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Report Appendices

41TH GENERAL SESSION
OF THE EUROPEAN COMMISSION
FOR THE CONTROL OF
FOOT-AND-MOUTH DISEASE
(EuFMD)

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Please note the Report is available online and as a separate document on the EuFMD website.

Appendix 1

Agenda

Day 1

23rd of April 2015

Time	Item		Presenter
9:00	1	Adoption of the Agenda	
	2	Global Foot and Mouth Disease (FMD) surveillance report	<i>D. King</i>
		European partnerships for Global Surveillance	<i>J.L. Angot</i>
10:30		Coffee break	
	3	Technical Items with policy importance for member states (STC Items)	<i>E. Ryan</i>
	a)	The importance of building business continuity into contingency plans	<i>P.Hullinger</i>
	b)	Technical progress on vaccination to live issues and the implications for diagnostic and vaccine banks	<i>E. Ryan</i>
	c)	The value of modelling animal movement and marketing patterns for animal disease impact assessments at national and continental scale	<i>C. Sauter-Louis; U. Wennergren;</i>
13:00		Lunch break	
	4	Report of the Executive Committee on actions since the 40 th General Session – Overview	<i>K. Sumption</i>
14:00		Pillar I: Roll out of the Training Credits programme: progress towards a breadth and depth of European expertise)	<i>J. Maud</i>
14:20		Improving contingency planning	<i>F. Rosso</i>
14:40		Pillar II: Report on activities in the European neighbourhood to reduce risk to member states	<i>M. McLaws; I. Eldaghayes</i>
15:15		Coffee break	
15:45		Pillar III: OIE and FAO: Reports on the GF-TADS Global Strategy	<i>J. Domenech; S. Metwally</i>
16:10		Pillar III: Support provided by EuFMD	<i>C. Bartels; K.V. Maanen</i>
16:25		Discussion	
16:35	5	Proposed updating to the four year Strategic Plan and the proposed "Pillar" work programmes for the biennium to April 2017	<i>K. Sumption</i>
	a)	Pillar I: Better preparedness for FMD crisis management in member states (MS)	
	b)	Pillar II: Reducing the risk to MS of FMD in the European Neighbourhood	
	c)	Pillar III: Support to the Global FMD Control Strategy of FAO and OIE	

Day 2

24th of April 2015

Time	Item		Presenter
9:00	6	Report on the status of FMD antigen and vaccine banks in the European Neighbourhood	<i>K. Hickey</i>
9:30	7	Proposed change to the EuFMD Constitution and Rules of Procedure	<i>EuFMD</i>
10:30		Coffee	
	8	Changes in Membership of the Commission	
	9	Financial Report, Budget and membership contributions for the biennium 2016-2017	<i>K. Sumption</i>
	10	Technical Committees and their functions in the upcoming biennium	<i>N. Gibbens</i>
	11	Election of the Executive Committee	<i>FAO</i>
	12	Any other issues	
	13	Reading of Recommendations	<i>EuFMD</i>
13:15		End of meeting	

Side events

23rd of April • Atrium Iran Room

17:30	The Training Menu, e-learning and knowledge base for contingency planning (<i>J. Maud</i>)
	The prototype FMD Impacts calculator (<i>J. Rushton</i>)
	Modelling Livestock movements (<i>C. Sauter-Louis; U. Wennergren; M. Keeling</i>)
	Priority setting for vaccine and antigen banks (<i>K. Hickey – EuFMD/WRL</i>)

23rd of April • the “Terrasse Cuisine & Lounge” of SOFTEL ROME VILLA BORGHESE

A bus will leave from FAO at 18:45 to Hotel Sofitel and take you back to FAO after dinner

Appendix 2

Monthly FMD report

Foot-and-Mouth Disease Situation
Food and Agriculture Organization of the United Nations
Monthly Report

March 2015

Guest Editor
Donald King
Head of WRLFMD,
The Pirbright Institute, UK

#INFORMATION SOURCES USED:

Databases:

OIE WAHID World Animal Health Information Database
FAO World Reference Laboratory for FMD (WRLFMD)
FAO Global Animal Disease Information System (EMPRES-i)

Other sources:

FAO/EuFMD supported FMD networks
FAO/EuFMD projects and field officers

The sources for information are referenced by using superscripts.
The key to the superscripts is on the last page.

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.

Guest Editor's Comments**Overview:**

I am pleased to be asked to write this short update for the EuFMD monthly report. The start of 2015 has been a very busy period for the WRLFMD team. Our new high-containment building (BBSRC National Virology Centre: The Plowright Building) has now been occupied, and the complex process of transferring our routine reference laboratory work is now underway, which will hopefully be completed by later in the summer.

I want to take this opportunity to expand on two new important FMD events in different regions that are covered in more detail in the different sections of this report. These are both on-going situations that have developed since my last editorial in December 2014.

Firstly, in the Republic of Korea (South Korea), >100 FMD outbreaks have now been reported since the first cases due to this particular FMD virus incursion were recognised in early December 2014. VP1 sequencing of representative viruses at the Animal and Plant Quarantine Agency in Korea, and at Pirbright has shown that the causative lineage for these outbreaks is O/SEA/Mya-98, and that these viruses are closely related, but probably distinct to viruses that caused earlier outbreaks in the country (during July 2014 and earlier in 2010). The majority of the affected premises have been pig farms and disease appears to have occurred in spite of a vaccination programme (with O1-Manisa). Although some questions still remain about whether the particular animals with clinical disease have been adequately vaccinated, other recent in-vivo data from Dr Wilna Vosloo and colleagues (CSIRO, Geelong - presented at the EuFMD Open Session in Cavtat in November) indicate that the O-Manisa vaccine does not provide adequate protection in pigs, although results for cattle were more encouraging. Based on these data, the recent events in Korea may not be that unexpected, and these findings highlight that work should now be undertaken to explore vaccine antigens that individually (or in combination) may generate an appropriate immune response in pigs against the O/SEA/Mya-98 lineage.

Secondly, a number of new FMD outbreaks have occurred in the Sidi Bel Abbès and Saida Provinces of Algeria during March 2015. Some of these new outbreaks that have occurred in goats and sheep are in a different region to areas that were affected during 2014. Genotyping of representative FMD viruses from these cases is now urgently required to confirm that these outbreaks are caused by the O/ME-SA/Ind-2001 lineage that has spread recently across Libya, Tunisia and Algeria. In view of the rapid spread of this lineage during 2013/14, a resurgence of new cases (now 12 outbreaks in 2015 [ed. update April 2015]) that is focussed further to the west than the outbreaks in 2014 (and closer to the border with Morocco) needs to be carefully monitored. Furthermore, the involvement of small ruminants in these outbreaks needs to be considered in the context of using vaccination to control these outbreaks. Together, these data reaffirm the importance of maintaining systems that follow the epidemiological patterns for FMD and the work of the OIE/FAO FMD Laboratory Network.

I. GENERAL OVERVIEW

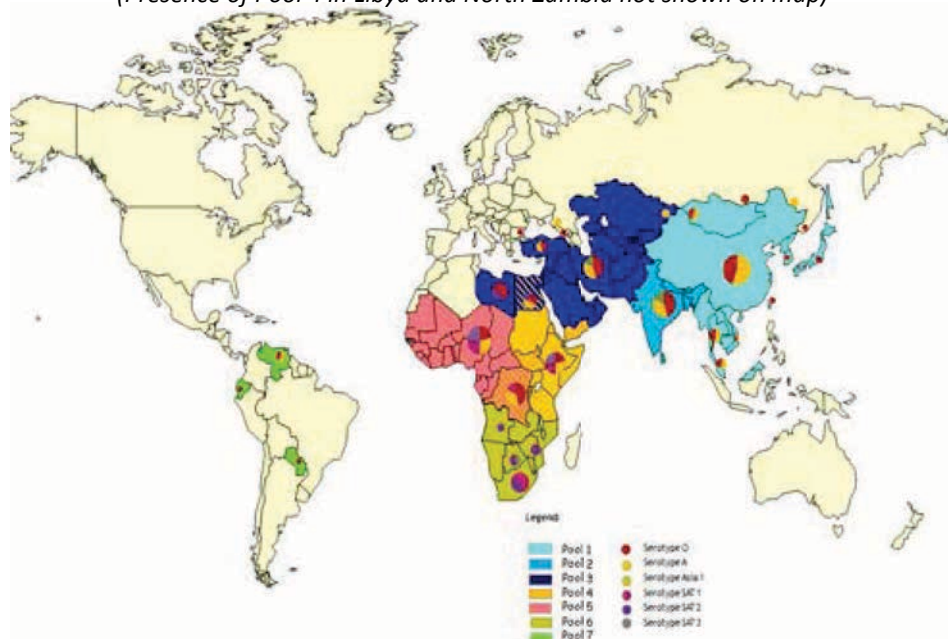
Pools represent independently circulating and evolving FMDV genotypes; within the pools, cycles of emergence and spread occur that usually affect multiple countries in the region. In the absence of specific reports, it should be assumed that the serotypes indicated below are continuously circulating in parts of the pool area and would be detected if sufficient surveillance was in place (Table 1).

Table 1: List of countries representing each virus pool for the period 2010 – 2015

POOL	REGION/COUNTRIES – colour pools as in figure	SEROTYPES
1	CENTRAL/EAST ASIA Cambodia, China (People's Rep. of), China (Hong Kong, SAR), China (Taiwan Province), Korea (DPR), Korea (Rep. of), Laos PDR, Malaysia, Mongolia, Myanmar, Russian Federation, Thailand, Viet Nam	O, A, Asia 1
2	SOUTH ASIA Bangladesh, Bhutan, India, Nepal, Sri Lanka	O, A, Asia 1
3	WEST EURASIA & MIDDLE EAST Afghanistan, Algeria, Armenia, Azerbaijan, Bahrain, Bulgaria, Egypt , Georgia, Iran, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Libya , Oman, Pakistan, Palestine Autonomous Territories, Qatar, Saudi Arabia, Syrian Arab Republic, Tajikistan, Tunisia, Turkey, Turkmenistan, Uzbekistan	O, A, Asia 1
4	EASTERN AFRICA Burundi, Comoros, Congo D. R. , Djibouti, Egypt , Eritrea, Ethiopia, Kenya, Libya , Rwanda, Somalia, Sudan, South Sudan, Tanzania, Uganda, Yemen	O, A, SAT 1, SAT 2, SAT 3
5	WEST/CENTRAL AFRICA Benin, Burkina Faso, Cameroon, Cape Verde, Central Afr. Rep., Chad, Congo D. R. , Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea Biss., Guinea, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome Principe, Senegal, Sierra Leone, Togo	O, A, SAT 1, SAT 2
6	SOUTHERN AFRICA Angola, Botswana, Congo D. R. , Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe	{O, A}*, SAT 1, SAT 2, SAT 3
7	SOUTH AMERICA Ecuador, Paraguay, Venezuela	O, A

Egypt, Libya and Congo D. R. (highlighted in bold) are indicated as being in multiple pools, since they have evidence of FMDV originating from 2 or more pools in the past four years. * ONLY IN NORTH ZAMBIA AS SPILL-OVER FROM POOL 4

Foot-and-mouth disease (FMD) virus pools: world distribution by serotype in 2011-2015 (Map 1)
(Presence of Pool 4 in Libya and North Zambia not shown on map)



II. HEADLINE NEWS

POOL 1

Korea (Rep. of) ^{1, 2} – Further FMD outbreaks (40) caused by serotype O occurred between the 2nd and the 23rd of March 2015, on pig farms in various area of Korea (Rep. of).

Mongolia ^{1, 2} – Two new FMD outbreaks caused by FMDV serotype O occurred on the 1st and 2nd of March 2015, in Khovd, on two farms involving cattle, sheep and goats on one premises and only cattle on the other.

Southeast Asia ³ – While no new FMD outbreaks have been reported during March 2015, 210 outbreaks in Cambodia, Myanmar, Malaysia, Thailand and Viet Nam are reported as ongoing.

Russian Federation ⁴ – The Regional Reference Laboratory for FMD (ARRIAH, Russia) diagnosed FMDV serotypes A and O in clinical samples.

POOL 2

India ⁵ – The Project Directorate on Foot and Mouth Disease (PDFMD), Mukteswar, India, detected the circulation of FMDV serotypes Asia 1 and O.

POOL 3

Algeria ^{1, 2} – An FMD outbreak involving principally sheep, caused by serotype O, was reported on the 2nd of March 2015 and was followed by other 6 outbreaks in the two administrative units, El Bayadh and El Oued.

Pakistan ⁶ – Seventy-nine FMD outbreaks were reported during February 2015, throughout Pakistan, within the Progressive Control of Foot and Mouth Disease Project. Laboratory results reconfirmed the circulation of three FMDV serotypes A, Asia 1 and O, already reported in February 2015.

POOL 4

Ethiopia ⁷ – The National Animal Health Diagnostic and Investigation Centre (NAHDIC), Ethiopia, detected FMDV serotype SAT 2 in samples collected from an FMD outbreak.

Kenya ⁸ – The Foot-and-Mouth Disease Laboratory, Embakasi, Kenya diagnosed FMDV serotypes A, O and SAT 2 in clinical samples.

POOL 5

No reports of FMD outbreaks in this pool during the month of March.

POOL 6

Botswana ^{1, 2} – A new FMD outbreak was reported on the 9th of March 2015 in Ngamiland that was followed by other three episodes, all involving domestic cattle of a village. The FMDV serotype presently responsible for the events is SAT 2.

POOL 7

Latin America ¹ – No outbreaks reported

COUNTER

*** 39 MONTHS SINCE THE LAST OUTBREAK IN SOUTH AMERICA WAS REPORTED

*** 127 MONTHS SINCE THE LAST SEROTYPE C OUTBREAK WAS REPORTED

III. DETAILED POOL ANALYSIS

A. POOL 1 – Central /East Asia

Korea (Rep. of)^{1,2}

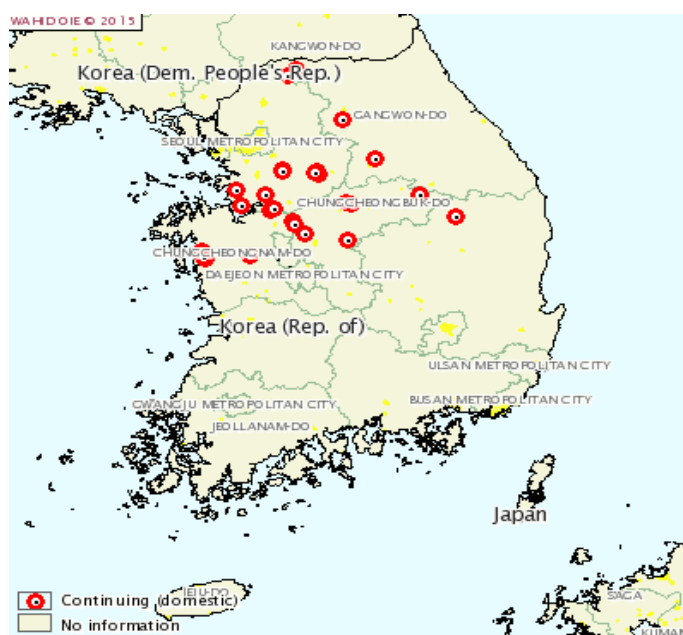
Another forty FMD outbreaks caused by serotype O occurred exclusively on pig farms in various areas of Korea (Rep. of) between the 2nd and the 23rd of March 2015. From the beginning of the current event that was initially reported on the 3rd of December 2014, 159 outbreaks have been registered, 154 involved pig farms. The latest outbreaks are spreading in a Northeast direction (Map 2).

A summary of the outbreaks is reported in Table 2 with their location presented in Map 2. Number of reported FMD outbreaks per week, from beginning of event to March 2015 in Korea (Rep. of) is presented in Graph 1.

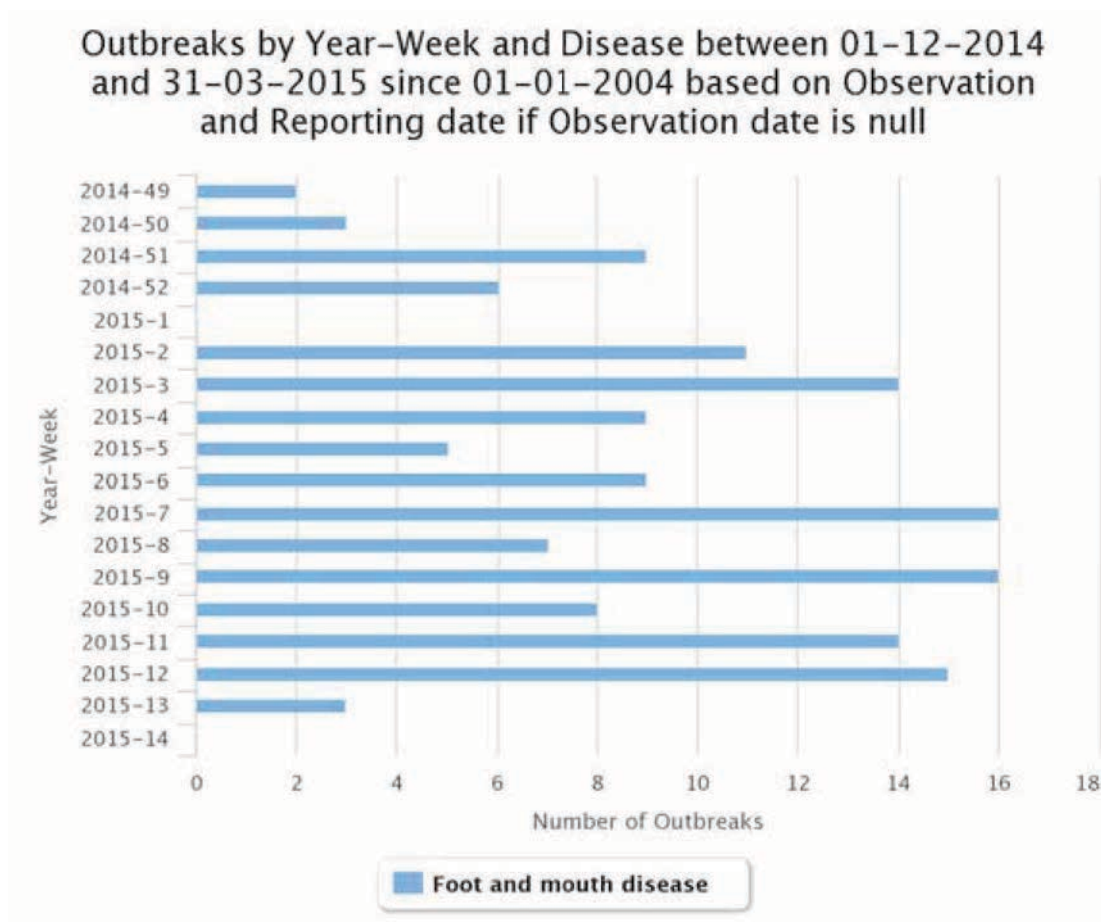
Table 2: summary of the locations and number of pigs involved in the outbreaks that occurred in Korea (Rep. of) during March 2015.

Administrative units in which FMD outbreak occurred	Species	Sum At Risk	Sum of Cases	Sum of Deaths	Sum Destroyed	Sum Slaughtered
Chungchongnam-do	domestic, swine	35462	351	0	0	0
Kang-won-do		10594	1022	0	994	0
Kyonggi-do		14426	1922	0	1780	0
Kyongsangbuk-do		1400	2	0	0	0
Totals		61882	3297	0	2774	0

Map 2: Location of FMD outbreaks occurring during March 2015 in Korea (Rep. of)¹.



Graph 1²: trend of outbreaks per week following report of 1st FMD outbreak on 3rd of December 2014 in Korea. (Rep. of).



Mongolia^{1, 2}

Two new FMD outbreaks, occurred on the 1st and 2nd of March 2015 caused by FMDV serotype O on two farms involving cattle, sheep and goats on one premises and only cattle on the other. These outbreaks were located in Khovd, in a similar region to the previous registered in February 2015. The diagnosis and serotyping were confirmed within a few days from the first outbreak, on the 6th of March 2015 by the State Central Veterinary Laboratory (National laboratory) using non-structural protein (NSP) ELISA, reverse transcription - polymerase chain reaction (RT-PCR) and gene sequencing.

Source of outbreaks is unknown or inconclusive and sanitary measures are still in place consisting in quarantine, movement control inside the country, screening, zoning and vaccination in response to the outbreaks.

A summary of the outbreaks is reported in Table 3 with location of outbreaks presented in Map 3.

Table 3: summary of the number of species involved in the outbreaks in Khovd, Mongolia since February 25th 2015.

Species	Susceptible	Cases	Deaths	Destroyed	Slaughtered	Apparent morbidity rate	Apparent mortality rate	Apparent case fatality rate	Proportion susceptible animals lost*
Cattle	Data not available	301	1	0	1	**	**	0.33%	**
Camelidae		14	0	0	0	**	**	0.00%	**
Goats		381	0	0	0	**	**	0.00%	**
Sheep		81	0	0	0	**	**	0.00%	**

*Removed from the susceptible population through death, destruction and/or slaughter **Not calculated because of missing information

Map 3: Location of FMD outbreaks that occurred during February and March 2015, in Khovd, Mongolia.



Russian Federation ^{4,5}

The Regional Reference Laboratory for FMD (ARRIAH, Russia) diagnosed FMDV serotypes A and O in clinical samples. Genotyping of FMDV serotypes A and O identified them within the Sea-97 and Mya-98 genetic lineages respectively. ARRIAH is conducting studies on the antigenic relationship between epidemic isolates and vaccine strains of FMDV serotypes A and O. Post vaccination monitoring was carried out by examining 585 sera. Research on FMDV is being conducted by ARRIAH focused on the immunobiological properties of serotype SAT2.

ARRIAH was involved in the provision of materials and advice to the Federal Service for Veterinary and Phytosanitary Surveillance of the Ministry of Agriculture of the Russian Federation and to the veterinary services of the Russian Federation Subjects.

Experts of the FGBl "Federal Centre for Animal Health" participated in the "Regional OIE Seminar on the Procedure of Recognition of the Member State's Freedom from FMD and on Validation of National FMD Control Program" which was held in Astana (the Republic of Kazakhstan) on March 26-27, 2015. The European Union and the Ministry of Agriculture of Kazakhstan supported the event.

The seminar was aimed at training the participants in preparation of dossiers to receive the OIE official recognition of the country as FMD-free with or without vaccination and on the procedures undertaken by OIE for the validation of National FMD control programs. Representatives of Tajikistan, Turkmenia, Uzbekistan, Kyrgyzstan, Georgia, Armenia, Azerbaijan took part in the seminar.

Participants studied standard operational procedures for the official recognition of the country as FMD free and for validation of National FMD control programs. Working groups underwent training in preparation of dossiers to receive the OIE official recognition of the country as FMD free.

Southeast Asia ³

No reports of FMD outbreaks have been described during March 2015, in the countries reported in Table 4. Last reported outbreaks were in Viet Nam, in December 2014. The episodes ongoing from previous months add to a total of 210. The FMDV serotypes circulating are A, Asia 1 and O. Location of outbreaks is presented in Map 4.

Table 4: FMD outbreaks reported as ongoing during March 2015, in the countries of the Southeast Asia area, are listed below.

Country registering FMD outbreaks	Prior outbreaks continuing
Cambodia	142
Myanmar	3
Malaysia	46
Thailand	4
Viet Nam	15
Total	210

Map 4: Location of FMD outbreaks reported as ongoing during March 2015 in the countries of the Southeast Asia area listed in Table 4 (SEAFMD).

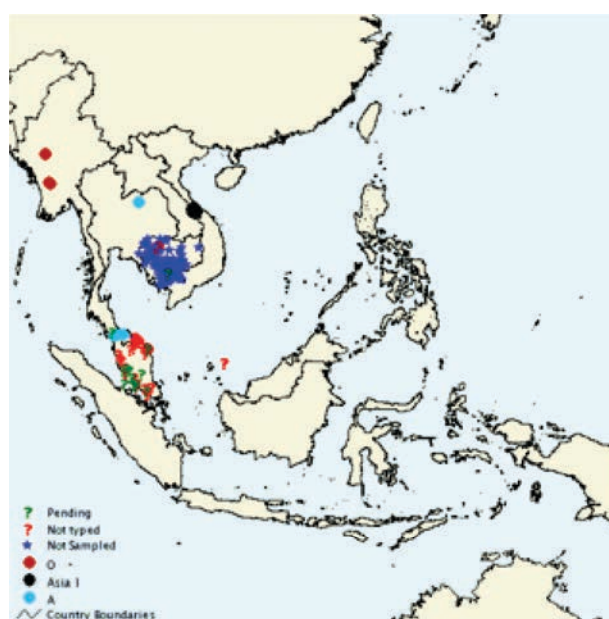


Table 5: Summary of the history of FMD Pool 1, 2012 – 2014, for geographic distribution see Map 5 below.

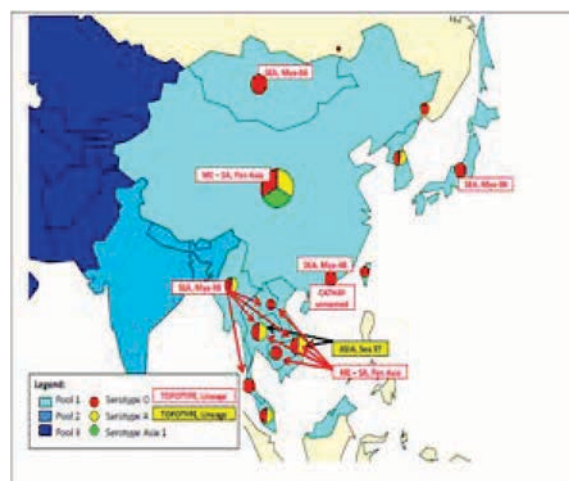
COUNTRY	FMD HISTORY FMDV serotypes, reported to OIE between 2012 – 2014	LAST OUTBREAK REPORTED/SEROTYPE [#]	Comment
Cambodia	O, 2013-2014/NOT SAMPLED	Jun 2014/O, Aug 2014/ not typed	Typing required
China (People's Rep. of)	2012-2013/O, 2013/A,	Nov 2014/O, Jan 2015/A	Genotyping required
China (Hong Kong, Sar)	O	Oct 2014/O	
China (Taiwan Province)	2012-2013/O,	Jul 2013/O	
Japan	FMD-FREE WITHOUT VACCINATION	Jul 2010/O	
Korea (DPR)	2012-2013/DISEASE ABSENT	May 2014/not confirmed, July 2014/O	
Korea (Rep. of)	2012-2013/DISEASE ABSENT	March 2015/O	See text

Laos PDR	2012/DISEASE PRESENT WITH QUANTITATIVE DATA BUT WITH AN UNKNOWN NUMBER OF OUTBREAKS	Mar 2013/O	
Malaysia	2012 –2013/O 2013/NOT TYPED	Jun 2014/O	Typing required
Mongolia	2013/A	Sept 2013/A, March 2015/O	See text Typing required
Myanmar	2012-2013/O	Jun 2014/O, July 2014/ not typed	Typing required
Russian Federation	2012/O, 2013/A	March 2015/O and A	See text
Thailand	O, A and NOT TYPED	Jun 2014 /A, Oct 2012/O, Sept 2014/not typed	Genotyping required
Vietnam	O, NOT SAMPLED 2013- 2014/A,	Apr 2013/A Jun 2014/O, July 2014/not typed	Typing required

Map 5: FMD distribution by serotype and toptotype in South East Asia, 2010 – 2014 (EuFMD).

Conjectured circulating FMD viral lineages in pool 1 per 2014¹⁶:

- Serotype O: O/SEA/Mya-98, O/ME-SA/PanAsia, O/CATHAY
- Serotype A: A/ASIA/Sea-97
- Serotype Asia-1 (not detected in the region since 2005 (Myanmar) and 2006 (Vietnam, P.R. China))



B. POOL 2 – South Asia

India⁶

The Project Directorate on Foot and Mouth Disease (PDFMD), Mukteswar, India, examined 22 clinical samples (18 samples from cattle and 4 from buffaloes) by antigen and/or RNA detection tests and FMDV serotypes O and Asia 1 were diagnosed. Nineteen field isolates, positive for FMDV serotype O, were subjected to vaccine matching tests. A total of 35,400 serum samples were tested for FMDV antibodies for epidemiological studies. The indigenous diagnostic kits developed at PDFMD, Mukteswar were used for these tests.

The laboratory personnel are constantly investigating FMD field outbreaks and provide expert advice to Government, national/local authorities or to other services. The laboratory is also involved in research studies and collaborations with international organisations.

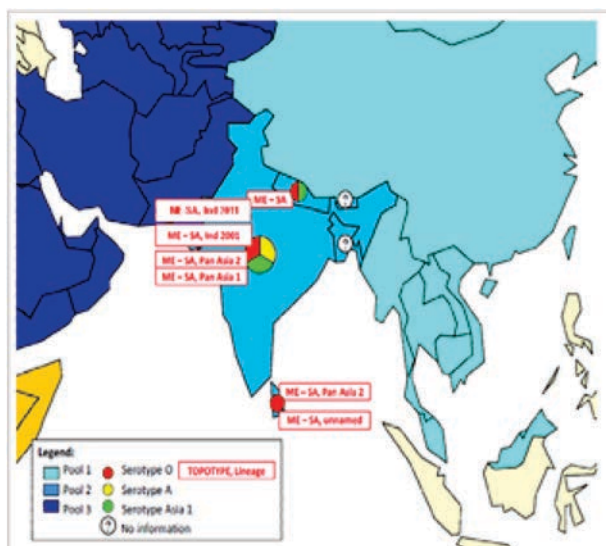
Table 6: Summary of the history of FMD Pool 2, 2012 – 2014, for geographic distribution see Map 6 below.

