



FMD, an unexpected TAD in the EU

USAHA FED Committee

04/11/25

*DG SANTE – G2 Animal Health
European Commission*

Outline

- Epidemiological situation and measures in 2025
 - Germany
 - Hungary and Slovakia
- EU Coordination
- EU Reference Laboratory for FMD
- International status
- Lessons Learned
- Conclusions

Epidemiological situation and measures in 2025

FMD Outbreaks in the EU

- The EU was free from FMD since 2011 (Bulgaria)
- Now two **UNRELATED** events in 2025:
- **10/01/2025 in Germany: FMD ser. O**
 - O/ME-SA/**SA-2018** lineage
- **06/03/2025 Hungary + Slovakia: FMD ser. O**
 - O/ME-SA/**Pan-Asia2/ANT-10** sub-lineage



EU Measures

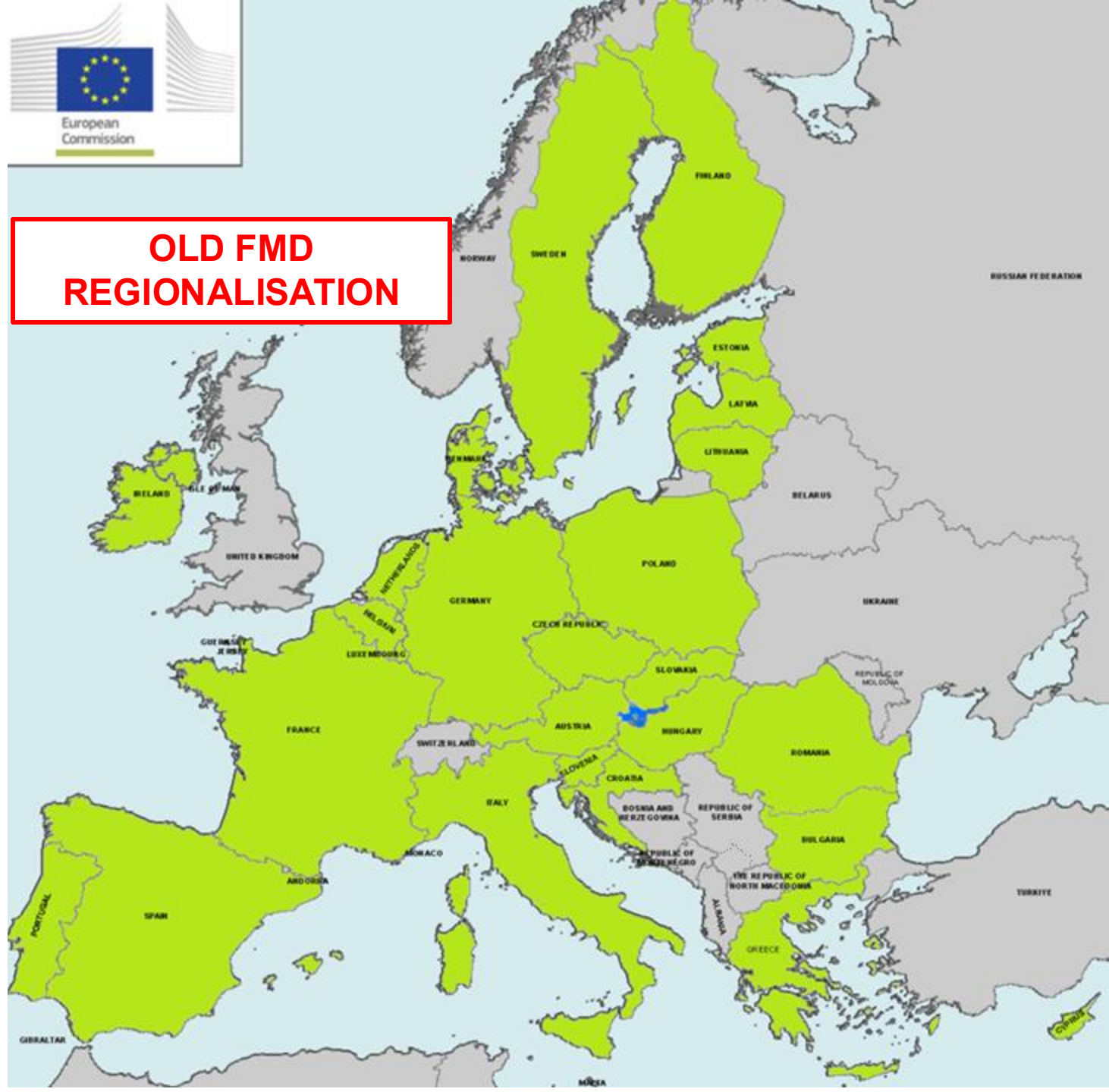
Regionalisation measures for FMD in the EU based on

