

Updated Outbreak Assessment #8

African Swine Fever (ASF) in South East Asia

25 June 2019

Ref: VITT/1200 ASF in South East Asia

Disease report

Since our last report on 4th June, China and Vietnam have reported more outbreaks in domestic pigs, Laos has now reported ASF for the first time, with seven outbreaks in domestic swine in villages in the south of the country, in Saravane. Disease control measures are in place, including culling affected and susceptible animals.



African swine fever in China, Mongolia, Vietnam and Cambodia since August 2018

0 205 410 820 1,230 1,640 Km

Situation assessment

China

The Chinese authorities reported the first outbreak of ASF in domestic pigs on 3rd August 2018. Since then, a total of 142 outbreaks in domestic pigs have officially been reported. See above map for location of the outbreaks (OIE, 2019). Since our last report on 4th June, three new outbreaks have been officially reported in domestic pigs; two in backyard holdings and one in a small farm, all in the south of the country in Guizhou.

Though the number of outbreaks reported since our last report on the 4th of June seems low, it may be too early to be demonstrating a trend, and this may be complicated by under-reporting. ASF has had a large impact on the pig sector, leading to price increases of up to 50% in domestic pig meat (FAO May, 2019). Over half the global pig population is kept in China, and half of that is in the backyard sector. Since the first outbreak in August 2018, over 1.13 million pigs have been culled, with production of fresh and frozen pig meat down by 17.3% in early 2019 (Profarmer; OIE). As pig meat is the preferred meat in China, this has led to increases in imports, with an increase from 24% to 29% forecast for 2019 (FAO. May, 2019). This is likely to be driving behaviours, including under-reporting of disease, as the demand for pig meat will not always respond directly to changes in prices (FAO) i.e. demand may remain high. As well as direct and arthropod vector routes of transmission, contaminated animal feed ingredients and fomites have the potential to be pathways for ASF.

Hong Kong

Hong Kong reported its first outbreak of ASF in domestic pigs at a slaughterhouse on 10th May 2019; since then one more outbreak has been officially reported in a slaughterhouse near the Chinese border, and the pig has been confirmed as imported from China. Control measures including enhanced surveillance and movement controls remain in place.

Taiwan

Taiwan remains officially free from ASF, and no reports of disease in domestic pigs or wild boar have been made to OIE. However, a dead pig found washed up on Shi Shan beach, Jinsha Township, Jinmen County, Taiwan Province on 21st May, and tested positive for ASF by PCR. The surrounding farms were also tested, but no positive results were found (FAO; PigProgress). Since our last report on 4th of June, genomic sequence analysis of the infected pig showed 100% identity with the ASF virus reported in other parts of China (FAO). Though an island, the country remains at high risk of infection via human mediated routes; ASF infected pork products from China have previously been confiscated from air travellers (Taipeitimes)

Vietnam

The first case of ASF in Vietnam was reported in early February 2019, since then a total of 2,700 outbreaks have been reported in 52 clusters, with reports from all provinces and many of the municipalities across the country (see map) (OIE). Since our last report on 4th of June, a total of 120 outbreaks in 12 clusters have been reported, all in villages. ASF outbreaks have now been reported in 58 of the 64 provinces and municipalities across the country, including all provinces, resulting in the culling of more than 2.6 million pigs (OIE, FAO),. The Ministry of Agriculture and Rural Development (MARD) has issued new guidance on pig slaughter and pig products (3708/HD-BNN-TY, 28th May), including: pig transport, cleaning and disinfecting procedures for facilities and vehicles, and increased ASF testing and quarantine certificates. Pork accounts for 3/4 of total meat consumption in Vietnam, and most of its 30 million farm-raised pigs are consumed domestically, roughly 8.7% of which have been lost due to disease and control measures.

Following this, the Prime Minister of Vietnam released Directive (No. 42/NQ-CP, 18 June 2019) regarding ASF control and prevention, including providing proportionate support to households, small medium sized pig farms, whose enterprises are destroyed by the epidemic (FAO).

Laos

Laos reported its first outbreak of ASF on 20th June 2019, with seven outbreaks in domestic swine in the Saravane province in the south of the country, resulting in culling of 973 pigs. The outbreaks are unsurprising given the current disease situation in Vietnam, the closest country border to the new outbreaks. The source of infection in this instance is less likely to be wild boar, given trade routes which may facilitate the movement of domestic pigs across the border. Further outbreaks are suspected.

Mongolia

There have been no new outbreaks reported in June. The last outbreaks were in backyard pigs in early February. To date, 11 outbreaks have been reported in Mongolia: in Bulgan, Darkhan-Uul, Dundgovi, Orkhon, Selenge, and Tov provinces and Ulaanbaatar, involving a total of 105 farms/households. According to media sources, more than 10% of the total pig population in Mongolia have died or been destroyed due to the ASF outbreaks.

