

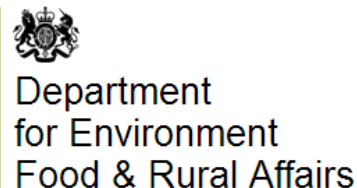


Global Update EuFMD Exec. Committee

Donald King

donald.king@pirbright.ac.uk

WRLFMD Team: Valerie Mioulet, Nick Knowles, Anna Ludi, Ginette Wilsden, Bryony Armson, Pip Hamblin, Kasia Bachanek-Bankowska, Kelly Adams, Jemma Wadsworth, Begoña Valdazo-González, Britta Wood, Barsha Thapa, Bob Statham, Abid Bin-Tarif, Ashley Gray, Emma Fishbourne, Beth Johns, Mark Henstock, Alison Morris, Debbie Gibson, Trish Ryder, Sarah Belgrave.



-
- Lab relocation
 - Global situation
 - OIE/FAO FMD Lab Network
 - Proficiency Testing
 - Vaccine Recommendations

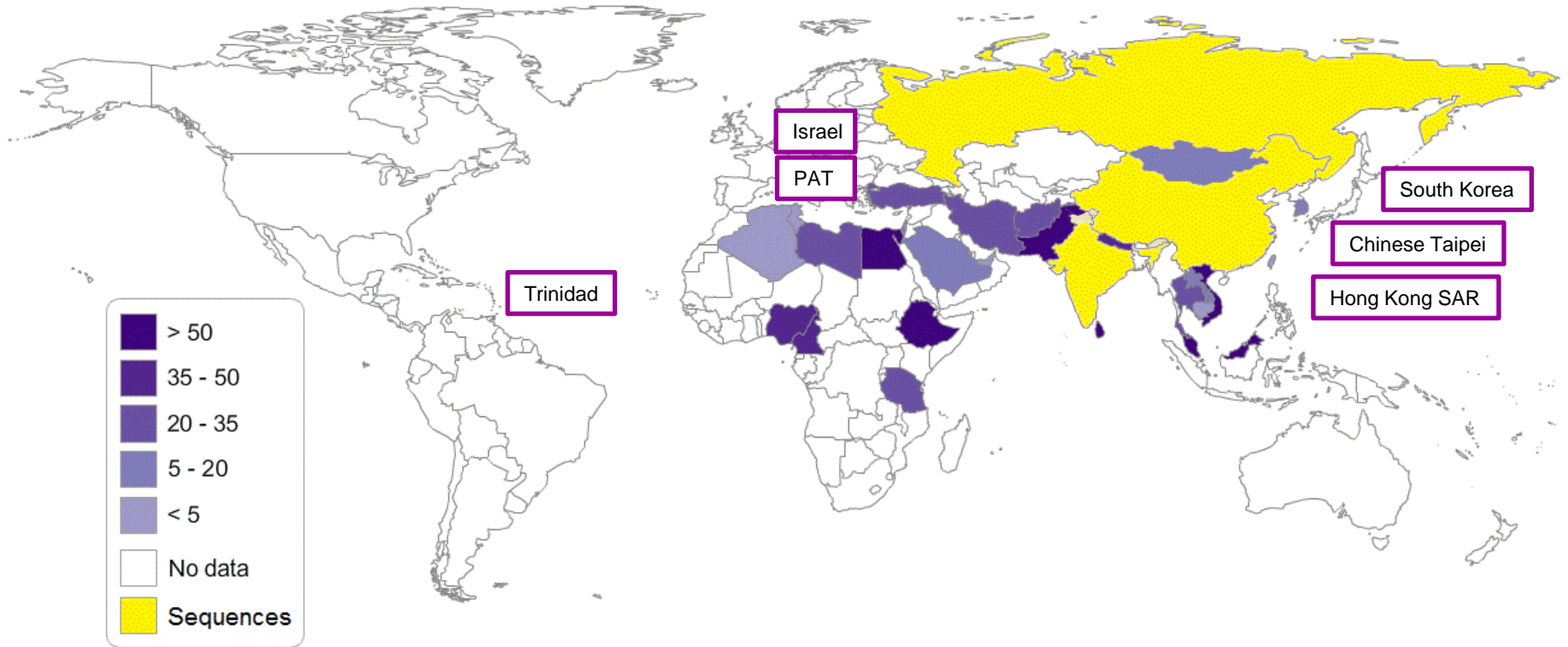
BBSRC National Virology Centre: The Plowright Building