- **Commission Implementing Decision (EU) 2025/672**

EU measures expired as of 5.6.2025



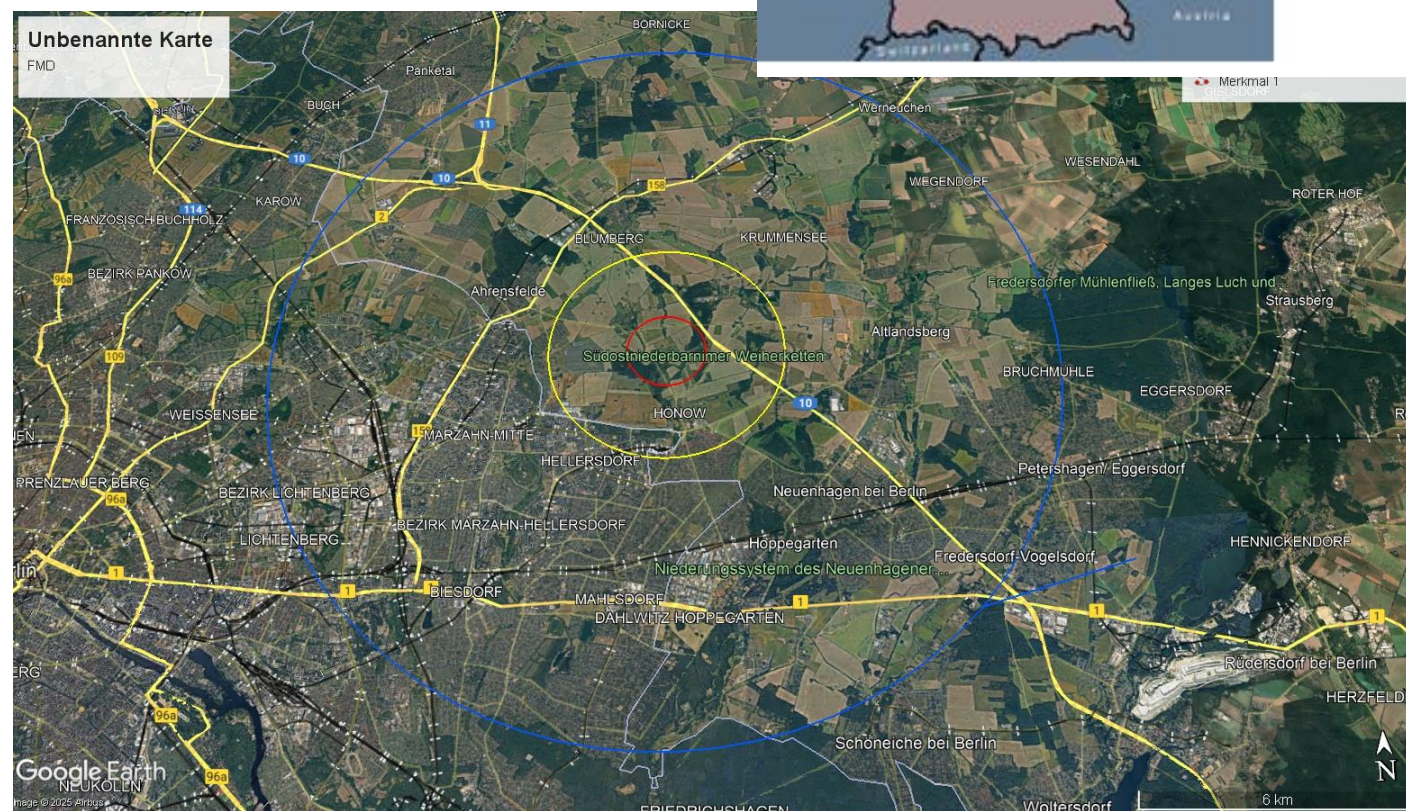
**OLD FMD
REGIONALISATION**



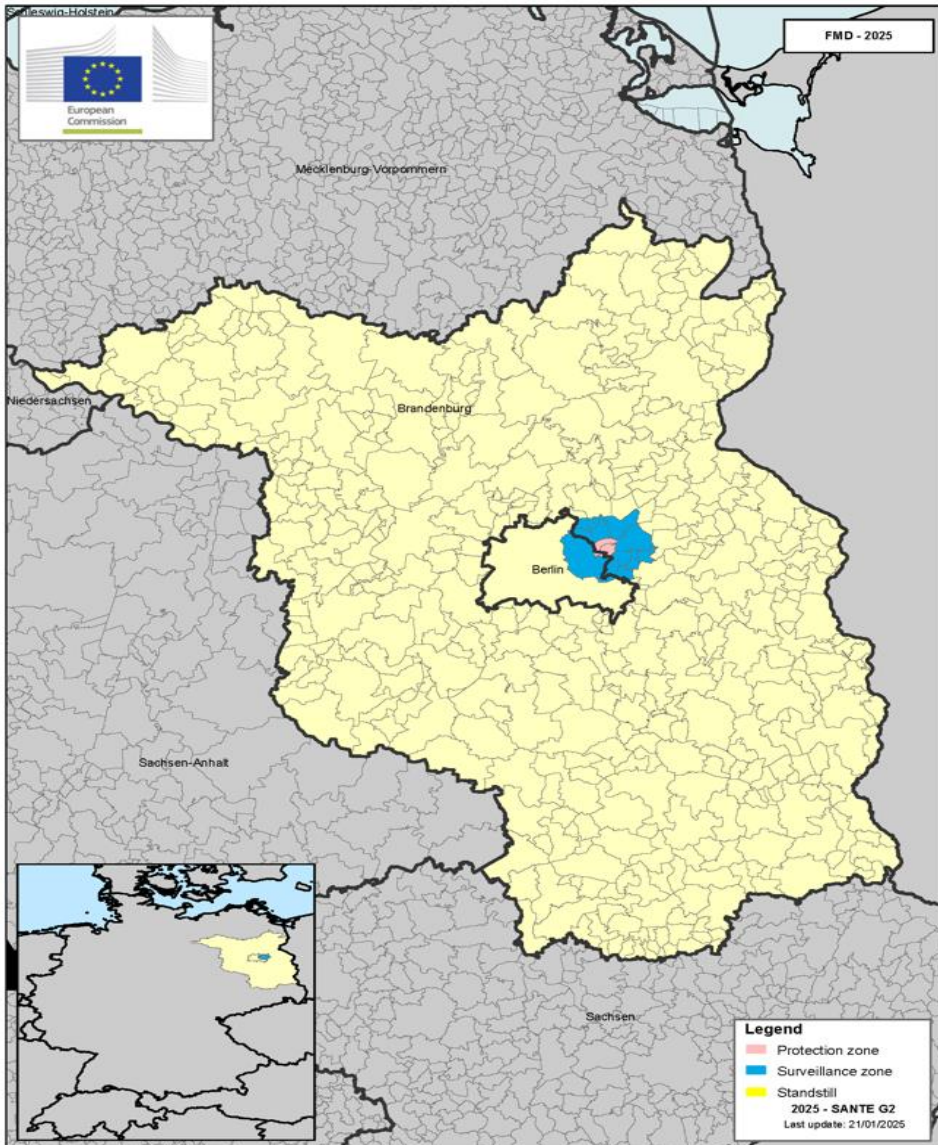
Epidemiological situation and measures in Germany

FMD Outbreak in Germany

- 1st FMD outbreak in Germany **since 1988**
- **Confirmed on 10/01/2025** in Brandenburg (BB)
- Establishment with **14 water buffalo** in Märkisch Oderland district
- Extensive keeping in nature reserve close to Berlin
- **FMD serotype O:**
 - **O/ME-SA/SA-2018** lineage

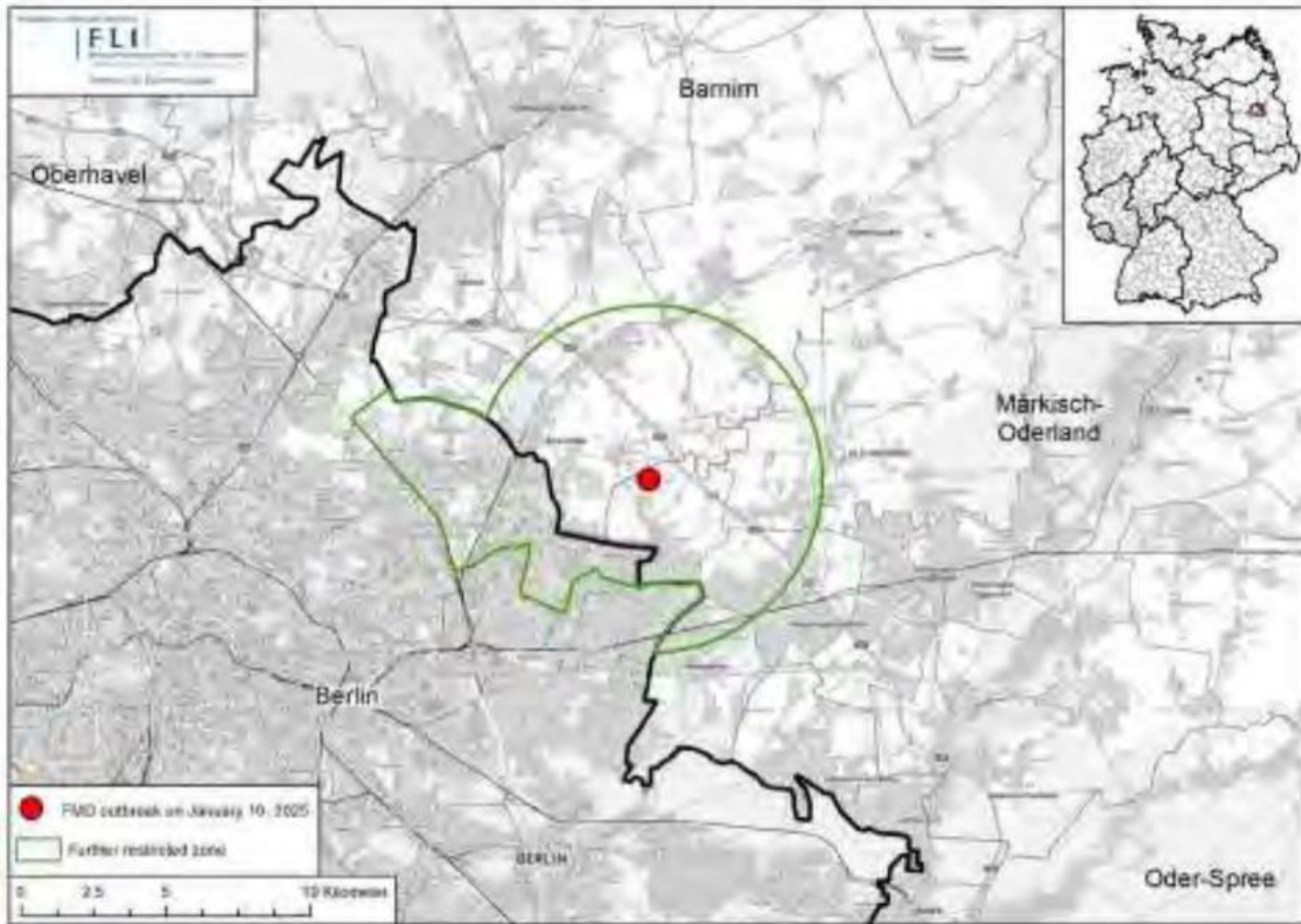


FMD Initial Regionalisation in Germany



- Measures applied immediately after the confirmation of the outbreak
- EU legislation: **Prot.** + **Surv.** Zones
- National measures **with standstill** for cloven hoofed animals from Brandenburg and Berlin

