

# Swine Disease Global Surveillance Report

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

## PROJECT

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

Bi-monthly reports are created based on the systematic 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 is then published in the report.

***Disclaimer:** 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.*



UNIVERSITY OF MINNESOTA



Swine Health Information Center

### *UMN Technical coordination*

Eliana Paladino<sup>1</sup>, Auguste Brihn, Sol Perez,  
Andres Perez<sup>2</sup>

### *Expert Focus group*

Jerry Torrison, Montserrat Torremorell,  
Cesar Corzo, Paul Sundberg, John Deen

<sup>1</sup>Project coordinator: [epaladin@umn.edu](mailto:epaladin@umn.edu)

<sup>2</sup>Principal investigator: [aperez@umn.edu](mailto:aperez@umn.edu)  
[www.cahfs.umn.edu](http://www.cahfs.umn.edu)

Current and previous reports

[www.swinehealth.org/global-disease-surveillance-reports/](http://www.swinehealth.org/global-disease-surveillance-reports/)

**Spontaneous reporting  
TOOL**



## Swine Disease Global Surveillance Report

Monday, March 4, 2019 – Monday, April 1, 2019

### Report highlights:

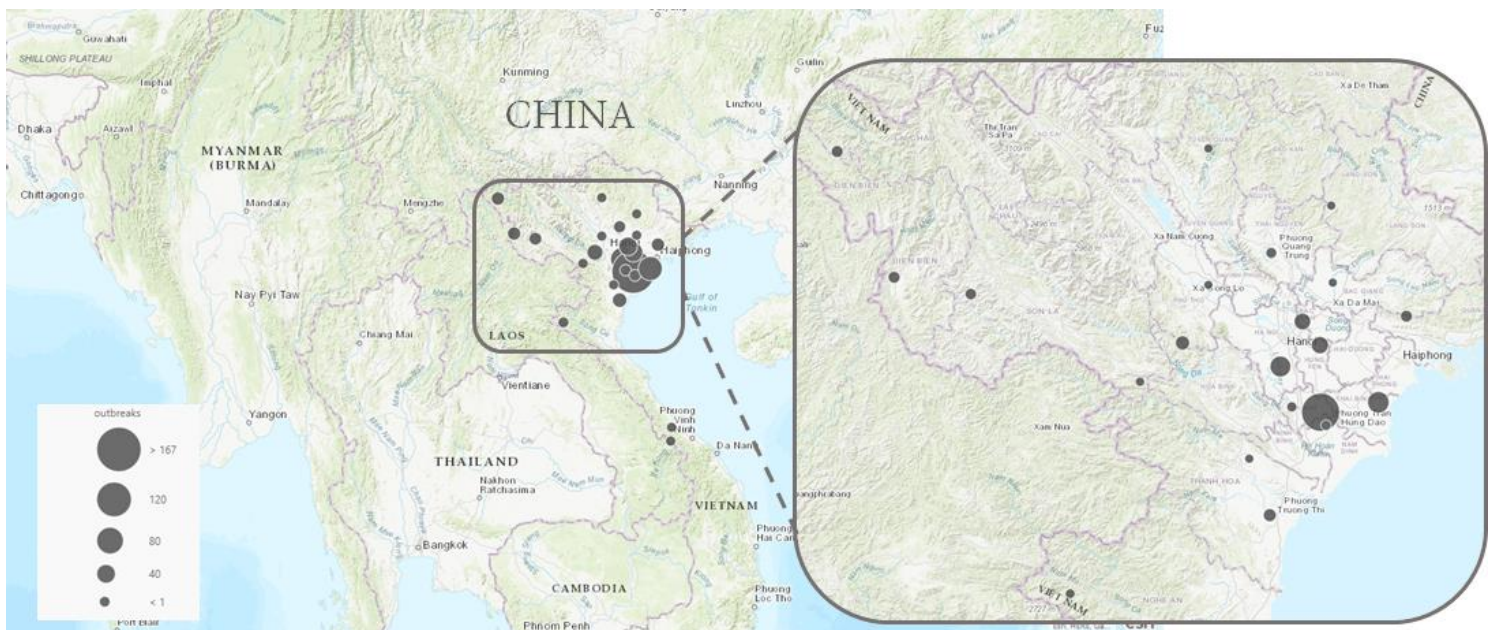
- Number of reported ASF outbreaks increase in Vietnam
- USDA seized 1 million pounds of contraband Chinese pork
- Risk analysis updated - introduction of ASF into the US through pork smuggled in air passengers' luggage
- FMD expands in the Korean peninsula
- Moldova reported new ASF outbreaks
- World maps and links to country-specific information are included, for the first time, in this report

