



Foot-and-Mouth Disease situation
Food and Agriculture Organization of the United Nations
Monthly Report
August 2012

Information sources used:

Databases:

Emergency Prevention System-Animal Health/Global Early Warning System (EMPRES-AH/GLEWS)
FAO EMPRES-i Global Animal Disease Information System
FAO World Reference Laboratory for FMD (WRLFMD)
OIE WAHID World Animal Health Information Database

Other sources:

FAO/EuFMD supported FMD networks (EARLN-FMD Eastern Africa, RESOLAB-FMD West Africa, West Eurasian Laboratory Network)
FAO/EuFMD projects and field officers.

The sources for information are referenced by using superscripts.

The key to the superscripts is below:

1. WAHID Interface – OIE World Animal Health Information Database
<http://web.oie.int/wahis/public.php?page=home>
2. Global Early Warning System (EMPRES/GLEWS) reports <http://empres-i.fao.org/empres-i/home> ; National Authorities, 10/11/2011, <http://www.gov.kg/?p=4716>
3. Reports from FAO/EuFMD projects and field officers
4. World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD), www.wrlfmd.org
5. Conference on Scientific Developments and Technical Challenges in the Progressive Control of FMD in South Asia, New Delhi, India, 13-15 February 2012.
6. 2nd Global FAO/OIE conference on FMD, 27-29 June 2012, Bangkok.
7. SENASA, Argentina

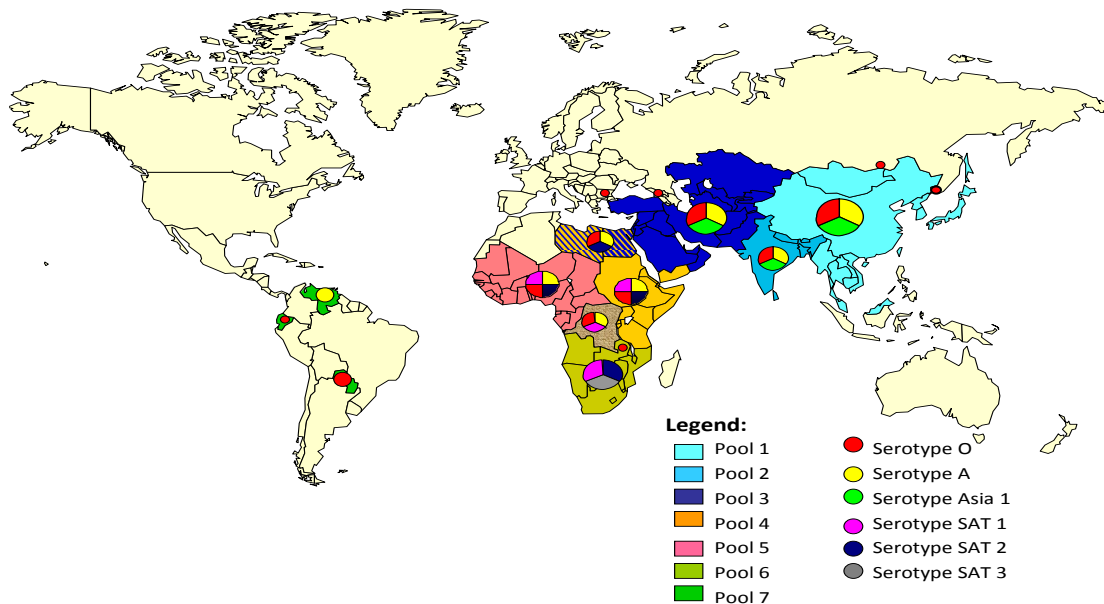
Review process:

This report (in draft) was circulated for comment to focal points of the FAO Reference Centres for FMD (including Centres in process of recognition) and OIE Reference laboratories for FMD.

The following are thanked for their comments:

- National Centre for Animal Diseases (NCFAD), Canada.

Foot-and-mouth disease (FMD) distribution by Serotype and the seven virus pools, 2010-2012



HEADLINE NEWS

Pool 3:

- **Iran**⁴ – serotypes O, A and Asia 1 have been detected in samples taken in June and July 2012 and tested at the WRL.
- **Saudi Arabia**⁴ – Serotype O detected in samples taken in July 2012.
- **Turkey**³ – continued circulation of serotypes Asia 1 and A, causing many outbreaks, in addition a new lineage of serotype O virus has recently been detected – toptotype ME-SA, lineage PanAsia-2^{FAR-09}.

Pool 4:

- **Eritrea**⁴ - genotyping analysis shows that several type O viruses detected are very closely related to the Libyan and Ethiopian type O viruses.