FMD Regionalisation in Germany



- Restricted zone based on **Commission Implementing Decision (EU) 2025/323** of 11 February 2025 concerning certain emergency measures relating to foot and mouth disease in Germany [...]
- 36 establishments with 1700 animals of susceptible species
- Prohibitions in place:
 - No ambulatory AI or natural mating
 - Ban on any animal markets or assemblies
 - Movement restrictions apply to susceptible animals and their products

FMD Surveillance in Germany

- ALL SAMPLES **NEGATIVE**
- Testing of all traced animals originating from BB since 1 December till 25 February
- 15-28 February 2025 sampling across Germany
 - 2 228 livestock animals sampled
 - 903 wildlife animals sampled



SPECIES	INVESTIGATED			
	Viro only	Sero only	Viro and Sero	total
CATTLE*	24	186	2,543	2,753
SHEEP	3	3	183	189
PIGS	13	120	2,547	2,680
TOTAL	40	309	5,273	5,622

* inclusive 2 bison

NB ASF surveillance was in place!!

Epidemiological situation and measures in Hungary and Slovakia

FMD Outbreak in Hungary

- 1st FMD outbreak in Hungary since 1973
- **Confirmed on 06/03/2025** in Győr-Moson-Sopron (notified on 07/03/2025 in ADIS and WAHIS)
- Establishment with **1418 dairy cattle**
- Along the Danube
- **FMD serotype O:**
 - **O/ME-SA/Pan-Asia2/ANT-10** lineage



FMD Outbreaks in Slovakia

- 1st FMD outbreak in Slovakia **since 1973**
- **Confirmed on 21/03/2025 3 outbreaks** in Trnavský
- Establishments with dairy cattle: 670, 790 and 1301
- **FMD serotype O:**
 - **O/ME-SA/Pan-Asia2/ANT-10**

Outbreak [SK-FMD-2025-00001](#) submitted



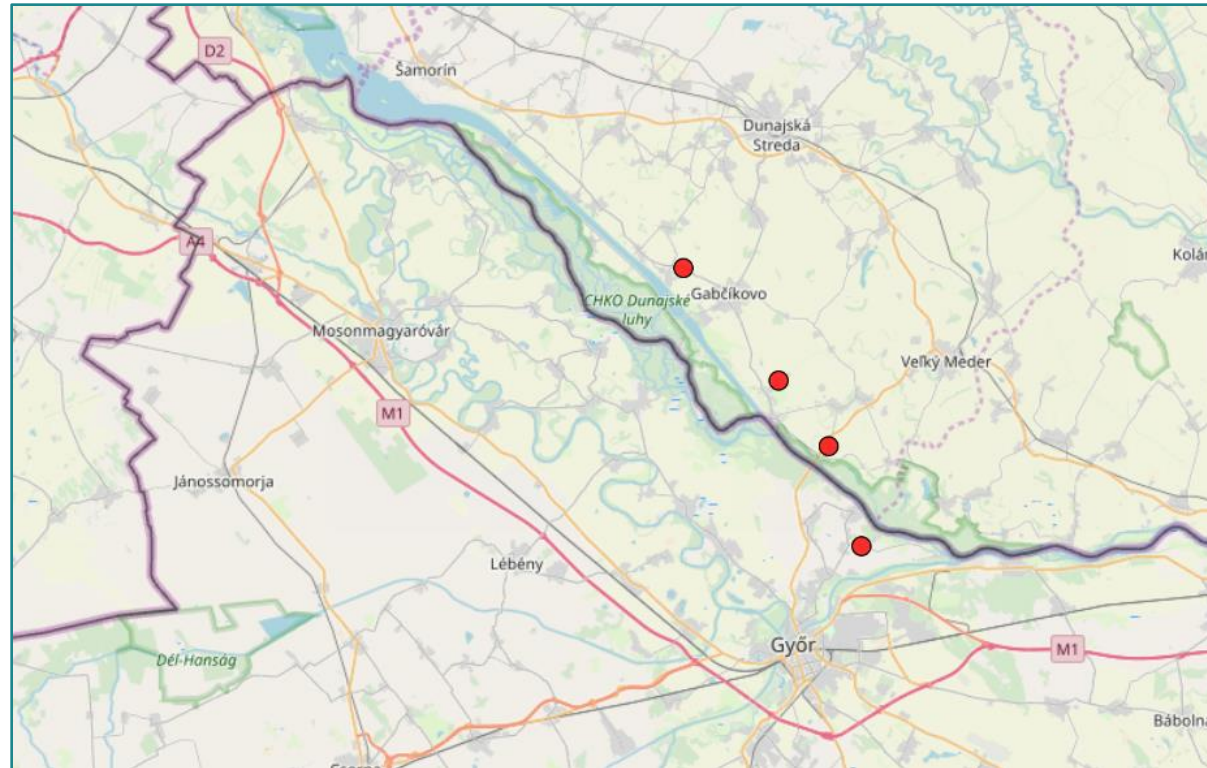
Outbreak [SK-FMD-2025-00002](#) submitted



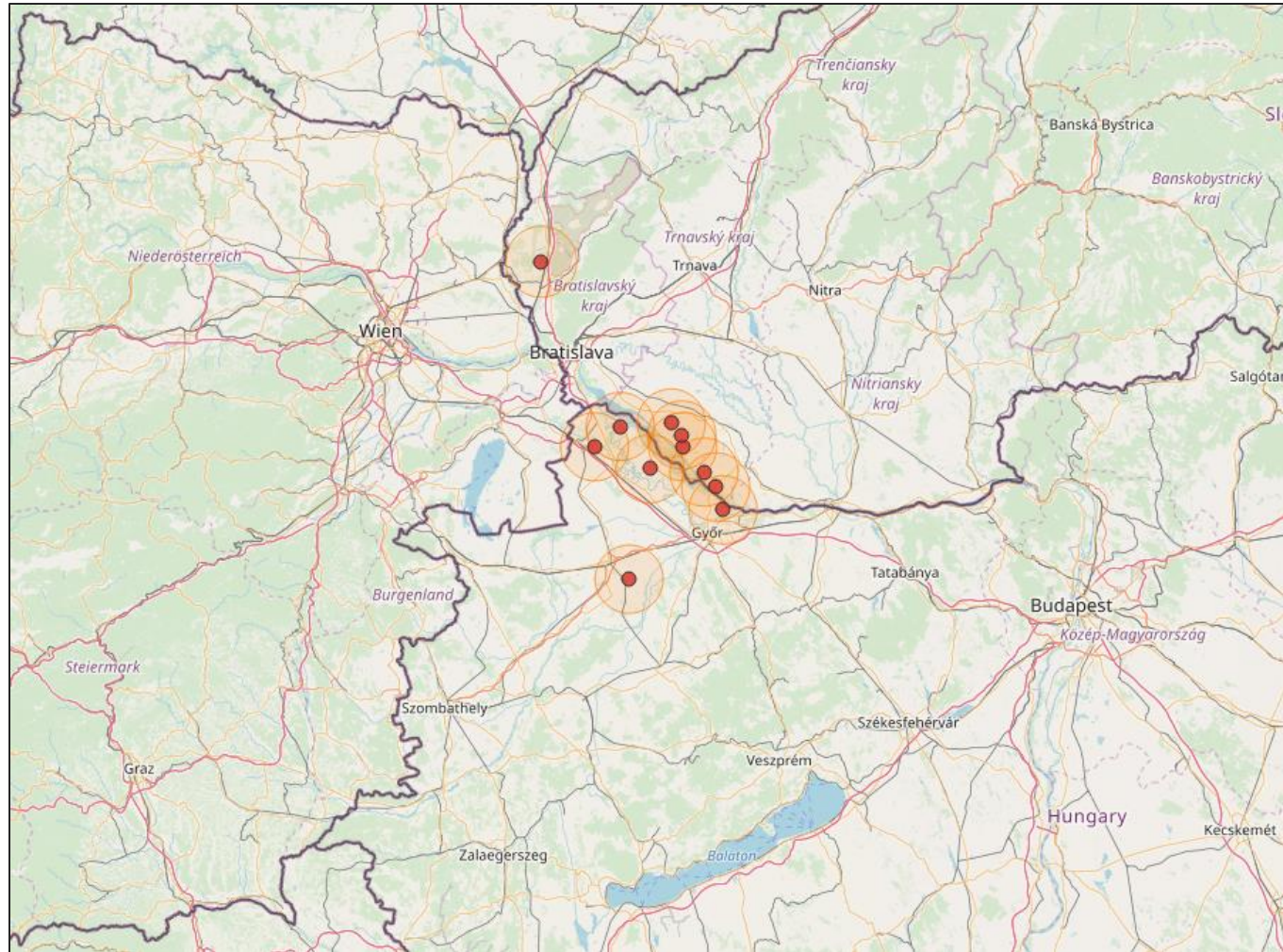
Outbreak [SK-FMD-2025-00003](#) submitted



