

Member's update on FMD, LSD and PPR

[Republic of Korea]

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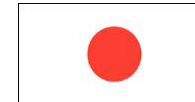
Tokyo, Japan



World Organisation
for Animal Health

中华人民共和国农业农村部

Ministry of Agriculture and Rural Affairs of the People's Republic of China



Ministry of Agriculture,
Food and Rural Affairs

1. Foot and Mouth Disease(FMD)

- FMD situation in Korea
- FMD prevention & Control
- Vaccination
- Surveillance
- Laboratory Capacity

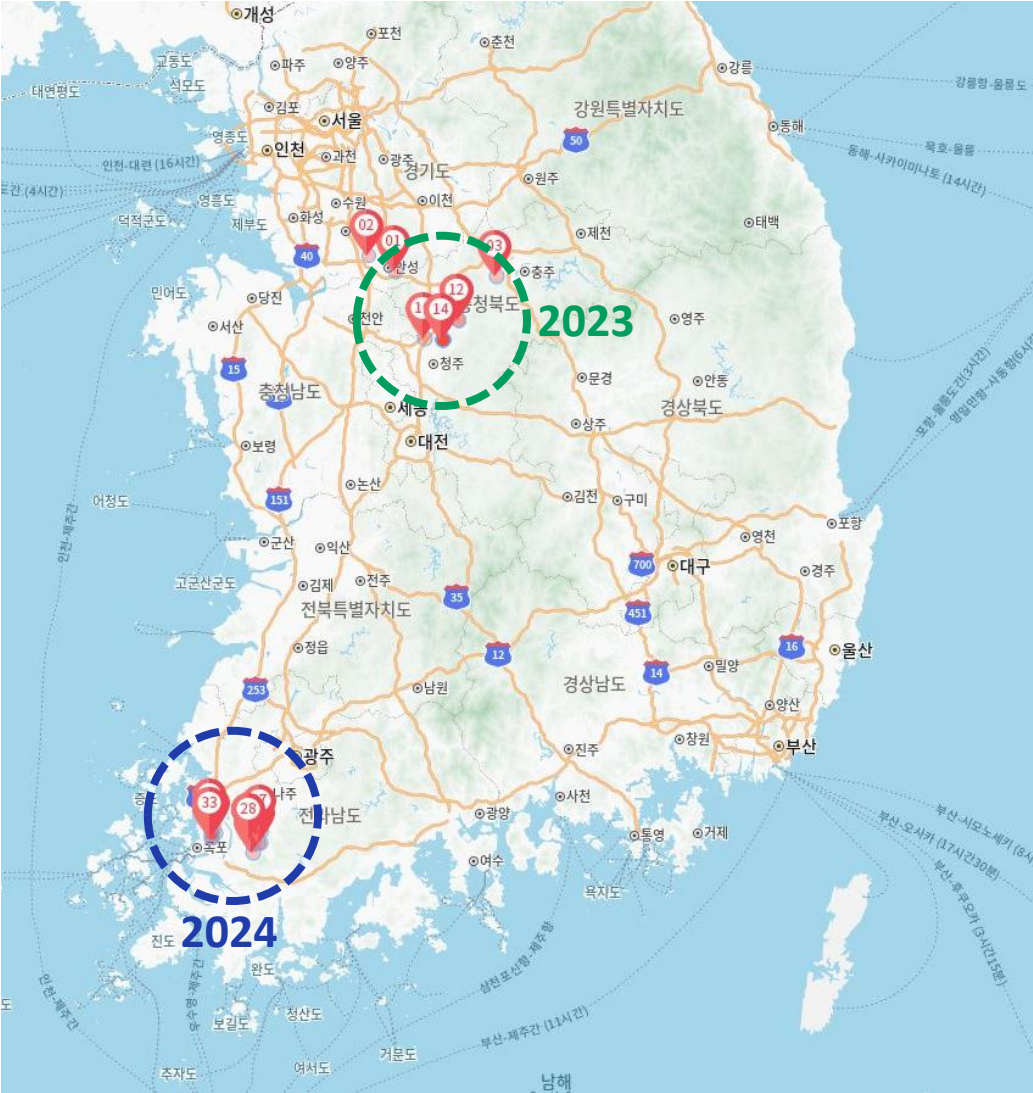
2. Lumpy skin Disease(LSD)

- LSD situation in Korea
- Risk Assessment
- Vaccination
- Vector Surveillance & control