- Jan-Feb 2015: Occupy new high containment laboratory
- Houses all work with “live” FMD and International Reference Laboratories for FMD, BT, PPR, ASF, AHS, Capripox



Submissions to WRLFMD Pirbright

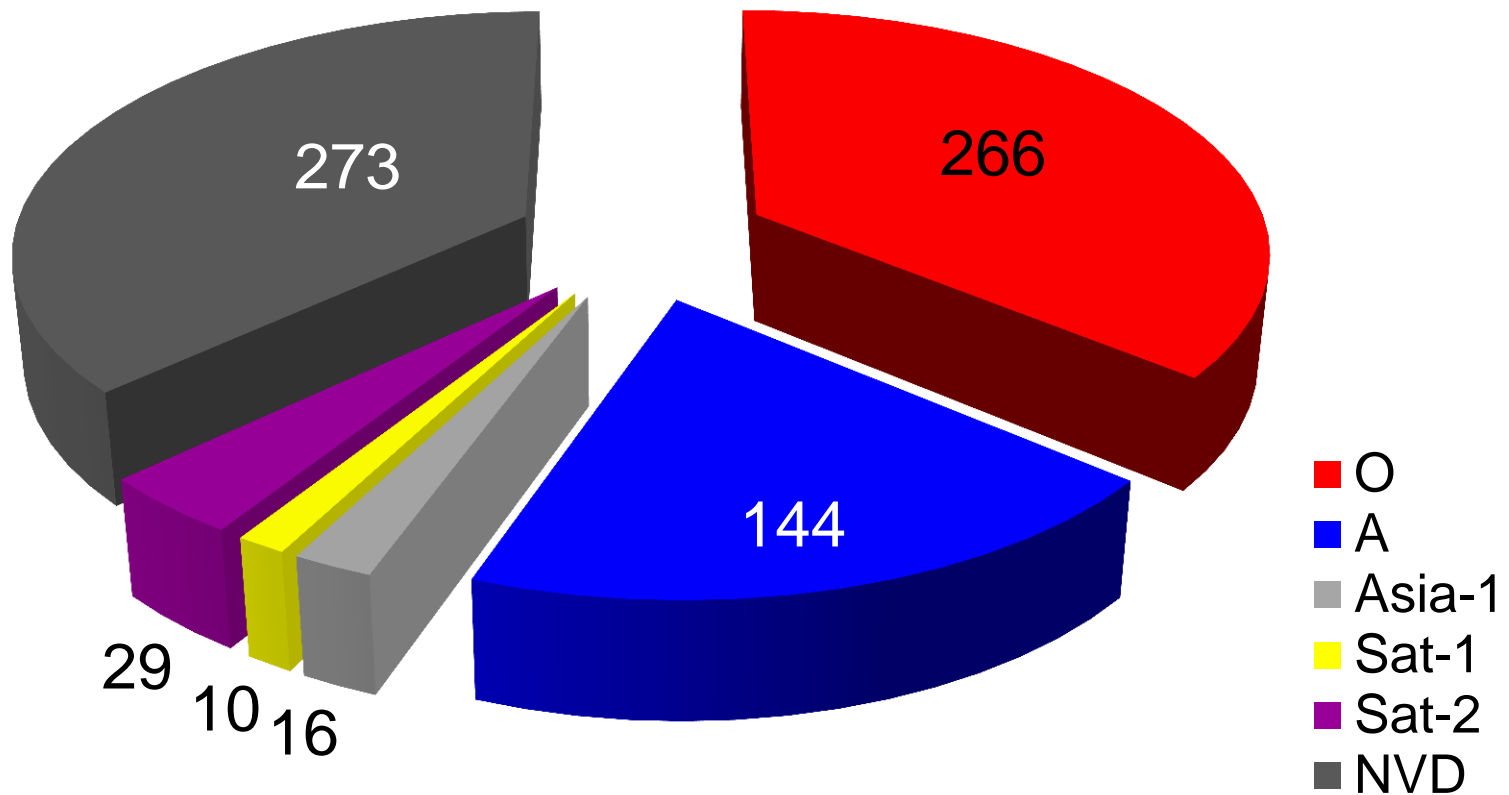
October 2013 – January 2015 (period of current LoA)