*Please note that the use of information and boundaries of territories should **not** be considered to be the view of the U.N. Please always refer to the OIE for official information on reported outbreaks and country status.*

Pool 1. CENTRAL / EAST ASIA

Country	Data WRL FMD ⁴ 2011/2012	Data from field officers ³ 2011/2012	Reported serotype/outbreaks in OIE 2012 ¹		Reported serotype/outbreaks in OIE 2011 ¹	
			Serotype	No of outbreaks	Serotype	No of outbreaks
Cambodia	O					94
China (People's Rep. of)			O	1	O	8
China (Hong Kong, SAR)	O		FMDV Genome detected.			
China (Taiwan Province)			O	12	O	12
Japan					Reported as absent.	
Korea (DPR)	O				O	114
Korea (Rep. of)	O				O	155?
Lao PDR	O					
Malaysia	O, A Asia 1				O, A	28
Mongolia					No new outbreaks in 2011 and 2010, event resolved 01/09/2011	
Myanmar					23/03/2011 – report confirming no new outbreaks	
Russian Federation			O	2	O	1
Thailand	O, A				O, A	31
Viet Nam	O				O	449

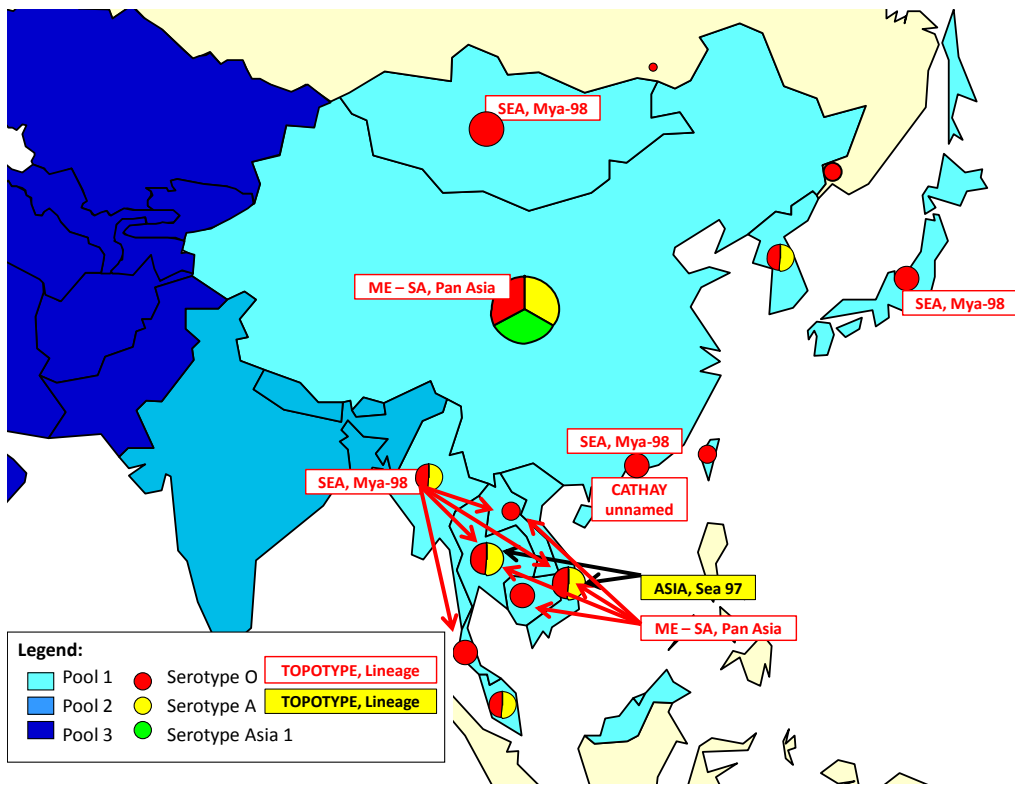
New events in Pool 1

No new events have been reported

Significant events in Pool 1 from previous months.

- **China¹** - The outbreak with a start date of 27/12/2011 that occurred in pigs in Hubei Province has been declared as resolved.
- **Thailand⁴** - Four FMD type O and 19 type A viruses were isolated from a batch of 24 samples received from Thailand in June 2012 (collected in 2011 and 2012). Two type O viruses belonged to the ME-SA/PanAsia lineage while the other two belonged to the SEA/Mya-98 lineage. All 19 type A viruses belonged to the ASIA/Sea-97 lineage.