3. Peste des ruminants(PPR)

- Risk Assessment
- Preparations for an outbreak

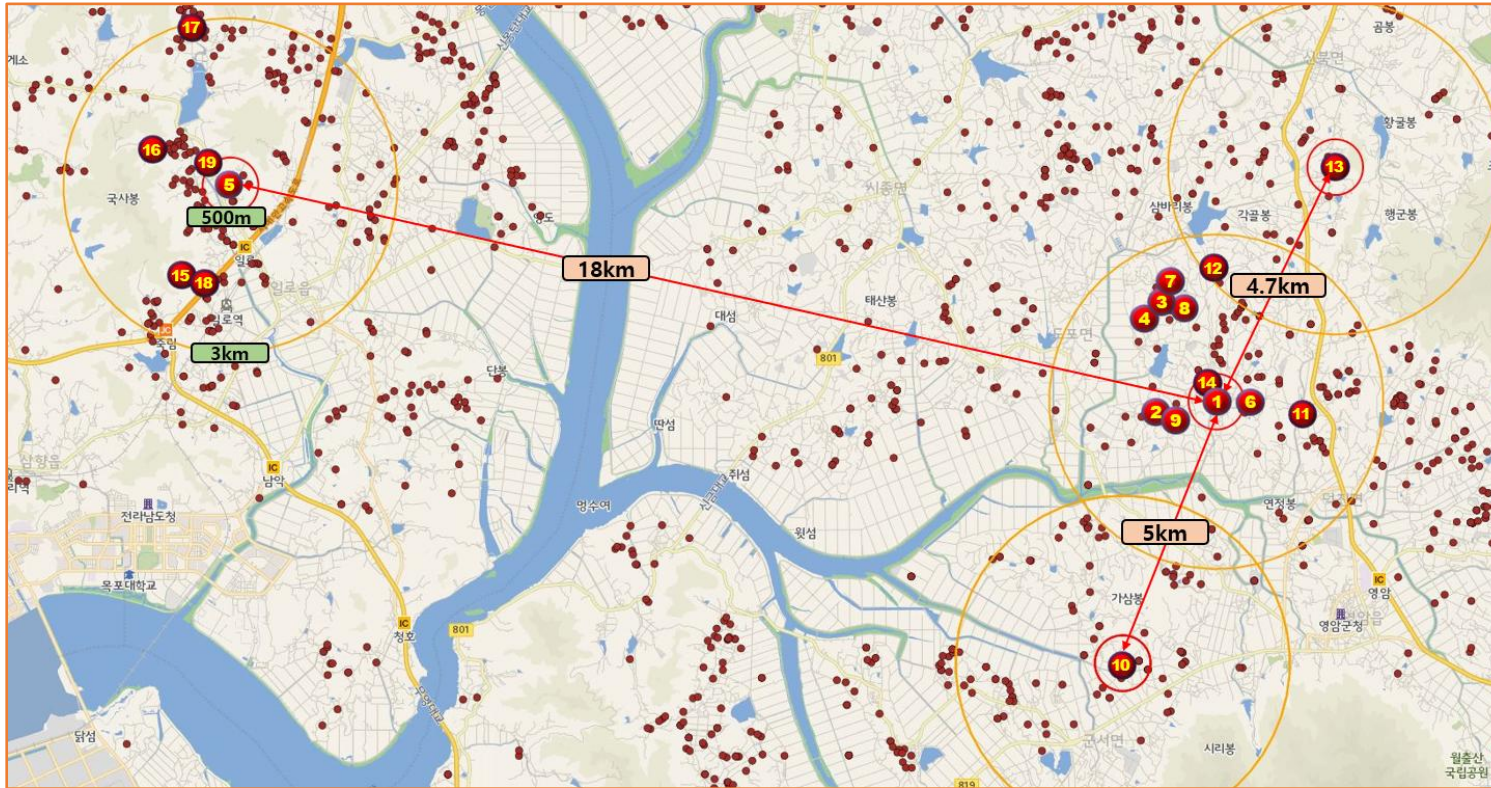
FMD situation in Korea



Year	Cases	Region	Serotype
2000.3-4	15	6 counties	O
2002.5-6	16	4	O
2010.1	6	2	A
2010.4	11	4	O
2010.11	153	75	O
2014.7-8	3	3	O
2014.12-2015.4	185	33	O
2016.1-3	21	6	O
2017.2	9	3	O·A
2018.3-4	2	1	A
2019.1	3	2	O
2023.5	11	2	O
2025.3-4	19	2	O

FMD outbreak in 2025

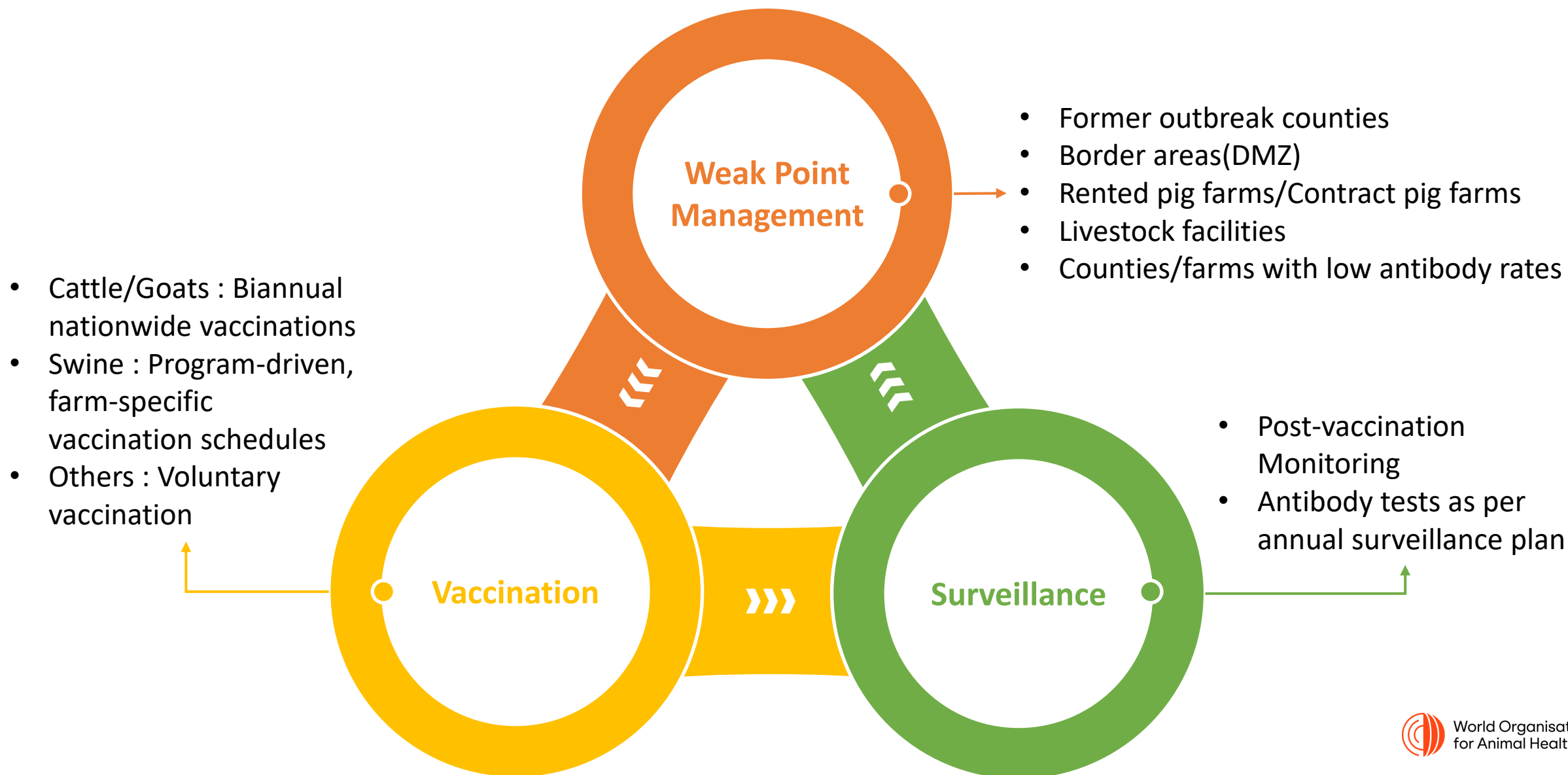
- Total 19 case : cattle 14, swine 5
- Mar.13 Yeongam cattle 1 → Mar.15 Muan cattle 1 → Apr.10 Muan pig 2 → Apr.14 Muan pig 3



