

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 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 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.



UNIVERSITY OF MINNESOTA



University of Minnesota Technical Coordination

Sol Perez¹, Auguste Brihn

Andres Perez²

Expert Focus group

Jerry Torrison, Montserrat Torremorell,

Cesar Corzo, Paul Sundberg, John Deen

¹Project coordinator. E-mail: mperezag@umn.edu

²Principal investigator. E-mail: aperez@umn.edu

www.cahfs.umn.edu

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www.swinehealth.org/global-disease-surveillance-reports/

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Swine Disease Global Surveillance Report

Tuesday, April 6, 2021 – Monday, May 3, 2021

Report Highlights

- **Philippines in the race for an African swine fever (ASF) vaccine:** in collaboration with Zoetis Philippines authorities have launched their first ASF vaccine trials
- **ASF in China:** Chinese authorities launch a regionalization strategy to control ASF
- **Australia border surveillance:** Seized pork products tested positive for ASF and foot-and-mouth disease (FMD)

MAY OUTBREAKS BRIEF

R	Location	Date	Disease	Impact
1	3 districts in Mizoram state, India	4/4	ASF	Over 700 pigs died.
1	Xinjiang province, China	4/5	ASF	599 pigs destroyed.
1	Dead infected pig washed ashore in New Taipei City, Taiwan	4/6	ASF	Authorities have begun testing hog herds. 11 piggeries with 2,719 head. Over 6,448 tested negative for ASF.
2	International mail centers, Australia	4/7	ASF/FMD	Over 20% of seized pork products tested positive for ASF
1	2 districts, Nagaland State, India	4/17	ASF	NA
	Nara City, Gunma prefecture, Japan	4/19	CSF	2 CSF outbreaks in pig farms. Over 1,202 head culled.
1	Hongcheon-gun county, Gangwon province, South Korea	4/20	ASF	The first case of ASF in the county. As of April 27, 1401 ASF cases reported in the country.
1	Detva, Zvolen and Stara Libovna (eastern and southern), Slovakia	4/20	ASF	New districts. Detection in wild boar.
	Banska Bystrica, Romania	4/22	ASF	25,000 pigs culled.
	Free State, and Gauteng province, South Africa	4/26	ASF	5 new outbreaks. 584 dead animals. 6,368 pigs culled.

1	Baotou City, Inner Mongolia region, China	4/29	ASF	432 pigs destroyed.
1	Koshi, East, Nepal	4/17	PRRS	First report of PRRS in the country. 66 pigs dead so far.

The outbreaks described in the table above are colored according to an assigned significance score. The score is based on the identified hazard and potential it has to 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. Map with the location of the events reported is available at the end of this report.

