from Singapore.** Barbecued meat, sausages, ham, pork-based instant noodles, canned food, pork floss egg rolls, and bak kut teh soup packs are on the list of prohibited items. Those who import, bring in, or ship-in pork products from Singapore will be fined \$8,800 for the first offense, and repeat offenders will be fined \$32,797. Previously, when Taiwan named all Southeast Asian countries, including Singapore, as high-risk areas for ASF in 2019, the fine was \$332.
- **Hong Kong | February 11: ASF was detected in 32 pigs, and 45 pigs died at a local farm in Sheung Shui near the border with mainland China.** As a result, a total of 100 pigs on the

farm were slaughtered. Five pig farms within 3 kilometers of the farm were inspected, and no abnormalities were found, as well as no reports of abnormalities from pig farms outside the 3 km zone have been received. According to the Agriculture, Fisheries and Conservation Department, the infections would not affect local pork supply or operations at local slaughterhouses due to implemented biosecurity measures, such as “Daily Clearing” (all live pigs transported to the slaughterhouses have to be slaughtered within 24 hours and pig pens in different locations of the slaughterhouses have to be emptied every day, thoroughly cleaned and disinfected) and enforcement of cleaning and disinfection of live pig transport vehicles in the mainland China and local slaughterhouses. To safeguard the biosecurity of local pig farms and to prevent the spreading of pathogens amongst farms, the AFCD has carried out a series of measures to reduce the risk of disease transmission, including restricting local pig transportation vehicles to carry live pigs from only one licensed pig farm during each trip to the slaughterhouse and setting up standards to avoid spillage from local pig transportation vehicles to minimize spillage of pig wastes.

- **South Korea | February 12: a new outbreak was reported on a local farm in the eastern region of Gangwon Province, 174 kilometers east of Seoul.** Animal health authorities conducted testing on a farm of 1,950 pigs after 23 pigs had died. This year it is the fourth outbreak, following ones in Pocheon (January 5), Cheorwon (January 11), and Gimpo (January 22).

Foot-and-mouth disease

There are reports of continued FMD outbreaks in the Middle East. FMD cases have been reported in multiple susceptible species of domestic ruminants in the West Bank and Iraq. These outbreaks have been confirmed to be caused by FMD virus serotypes SAT2 and O.

MIDDLE EAST

West Bank | February 2023, [Two new FMD outbreaks](#) occurring in farms in Bethlehem and Hindaza, were reported to WOA. The outbreak in Bethlehem was first detected on February 26, 2023, on a goat farm. Eight cases were observed, and eight deaths were reported. As a measure of control, seven at-risk goats were vaccinated. The outbreak in Hindaza started on February 26, 2023, when at the death of newborn lambs, "tiger heart" was discovered at necropsy according to laboratory diagnosis. In this affected farm, 20 deaths and 30 cases were reported, all in sheep. Detailed molecular characterization of the FMD virus causing these outbreaks shows it belongs to FMD Serotype O, ME-SA/PanAsia-2 ANT-10 lineage.

Iraq | February 26, 2023. [Nine new outbreaks](#) have been reported in mixed susceptible species (domestic buffaloes, cattle, sheep, goats), bringing the total number of FMD cases to 27,910 and 231 deaths since the first case was observed on January 03, 2023, and confirmed to be caused by FMD SAT 2. These latest outbreaks were reported in the localities of Mosul, Karbala, Dayala, Aldewania, Albashrah, Baghdad, Babil, Alnajaf, and Alramadi. Local authorities are working to control 23 ongoing outbreaks throughout the country. This has particularly been made more complicated by a delay in acquiring vaccines.

Nipah Virus

Bangladesh

From January 4 to February 13, 2023, Bangladesh experienced a concerning increase in Nipah virus infection, with 11 cases (10 confirmed and one probable) detected in seven districts spanning two divisions. According to the [World Health Organization](#) (WHO), eight people died as a result of this illness.

This is the largest outbreak since 2015, when 15 cases were reported, with 11 deaths. Laboratory confirmation was possible for 10 of the cases in the current Nipah outbreak, while one was classified as probable due to a lack of available samples.

Nipah virus is a zoonotic virus that was first discovered in [Malaysia and Singapore in 1999](#) and has since spread to other countries, including Bangladesh. The first Nipah virus outbreak in Bangladesh occurred in 2001, and there have been several other outbreaks since then. In Bangladesh, the virus is primarily associated with fruit bats of the *Pteropus* genus, which are thought to be the virus's natural reservoir. Human-to-human transmission of the virus has also been reported, particularly among infected people's close contacts.