FMD distribution in Pool 1 by serotypes 2010 - 2012



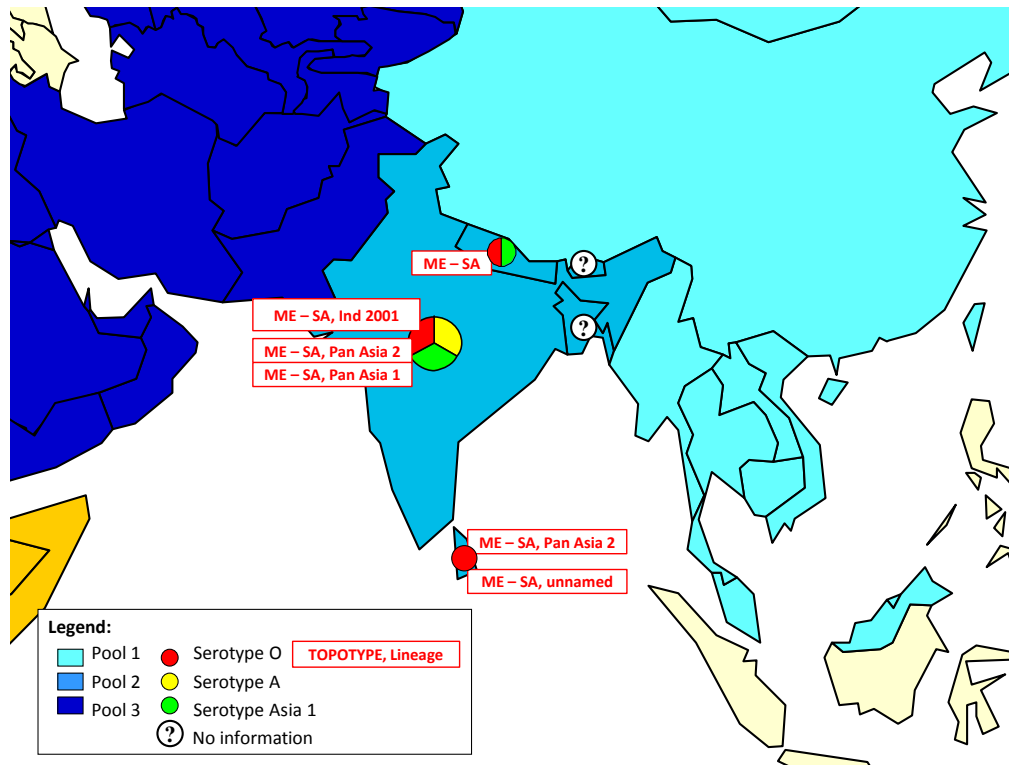
Pool 2. SOUTH ASIA

Country	Data WRL FMD ⁴ 2011 2012	FMD Conference New Dehli February 2012	Reported serotype/outbreaks in OIE 2012 (immediate notifications) ¹		Reported serotype/outbreaks in OIE 2011	
			Serotype	No of outbreaks	Sero type	
Bangladesh		O A Asia 1			Disease present but without quantitative data	
Bhutan		O				
India		O, A, Asia 1			O, Asia 1	439
Nepal		2011 ~873 outbreaks (O, A, Asia 1)			O, Asia 1	72
Sri Lanka	O				O	6

New events in Pool 2

No new events have been reported.

FMD distribution in Pool 2 by serotypes 2010 - 2012



The following were reported at the New Delhi Conference 2012:

Bangladesh – Serotypes O, A and Asia 1

Bhutan – Serotype O

Pool 3: WEST EURASIA & MIDDLE EAST

Country	Data WRL FMD ⁴ 2011/2012	Data from field officers ³ 2011/2012	Reported serotype/outbreaks in OIE 2012 ¹		Reported serotype/outbreaks in OIE 2011 ¹	
			Serotype	No of outbreaks	Serotype	No of outbreaks
Afghanistan	A, O, Asia 1				A, O, Asia 1	294
Armenia		No outbreaks 2012				Reported as Absent.
Azerbaijan						Reported as Absent.
Bahrain	A, O, Asia 1		(SAT 2)*	(1)*		33
Bulgaria	O				O	11
Egypt	A, O, SAT 2	Epidemic	SAT 2	43		Reported as Absent.
Georgia		No outbreaks 2012				Reported as Absent.
Iran	O, A, Asia 1	O, A, Asia 1			O, A, Asia 1	2053
Iraq						
Israel	O		O	2	O	16
Jordan					Disease absent	
Kazakhstan	O, A		O, A	8	O, A	11
Kuwait	O				O	3
Kyrgyzstan	A	A,O 2012 - 33 outbreaks			A, O	66
Lebanon						Reported as Absent.
Libya	O		O, A, SAT 2	24	Disease present but without quantitative data	
Oman					O	122
Pakistan	O, A, Asia 1				Disease present but without quantitative data	
Palestine Autonomous Territories	SAT 2		O SAT 2	2	A, O	126
Qatar					O	20
Saudi Arabia					Disease present but without quantitative data	
Syrian Arab Republic						
Tajikistan					Asia 1	1
Turkey	O, A Asia 1	O, A Asia 1		O, Asia 1	O, A Asia 1	1045
Turkmenistan						
Uzbekistan						

()* - identified in the quarantine centre

New events in Pool 3

- **Iran⁴** – WRL results for samples taken in June and July 2012 are given below:
Serotype O - two lineages have been detected in two of the samples, PanAsia-2^{ANT-10} and PanAsia-2^{FAR-10}. These lineages have previously been detected in Iran.
Serotype A - two lineages have been detected in six samples - five were genotype Iran-05^{AFG-07} and one was Iran-05^{SIS-10}.
Serotype Asia 1 – three of the samples taken in June and July 2012 are genotype Sindh⁻⁰⁸
- **Saudi Arabia⁴** – Serotype O, toptotype ME-SA, lineage PanAsia-2^{ANT-10} has been isolated at the WRL in samples taken from cattle in July 2012. This lineage is closely related to viruses that have recently been detected in Kuwait and Bahrain.