Control Measures

- Culling
- Standstill
- Emergency vaccination
- Livestock Movement restrictions
- Clinical Inspections
- Tracking of livestock vehicles
- Slaughtering all NSP positive animal

FMD prevention and control



Vaccination

- Authorized vaccine

Country	Manufacturer	Vaccine Type	Virus Strains	Approval Date
UK	Boehringer Ingelheim	Bivalent (O+A)	O Manisa, O 3039, A22 Iraq	2015.10.28. (2013.2.18.)
Russia	FGBI ARRIAH	Bivalent (O+A)	A Zabaikalsky[A/ASIA/Sea97/2013], O Primorsky[O/SEA/Mya98/2014]	2018.3.14. (2017.9.19.)
Argentina	Biogenesis Bago S.A	Bivalent (O+A)	O1 Campos, A 24 Cruzeiro, A 2001 Argentina	2019.6.3. (2018.11.18.)

- Vaccination Program

Manufacturer	Cattle(2mℓ)	Goat(1mℓ)	Swine(2mℓ)
Boehringer Ingelheim	1 st at 2 months 2 nd after 1 month Boosters every 6 months	1 st at 2 months 2 nd after 1 month Boosters every 6 months	1 st at 8 weeks 2 nd at 12 weeks Boosters every 6 months
FGBI ARRIAH	1 st at 4 months 2 nd after 1 month Boosters every 6 months	1 st at 4 months 2 nd after 1 month Boosters every 6 months	1 st at 8 weeks 2 nd at 12 weeks Boosters every 6 months
Biogenesis Bago S.A	1 st at 4 months 2 nd after 1 month Boosters every 6 months	1 st at 2 months 2 nd after 1 month Boosters every 6 months	1 st at 8 weeks 2 nd at 12 weeks Boosters every 6 months

Serological Surveillance(2025 plan)

Category		SP Ab		NSP Ab	
		No. of Heads	Farms	No. of Heads	Farms
Total		533,506	27,656	412,487	31,208
Cattle	Farm	149,483	12,433	149,483	12,433
	Abattoir	151,200	1,200+α	4,750	4,750
	Breeding stock farm	2,668	32	2,668	32
Goats	Farm	7,365	934	7,365	934
	Abattoir	1,200	1,200	1,200	1,200
Swine	Farm	102,944	6,434	102,944	6,434
	Abattoir	83,504	5,219	83,504	5,219
	Breeding stock farm	35,142	204	35,142	204
Wild animals		-	-	1,613	-
Others (Requested, NSP positive animal targeted, etc)		-	-	23,818	2

Serological Surveillance(Result)

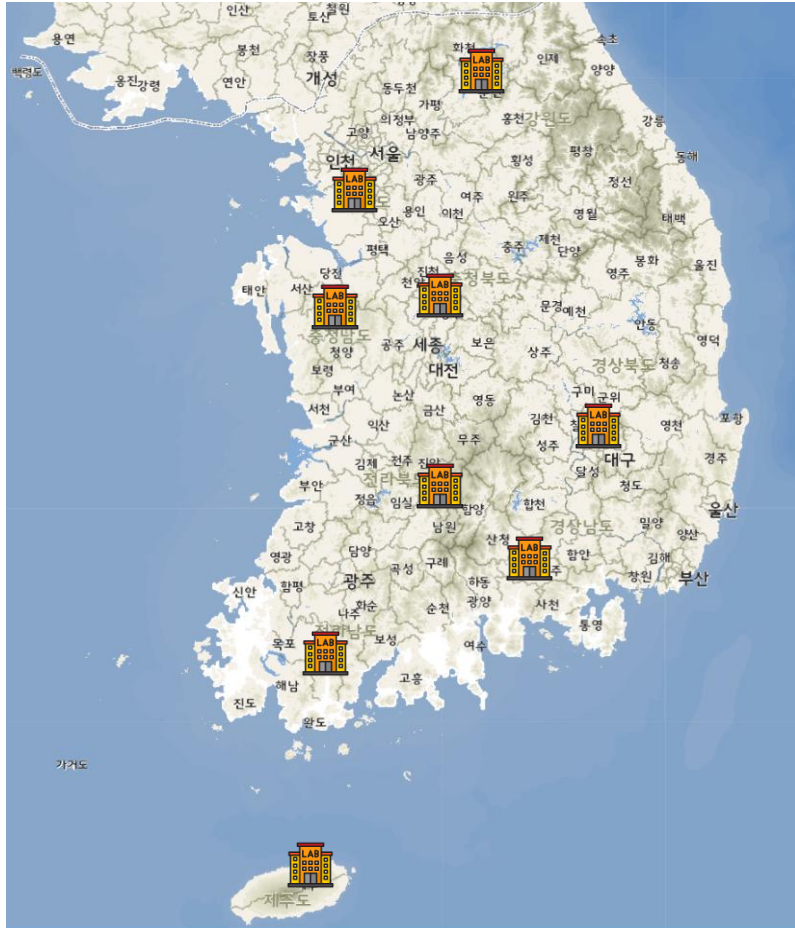
- SP ELISA(seropositive rate, %)