Cambodia

Cambodia reported its first outbreak of ASF in domestic pigs in a backyard farm in Rattanakiri province on 23rd March 2019. This was on the eastern border with Vietnam and in this respect was not surprising, although it does represent a jump south if cases are linked epidemiologically across the border. Since our last report on 14th May, there have been no more outbreaks reported, though the disease is likely circulating given the outbreaks reported by Vietnam, close to the Cambodian border (see map).

North Korea

North Korea reported its first outbreak of ASF in domestic pigs in a village in the Chagang-Do Province on 30th May 2019, close to the Chinese border. The appearance of the disease here was not completely unexpected as cases have been reported in China in wild boar in close proximity to the North Korean border. There have been no further cases since our last report on 4th June and control measures are still in place.

Other factors

The presence of African Swine Fever Virus (ASFV) in China, Mongolia, Vietnam, Cambodia, Hong Kong, North Korea and now Laos, shows the potential for further spread into the domestic pig and wild suid populations in south-eastern Asia, where the presence of soft-bodied argasid ticks could also hinder eradication if found to be able to transmit ASFV. In China, for example, there are 13 species of argasid ticks (Yu et al. 2015) belonging to three genera: *Argas* (seven species), *Carios* (four species), and *Ornithodoros* (two species).

Furthermore, there is currently no vaccine available against ASF, recent reports in the media suggested that Chinese researchers were taking a candidate vaccine into clinical trials, however the Agricultural Ministry subsequently downplayed the announcement. Elsewhere, the European Commission has funded a Spanish consortium to develop a live attenuated vaccine suitable for use in the EU, and DEFRA funded research in the UK has identified a number of ASF proteins that could form part of a subunit vaccine (Pirbright Institute). However, it is likely to be several years before a safe and effective ASF vaccine is ready for deployment in the field.

The overall risk to the UK given the current distribution of ASF in Belgium, Eastern Europe and neighbouring countries is still **medium**. There are ongoing concerns around pork products from non-EU countries entering the EU in passenger luggage and then being discarded in areas where wild boar or domestic pigs are present. With regular direct flights to the EU and UK from China and eastern Asia, there is a risk of entry of ASFV in POAO from Asia. Numerous media accounts in 2019 have reported the movement of illegal pork products and ASF infected pork products from China.

Publicity campaigns are in place to inform the public and discourage individuals from bringing pork products into UK, with targeted messages to key people such as road hauliers, hunters, pig keepers and veterinarians. See: http://web.oie.int/rr-europe/eng/regprog/en_asf_depository.htm, and, <https://pork.ahdb.org.uk/health-welfare/health/emerging-diseases/african-swine-fever/>

Conclusion

The risk of ASF introduction to the UK was raised to **low** in August 2017. This was because, despite the relatively low level of legal trade in live pigs or commercially produced pig products, there could be a risk from the fomite pathway involving movement of people and vehicles from affected Eastern EU countries and there was evidence of contaminated / infected non-EU origin pig products being detected in the EU. With the number of outbreaks of ASF being reported in Eastern Europe in August 2018, and subsequent detection of ASF in wild boar in Belgium in September 2018, the risk to the UK was elevated to **medium**. Despite the spread of ASF to China, Mongolia, Vietnam, Cambodia, Hong Kong and North Korea, and now Laos, the current risk of ASF introduction to the UK is still considered to be **medium**, although the situation is being kept under review and depends on how ASF spreads further across south-east Asia.

We would like to highlight to all pig keepers and the public to ensure pigs are not fed catering waste, kitchen scraps or pork products, thereby observing the swill feeding ban. All pig keepers should be aware that visitors to their premises should not have had recent contact with pigs and pig premises in the affected regions. Anybody returning from any ASF-affected area should avoid contact with domestic pigs, whether commercial holdings or smallholdings, areas with feral pigs or wild boar, until they are confident they have no contaminated clothing, footwear or equipment. Pig keepers and veterinarians should remind themselves of the clinical signs for ASF. Any suspect cases must be reported promptly. Please see <https://www.gov.uk/guidance/african-swine-fever> for more information.

Department for Environment, Food and Rural Affairs
Animal and Plant Health Agency
Advice Services - International Disease Monitoring

We would like to remind the public that any feeding of meat products, including the feeding of swill, kitchen scraps and catering waste, to wild boar or feral pigs is also illegal. A poster reminding pig keepers of this is available:

<http://apha.defra.gov.uk/documents/surveillance/diseases/african-swine-fever-poster.pdf>

We will continue to monitor the situation.

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All disease reports are available from the OIE WAHIS database.

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