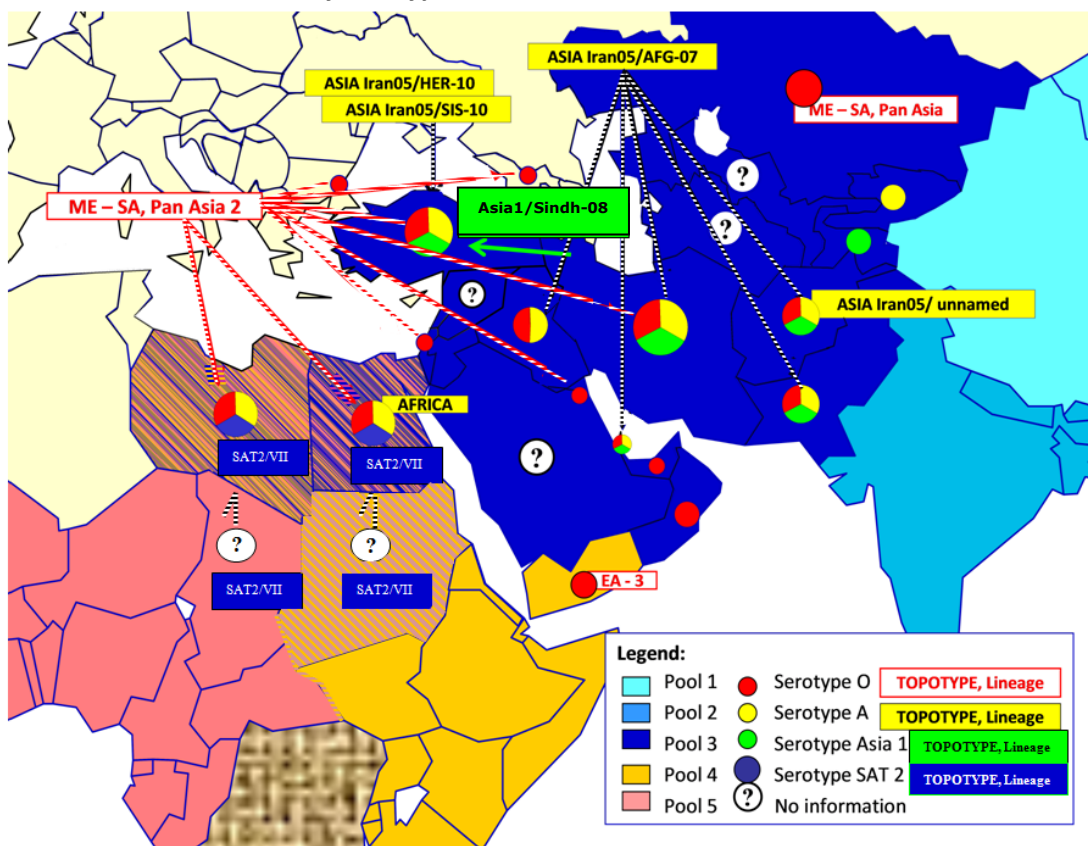
Significant events in Pool 3 from previous months

- **Egypt³** - in July 28 villages in three governorates reported clinical FMD cases for the first time. This compares to 149 villages (in seven governorates) reporting clinical FMD for the first time in June 2012, 83 (eight governorates) in May 2012 and 553 (24 governorates) in April 2012. This brings the number of first time village notifications of FMD, from the first recording on 5th March 2012 to 3333.
- **Libya⁴** – genotyping by the WRL showed that a serotype O toptotype EA-3 (O/Lib/54/2012) is very closely related (99.37%) to an Ethiopian isolate and to several Eritrean isolates (99.69% identical). This important finding sheds light on the possible origins of the sub-Saharan FMD incursions into Libya
- **Kyrgyzstan⁴** - one sample taken in November 2011 was A Iran-05^{HER-10}. This is 98.9% identical to the serotype A found in a sample in Kazakhstan in February 2012.

Kyrgyzstan³ - The State Veterinary Department (SVD) has reported 33 outbreaks so far in 2012 (65 outbreaks were reported by the SVD in 2011). The central laboratory reports that most of the outbreaks are due to serotype O and some due to serotype A.

- **Turkey³** – continued circulation of serotypes Asia 1 and A, causing many outbreaks, in addition a new serotype O virus has recently been detected – PanAsia-2^{FAR-09}.

Pool 3. FMD distribution by serotypes 2010 – 2012



The following have recently been reported by the WRLFMD:

Egypt:

- Serotype A, topotype ASIA, lineage Iran-05^{BAR-08}.
- Serotype A, topotype AFRICA, lineage G-IV^{ISM-12}.
- Serotype SAT 2, topotype VII, lineages Alx-12 and Ghb-12.

Kazakhstan:

- Serotype A, topotype ASIA, lineage Iran-05^{HER-10}.

Kyrgyzstan:

- Serotype O

Libya:

- Serotype O, topotype EA-3.
- Serotype O, topotype ME-SA, lineage PanAsia-2^{ANT-10}.
- Serotype SAT 2, topotype VII, lineage Lib-12.