COUNTRY	FMD HISTORY FMDV serotypes, reported to OIE between 2012 – 2014	LAST OUTBREAK REPORTED/SEROTYPE [#]	Comment
Bangladesh	DISEASE PRESENT BUT WITHOUT QUANTITATIVE DATA	Not available	Follow –up needed
Bhutan	NOT TYPED, 2013/NOT SAMPLED 2013-2014/O	Not available	Follow –up needed
India	O, A, NOT SAMPLED 2012-2013/Asia 1 2013/NOT TYPED	March 2015/Asia1 and O	See text
Nepal	O, 2012-2103/Asia 1	Apr 2014/O	
Sri Lanka	2012 – 2013/O	Sept 2014/O	

Map 6: FMD distribution by serotype and toptotype in South Asia, 2011 – 2014 (EuFMD).

Conjectured circulating FMDV lineages in pool 2 per 2014¹⁶:

- O/ME-SA/Ind-2001 (the O/ME-SA/Ind-2011 lineage that emerged during 2011 has not been recognized during 2012-13)
- O/ME-SA/PanAsia-2 (last detected in 2011 in Sri Lanka)
- A/ASIA/IND (genotype 18)
- Asia-1 (lineage C subdivided into Eastern and Western clusters)



C. POOL 3 – West Eurasia & Middle East

Algeria^{1, 2}

An FMD outbreak, caused by FMDV serotype O, was reported on the 2nd of March 2015, after an interruption of their occurrence in the country for nearly five months. The previous outbreaks in the country, due to the same serotype, had started on the 25th of July 2014 and were resolved on the 12th of October 2014. While bovines were principally involved in the previous outbreaks, the present ones are mainly involving sheep.

The seven outbreaks recorded during March 2015 occurred in the two administrative units of El Bayadh and El Oued, which are respectively on the western and eastern ends of the northern area of the country (Map 7). The Constantine and Laghouat Regional Veterinary Laboratories initially diagnosed FMD on samples of sheep and cattle on the 4th of March, using NSP ELISA. FMD was confirmed on the 9th of March 2015 by the Central Veterinary Laboratory (National laboratory) on cattle samples, using real-time reverse transcriptase/polymerase chain reaction (RRT-PCR).

The source of the outbreaks is attributed to the introduction of new live animals. The control measures implemented consist in quarantine, vaccination, disinfection of infected premises. No treatment of affected animals is being carried out. A summary of the vaccination programme that has already been carried out is reported in Table 7, while that of the species involved in the outbreaks is reported in Table 8. Geographic location of the outbreaks is presented on Map 7.

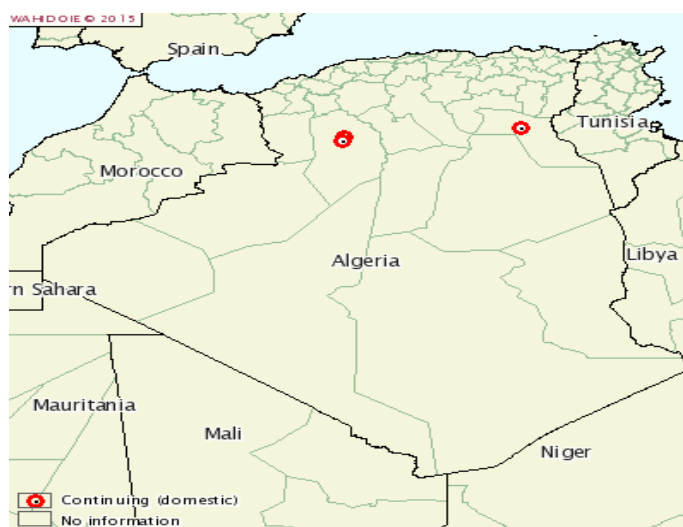
Table 7: summary of type of species and number of animals vaccinated in the administrative units where the FMD outbreaks occurred in Algeria during March 2015.

Administrative division	Species	Number Vaccinated
EL BAYADH	Goats	5210
EL OUED	Cattle	367
EL BAYADH		691
	Sheep	49716
	Total	55984

Table 8: summary of the type and number of species involved in the outbreaks in El Bayadh and El Oued, Algeria during March 2015.

Species	Number of susceptible animals	Cases	Apparent morbidity rate
Cattle	24	1	4.16%
Goats	78	0	0.00%
Sheep	2230	42	4.84%
Total	2332	43	

Map 7: Location of FMD outbreaks occurring during March 2015 in Algeria.



Pakistan ⁷

During the reporting period, the field veterinarians attended 79 FMD outbreaks. Affected animals (171) were provided free treatment and ring vaccination was carried out in 1147 animals at risk. Laboratory analysis indicated that three FMDV serotypes (A, Asia-1 and O) were circulating in the country. Landhi Cattle Colony (LCC) remained the hottest spot in the country where 41 out of 79 outbreaks were reported.

During March, 36,239 animals in different production systems (8,350 animals in dairy colony production system, 5,537 animals in market oriented rural smallholders, 1760 animals in government livestock farms and 20,592 on

cost-sharing basis) were given preventive FMD vaccination. Use of quality FMD vaccine according to the SOP developed by the Project has provided protection to animals against the disease. This successful demonstration has convinced a large number of farmers to start vaccinating their animals (including on cost-share basis) particularly against FMD. On cost sharing basis, a total of 20,592 animals were registered and vaccinated/ear tagged in Sindh and Punjab provinces. These included 5,117 animals in Karachi, and 15,475 animals at JK dairy farms Rahim Yar Khan, working with Engro Pvt Ltd and international Livestock Research Institute (ILRI).

Eight diagnostic labs continued providing FMD diagnostic and serotyping facilities in all provinces/regions of the country. Arrangements are being made to equip and make functional the 9th ELISA Laboratory, in Fata. ELISA kits, other expendables and technical backstopping were provided to these laboratories. Two week long training for the “Quality Control of Foot and Mouth Disease Vaccine” was arranged by the project from 17th to 28th of March at NVL, Islamabad. The services of an International consultant, Dr. Can Cokaliskan (Director Quality Control Section SAP institute, Turkey) were engaged for providing training on the subject. A total of 7 lab scientists from NVL (2), University of Veterinary and Animal Sciences Lahore (1), FMD Research Centre Lahore (1), Veterinary Research Institute Peshawar (1) and FAO-FMD Project (2) participated in the training workshop. During the training, SOPs were developed and hands-on training was provided to the participants.

Three awareness seminars were organized respectively in Mohmand Agency, South Waziristan and FR Dera Ismail Khan FATA. A total of 41 farmers and field veterinary staff were educated in the areas of prevention and control of FMD.

Table 9: Summary of the history of FMD Pool 3, 2012 – 2014, for geographic distribution see Map 8 below.

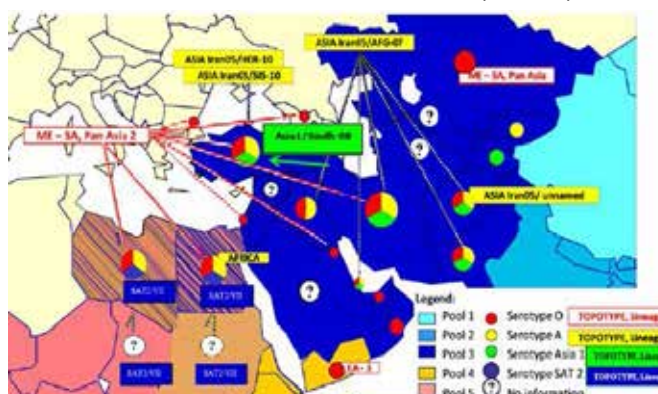
COUNTRY	FMD HISTORY FMDV serotypes, reported to OIE in 2012 – 2014	LAST OUTBREAK REPORTED/SEROTYPE [#]	Comment (Genotyping or vaccine matching tests needed for this pool)
Afghanistan	2013/O, A, Asia 1, NOT TYPED 2012/SEROTYPE NOT REPORTED	2014/A, Asia 1, O	Genotyping required
Algeria	2014/O	March 2015/O	See text
Armenia	2012-2013/DISEASE ABSENT	Not available	Follow –up needed
Azerbaijan	DISEASE ABSENT	Jun 2001	Follow –up needed
Bahrain	2012 /O	Oct 2014/O	
Egypt	2012, 2014/SAT 2 2012 - 2014/O, A	May 2014 A , Oct 2014/O, April 2014	
Georgia	DISEASE ABSENT	2002	Follow –up needed
Iran	O, A, 2012-2013/Asia 1	Jun 2013/Asia 1, Apr 2014/O, A	
Iraq	2012-2013/O, A	Dec 2013/A, O -	Follow –up needed
Israel	2012-2013/O	Nov 2013/O	Follow –up needed
Jordan	DISEASE ABSENT	2006	Follow –up needed
Kazakhstan	2012/O 2012 –2013/A	Aug 2012/O, Jun 2013/ A	Follow –up needed
Kuwait	2012/O 2013 – 2014/ DISEASE ABSENT	Jan 2012/O	Follow –up needed
Kyrgyzstan	2012-2013/O, A	Apr 2013 /O, A, Aug 2014/NOT TYPED	Typing required
Lebanon	DISEASE ABSENT	03/2010	Follow –up needed
Libya	NO DATA AVAILABLE	Oct 2013/O	Follow –up needed
Oman	2012-2013/O	Dec/2013	

Pakistan	DISEASE LIMITED TO ONE OR MORE ZONES	March 2015 / A, Asia 1, O	See text - genotyping required for most recent isolates
Autonomous Territories Palestine	O, 2012-2013 - SAT 2	Mar 2013/Sat 2, Nov 2014/O	
Qatar	2012-2013/O	Dec 2013/O	Follow –up needed
Saudi Arabia	2013/O	Nov 2013/O	
Syrian Arab Republic	DISEASE ABSENT	Mar/2002	Follow –up needed
Tajikistan	2012/NOT TYPED 2013/DISEASE ABSENT	Nov 2011/Asia 1, Nov 2012/ NOT TYPED	
Tunisia	2014/O	Oct 2014/O	
Turkey	Asia 1, A, O, NOT TYPED	Nov 2014/O, Feb 2015/ A and Asia 1	
Turkmenistan	NO DATA AVAILABLE	Not available	Follow –up needed
Uzbekistan	NO DATA AVAILABLE	Not available	

Map 8: FMD distribution by serotype and toptotype for West Eurasia and Middle East, 201 – 2014 (EuFMD).

Conjectured circulating FMDV lineages in pool 3 per 2014 ¹⁶:

- O/ME-SA/PanAsia-2 (predominantly from ANT-10 and FAR-09 sub-lineages)
- O/ME-SA/Ind-2001 (recent incursion per 2013 from the Indian sub-continent)
- A/ASIA/Iran-05 (from SIS-12, SIS-10, FAR-11 and BAR-08 sub-lineages)
- Asia-1 (Sindh-08 lineage).



D. POOL 4 – Eastern Africa

Ethiopia ⁸

The National Animal Health Diagnostic and Investigation Centre (NAHDIC), Ethiopia, collected 21 sera and 3 tissue samples from an FMD outbreak. All resulted negative except for one sample in which FMDV serotype SAT 2 was detected. This will be forwarded for confirmation to the WRLFMD.

FMD antibody detection was conducted on 481 samples and 63 samples were positive for NSP antibodies. NAHDIC has been given support by IAEA through the provision of NSP ELISA kits for FMD.

Experts from the laboratory were involved in the FMD outbreak investigation from which the above-mentioned samples were collected.

The laboratory was also involved in the training of experts on protocols of the cross-sectional survey of various diseases, including FMD, CBPP, PPR and RVF, in collaboration with Ministry of Agriculture and the African Union – International Bureau for Animal Resources and national surveillance for these diseases will start shortly.

Kenya ⁹

The Foot-and-Mouth Disease Laboratory, Embakasi, Kenya detected FMDV serotype A (1), O (2) and SAT2 (1) in thirteen clinical samples tested. The laboratory also carried out pre-export screening for FMD.

Table 10: Summary of the history of FMD Pool 4, 2012 – 2014, for geographic distribution see Map 9 below.

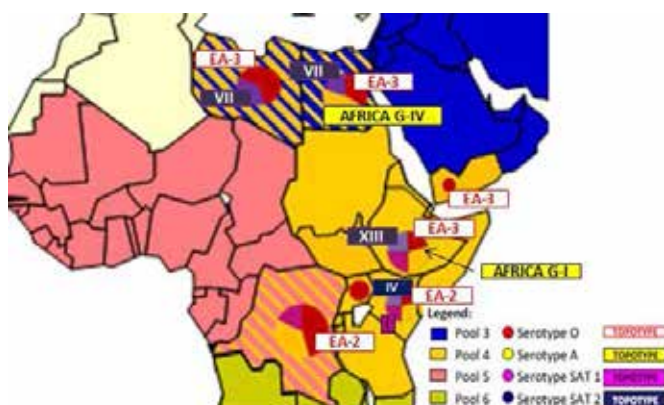
COUNTRY	FMD HISTORY FMDV serotypes, reported to OIE in 2012 - 2014	LAST OUTBREAK REPORTED/SEROTYPE [#]	Comment
Burundi	NO DATA AVAILABLE	Aug 2013 / not available	Typing required
Comoros	NO DATA AVAILABLE	2010	Follow –up needed
Congo d. R.	NO DATA AVAILABLE	Jun 2013/not typed	Typing required
Djibouti	DISEASE ABSENT	Not available	Follow –up needed
Egypt	2012, 2014/SAT 2 2012 - 2014/O, A	Jan-June 2014/O, A, SAT2	
Eritrea	2012/O	Jan 2012/O	Follow –up needed
Ethiopia	O, 2012/A, SAT 2	Jun 2014/A, Feb 2015/O, Jan 2015/confirmation pending, March 2015/SAT 2,	See text Genotyping required for most recent isolates
Kenya	O, SAT1, SAT2, 2012 – 2013/A, 2012/NOT TYPED	March 2015/ A, O and SAT 2	See text Genotyping required
Libya	NO DATA AVAILABLE	Oct 2013/ O, Sat 2/Apr 2012	Follow-up needed
Rwanda	2012-2013/A, O, SAT1, SAT 2	Nov 2012/not typed	Typing required
Somalia	2012/NOT SAMPLED 2013 – 2014/ NO DATA AVAILABLE	2011	Follow –up needed
Sudan	O, 2013/SAT 2, 2013-2014/NOT TYPED	2013/O, SAT2	Follow –up needed
South Sudan	NO DATA AVAILABLE	2011	Follow –up needed
Tanzania	2012/O 2012-2013/A, SAT 1, SAT 2,	Mar 2013/O Apr2013/ A, SAT 1, SAT2	
Uganda	2012/O, SAT 1 2012-2013/NOT TYPED	May 2014-Jan 2015/O, A, SAT1, 2 and 3	Genotyping required
Yemen	2012/O 2013 – 2014/ DISEASE PRESENT BUT WITHOUT QUANTITATIVE DATA	Not available	Follow –up needed

Map 9: FMD distribution by serotype and toptype for East Africa. 2011 – 2014 (EuFMD)

East Africa is known to be endemic for FMD, but currently available data are limited.

Conjectured circulating FMDV lineages in pool 4 per 2014¹⁶:

- O (topotypes EA-2 (Kenya, Tanzania, DR Congo, Uganda), EA-3 (Ethiopia, Eritrea, Sudan, Egypt) and EA-4 (Ethiopia, Kenya, Uganda).
- A/AFRICA (genotypes I (Kenya, Tanzania, D.R. Congo), IV (Sudan, Eritrea, Egypt) and VII (Ethiopia, Egypt))
- A/ASIA/Iran-05 BAR-08 sub-lineage (Egypt)
- SAT 1 (topotypes I (Kenya, Tanzania)
- SAT 2 (topotypes IV (Kenya, Tanzania), VII (Sudan, Egypt), XIII (Ethiopia, Sudan))
- SAT 3 (only detected in African buffalo in the south of the QENP, Uganda in 1970 & 1997)



E. POOL 5 – West / Central Africa

Cameroon¹⁰

The Laboratoire National Vétérinaire (LANAVET) –Garoua did not report the diagnosis of FMDV during March 2015. However, the laboratory personal was involved in the investigation of FMD outbreaks in the field and in providing expert advice to Government services national/local authorities and other services. The laboratory is continuing with its research collaborative projects with Plum Island Animal disease Centre and Ohio state university, USA.

Ghana¹¹

No FMD outbreaks were reported for the country during March 2015.

Nigeria¹²

No FMD outbreaks were reported for the country during March 2015.

Senegal¹³

The Laboratoire National de l'Elevage et de Recherches Vétérinaires (LNERV, Senegal) will be involved in the testing of samples for FMD that the veterinary services are currently collecting within the TCP/FAO/DSV/SN3502.

Table 11: Summary of the history of FMD Pool 5, 2012 – 2014, for geographic distribution see Map 10 below.

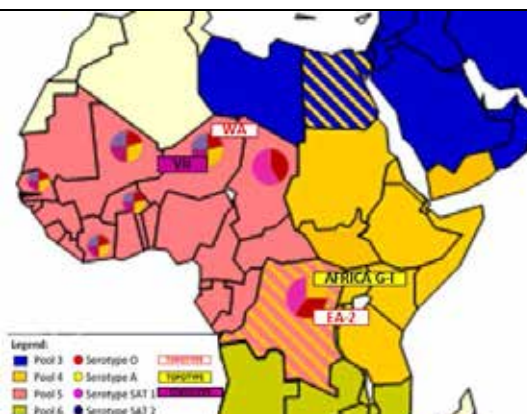
Country	FMD history FMDV serotypes, reported to OIE in 2012 – 2014	Last outbreak reported/serotype [#]	Comment (Genotyping would be useful for this region)
Benin	A, O, SAT 1, SAT 2	Jun 2014/O, A, SAT 1, SAT 2	
Burkina Faso	SEROTYPES NOT REPORTED	2013/ not available	Follow –up needed
Cameroon	SEROTYPES NOT REPORTED	Apr 2014/ A, Nov 2014/O, SAT 2, May 2014/SAT 1, Jun 2014, Jan 2015/untyped	Genotyping required for most recent isolates
Cape Verde	NO DATA AVAILABLE	Not available	Follow –up needed
Central Afr. Rep.	DISEASE PRESENT BUT WITHOUT QUANTITATIVE DATA	Not available	

Chad	2012 – 2013/SEROTYPES NOT REPORTED	Not available	
Congo D. R.	2012 – 2013/A, O, SAT 1	Jun 2013/not typed	Typing required
Congo R.	NO DATA AVAILABLE	Jun 2013/not typed	Typing required
Cote D'Ivoire	2012/A, NOT SAMPLED 2013/ SEROTYPES NOT REPORTED	Jun 2013/not typed	
Equatorial Guinea	DISEASE SUSPECTED BUT NOT CONFIRMED	Not available	Follow –up needed
Gabon	NO DATA AVAILABLE	Not available	
Gambia	NO DATA AVAILABLE	2012/O	
Ghana	2012 – 2014/SEROTYPES NOT REPORTED	2014/not available	Identification required Follow –up needed
Guinea Biss.	DISEASE ABSENT	No data available	Follow –up needed
Guinea	2012-2013/ DISEASE ABSENT	2014/not available	
Liberia	NO DATA AVAILABLE	Not available	Follow –up needed
Mali	2012/DISEASE ABSENT 2013/ SEROTYPES NOT REPORTED	2011/2012, no precise data	
Mauritania	2012-2013/NO REPORTED OUTBREAKS	Not available	
Niger	2012 – 2014/NOT SAMPLED	2014/not sampled	Identification required
Nigeria	2012 – 2014/NOT SAMPLED	Sept 2014/SAT 1, SAT 2, Sept 2014/O Feb 2015/ A	Genotyping required Follow –up needed
Sao Tome Principe	2012/DISEASE ABSENT, 2013/NO DATA AVAILABLE	Not available	Follow –up needed
Senegal	2012, 2014/NO DATA AVAILABLE 2013/DISEASE ABSENT,	2014/ SAT 1 Feb 2015/ A and O	Follow –up needed
Sierra Leone	DISEASE ABSENT	Oct 1958	Follow –up needed
Togo	O, SAT 1, 2013/NOT TYPED	2012/O	Follow –up needed

Map 10 FMD distribution by serotype and topotypes for West Africa, 2011 – 2014 (EuFMD)

Conjectured circulating FMDV lineages in pool 5 per 2014¹⁶:

- Serotype O (topotypes WA, EA-3 (Nigeria))
- Serotype A (topotype AFRICA, genotypes IV and VI)
- Serotype SAT 1
- Serotype SAT 2 (topotype VII)



F. POOL 6 – SOUTHERN AFRICA

Botswana^{1,2}

An FMD outbreak was reported on the 9th of March 2015 in Ngamiland followed by further three episodes, involving the domestic cattle of a village. The affected cattle are those grazing in a communal area. The first of the series of the current outbreaks was located outside the FMD free zones without vaccination. An animal with oral lesions was detected during clinical inspection prior to loading for slaughter at the local abattoir. Trace-back to the crush of origin revealed further 19 cases with clinical signs similar to those of FMD. Source of the outbreaks or origin of infection is attributed to illegal movement of animals or to contact with infected animals at grazing/watering. The diagnosis was carried out by the Botswana Vaccine Institute (OIE's Reference Laboratory) on cattle samples by virus isolation that was reported as positive on the 17th of March 2015. The FMDV responsible for the current events is SAT 2.

Containment and preventive measures applied are control of wildlife reservoirs, zoning, and vaccination in response to outbreaks movement control inside the country are to be yet applied.

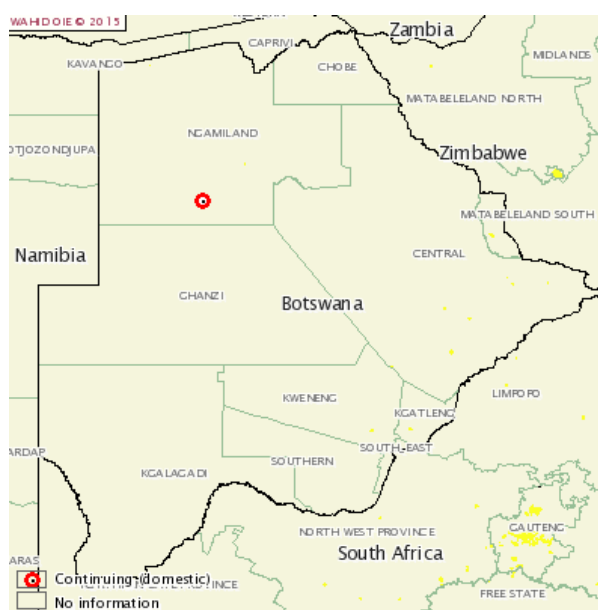
Mass vaccination is being carried out with trivalent SAT 1, 2 and 3 vaccine of all cattle in zone 2 of Ngamiland with the inoculation of 24,939 cattle.

A summary of the outbreak is reported in Table 12 with location of outbreak is presented in Map 11.

Table 12: summary of the number of cattle involved in the FMD outbreak reported in Ngamiland, Botswana during March 2015.

	Sum At Risk	Sum of Cases	Sum of Deaths	Sum Destroyed	Sum Slaughtered
	3304	14	0	0	0
	439	9	0	0	0
	1434	24	0	0	0
	500	20	0	0	0
Totals	5677	67	0	0	0

Map 11: Location of FMD outbreaks reported in Ngamiland, Botswana during March 2015.



RSA¹³

The ARC-Onderstepoort Veterinary Institute is carrying out serotyping of FMDV in clinical samples. Serological testing was conducted for trade and movement purposes. The laboratory is also involved in providing expert advice to Government services national/local authorities and is carrying out research studies on FMD.

Table 13: Summary of the history of FMD Pool 6, 2012 – 2014, for geographic distribution see Map 12 below.

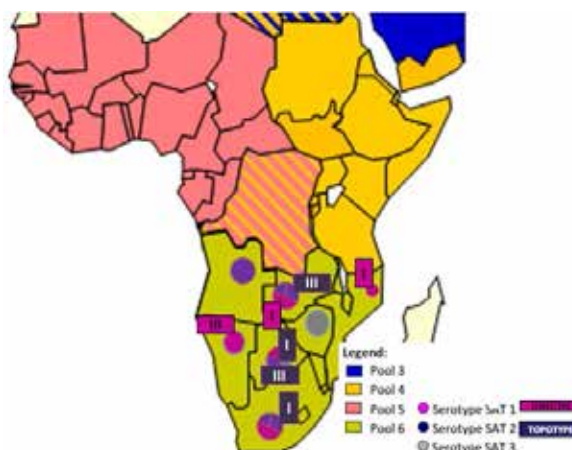
COUNTRY	FMD HISTORY FMDV serotypes, reported to OIE in 2012 – 2014	LAST OUTBREAK REPORTED/SEROTYPE [#]	Comment
Angola	2012/DISEASE SUSPECTED BUT NOT CONFIRMED 2013/DISEASE ABSENT 2014/NO DATA AVAILABLE	Dec 2010/ SAT 2	Follow –up needed
Botswana	2012-2014/SAT 2 2014/SAT 1	March 2015/SAT 2, Oct 2014/SAT 1	See text Follow –up needed
Congo D. R.	2012 – 2013/A, O, SAT 1	Jun 2013/not typed	Follow –up needed
Malawi	2012 -2013/NO REPORTED OUTBREAKS	Oct 2011	Follow –up needed
Mozambique	2012 -2013/DISEASE ABSENT, 2014/NO DATA AVAILABLE	Oct 2014/SAT 2	Genotyping required
Namibia	2012-2013/SAT 1	Dec 2014/SAT 2, Jan 2015/typing pending	Serotyping required
South Africa	2012/SAT 2 2013/SAT 1	Aug 2013/SAT 1, Nov 2014/ SAT 2	See text Genotyping required
Zambia	2012/SAT 1, SAT 2	Jan 2013/SAT 1, SAT 2	Follow –up needed
Zimbabwe	2012-2013/SAT 2 2013/SAT 3 2014/SAT 1	Jun 2013/SAT 3, Sept 2014/SAT 1, Feb 2015/SAT 2	Follow –up needed

Map 12: FMD distribution by serotype and topotype for southern Africa, 2011 – 2014 (EuFMD)

Swaziland and Lesotho are free from FMD without vaccination. There is a zone in both Botswana and Namibia, which has been FMD free without vaccination, since 2010 and 1997 respectively.

Conjectured circulating FMDV lineages in pool 6 per 2014¹⁶:

- Serotype SAT 1 (topotypes I, II and III)
- Serotype SAT 2 (topotypes I, II and III)
- Serotype SAT 3 (topotypes I, II and III)



G. POOL 7 – South America**South America¹**

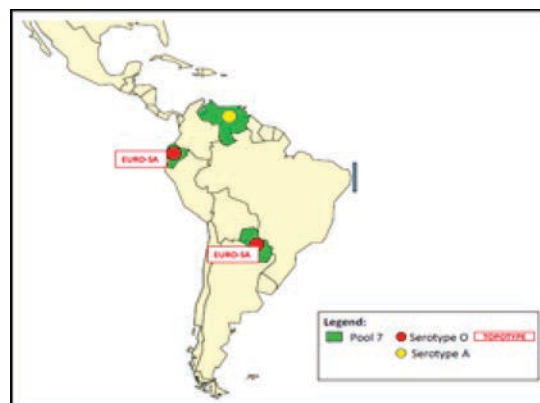
No new outbreaks have been reported during March and it is now more than three years since the last FMD outbreak in South America was reported.

Most South American countries are FMD free with vaccination (Uruguay) or without vaccination (Chile, Guyana) or with free zones with vaccination (Argentina, Bolivia, Brazil, Colombia, Peru) or without vaccination (Argentina, Bolivia, Brazil, Colombia, Peru) described by the OIE maps (see: <http://www.oie.int/en/animal-health-in-the-world/official-disease-status/fmd/en-fmd-carte/>). Small areas of the continent may still be considered as endemic but clinical cases are rare (Table 14 and Map 13). The FMD history between 2011 – 2013 given in Table 14.

Table 14: Summary of the history of FMD Pool 7, 2012 – 2014, for geographic distribution see Map 13 below

COUNTRY	FMD HISTORY FMDV serotypes, reported to OIE in 2012 2014	LAST OUTBREAK REPORTED/SEROTYPE#	Comment
Ecuador	DISEASE ABSENT	Aug 2011/O	
Paraguay	DISEASE ABSENT	Dec 2011/O	
Venezuela	DISEASE ABSENT	2011/O, A	National situation needs verification

Map 13: FMD distribution by serotype and topotype for South America, 2011 – 2013¹⁶ (EuFMD).



IV. OTHER NEWS:**Bahrain¹⁴**

A total of 293 FMD cases have so far been identified in 13 farms and urgent measures to control the disease outbreak in the country were ordered by the Prime Minister who has also directed immediate precautionary measures. Ministry Under-Secretary for Agriculture and Marine Resources directed officials to intensify measures taken when the first case was discovered on the 23rd of February 2015. They were instructed to enforce measures, including cleansing, quarantine, immunisation and the establishment of buffer zones to separate infected animal farms. They were also directed to immunise herds in the farms surrounding the affected area. The Directorate of Agriculture and Marine Resources had announced that three cases had been found among 300 cattle kept in two farms.

Kenya¹⁴

Clinical cases of FMD were reported in Nakuru West, Kiamunyi, Menengai and Nakuru East, Kenya.

Nigeria¹⁴

About 200 cattle in Toro Local Government Area of Bauchi State of Nigeria have been infected with FMD.

Philippines¹⁴

The Department of Agriculture Secretary hosted with the Office of International des Epizooties (OIE) the 21st OIE Sub-Commission Meeting for FMD in South-East Asia and China from March 10th to 13th, 2015 in Manila. Around 100 representatives from all Southeast Asian countries plus China, the OIE and its technical partners, the private sector, the academia and donor countries attended the meeting. Officials and technical experts provided an update of the current FMD situation in the region and efforts to control and eradicate the disease.

It was informed that the Philippines has maintained an FMD-free status—without vaccination—through progressive zoning approach working in the effort to reach this with other countries, through the OIE, for FMD control.