- Samples received from 29 countries
- Additional sequence exchange with China, Russia and India
- Reports for these samples can be found at: www.wrlfmd.org

Serotypes recovered

October 2013 – January 2015

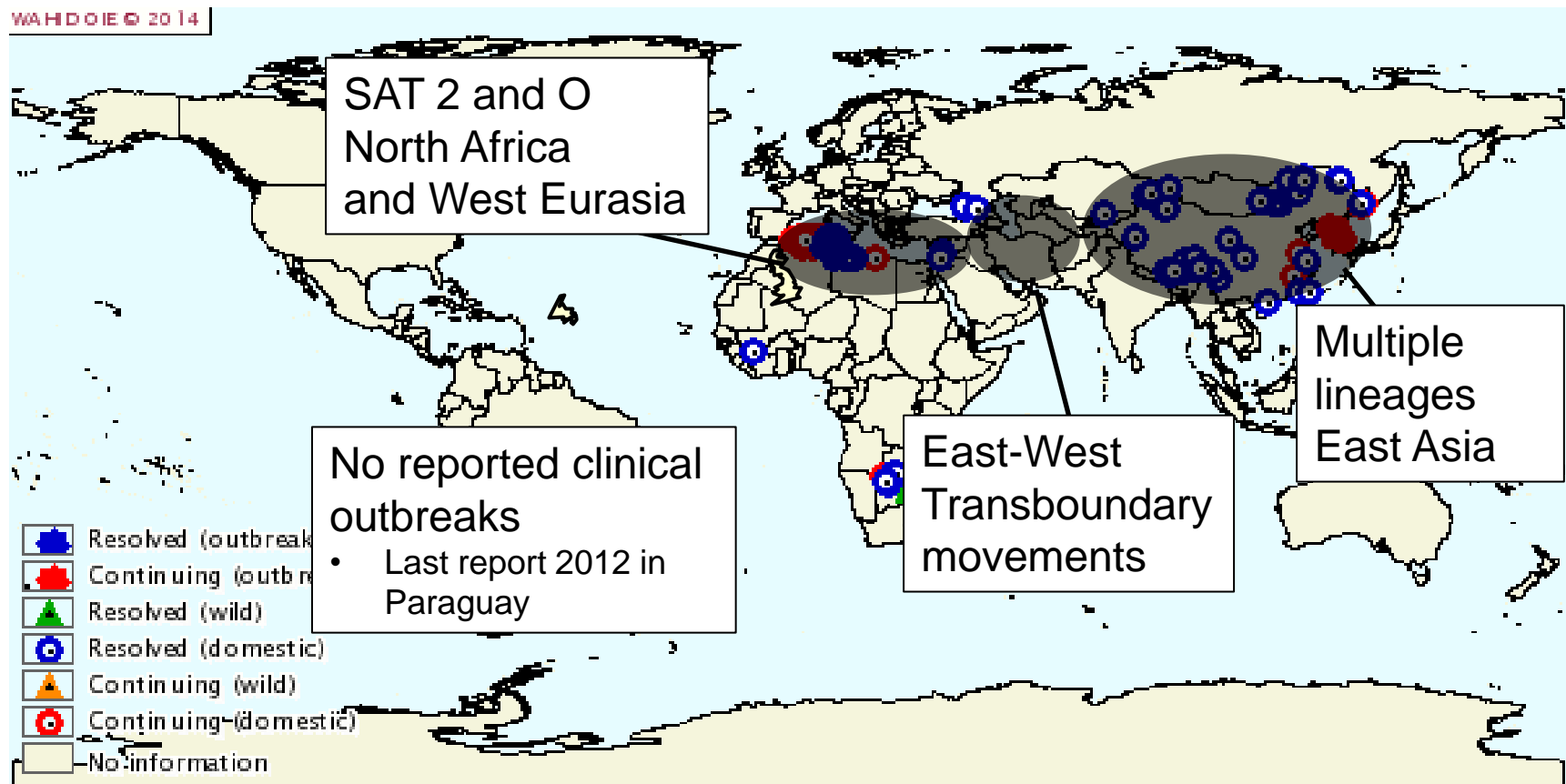


- 738 samples / 273 NVD
- No C or SAT3

Global Status:

Update regarding North Africa (O/ME-SA/Ind2001 situation) – data from WAHID

- Tunisia 150 outbreaks (last case 13/10/2014)
- Algeria 420 outbreaks (last case 22/9/2014)



Outbreaks reported to the OIE (change of epidemiological status):

<http://www.oie.int/wahid-prod/public.php?page=home>

Vaccine matching for O/ME-SA/Ind-2001

22 field isolates

	Vaccine strain				
Field Isolate	O-3039	O Manisa	O BFS	O/TAW/98	O/TUR/5/09
LIB 1/2013			nd		
LIB 7/2013			nd		
LIB 17/2013					
LIB 22/2013			nd		
NEP 13/2012		borderline	nd		
NEP 6/2012	borderline		nd		
NEP 21/2012			nd		
NEP 6/2013			nd	borderline	