Saudi Arabia:

- Serotype O, topotype ME-SA, PanAsia-2^{ANT-10}

Pool 4. EAST AFRICA

Country	Data WRL FMD ⁴ 2011/2012	Data from field officers ³ /EARLN ⁸ 2011/12	Reported serotype/outbreaks in OIE 2012 ^{1*}		Reported serotype/outbreaks in OIE 2011 ^{1*}	
			Serotype	No of outbreaks	Serotype	No of outbreaks
Burundi		O A SAT 1 SAT 2 ⁸ Four outbreaks			No details submitted.	
Comoros					Disease suspected but not confirmed.	
Congo D. R.	A				O, A, SAT 1	3
Djibouti						Reported as Absent.
Egypt	O, A SAT 2	A, O SAT 2	SAT 2	49		Reported as Absent
Eritrea	O				No details submitted.	
Ethiopia	O	O, A SAT 1 ⁸			A, SAT 1, SAT 2, O	15
Kenya	O	O, SAT 1, SAT 2 ⁸			O, SAT 1 SAT 2	60
Libya	O		O, A, SAT 2	37	No details submitted.	
Rwanda		Reported as absent ⁸			No details submitted.	
Somalia		No data available ⁸				7
North Sudan	A,O	No confirmed outbreaks 2012				9
South Sudan		O, SAT 1, SAT 2, A				
Tanzania	SAT 2	SAT 1 in buffalo SAT 2 in cattle O			SAT 2 SAT 3	14
Uganda	12 outbreaks in 2012	O ³ A ⁸ SAT 1 SAT 2 SAT 3			O	15
Yemen					No details submitted.	

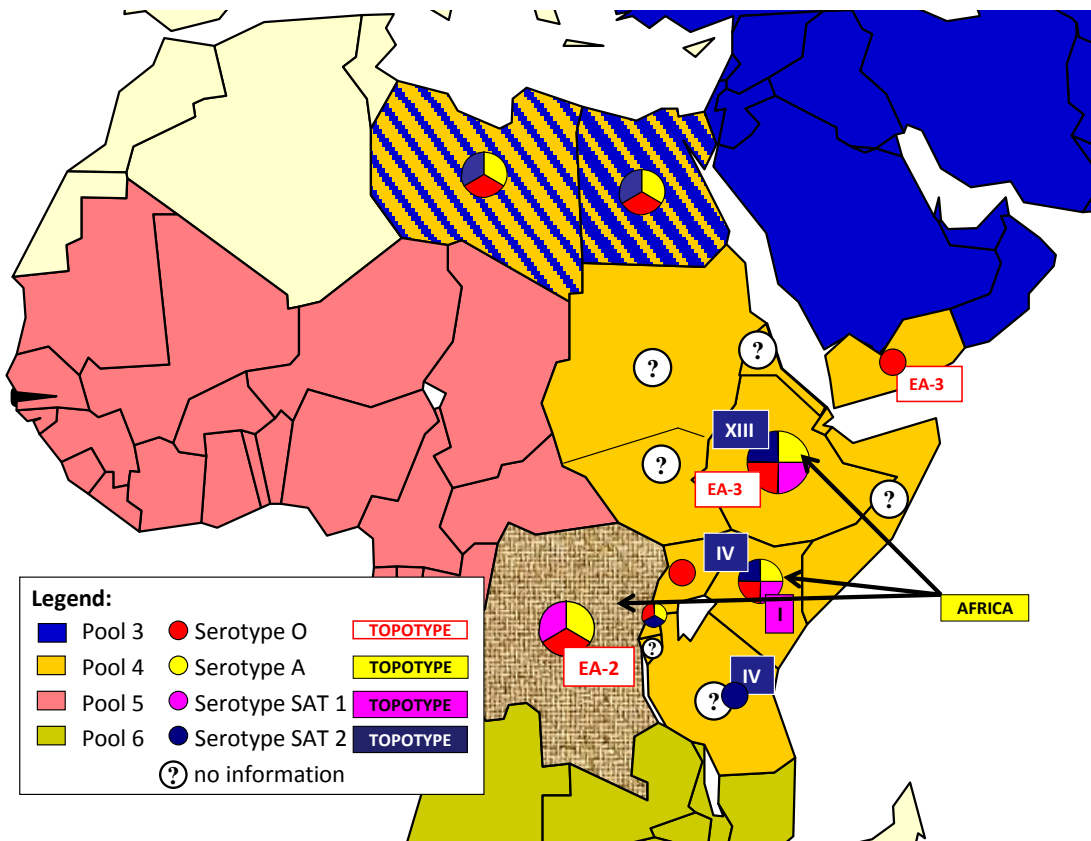
New events in Pool 4

- **Eritrea**⁴ – Serotype O, toptype EA-3 has been isolated in 14 samples collected from outbreaks that occurred between October 2011 and February 2012. The samples were shipped to WRLFMD in July and the dispatch of the samples was arranged by the EuFMD/FAO EMPRES shipping service and EuFMD covered the shipping costs. Genotyping showed that these isolates were very closely related to type O detected in Libya (O/Lib/54/12), with 99.69% VP1 identity. They are also closely related to two type O viruses recently detected from Ethiopia (O/Eth/59/12: 99.84% identical, and O/Eth/7/12), which were detected in the Tigray region bordering Eritrea and Sudan. This important finding sheds further light on the source of the current African type O outbreaks in Libya.
- **Republic of Sudan**⁴ – six serotype O, four serotype A and one SAT 2 have been detected by the WRL in samples taken 2009-2011.