Rwanda¹⁴

The Ministry of Agriculture confirmed a new outbreak of FMD in Nyagatare District in the Eastern Province on the 13th of March 2015. The disease has involved the corridor that stretches, Nyagatare, Gatsibo, Kayonza and Kirehe, districts neighbouring Tanzania. Clinical FMD was observed in at least 100 cows in Karangazi Sector farms, but it was not yet clear how many animals have been affected. The veterinarians, who said the disease could have originated from Tanzania, were still investigating another possible outbreak in other farms of the district.

A representative of Rwanda Animal Resources Development Authority (Rada) in Nyagatare District said that a quarantine zone has been put in place around the affected areas.

Global Foot-and-Mouth Disease Situation

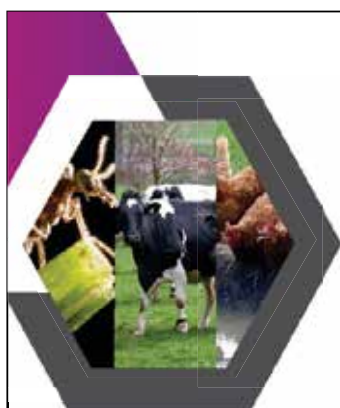
March, 2015

V. REFERENCES - Superscripts

1. WAHID Interface – OIE World Animal Health Information Database
<http://web.oie.int/wahis/public.php?page=home>
2. FAO EMPRES-AH, <http://www.fao.org/ag/againfo/programmes/en/empres/home.asp>
3. SEAFMD, <http://www.arahis.oie.int/reports.php?site=seafmd>
4. Regional Reference Laboratory for FMD (ARRIAH, Russia) - (Dr. Svetlana Fomina)
5. Rosselkhoznadzor / News Federal Service for Veterinary and Phytosanitary Surveillance -
http://www.fsvps.ru/fsvps/news/13056.html?_language=en
6. Project Directorate on Foot and Mouth Disease (PD-FMD), Indian Council of Agricultural Research, Mukteswar, India (*Dr B. B. Dash*) FAO
7. Progressive Control of Foot and Mouth Disease in Pakistan, GCP/PAK/123/USA - (*Dr. Manzoor Hussain*, National Project Director and *Dr. Muhammad Afzal*, Project Coordinator)
8. National animal health diagnostic and investigation center (NAHDIC), Ethiopia - (*Dr. Daniel Gizaw*)
9. National FMD Reference Laboratory, Embakasi, Kenya - (*Dr. Abraham Sangula*)
10. Laboratoire National Vétérinaire (LANAVET) -Garoua, Cameroon - (*Dr. Simon Dickmu Jumbo*)
11. ACCRA Veterinary Laboratory, Ghana - (*Dr. Joseph Adongo Awuni*)
12. FMD Research Centre, Virology Research Department, National Veterinary Research Institute, Vom, Plateau State, Nigeria - (Dr. Ularamu Hussaini)
13. Laboratoire National de l'Élevage et de Recherches Vétérinaires (LNERV, Senegal) – (Dr Modou Moustapha Lô – Miss Mariame Diop)
14. ARC-Onderstepoort Veterinary Institute-Transboundary Animal Diseases Programme, RSA - (*Dr. Rahana Dwarka – Dr. Livio Heath*)
15. FMD News - CADMS (Centre for Animal Disease Modelling and Surveillance) database, The University of California, Davis, US)- <http://cadms.ucdavis.edu/news.html>
16. OIE/FAO FMD Reference Laboratory Network, Annual Report 2013

Appendix 3

Global FMDV surveillance



Global FMD Surveillance Report

Donald King

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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.



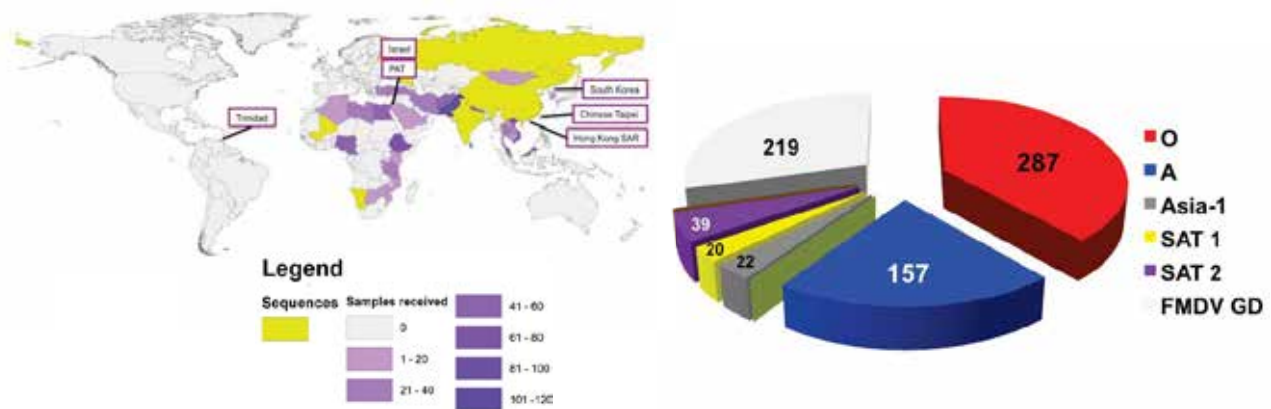
BBSRC National Virology Centre: The Plowright Building

- 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



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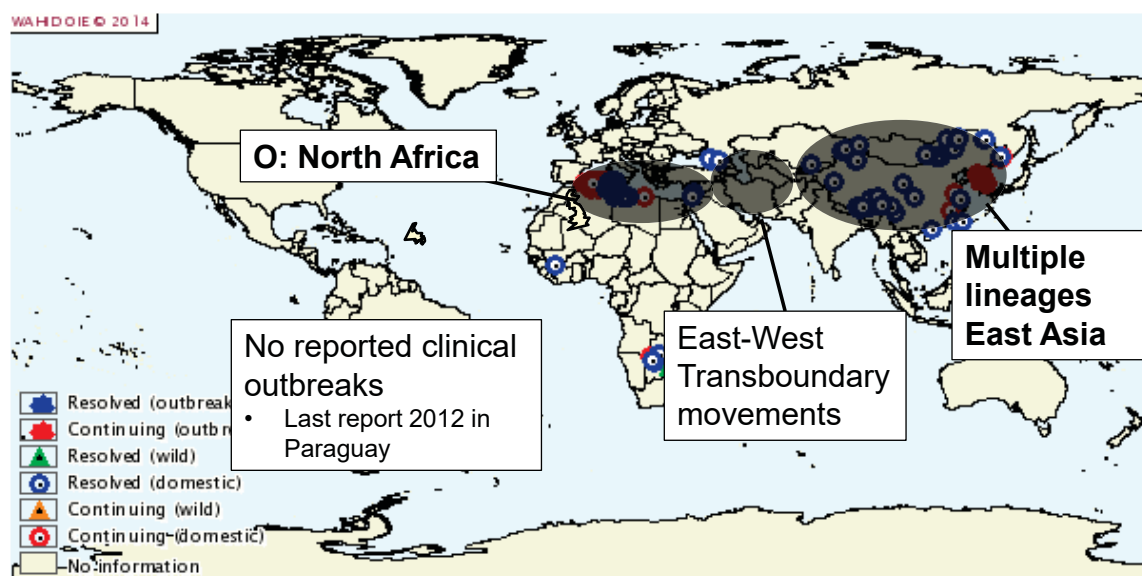
Virology submissions to WRLFMD Pirbright October 2013 – March 2015 (period of current LoA)



- 874 samples received from 34 countries
- 101 no virus detected and 219 only rRT-PCR positive
- No serotype C since 2004
- Gaps still remain in the East and West African pools.
- Reports for these samples can be found at: www.wrlfmd.org

www.pirbright.ac.uk

Changing epidemiological patterns



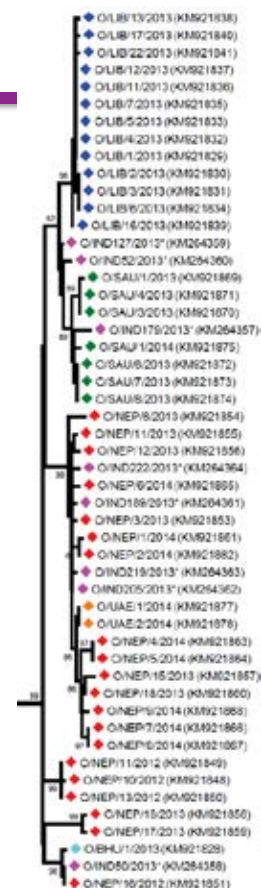
Outbreaks reported to the OIE (change of epidemiological status):
<http://www.oie.int/wahid-prod/public.php?page=home>

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2013/14 - O/ME-SA/Ind-2001

Middle East and North Africa

- Samples collected in Libya in Sept/Oct 2013 - submitted via IZSLER (Brescia)
- O/ME-SA/PanAsia-2 and O/EA3 previously reported in the country
- Samples collected in Saudi Arabia in Aug/Nov 2013
- **O/ME-SA/Ind-2001** lineage most closely related to viruses from Bhutan, Nepal and India – and Sri Lanka in 2014



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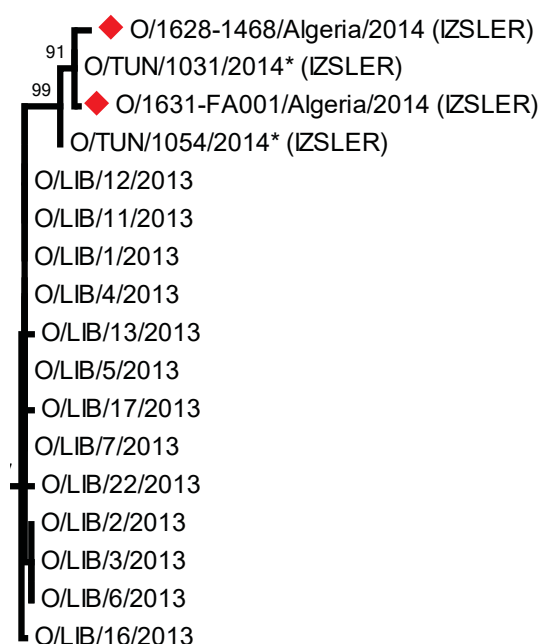
Continued spread of O/ME-SA/Ind-2001

2014: Tunisia and Algeria

- Algeria: reported 27/07/14 (418 outbreaks)
- Tunisia: reported 29/04/14 (134 outbreaks)



Source: OIE (12/10/2014)



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

22 field isolates

Field Isolate	Vaccine strain				
	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	

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O Manisa Vaccine / O Algeria Challenge

Preliminary Data



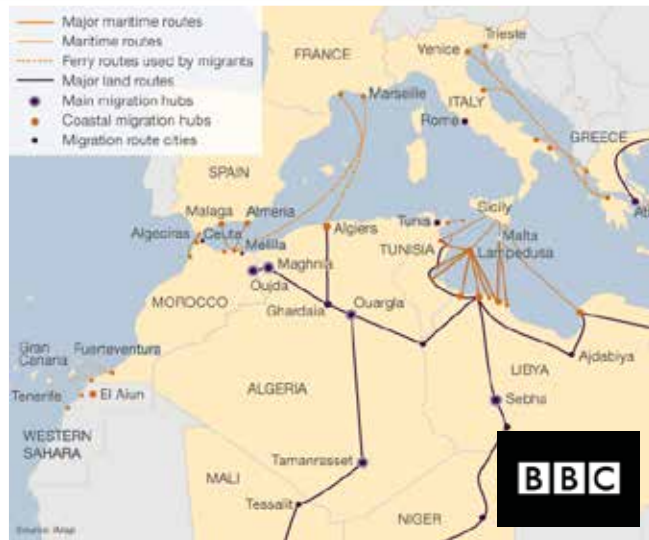
- 3 groups of five cattle were vaccinated with monovalent O₁ Manisa vaccine: 2ml (full dose), 0.5ml (1/4 dose) and 0.125ml (1/16 dose)
- At 21dpv, cattle (+ two unvaccinated controls) were challenged with 100,000 PFU of O/ALG/2014 by tongue inoculation



Vaccine Dose	Number Protected
Full	3/5
1/4	4/5
1/16	0/5

- The heterologous potency was estimated to be slightly greater than 3 PD₅₀

New FMD outbreaks in Algeria: 2015



- 12 FMD outbreaks reported (initial outbreak on 2/3/2015)
- Disease in small ruminants – foci in the west of the country?
- Serotype O
- Genotyping is urgently need to confirm FMDV lineage
- Increased threats to Morocco and Europe?

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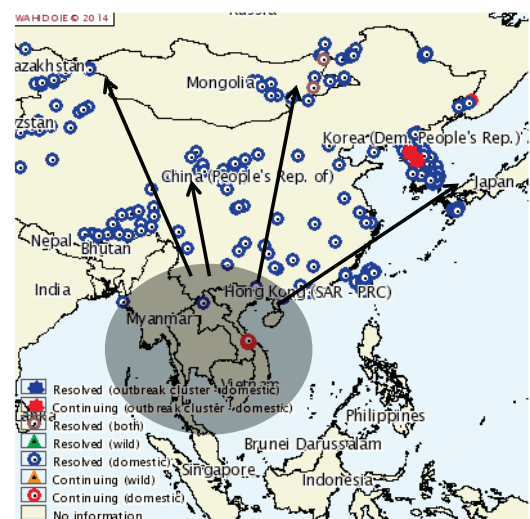
East Asia: outbreaks due to exotic FMDVs

FMD outbreaks since 2008

During 2009-2015:

Spread of three FMD virus lineages from Southeast Asia:

- **O/ME-SA/PanAsia**
China, Russia, Mongolia, Kazakhstan
- **O/SEA/Mya-98**
China, Japan, South Korea, North Korea, Russia, Mongolia, Taiwan
- **A/ASIA/Sea-97**
South Korea, China, Mongolia, Russia, Kazakhstan





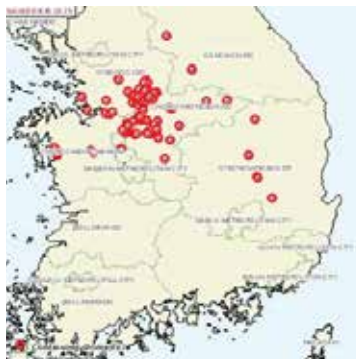
OIE: WAHID

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FMD Outbreaks in South Korea

December 2014 – on-going

- New outbreaks (O/SEA/Mya-98)
- 121 outbreaks since December
- Majority of cases in pigs
- Vaccinated with O-Manisa?
- Sequence data indicates another introduction into SKR
 - 2 in 2014? 
 - 3+ in 2010? 
 - Does this provide an indication of the severity of “infectious pressure” in the country?



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Coordinating Global Networks

OIE/FAO FMD Laboratory Network



- OIE and FAO Reference Centres (+ affiliates)
- Annual meeting and report
- **Global surveillance and changing patterns in risk pathways**
- **Harmonised and improved lab capacity**



Brescia, Italy – November 2014

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(Increasing) threats to Europe (?)

Mainly from:

1. The Middle East
2. East Asia
3. North Africa
4. South Asia
5. ssAfrica
6. South America



- Outbreaks in UK in 2001
- Increased FMD circulation in East Asia

- 2010-2011
Outbreaks in Bulgaria
- O/ME-SA/PanAsia-2
 - A/ASIA/Irn-05
 - Asia-1

- New FMD lineages in North Africa
- Outbreaks in FMD-free countries

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Vaccine Bank Recommendations (March 2015)

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

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A new tool for vaccine antigen selection

WRLFMD/EuFMD/SAFOSO

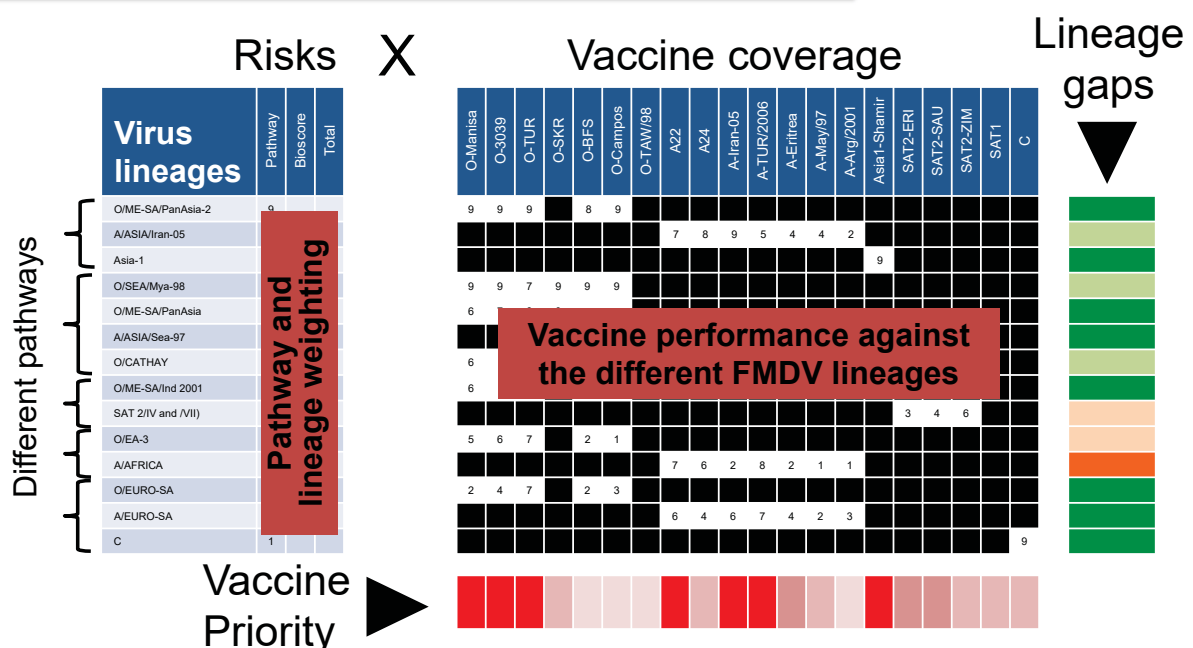
- Improved (more transparent) categorisation of different FMDV vaccine antigens
- Ability to respond to changing epidemiological risks
- Accommodates use of vaccines across different lineages
- For use in FMD-free settings

Determines scores as a **product** of two components

1. Different risks and associated FMDV lineages that are specific to a particular region (Europe, NA, Aus/NZ)
 2. Uses available in-vitro, in-vivo and field data to score the ability of available vaccines to protect against the different lineages
- Adds up the cumulative “antigen score” for each vaccine antigen to generate a heat map of vaccine priorities

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Cartoon overview of tool (draft)



- Further details will be provided by Katie Hickey at side event
- Plan to discuss with FMD Experts and vaccine companies

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Annual Proficiency testing scheme

- To assist National FMD Laboratories to develop/improve accurate and reproducible FMD diagnostic tests
- QA requirements to support ISO/IEC 17025
- NRLs from all EU member states must participate
- 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 - reported in 2014
- 56 countries worldwide

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PTS update

- As part of the LoA – EuFMD supports participation of labs in the PTS
 1. Global Network
 2. Non EU - EuFMD members
 3. Neighborhood states
- Performance (against criteria) generally good and improving
- 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: Panafosa, 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

Summary

- A new high-containment laboratory has recently opened at Pirbright
- Samples tested at the WRLFMD and the OIE/FAO FMD Laboratory Network provide vital intelligence about the circulation of FMD viruses in the field
- The epidemiology of FMD in the regions that threaten Europe is very dynamic, and recent trans-boundary movements of the virus require close monitoring.
- A new risk-based approach is being developed to prioritise the selection of vaccine antigens for vaccine banks.
- The WRLFMD organises an annual inter-laboratory proficiency testing scheme which assists in the harmonisation of laboratory performance

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Acknowledgements

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



Photos courtesy of HDR Architecture, Inc.; © 2104 James Brittain



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Appendix 4

Network/consortium concept

European partnerships and Global FMD surveillance: networking between European NRLs for improvement of support to FMD surveillance in Africa and Asia

Stéphan Zientara / Labib Bakkali Kassimi

ANSES
Animal Health Laboratory
FMD National Reference Laboratory
Maisons-Alfort
Email: stephan.zientara@anses.fr

Background

- FMDV still circulating in endemic areas and still a threat for free countries in Europe,
- It still gaps in knowledge on FMD viruses circulating in Pools 4 and 5 (Sub-Saharan East and West Africa), for risk assessment and PCP progress,
- According to the Progressive Control Pathway for the control of FMD (PCP-FMD), the countries of this part of Africa are on steps 0 or 1.



Many efforts are needed to assist these countries to obtain basic data on their FMD situation to improve their FMD control policies.

Background

The European FMD laboratories:

- have individual collaborations with African laboratories (in West and Central Africa),
- provide training, reference services and undertake research on FMD with partners in Africa and Asia



How to work together more effectively in support of the Global Strategy on FMD Control?

anses 

Proposal



Under the umbrella of OIE, FAO (and/or EU-FMD) to create an open network of expertise encompassing the OIE and FAO Reference Centers (Pirbright Institute, ISZ Brescia and CODA-CERVA) and other FMD-active European labs (ANSES, CVI, FLI, DTU,...) and African laboratories in certain West and Central African countries,

anses 

Objectives for the Consortium



Better coordinate, highlight and integrate the individual initiatives that the European labs have developed in the same regions of Africa



- To share and offer technical advice, training and veterinary expertise to African countries
- To assist in the prevention, diagnosis, surveillance and control of FMD;
- To exchange scientific data and biological materials (including virus strains) within the network, to analyze such data, and to share such information with the wider scientific community;
- To highlight FMD surveillance and research needs, promote their development and ensure co-ordination;
- To improve and facilitate the FMD surveillance programmes already put in place by the existing African regional laboratories networks.

Expected results



- ✓ Capacity building to establish FMD diagnosis methods and associated FMD epidemiology expertise in the collaborative centres,
- ✓ Improve classic and molecular epidemiology in order to deliver guidance,
- ✓ The better selection and use of vaccine,
- ✓ Minimum biosafety guidelines for laboratory workers and strategic guidance on FMD in Africa
- ✓ Provide expertise in FMD diagnosis and research to already existing African networks (REMESA, RESOLAB, EARLN-FMD ...) recognizing they are led by regional economic communities or FAO/OIE for their regions.

Appendix 5

Building business continuity into contingency plans

The Importance of Building Business Continuity into Contingency Plans: The Example of FMD Continuity of Business Planning in the United States

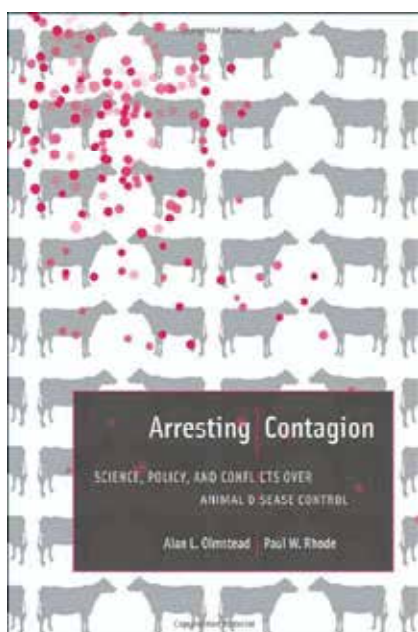


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Control of Foot and Mouth Disease (EuFMD)
FAO Headquarters, Rome, Italy
April 23rd, 2015



Historical VS Successes Created New Challenges

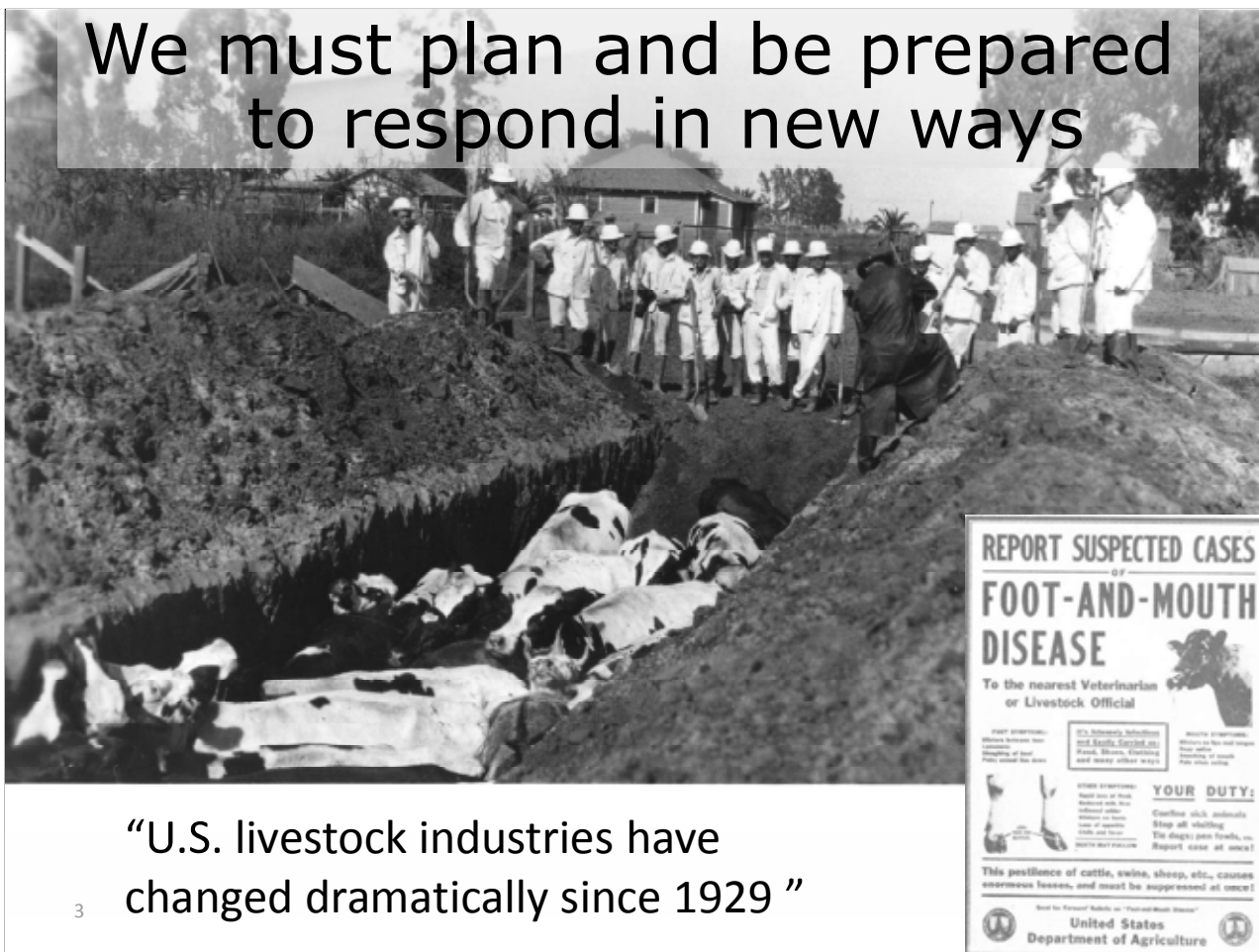


USDA Bureau of Animal Industry Successful Eradication Programs (1884-1943)

- Contagious Bovine Pleuropneumonia (1892)
- Fowl Plague (1929)
- Foot and Mouth Disease (1929)
- Glanders (1934)
- Bovine TB (1940)
- Dourine Fever (1942)
- Texas Fever (1943)



We must plan and be prepared
to respond in new ways



“U.S. livestock industries have
changed dramatically since 1929 ”

U.S. Foreign Animal Disease Response Planning is Moving in a New Direction

U.S. Secure Food Supply (SFS) Plans are underway !



Why Secure Food Supply (SFS) Plans?