### AFRICAN SWINE FEVER

#### *Asia*

#### VIETNAM

The United Nations Food and Agriculture Organization (FAO) advised Vietnam to declare a national emergency because of the large number of African Swine Fever (ASF) outbreaks reported. Pork accounts for three quarters of total meat consumption in Vietnam. Most of Vietnam's 30 million farm-raised pigs are consumed domestically and the loss of pigs due to ASF creates a heavy economic burden. China, in response to the outbreaks in Vietnam, banned the import of pigs and pork products from Vietnam.



Map 1. 23 Vietnamese provinces and cities affected by ASF since the first outbreak was reported on 2/19/19. Circle sizes are proportional to the number of outbreaks reported in each province: Hung Yen, Thai Binh, Thanh Hoa, Ha Nam, Hai Duong, Hoa Binh, Dien Bien, Thai Nguyen, Quang Ninh, Ninh Binh, Nam Dinh, Bac Kan, Son La, Nghe An, Lang Son, Bac Ninh, Thua Thien-Hue, Lai Chau, Bac Giang, Quang Tri, Vinh Phuc, Hanoi, Hai Phong.

Since the Ministry of Agriculture and Rural Development (MARD) confirmed ASF outbreak on February 19, 2019, a total of 556 ASF outbreaks have been reported in 23 out of 58 provinces, and more than 89,600 pigs have been culled. In response to these outbreaks, Vietnam has issued strict movement controls and depopulation measures in accordance with the emergency response action plan. In addition, there is growing concern over the spread of ASF to bordering regions, particularly Cambodia. Authorities in Cambodia have called for officials to remain on high alert. Regional alarm keeps growing, with many countries, including Japan and Thailand, strengthening their port of entry (airports, harbors, etc) procedures to keep the disease out of these countries.

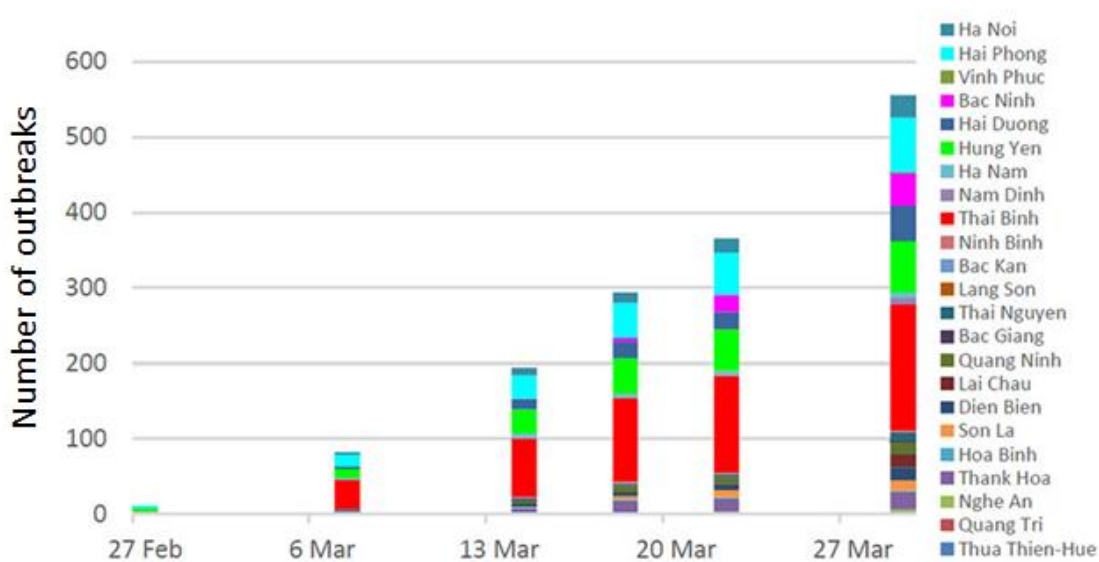


Figure 1. Source: FAO: Situation in Asia update [LINK](#)