African Swine Fever

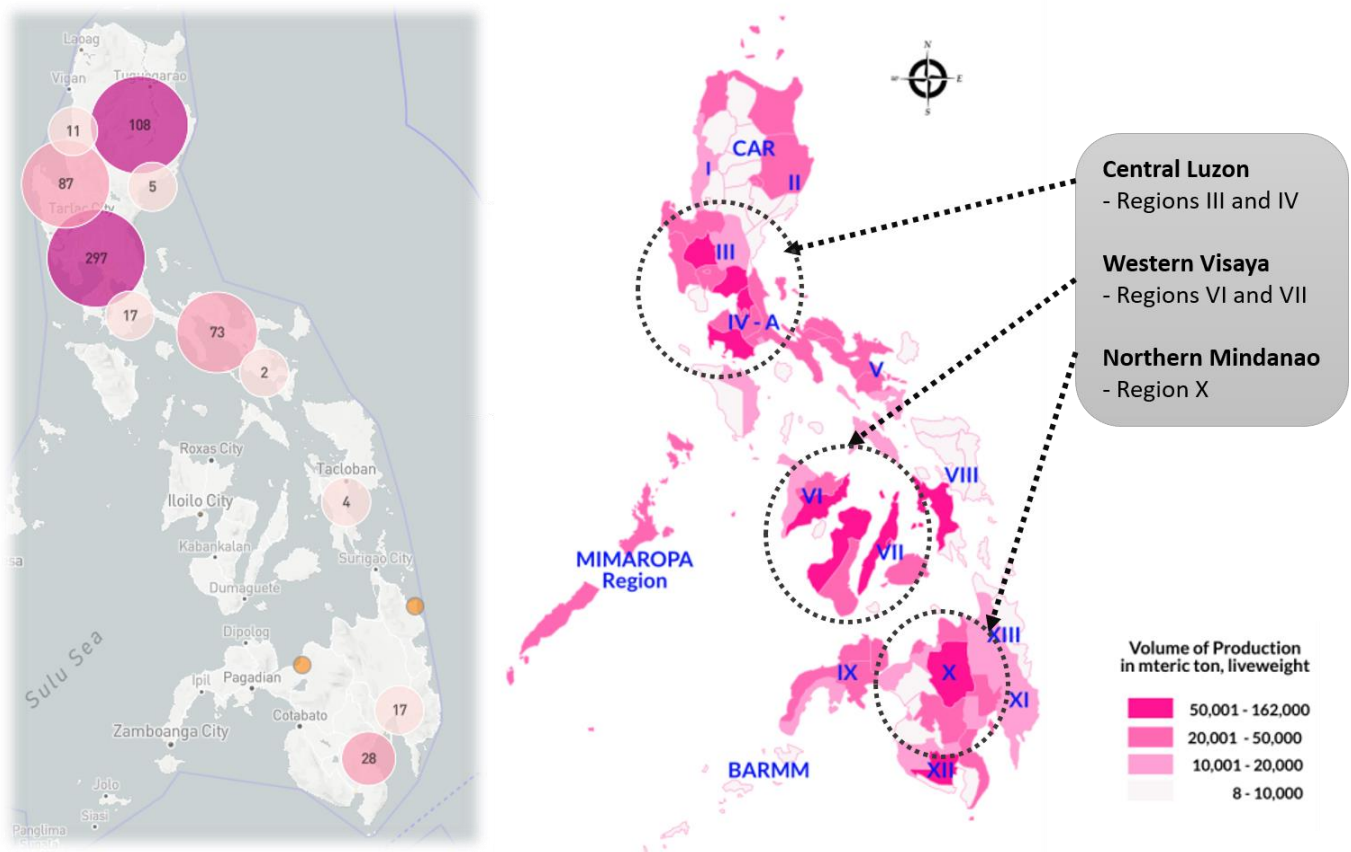
ASIA

In April, **six countries** - China, Indonesia, South Korea, the Philippines, Malaysia, and India - reported new ASF outbreaks. Currently, there are over 1400 ongoing official outbreaks across 14 countries.

The Philippines

On April 23, the Department of Agriculture-Bureau of Animal Industry (DA-BAI) launched the initial ASF vaccine trials in areas previously affected by the disease.

In a statement, the DA-BAI said the vaccine trials design were done in collaboration with a US vaccine company Zoetis. The Agriculture Secretary said the ASF vaccine trials started in 10 commercial swine farms. Vaccine trials will be conducted and monitored by DA-BAI personnel for 84 days, in line with the current protocols set by the government technical working group, the vaccine manufacturer, and Zoetis Philippines Inc.



Map 1. ASF in the Philippines. Left: distribution of reported outbreaks as of May 3. Right: Distribution of pig population by regions.

As of April 16, approximately 80% (389 of 493 cities) of cities and municipalities affected by ASF have not reported new outbreaks in more than 90 days. Furthermore, according to official reports, the number of ASF outbreaks in the country has gone down, from 3060 in the third quarter of 2020 to only 935 in the first quarter of 2021. Overall, since the confirmation of the first ASF outbreak in July 2019,

ASF has spread to over 40 provinces (total = 81) causing a loss of over 3 million pigs (total pig population is around 13 million head).

Background

In October 2018, the Agricultural Research Service (ARS) of the USDA sought comments on its plan to grant Zoetis an exclusive license to develop a vaccine to control ASF.

