



Ministry of Agriculture, Livestock and Irrigation
Livestock, Breeding and Veterinary Department

Cross Border ASF Risk Assessment in Myanmar

Livestock Breeding and Veterinary Department
Nay Pyi Taw, Myanmar

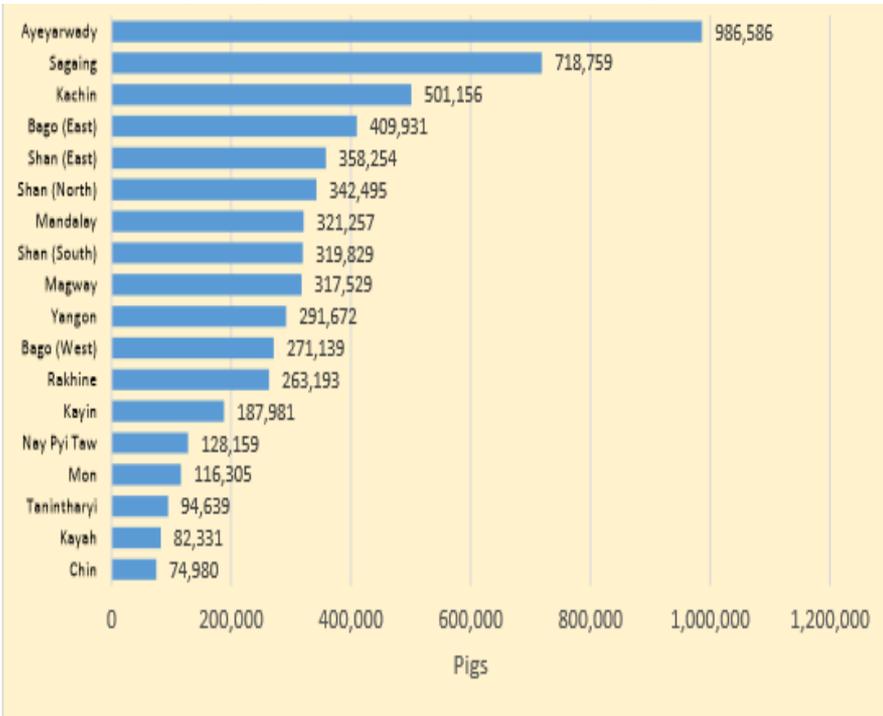
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Pig Production System in Myanmar

- Over **two million holdings** raised **5.8 million pigs** with an average of about **nearly three pigs per holdings**.
- Nationally, **27 percent of holdings** raised pigs.
- Pigs were **most numerous in Ayeyarwady Region**.
- Pig raising was **very common in upland areas** (Chin, Shan, Kayah & Kachin).
- Pig raising was **common but variable in dry zone regions** (Sagaing, Magway & Mandalay)
- Pig raising was relatively **less common in costal area** (Yangon, Tanintharyi, Mon & Rakhine).

Pig Population in State & Regions



Pig Supply Value Chain in Myanmar



ASF Outbreaks in Myanmar

No	Date	State/ Division	District	Township	Type of Facility	Herd Size	Affected	Death	Cull
1.	1-8-2019	Shan (East)	Matman	Panghseng	Backyard Farm	3	2	0	0
2.	1-8-2019	Shan (East)	Keng Tung	Mongla	Semi-intensive Farm	65	15	12	53
3.	11-8-2019	Shan (East)	Tachileik	Mong Yawng	Semi-intensive Farm	60	2	2	2
4.	13-9-2019	Shan (East)	Tachileik	Mong Hpayak	Backyard Farm	29	3	3	0
5.	6-2-2020	Shan (North)	Lashio	Naung Mon	Backyard Farm	10	7	6	0
6.	22-2-2020	Kachin	Bahmo	Dokphoneyan	Intensive Farm	365	3	3	0
7.	5-4-2020	Shan (South)	Taunggyi	Nyaung Shwe	Semi-intensive Farm	90	13	9	0
8.	28-6-2020	Kayah	Loikaw	Loikaw	Intensive Farm	120	91	91	29
9.	7-11-2020	Sagaing	Shwebo	Taze	Backyard Farm	10	10	10	0
10.	19-11- 2020	Sagaing	Kalay	Kale	Backyard Farm	2	2	2	0
11.	6-6-21	Shan (East)	Keng Tung	Keng Tung	Intensive Farm	153	9	9	5
						895	157	147	89