Size, structure, efficiency, extensive movement inherent in North American livestock industries will present *unprecedented challenges* in an FAD outbreak



Goal of SFS Plans: Ensuring Business Continuity for U.S. Agriculture

- Minimize unintended negative effects of disease and disease response, while achieving response goals
 - Control or eradicate disease without “destroying” the industry



U.S. Secure Food Supply Plans under development

- Secure Milk Supply
 - Foot and Mouth Disease (FMD)
 - Movement of milk
- Secure Pork Supply
 - FMD, Classical Swine Fever, African Swine Fever, and Swine Vesicular Disease
 - Movement of animals
- Secure Beef Supply
 - FMD
 - Movement of animals
- Secure Egg Supply
 - High Path Avian Influenza (HPAI)
 - Eggs and egg products
- Secure Turkey Supply
 - HPAI
 - Movement of birds
- Secure Broiler Supply
 - HPAI
 - Movement of birds, hatching chicks and eggs



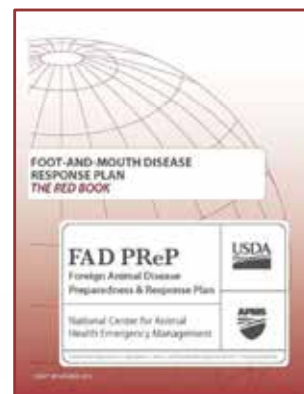
Common Components of Secure Food Supply Plans

- **Voluntary** pre-outbreak preparedness components
- **Biosecurity**, surveillance, epidemiology questionnaires, movement permits
- **Proactive risk assessments** (completed and in-process)
- Plans must be based on **current capabilities** and will evolve with science, risk assessments and new capabilities
- **Guidelines only**: Final decisions made by responsible officials during outbreak
- Outreach and training pre- and post-outbreak



U.S. FMD response is based on USDA VS guidance

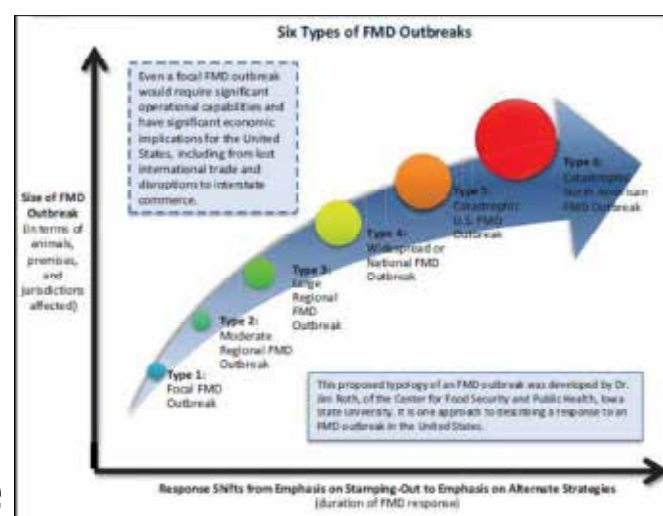
- Rapid control and eradication still the goal, but...
 - Animal/product movements from concentrated dairy, beef and swine sectors present a huge challenge
 - Mass depopulation unlikely - inadequate resources/political will
 - May take months/years to gain freedom from the disease
- Recent policy enhancements
 - **Continuity of business planning**
 - **Early consideration of vaccination**



Modern U.S. FMD response plans must be scalable to different size outbreaks

FMD response and management strategies depend upon outbreak:

- "The Type", eg magnitude, location, other characteristics
- "Phase", eg the stage



There are many tools for the control of FMD

- **Biosecurity**
- Quarantine and Managed Movement
- Trace back/Trace forward
 - 2 incubation periods
- Stamping Out
 - Slaughter of all clinically affected and in-contact susceptible animals (within 24 hours or as soon as possible)
- Surveillance
- Rapid Diagnostics
- Vaccination
 - Vaccinate to kill/slaughter/live



The U.S. National Secure Milk Supply Plan



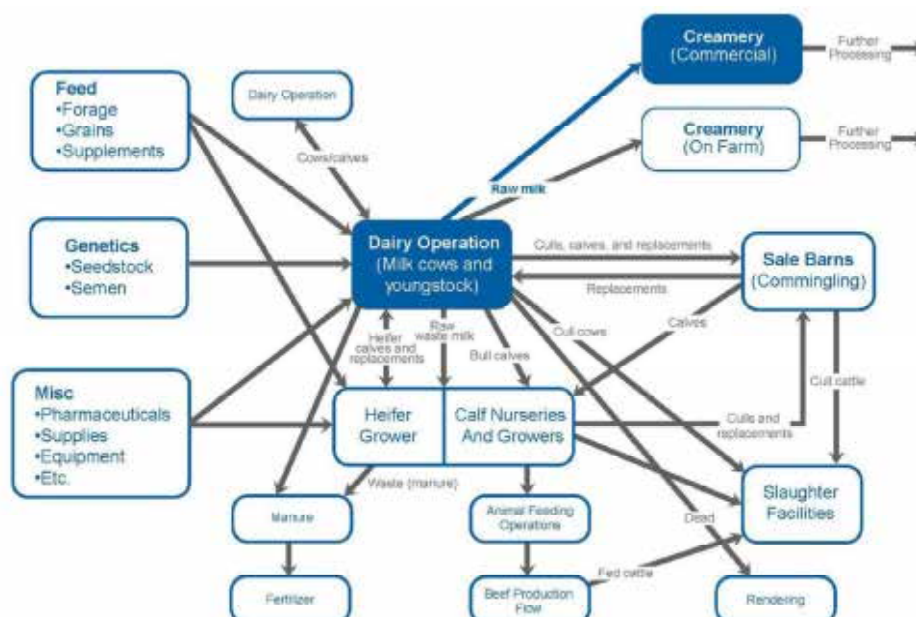
What is the Secure Milk Supply Plan ?

- U.S. Dairy Industry **Continuity of Business Planning** for FMD
- **Initial Goal**
 - To **maintain** milk movement in a Foot-and-Mouth Disease (FMD) outbreak and to provide a continuous supply of wholesome milk and milk products for consumers
- **Public-Private Partnership**
 - Industry, State, Federal, Academia
- **Voluntary**



National SMS Initial Focus: Raw Milk Movement from Farm to Processing

The dairy industry (producer and processor) business flow is complex



National and Regional SMS Partners

National Partners:

Industry

- Working groups, topic experts

Academia

- Iowa State University
- University of California, Davis
- University of Minnesota

USDA-APHIS-VS

- National Preparedness and Incident Coordination (NPIC)

Regional Partners:

- California
- Colorado
- New England States Animal Agricultural Security Alliance (NESAASA)
 - CT, MA, ME, NH, RI, VT
- Mid-Atlantic States
 - VA, MD, TN, NC, SC, DE, WV, NJ, PA
- Michigan
- Pacific Northwest
 - WA, OR
- Wisconsin

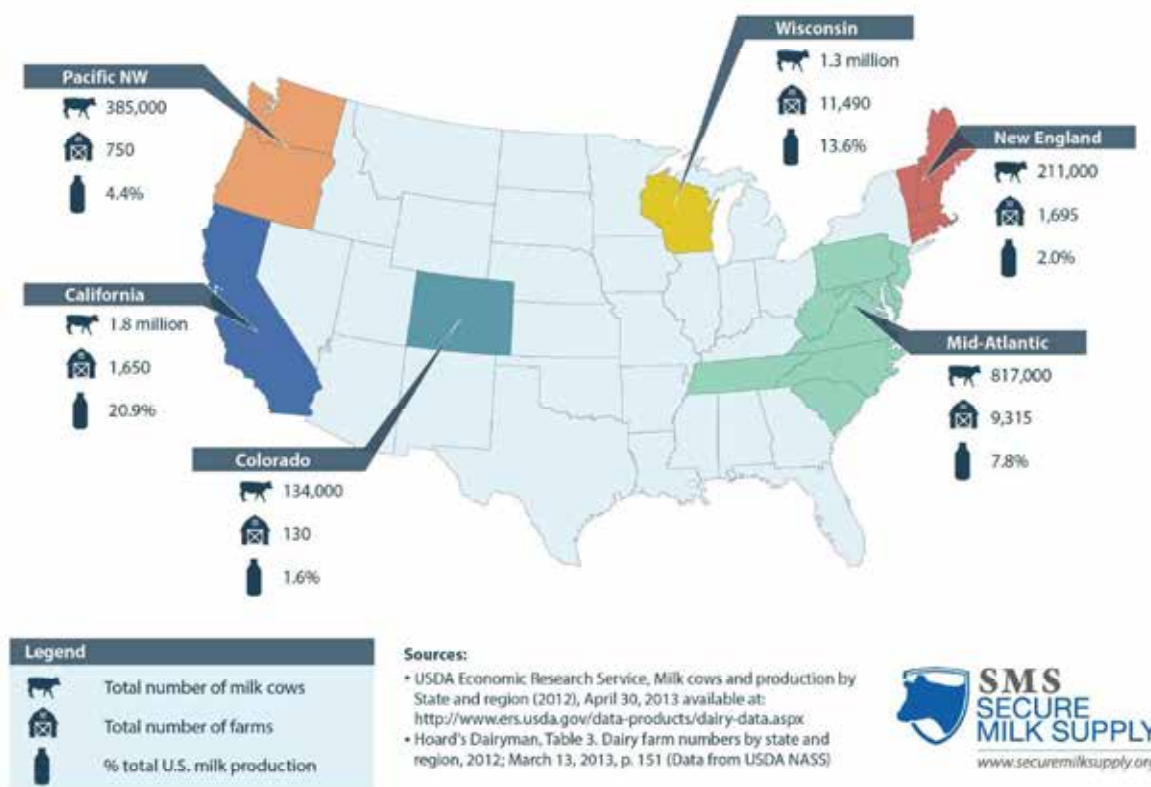


The SMS must accommodate the diversity of the US dairy industry

State	Total Milk (million lbs)	Milk Cows (1,000)	# Farms	% US Milk Production
California	41,256	1,780	1,515	20.5
Wisconsin	27,572	1,271	10,860	13.7
New York	13,469	610	5,030	6.69
Idaho	13,431	573	550	6.67
Pennsylvania	10,565	533	7,200	5.25

Top 5 U.S. dairy states, 2013

Diversity of Milk Production Among SMS Regional Partners, 2012



Core SMS Plan Components

- Biosecurity performance standards
 - Dairy premises, milk haulers, processing plants
- Pre-event risk assessments
 - Identify needed mitigation steps to control FMD virus spread
- Decision support and training tools
 - Guidance documents
 - Herd monitoring/surveillance tools
 - Handling of milk from FMD infected farms
 - Surge capacity for FMD vaccination



Line of Separation (LOS)

(Milk tanker does not cross in this example)



- Farm dedicated hose
- Licensed weigher/sampler on farm
- Hauler does not cross LOS
 - Wears gloves



California's SMS pre-certification levels for producers

DRAFT CONCEPT OF CALIFORNIA SECURE MILK SUPPLY¹
CERTIFICATION LEVELS

CA SMS Certification Level	Bronze	Silver	Gold - Certified
Workshop Attendance	Recommended	Recommended	Recommended
SMS Farm Plan Completed and Current*	Yes	Plan reviewed and approved by CDEA	Plan reviewed and approved by CDEA
SMS Supplies	No supplies	All required supplies	All required supplies
Documented Employee Training	No training	Completed	Completed
<ul style="list-style-type: none"> • Herd Monitoring • Cleaning and Disinfection/PPE • Bulk tank sample collection and milk transfer 			
Demonstration Exercise of Plan Component	No demonstration	Some plan components successfully demonstrated	All plan components successfully demonstrated
<ul style="list-style-type: none"> • Herd Monitoring • Cleaning and Disinfection/PPE • Bulk tank sample collection and milk transfer 			

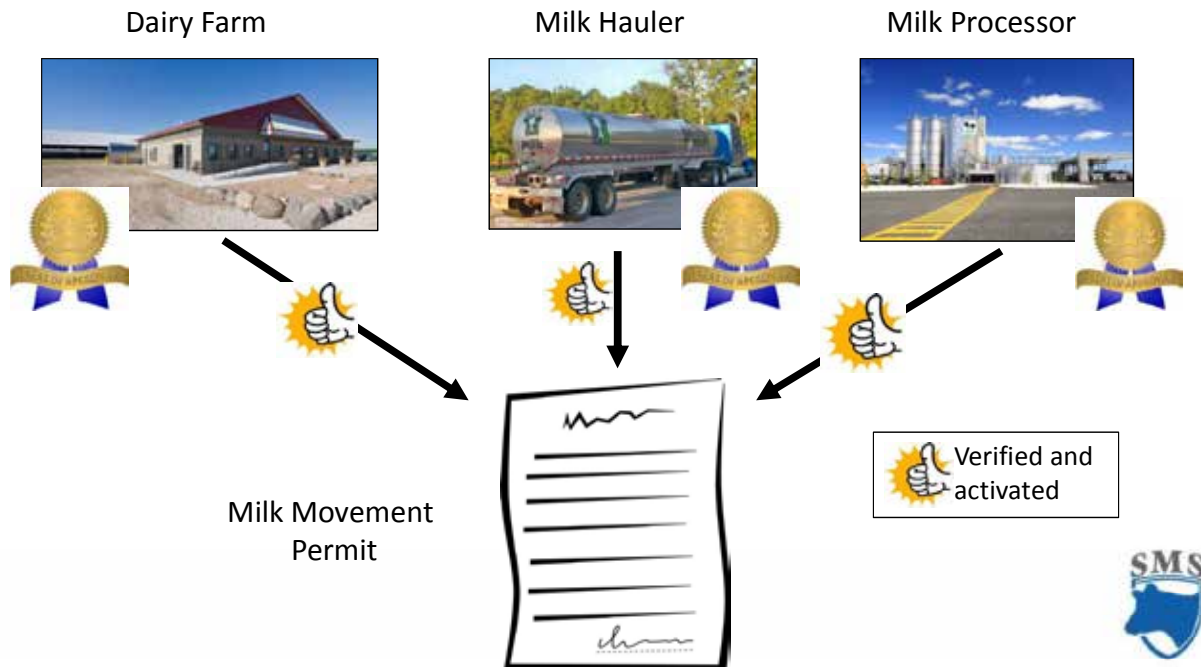
- **Gold** 
- **Silver**
- **Bronze**



Gold certified producer-hauler-processor routes would have no interruption in milk movement if biosecurity and herd monitoring in place

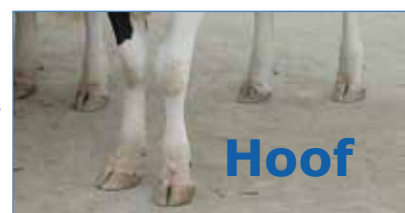


Dairies, Haulers and Milk Processors will all need to be GOLD certified for a milk movement permit to be issued in an outbreak



Messaging will be critical to maintaining U.S. consumer confidence

- FMD is NOT a public health concern
 - NOT** hand-foot-mouth disease that affects children
 - NOT** the same as BSE or "mad cow disease"
- Industry has invested heavily on crisis communications preparedness www.FootAndMouthDiseaseInfo.org
- Industry representatives suggest using term "HOOF and Mouth Disease" in messaging

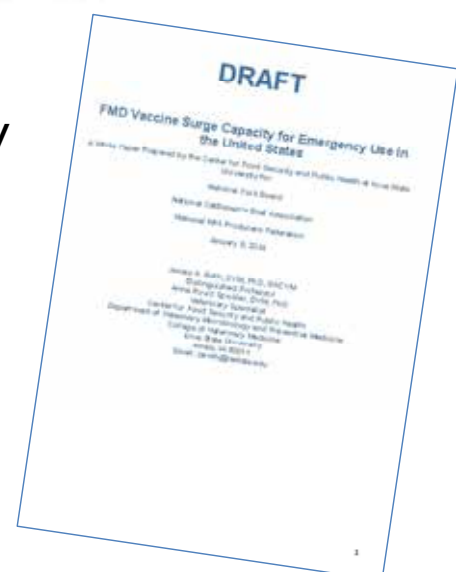


U.S. FMD vaccination contingency planning....One size does not fit all



FMD Vaccine Surge Capacity for Emergency Use in the United States - January 2014

- At present vaccine availability is highly unlikely to meet desired demands
- Contingency planning should take limited vaccine resources into consideration
- Prioritization for limited resources should be discussed in advance with all stakeholders



<http://www.cfsph.iastate.edu/Secure-Food-Supply/index.php>



SMS Current Focus: Management Issues in a Large FMD Outbreak

- On-farm calf rearing and management of replacement heifers
- Enabling other necessary activities (cropping, manure handling, feed, etc.)
- Milk handling from FMD infected or vaccinated dairies
- Dairy export loss mitigation opportunities for industry



Conclusions

- COB planning is presently a necessary component of FMD emergency response planning
- COB planning is not something that VS can do on its own and it must engage and involve all stakeholders
- While planning guidance is necessary, COB plans must still be tailored to local, regional and state needs
- To be successful, COB planning and preparedness must occur and be well socialized in advance of an event
- There is inherent value to COB planning that goes well beyond a “plan” or product



www.securemilksupply.org



- FMD Info
- Dairy Industry Manual
- Phases and Types
- Inactivation of FMDV in dairy products
- Vaccination info
- FMD Response Plan
- OIE resources



For More SFS Information

<http://www.cfsph.iastate.edu/Secure-Food-Supply/index.php>

- ✓ Secure Food Supply Plans
- ✓ USDA Foot-and-Mouth Disease Response Plan "The Red Book"
- ✓ Phases & Types of an FMD Outbreak
- ✓ NAHEMS Guidelines: Continuity of Business
- ✓ NAHEMS guidelines: Vaccination for contagious diseases; Appendix A: Vaccination for Foot-and-Mouth Disease
- ✓ FMD Vaccine Surge Capacity for Emergency Use in the United States
- ✓ Inactivation of Foot-and-Mouth Disease Virus in Milk Products
- ✓ Foot and Mouth Disease in Pigs - Progression of Lesions



Acknowledgements

- USDA, APHIS, VS
- U.S. Livestock Industry
- State government partners
- Academic partners
 - Iowa State University
 - University of Minnesota



Thank you!



Appendix 6

Technical progress on vaccination to live



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41st General Session of the EuFMD

Technical progress on vaccination-to-live issues and the implications for diagnostic and vaccine banks



Eoin Ryan¹ and Katie Hickey²

¹Acting Chair, Standing Technical Committee, EuFMD; Central Veterinary Research Laboratory, DAFM, Ireland

²Short-term professional Animal Health Officer, EuFMD

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Key messages

- Vaccination-to-live: technical progress & changes in societal attitudes.
- There is a need for an EuFMD-coordinated vaccine discussion network
- There is a need to continue to support European FMD modelling
- There is a need to improve the process of antigen selection for vaccine banks.
- EuFMD member states should consider establishing a shared diagnostic bank.
- There is a need to match vaccine antigens to SP detection kits
- There is a need to conduct an evaluation on the degree to which vaccination-to-live may influence market access to trading partners.



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Background

Technical progress on vaccination-to-live issues (Paton et al., 2014; Barnett et al., 2013; Geale et al., 2013):

- High quality, high potency vaccines reduce
 - the risk of subclinical circulation
 - the risk of carriers
- Differentiating infected from vaccinated animals is technically feasible
- Post-outbreak FMD risk: related to effectiveness of surveillance more than waiting period
- Acceptable level of statistical certainty for probability of FMD freedom post-outbreak, rather than set time period
- Importance of demonstrating vaccine effectiveness

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Technical progress on vaccination to live

- Current OIE rules: minimum time to regain FMD freed status is
 - 3 months (if vaccinate to kill, or culling with no vacc)
 - 6 months (if vaccinate to live)
 -> Clear implications for trade
- Culling of healthy animals (either vacc or non-vacc) may become harder to justify to the public
- The larger the outbreak, the harder to control by culling alone -> factors predisposing to large outbreaks support early adoption of emergency vaccination

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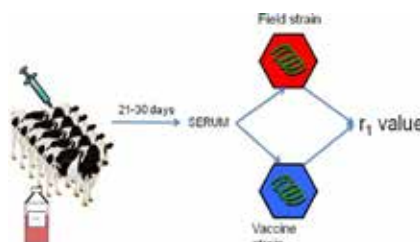
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Suitability of antigens:

For vaccination to work, must have

- Enough vaccine
- The right vaccine
- The vaccine antigen used must match the outbreak virus
- Spectrum of immunogenicity of antigens against virus lineages:
 - Lack of field data
 - Lack of in-vivo data
- Selection of antigens for vaccine banks: WRL makes recommendations to EuFMD ExCom and DG-SANCO
- Methodology being revised (*K. Hickey, 17.30 side event in Iran Room*)



 1 dose	 1/4 dose
 1/10 dose	 No dose

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Vaccinate to live or vaccinate to die?

- Logistics, market access concerns, consumers, public attitudes, relative importance of agri-food exports to national economy
- OIE: 3 months versus 6 months
- Emergency vaccination-to-live may alter the distribution of costs between government, the livestock sector and society generally (R. Bergevoet)
- Vaccinate to die: may involve similar scale of destruction of healthy animals as culling alone, but in a more controlled and manageable way



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Reaction of trading partners to use of vaccination?

- Re-establishment of trade in animals & animal products is key priority
- Bilateral trade negotiations, risk assessments, reviews by third countries
- Trade partners (and private customers) may wish to differentiate between products of vaccinated versus non-vaccinated animals

How much does vaccination influence bilateral trade? Hard to predict...

US delay in recognising FMD freedom after OIE freedom attained (USDA figures)

- UK 2001: +329 days (no vacc)
- Ireland, Netherlands 2001: +47 days (no vacc/IE, vacc-to-kill/NL)
- Japan 2000: +468 days (no vacc)
- Japan 2010: +560 days (vacc-to-kill)

Evaluation of the possible effect on market access would be useful (as has been done by non-European countries) as this is a key constraint

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How would vaccination affect surveillance?

- Prevalence of carriers – likely to be v. low (0.2%, Arnold et al, 2008)
- Design of surveys affected by tests Se/Sp (Paton et al. 2014)
- “Small herd problem”: herd-level freedom can’t be statistically demonstrated even if all animals tested
 - Census surveillance: overcomes this by allowing small herds to be treated as one stratum
- Pigs: concern is inadequately vaccinated pigs -> may emit vast amount of virus if infected
- **More emphasis needed on the effectiveness of the FMD control programme, including vaccine effectiveness**



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Implications for vaccine banks

Coordination between VB members:

- VB managers in different regions face similar problems: selection of antigen, manufacture, storage, regulation, renewal of vaccines
- International coordination: different regions?
- 2010: International FMD vaccine strategic reserve network founded
- Type C FMD?



→ **Need for an EuFMD-coordinated vaccine discussion network**

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Implications for vaccine banks

Estimating likely demand for vaccines:

- Use of emergency vaccination increasingly more feasible
 - If multiple countries were simultaneously affected and chose vaccination as a control tool, would there be sufficient stock?
 - Mechanisms for states to purchase vaccine from other states?
- **Need for continued support to disease spread modelling, including at continental level**
- **Integrate modelling outputs into contingency planning activities**



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Implications for vaccine banks

Selection of antigens in response to changes in risk:

- More work is needed to accurately prioritize vaccine antigens which should be held in vaccine banks
- A tool is being developed by EuFMD in partnership with the WRLFMD, Pirbright in order to improve the way recommendations are made to vaccine bank managers (M. McLaws, A. Ludi, K. Hickey; *see side event @17.30, K. Hickey*)



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International diagnostic bank – why?

- FMD outbreak – rapid rise in need for diagnostic kits
- Requirement to diagnose clinical cases
- Requirement to conduct mass serology in post-outbreak surveillance phase
- **How confident are we that we could access sufficient kits at short notice?**
- **Individual national diagnostic bank arrangements: efficient use of resources?**
- **What about countries which can't afford national diagnostic banks?**
- International diagnostic bank: conceptually similar to an international vaccine bank: pooling resources to reduce their individual costs

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International diagnostic bank: resource estimation

- Acute phase: diagnostic kits needed rapidly (e.g. Bulgaria 2011)
- Vaccination to live: census serosurveillance may increase need for serology kits and capacity

Examples:

UK 2001: >3 million sera tested (pers comm, Don King)

NL 2001: >190,000 sera tested (pers comm, Aldo Dekker)

Ireland 2001: >160,000 sera tested



→ importance of European disease spread modelling -> inputs in discussions on diagnostic resource estimates.

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Lab capacity estimation

- Importance of estimating lab resources and planning how lab capacity could be scaled up during an outbreak (“surge planning”)
- Detailed contingency plans for labs needed

Example: UK laboratory contingency plan

(<https://www.gov.uk/government/publications/contingency-plan-for-exotic-notifiable-diseases-of-animals>)

Nominated laboratory would be ready to start contingency surge capacity serological testing within three weeks of notification:

- Initial capacity of 7,000 tests per week,
- 20,000 tests in the second week,
- 40,000 in the third week
- 120,000 tests per week at week 10



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Matching serological assays with vaccines

- Importance of being able to demonstrate effectiveness of emergency vaccination -> provides assurance to trade partners, OIE, etc.
- Diagnostic bank should include kits matched to specific vaccines so vaccinated animals can be serologically tested to provide proof of efficacy.
- EuFMD SCRPD has all 3 OIE/FAO Reference Centres in Europe represented and has expertise to assist -> could be a priority task

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Mechanisms to administer a diagnostic bank

- Maintaining a baseline stock at all times
- Agreement on number of kits, type, time period for delivery
- Clarity on balancing national responsibilities to maintain a diagnostic minimum capacity with diagnostic bank membership
- Provision of training where required
- Financial commitments: clear descriptions of all costs required



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What might a European diagnostic bank look like?

- a) Rapid deployment kits for initial diagnosis. PCR, Ag ELISA, serology kits
- b) Serology kits for post-outbreak surveillance: longer lead-in time but much larger number of kits needed
- c) Provision of kits to detect structural proteins for vaccine effectiveness assays
- d) Clear protocol on expected delivery dates for each type of kit and the volume to be delivered
- e) Governance: agreement on funding, administration and the decision process for releasing kits.
- f) Expert advisory body: An advisory body or committee would be needed for issues such as choice of reagents, numbers of kits, etc

41st General Session of the EuFMD • Rome, 23-24 April 2015



Food and Agriculture
Organization of the
United Nations



Conclusions: Key messages

- Vaccination-to-live: technical progress and changes in societal attitudes.
- There is a need for an EuFMD-coordinated vaccine discussion network
- There is a need to continue to support European FMD modelling
- There is a need to improve the process of antigen selection for vaccine banks.
- EuFMD member states should consider establishing a shared diagnostic bank.
- There is a need to match vaccine antigens to SP detection kits
- There is a need to conduct an evaluation on the degree to which vaccination-to-live may influence market access to trading partners.

41st General Session of the EuFMD • Rome, 23-24 April 2015

Appendix 7

Modelling animal movement patterns for disease impact assessment



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Modelling animal movement patterns for disease impact assessment - rationale and implications of the FLI/DTU EuFMD-FAR project

C. Pottgießer, T. Halasa, T. Selhorst, C. Staubach,
C. Sauter-Louis, B. Haas, J.M. Gethmann,
D. Höreth-Böntgen, A. Boklund, F.J. Conraths



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FMD

- Risk of introduction
- Different control options
- Decisions must be taken:
Recommendations?

=> Simulation models



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Different prevention and control strategies

- Culling
- Vaccination
- Stand still
- Movement restrictions

Reduced social
acceptance of massive
culling of animals



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FMD - simulation models

-Davis Animal Disease Simulation (DADS) model -
University of California, Davis

-North American Animal Disease Spread Model
(NAADSM) - Center of Epidemiology and Animal
Health and United States Department of Agriculture

-InterSpreadPlus (ISP) model - Massey University,
New Zealand



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FMD simulation model

- DADS selected (Bates et al., 2003; Halasa et al., 2014)
- Simulation of transmission
 - intra- and inter-herd
- Spatial, stochastic, state-transition model
- Deterministic on animal-level
- Time steps of 1 day

Bates et al., 2003, Am J Vet Res 64: 195-204

Halasa et al., 2014, PLOS ONE. 9 (3): e92521

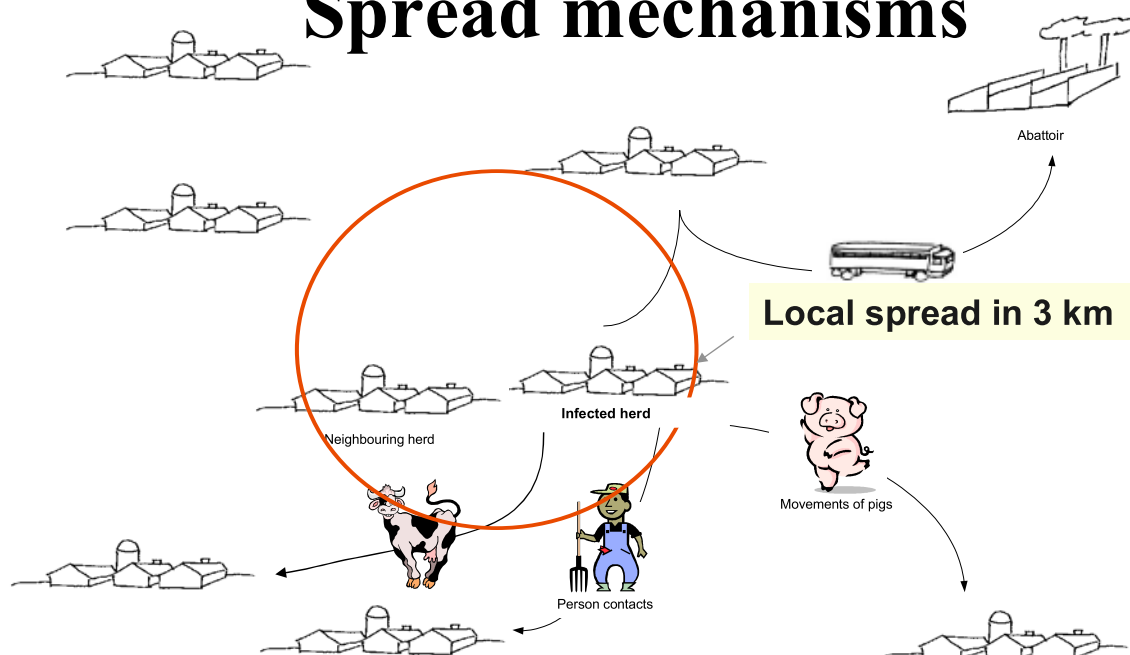


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Spread mechanisms





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Animal Movements

- Crucial for spreading the disease
- For simulation: number of individual animals moved on farm level (network of movements between farms)
- Not available in all situations
 - Due to data protection issues => data on administrative unit only available
 - Or not available at all village (= epidemiological unit)