In September 2019, a non-exclusive license agreement between Zoetis and the USDA for the development and commercial production of ASF vaccines.

- The agreement with USDA ARS gives Zoetis access to three patents related to ASF live attenuated vaccine strains ([Link 1](#), [Link 2](#)).
- USDA-ARS has conducted proof of concept studies that have demonstrated both safety and efficacy at various dose levels.

Last February, the DA-BAI issued a special order creating a technical working committee to inform the development and deployment of an ASF vaccine. The committee is working with international partners, such as USDA and Pirbright Institute (UK), to coordinate the licensing, material transfer, development, and manufacture of the ASF vaccine in the country. In this context, it is also facilitating the clinical trials of the ASF vaccine candidates to ensure the safety and efficacy, and eventual registration of such.

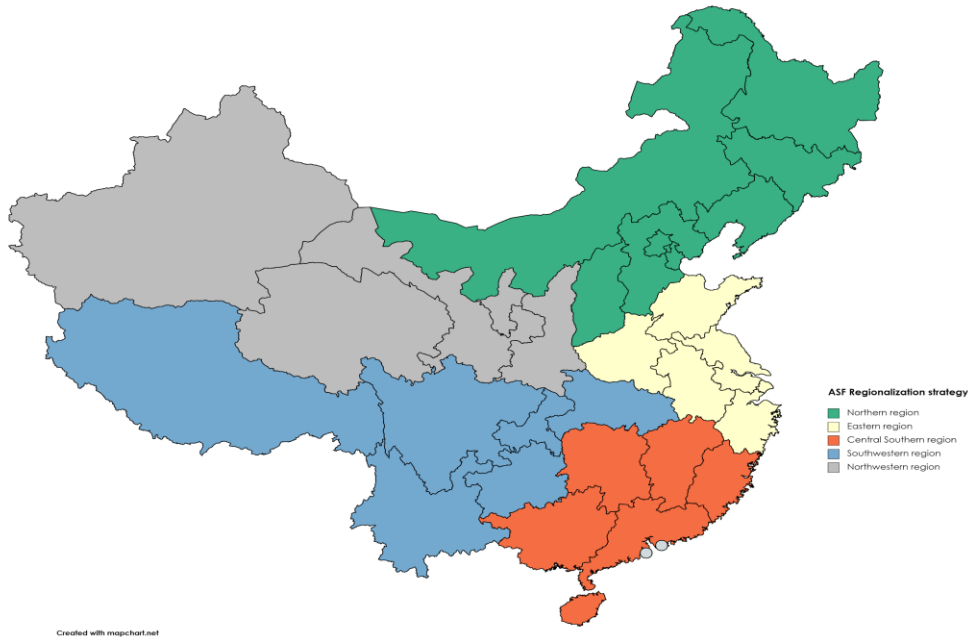
China

On April 21, the Chinese agriculture ministry issued a plan dividing the country into five regions (Map 2) to be charged with greater responsibility to prevent and control ASF. Authorities had previously piloted the regional control system in six provinces in the south. This is in response to a severe wave of outbreaks in northern China. The extent of the disease's resurgence in the first quarter of 2021 after more than a year of declining outbreaks, is a significant setback to China's efforts to recover its hog herds. Shandong and Hebei provinces, in northern China, and Henan province (central region), the country's third-biggest hog-producing province, were particularly affected (20-25% of the herd).

The new regional offices will be responsible for coordinating and supervising regional activities. In the first round, the leading role will be assumed by the major pig-producing provinces of each region, namely Liaoning, Shandong, Sichuan, and Shaanxi (Map 2).

Some key points of the strategy:

- Strengthen the supervision of live pig transportation: Live pigs will not be allowed across the boundaries.
- Promote the creation of epidemic-free areas.
- Close inter-provincial animal health supervision and cooperation in the region, explore the establishment of joint law enforcement work mechanisms to control animal trafficking.
- Speed up the transformation and upgrading of the slaughter industry.
- Gradually build a cold chain logistics infrastructure network, connecting production and sales - distribution system.