Source: VPHD, LBVD

Inhabitants of Wild Boar in Myanmar

No	Year	State/ Division	Township	Reference
1.	2008, 2010, 2015, 2016	Shan (East)	Mongla	Nijman 2010; Nijman and shepherd 2015; Nijman et al. 2016; Shepherd and Nijman 2008a
2.	2008, 2010, 2015, 2016	Shan (East)	Tachileik	Nijman 2010; Nijman and shepherd 2015; Nijman et al. 2016; Shepherd and Nijman 2008a
3.	2019	Bago (West)	Nyaunglebin	Tierra Smiley Evans et al., 2019
4.	2020	Mon	Kyaikto	Sapal Min, 2020



Trading Partners with Myanmar

Trade of Live Pig and Feed

- Argentina, Brazil, US, China and India are the main countries for feed ingredient trade in Myanmar.
- Canada, Netherland and Thailand are the main trade partners for live pigs.

Trade of Meat

- USA, Spain, Italy and Singapore are keen trade partners for the trade of pig meat.
- Trade of wild boar meat to Thailand and China were occurred according to the surveys.

Study Design of the Crossborder Risk Assessment Project (2020-2021)

Study design

Prior to the webinar series, a study design was formulated. The document was not previously published but included in the Annex 7 of the present report for reference. The study design set out the objectives of the project as follow:

1. To review existing knowledge about ASFV epidemiology in countries participating in the study.
2. To identify the major entry risk pathways for ASFV (re) introduction to each country.
3. To develop and strengthen risk assessment capacity of national veterinary services.
4. To develop practical recommendations on risk mitigation measures in the region.

The hazard was identified as part of formulating the study design and presented to all CRATs at the beginning of this project.

Types of risk pathways

There will be found four main types of risk pathways according to the country situation and trade routes as follows;

Pathway 1: Trade of Live Domestic Pig

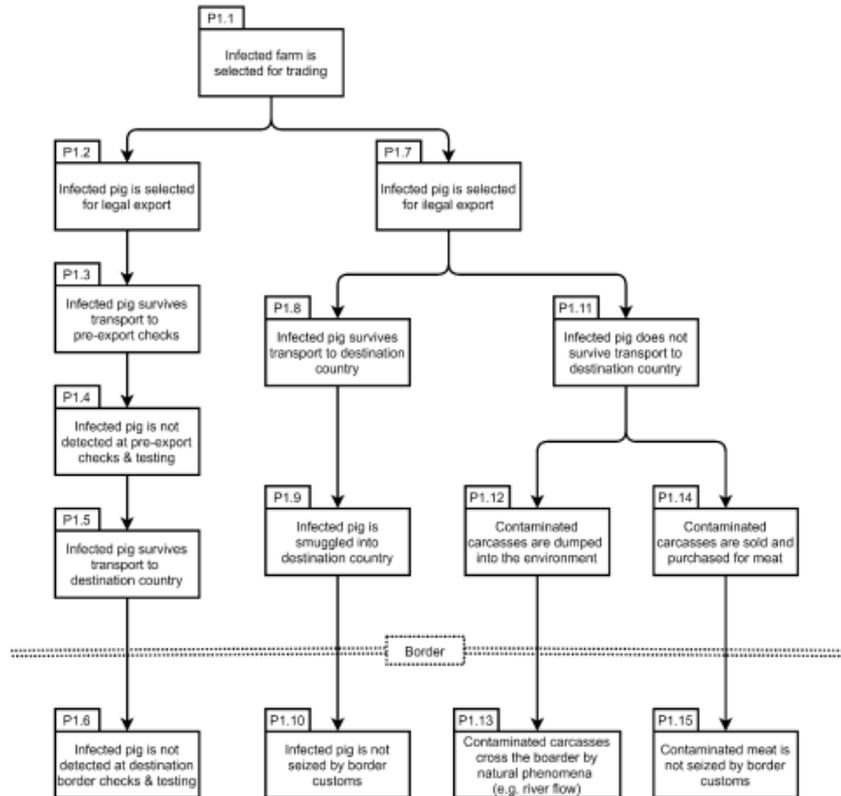
Pathway 2: Trade of pig products/by-products