Events in Pool 4 from previous months

- **Burundi**³ - four outbreaks were reported in June 2012.
- **Democratic Republic of Congo**³ - FMD continues to be reported the east of the country, with 10 outbreaks recorded in July 2012.
- **Ethiopia**⁴ – further outbreaks of type O in Amhara/Tigray Regions. Genotyping by the WRL showed one of the detected viruses was very closely related (99.37% similarity) to the type O recently detected in Libya.
- **Kenya**⁴ - six FMD type O, one type SAT 1 and six type SAT 2 viruses were isolated from a batch of samples received from Kenya by the WRL on 29 June 2012
- **Tanzania**³ - 24 outbreaks reported for the period January to July 2012.
- **Uganda**³ – 11 outbreaks reported in the first six months of 2012

Pool 4: FMD distribution by serotypes 2010 – 2012



Pool 5. WEST AFRICA

Country	Data RESOLAB 2011/2012	Serotypes reported from RESOLAB 2011/12	Reported serotype/outbreaks in OIE 2012 ^{1*}		Reported serotype/outbreaks in OIE 2011 ^{1*}	
			Sero type	Nb of outbreaks	Serotype	No of outbreaks
Benin		A, SAT 1 O, SAT 2			A, O, SAT 1, SAT 2	59
Burkina Faso		A, O, SAT 2				161
Cameroon	11 outbreaks 2012	A, O, SAT 2				35
Cape Verde					No details submitted	
Central Afr. Rep.					No details submitted	
Chad		A, SAT 1			No details submitted	
Congo D. R.	O,A	A, SAT 1			O,A, SAT 1	3
Congo R.					No details submitted	
Cote d'ivoire		A, O, SAT 2			SAT 1, A	13
Equatorial Guinea						Disease suspected but not confirmed.
Gabon						Reported as absent.
Gambia	One outbreak	A O SAT 2			No details submitted.	
Ghana	43 samples ELISA positive	A O SAT 1 SAT 2				57
Guinea Biss.					Reported as absent.	
Guinea					No details submitted	
Liberia		A, SAT 2			No details submitted.	
Mali		A, SAT 1 O, SAT 2				3
Mauritania					No details submitted	
Niger	13 Outbreaks awaiting serotyping	A,O,SAT 1 SAT 2				45
Nigeria		A, SAT1,O				15
Sao Tome Principe					No details submitted.	
Senegal		A,O,SAT 2			?	12
Sierra Leone					Reported as absent.	
Togo	One outbreak 2012	O, SAT 1			O, SAT 1	79

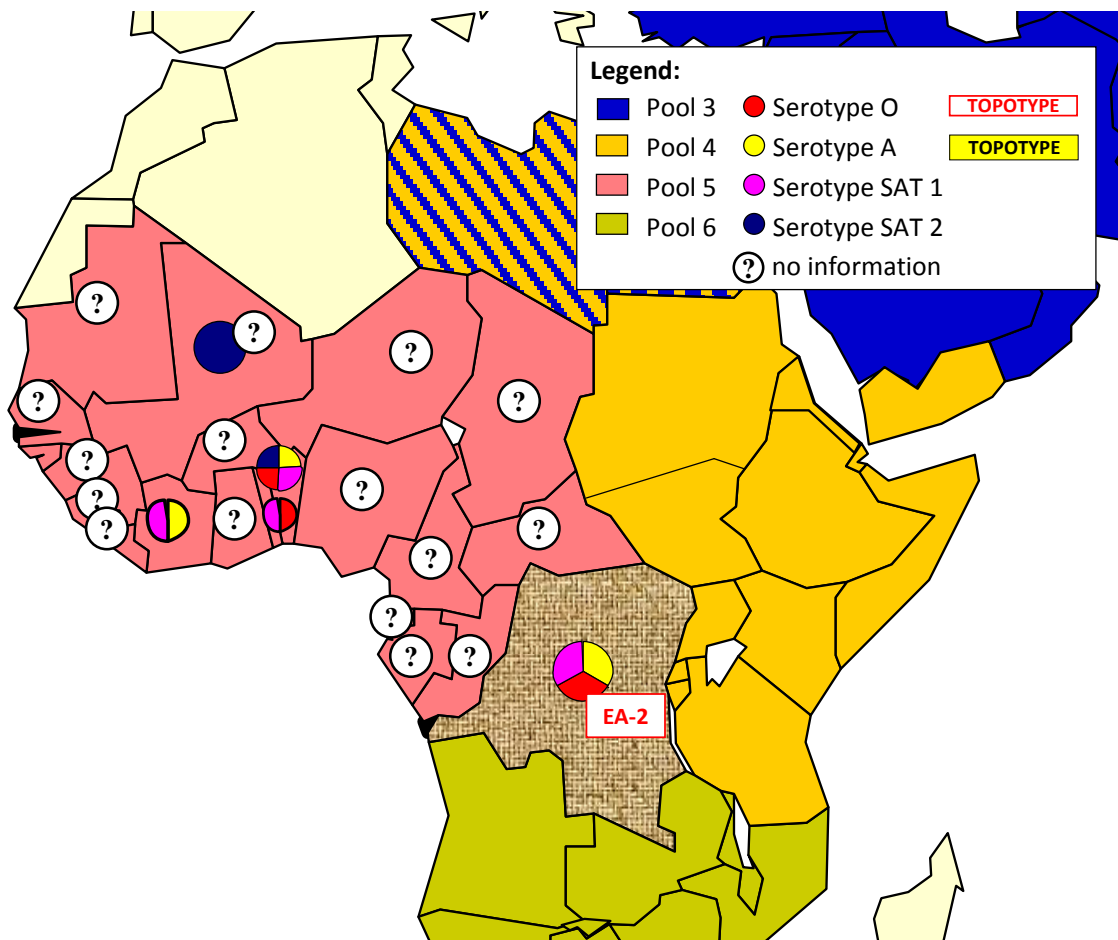
New events in Pool 5 .