### CHINA

Chinese authorities have communicated that the country's infection had been brought under control. Still, most analysts find it unlikely given the high density of domestic pigs in China over a large geographical space, with a high proportion of small to medium size pig farms. Concern keeps growing over the likelihood of under-reporting. On this regard, Ted McKinney, the under-secretary for trade and foreign agricultural affairs at the United States Department of Agriculture (USDA), said he believes cases of African swine fever (ASF) are not being reported and that the epidemic in China is much more extensive than reported ([link](#)).

In March, new outbreaks have been reported in Shaanxi, Sichuan, Guangxi, and Chongqing provinces, and ASF virus has been detected in more pork products. New guidelines have been released by Chinese authorities for slaughterhouses. Slaughterhouses will have to put in place the procedures to conduct self-

inspection based on on-site diagnostics using PCR testing. The authorities set different deadlines, depending on the size and importance of the slaughterhouses (April 1: slaughterhouses doing cross-provincial sales of pig products, having over 100,000 head per year, and integrated pig slaughtering and processing enterprises; May 1: slaughterhouses having over 50,000 head per year; July 1: all other slaughter companies) to fulfill the infrastructure and diagnostic capacity requirements. In parallel, authorities at the provincial level are intending to promote restocking of big farms again with the release of temporary subsidies, as the stock in key regions has been dramatically affected. As an example, in Shandong province, northern China's biggest producer of hogs (7 percent of all hogs sent to slaughterhouses), the stock of breeding pigs plunged 41 percent in the seven months to February.

### ***United States***

On Friday, March 15, the US Customs and Border Protection (CBP) agency seized roughly 1 million pounds of pork products attempting to be smuggled into the US from China. CBP seized more than 50 shipping containers at a New Jersey port before they could enter the US. This is the largest agricultural seizure in US history according to the director of CBP field operations.

It has been estimated that if ASF was detected in the United States, over \$10 billion in estimated damage could occur in the first year.

The Newark port of entry is one of the busiest in the country and sees thousands of containers pass through it every day. USDA is continuing to investigate the event and once all material has been inspected the products will be incinerated.

- ***Risk analysis updated - Introduction of ASF into the US through Pork Smuggled in Air Passengers' Luggage***

An analysis conducted by the Center for Animal Health and Food Safety, College of Veterinary Medicine, University of Minnesota (OIE collaborating center on capacity building) and the Universidad Complutense de Madrid, Spain (OIE reference laboratory for ASF) estimated the risk for introduction of ASF virus into the US through smuggling of pork in air passengers' luggage. Results suggest the mean risk of ASF virus introduction into the US in this way has increased 183 percent, compared to the risk estimated before the disease spread into China, East Asia, and Western Europe in 2018 and 2019.

Results also suggest there is a high risk that ASF virus was currently reaching US airports in air passengers' luggage, prior to Customs inspection, which is consistent with the detection of ASF virus in seized pork in a number of Australian and Asian airports. Likely, the risk decreases substantially after Customs inspection. Most of the risk (greater than 50 percent) was associated with flights originated from China and Hong Kong, followed by the Russian Federation (27 percent).

Data showed that five airports account for greater than 90 percent of the risk: Newark (New Jersey), George Bush (Houston), Los Angeles (California), John F. Kennedy (New York), and San Jose (California).

Results suggest the risk for ASF virus introduction into the US via smuggling of pork in air passengers' luggage has dramatically increased in 2018 and 2019, compared to previous years. This data will help to inform surveillance strategies for the disease in the US, with the ultimate objective of preventing, or mitigating, the impact of a hypothetical ASF virus incursion into the country.