Pathway 3: Fomite associated with domestic pig farming

Pathway 4: Trade of Feed or Ingredients

Pathway 5: Trade of Wild Meat

Trade of Live Domestic Pigs



National Risk Assessment (trade of live domestic pigs)

National risk estimation: After reviewing the collected data, Thailand and Singapore considered that the overall risk for ASFV introduction through trade of live domestic pigs was “negligible” with “low” and “medium” uncertainty respectively, while Myanmar reported a “very high” risk with “low” uncertainty. The Philippines supported a “negligible” risk with “low” uncertainty for legal trade. But the risk with illegal importation is “very low” with “high” uncertainty.

Risk Pathway for the trade of Domestic Pig Products

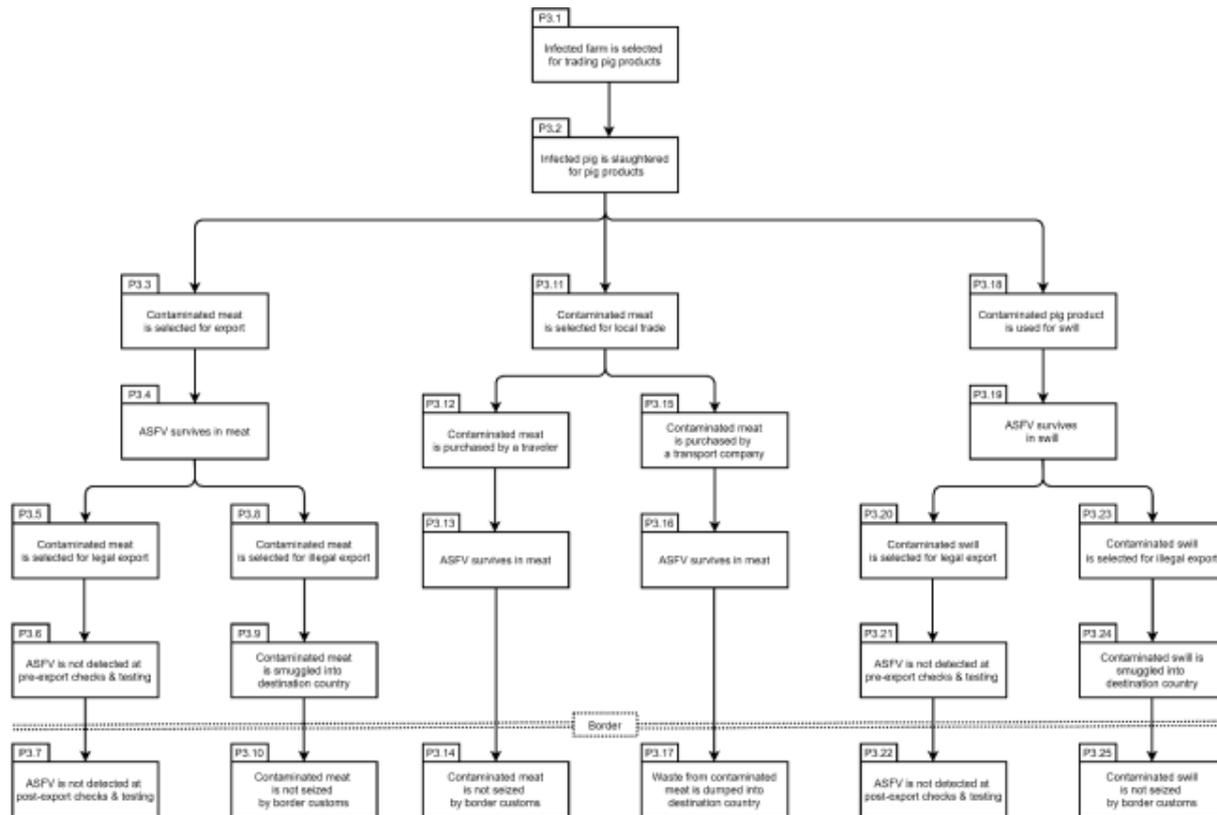


Figure 3 Generic risk pathway diagram for ASFV introduction through trade of pig products

National Risk Assessment (trade of domestic pig products)

National risk assessment: Thailand estimated that the overall risk associated with legal trade of domestic pig products was “negligible” with “low” uncertainty. In contrast, the country estimated that illegal trade of domestic pig products, including those brought by travellers, posed “high” risk with “high” uncertainty. Singapore considered that the risk pathway posed “negligible” risk with “medium” uncertainty for legal trade and “very low” risk with “high” uncertainty for illegal trade. Myanmar reported an overall risk of “moderate” with “medium” uncertainty. The