FMD Outbreaks up to 21 March 2025



FMD Outbreaks 6 March → 17 April 2025



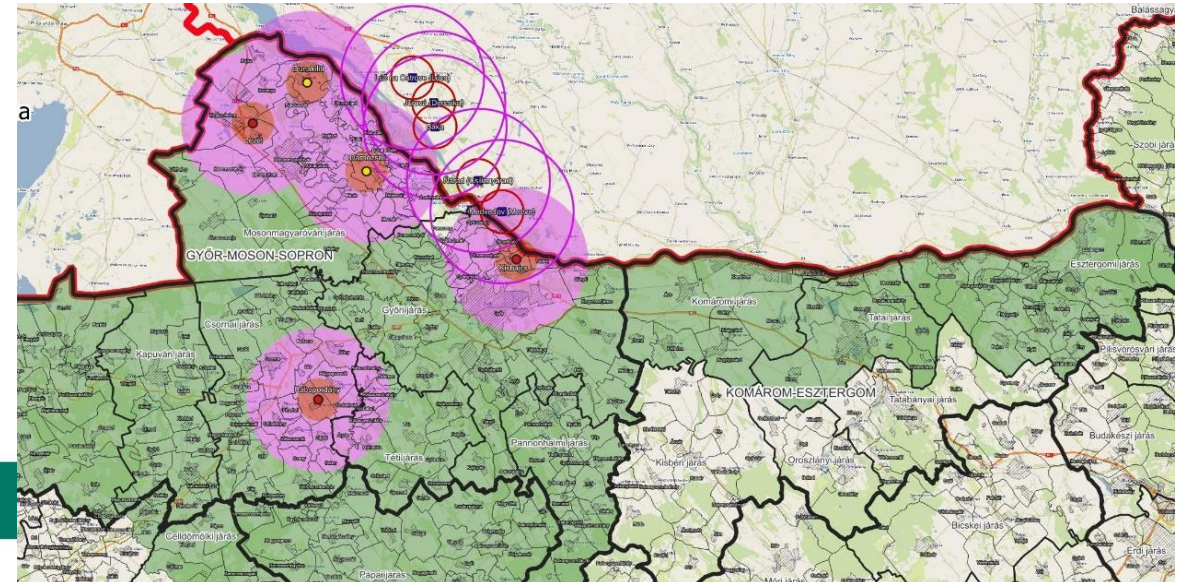
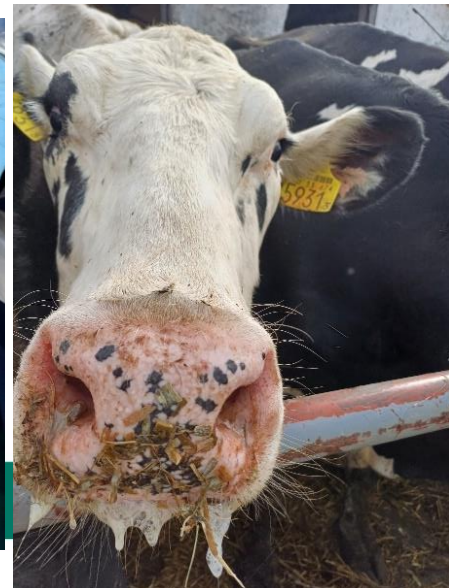
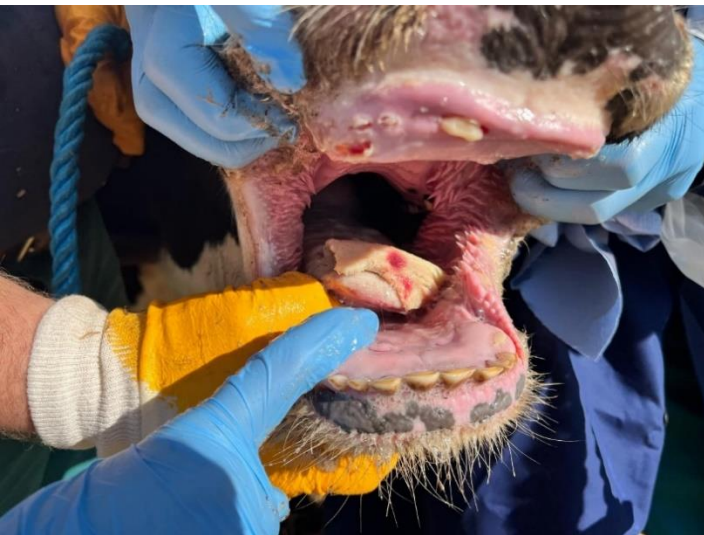
Outbreaks management in Slovakia

Outbreak No.	Outbreak location	County	Region	Vaccination			Depopulation	
				Beginning	Completion	Vaccine	Beginning	Completion
1	Medved'ov	Dunajská Streda	Trnava	22.3.2025	22.3.2025	Aftopor	29.3.2025	30.3.2025
2	Ňárad	Dunajská Streda	Trnava	23.3.2025	23.3.2025	Aftopor	30.3.2025	1.4.2025
3	Baka	Dunajská Streda	Trnava	N/A	N/A	N/A	22.3.2025	26.3.2025
4	Malá Lúč	Dunajská Streda	Trnava	26.3.2025	27.3.2025	Aftopor	27.3.2025	28.3.2025
5	Plavecký Štvrtok	Malacky	Bratislava	30.3.2025	31.3.2025	Aftopor	2.4.2025	7.4.2025
6	Jurová	Dunajská Streda	Trnava	4.4.2025	5.4.2025	Aftopor	9.4.2025	10.4.2025
	Dolný Štál	Dunajská Streda	Trnava	9.4.2025	10.4.2025	Aftopor	11.4.2025	14.4.2025





Outbreak	suspicion date	confirmation date	suppressive vaccination	killing and disposal started	killing and disposal finished	preliminary disinfection finished
1 – Kisbajcs	05.03.	06.03.	-	09.03.	13.03.	21.03.
2 – Levél	25.03.	26.03.	26.03.	30.03.	03.04.	14.04.
3 – Darnózseli	01.04.	02.04.	02.04.	08.04.	10.04.	16.04.
4 – Dunakiliti	01.04.	02.04.	02.04.	10.04.	11.04.	05.05.
5 – Rábapordány	17.04.	17.04.	17.04.	18.04.	<u>19.04.</u>	03.05.



FMD Outbreaks in Slovakia + Hungary

- Several risk factors being investigated:
- **Wind spread / direct human contact**
- Measures applied in the outbreaks
 - **Suppressive vaccination followed by stamping out**
 - **Carcass disposal**
 - **Cleaning & disinfection**
 - **Movement restrictions (animals + products + workers + vehicles cannot leave the farms if not decontaminated)**



FMD additional national measures in Slovakia and Hungary

- Temporary complete standstill in the whole country. (SK+HU)
- Export of live susceptible animals is banned from wide Further Restricted Zone (SK).
- Transit of susceptible animals allowed via designated border crossing (SK)
- Raw milk collection is allowed from multiple farms within the further restricted zones, but no mixing with milk from free zones (SK)
- Susceptible animals must be kept indoor within restricted zones, grazing banned in some areas (HU).
- Slaughter on the spot is encouraged under official supervision, with mandatory sampling for lab testing (HU)
- Vehicles are subject to disinfection (HU).