NEP 18/2013			nd		
NEP 1/2014					
NEP 6/2014			nd		
SAU 1/2013			nd		
SAU 4/2013			nd		
SAU 6/2013			nd		
SAU 7/2013			nd		
SAU 1/2014	borderline		nd		
SRL 1/2013			nd		
SRL 1/2014		borderline	nd		
UAE 1/2014		borderline	borderline		
UAE 2/2014		borderline	nd		
ALG 1/2014	borderline			borderline	
TUN 1/2014	borderline			borderline	

Vaccine Potency Trial



O/ME-SA/Ind2001

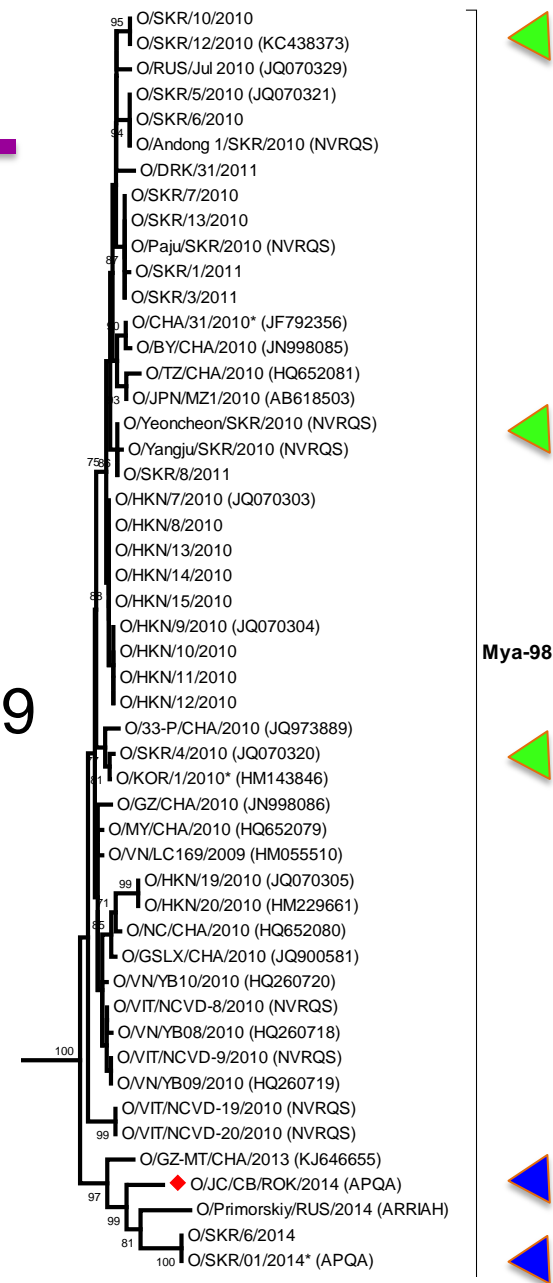
- Funded via EU (from EU-RL) contributions
- Experiments hosted by CVI-Lelystad
- Design agreed after discussions with FMD experts in Italy, UK, Germany and The Netherlands
- O-Manisa vaccination with O/TUN/2014 challenge
- Will adopt European Pharmacopeia protocol
- Vaccinations will start mid Feb 2015
- Challenge mid March 2015
- Simultaneous cattle passage required (funded from UK and Dutch National Projects)
- Preliminary results will be reported at EU-RL meeting in May