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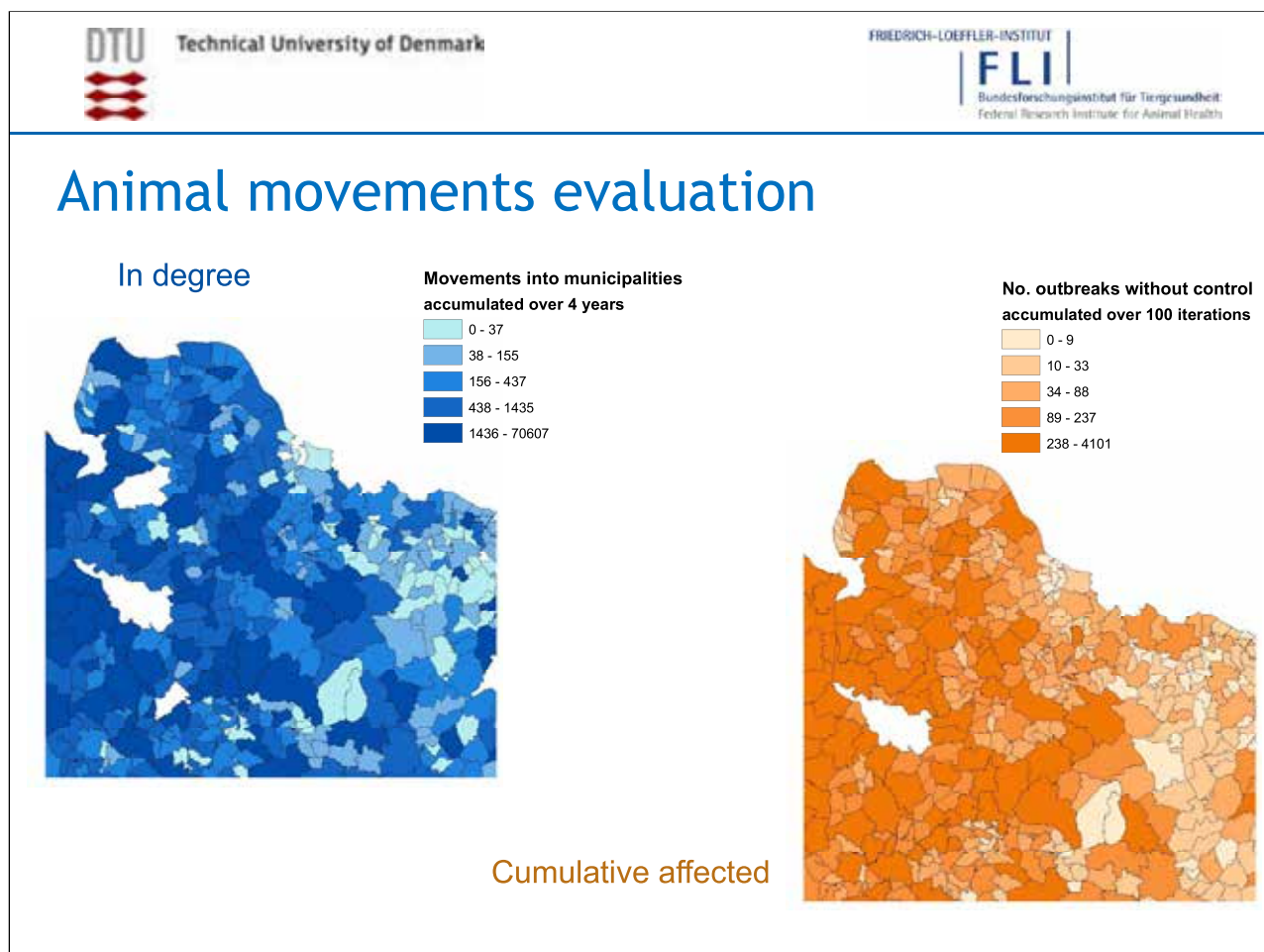
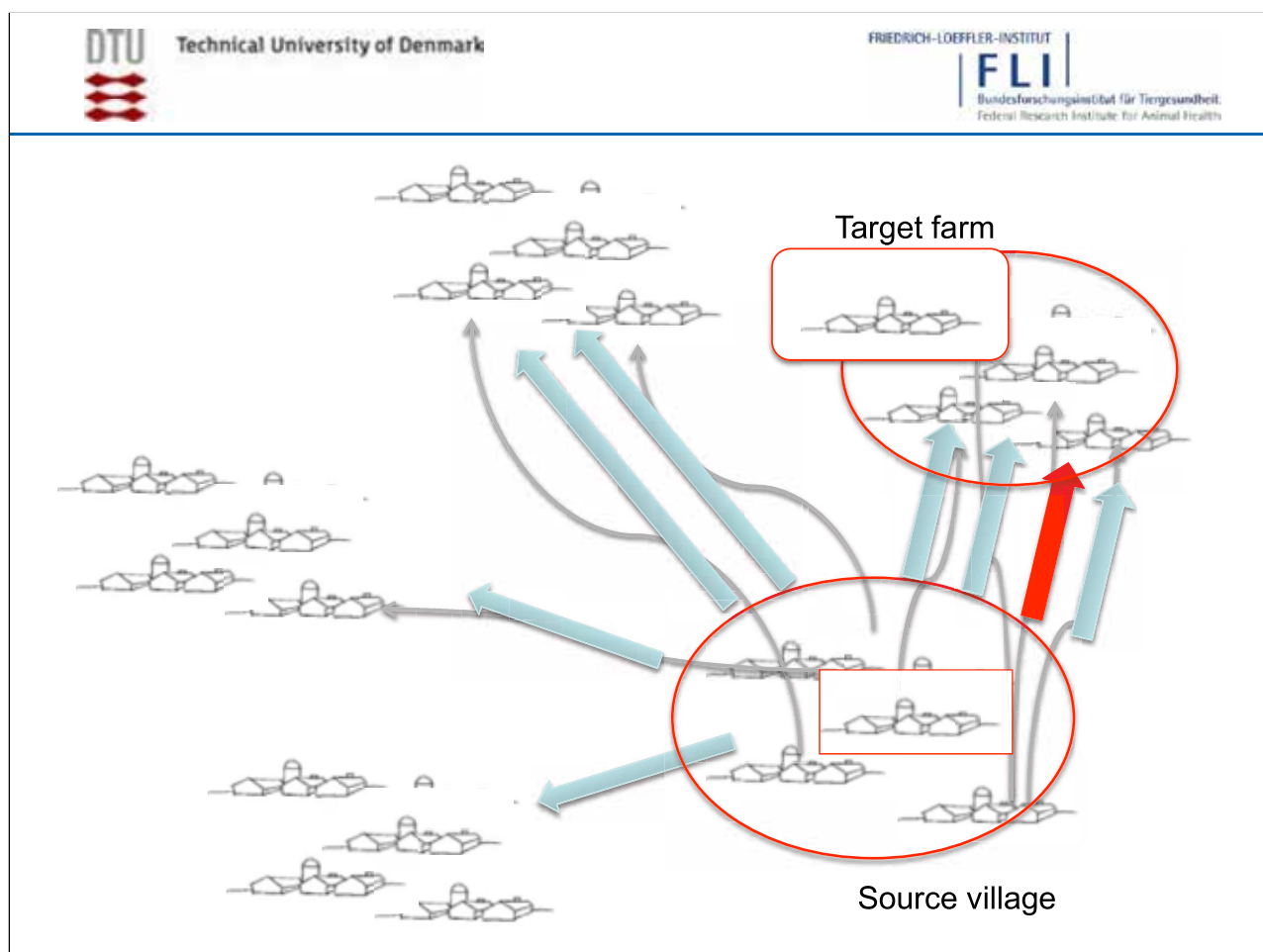
Bundesforschungsinstitut für Tiergesundheit
Federal Research Institute for Animal Health

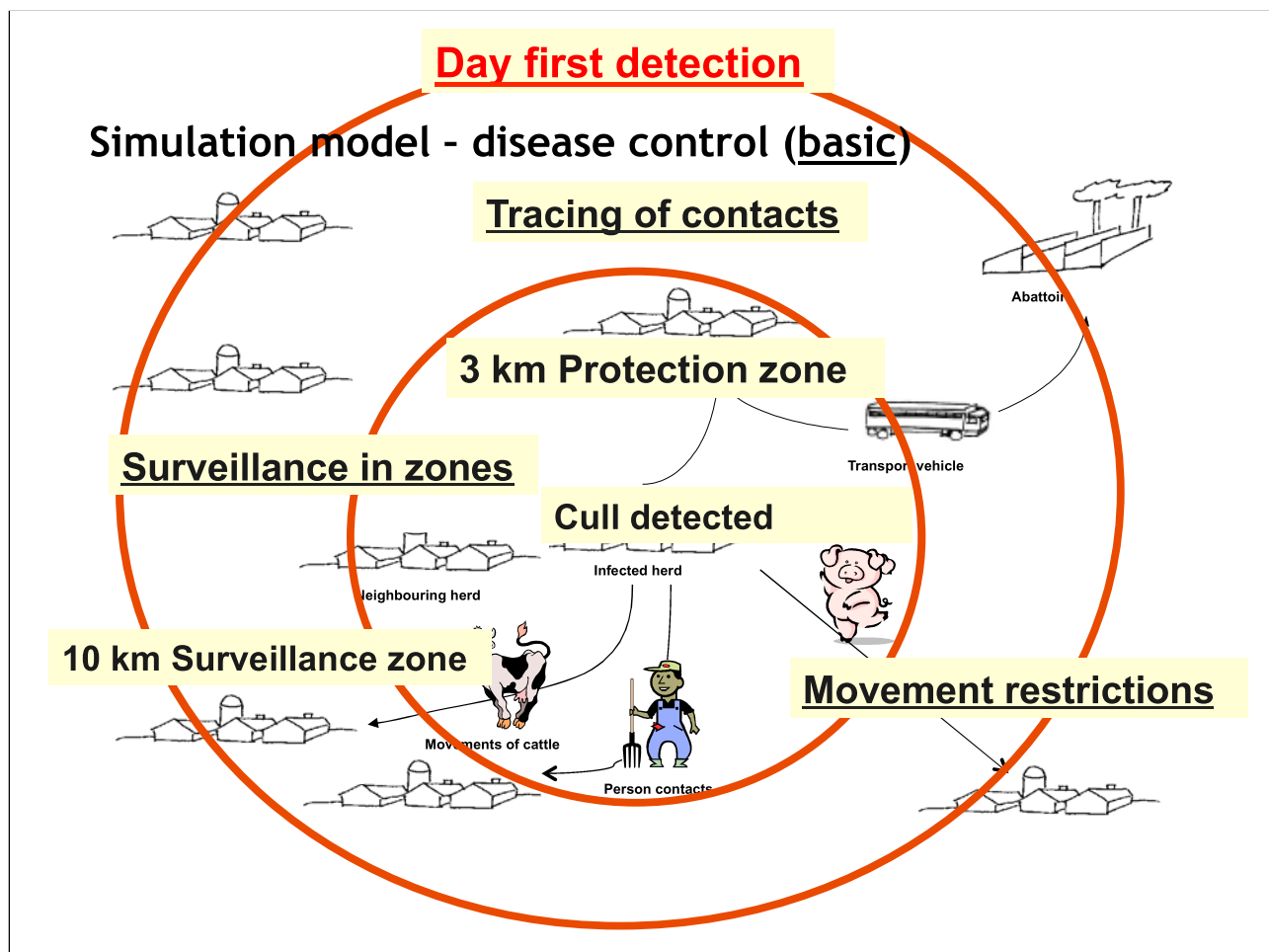
Animal Movements

- Aggregation of movements on administrative unit or village level possible, but farm level data still used for precise modelling of the disease and flexibility (if farm level data are available)

=> Hybrid approach

- Individual infected farm within a source village
- Randomly chosen movement from this village
- Leads to target village
- Randomly chosen individual farm within the target village will be infected





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- Comparison of different scenarios
 - Basic - no resource limits
 - Basic - *with resource limits*
 - Depopulation within 1 km zone
 - Vaccination ,to live' *of cattle* in 3 km/10 km zone
 - Vaccination ,to live' *of cattle and pigs* in 3 km/10 km zone
 - Vaccination ,to cull' of *detected farms* in 3 km zone
 - Vaccination ,to cull' *of all farms* in 1km/3 km zone



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- Preliminary running of scenarios
 - 100 simulations per scenario
 - Stop criteria
 - If more than 1000 herds are infected (excluding the culled herds)
 - AND time >90 days
 - Duration of epidemic and number of infected herds

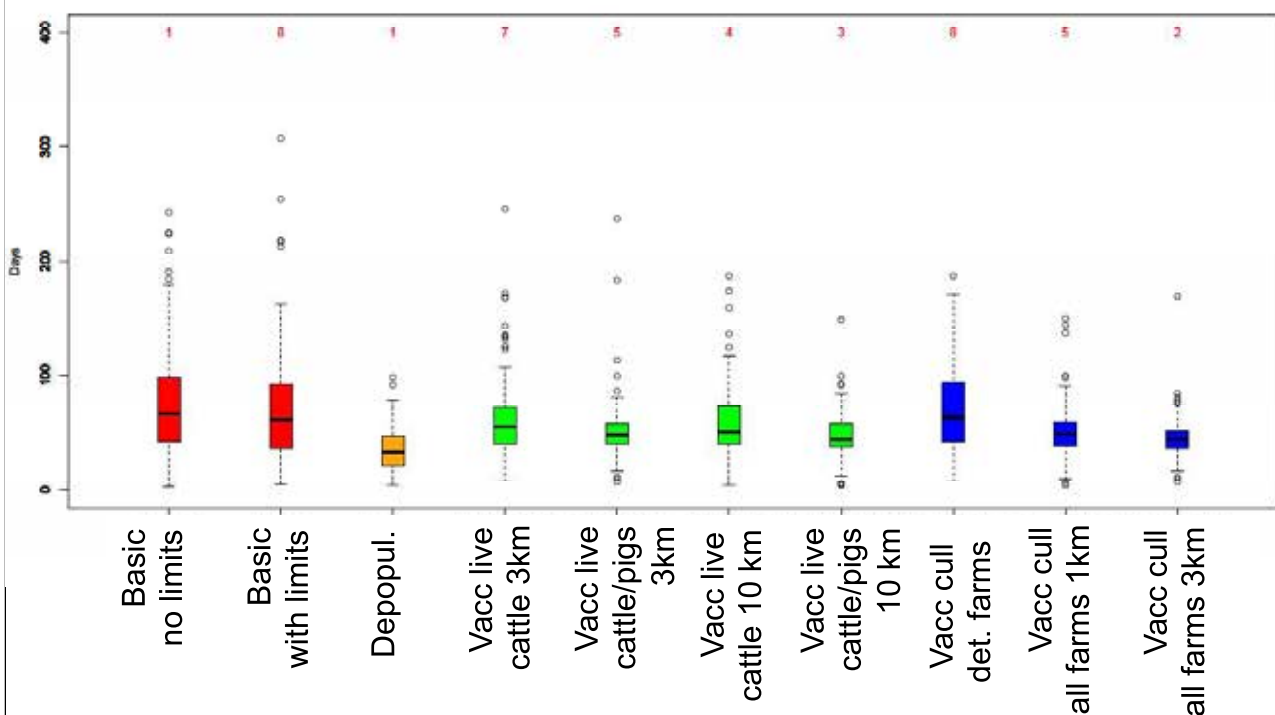


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Preliminary results - duration of epidemic



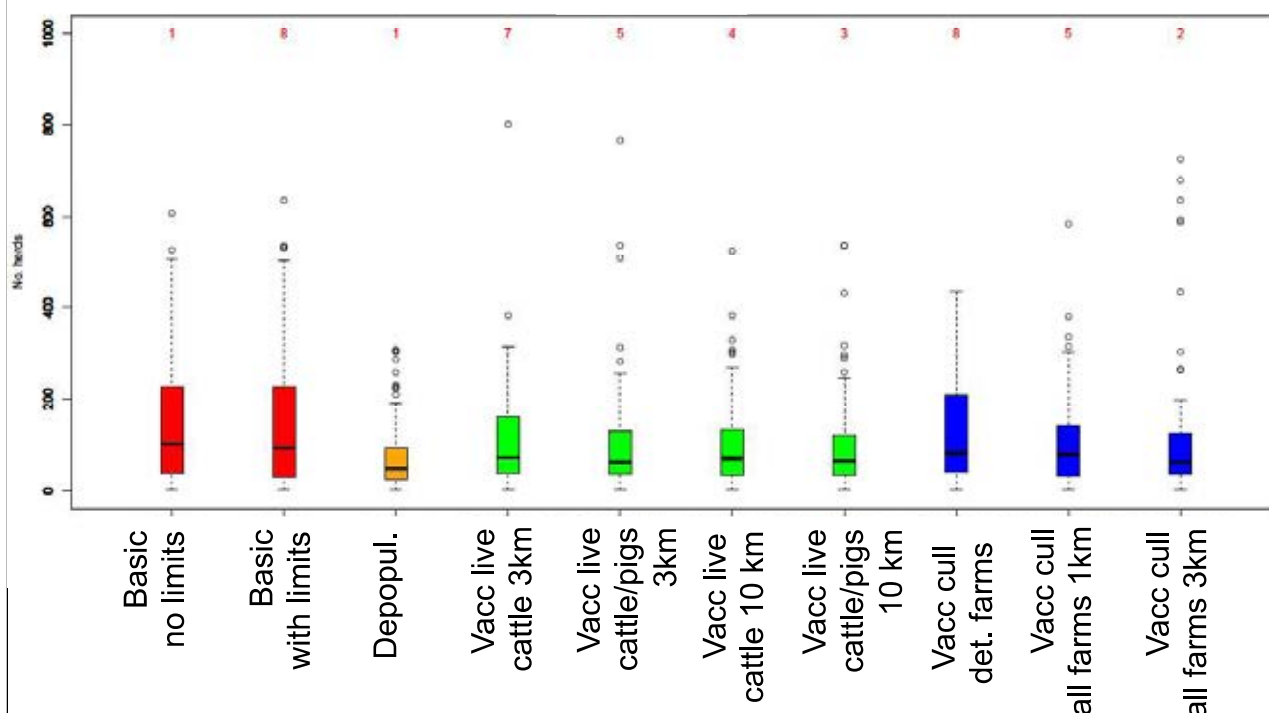


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Preliminary results - infected herds

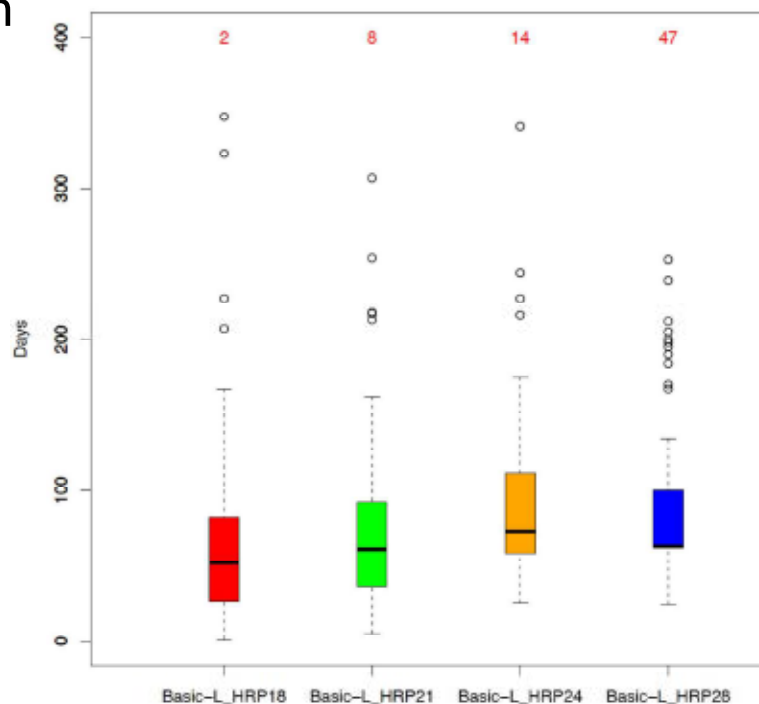


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Sensitivity analysis - high risk period - basic scenario duration



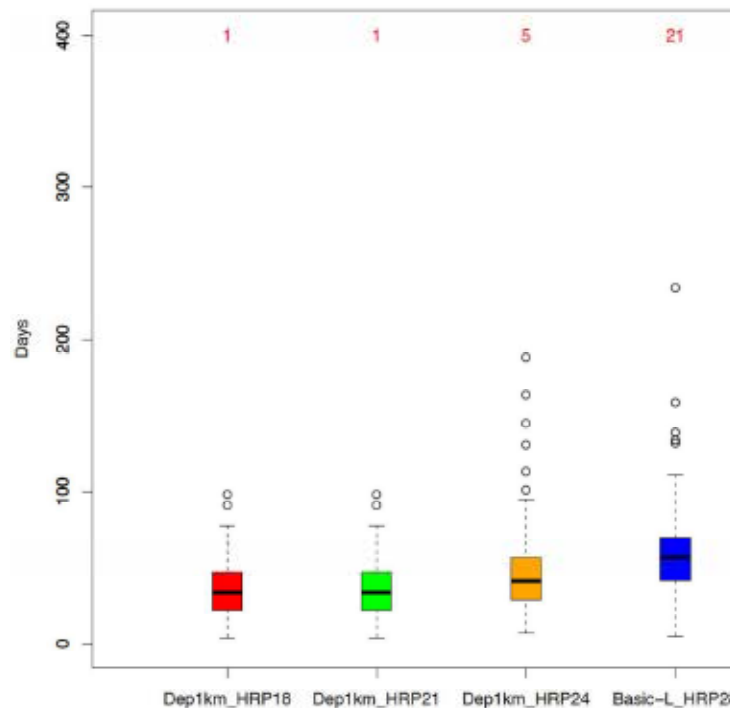


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Sensitivity analysis - high risk period - depopulation duration



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Preliminary results

- Output similar, except for the number of extreme runs (stop criteria)
- High-risk-period sensitivity analysis shows influence of this parameter, but more detailed investigation necessary (daily modification)



Summary

- Model is suitable for simulating movements on administrative unit and village level as well as farm level depending on the availability of data
⇒ more widely applicable for countries and regions
- Provides a tool for management and decision makers



Further work needed to optimise this tool for policy makers and epidemiologists

- Sensitivity analysis of different parameters
- Implementation of additional control options
- Different combinations of control tools (e.g. vaccination and culling)



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Further work needed to optimise this tool

- Conditions that favour vaccination-to-live
 - With and without large export of animals or products
- Investigate resource limits
 - staff, vaccines, culling capacities
- Economic effects of different control options
- Input-data-files for easier use

Thank you very much

State veterinary service
Veterinary association
Meat processing industry
Milk processing industry
Inseminator organisations
Rendering industry



Appendix 8

Pan-European modelling of FMD

Pan-European Modelling of Foot and Mouth Disease



Pan-European Modelling of Foot and Mouth Disease

Uno Wennergren: Linköping, Sweden

Matt Keeling: Warwick, UK

Mike Tildesley: Nottingham, UK

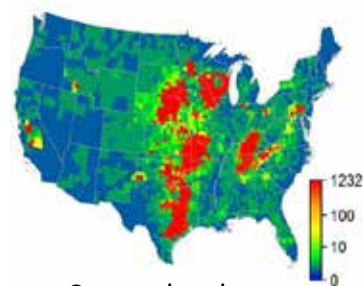
Tom Lindström: Linköping, Sweden



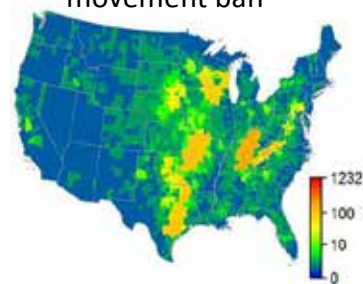
Modelling FMD at European scale



No movement ban

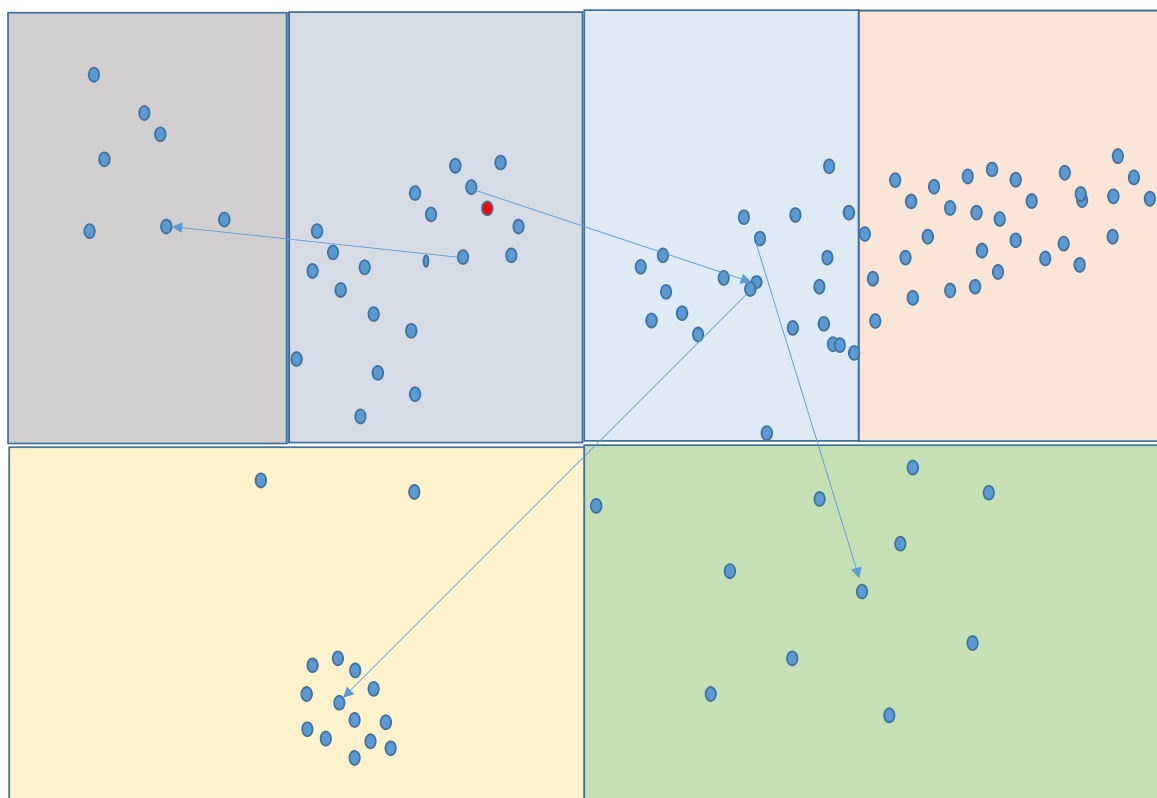


County level
movement ban



*Buhnerkempe, Tildesley, Lindström,
Gear, Portacci, Miller, Lombard,
Werkman, Keeling, Wennergren,
Webb. 2014. PLoS One*

The process



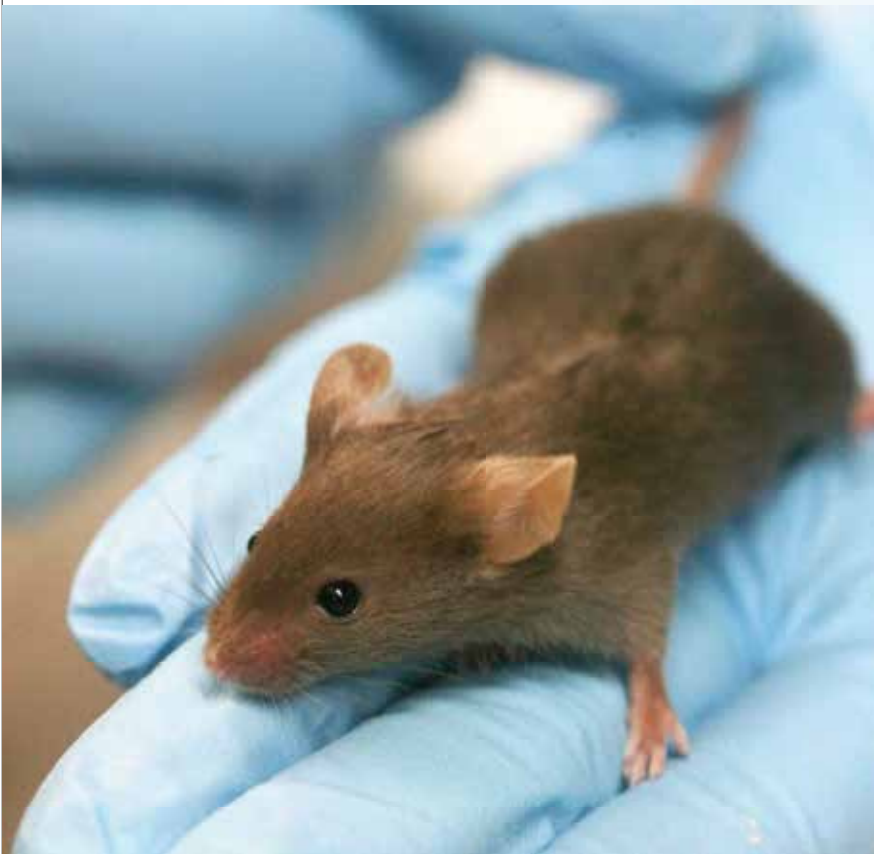
Why use models?

1) When human intuition is insufficient or cannot be relied upon.

and

2) When it is too costly to experiment with the system directly.

Models are also a tool for understanding epidemic dynamics – and like any statistical tool, they need to be used with caution.

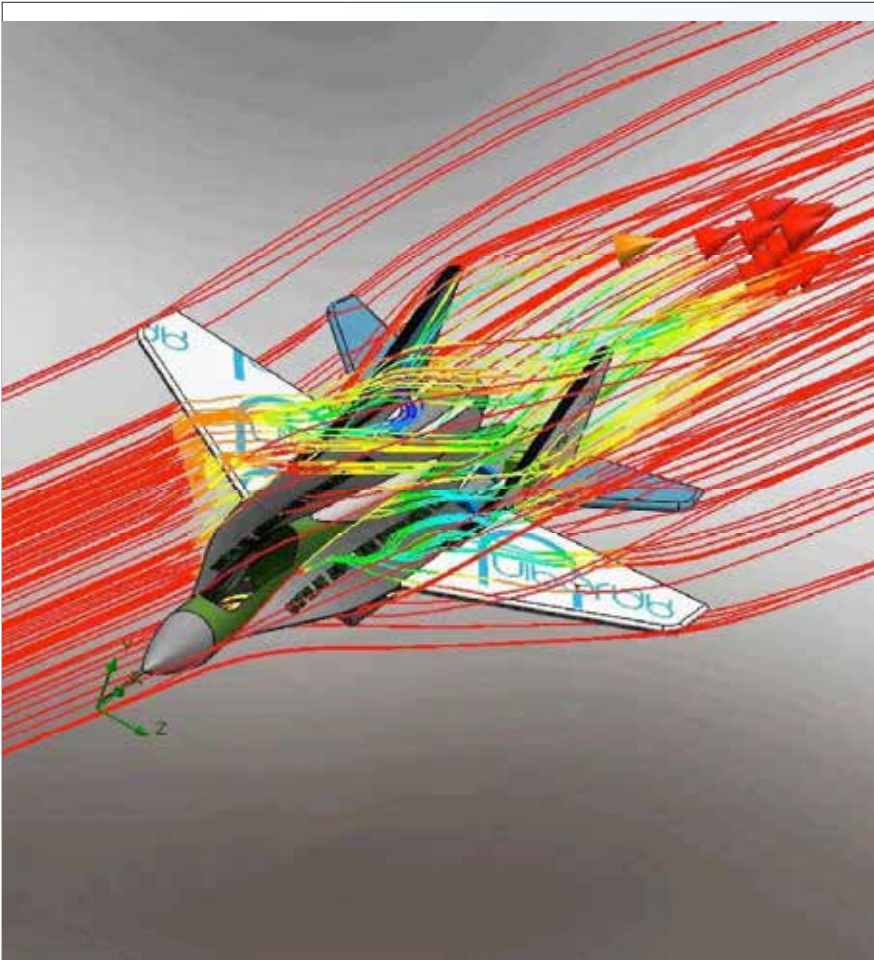


We commonly use mice as laboratory models. We are not interested in the mice but they are a model for humans or other animals.