Species		2019	2020	2021	2022	2023	2024	2025.Jan-May
Cattle		97.8	97.3	98.1	98.2	97.8	97.3	98.2
	Beef	97.8	97.1	98.1	98.2	97.8	97.3	98.2
	Dairy	97.7	98.4	98.4	98.3	97.7	97.0	98.2
Swine		75.8	88.3	92.1	93.2	93.8	91.3	92.0
	Breeding	91.0	94.5	97.1	97.4	98.0	97.2	97.0
	Fattening	73.5	87.3	91.3	92.5	93.1	90.3	91.2
Goats		84.8	83.4	89.8	89.8	88.5	89.2	91.2

- NSP Detection cases

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2023	2025.Jul
case	388	303	30	38	177	180	34	16	20	19	1	5	28

Laboratory capacity



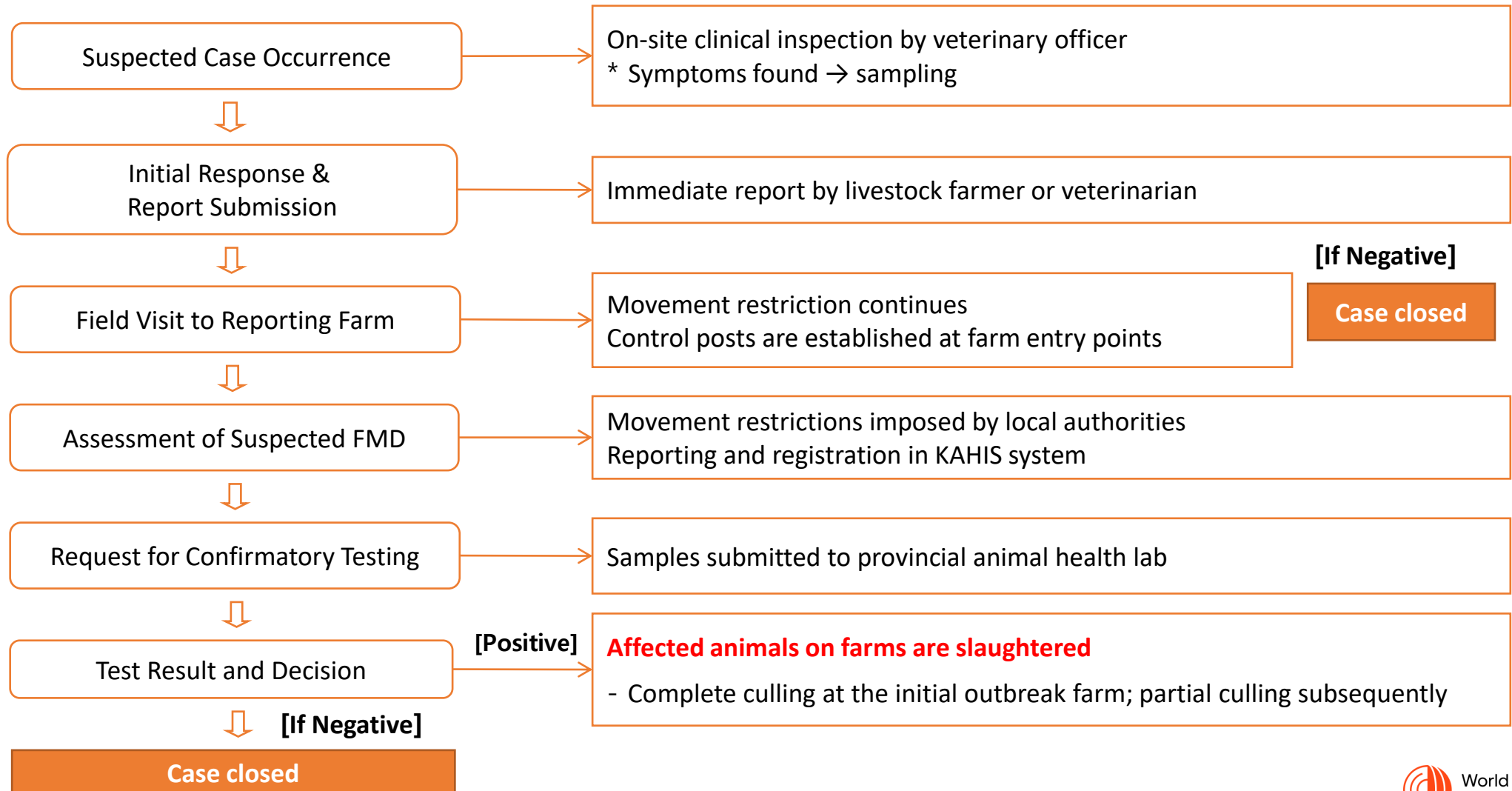
FMD Confirmation diagnosis required for:

- All notified suspect cases
- Samples found positive during routine active surveillance by regional laboratories

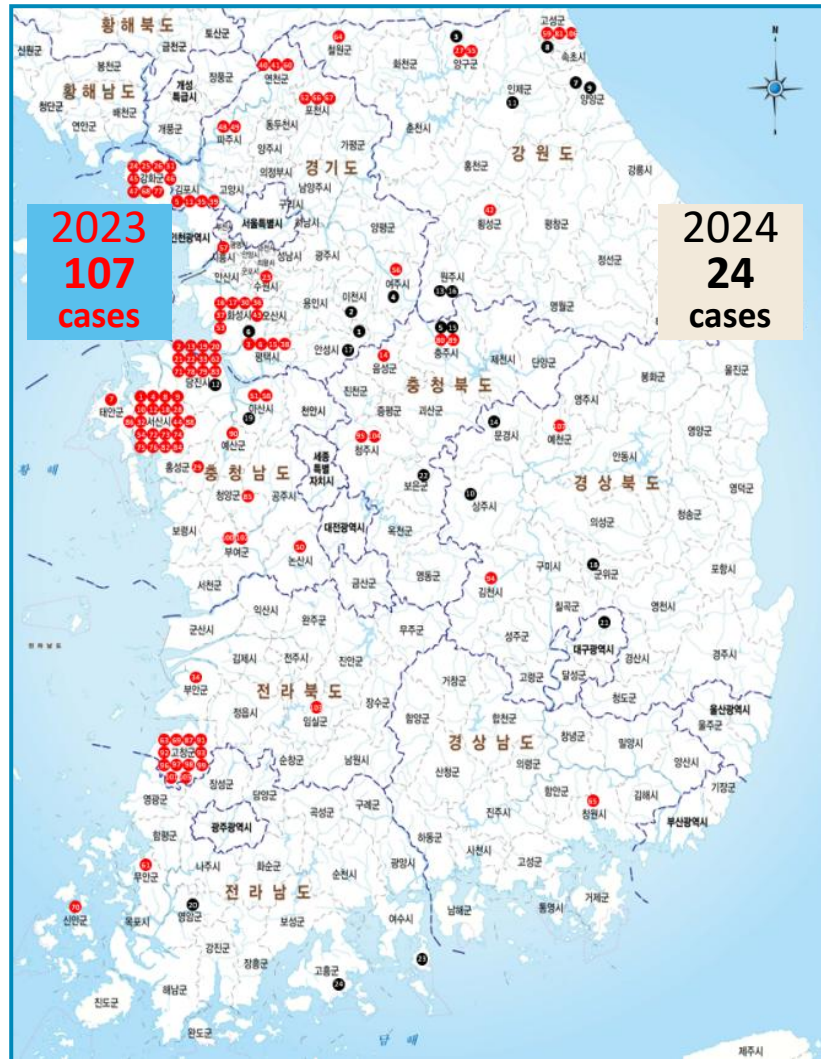
Labs conducting confirmatory diagnosis:

- **FMD Diagnostic Division, APQA**
 - national reference laboratory for FMD
- **Regional laboratories (9 labs)**
 - accredited for FMD confirmation diagnosis

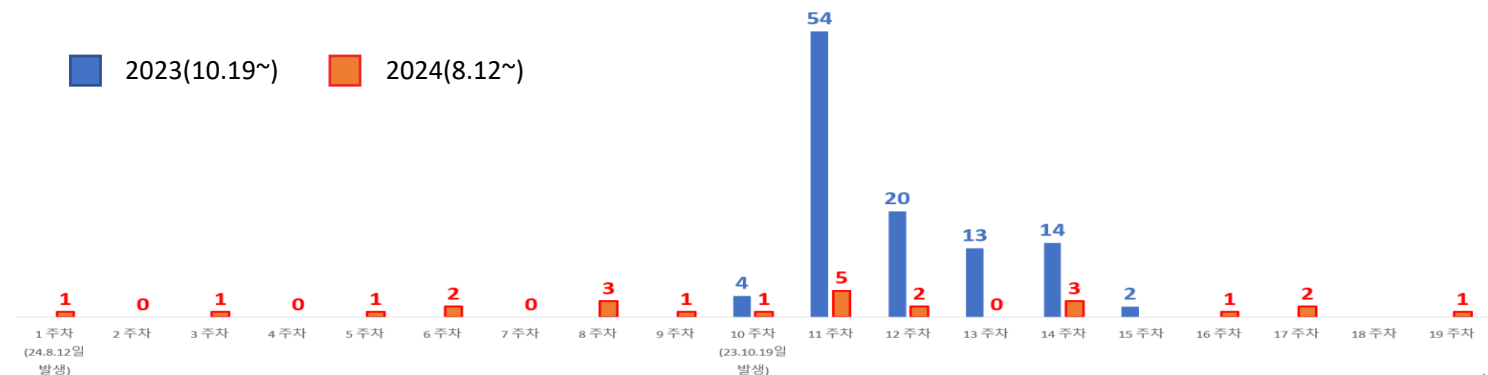
Detection & Reporting Workflows



LSD situation in Korea

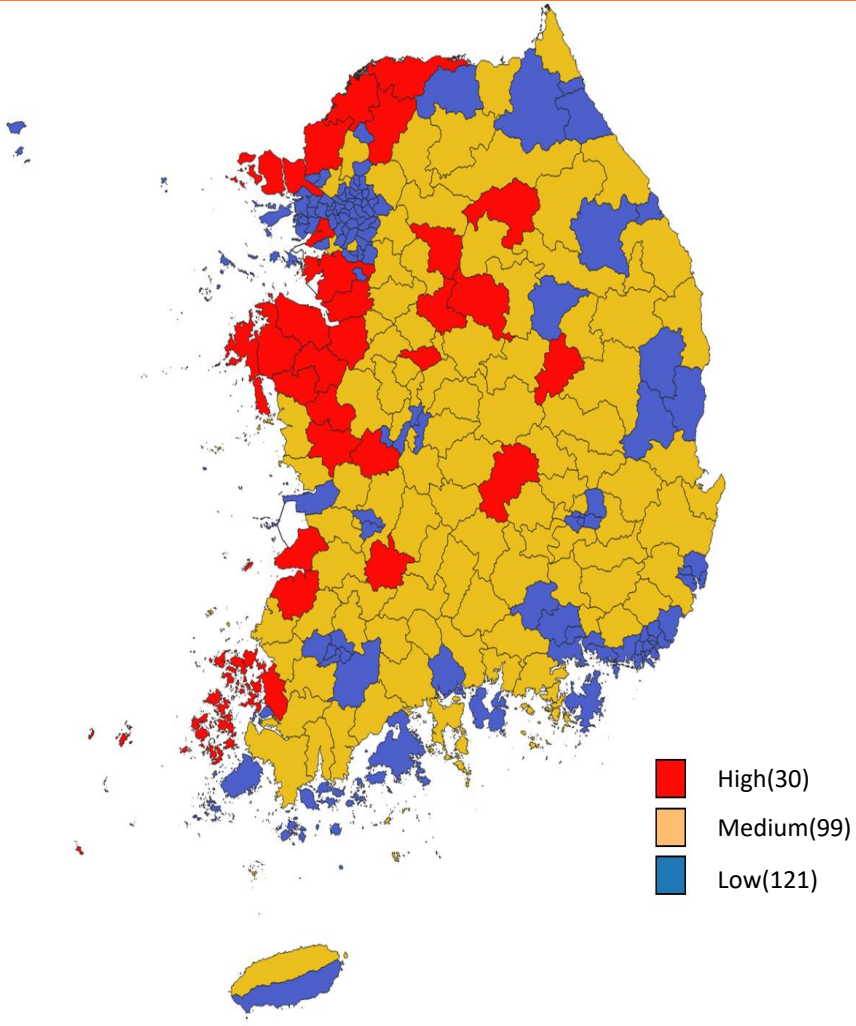


- **2023 : 1st Outbreak**
 - 107 cases (Oct-Nov 2023), mainly along the West coast
 - Introduction suspected via infected vectors on ships, air, or from border regions
 - Sharp decrease after emergency vaccination
- **2024: Herd immunity established**
 - 24 cases (Aug-Dec 2024)
 - Sporadic and localized outbreaks continue, mainly in farms with insufficient vaccination
 - Outbreak occurred earlier than 2023