While the virus is most commonly associated with fruit bats and human-to-human transmission, pigs have been infected with the virus as well. Pigs can get the Nipah virus from infected bats or consuming contaminated feed or water. Pigs were found to play a key role in spreading the virus to humans during the outbreaks in Malaysia. Infected pigs can shed the virus through their saliva, urine, and feces, and the virus can survive for several days in the environment. This facilitated the virus's spread from pigs to humans, resulting in a high number of human cases.

Efforts have been made to prevent the spread of the Nipah virus in pigs since the outbreaks in Malaysia. Measures such as pig farm surveillance, culling infected pigs, and movement restrictions have been implemented in the past. Additionally, the development of [pig vaccines](#) has been investigated as a potential control measure. While pigs can be infected with the Nipah virus, they are not considered a natural host for the virus, and the risk of transmission from pigs to humans is low when compared to transmission from bats to humans. However, steps must be taken to prevent the virus from spreading in pig populations in order to reduce the risk of human cases.

References:

Recurrent reports reviewed

WOAH - [WAHIS interface - Immediate notifications](#)

WOAH - [WOAH Asia Regional office](#)

FAO - [ASF situation update in Asia & Pacific](#)

DEFRA - [Animal conditions international monitoring reports](#)

CAHSS - [CEZD Weekly Intelligence Report](#)

European commission - [ADIS disease overview](#)

EUROPE

Moldova

[Outbreak in Leova District](#)

[African swine fever outbreaks detected in two villages in southern Moldova](#)

[Several cases of infection of domestic pigs with ASF virus were registered in Moldova](#)

Romania

[Fourth European nation reports ASF in pigs this year](#)

Germany

[8th Outbreak in Brandenburg](#)

[ASF Germany: Small farm infected, 8th in total](#)

Italy

[New EU regulation](#)

[Sardinia derogation for areas subject to restrictions](#)

[African swine fever, the next disaster announced?](#)

[ASF: regionalized Sardinia, guidelines from the Ministry of Health](#)

[CHECKS FOR AFRICAN SWINE FEVER - Three new cases between Piedmont and Liguria](#)

ASIA

Cambodia

[Infected pork seized, burned](#)

Hong Kong

[Hong Kong reports outbreak of African Swine Fever on farm - WOA](#)

[Local pig samples test positive for ASF virus](#)

[All pigs on Ta Kwu Ling pig farm with samples](#)

[tested positive for ASF virus earlier were culled](#)

[100 pigs at Hong Kong farm culled after 32 cases of African swine fever detected](#)

Indonesia

[Deaths of pigs in Indonesian province spark swine fever concerns](#)

Bangladesh

[outbreak in Bangladesh](#)

[Nipah in Malaysia and Singapore-Humans and pigs infected](#)

[Vaccines against Nipah in Pigs](#)

Malaysia

[Three more commercial pig farms in Penang report ASF cases](#)

[30 Penang pig farms now affected by African swine fever](#)

[Over 14,000 pigs culled as African Swine Fever hits 30 commercial farms in Penang](#)

Nepal

[Over 2,800 pigs die due to swine fever](#)

Singapore

[African swine fever virus detected in wild boar carcass: NParks](#)

[Wild boar carcass in S'pore found with African](#)

[Swine Fever virus: NParks](#)

[Wild boar carcass in Singapore tests positive for](#)

[African swine fever](#)

South Korea

[S. Korea reports new swine fever case](#)

[Korea Reports 4th Case of African Swine Fever This Year](#)

Taiwan

[Taiwan raises fine for bringing in pork products from S'pore following swine fever detection](#)

[Taiwan ups fines on pork from Singapore following ASF case](#)

The Philippines

[ASF cases detected in 3 more Iloilo towns](#)

[Zarraga now ASF red zone](#)

[DA boosts public awareness as ASF spreads to Capiz](#)

MIDDLE EAST**West Bank**

[FMD in Bethlehem and Hindaza](#)

Iraq

[Nine new FMD outbreaks countrywide](#)

The GSDMR team compiles information drawn from multiple national (Ministries of Agriculture or Livestock, Local governments, and international sources (WOAH, FAO, DEFRA, EC, etc.), as well as peer-reviewed scientific articles. The team makes every effort to ensure but does not guarantee the accuracy, completeness, or authenticity of the information. The designation employed and the presentation of material on maps and graphics do not imply the expression of any opinion whatsoever on the part of the GSDMR team concerning the legal or constitutional status of any country, territory, or sea area or concerning the delimitation of frontiers.

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