Why do we do this?

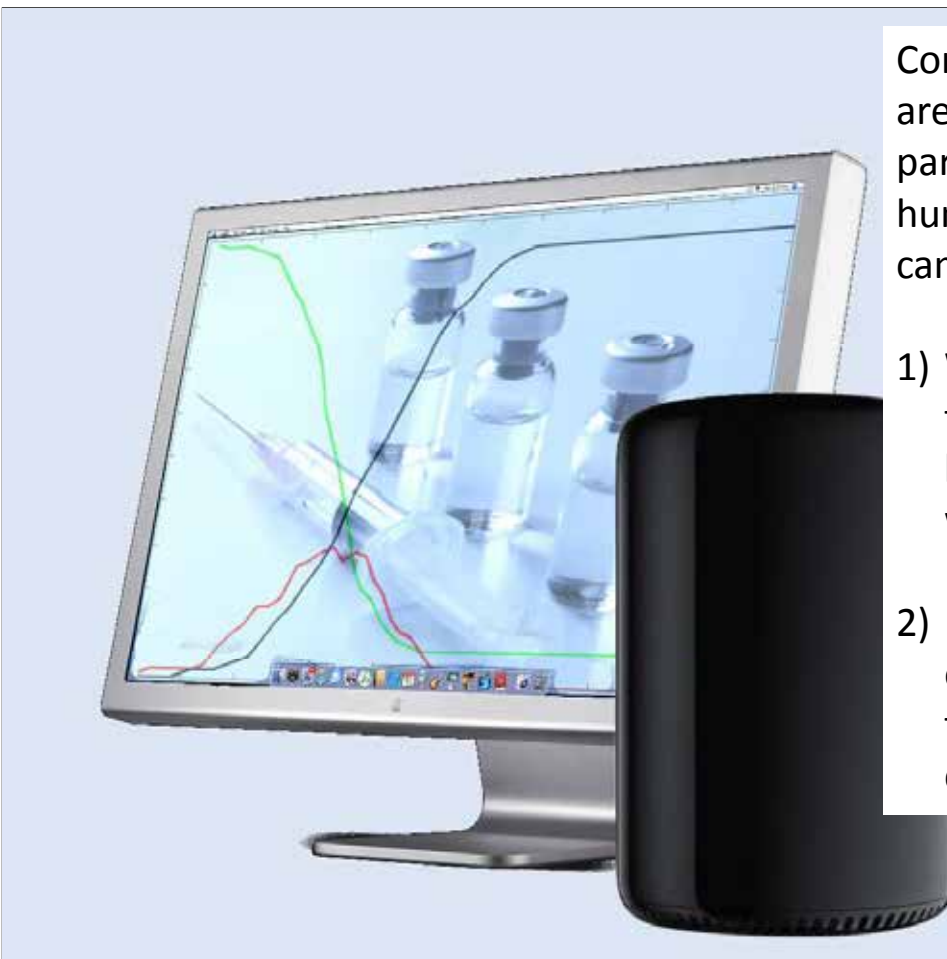
1) We cannot predict the action of drugs or treatments.

2) It is infeasible to test products on humans.



Computer models are commonly used in design, from cars to boats to aeroplanes. Why?

- 1) We cannot predict the flow of air and drag without them.
- 2) It is too costly to build new products to test changes.



Computer models are now an integral part of planning human vaccination campaigns. Why?

- 1) We cannot predict the population – level behaviour without them.
- 2) It is too costly to experiment by trialing new campaigns.



We believe we now have the skills and computational resources to effectively model livestock infections at the European scale.

Computer models are now an integral part of planning human vaccination campaigns. Why?

- 1) We cannot predict the population – level behaviour without them.
- 2) It is too costly to experiment by trialing new campaigns.

Our Modelling Ideology

Models should be,

Mechanistic: so that they accurately capture the known underlying biology and the action of controls.

Parsimonious: so that a few parameters can be robustly fitted to early epidemic data.

Flexible: so that different scenarios and controls can be easily incorporated.

We will illustrate such a modelling approach in three settings:

- 1) Rapid fitting to early data
- 2) Economic analysis of movement controls in UK
- 3) Prediction of outbreaks across US

1. Rapid Fitting to Early Data

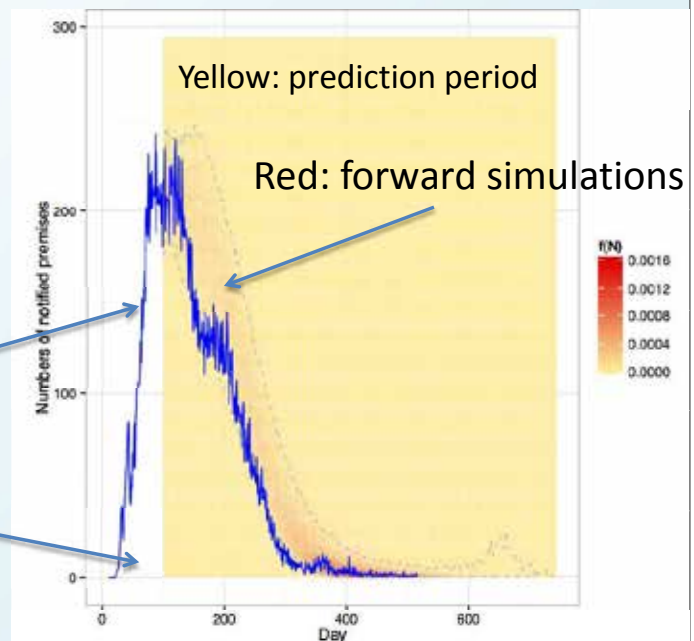
Model framework was developed during the UK 2001 outbreak, so that is not a reasonable test.

We therefore against other models using Japanese data

1.UK formulation.

Blue: true results

White: fitting period



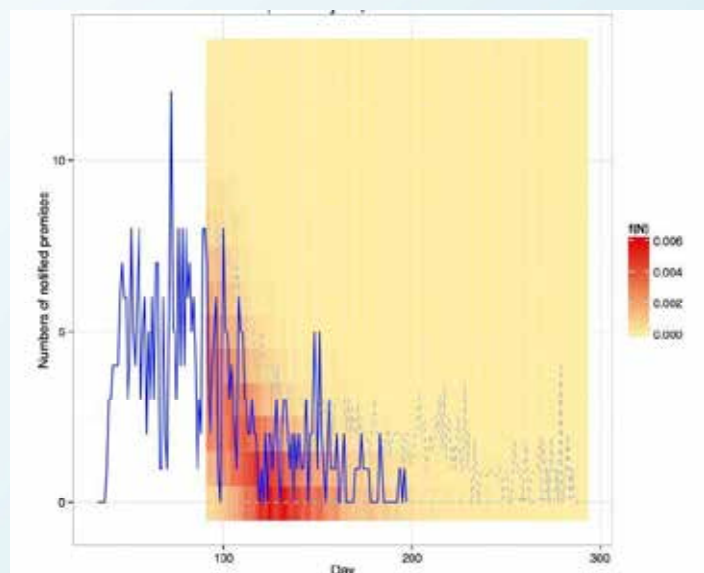
1. Rapid Fitting to Early Data

Model framework was developed during the UK 2001 outbreak, so that is not a reasonable test.

We therefore fit against other models using Japanese data

1.UK formulation.

2. Interspread

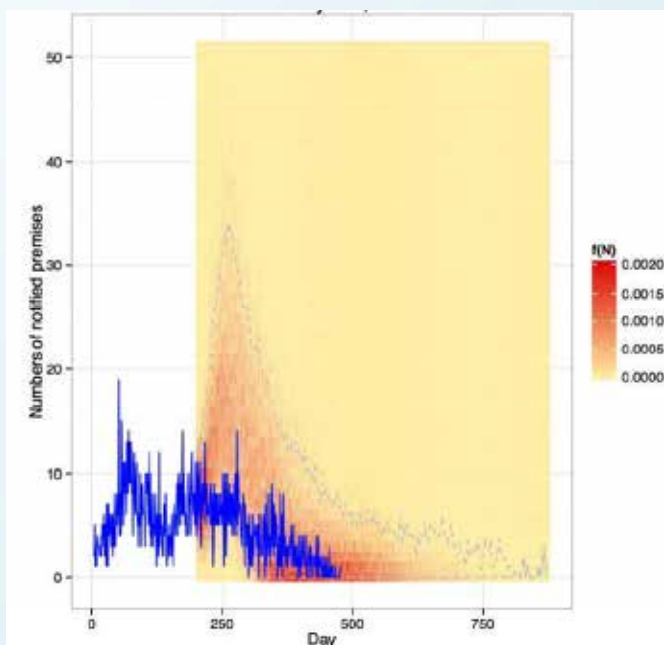


1. Rapid Fitting to Early Data

Model framework was developed during the UK 2001 outbreak, so that is not a reasonable test.

We therefore fit against other models using Japanese data

1. UK formulation.
2. Interspread
3. NAADSM



1. Rapid Fitting to Early Data: Conclusions

A simple model framework that has mechanistic dynamics for transmission between farms can be readily fit to both outbreak data and results from other, more complex models.

We believe this flexibility is key to extending the model to new countries and differing farming practices.

In principle we can apply this approach to any new livestock disease outbreak – not just FMD.

2. Economic Analysis of Movement Controls

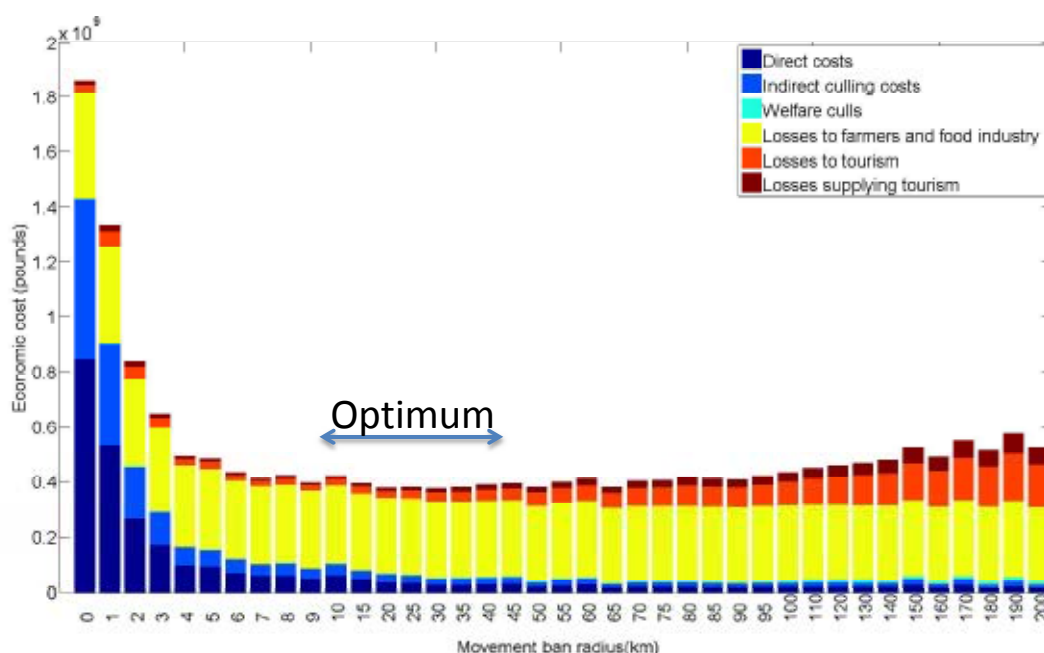
While multiple analyses of the 2001 UK outbreak have been performed, little thought has been given to the nation-wide movement ban.

Here we question if a movement ban should be localised. Our definition of what is optimal must now include economics: what leads to the least expensive epidemic?

Epidemic cost = Cost per animal culled + Costs per day per farm affected by movement ban

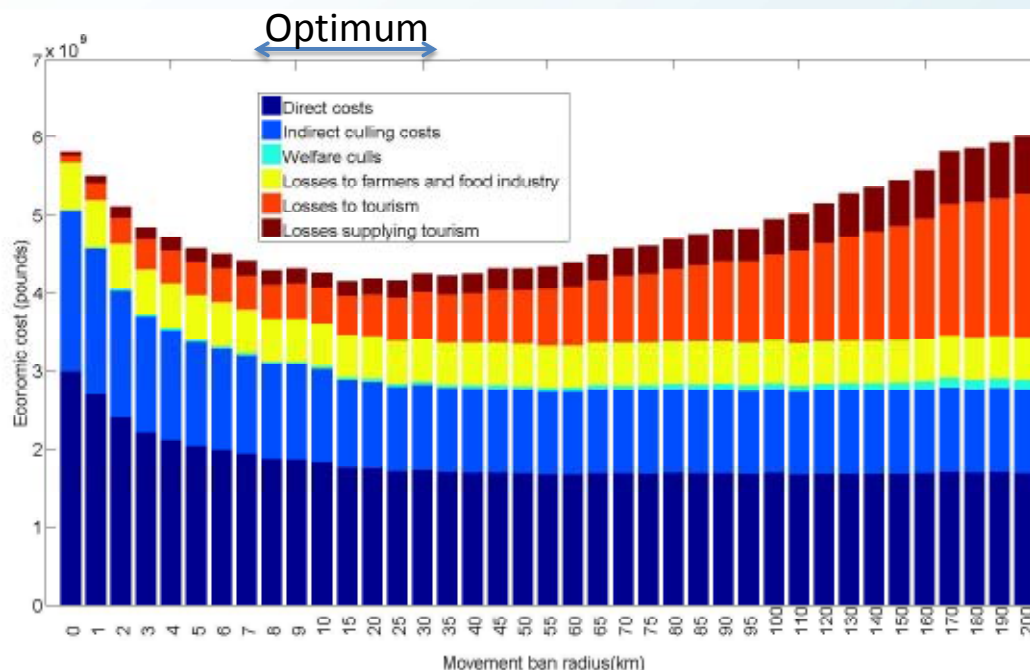
2. Economics of Movement Controls: Devon

Many thousands of simulations, 100,000 farms, localised transmission, plus millions of movements between farms.



2. Economics of Movement Controls: Cumbria

Many thousands of simulations, 100,000 farms, localised transmission, plus millions of movements between farms.



3. A continental scale disease model

- Two parts
 - Local transmission
 - Long distance movement
- Movements across the entire continent
 - Animal movement cause long distance transmission

New York



Lindström et al. 2013, PLoS One

Movement in the US

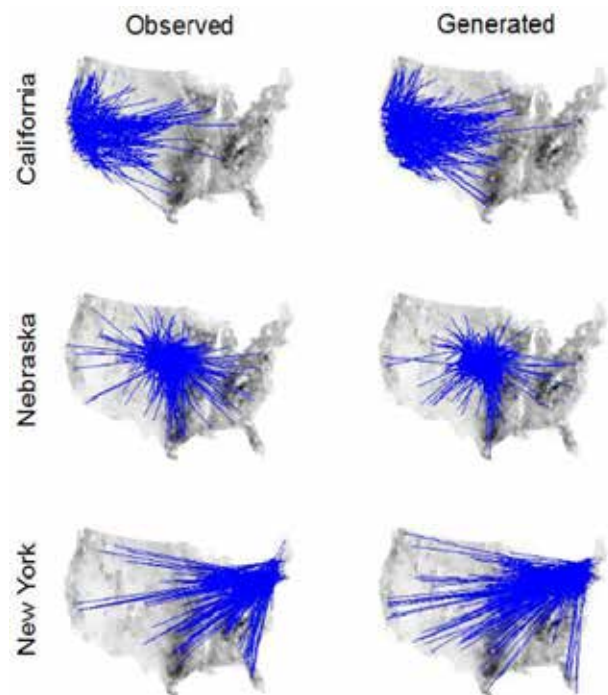
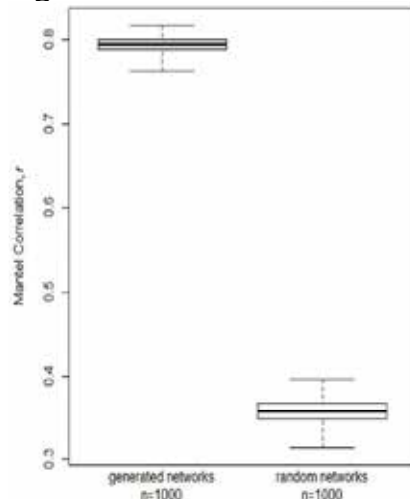
- Data quality much poorer than for EU
 - Farm locations
 - Unknown
 - Densities at the county level
 - Movement data
 - Only required for between-state movement
 - ICVI (Interstate Certificate of Veterinary Inspection)
 - Not in electronic format.
 - Hooray for cheap labor (CSU students).
- Sampled 10% of all between-state movement for one year

Movement in the US

- To construct a data driven disease spread model, we need to make assumptions about the whole contact structure.
- Fill in the blanks
 - 90% of between movement and all within
 - All with state movement
 - A county level model
- Movement data is at two levels
 - At the individual shipment level to estimate state specific parameters for shipment probabilities
 - At the network level to validate the model

Movement in the US

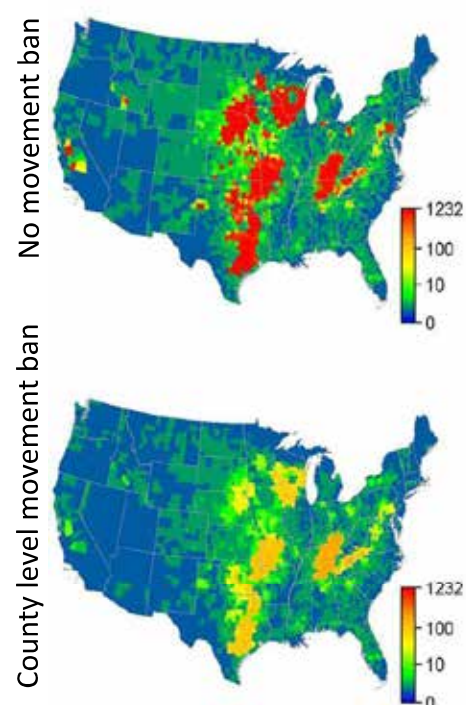
- Validation – State level
 - About 80% correlation between observed and generated networks



Lindström et al. 2013, PLoS One

Simulating outbreaks where are the hotspots?

- Movement as described by our model
- Local transmission informed by UK outbreak
- Analyze areas of particular concern
- Compare control scenarios
- This requires thousands of stochastic simulations for each of the 3000+ seed counties



Looking to the Future

It is clear that we have a very flexible, fast yet powerful formulation that can predict the spread & control of FMD under a number of scenarios, including cross-continental spread.

We now have a fantastic opportunity to expand these models to the whole of Europe. We have far better data than the US and a greater understanding of farming processes.

However, this opportunity can only be realised by strong collaboration with those that have the knowledge and data on farming practices across the EU.

Appendix 9

Report of the Executive Committee

Appendix 4.1

Item 4 Report of the Executive Committee on the Actions since the 40th Session in April 2013

Executive Summary

The work programme in the past two years has been among the most intense ever for the Commission, reflecting the ambition of the Strategic Plan with its Three Pillars and the 13 Component Workplan agreed with the EC. No outbreaks of Foot and Mouth Disease have occurred within the free countries of the Member States (MS) in this period, despite the nearby, continuous risk. The first FMD outbreaks in Tunisia and Algeria in 1999, involving a strain from South Asia (probably India) reflect the rapid jumps in virus distribution that can occur, as well as the insecurity and difficulty for veterinary services in the Middle-East and North Africa. This has not been a time for complacency. The 24 month funding agreement enabled implementation of the new Strategy and the system of agreed long term work plans, a result-oriented planning and delivery framework, with a high emphasis on Component managers to communicate and co-ordinate with member states to ensure demand driven activities. This has shown its benefits and enabled a feeling that the actions being undertaken are closer to the needs of the member states than in the previous periods. The longer term planning has ensured the actions are coordinated and supportive to Gf-TADS and the Pillar III actions are now driven by the requests from the Gf-TADS FMD Working Group, ensuring the EuFMD is recognized as supporting the Global Strategy and providing its expertise to the international efforts.

The training partnership with Australia has enabled e-learning and virtual meetings to be established into the Training Programme and, as a result, e-learning courses have been taken up strongly by member states with a strong demand from Training Focal Points to deliver the courses at national level. The additional programme width and wider impact of the actions could only be achieved through cost cutting on travel and emphasis on use of webinars and e-learning. Thanks to experts in our MS and a multilingual team, the Commission has delivered FMD e-learning courses in Russian, French and English. In the past year, over 1000 persons across almost 50 countries have participated in the EuFMD e-learning online. It is clear, from the demand received, that every Veterinary Service has disease risk managers who need to be supported. The decline in European FMD research remains alarming and, though the new EuFMD-Fund for Research is filling a vital gap, the Standing Technical Committee (STC) has made it clear we need to learn from management approaches and research undertaken outside Europe. The new Contingency Planning network may act as a forum to identify priorities for studies as well as their relevance to policy including the use of vaccination to live. We have heard the cry from European contingency planners for arguments to assist them and it is hoped that giving them a voice, and tools such as the Impact Calculator, may bring the attention and support needed to ensure every country invests in contingency planning.

The Secretariat recognizes the role of the Chairman, Ulrich Herzog, and Vice Chairman Nigel Gibbens in the changes in strategy, management, better programme planning and stronger partnerships they have achieved over the past six years and the constant, constructive support of DG-SANTE throughout this period of economic and organizational change. On behalf of the members, the EuFMD wishes to thank them for their Leadership and commitment to achieving long term FMD security for the member states and more effective contribution to global efforts.

Summary

Executive Committee and Standing Technical Committee Sessions and Actions since the 40th Session

1. The 40th Session was held in April 2013 and elected the following as Chairpersons and Members:

Position	Elected	Members:	Elected
Chairman	U. Herzog (Austria)	Member	D. Iliev (Bulgaria)
Vice-Chairman	N. Gibbens (UK)	Member	N Pakdil (Turkey)
Vice-Chairman	P.Naassens (Belgium)	Member	JL Angot (France)
		Member	J Milius (Lithuania)
		Member	Z. Novakovic (Serbia)

2. These attended (with the exception of Dr Milius) or sent alternates in their place to each of the four Executive Committee Sessions held in the interim (Lyon, October 2013; Brussels and Sofia 2014, Belgrade 2015). All the Session Reports are online. In addition Programme Committee ("Mini-Executive") meetings were held in Lithuania, Brussels and Austria between Sessions, for decisions on the work programme in fulfilment of the Contract with the EC and as required by the situation
3. The **Standing Technical Committee (STC)** was elected at the 40th Session, and has met mainly by teleconference in the intervening period. They have helped enormously with the processes of the EuFMD Fund for Applied Research. They guided the programme for **very successful Open Session** held in Cavtat, Croatia, in October 2014, which had over 250 participants on site and the same number registered for the online Conference which was streamed in parallel. Those elected and served the Commission were Professor David Paton, UK (until July 2014; then replaced ad interim by Eoin Ryan, Ireland); Christianne Bruschke (NL), Preben Willeberg (DK) and Matthias Kramer (DE).
4. The Special Committee for Research and Programme Development (SCRPD) was also elected at the 40th General Session (List in **Table 1**) met twice, in Frascati in November 2013 and Cavtat Croatia in October 2014. They have been very active in reviewing the submissions to the EuFMD-FAR fund, as experts in the Real-Time Training courses and other courses, and in providing expert opinion on topics requested by the STC, and almost all presented work at the Open Session.

Table 1. Special Committee on Research and Programme Development (SCRPD).

In addition to the names below, representatives of the three FAO Reference Centers for FMD which are located in the EuFMD Member States are invited to each Session as follows: Kris de Clercq (FAO FMD Reference Centre, VAR), Emiliana Brocchi (FAO FMD Reference Centre, IZSLER) and Jef Hammond (FAO-WRL FMD, Pirbright).

Name	Expertise	Pillar/ SubGroup
Bernd Haas (Ger)	FMD biorisk management, FMD lab services, vaccine evaluation	Group 1: European MS
Aldo Dekker (NL)	FMD research, vaccine evaluation	Group 1: European MS
Tsviatko Alexandrov (BG)	Contingency planning, wildlife surveillance	Group 1: European MS
Kate Sharp (UK)	Surveillance, risk management	Group 1: European MS
Sten Mortensen (DK)	Crisis management, contingency planning; epidemiology PhD	Group 1: European MS
Labib Bakkali (Fr)	FMD surveillance in REMESA, RESOLAB, European neighbourhood risk	Group 2: European neighbourhood risk

Giancarlo Ferrari (IT)	FMD surveillance and epidemiology, Progressive Control Pathway (PCP) expert	Group 2: Epidemiology and surveillance -West Eurasia, Mid-East, PCP progress
Michel Bellaiche (Is)	FMD surveillance and management, Israel/Mid-East	Group 2: European neighbourhood risk
Naci Bulut (TUR)	FMD surveillance in West Eurasia, vaccine quality and production	Group 2: European neighbourhood risk
Gregorio Torres (SP)	Epidemiology, surveillance systems, REMESA Mid-East	Group 2: European neighbourhood risk
Jean Francois Valarcher (SWE)	FMD virology, vaccine QA, surveillance, epidemiology, global	Group 3: surveillance and monitoring progress
Ron Bergevoet (NL)	Veterinary economist/FMD	Group 3: surveillance and monitoring progress
Katharina Stark (Swi)	Veterinary epidemiology, surveillance, management; FMD field research wide international experience	Group 3: global issues/ PCP progress
Stephan Zientara (Fr)	Epidemiology, surveillance systems, Europe/Africa/REMESA/Wes Eurasia	Group 3: surveillance and monitoring progress
Don King (UK)	Global FMD surveillance, diagnostics	Group 3: surveillance and monitoring progress

Implementation of the Strategic Plan after the 40th General Session

- At the 40th General Session, the Commission adopted a radical new Strategic Plan for the period 2013-17. The Secretariat, while completing the activities under the Phase II EC agreement (2009-13) was active in developing the agreement with the EC for Phase III funding, involving a fully-costed workplan for the three Pillars and 13 Component Objectives of the new Strategy. This was signed on 28th August 2013 and after review at the Lyon Session by the full Executive of the 13 components and 40 expected results, and detailed workplans and budgets for each, the new program was agreed by all parties, including the OIE and FAO observers, and commenced in October 2013.

The programme was planned in detail for 24 months, with the Executive, through the Chairpersons, with the EC, acting as the Programme Steering Committee. The Executive Secretary was responsible for the management of the programme, assisted by the EuFMD Administrative Team, a Professional Officer (Eoin Ryan, P3), Communications and Training Officer (Nadia Rumich), and Short Term Professionals and long term consultants who together managed the 13 components. Each component has a manager and this person is supervised by the Executive Secretary or his Deputy.

The progress of the workplan is reviewed every five-six months by the Executive at their Regular Sessions. The Chairpersons have reflected very positively on the transparency and high level of progress and outputs in almost all Components. The FMD crisis situation in North Africa required changes to priorities and emergency training and missions were implemented in June-August 2014. The system by which workplans are agreed with the Gf-TADS partners for Pillar II and III has enabled changes to the programming to be agreed with all parties, and the role of the REMESA Programme Committee has allowed this following the FMD epidemics in 2014.

A summary (Newsletter format) of the progress report on the EC funded actions between October 2013 and February 2015 is given as **Appendix 4.2** (and the Full Report on the 13 Components is on the USB provided to the 41st General session participants and online).

6. Significant developments to the Pillar I programme

Modelling and Contingency Planning

The Component (1.2) on Modelling and Contingency Planning was launched as separate entity from the Training programme (1.1) in August 2014, following a strong demand from MS for the networks on modelling and contingency planning. This was decided by the Executive in July 2014. The interest has continued to be strong and the programme is complementary without overlap to the SANTE/FVO efforts to improve the quality and testing of contingency plans in the MS.

E-learning and training resources

The development of e-learning courses was initially undertaken to ensure pre-course and post-course training of vets joining the Real-Time Training Courses. The success of the e-learning stimulated wider trials of e-learning for the Training Network and, as a result, the EC translated the course into all EU and neighborhood major languages. It has been run in French and Russian in 2014 and 2015. By the 41st General Session, over a thousand registered users have been through EuFMD courses and meetings and use the online training resources site.

Language versions and greater use of online platforms for networking and training

Real-Time courses have been run in English, French and Russian, in Kenya and Turkey, and webinars and online training in all three are now regular (1-2 per week) events.

Demand driven developments

Member states have asked to use training credits, or their own budgets, to buy additional places and to launch national versions of the emergency (e-learning) course. This demand from national training focal for resources to enable their own national training by efficient e-learning and blended learning (trainer moderated) has taught the Eufmd a lot about what MS desire from support. In 2015, we expect about six emergency courses for national (MS) users in addition to the English and Russian courses. Overall, about 50 countries have participated in training across the three Pillars.

Surveillance for other infections under the co-ordination programme in Thrace

Following requests from the countries concerned and decisions at the Tripartite meetings in 2013 and 2014, the FMD surveillance programme in the three countries (GRE, BUL, TUR) was extended to include *Peste des Petits Ruminants* (PPR) and Sheep and Goat Pox (SGP). A mission was conducted with experts from the three countries to assist national preparedness/Contingency Planning for LSD in the Thrace region in relation to the threat of Lumpy Skin Disease (LSD) to Thrace. A moderate increase in the original budget (of circa 50,000 USD) was agreed to enable this.