FMD Outbreaks in South Korea

December 2014 – on-going

- New outbreaks (O/SEA/Mya-98)
 - 3 outbreaks reported
 - Unofficially >60 outbreaks
 - South of Seoul
- Cases in vaccinated pigs
 - O-Manisa/Merial
 - Suggestion to supplement with O-3039
- Sequence data indicates another introduction into SKR
 - 2 in 2014? 
 - 3+ in 2010? 
 - Based on the reported outbreaks this may provides an indication of the severity of “infectious pressure” in the country?



Coordinating Global Networks

OIE/FAO FMD Laboratory Network

OIE/FAO
Foot-and-Mouth Disease
Reference Laboratories
Network



- Secretariat for the OIE/FAO FMD Lab Network
- OIE and FAO Reference Centres (+ affiliates)
- Annual meeting and report (March/April 2015)
- Global surveillance and changing patterns in risk pathways



Brescia, Italy – November 2014

OIE/FAO FMD Lab Network

Meeting recommendations

1. With assistance from OIE and FAO, the network will obtain and analyse samples from under-sampled endemic pools
2. Network partners will provide a central resource of expertise and advice regarding FMD control, vaccines and diagnostics
3. The network will continue to explore (and support) tools for real-time sharing of Laboratory data generated within the Network
4. **Core OIE and FAO Network partners to consider the organization of the network and opportunities to make it a more inclusive network to maximize data collected from the field**

OIE/FAO FMD Lab Network

Proposed ***Virus Nomenclature*** Working Group

To address isolate, strain and toponotype nomenclature and to provide recommendations about coherent naming of FMD viruses.

Initial priorities for working group:

1. To propose common nomenclature to be used to describe samples and sequences (FMDV positive [and FMDV negative?] specimens)
2. To define toponotype nomenclature for SAT serotypes (including nucleotide cut-offs for different serotypes)
3. To explore formal approaches (such a standing Network sub-group) to oversee the naming of new lineages

Proposed Members: *Nick Knowles, Wilna Vosloo, Fuat Ozyoruk, Alexi Scherbakov, Rahana Dwarka, representative from PDFMD (tbc)*

Proposed Working Group for ***vaccine recommendations in endemic settings***

Initial priorities for working group:

1. Review data from previous PT exercise with a view to publishing this data
2. Plan a further practical study that can be used to harmonise in-vitro vaccine matching methods (VNT and LPBE) used in different laboratories within the Network.
3. Explore whether alternative serological approaches are more appropriate for vaccine matching in endemic settings where multivalent vaccines provided by local or international suppliers are employed. If so, provide recommendations for a standardized laboratory method that can be rolled-out to members within the Network.