On this regard, lately, USDA has released several communicational resources (e.g. [VIDEO](#)) regarding current control and inspection procedures at points of entry available at [www.aphis.usda.gov/travel](http://www.aphis.usda.gov/travel).

- **Europe**

On March 18, Moldova reported its first ASF outbreak since July 2017. The outbreak is located in the autonomous region of Gagauzia, in the south of the country. Poland and Romania also continue to report outbreaks, involving both wild boar and small backyard farms.

The outbreak in wild boar in Belgium has reached a total of 708 infected animals. In March, 83 positive wild boars were identified, a much lower number compared to February, when 217 cases were reported. Still, authorities in Luxembourg have decided to build a fence of 8 km that will run along the cycling route to the south of the town of Steinfort which shares borders with Belgium, to keep out the wild boar coming from the periphery of the affected area. Also, Luxembourg's government communicated it was studying whether to start a "targeted" cull of boar in the area. Worthy of mention, surveillance efforts testing dead wild boar in the area (total of 131 tests carried out) have come back negative so far.

## **FOOT AND MOUTH DISEASE**

### *SOUTH AND NORTH KOREA*

In the wake of the foot and mouth disease (FMD) outbreak on three farms in South Korea early this year, there have been reports that North Korean livestock have been dealing with FMD since early January. Multiple sources across multiple regions have reported FMD has led to the death of many cattle. Initial thoughts during the outbreak were that cows were dying due to severe malnutrition but as the number of deaths increased, a veterinary sanitary agency concluded that it was FMD. South Korean intelligence is monitoring the spread of disease in North Korea and the country's response.

When the disease was first detected, a nationwide transportation ban on cloven-hoofed animals was issued and preventative culling occurred on infected premises. The Ministry of Agriculture also initiated a nationwide vaccination campaign for all cows and carried out disinfection measures focusing on livestock farms and transportation routes. North Korea also appears to be using quarantine methods and culling to control outbreaks.

- *FMD transmission modeling report - preparedness*

On February 25, an [article](#) was published reporting results that demonstrate that the transmission of FMD in swine occurred approximately one day prior to the development of visible signs of disease. *"Updated disease state durations were incorporated into a simulation model to examine the importance of addressing preclinical transmission in the face of robust response measures. Simulation of FMD outbreaks in the US pig production sector demonstrated that including a preclinical infectious period of one day would result in a 40 percent increase in the median number of farms affected (166 additional farms and 664,912 pigs euthanized) compared to the scenario of no preclinical transmission, assuming suboptimal outbreak response".* The authors (from USDA; CEAH, APHIS; PIADC, ORISE; SBIDER, UK; VPM, UMN), highlight the significance of these findings is demonstrate the importance of *"understanding the relationships between proxy measures of disease status and infectiousness, and the subsequent value of*