Surveillance Hungary

Sampling whole country (as of 05.06.)

PCR	55.927
ELISA	206.009

County	census	contact	suspicion	milk	immediate slaughter	commercial	additional	wild game
Bács-Kiskun		1				4	313	1
Baranya		1	1			4	133	
Békés			2			20	48	
Borsod-Abaúj-Zemplén			3			4	170	1
Csongrád-Csanád		1	3			3	222	
Fejér		1	3			4	68	86
Győr-Moson-Sopron	510	36	8	31	91		17	3263
Hajdú			1			26	145	1
Heves			1				96	1
Jász-Nagykun-Szolnok			2		1	7	217	
Komárom-Esztergom		3	3	6	50	3	54	1237
Nógrád			1				24	
Pest		1	1			9	137	33
Somogy			3			3	62	1
Szabolcs-Szatmár-Bereg						6	42	1
Tolna					1	1	55	
Vas		4		2	4	2	96	134
Veszprém		6	4	11	18	3	49	527
Zala		3				5	64	
Total	510	57	36	50	165	104	2012	5286

RSZKF aktuális járványügyi helyzet - The current epidemiological situation of FMD

frissítve: 2025.05.24., 20:08



*Farms tested with negative results **Infected farms



Vizsgált vadhús - Tested wild game meat



*Wild game meat tested with negative results **Wild game meat tested with positive result

Surveillance in Slovakia

FMD in Slovakia

SAMPLING (state of play until 16/06/2025)

- number of tested farms/holdings: **2 982**
- number of farms tested positive: **6**



Number of samples <i>(animals kept for farming purposes)</i>	50 431 (17 489 PCR + 32 942 NSP ELISA)
Number of samples <i>(wild animals)</i>	4 108 (19 PCR + 4 089 NSP ELISA)

EU Coordination and measures

EU Coordination

- Early coordination already even before the confirmation (text messages and phone calls)
- Animal Health Advisory Committee (**AHAC**): 24 January & 7 April
- **EU CVO** working party meeting on 21-22 January, 9 April
- Daily **INFO NOTES** dispatched to MS and third countries
- **ADIS** + **WAHIS** information available
- **EU Veterinary Emergency Team (EUVET)**

Outbreak [DE-FMD-2025-00001](#)



Confirmation on 10 January in Germany → **ADIS** alert message & **WAHIS**

Outbreak [HU-FMD-2025-00001](#) submitted



Confirmation of 1st outbreak 6 March in Hungary → **ADIS** alert message & **WAHIS**



EU measures

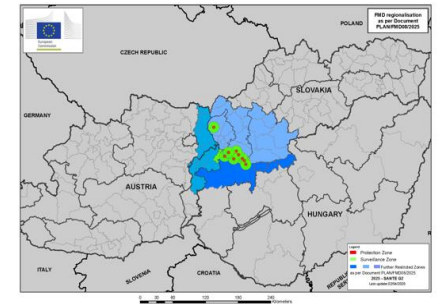
Current EU FMD **emergency** measures are regulated by:

Commission Implementing Decision (EU) 2025/672 of 31 March 2025 concerning certain emergency measures relating to outbreaks of foot and mouth disease in Hungary and Slovakia and repealing Implementing Decision (EU) 2025/613 http://data.europa.eu/eli/dec_impl/2025/672/oj

Commission Implementing Decision (EU) 2025/323 of 11 February 2025 concerning certain emergency measures relating to foot and mouth disease in Germany and repealing Implementing Decision (EU) 2025/186 http://data.europa.eu/eli/dec_impl/2025/323/oj

Measures on Comm. Delegated Regulation 2020/687 include:

1. immediate **on-the-spot killing** and **safe disposal** of all animals of susceptible species kept in the affected establishment (possibly coupled with pre-emptive slaughter/killing determined by the national authorities)
2. in some outbreaks **emergency suppressive vaccination**
3. **cleaning and disinfection** of the premises
4. **prohibitions of movements** of susceptible animals and their products
5. intensive **surveillance** in the 3 and 10 km zones
6. the **prohibition to move animals and products from the further restricted zone** (some derogations are can be granted by authorities after risk assessment and risk mitigation measures applied like heat treatment of products).



EU Regionalisation – e.g. HU/SK

- Since Monday 11 March 2025, the Commission **adopted 8** Commission Implementing Decisions with emergency measures demarcating regionalization at EU level:
 - restricted zones in Hungary, Slovakia and Austria
 - protection (3km) and surveillance (10km) zones with severe restrictions
 - 3 sufficiently large “further restricted zones” with moderate restrictions that confer protection to the rest of the EU

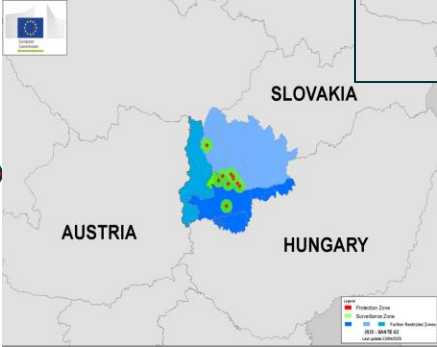
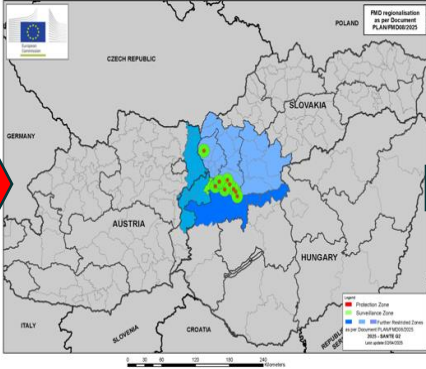
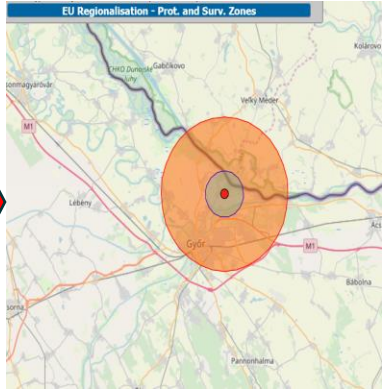
Tuesday
11/03/25

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**REGIONALISATION
MEASURES LIFTED
ON 5.6.2025**

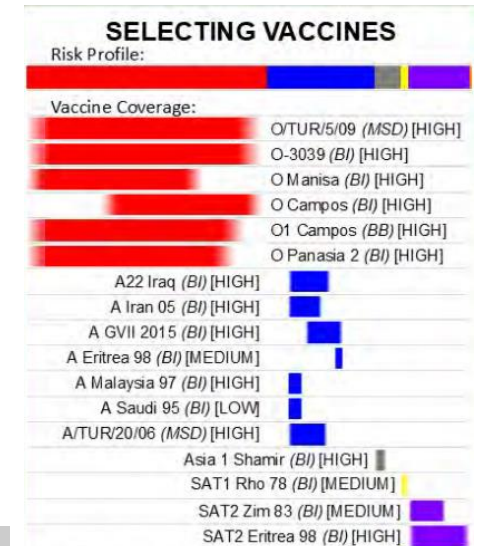


Wed.
21/05/25



EU Measures

- **Disease control measures** based on **Commission Delegated Regulation (EU) 2020/687**
 - Full and immediate stamping out, cleaning & disinfection, movement restrictions on animals and products (regionalisation), surveillance
 - emergency suppressive vaccination → 5 outb. in SK and 4 outb. in HU (over 13K animals)
- **EU antigen bank for FMD** is regulated by **Commission Implementing Regulation (EU) 2022/140**
 - Over 36 million doses of inactivated antigens ready for rapid formulation and delivery
 - All serotypes covered with different amounts based on the risk for the EU