7. Significant developments under Pillars II and III

Under Pillar II, of most significance has been the intensive support to GDRC Turkey to establish an epidemiology and monitoring unit to assist GDRC to monitor the implementation of the Turkish national strategic plan. A workshop for TransCaucasus countries, Turkey and Russian federation, on "Improved FMD surveillance in the common borders region" was held in Ankara in January 2015. Further Progressive Control Pathway (PCP) workshops were held in Egypt under Component 2.2, and support was given to Algeria and Mauritania under the REMESA program (for surveillance). Under Component 2.3, support to Libya had progressed well to develop a national control programme (RBSP) until security broke down completely. This allowed more focus on the other countries and of significance, the good start made to work with Mauritania, for which the Libyan expertise was useful. The FMD crisis in Tunisia and Algeria required emergency actions in June 2014; this only highlights the insecure situation for FMD management and risks to Europe.

In support of Pillar III, EuFMD experts have assisted the Gf-TADS Working Group through assistance to develop the Global Report, with focus on evidence for implementation of PCP related national activities, on training for FMD experts (East Africa, Component 3.2), and in development of an e-learning course on the PCP for launch in April 2015. Under Component 3.3, the WRL at Pirbright has strongly contributed in surveillance services and in managing the Annual Global Meeting of OIE/FAO Reference Centers. The target of surveillance in each Pool has not been met but progress has been made towards the planned involvement of screening labs (Regional Support Labs) in four countries; each is now contributing to the Monthly EuFMD report on virus circulation.

8. **Monthly Global Surveillance Reports** have been produced, managed by Teresa Scicluna, from the EuFMD Short Term Professional (STP) programme. In 2014 and 2015, each edition has had a different **Guest Editor** who is an international FMD expert from the Special Committee or from an FAO or OIE reference center. Circulation of the report continues to grow and, via ProMed and other routes, is used as a regular and valued output. There is a plan to improve the use of this information in the prioritization guidance on antigens for the European vaccine banks which will be reported at the 41st Session.

9. **Training Contract with Australia and New Zealand**

Following the positive review at the 40th Session in April 2013, the programme for Real Time training courses in Nepal for participants from Australia was extended in 2013 and 2014. As we received interest from other states (such as New Zealand), in order to keep the administrative arrangements clear, the extension to the programme was negotiated with Australia but included the provision of two courses for New Zealand. To date, 15 training courses have been held in Nepal, training 138 participants from Australia and New Zealand with very positive feedback received from each course. Additionally, as part of the terms negotiated by FAO with the host Government, support has been provided to the Department of Livestock Services (DLS), Nepal. 75 Nepalese veterinarians have been trained during the courses and training and equipment provided to the National FMD laboratory. Additionally, under FAO lead, a series of workshops have been held with the DLS FMD working group, which have enabled the drafting of a National FMD Control Programme, based on the principles of the PCP, which has recently been submitted for legislative approval. Central to the contract is the **agreement that it will bring direct benefits to EuFMD Member States, and these in 2013-14 include funding** of a significant proportion of the set-up costs of the EuFMD e-Learning training platform and the position of a full-time Training Support Officer. A request for further extension of the agreement for training courses to be held in 2015 and 16 has recently been agreed by the Executive Committee.

Staffing and EuFMD Program Management Responsibilities

10. The Secretariat staff is listed below (as of April 2015).

Technical team at April 2015:

Executive Secretary	Keith Sumption
Deputy	Fabrizio Rosso (ex-Eoin Ryan, to 1/2014, and Caroline Dube, June-July 2014;)
Training Development Officer	Jenny Maud (ex-G Torres to 10/2013, and C. Taylor, to 1/2014)
Communications and Training support	Nadia Rumich
Short Term Professionals	Katie Hickey (UK/NZ) Teresa Scicluna (Malta)

Consultants (Component Managers)	Milan Pandurovic (Serbia)
	Gunel Ismailova (Azerbaijan)
	M. McLaws, C. Bartels, K. Van Maanen

Administrative team :

Program Co-ordinator	Cecile Carraz
Finance Assistant	Silvia Clementelli
Team members	Ida D'Alessandro; Erica Tomat

11. The Executive Secretary, the Deputy, 50% of the costs of the position of Ms Rumich and two STPs are funded by the Administrative Fund (Members Contributions), being the 2.5 posts plus two STPs as per the agreement on use of the Administrative Budget at the 40th General Session. Essentially, the technical programme is underpinned by this support, which equates to 20% of the overall annual administrative and work programme budget.
12. The management responsibilities for the EuFMD program are shown in **Table 3**. Managers have thus been mainly funded by the MS through the Administrative Fund with the exception of those which are EC funded (two consultants and one STP (Isabel Gutierrez Boada) and the Training Officer (by Australia). The Short Term Professionals (STPs) assist with management in areas of their competence.
13. **Short Term professionals (STPs):** the STP programme has been well taken up and the series of excellent STPs have strongly assisted the EuFMD with their in-depth knowledge of European contexts and veterinary service roles and responsibilities. Each STP commits to at least three months and usually not more than six. **Table 4** indicates the STPs in the past three years.
14. Visiting Scientists and Secondments from FAO regional offices: in 2015, the EuFMD benefitted from Dr Ibrahim Eldaghayes (Libya) joining EuFMD as Visiting Scientist, with no cost to EuFMD, on sabbatical leave from University of Tripoli. He already has more than two years' experience in FMD management in Libya and is very well known in REMESA, and therefore assists with this programme. In addition, Dr Elma Sikala comes on secondment from FAO-Zimbabwe office to work on the PCP Component (3.2), assisting Dr Bartels. These staff assist building bridges with REMESA and FAO and free up staff time for the main actions under Pillar I.
15. **Administrative support:** Currently, the EuFMD has a Program Co-ordinator (Ms Carraz), a finance assistant (Ms Clementelli), and two team members (Ms D'Alessandro, Ms Tomat) working on all the administrative and logistic issues of the EuFMD. The Finance Assistant is covering the G5 role, so there is no strong reason in terms of current performance gaps to recruit an FAO Clerk.

Financial position

16. The Secretariat manages three Trust Funds, for the Administration of the Secretariat (MTF/INT/011/MUL, contributions from the Member States), EC Program (MTF/INT/003/EEC) and an Emergencies and Training Fund into which additional contributions have been received for provision of training (MTF/INT/004/MUL).
17. Position of the **Administrative Fund (MTF/INT/011/MUL)**: the opening cash balance was 453,275 USD and the statement for income and expenditure for 2014 (**Table 5**) shows that **618,105 USD of contributions against an expenditure of 738,476 USDS, and a final (year-end) Balance of 332,040 USD**. This is in line with expectations on the reduction in the end of year cash balance for 2014 and

2015. As a result of better than anticipated payment of arrears, there was a slightly higher balance at the end of 2014 (by about 30,000 USD), than was forecast in 2013.

18. **Outstanding Contributions:** at 31/12/2014 there was a total of USD 95,937.43 outstanding, of which 51,144 USD related to Bulgaria and 20,850 to FYROM. The letter was sent to Bulgaria on this issue resulted in prompt action and this amount was settled in full by February 2015. The Commission is grateful to Dr Iliev for action to resolve this situation.
19. Given the above, there is a need for careful attention to the expenditure in 2015, but the situation allows for filling of at least one STP position in 2015 from the fund (two positions were maintained in 2013-14) providing the Budget Revision (**Table 2**) with EC over the sharing of costs with the EC TF is agreed at an early date.
20. Position of the **Emergencies and Training Fund (MTF/INT/004/MUL)**. Funds have been received from the Department of Agriculture, Australia as part of the agreement of AU\$460,000 to cover courses in 2014-15. The new agreement has received 328,010 US\$ in 2014, had expenditure of 255,658 US\$ in this year, and has a balance of 118,013 US\$, which will be used, alongside the final contributions totalling 110,000AU\$, to cover the remaining three courses to be held in 2015. The EuFMD president received a letter on behalf of the CVO Australia to request four further courses in 2015-16 and one e-learning course, totalling an additional contribution of 245,600AU\$, and the 89th Executive Committee approved this continuation on the basis of clear benefits to the Member States. The Fund has also received contributions from non-member states for places on Real Time courses and contributions from two member states funding additional places on training courses under the "training credits top-up scheme", with a strong level of interest from MS in further training places. The Fund has been used to pay for a Full Time Training Development Officer in 2014 (Jenny Maud) who manages Component 1.1, a considerable gain to the EuFMD and a savings to EC Fund.
21. Position of the **EC Program Fund (MTF/INT/003/EEC)**. The Phase II agreement with the EC was operationally closed at the end of September 2013, and final payments organized and closed, so that the financial closure could be made on 13th February 2014. The final balance is US\$ 1,227,043.

MTF/INT/003/EEC (PHASE II 2009-13, TFEU97AA09638 entity 608868)

<u>EC Project Phase II</u>	<u>US\$</u>
<i>Total Cash received</i>	<i>10,592,358 (including interest earned 5,813)</i>
<i>Total expenditures</i>	<i>9,359,502</i>
<i>Final Balance</i>	<i>1,227,043</i>

22. Total expenditure in Phase III, at 10 April 2015, is US\$ 3,422,361, and thus over 100% of the agreed pre-financing. A call for Funds has been sent to the EC together with a proposed amendments to the project relating to use of budget (variation by line and per component, following the 89th Executive Committee Session), as recorded below.

<u>EC Project Phase III</u>	<u>USD</u>	<u>EURO</u>	<u>Note</u>
<u>Total scheduled</u>	<i>USD 5,318,270</i>	<i>€ 4,000,000</i>	

Total Cash received	USD 1,009,658		Equivalent to €771,379 in Agreement
10 April 2015		€ 771,379	
Total expenditures up to 10 April 2015	USD 3,422,361	€ 2,574,026	Over 200% of official pre-financing
Cash Balance	- USD 2,412,703	- € 1,814,642	Can Reduce negative balance by circa 320,000€ when the Final Balance Phase II is accepted by EC and counted into the first instalment.
Overall Phase III budget			
Maximum EC financing	USD 5,318,270	€ 4,000,000	
Expenditure to April 10 th 2015	USD 3,422,361	€ 2,574,026	Exchange rate 0,75212
Current Balance	USD 2,145,743	€ 1,425,951	

23. Management of expenditures - Phase III

At the 86th Executive Committee Session, the limits on spending per component and budget line were agreed and every component and subcomponent (outcome) was assigned a budget. Subsequent Executive Committee Sessions approved several proposed changes to the limits for some components and this created a need for a formal BUDGET REVISION, which was proposed to the EC on 11th March 2015. The financial control system now in place has made for clarity in the daily work and planning, and is controlled through the Financial Oversight of the Finance Assistant (Silvia Clementelli) and Budget Holder (Keith Sumption).

The Programme Coordinator (Cecile Carraz) develops the three-month forward work scheduling plan together with the Finance Officer and Component Managers and these have been transmitted to the Chairpersons when updated. The spending per Component is reviewed in team meetings once a month.

24. The Expenditure by Component

As mapping expenditure to components is not-automatic, there is no way to track spending per component in real-time. **Table 6** gives the result of the most up to date mapping of spending per component as presented to the 89th Session in February 2015. Only those components which have a high proportion of longer term commitments (into 2015, such as research studies contracted under Component 1.5) have “overspent” their expected 50% benchmark.

Activity Plan April to August 2015

25. The 24 month agreement with the EC ends on 28th August 2015 and following the 41st General Session in April, the workplan and associated budget for the new Agreement will be develop. It is hoped agreement will be reached in order to start the new Contract on 1st September 2015. The

final set of activities under the current Phase III will be conducted, with modifications so recommended at the 41st General Session. The planned actions are summarized in **Table 7**. A set of training courses under the contract with Australia and New Zealand will occur in May in Nepal.

The period after the General Session, including the OIE General Session, will involve significant work in developing detailed work plans for the Phase IV and the closure/finalization of actions agreed under Phase III.

Following the Session, the new Executive will need to make decisions concerning the staffing of vacant positions under the Administrative Fund and to be included in the EC agreement, to support the agreed work program.

Table 2. Proposed Budget Revision Phase III

PROPOSED BUDGET REVISION - PHASE III								
Accounts	Description	Pillar I / EUR	Pillar II / EUR	Pillar III / EUR	Agreed Total September 2013	Proposed Total	Changes between new and approved budget	Proposed as % of previous
	STAFF COSTS							
5300	Salaries Professional	205,934		22,882	94,385	228,816	134,431	142%
	Salaries General Service	5,000			251,149	5,000	-246,149	-98%
5570	Consultants Budget	396,139	290,077	39,625	359,049	725,841	366,792	102%
5900	Duty Travel Budget	537,200	321,000	122,899	981,099	981,099	0	0%
5650	Contracts Budget	380,000	55,000	400,000	835,000	835,000	0	0%
5920	Training Budget	102,500	124,000		161,200	226,500	65,300	41%
6000	Procurement Budget	356,715	59,452	41,159	777,700	457,326	-320,374	-41%
6150	Report Costs	2,688	1,025	889	4,602	4,602	0	0%
	Administrative support to the project	29,755			29,755	29,755	0	0%
6160	Project Evaluation Cost	17,928	6,833	5,918	30,679	30,679	0	0%
6300	General Operating Expenses	126,200	85,500	-	211,700	211,700	0	0%
6400	General Overhead Budget	2,000			2,000	2,000	0	0%
	Subtotal	2,162,059	942,887	633,372	3,738,318	3,738,318	0	0%
Grand Subtotal €		3,738,318.00						
Support Cost. 7% €		261,682.00						
GRAND TOTAL €		4,000,000.00						

Table 3 – Management Responsibility: Pillar and Component Managers April 2014 to October 2015 - EuFMD /EC Action 2013-15 ("Phase III")**BOLD= Continuity. Red= change.** TSO: Training Support Officer. STP: Short term professionals. KS: Keith; NR: Nadia; FR: Fabrizio; JM: Jenny; AUS: Australian funds (to 12/2013)

Pillar	Comp	Comp.	Pillar Mgr	%time	KS %	NR%	STP/ TSO	2014	2014	2015	Comment
								July-Sept	Oct-Dec	Jan-June	
I	1.1	Training-RT	KS		10	20	TSO 0.5	J.Maud	J.Maud	J Maud	AUS funds support the Training Officer
	1.2	Training -CP&DS	KS		5	10	TSO 0.5	C. Dube	E. Calduch	E Calduch (Jan), Katie HICKEY (Feb-June)	
	1.3	THRACE	KS		5		STP 0.5	M. Hovari	M. Hovari	Mark Hovari (Jan), Milan Pandurovic (Feb-June)	
	1.4	Balkans	KS				STP 0.5	M.Hovari	M.Hovari	Mark Hovari (Jan), Milan Pandurovic (Feb-June)	
	1.5	Res Fund	KS		5			C. Dube	K.Sumption	K Sumption	
	1.6	Crisis	KS								
	1.7	PTS	KS					K. v Maanen	K. v Maanen	Kees	
		Surveillance Rep	KS			5		T.Scicluna	T.Scicluna	Teresa Scicluna	
II	2.1	Turkey/GEO	KS		10		STP 0.5	M.Mclaws	M.Mclaws (assisted by G. Ismailova STP)	M.Mclaws (assisted by G. Ismailova STP to Junel 2015)	Gap after Gunel
	2.2	Israel/Cyprus	KS	20				K. v Maanen	K. van Maanen	Kees	K.VM to end of June in Rome then from distance
	2.3	REMESA	KS		10	10	STP 0.5	C.Dube	F.Rosso	F ROSSO assisted by Ibrahim Eldaghayes (Visiting Scientist)	
III	3.1	Monitoring	KS		5		STP 0.75	G.Grigoryan	I. Gutierrez.	Isabel Gutierrez (to March)	Rodrigo Nova (UK) to cover after Isabel with 50% time to support e-learning under Training Component (1.1)
	3.2	PCP	KS		5	5	STP 0.25	C.Bartels	C.Bartels	Chris Bartels	
	3.3	Global Lab	KS		5			K. v MAANEN	K. v MAANEN	Kees	
			Total projects	100	60	50					
		Management			40						
		Communications				50					
Pillar	Comp onent	STAFF LEVEL		One P3	One P5	One P2	1 TRO +3 STPs				

Table 4. Short Term Professionals Programme – STPs since April 2012

Full name	Permanent Residence Country	Releasing Party	Start Date	End Date
WILSON, MS ELIZABETH	United Kingdom		03-Apr-12	03-Sep-12
KNIGHT-JONES, MR THEODORE JAMES	United Kingdom	Pirbright Institute	27-Apr-12	31-Oct-12
DILAVERIS, MR DIMITRIOS	Greece	Ministry of Rural Development and Food of Greece	01-Nov-12	25-Apr-13
ALEXANDROV, MR TSVIATKO MARINOV	Bulgaria		01-Nov-12	13-Apr-13
MILICEVIC, MS VESNA MILOVAN	Serbia	Ministry of Agriculture, Forestry and Water of Serbia	01-Nov-12	30-Jun-13
POTOCNIK, MR MARKO	Slovenia	Ministry of Agriculture and the Environment Administration	01-May-13	31-Oct-13
POLIHRONOVA, MS LILYANA	Bulgaria	National Diagnostic and Research Veterinary Medical Institute of the Republic of Bulgaria	30-Jun-13	29-Oct-13
BOUMA, MS ANNEMARIE	Netherlands	Ministry of Economic Affairs of the Kingdom of the Netherlands	31-Aug-13	30-Dec-13
VAN MAANEN, MR CORNELIS	Netherlands		12-Sep-13	30-Jul-14
TURIAC, MS IULIA	Romania	National Sanitary Veterinary and Food Safety Authority	31-Oct-13	31-May-14
ROSSO, MR FABRIZIO	Malta	Ministry for Sustainable Development, Env. & Climate Change	05-Dec-13	15-Jun-14
GRIGORYAN, MR GRIGORI	Armenia	National scientific center for food safety risk assessment & analysis	25-Feb-14	30-Aug-14
SCICLUNA, MS MARIA TERESA	Italy		23-May-14	31-Aug-15
ISMAYILOVA, MS GUNEL	Azerbaijan		06-Oct-14	07-Jul-15
GUTIERREZ BOADA, MS ISABEL	Spain	Ministry of Public Administration BIP las palmas Gran CANarias	13-Oct-14	13-Apr-15
ELDAGHAYES, MR IBRAHIM	Libya	University Of Tripoli	20-Oct-14	01-May-15
HICKEY, MS KATHERINE	UK/New Zealand	Ministry for Primary Industries	02-Feb-15	01-Aug-15
PANDUROVIC, MR MILAN	Serbia	Ministry of Agriculture and environmental protection	23-Feb-15	31-May-15
SIKALA, MS ELMA	Zimbabwe	FAO	23-Feb-15	23-Jun-15

Table 5 - Financial Statement

				STATEMENT 1	
MTF/INT/011/MUL - TF number 904200					
EUROPEAN COMMISSION FOR THE CONTROL OF FOOT-AND-MOUTH DISEASE					
Financial Report from 1st January to 31 December 2014					
	USD	USD		Eur	Eur
Balance as at 1 January 2014		453,275			340,410
Interest received	0				
Contributions from member countries and institute	618,105			508,082	0
Project Income Earned (Child)	0	618,105		0	464,197
Expenditure					
Salaries	430,894			323,601	
Consultant	163,484			122,776	
Contracts	0			0	
Duty Travel	110,786			83,200	
Training	7,036			18,854	
General Operating Expenses	25,105			18,854	
Expendable Equipment	1,171			879	
Non-Expendable Equipment	0			0	
Total Expenditure		<u>738,476</u>			<u>554,595</u>
Balance as at 31 December 2014		<u>332,904</u>			<u>250,011</u>
Balance restated at UN Exchange rate of 31 December 2014					
The Financial Statements of the Commission are maintained in US Dollars in accordance with the accounting policies and administrative systems of FAO. The amounts stated in Euros, including the opening balance, have been converted from US Dollars at the average monthly UN Operational Exchange Rates for 2014. The average monthly UN Operational Exchange Rate applicable for the period to 31 December 2014 is USD 1: EUR 0.751					

Table 6: Mapping of activities

EURO €	2013-2015				PILLAR I				PILLAR II				PILLAR III			
Account NB. Description	III PILLARS Budget 2013-2015	III PILLARS 16 mths Exp.	%	Available	Pillar I Budget 2013-2015	Pillar I 16 mths exps	%	Available	Pillar II Budget 2013-2015	Pillar II 16 mths exps	%	Available	Pillar III Budget 2013-2015	Pillar III 16 mths exps	%	Available
5900 TRAVEL	€ 854,550.00	€ 550,524.72	64%	€ 304,025.28	€ 395,750.00	€ 373,209.39	63%	€ 222,540.61	€ 176,000.00	€ 121,837.91	69%	€ 54,162.09	€ 82,800.00	€ 55,477.42	67%	€ 27,322.58
5920 TRAINING	€ 203,900.00	€ 159,350.27	78%	€ 44,549.73	€ 79,980.00	€ 138,135.22	173%	€ 58,235.22	€ 126,000.00	€ 21,215.05	17%	€ 102,784.95	€ -	€ -	0%	€ -
5570 CONSULTANT	€ 541,286.00	€ 458,506.27	85%	€ 82,789.73	€ 288,196.00	€ 237,139.34	82%	€ 51,056.66	€ 185,100.00	€ 177,275.72	96%	€ 7,824.28	€ 68,000.00	€ 44,091.22	65%	€ 23,908.78
5650 CONTRACT	€ 714,180.00	€ 703,103.00	97%	€ 11,277.00	€ 330,000.00	€ 219,538.00	64%	€ 110,462.00	€ 9,000.00	€ 7,955.50	88%	€ 1,044.50	€ 375,380.00	€ 475,610.00	127%	€ 100,230.00
6000 PROCMT	€ 446,190.00	€ 50,803.21	8%	€ 595,386.79	€ 181,190.00	€ 39,379.11	8%	€ 443,810.89	€ 98,000.00	€ 11,424.10	12%	€ 86,575.90	€ 65,000.00	€ -	0%	€ 65,000.00
6300 GEN.OP. exps	€ 246,800.00	€ 4,532.73	2%	€ 242,267.27	€ 115,050.00	€ 1,437.40	2%	€ 113,612.60	€ 97,250.00	€ 2,913.15	2%	€ 94,336.85	€ 34,500.00	€ 182.17	1%	€ 34,317.83
TOTALS Activity	€ 3,207,116.00	€ 1,926,820.20	60%	€ 1,280,295.80	€ 1,892,096.00	€ 1,008,838.46	54%	€ 883,247.54	€ 689,350.00	€ 342,621.43	48%	€ 346,728.57	€ 625,680.00	€ 575,360.81	92%	€ 50,319.19
PRIOR 86th Excom	€ 3,207,116.00				€ 1,877,836.00				€ 720,100.00				€ 609,180.00			
Prior 1st EC Agreement	€ 3,207,116.00				€ 1,882,245.00				€ 689,608.00				€ 625,253.00			

Table 7: Eight month Activity Plan Feb-Sept 2015

8 Months Activities Plan - February - September 2015															
PILLAR			PRIOR EC Budget Agreement	Total Budget Allocated € 320'7116	16 months Expenses Oct. 13 -Dec. 14	% 65 of project completion	Actual available (8 months activities 2015)	Feb.15	MAR. 15	APR. 15	May 15	Jun. 15	Jul. 15	Au 15	Sept.15
PILLAR I IMPROVE PRIOR Agreed € 1'882'245 Allocated € 1'877'836.00	1.1 E Learning Training 1.1 Training Program	Nadia -Jenny	€ 341,239.00	€ 515,241.00	€ 380,446.35	73.8%	€ 134,794.65	NTC 16-17-18-19-20 refresher NTC 21 Induction course FEPC in English for Norway Lithuania Hungary Poland Portugal	NTC 13-14-15refresher FEPC in English for Norway Lithuania Hungary Poland Portugal FEPC in Russian Language c/o Gunel FEPC in French	FEPC in French Algeria	Induction courses NTC	FEPC Spanish			
									2-6 NTC 21 RTT KENYA						
	1.2 Modelling Prior € 168'525 € 61'500	Katie Hickey	€ 168,525.00	€ 61,500.00	€ 6,095.00	9.9%	€ 55,405.00	89th Excom Network for FMD vaccination							
	1.3 THRACE Prior € 300'000.00	Fabrizio Rosso	€ 258,149.00	€ 350,000.00	€ 212,738.49	60.8%	€ 137,261.51	18-20 PPR Workshop Istanbul 25-27 LSD WS Cappadocia							
	1.4 BALKANS Emergency Management	TBC (ex Mark Hovari)	€ 236,781.00	€ 214,240.00	€ 106,907.46	49.9%	€ 107,332.54		Simex Evaluation (tentative) WS Sofia - Athens			Tent. Simex			
	1.5 Research Funding	Keith Sumption	€ 312,983.00	€ 285,000.00	€ 278,000.87	97.5%	€ 6,999.13			Blarisk	Wildlife conf.OIE General Session	SCRPD			
	1.6 Crisis/Management Prior € 501,155.00 - € 30,750.00 Comp. 1.2 - € 50,000.00 Comp. 1.3 - € 16,500.00 Comp. 3.2	Keith Sumption	€ 501,155.00	€ 403,905.00	€ 17,647.62	4.4%	€ 386,257.38								
1.7 PTS - NRLs of EufMD Members and neighbourhood	Kees Van Maanen	€ 63,413.00	€ 62,200.00	€ 7,003.51	11.3%	€ 55,196.49									
PILLAR II REDUCE PRIOR Agreed € 689'608 Allocated € 720'100	2.1 SEE-SOUTH EAST EUROPE Wes Eurasia	Melisse Mc LAWS + Gunel Ismailova	€ 284,342.00	€ 298,100.00	€ 214,781.71	72.1%	€ 83,318.29	HQ Meeting	tentative West Eurasia RAG Astana						
	2.2 SEM SOUTH EAST MEDITERRANEAN Prior € 209,500.00 - € 30'750.00 Comp. 1.2	Kees Van Maanen	€ 183,509.00	€ 178,750.00	€ 63,047.22	35.3%	€ 115,702.78	Mission Egypt (+ C.Bartels)	Mission Palestine						
	2.3 REMESA	Fabrizio ROSSO	€ 187,586.00	€ 212,500.00	€ 64,792.51	30.5%	€ 147,707.49	23-26 Mission to Mauritania	Remesa JPC Tentative WSRegional FMD control strategy	Tentative Data Collect					
	2.4		€ 34,171.00	€ -	0	0	€ -								
PILLAR III PROMOTE PRIOR Agreed € 635'253 Allocated € 609'180	3.1 SUPPORT System for Reporting on the	IsabelGutierrez Boada	€ 107,066.00	€ 86,000.00	€ 45,283.05	52.7%	€ 40,716.95	Joint Mauritania Comp 2.3	Meetings HQ OIE/FAO GF-TAD's FMD working Group (WG-FMD) -						
	3.2 PCP FMD WG of FAO/OIE Prior € 40'800	Chris BARTELS	€ 21,097.00	€ 63,300.00	€ 43,655.66	72.1%	€ 17,644.34	16-20 RVC + Jenny							
	3.3 Global FMD reference Centre	Kees VanMaanen	€ 507,100.00	€ 476,380.00	€ 484,421.70	101.7%	-€ 8,041.70								
Total Budget Allowances 2013-2015			€ 3,207,116.00	€ 3,207,116.00	€ 1,926,821.14	60.1%	€ 1,286,389.86	13-14 89th Executive Committee, Belgrade	GENERAL SESSION HQ	Tentative Blarisk	Tent. Minirecom	Tent. SCRPD	90th Excom		

Appendix 10

Highlights 2013-2015

PILLAR

Component

1.1.

TRAINING

Improve readiness for FMD crisis management in Member States

Highlights 2013 -2015



K. Sumption
Pillar Manager

J. Maud
Component Manager

M.S. nominees
Focal points

Member States
Beneficiaries

OBJECTIVE

To improve the ability of Member States (MS) and Europe as a whole to respond to an FMD incursion through developing a cadre of European experts in FMD crisis management and improving the use of decision making tools by managers in contingency planning and outbreak response.

OUTPUTS / Expected results

1. Whereby MS use training credit system to ensure training needs are addressed through a demand-driven training program.
2. Improved MS capacity to recognize, respond to and manage FMD through provision of training programs on clinical recognition, outbreak management and CP, and improved use of models/DST to support managers.
3. Infrastructure for learning and knowledge transfer in place, including e-learning, training resources and staff support.

PROGRESS

- **OUTCOME 1: Training credits system**
 - All MS have appointed a training focal point and been allocated 10 "training credits" which may be spent on a variety of training courses.
 - Training focal points are updated on training opportunities through webinars, newsletters and a dedicated area on the EuFMD e-Learning website.
 - Countries may purchase additional training credits under the "top up scheme" if the allocation is not sufficient to meet their training needs.
 - To date (April 2015) 85% of training credits have been committed to courses and two countries have purchased additional credits.
- **OUTCOME 2: Improved MS capacity to respond to and manage FMD**
 - 9 Real Time FMD training courses have been held.
 - Online FMD Emergency Preparation Course developed and run, with EC funding providing translation into all EU languages.
 - Workshop on Modelling as Decision Support Tool developed and held.
 - Country specific versions of the FMD Emergency Preparation Course planned for three MS.
 - Bespoke training has been organized for one MS.
- **OUTCOME 3: Infrastructure for learning and knowledge transfer in place**
 - Training Support Officer funded through agreement with governments of Australia and New Zealand for provision of Real Time Training.
 - EuFMD e-Learning platform has been established in partnership with the Royal Veterinary College, University of London. It is now used extensively to support training and communication activities, with 1450 registered users to date.
 - Webinars are now used regularly throughout EuFMD's work programme to support training and networking.

MAJOR ISSUES

Timely nominations for training courses have not been received from all MS.

SIGNIFICANT PLANS

Final call for nominations for training courses is underway, Real Time Training and/or Modelling workshops will be held dependent on interest.; At least 2 further online FMD Emergency Preparation Courses will be held.; Consultation underway with focal points to guide formulation new workplan from October 2015. This is to include continued demand-led training, with improvements in course selection procedures and additional support provided to assist countries in the provision of national training ("train the trainers" approach).