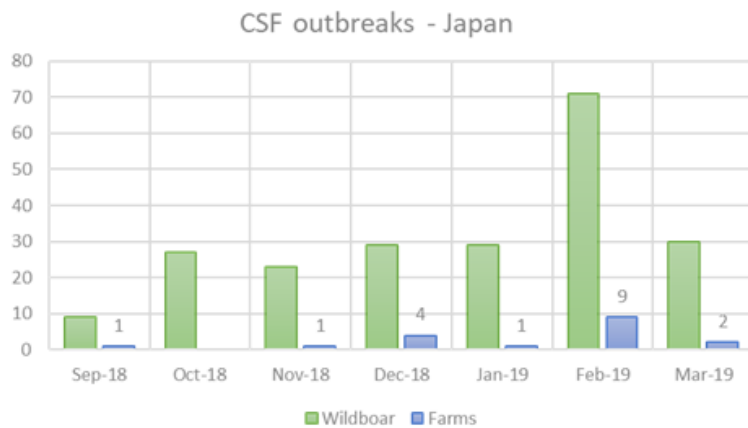
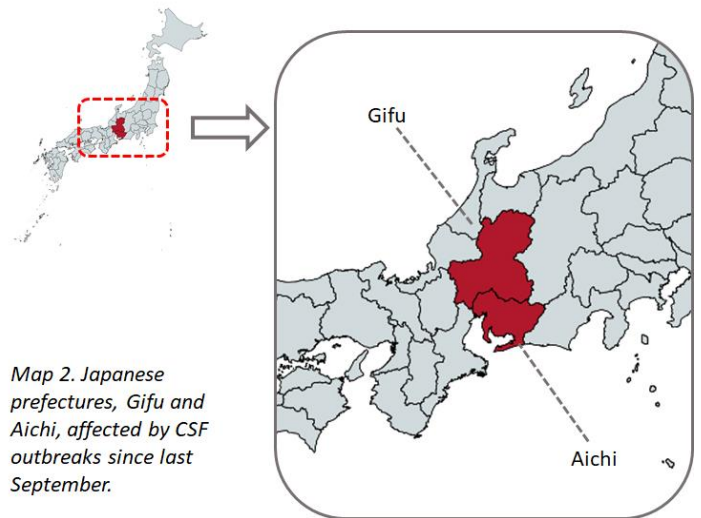
incorporating these detailed parameters into disease spread models.” This improved understanding of the disease dynamics may lead to improved approaches to surveillance and diagnostic testing to further refine control measures.

**CLASSICAL SWINE FEVER**

**JAPAN**

In March, after the alarming rise of cases during February, Gifu and Aichi prefectures continued reporting new outbreaks, both in wild boars and commercial farms.

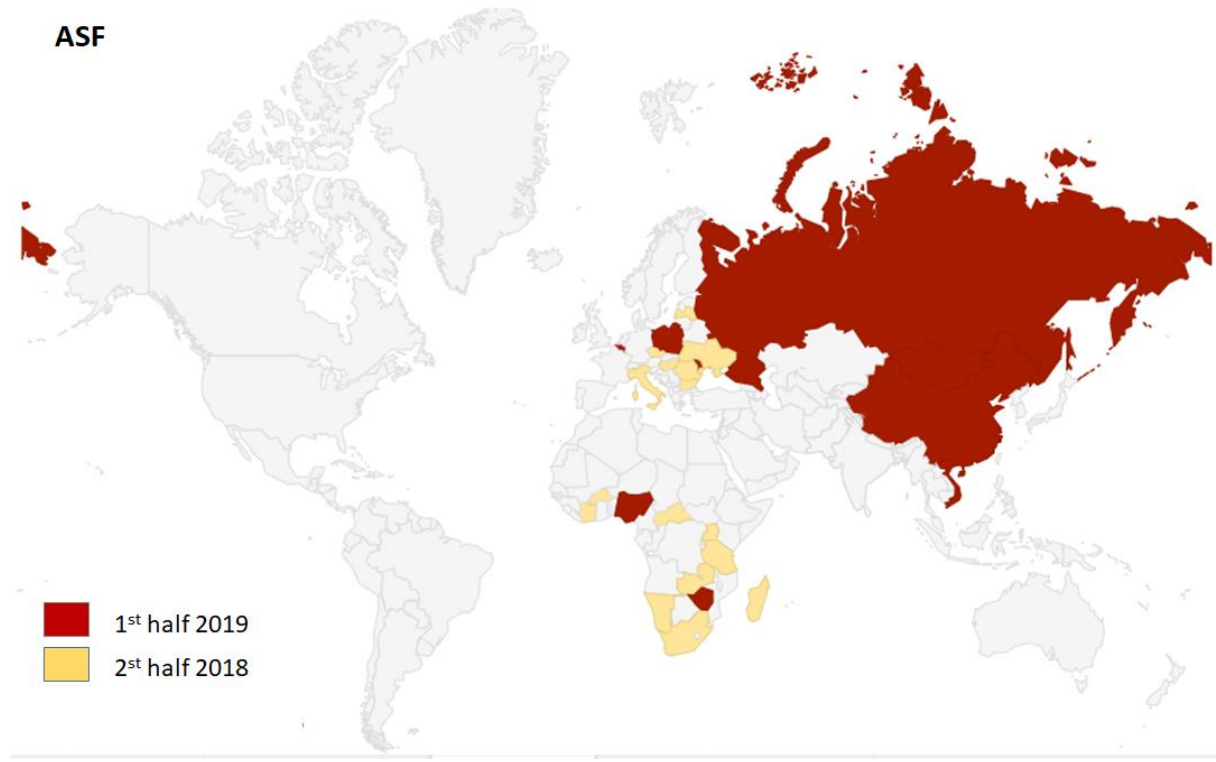
On March 27 and 29, authorities culled about 4,100 and 2,400 pigs in two separate locations in central Japan following the confirmation of two more cases of swine fever at farms in the region, the central government said. Aichi prefectural government officials began vaccinating wild boars in an effort to prevent the spread of the disease. This is Japan’s first attempt at vaccinating wild animals in the country. Five more rounds of vaccination work will be conducted by February 2020, prefectural officials said.