No new events have been reported.

Events in Pool 5 from previous months.

- **Benin**¹ - reported 22 outbreaks in the second half of 2011 bringing the total outbreaks of FMD reported to the OIE in 2011 to 59.
- **Burkina Faso**¹ – additional reporting to the OIE brings the total number of outbreaks for 2011 to 161.
- **Cameroon**⁵ - 11 outbreaks reported for the first three months of 2012; samples to be sent for analysis.
- **Nigeria**¹ – total outbreaks reported to OIE for 2011 is 15.
- **Niger**¹ - total outbreaks reported to OIE for 2011 is 45.
- **The Gambia**⁵ - outbreaks in the North bank, Central river and Western regions; samples sent for analysis.
- **Togo**⁵ - one outbreak at Adetikope (Adodovi) on 21 February 2012.

Pool 5. FMD distribution by serotypes 2010 - 2012



Pool 6. SOUTHERN AFRICA

Country	Data WRL FMD ⁴ 2011 - 2012	Data from field officers ³ 2011 - 2012	Reported serotype/outbreaks in OIE 2012		Reported serotype/outbreaks in OIE 2011	
			Serotype	No of outbreaks	Serotype	Nb of outbreaks
Angola						None
Bostwana	SAT 2		SAT 2	1	SAT 2	4
Congo D. R.	A	A, SAT 1			O, A, SAT 1	3
Malawi					SAT 2	2
Mozambique				None	SAT 2	1
Namibia			SAT 1	1	SAT 1	4
South Africa	SAT 2		SAT 2	5	SAT 1	46
Zambia				None	SAT 2	1
Zimbabwe					SAT 2	10