Map 2. China ASF regionalization

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Australia

Again, ASF and FMD genomic material has been detected in pork products seized at Australia’s international mail centers.

Pork products were seized at international mail centers in **Brisbane, Perth, Sydney, Melbourne over two, two-week periods** over recent holidays.

Overall:

- 24% of samples tested positive for ASF virus fragments
- 1% tested positive for FMD virus fragments.



The Australian Minister of Agriculture reported these results:

<i>Period Virus</i>	ASF	FMD
December 2020	20% (19/94)	0% (0/94)
January/February 2021	28% (29/104)	2% (2/104)

The Australian Government has stepped up its biosecurity efforts through a \$66.6 million ASF package, which has ramped up interventions at the border, targeted operations to detect fraudulently labeled imported products, and testing more products.

It is important to remark that these results do not confirm that *live infectious virus* was present but demonstrate the feasibility of that introduction pathway.

Additional points:

- Between November 5, 2018, and December 31, 2020, **42.8 tonnes** of pork products were intercepted on air travelers, and **9.4 tonnes** were intercepted in mail items at the Australian border.
- In the previous testing (September 2019) of seized pork samples, **48% tested positive for ASF virus fragments**; however, samples were from both the international traveler and mail pathways.

EUROPE

In April, **three countries** - Poland, Romania, and Ukraine (82 cases) - reported new ASF outbreaks in pigs. Since the beginning of 2021, these countries have registered 350 outbreaks in farms.

Since the start of 2021, across 10 countries, the region has registered over 5000 cases in wild boar (28/4_EC ADNS disease outbreaks report; Figure 1), compared with 2,502 cases reported during the same period of 2020.

If the report frequency documented in the first third of the year remains still, the final count of ASF cases will even or surpass the total of 2020 outbreaks in many of these countries.