LSD risk assessment

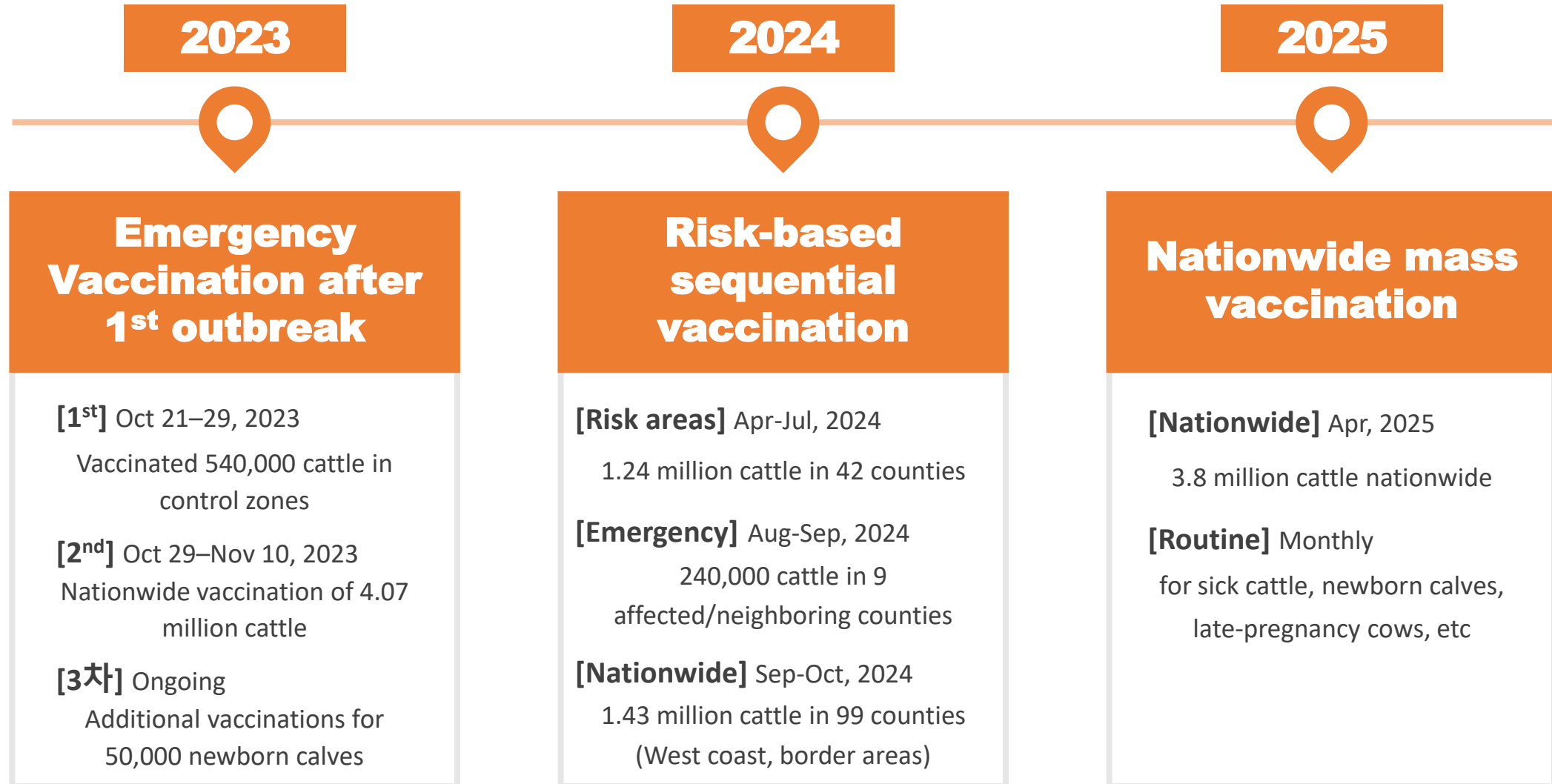
According to the findings of the risk assessment regarding disease outbreak and transmission, the regions are categorized into **high**, **medium**, and **low**-risk areas



- (Assessment methodology)
 - ① Identifying LSD risk factors
 - ② Assessment of disease outbreak risk by region
 - ③ Assessment on LSD spread by region

Occurrence risk \ Diffusion risk	Diffusion risk	
	Low	High
Low	Low(121)	Medium(95)
High	Medium(4)	High(30)

Vaccination



Surveillance

- **Serological surveillance**

- Targets : 13,000 Cattle in vaccinated regions (10 provinces, 7 breeding centers)
- Period : Feb–Jul 2024
- Antibody rates: about 32% (1st), about 55% (2nd)

- **Surveillance in Farms**

- Investigation into reintroduction, recirculation, and emergence of viruses based on vector activity periods and regional risk levels
- Targets : 6,600 cattle across 628 farms in 9 provinces
- Period : Apr–Nov 2024
- Result : All negative for virus