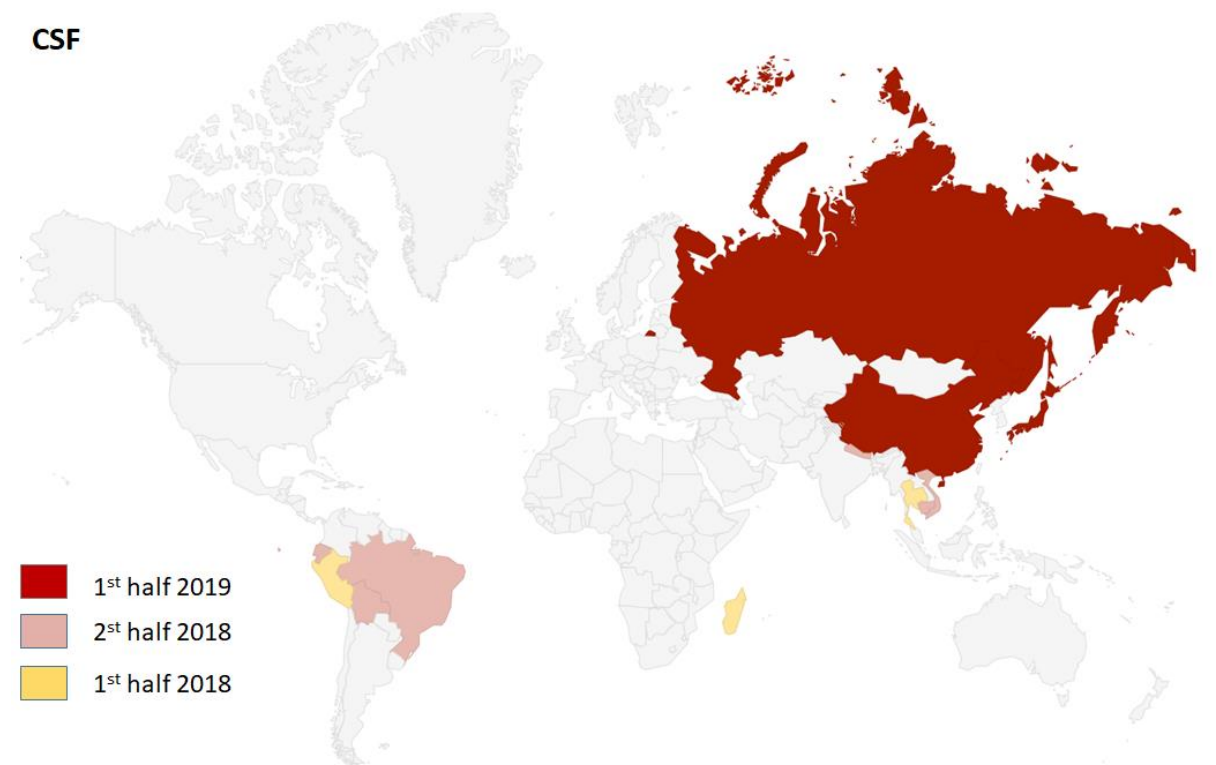
Total number of animal destroyed by month	
Sep-18	610
Oct-18	0
Nov-18	23
Dec-18	8071
Jan-19	1662
Feb-19	36215
Mar-19	5144

Figure 2. CSF outbreaks in Japan. Each column shows the total number of reported outbreaks in wild boar or domestic pigs since September. Table on the right shows the number of destroyed animals at commercial farms.