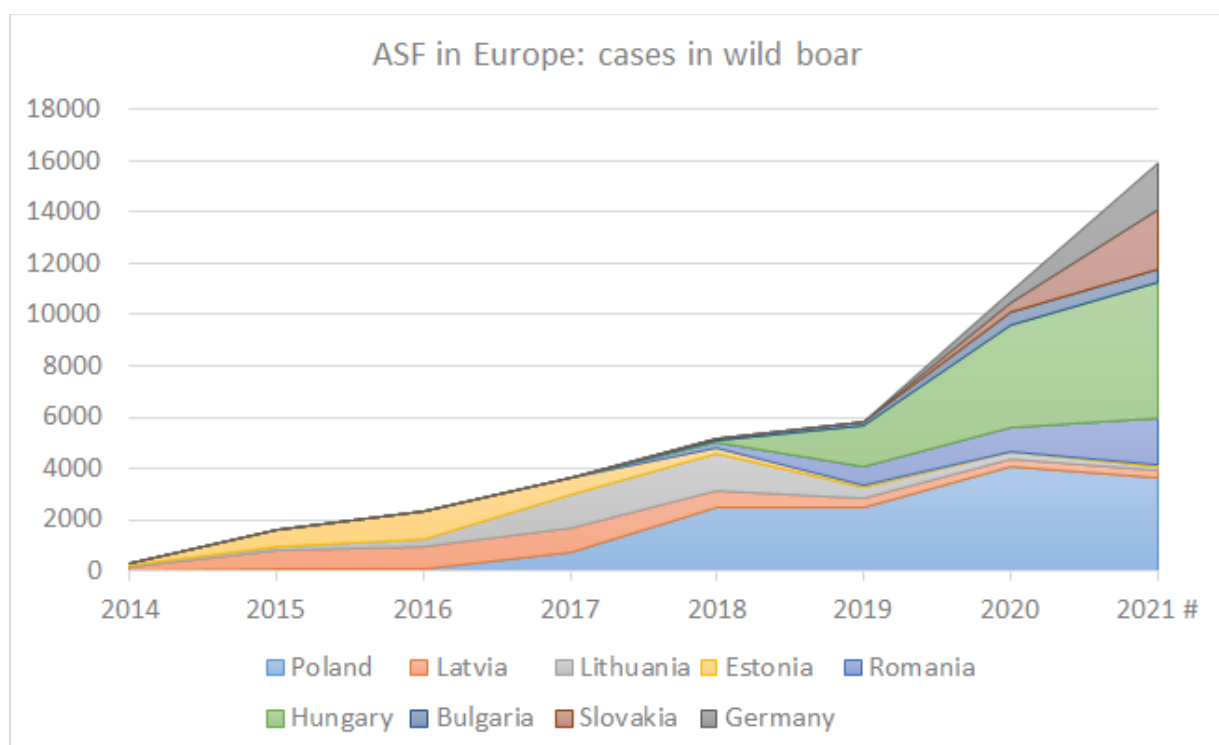


Figure 1. Timeline of ASF outbreaks in wild boar in European countries

Slovakia

In mid-April, Slovakian authorities reported that ASF has spread into three new districts, making a total of 18 districts (total = 79) affected by the disease since the first report in July 2019. Since then, 2351 cases in wild boar and 28 in domestic pigs have been reported.

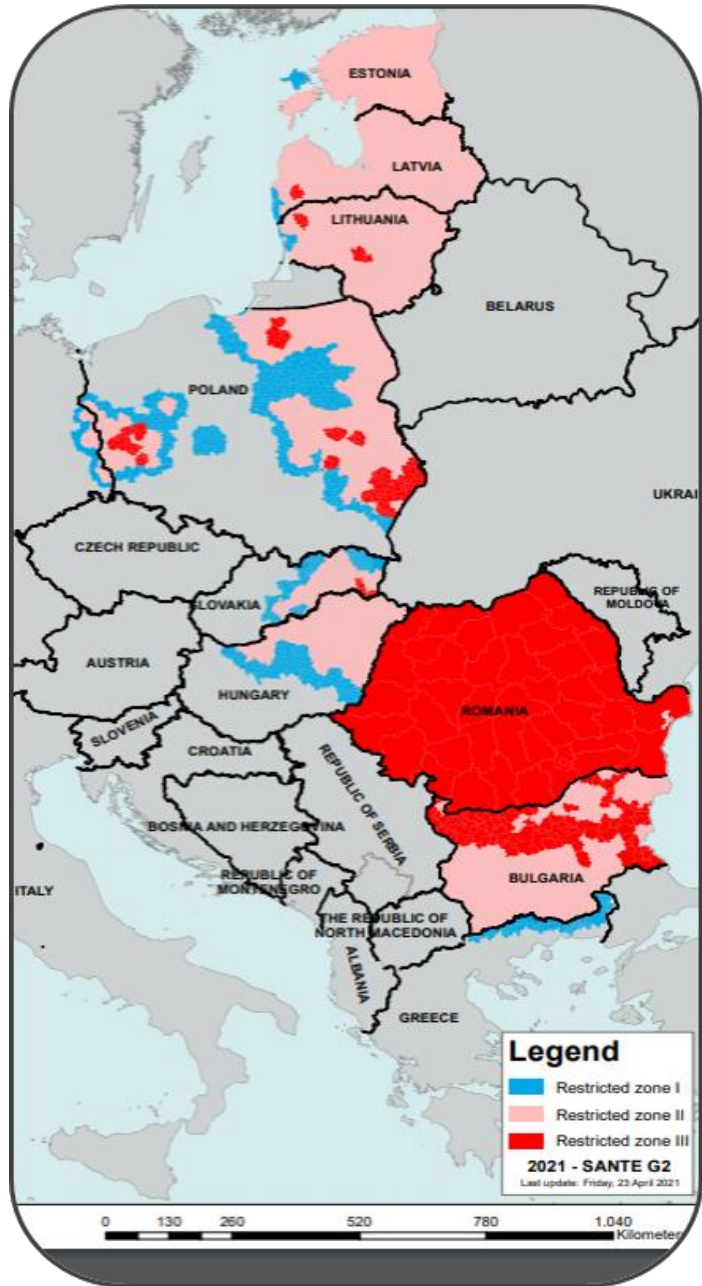
Remarkably, there have not been new cases in domestic pigs since September 2019.