Proposed Members: *Kris De Clercq, Emi Brocchi, Anna Ludi, Rosanna Allende, George Matlho, China (tbc), PDFMD (tbc), Kees van Maanen (observer, tbc)*

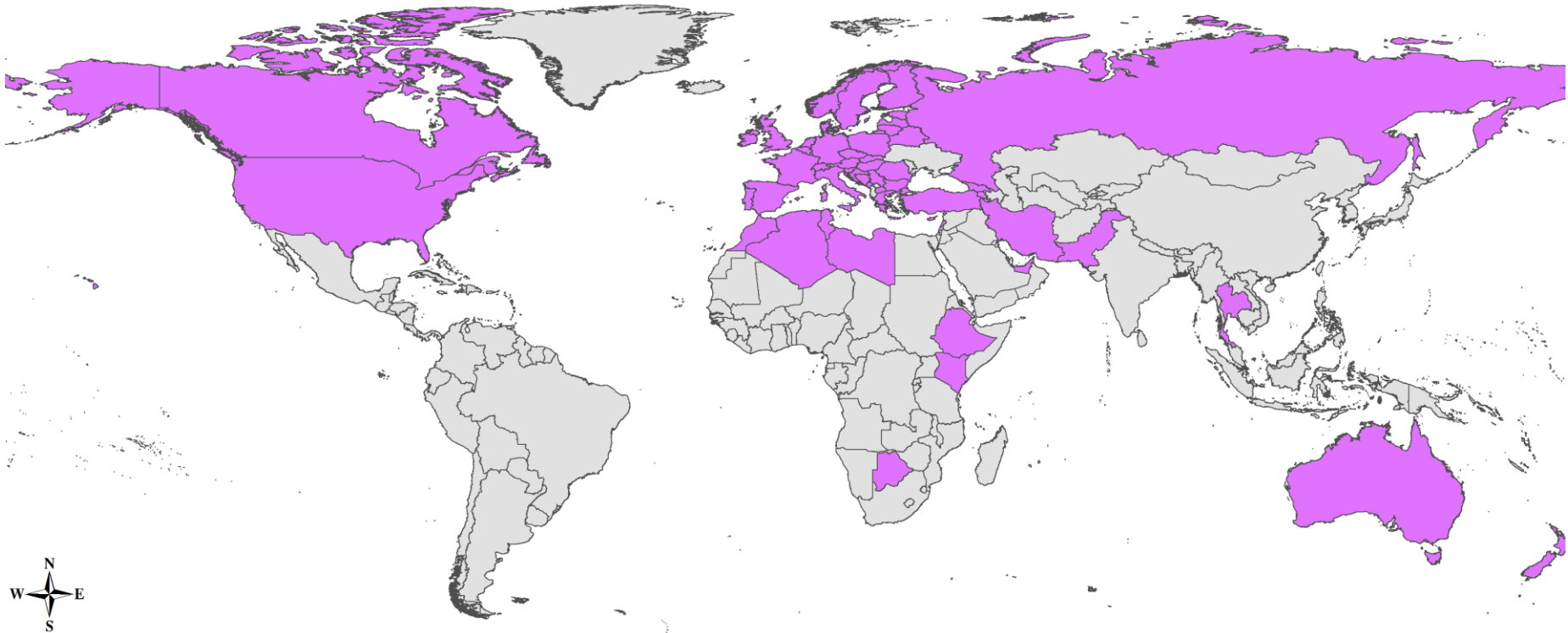
Broads aims of PTS:

- NRLs from all EU member states must participate
- Intra-laboratory equivalence testing
- To assist EU and other National FMD Laboratories to develop/improve accurate and reproducible FMD diagnostic tests
- Quality assurance programme requirements to support ISO/IEC 17025
- Feedback (reiterative improvements to assays)
- Covers SVDV* as well as FMDV

*From Jan 2015 the EU will not support an EU-RL for SVDV

Phase XXVI Global Participants

- Reported in 2014



- 56 countries worldwide

Minimum lab criteria

- Agreed minimum capabilities for a (EU) NRL:
 - 1. laboratories should be able to detect FMDV virus in clinical specimens**
 - 2. laboratories should be to correctly identify animals previously exposed to FMDV by serology**
- Particular tests and assays are not specified: laboratories must select appropriate tests, and use them to interpret the status of the samples

Performance scoring against criteria

- Each laboratory receives a personalized anonymous feedback letter to highlight areas in which they could improve
- Overall scoring criteria (agreed by the NRLs in 2014):
 - (**Category 1**) to emphasize critical issues where immediate action is required that impact upon the laboratory to correctly identify FMD virus (virology tests) or FMDV infected animals (serological tests)
 - (**Category 2**) laboratories with serious issues with the performance of individual tests that need to be addressed
 - (**Category 3**) to record additional observations which may need to be considered by the laboratory to improve the local performance of individual tests
 - (**Category 4**) laboratories whose tests which are fit for purpose and where no further action is required