Philippines gave risk estimation for five risk pathways: 1) “very low” for legal importation of large volume of meat and meat products (“low” uncertainty); 2) “medium” for illegal importation of large volume of meat and meat products (“high” uncertainty); 3) “negligible” for legal importation of hand carried of meat and meat products (“low” uncertainty); 4) “medium” for illegal importation of hand carrier of meat and meat products (“high” uncertainty); 5) “medium” for left over meat products from foreign vessel/aircraft (“high” uncertainty).

Risk Pathway Diagrams (fomites)

Pathway 4: Fomites associated with domestic pig farming

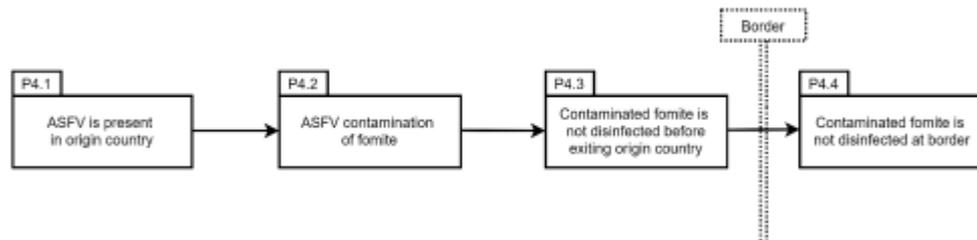


Figure 4 Generic risk pathway diagram for ASFV introduction through fomites

National Risk Assessment (fomites)

National risk assessment: Singapore estimated the risk as “very low” with “high” uncertainty. Myanmar combined the fomites with the feed for the risk pathway and considered a “moderate” overall risk with “medium” uncertainty.

Risk Pathway Diagrams (Trade of Contaminated feed and infected ingredients)

Pathway 6: Trade of contaminated feed and infected ingredients



Figure 6 Generic risk pathway diagram for ASFV introduction through trade of contaminated feed and infected ingredients

National Risk Assessment (trade of feed or ingredients)

National risk assessment: For Myanmar, risk estimation was combined with the fomites and estimated as “moderate” with “medium” uncertainty.