The Ministry of Agriculture and Rural Development (MARD) spokesman stated that the existing concern is about the deteriorating situation in neighboring countries (Map 4), which increases the risk of ASF reintroductions.

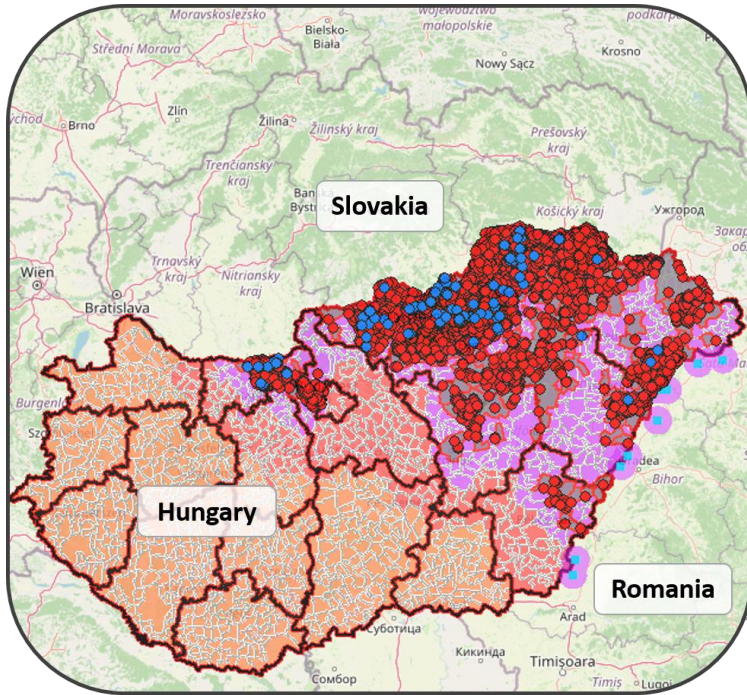
Preparedness moving forward

In another effort to limit the impact of the disease, the MARD also launched the so-called porcine amnesty to reduce the risk of ASF transmission between unregistered pig farms. Farmers were allowed to register their unregistered animals without the threat of any sanction under current legislation.

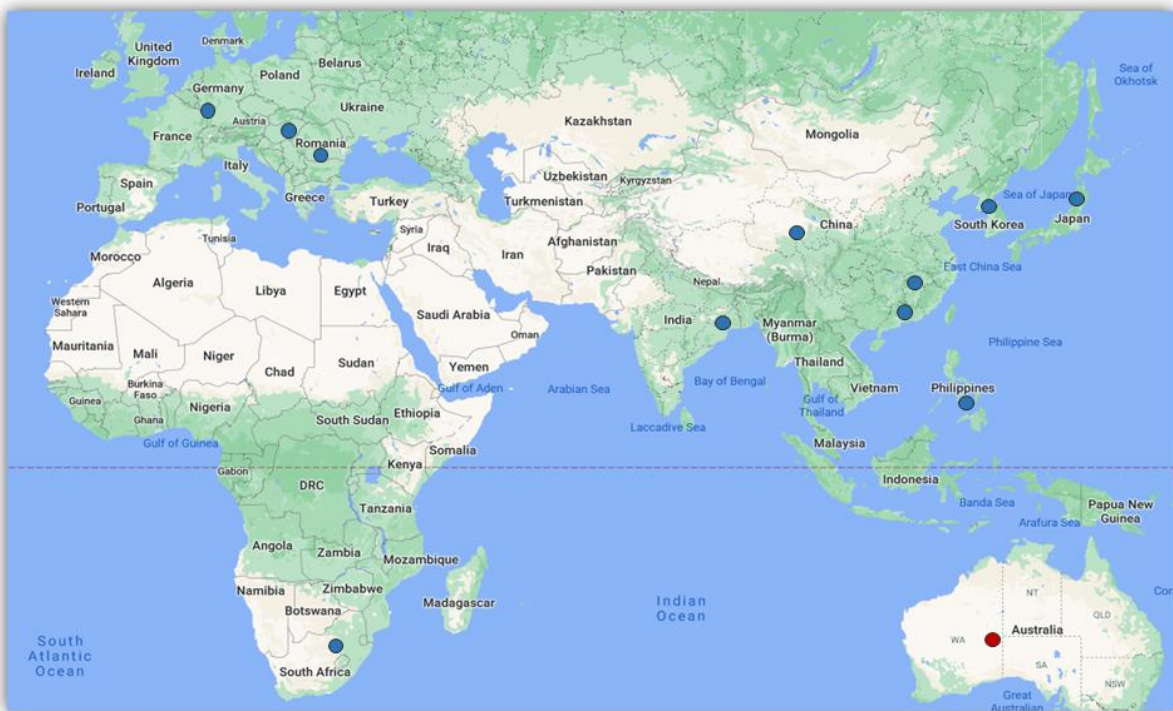
This strategy increased the number of registered pig farms, from approximately 9,000 to 32,000.