EU Regionalization **Commission Implementing Decision (EU) 2025/672**



EU Reference Laboratory for FMD

EURL FMD – coordinate network of NRLs



Activity 1

TO ENSURE AVAILABILITY AND USE OF HIGH QUALITY METHODS AND TO ENSURE HIGH QUALITY PERFORMANCE BY NRLs

Activity 2

TO PROVIDE SCIENTIFIC AND TECHNICAL ASSISTANCE TO NRLs

Activity 3

TO PROVIDE SCIENTIFIC AND TECHNICAL ASSISTANCE TO THE EUROPEAN COMMISSION AND OTHER ORGANISATIONS

Activity 4

REAGENTS AND REFERENCE COLLECTIONS



Eurl-fmd@anses.fr
<http://eurl-fmd.anses.fr>



EURL FMD – yearly proficiency test (PT)

- 26 EU member states
- 9 candidate countries
- 2 third countries supported by the EURL
- 3 countries supported by EuFMD

2025 PT →

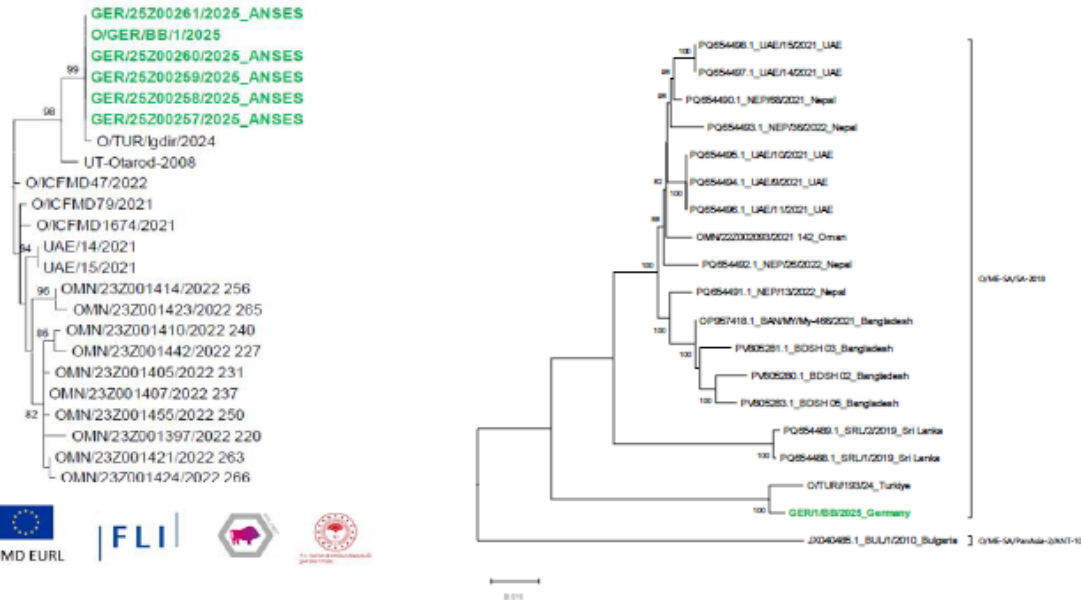
Total = 40 participants

- PT sent on April 2025
- Reports sent to participants
- Results presented during the EURL Workshop two weeks ago



EURL FMD –findings from Germany

- Lineage O/ME-SA/SA-2018 identified
 - ➔ initially identified in South Asia, and then spread to West Asia
- Most closely related sequence on VP1: O/TUR/Igdir/2024 (99.84%)
- Confirmation of FMD by EURL (rt RT-PCR, virus isolation), VP1 sequencing, Full genome sequencing, Vaccine matching
- Vaccine matching test performed at EURL : **effective vaccines available**



Vaccine strain	Heterologous Titre	r1
O-3039 BI	2.0	0.28
O-PanAsia2 BI	2.25	0.35
O1 Manisa BI	2.15	0.63

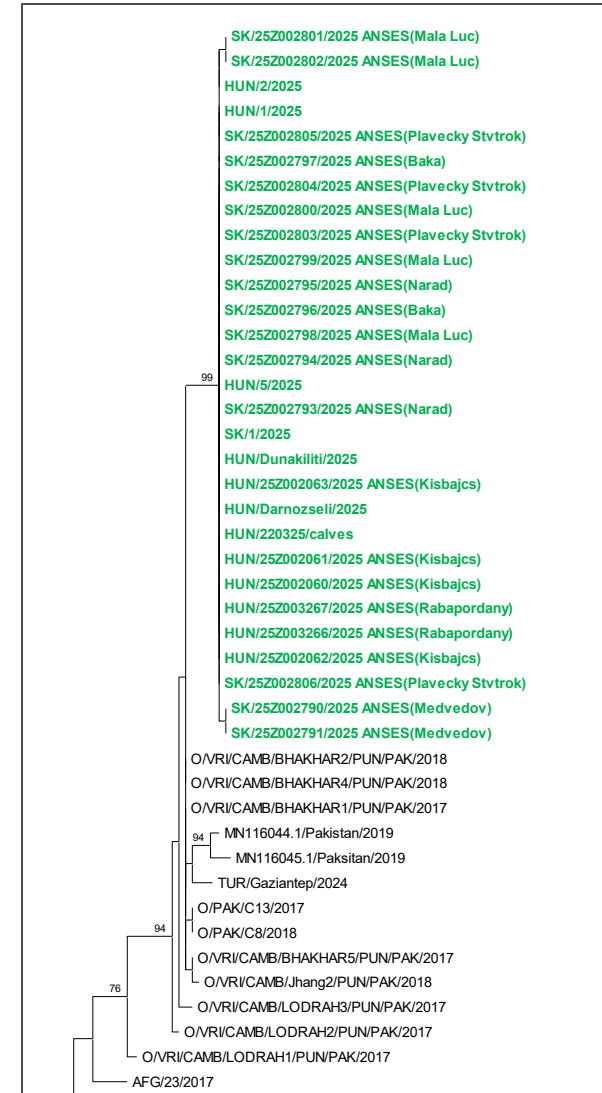
rtRT-PCR for the detection of O/ME-SA/SA-2018 FMDV
 This real-time RT-PCR is a molecular tool for detection of Foot-and-mouth disease virus lineage O/ME-SA/SA-2018, as it is an emerging lineage in South Asia since 2018.