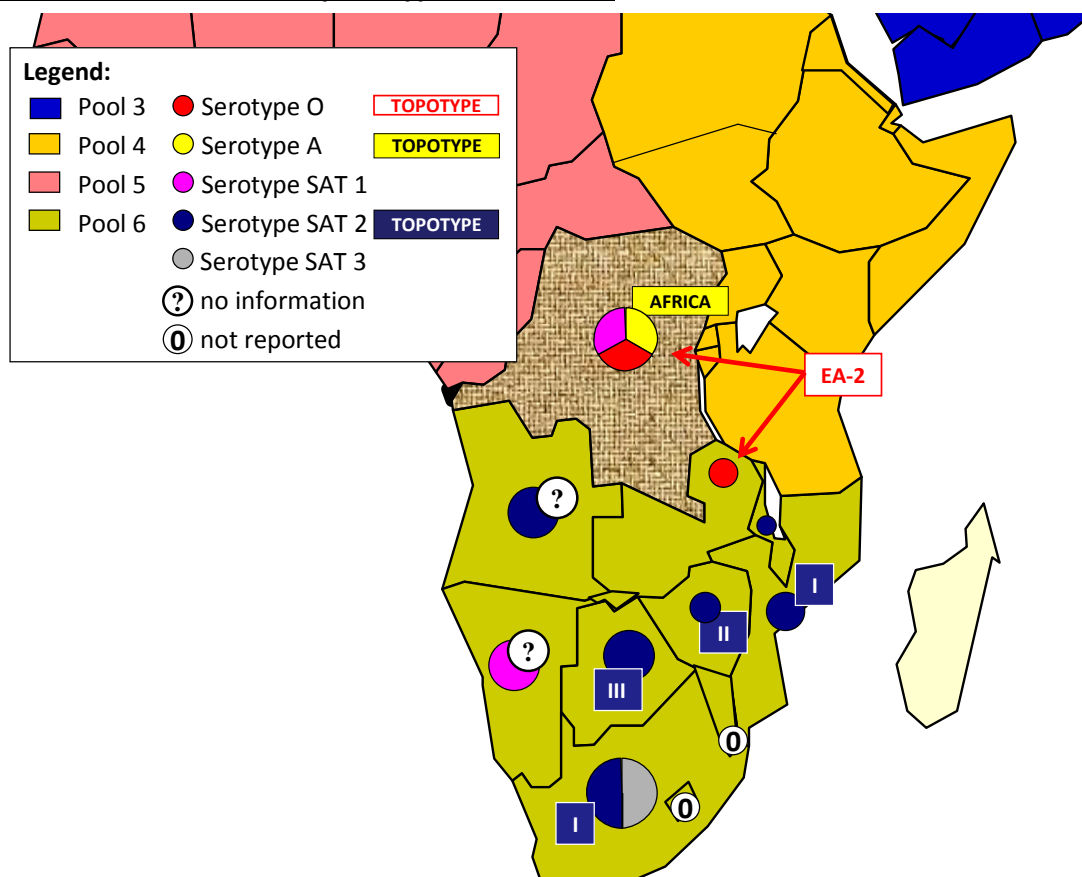
New events in Pool 6

No new events have been reported.

Significant events in Pool 6 from previous months

- **Botswana**¹ - partial VP1 sequence data received from the Botswana Vaccine Institute showed the new FMD type SAT 2 out break reported in cattle at Matsebe Crush, Ngami, Ngamiland, Maun on 23/05/2012 to be due to topotype III.
- **Namibia**¹ - a follow up report submitted on 17 July 2012 regarding outbreaks resolved in the Caprivi Strip on 20 March indicates that the SAT 1 viruses from all four 2011 outbreaks were 100% similar to each other and differed by 6% from a previous SAT 1 outbreak in 2010 also in the Caprivi strip. The 2011 viruses also cluster with Botswana SAT 1 isolates from 1998 and 2006 with a nucleotide difference of 11% and 12% respectively. No new cases have been reported since 15 January 2012.

Pool 6. FMD distribution by serotypes 2010 – 2012



Pool 7. SOUTH AMERICA

Country	Data WRL FMD ⁴ 2011 - 2012	Data from field officers ³ 2011 - 2012	Reported serotype/outbreaks in OIE 2012		Reported serotype/outbreaks in OIE 2011	
			Serotype	No of outbreaks	Serotype	No of outbreaks
Ecuador					O	5
Paraguay					O	2
Venezuela					O,A	2

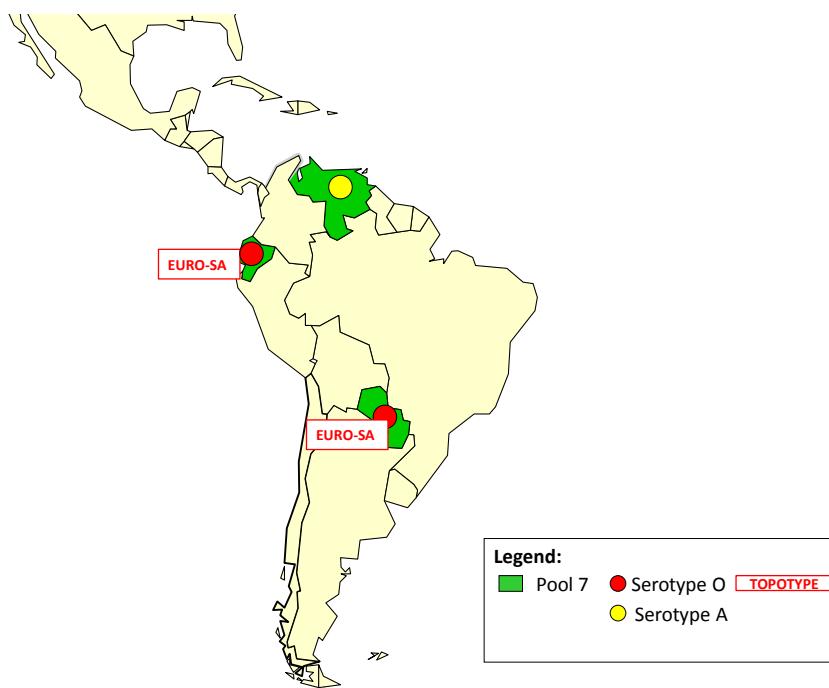
New Events in Pool 7

No new events have been reported.

Recent important events 2011-2012 in South America⁷

- Nine outbreaks of FMD were notified in 2011: eight serotype O (five Ecuador, two Paraguay, one Venezuela) and one serotype A (Venezuela) – no outbreaks have been notified in the region in 2012.
- Bolivia had 5 years without FMD outbreaks (last outbreak February 2007) and received the OIE recognition of free without vaccination for the Region del Altiplano.
- Brazil started epidemiological studies for the recognition of a free zone with vaccination in the states of its north east Region.
- Ecuador and Venezuela maintain FMD virus circulation.
- Peru has requested the OIE recognition of free without vaccination for the remaining part of its territory.

Pool 7. FMD distribution by serotypes 2010 – 2012



The sources for information are referenced by using superscripts.

The key to the superscripts is below:

1. WAHID Interface – OIE World Animal Health Information Database
<http://web.oie.int/wahis/public.php?page=home>
2. Global Early Warning System (EMPRES/GLEWS) reports <http://empres-i.fao.org/empres-i/home> ; National Authorities, 10/11/2011, <http://www.gov.kg/?p=4716>
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