Risk Pathway Diagrams (trade of wild meat)

Pathway 14: Trade of wild meat

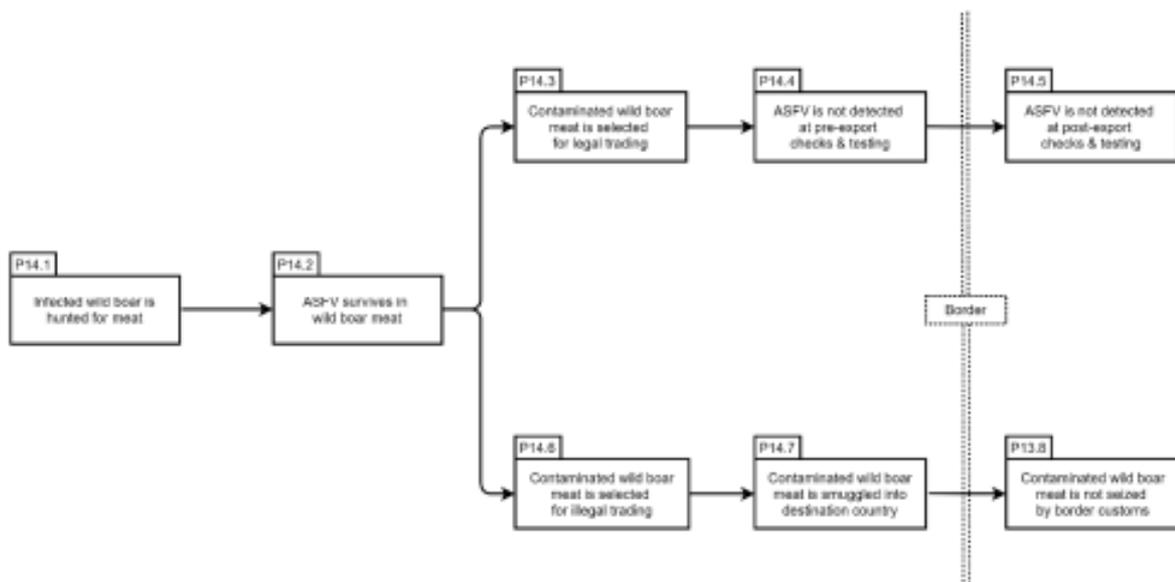


Figure 13 Generic risk pathway diagram for ASFV introduction through trade of wild meat

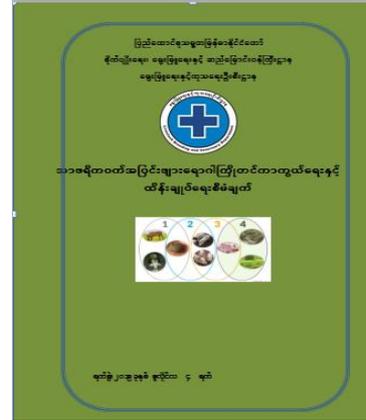
National Risk Assessment (trade of feed or ingredients)

National risk assessment: The risk of ASFV entering into Thailand through wild boar meat was estimated to be “low” with “high” uncertainty while Myanmar considered this risk as “very low” with “high” uncertainty.

Activities for the controlling of ASF

PREPAREDNESS

- Contingency Planning
- Legislation (Listed as Notifiable Disease)
- Awareness
- Surveillance
- International Collaboration (FAO, OIE)
- Simulation exercises
- Movement control (illegal)
- Strengthening border control for illegal pig products



Activities for the controlling of ASF

DETECT

- Laboratory capacity building
- Biosecurity (Farm/Trader/Slaughter)
- Rapid Response Team (Communication/Networking)



RESPONSE

- Transparency (OIE reporting)
- Directive order for restocking
- Directive order for pig transportation



Source: VMDCD, LBVD

List of Measures for ASF

- Surveillance
- Inspection, Quarantine and Movement Control
- Biosecurity Improvement
- Public Awareness for early warning and early reporting
- Artificial Insemination free from ASF
- Zoning
- Cleaning & Disinfection

Thank you so much for your attention