<https://eurl-fmd.anses.fr/>

EURL FMD – findings from HU/SK

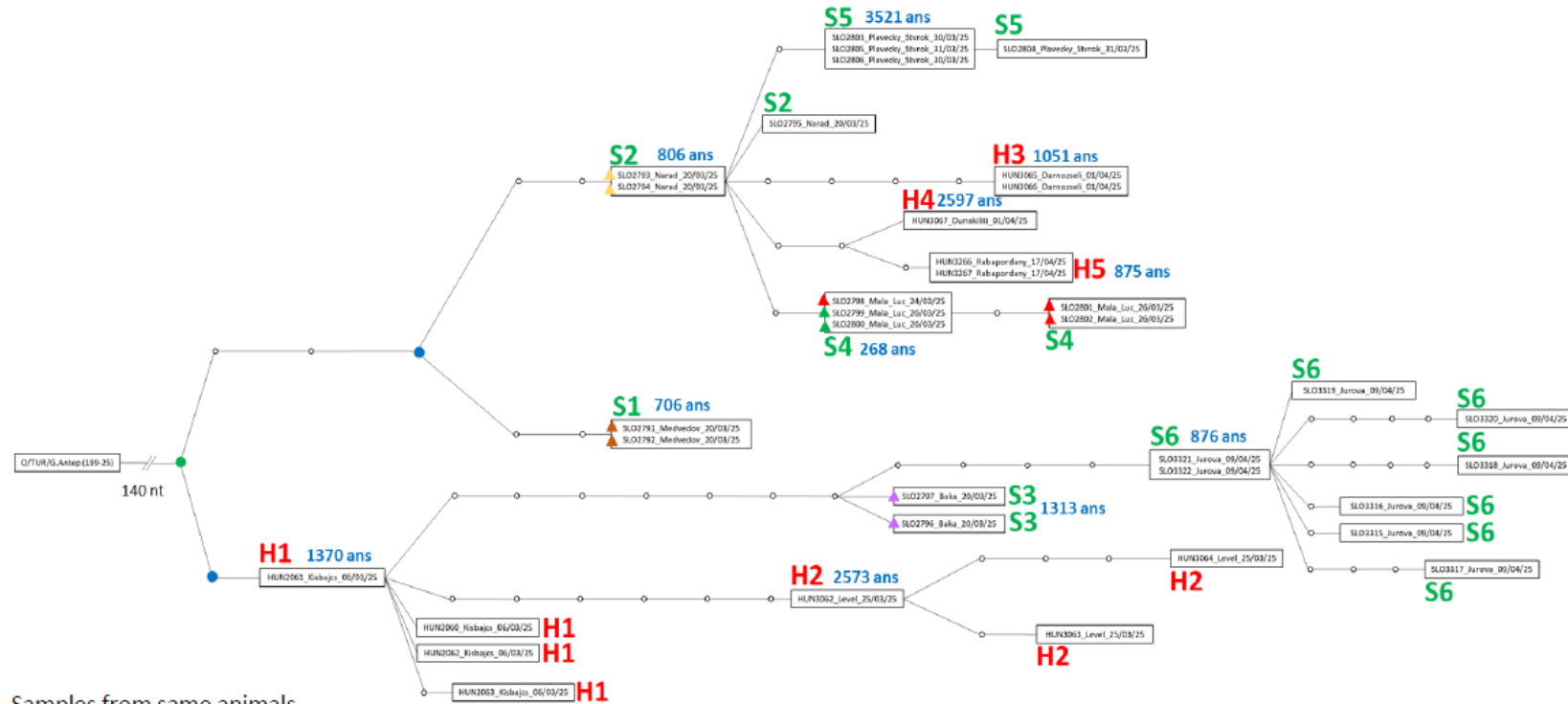
- FMDV was detected, typed and the **O/ME-SA/PanAsia-2^{ANT-10}** strain identified after VP1 sequencing by the NRLs
- Results confirmed by the EURL
- Most closely related sequences are from **Pakistan (2017, 2018: 99,22%)** and **Türkiye (2024:98,58%)**
- Vaccine matching ➔ suitable vaccine available

Vaccine strain	Heterologous Titre	r1
O-3039 BI	1.70	0.18
O-PanAsia2 BI	2.30	0.28
O1 Manisa BI	2.00	0.56
O1 Campos BI	2.00	0.40



EURL FMD – Preliminary findings from HU/SK

- A single putative common ancestor for all the sequences
➔ provides evidence for a **single introduction of the virus**
- Few mutations between farms ➔ **No evidence of unsampled farm**



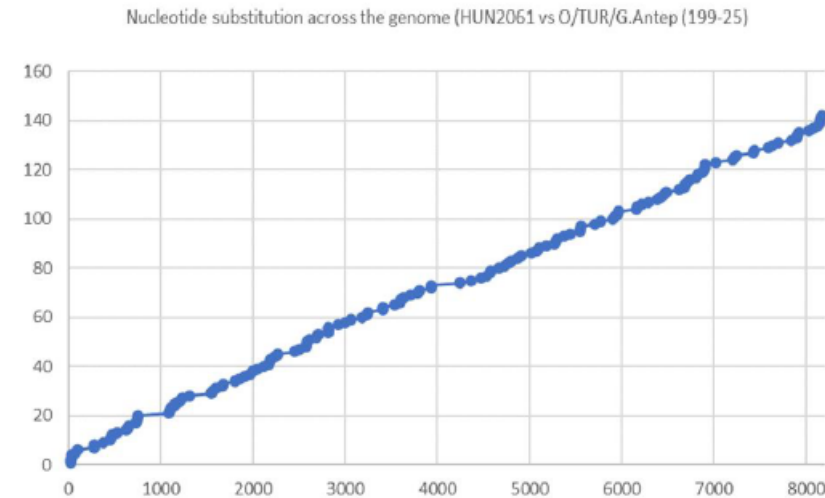
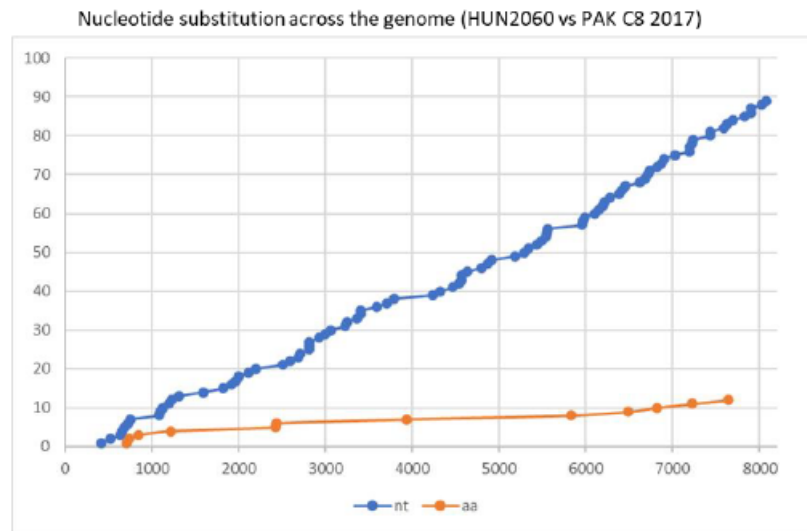
▲ Samples from same animals

Comparison based on 8180 nt
Each branch = 1 nt of difference

TCS tree (statistical parsimony analysis)

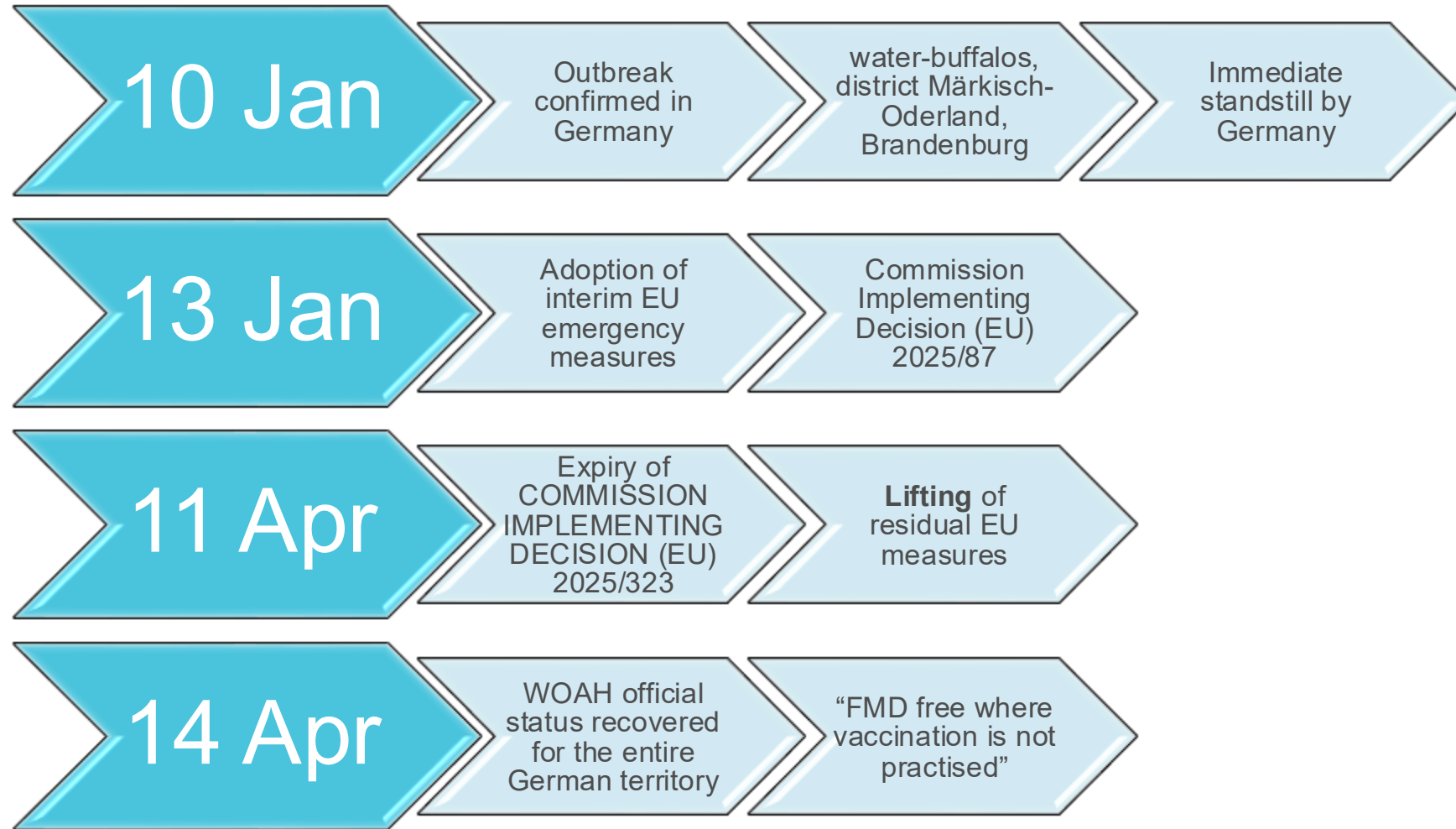
EURL FMD – Preliminary findings from HU/SK