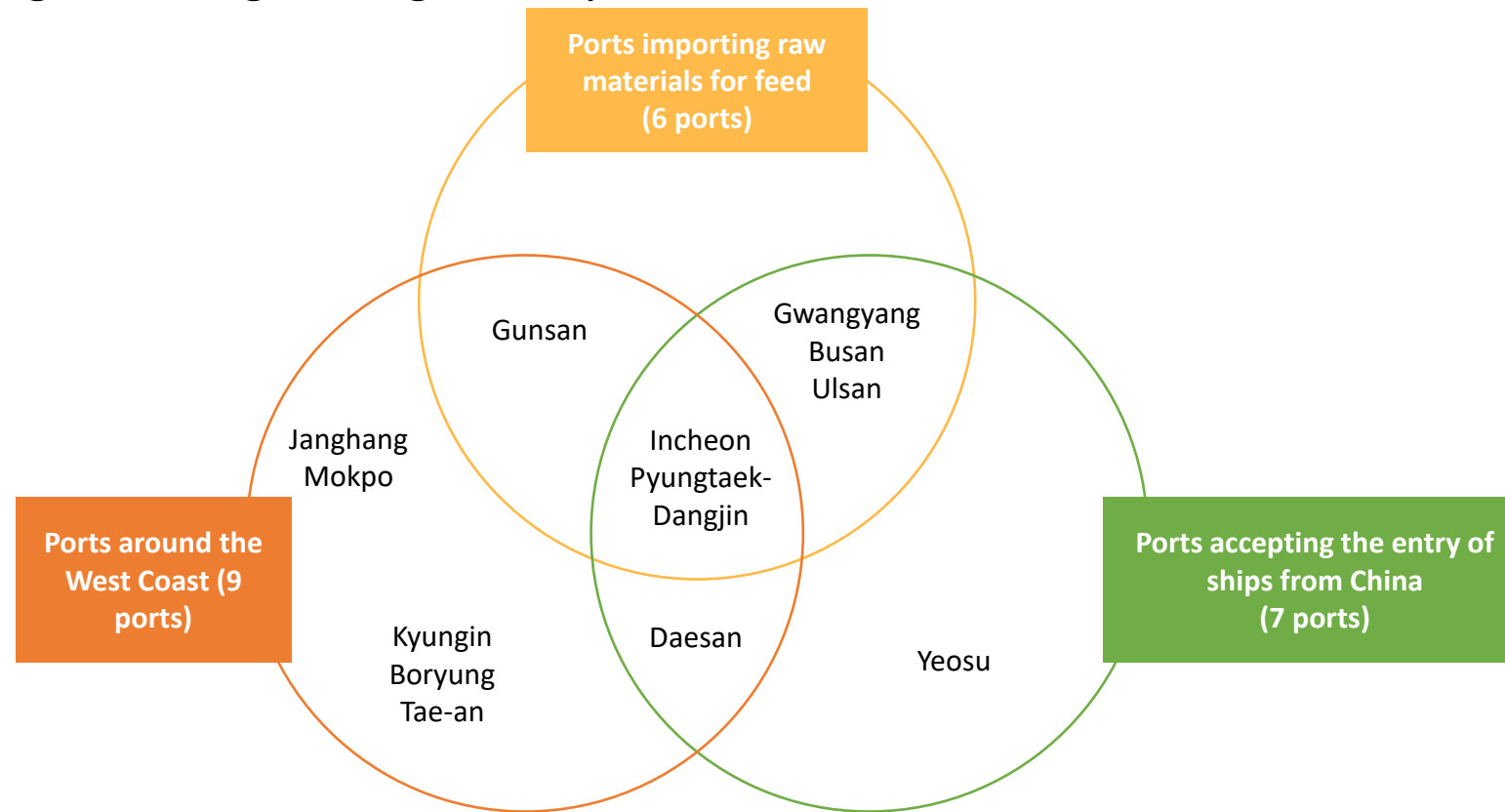
- **Vector surveillance**

- Targets : 38 farms in 3 provinces, 15 high-altitude traps
- Period : until Nov 2024
- Result : 4,758 biting flies checked, all negative for virus