**Disease distribution maps - officially reported information**

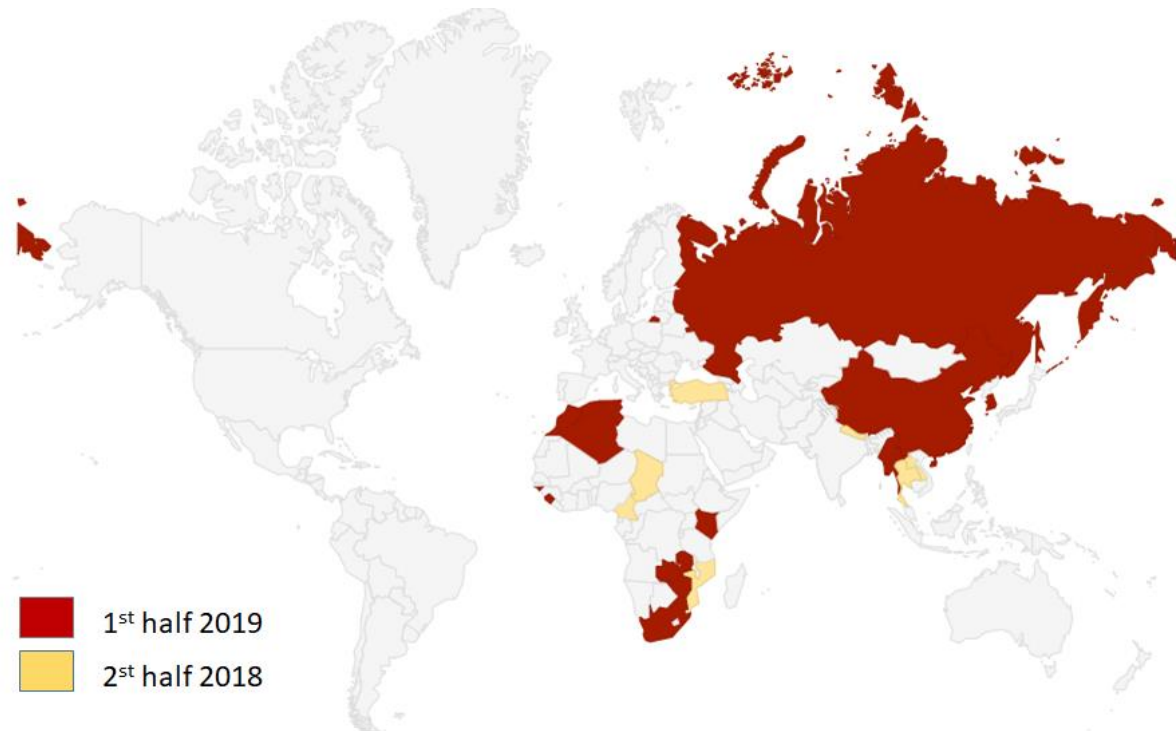


*Map 1. Current ASF distribution - source OIE*



*Map 2. Current CSF distribution - source OIE*

**FMD**



Map 3. Current FMD distribution - source OIE

Maps 1, 2, 3: Maps show the presence of disease at the national based on OIE six-month reports. You can see the global situation at national level; if you want to zoom in on a specific region, country or locality follow this [LINK](#) to the OIE website and choose the disease and time frame you are interested in. This map does not display information from immediate notifications and follow-up reports from OIE. To see information from immediate notifications and follow-up reports, please use the [disease outbreaks maps](#).

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