Map 3. ASF Zoning measures in the EU, April 21, 2021 (Source: EU-ADNS [link](#))



Map 4. Example of Slovakia neighbor countries: Hungary's ASF reports across the Slovakia border. Blue: Outbreaks reported in the last month. Red: previous reports.



Map 5. Location of the outbreaks reported throughout December. 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

References:
Recurrent reports reviewed and included

OIE - [WAHIS interface - Immediate notifications](#)
OIE - [OIE Asia Regional office](#)
DEFRA - [Animal diseases international monitoring reports](#)
CAHSS - [CEZD Weekly Intelligence Report](#)
European commission - [ADNS disease overview](#)

AMERICA

https://www.zoetis.com/_locale-assets/pdf/innovation/zoetis-approach-to-african-swine-fever.pdf

EUROPE

Slovakia-

<https://www.tasr.sk/tasr-clanok/TASR:20210420TBB00074>

Romania -

<https://trademagazin.hu/hu/afrikai-sertespestis-ujabb-25-ezer-allatot-olnek-le-romaniaban/>

ASIA

India -

<https://www.morungexpress.com/african-swine-fever-outbreak-in-nagaland>

<https://www.eastmojo.com/nagaland/2021/04/18/now-nagaland-too-confirms-cases-of-african-swine-fever/>

Taiwan -

<https://www.reuters.com/world/china/taiwan-tests-hog-herds-after-african-swine-fever-pig-washes-ashore-2021-04-06/>

South Korea -

https://www.provin.gangwon.kr/view/doc.html?fn=board_BDNEWS07_20210421_1.hwp&rs=/view/html/board/BDNEWS07/20210421160813

China -

http://www.moa.gov.cn/govpublic/xmsyj/202104/t20210421_6366333.htm

<https://www.reuters.com/world/china/china-set-up-regional-control-system-african-swine-fever-2021-04-21/>

The Philippines -

<https://www.qmanetwork.com/news/news/nation/785523/da-bai-starts-african-swine-fever-vaccine-trials/story/>

<https://cnnphilippines.com/news/2021/4/28/ASF-vaccine-trials.html>

<https://www.philstar.com/headlines/2021/04/27/2094026/da-forges-partnerships-asf-vaccine-trials>

OCEANIA

Australia -

<https://www.beefcentral.com/news/asf-and-fmd-found-in-pork-products-at-border-seizure/>

The GSDMR team compiles information drawn from multiple national (Ministries of Agriculture or Livestock, Local governments and international sources (FAO, OIE, DEFRA, EC, etc.), as well as peer-reviewed scientific articles. The team makes every effort to ensure but does not guarantee, 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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