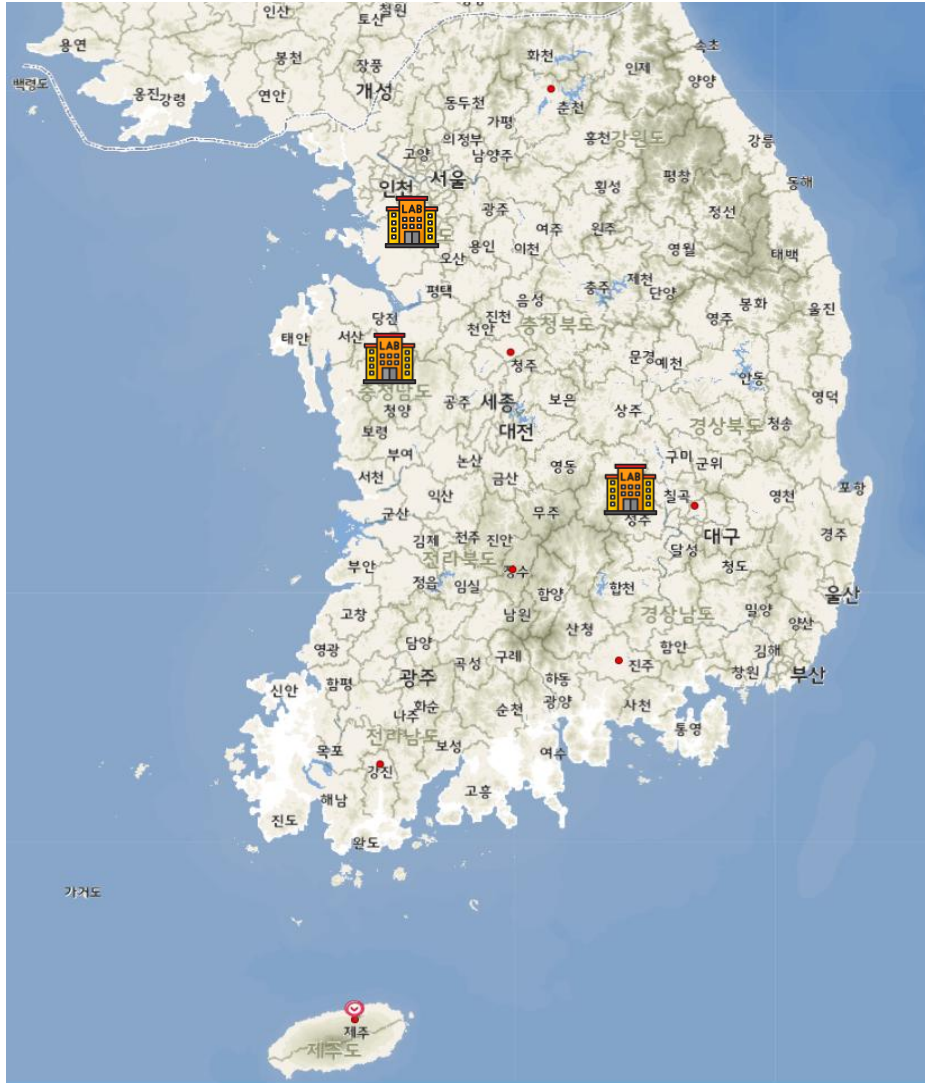


Strengthening the Border Control

- **(Seaport Quarantine)** Promoting seaport quarantine measures to prevent vectors from being imported into the country via ships and entering livestock farms
 - **Ports located in the West Coast, where raw feed materials are imported, must be disinfected by a professional bio-security control company**
 - (Control target) 13 trade harbors : 9 ports located around the West Coast and 4 ports with many ships arriving from neighboring country



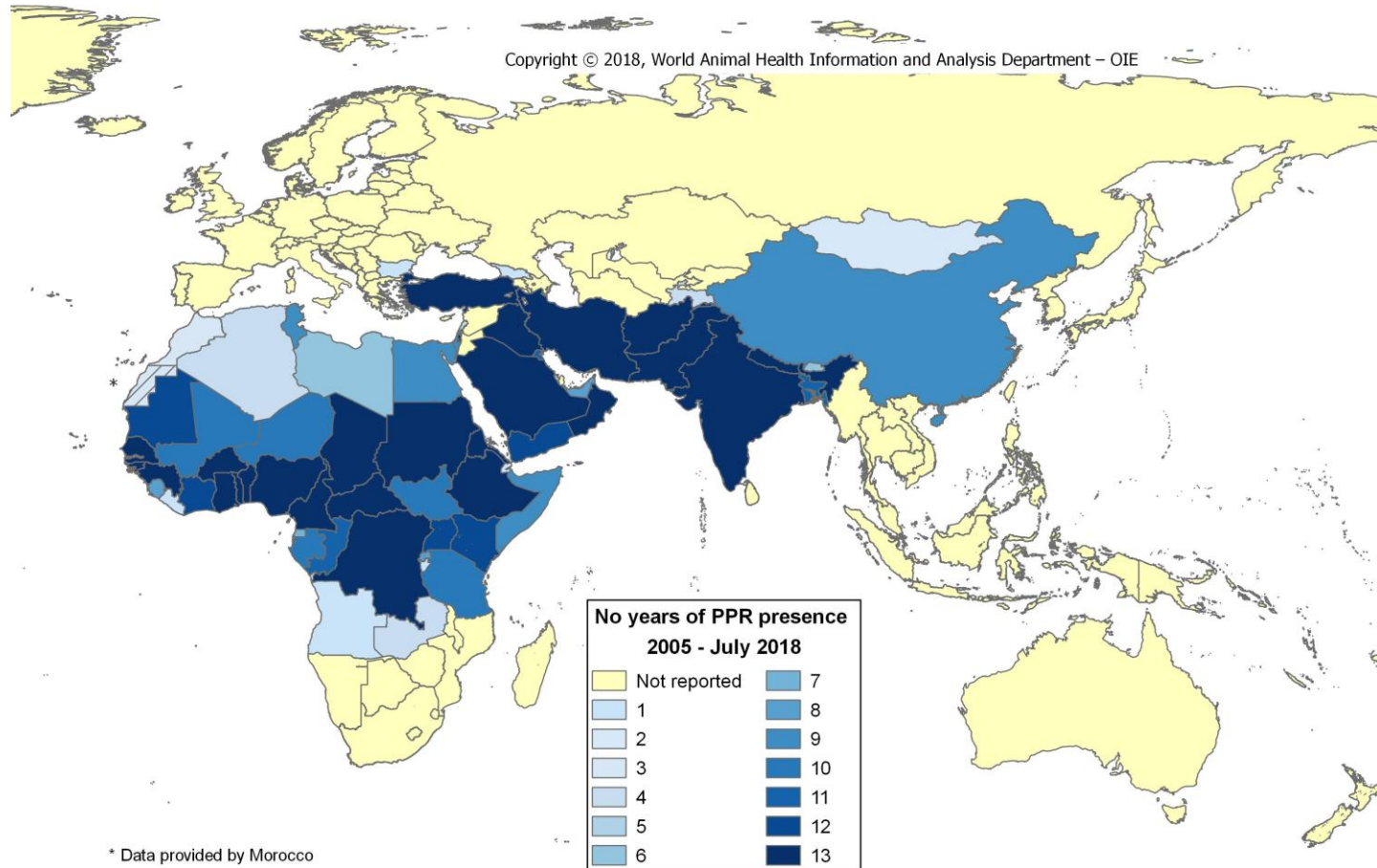
Laboratory capacity



Labs conducting confirmatory diagnosis:

- **Foreign Animal Disease Division, APQA**
 - national reference laboratory for FMD
- **Regional laboratories (2 labs)**
 - accredited for FMD confirmation diagnosis
 - Gyeong-gi do, Chung-nam do

Risk Assessment of Peste des Petits Ruminant



- No outbreak
- Expansion in neighboring Asian countries
 - Mongolia (2016–2018, 2022–2023), China (2013–2018), Thailand (2021), PPR detected in wild goats in Tibet, China (Feb 2024)
- Risk Assessment :
 - Domestic introduction risk is low
 - Some risk of artificial transmission

PPR Response Plans

SOPs

- Develop SOPs for main control measures including culling, movement restrictions, and vaccination (by Dec 2024)
 - ✓ Approach to setting control zones according to the distribution of farm sizes during an outbreak
 - ✓ Application method of culling measures for susceptible animals
 - ✓ Handling methods for raw milk at risk of contamination, etc

Vaccine stockpile

- Stockpile of Emergency Vaccines for 170,000 Doses (about 30% of Korea's goat population)

Thank you

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