Nucleotide substitution across the genome



International status

Timeline 2025 - Germany



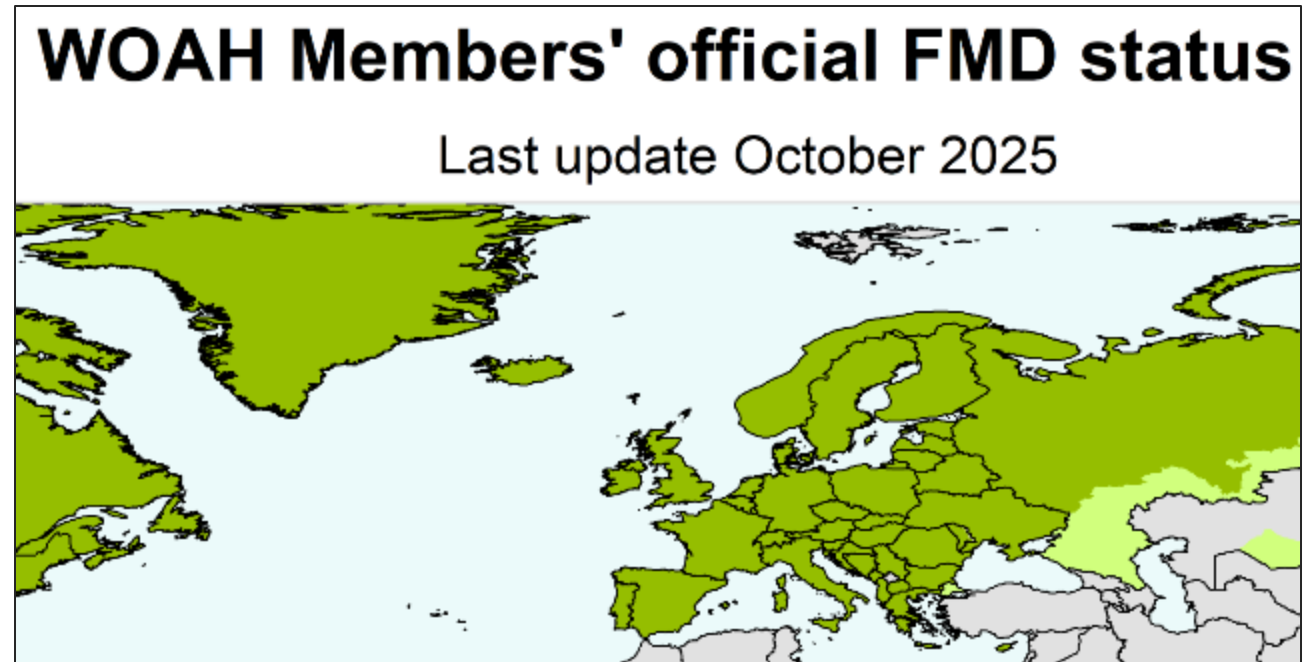
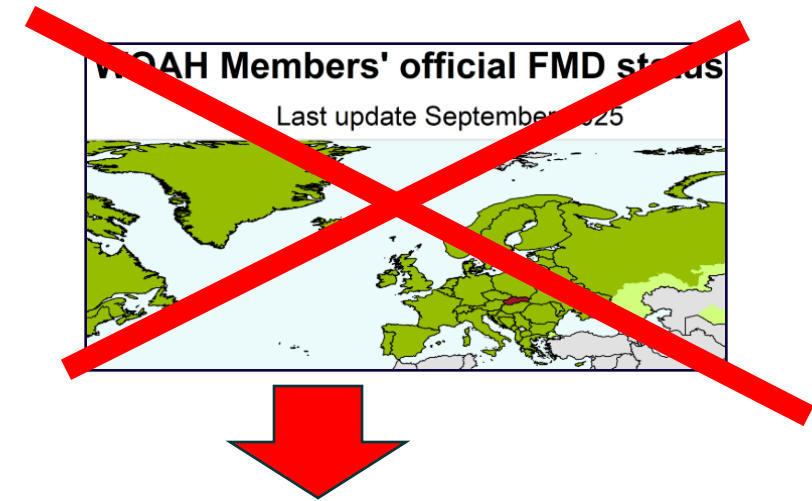
Timeline 2025 – Hungary and Slovakia



Conclusions

Official WOAAH status regained

- WOAAH recognised **GERMANY, HUNGARY & SLOVAKIA** as FMD free where vaccination is not practised, according to the provisions of Chapter 8.8. of the Terrestrial Code
- **GERMANY** has been reinstated by WOAAH with effect from 14 April 2025
- **HUNGARY** has been reinstated by WOAAH as of 10 September 2025
- **SLOVAKIA** has been reinstated by WOAAH as of 31 October 2025



Lessons Learned

Outbreak Management Lessons Learned

- **EU regionalisation worked well**, especially the use of the *Further Restricted Zone (FRZ)* beyond the standard 3 + 10 km zones.
- **Rapid vaccine access** enabled swift suppressive vaccination (flexible legislation).
- **Bold decisions**, such as pre-emptive culling within 3 km, proved decisive in stopping spread.
- **Complex epidemiological investigation**
- **Rendering and contingency planning** need be regularly reviewed — disposal capacity and crisis-centre procedures must be pre-defined.
- **Communication and costs** were major challenges; media management and emergency funding should be built into plans.
- **Biosecurity and movement control** are essential.
- Despite active surveillance in **wildlife**, they did **not** play a role.

Overall Lessons Learned

- Incidents attributed to “**wrongdoing**”
- Importance of effective **passive surveillance!!!!!!** (dairy cows showed diseases)
- **Measures** put in place in the EU were **effective to eradicate and Official WOAAH status regained quickly**
- Very **transparent** communication (Info Notes/PAFF/webpage/**ADIS**/WAHIS/**GFTADs**)
- Access to **FMD antigen banks** crucial for **rapid response**
- **Specific training (EuFMD) on the spot in Africa helps**
- National minimum **requirements for biosecurity revised and upgraded**
- **Framr registration and animal identification are essential**
- **Remain Vigilant → joint effort from all stakeholders**

Some reflections on veterinary epidemiology

- **Boots epidemiology – field epidemiology – epi investigations**
- **Laptop epidemiology – analytical epidemiology – modelling**
- **White coat epidemiology - Lab epidemiology – Molecular epidemiology**

Useful links:

PAFF Committees and **PPT**: https://food.ec.europa.eu/horizontal-topics/committees/paff-committees/animal-health-and-welfare/presentations_en#20250113

SANTE FMD PAGE: https://food.ec.europa.eu/animals/animal-diseases/diseases-and-control-measures/foot-and-mouth-disease_en

ADIS PUBLIC PAGE: <https://webgate.ec.europa.eu/tracesn/adis/public/notification>

Thank you



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