PTS update

- As part of the LoA – EUFMD supports participation of labs in the PTS
 - Global Network
 - Non EU - EuFMD members
 - Neighborhood states
- Performance generally good
- Results summarized in WRLFMD interim report (Jan 2015)

	2013	2014
Total invited laboratories	86	91
Total number of shipments	60	66
Participants from European Union (funded by EURL for FMD)	27	27
EUFMD funded participants		
Participants from Global Network Labs	BVI, Botswana: ARRIAH, Russia: OVI, South Africa: NAHDIC, Ethiopia: Embakasi, Kenya: Pakchong, Thailand: USDA, USA ³	BVI, Botswana: OVI, South Africa: NAHDIC, Ethiopia: Embakasi, Kenya: Pakchong, Thailand; Lanzhou, China: Panaftosa, Brazil; NVRI Nigeria; LNERV, Senegal; USDA, USA ³
% of labs meeting target performance	Cat-1 0% Cat-2 17% Cat-3 50% Cat-4 33%	Analysis of results pending
Participants from EuFMD Member states (non-EU)	Algeria, Bosnia, Georgia, Macedonia, Morocco, Norway, Serbia, Switzerland, Tunisia, Turkey	Albania, Bosnia, Georgia, Macedonia, Norway, Serbia, Switzerland, Turkey
% of labs meeting target performance	Cat-1 0% Cat-2 0% Cat-3 40% Cat-4 60%	Analysis of results pending
Participants from neighbourhood countries	Armenia, Azerbaijan, Belarus, Iran, Libya, Lebanon, Montenegro.	Algeria, Armenia, Azerbaijan, Belarus, Egypt, Iran, Kosovo, Morocco, Moldova, Tunisia, Montenegro, Lebanon,
% of labs meeting target performance	Cat-1 0% Cat-2 0% Cat-3 43% Cat-4 57%	Analysis of results pending
Summary of EUFMD funded participants		
Invited	33	40
Total number of participants funded by EUFMD	23	29

Vaccine Bank Recommendations (Jan 15)

High Priority	O Manisa O PanAsia-2 (or equivalent) O BFS or Campos A24 Cruzeiro Asia 1 Shamir A Iran-05 (or A TUR 06) A22 Iraq SAT 2 Saudi Arabia (or equivalent i.e. SAT 2 Eritrea)
Medium Priority	A Eritrea SAT 2 Zimbabwe SAT 1 South Africa A Malaysia 97 (or Thai equivalent such as A/Sakolnakorn/97) A Argentina 2001 O Taiwan 97 (pig-adapted strain or Philippine equivalent)
Low Priority	A Iran '96 A Iran '99 A Iran 87 or A Saudi Arabia 23/86 (or equivalent) A15 Bangkok related strain A87 Argentina related strain C Noville SAT 2 Kenya SAT 1 Kenya SAT 3 Zimbabwe

Discussions are currently underway to adopt a risk-based approach to identify priority vaccines for use in Europe and other FMD-free settings

Acknowledgements

- Support for the WRLFMD and research projects
- Collaborating FMD Reference Laboratories and field teams
- Partners within the OIE/FAO FMD Lab Network

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Department
for Environment
Food & Rural Affairs



Harmonisation of Vaccine Matching

New Standardised BVS for the Ref Lab Network

Monovalent single vaccine

Adjuvant (use commercial formulated product)

$> 3PD_{50}$ or $> 6PD_{50}$ (nature of product should be defined) or $\geq 80\%$
PGP

21-28 days post vaccination

No Boost

Pool of five cattle with individual titres mid-range (i.e. no low responders (may need to define criteria for exclusion))



New collaborations and projects

- OIE Twinning proposed project 2015-18 with NAHDIC Ethiopia
- New PhD student (Jamaliah Senawi)
- Malaysia