PARTNERSHIPS

Training focal point in each EuFMD Member State; Letter of agreement with Royal Veterinary College, UK, for provision of EuFMD e-Learning platform.

Eur.
515,241

74 %

Eur. 380,446



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PILLAR

Component

1.2.

DECISION SUPPORT TRAINING

Improve readiness for FMD crisis management in Member States

Highlights
2013 -2015



M. McIlaws
Pillar Supervisor

K. Hickey
Component Manager

M.S. nominees
Focal points

Member States
Beneficiaries

OBJECTIVE

This component includes the development of training material on modelling and decision-support tools, development of modelling activities at various scales (national, regional or European-level), coordination of modelling and simulation exercise networks both at European and international levels, management of research projects on modelling, integration of decision support tools such as modelling and economic analysis into contingency planning and outbreak response.

OUTPUTS / Expected results

1. An European modelling network composed of policy makers and model users from all interested MS with direct access to FMD models and model developers linked to other international modelling groups.
2. Resources for training on disease modelling and economic analysis in decision-making and simulation exercise design.
3. A network of managers in contingency planning and simulation exercise design.

PROGRESS

- OUTCOME 1: The EuFMD modeling network has been started and is growing. Activities include a webinar series, formation of an inventory of models and other decision support tools on the EuFMD e-learning site and collaboration of network members in submitting a proposal to Animal Health and Welfare ERA-Net (ANIWHA) to fund a project entitled "Pan-European Modelling of Animal Infectious Diseases".
- OUTCOME 2: A training workshop "To vaccinate or not to vaccinate: using modeling to evaluate FMD control options" was held in autumn 2014. This workshop had 16 participants from 11 countries, and was very well received. Following a request for proposals, the Royal Veterinary College was awarded a contract to develop a prototype model for the rapid assessment of FMD impacts. We are currently developing guidelines on planning simulation exercises.
- OUTCOME 3: We are working on issues surrounding emergency FMD vaccination, particularly vaccine and diagnostic banks and why these may be of importance in contingency planning.

MAJOR ISSUES

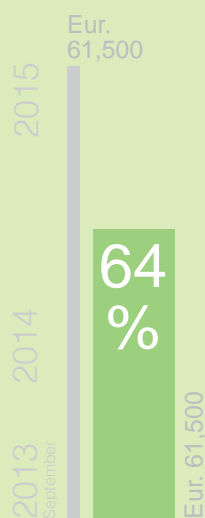
- Determine how EuFMD can best assist members of the modeling network to establish a common project, depending on the results of the aniwha call regarding the funding for the proposal already submitted

SIGNIFICANT PLANS

- Continue the Modeling network webinar series. The next webinar will be held on 28th May: "Model development - issues and best practices: Foot and mouth disease transmission models and the estimation of parameters" by Thomas Hagenaars of the Netherlands.
- To establish a network of vaccine bank managers to discuss common issues related to vaccine banks and policy issues surrounding the use of vaccination.
- To hold a series of webinars focused on contingency planning: Risk Communication, Diagnostic Banks and Planning Simulation Exercises.

PARTNERSHIPS

- We have worked in partnership with SAFOSO and the WRLFMD to develop a simple risk model to support improving the way the WRLFMD recommends high priority antigens to be held by vaccine banks.
- We are working with Danish Emergency Management Agency and Ministry of Civil Defence and Emergency Management (NZ) to develop guidelines for planning simulation exercises.
- Royal Veterinary College to develop a prototype model for the rapid assessment of FMD impacts.



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PILLAR

Component

1.3.

PROGRAMME FOR EARLY WARNING
SURVEILLANCE IN THE THRACE REGION OF
BULGARIA/GREECE /TURKEY

Improve
readiness for
FMD crisis
management in
Member States

Highlights
2013 -2015



F. Rosso
Pillar Supervisor

M. Hovari
M. Pandurovic
Component Manager

STC +12 national
Focal points

Member States
Beneficiaries

OBJECTIVE

The objective is to establish a system which provides continuous confidence in Disease Freedom (DF) and which improves the chances of detecting an outbreak at an early stage.

OUTPUTS / Expected results

1. Establishing a co-ordination framework for the activities required to maintain confidence in DF amongst the three countries.
2. Established system for real-time data entry to support management of national surveillance activities aimed at maintaining DF confidence.
3. Achieving two years of risk based surveillance results through activities implemented in each country for FMD (and other diseases as decided by Coordination Framework).

PROGRESS

- OUTCOME 1: Technical networking between the countries was established and regularly maintained through tripartite and management meetings, workshops and trainings organized on relevant subjects.
- OUTCOME 2: A database has been developed for the recording of clinical and serological surveillance performed for FMD and other diseases (multi-diseases surveillance). Data are regularly collected and analyzed for evidence of FMD freedom.
- OUTCOME 3: The targeted surveillance has been properly implemented in low and high risk areas identified in each country. The data collected shows that the probability of FMD freedom is regularly above 95%.

MAJOR ISSUES

- Sustainability of the activities in case of lack of resources dedicated to the programme.
- Overlooking risks non-defined in the development of the targeted surveillance in 2013.
- Risk of Lumpy Skin Disease reaching Turkish Thrace. Adequate preparedness of Thrace for the possible introduction of the disease.

SIGNIFICANT PLANS

- Promoting the collaboration between veterinary services and laboratories of the three countries on risk assessment, preparedness, and diagnostic capabilities.
- Providing a regular support with laboratory reagents and trainings for preserving the targeted risk-based surveillance and allowing continuous improvement of the awareness against FMD and other exotic diseases;
- Using the model developed for FMD freedom confidence and early detection capacity to analyze the surveillance implemented for other diseases (e.g. PPR).
- Possibility to adapt to other countries/geographic area to produce an outcome (disease freedom confidence and early detection capacity) of easy comprehension for policy/decision makers.
- The activity might be a pilot programme for integrated animal diseases surveillance (FMD, PPR, SGP, LSD) implemented between different countries.
- If Turkey will stop FMD vaccination in Turkish Thrace in the future, it would be essential to address the capacity needs for non-vaccination.

Eur.
350,000

61%

Eur. 212,738



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PILLAR

Component

1.4.

TO SUPPORT THE DEVELOPMENT
OF FMD EMERGENCY MANAGEMENT
CAPACITY IN THE BALKAN REGION

Improve
readiness for
FMD crisis
management in
Member States

Highlights
2013 -2015



F. Rosso
Pillar Supervisor

M. Hovari
M. Pandorovic
Component Manager

12 national
Focal points

Member States
Beneficiaries

OBJECTIVE

To support the development of FMD emergency management capacity in the Balkan region.

OUTPUTS / Expected results

1. Coordination framework for western Balkan countries for emergency planning on FMD, including an FMD laboratory sub-network.
2. Improved contingency plans through participation of countries in two multi-country simulation exercises with pre and post exercise training and evaluation on specific themes or chapters of the contingency plans.
3. Integration of national FMD reference centers (laboratories) in the national CPs and improved regional diagnostic capacity for FMD challenge.

PROGRESS

- OUTCOME 1: Establishment of network of National Focal Points and Laboratory Sub-network Contact Points for the implementation of the programme. The coordination framework developed might be essential to assist the control of FMD and other trans-boundaries animal diseases in case of occurrence.
- OUTCOME 2: Various workshops and simulation exercises were organized in order to improve the contingency planning (CP) capability. A "Balkan section" was created in the EuFMD e-learning website to make accessible documentation on CP and improve the networking.
- OUTCOME 3: Laboratory trainings on a range of FMD diagnostic methods and on biosecurity were organized. The support to participate in the 2014 WRL Proficiency Test Schemes was a relevant aspect of this component.

MAJOR ISSUES

- The national contingency plans are not finalized yet in all the Balkan countries with particular reference to specific chapters (e.g. organigram, chain of command, media strategy, internal/external communication, etc).
- Specific procedures of the operational manuals need to be practiced to assess their feasibility and effectiveness.
- Lack of sufficient national funding, resources and equipment can affect the contingency planning capacity.
- Capability to use the 'lessons learnt' from the activities implemented within the programme should be better assessed.

SIGNIFICANT PLANS

- Providing assistance and guidance to continue developing the contingency plans and operational manuals for FMD.
- Improving the sustainability of the programme through the implementation of a system for mutual assistance between countries.
- Developing the capacity of the countries to design, implement, evaluate different type of exercises in order to challenge and self-assess the contingency planning capacity.
- Facilitate a Serbo-Croatian version of the e-learning FEPC (in synergy with components 1.1 and 1.2), for improving the FMD emergency preparedness in the region.

PARTNERSHIP

- Danish Veterinary and Food Administration (FVST) and Danish Emergency Management Agency (DEMA) for assistance in organization of workshops and with the design, execution and evaluation of the multi-country simulation exercises.

Eur.
214,240

2015

2014

2013
September

50 %

Eur. 106,907



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PILLAR

Component

1.5.

EUFMD - FAR
FUND FOR APPLIED RESEARCH

Improve
readiness for
FMD crisis
management in
Member States

Highlights
2013 -2015



K. Sumption
Pillar Manager

K. Sumption
Component Manager

STC,

SCRPD, ExCom
Focal points

Member States
Beneficiaries

OBJECTIVE

Guidance of EC institutions involved in decisions on Research Funding. This includes support for research projects which have been endorsed by the EuFMD STC as being a benefit of the EuFMD objectives: activities to translate research into tools, actions or activities which are of benefit to EuFMD activities and actions to integrate research outcomes with policy.

OUTPUTS / Expected results

1. Produce Special Committee on Research and PD reports, including Biorisk Management;
2. Outputs of Funded Research Projects.

PROGRESS

- Produce SCRPD Reports:
 - Two SCRPD meetings were held in Frascati (November 2013) and Cavtat (October 2014), and the Reports of each have been important to identify priorities for the EuFMD-FAR, and task working groups under the SCRPD. A 2nd "Global Report on FMD Research" was commissioned through the GFRA and its summary presented at Cavtat (Croatia). The Open Session in Croatia was very successful, over 250 attended and all talks were recorded and streamed online - over 500 registered participants used the online Conference.
- Outputs of Funded Research:
 - The EuFMD-FAR issued three calls for proposals plus two targeted calls (Non-Invasive sampling optimisation and the Impact Calculator).

This table indicates the
state of commissioned research:

EuFMD-FAR Project	Lead/Main partner	Value (€)
LAMP-PCR	Perceigne	50319
Non-invasive sampling: PCR optimisation	FLI	34772
Model development	FLI	49977
Biosafe transport	ANSES	14,000
Development of methods for testing vaccine stability	Perceigne (note: joint study, subcontract with CVI Lejystad)	32,256
Field Trials of the Non-Invasive Sampling	T. Alexandrov (BG); with SAP Institute (Turkey)	45,000
FMD Impact Calculator	RVC	To fund under Component 1.2
Reservoir modelling	Nottingham (UK)	34772
TOTAL committed (€)		226,544

Successful applications
Grants awarded

MAJOR ISSUES

Initial applications did not address the priorities sufficiently; the 2nd and 3rd calls were targeted and this worked far better.

SIGNIFICANT PLANS

The fund is now fully committed (when the costs of the SCRPD and STC meetings are included) and so the major commissioning phase is over and the reports of the projects are now expected. Field testing of the non-invasive sampling will be challenging within the time frame.

PARTNERSHIPS

- GFRA undertook the Global State of FMD Research Report as a Commission.
- The STC and SCRPD have been very active in the review and priority setting process.

Eur.
285,000

98
%

Eur. 278,000



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PILLAR

Component

1.6.

CRISIS MANAGEMENT

Improve
readiness for
FMD crisis
management in
Member States

Highlights 2013 -2015



K. Sumption
Pillar Manager

K. Sumption
Component Manager

STC, SCR,
ExCom
Focal points

Member States
Beneficiaries

OBJECTIVE

Maintenance of a capacity to provide advice, technical support and assistance to EUFMD MS and countries in the European neighbourhood in the event of an FMD outbreak, including lab and epidemiological support, including assistance and support to MS with vaccine procurement and supply, through the provision of technical input, advice in the selection of vaccine strains, risk based evaluation of vaccination strategies and other related activities.

OUTPUTS / Expected results

1. Procurement–vaccines/diagnostics.
2. Emergency Missions.

PROGRESS

- During the FMD epidemic in Tunisia in 2014, the national laboratory was supported with the delivery of Ag ELISA kits.
- A mission was organized in Tunisia to evaluate and discuss with national authorities the contingency measures implemented and the strategy for an effective vaccination campaign.
- In response to the outbreaks in Tunisia, trainings have been immediately organized in Algeria and Morocco with the purpose to provide guidance on the FMD clinical recognition, pathogenesis, samples collection, diagnosis, biosecurity, epidemiological investigation, surveillance and crisis management.

MAJOR ISSUES

- Obtaining proper and timely information regarding the support needed.
- Coordinating with the intervention of other organizations and institutions.

SIGNIFICANT PLANS

- Development of EuFMD internal procedures to facilitate the management of the crisis and to improve the capacity to give proper and timely support on expertise, equipment, diagnostic material, trainings, etc.

Eur.
434,655

2015

2014

2013
September

4
%

Eur. 17,647



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European
Commission

PILLAR

Component

1.7.

PROFICIENCY TEST SERVICES

Improve readiness for FMD crisis management in Member States

Highlights 2013 -2015



K. Sumption
Pillar Manager

K. van Maanen
Component Manager

Member States
Focal points

Member States
Beneficiaries

OBJECTIVE

To provide services of the Proficiency Test Services to the NON-EU members of the EuFMD to enable them to participate to the same extent as the NRLs of the Eu28 under the scheme implemented through the EURL at Pirbright.

OUTPUTS / Expected results

Increased participation and better national alignment of the NRLs in the European neighbourhood to the EuFMD and EU standard for FMD diagnostic NRLs performance (as defined at GS39), with specific results of:

1. Participation of 20 non-EU EuFMD member states and neighbourhood countries in annual PTS.
2. Management and participation in annual EU reference laboratory meetings.

	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: Panafosa, 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

PROGRESS

- OUTCOME 1: Special Committee for Research and Programme Development (SCRPD) recommendations received, from the Frascati meeting (November 2013).

Eur.
62,200

2015

2014

2013
September

11
%

Eur. 7,004



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PTS update
From D.King, TPI

PILLAR

Component

2.1.

SOUTH-EAST EUROPE
TURKEY, GEORGIA AND NEIGHBOURS

Reduce risk to Member States from the European neighbourhood

Highlights
2013 -2015



K. Sumption
Pillar Manager

M. McLaws
Component Manager

TTCs, Turkey,
ExCom
Focal points

M.S. + neighbours
Beneficiaries

OBJECTIVE

The objective is to reduce the impact of FMD in Turkey and Georgia (EuFMD member states) and to reduce the risk posed by FMD in the region to all EuFMD Member states.

OUTPUTS / Expected results

1. Risk based control programmes (Progressive Control Patchway - PCP) adopted and implemented in Turkey.
2. Risk based control programmes (PCP Pathway) adopted and implemented in Georgia.
3. Improved information system for regional risk managers which supports the West Eurasia Roadmap countries.

PROGRESS

- OUTCOME 1: GDFC staff in Turkey are developing skills in epidemiology for FMD data analysis and reporting to enhance risk based control through ongoing training in epidemiology provided by EuFMD.
- OUTCOME 2: Georgia has submitted their risk-based strategic plan for FMD control to the OIE/FAO FMD working group, in order to be formally accepted in PCP Stage 2.
- OUTCOME 3: A number of activities have been developed to improve the information about FMD for risk managers in the region. These include:
 - 1) a Webinar series on technical topics of interest to epidemiologists and laboratory experts.
 - 2) Russian language version of EuFMD's online training course, the "FMD Emergency Preparation Course".
 - 3) EuFMD support to OIE/FAO for W. Eurasia Roadmap meetings in 2014 and 2015.

MAJOR ISSUES

A workshop for TransCaucasus countries was held in Ankara in January 2015 to discuss a proposal for regional collaboration coordinated by EUFMD/ FAO and FGBI ARRIAH. This project could be a possible mechanism for regular exchange of information about the FMD situation in the region. However, donor support is required to develop it further.

In January 2015, Turkey (GDFC) asked EUFMD to assist with training veterinarians in headquarters and the regional institutes in epidemiology, as a step in further developing and extending the Monitoring and Epidemiology Unit. GDFC would cover all costs related to the trainees, but they are looking for international experts to develop the curriculum and deliver the training. EuFMD carried out a needs assessment mission in March and is now working on developing a proposal for a curriculum. It is expected that this training material will also be useful for other countries in Pillar II.

SIGNIFICANT PLANS

- The W. Eurasia Roadmap meeting will be held 28-30 of April in Almaty, Kazakhstan.
- A workshop in Georgia to assist with the analysis of the data from a recent serosurvey (to be scheduled).
- Develop a training course in epidemiology for veterinarians from headquarters and the regional institutes in Turkey and possibly other Pillar II countries.

PARTNERSHIPS

- OIE FMD Regional office in Astana.
- GDFC and the FMD (Sap) Institute, Turkey.
- FGBI ARRIAH, Russia.
- Kimron Veterinary Institute, Israel.

Eur.
298,100

2015

2014

2013
September

72
%

Eur. 214,560



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Component

2.2.

SOUTH-EAST MEDITERRANEAN ISRAEL, CYPRUS

Highlights 2013 -2015



M.S. + neighbours
Beneficiaries

- Veterinary Services of Israel, Palestine, Egypt
- Central Veterinary Laboratories of Israel, Palestine, Egypt
- Hebron Polytechnic University
- EARLN-FMD subnetwork

35%

Eur. 63,047



PILLAR

Component

2.3.

REMESA

Reduce risk to Member States from the European neighbourhood

Highlights
2013 -2015



K. Sumption
Pillar Manager

F. Rosso
Component Manager

FAO, OIE,
national
Focal points

M.S. + neighbours
Beneficiaries

2015
Eur. 212,500

2014

2013

September

30%

Eur. 64,793



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european commission for the
control of foot-and-mouth disease



OBJECTIVE

Assist national FMD risk management as part of the REMESA action plan

OUTPUTS / Expected results

1. Risk based control programme (Progressive Control Pathway - PCP) adopted and implemented in Libya and Mauritania.
2. Improved regional co-ordination.
3. Regular information flow on FMD circulation in Mauritania/Western Sahel countries available to risk managers.
4. System established in the REMESA high risk area for FMD spread (Libya, Algeria, Tunisia, Morocco) to provide continuous confidence in FMD freedom/early detection capability.
5. Regional strategy for risk-based surveillance and vaccination programme and strategy to establish a local/ regional vaccine-bank

The output n.5 replace the output 'Morocco, Algeria and Tunisia disease freedom dossier submission to OIE'(included in workplan 2013).

PROGRESS

- OUTCOME1: PCP workshops organized in Libya and Mauritania were focused on the use of Practical Epidemiology for Progressive control to assist the development of the Risk Based Strategic Plan (RBSP) for FMD control.
- OUTCOME 2-3: The participation to REMESA JPC was initially supported. A programme for laboratory networking between Mauritania, Mali and Senegal under the framework of RESOLAB was implemented and a workshop in Senegal carried out on epidemiological surveillance and laboratory capacity building.
- OUTCOME 4-5: Morocco, Algeria, Tunisia were supported with workshops and e-learning trainings on FMD emergency preparedness and real time trainings. NSP Eisa kits were supplied to laboratories. FMD awareness improved with leaflets produced in Arabic and French.

MAJOR ISSUES

- FMD outbreaks in Tunisia (2014) and Algeria (2014-2015).
- The political situation Libya influences the progress of the programme in the Country.
- The network with beneficiary countries should be improved in order to better understand and address the needs on FMD surveillance, outbreaks investigation, and emergency preparedness.
- The coordination of actions taken by different institutions (e.g. EuFMD workplan and FAO Technical Cooperation Programme) is essential to avoid duplications.
- In case of emergency, a clear communication chain should be implemented to avoid confusion, incorrect information and duplication of actions.

SIGNIFICANT PLANS

- Development of regional expertise on PCP that can be used in the region.
- Development of a vaccination evaluation system which takes into consideration the programming, implementation, evaluation of a FMD vaccination campaign.
- Guarantee proper support to improve the clinical recognition and outbreaks investigation.
- Mauritania: assistance to complete the RBSP. Support serosurvey and field outbreaks investigation.
- Algeria, Tunisia, Morocco: development and implementation of surveillance programme in high risk areas, workshops on risk based control, and support the development of a regional strategy for FMD control.
- Development of a training credit system to facilitate the delivery of courses according to the needs and implementation of a network of focal points to assist the process.

PARTNERSHIPS

- IZSLER for the development of the RBSP in Libya; ANSES for the implementation of a laboratory networking in Mauritania and West Sahel; SAFOSO for the development of the RBSP in Mauritania.

PILLAR

Component

3.1.

SUPPORT GLOBAL PROGRESS MONITORING
OF FMD CONTROL PROGRAMMES

Reduce risk
to Member
States from the
European
neighbourhood

Highlights
2013 -2015



K. Sumption
Pillar Manager

I. Gutiérrez
Component Manager

FAO, OIE
Focal points

Global
Beneficiaries

OBJECTIVE

To collate, analyse and disseminate relevant information on regional FMD control programmes worldwide; support for workshops to coordinate this process.

OUTPUTS / Expected results

1. Technical Development of Monitoring system (with Special Committee for Research and Programme Development - SCRPD).
2. Systematic collation and analysis (by Standing Technical Committee - STC); Country Profile.
3. Assist FAO/OIE Working Group to produce the 'Global FMD Control Strategy Progress Report'.

PROGRESS

- OUTCOME 1: Not developed.
- OUTCOME 2: Pool FMD Status Report. EuFMD (STP) supported by the FMD unit, is developing a Pool FMD Status Report, for each of the regions involved in Roadmap meetings and PCP application.
 - East Africa pool report finalized.
 - West Eurasia and SAARC pool reports finished and pending of final comments from FAO and EuFMD.
 - NENA under progression.
- OUTCOME 3: Global FMD Control Strategy Progress Report.
 - Structure and Title pending on agreement between FAO and OIE.
 - EuFMD (STP) prepared a draft for possible Chapter 2 and other documents useful for the Global Strategy Report.
 - Questionnaire Survey to gather information from countries developed and planned to be send out in April 2015.

MAJOR ISSUES

- Outcome 3 behind schedule: Significant investment in the time needed to reach agreement between parties involved.

SIGNIFICANT PLANS

- Goal of publishing the 'Global FMD Control Strategy. Progress Report', in 2015.
- Implementation of a Questionnaire Survey to gather information related to FMD, with assistance from FAO statistics division.
- Development of FMD country profile database in collaboration with FAO statistics division.

PARTNERSHIPS

- GF-TAD FMD WG OIE / FAO.
- Special Committee members supporting Pillar III.

Eur.
86,000

2015

2014

2013
September53
%

Eur. 45,283



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european commission for the
control of foot-and-mouth disease



PILLAR

Component

3.2.

PCP - PROGRESSIVE CONTROL
PATHWAY SUPPORTReduce risk
to Member
States from the
European
neighbourhoodHighlights
2013 -2015K. Sumption
Pillar ManagerC. Bartels
Component ManagerGFTADS, SCRPC,
National
Focal pointsGlobal
Beneficiaries

OBJECTIVE

The objective is to enhance the international capacity for the application of the FAO/EuFMD/OIE PCP-FMD through development of tools, guidelines and knowledge transfer.

OUTPUTS / Expected results

Specific Outputs:

1. PCP toolbox developed for PCP-FMD user community, including guiding documents developed for joint FAO/OIE application.
2. System for training PCP-FMD experts well established and supported by resources.
3. Representation in regional roadmap meetings, FAO/OIE FMD working group and EuFMD executive meeting.

PROGRESS

- OUTCOME 1 - PCP-FMD Toolbox:
 - Guiding documents and templates supporting development of strategic plans for progress FMD control.
 - Guidelines on Disease Outbreak Investigation and support to Guidelines on Post-vaccination Monitoring.
 - Workshop sequence for countries in Stage 1 to develop a risk-based strategy plan (RBSP) and used in countries under Pillar II.
- OUTCOME 2 – Training on PCP-FMD
 - PCP-FMD training for FAO staff at headquarters in Rome and FAO staff in Eastern Africa.
 - A table-top simulation exercise on developing a risk-based strategic plan for FMD control.
- OUTCOME 3 – Representation and support
 - Representation and technical support to regional roadmap meetings West Eurasia (Azerbaijan in 2013, Astana in 2014), Middle East and Northern Africa (Amman in 2014), and Eastern Africa (Kigali in 2014).

MAJOR ISSUES

- The FAO/OIE FMD Working Group has not met frequently in 2014 and 2015. As a result of which a range of work planning issues were not resolved further.

SIGNIFICANT PLANS

- Piloting of PCP-FMD E-learning at different levels:
 - Introduction to PCP-FMD: "What is PCP-FMD?".
 - Registered access on: "What to do for PCP-FMD?".
 - Training course on "How to perform PCP-FMD?".
- Establishing means by which PCP-FMD E-learning may be accredited.
- Creating "Job Aids" for professionals and field workers to facilitate implementation of FMD control.
- Establishing a PCP-FMD Knowledge bank.

PARTNERSHIPS

- FMD WG of Gf-TADS.
- FAO and OIE FMD Working Group.
- Royal Veterinary College, London, UK.

Eur.
63,300

2015

2014

2013
September72
%

Eur. 45,655

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control of foot-and-mouth disease

PILLAR

Component

3.3.

GLOBAL LABORATORY: TO SUPPORT THE FAO/OIE GLOBAL FMD LAB NETWORKS AS PART OF THE GLOBAL FMD CONTROL STRATEGY

Reduce risk to Member States from the European neighbourhood

Highlights
2013 -2015



K. Sumption
Pillar Manager

K. van Maanen
Component Manager

STC + ExCom
Focal points

Global
Beneficiaries

OBJECTIVE

To support the FAO/OIE global FMD laboratory network as part of the global FMD control strategy, with the following outcomes.

OUTPUTS / Expected results

- Creation of a framework for coordination of laboratory support activities within the FAO/OIE global laboratory network.
- System in place for supporting diagnostic activities to be carried out by WRLFMD.
- System in place for supporting the collection of samples from outbreaks in pools 4 and 5.
- Support for a global proficiency test scheme, to include 19 laboratories in the global network.

PROGRESS

- OUTCOME 1: Annual OIE/FAO FMD laboratory network meetings with establishment of two Network Working Groups to a) address isolate, strain and topotype nomenclature and to provide recommendations about coherent naming of FMD viruses; b) to explore vaccine recommendations for endemic settings including harmonization of in-vitro vaccine matching methods. Coordination and exchange of information associated with the emergence and spread of the O/ME-SA/Ind-2001 lineage from the Indian sub-continent that has involved PD-FMD (India) and IZSLER (Italy), as well as NRLs and FMD researchers in Libya, UAE, Saudi Arabia, Sri Lanka, Nepal and Bhutan.
- OUTCOME 2: Under the LoA between FAO/EuFMD and the Pirbright Institute significantly increased submission of samples to and exchange of sequences with WRLFMD.
- OUTCOME 3: Several shipments of clinical specimens from Nigeria, Ethiopia, Cameroon, Tanzania, and Kenya to WRLFMD. Laboratory support/training in Kenya. Provision of kits and technical advice to Nigeria and Senegal. Twinning WRLFMD with NAHDIC in Ethiopia to build and maintain capacity within the East Africa Laboratory Network for FMD (EARLN-FMD).
- OUTCOME 4: Increased participation in the proficiency tests organized by WRLFMD with almost all invited EuFMD non-EU and European neighborhood NRLs and all 4 RSLs for pools 4 and 5 participating, 27 participants from European Union (funded by EURL for FMD).

MAJOR ISSUES

- Many gaps still exist in FMD surveillance in East, Central and particularly West Africa.
- A closer working relationship should be established with the European NRLs for global surveillance group.
- Still significant gaps in the availability of reagents (bovine vaccinal sera and relevant vaccine viruses) for many commercial vaccines (outside of Sanofi/Merial and MSD/Intervet) and locally-used vaccines that are administered in endemic areas.

SIGNIFICANT PLANS

- Development of MoU for regional support labs in pools 4 and 5.
- Additional training, supervision, sample collection and sample shipment from pools 4 and 5.
- Harmonization and improvement of communication with network labs.
- Creation of a closer working relationship with the European NRLs for global surveillance group.
- Vaccine matching and harmonization of nomenclature of FMDV strains (working groups OIE/FAO FMD laboratory network).

SIGNIFICANT PARTNERSHIPS

- WRLFMD, OIE/FAO FMD laboratory network, European NRLs.

Eur.
476,380

2015

93
%

2014

2013
September

Eur. 442,215



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Appendix 11

Roll-out of training credit system



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Roll out of the training credits programme: progress towards a breadth and depth of European expertise

Jenny Maud

Training Support Officer, EuFMD

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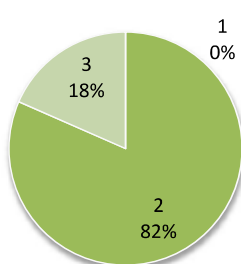


Pillar I, Component I: Training

1.1 Real Time Training– Contingency Plans and Decision Support Training

OBJECTIVE: To improve the ability of Members States (MS) and Europe as a whole to respond to a FMD incursion; through developing a cadre of European experts in FMD crisis management, and improving the use of decision making tools by managers in contingency planning and outbreak response.

OUTPUTS (EXPECTED RESULTS):



1. System in place whereby MS use **training credit system** to ensure training needs are addressed through a demand-driven training program;
2. Improved MS capacity to recognize, respond to and manage FMD through provision of **training programs** on clinical recognition, outbreak management and CP, and improved use of models/DST to support managers;
3. Infrastructure for **learning and knowledge transfer** in place, including e-learning, training resources and staff support.

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Output 1

“System in place whereby MS use **training credit system** to ensure training needs are met through a **demand driven** training program”

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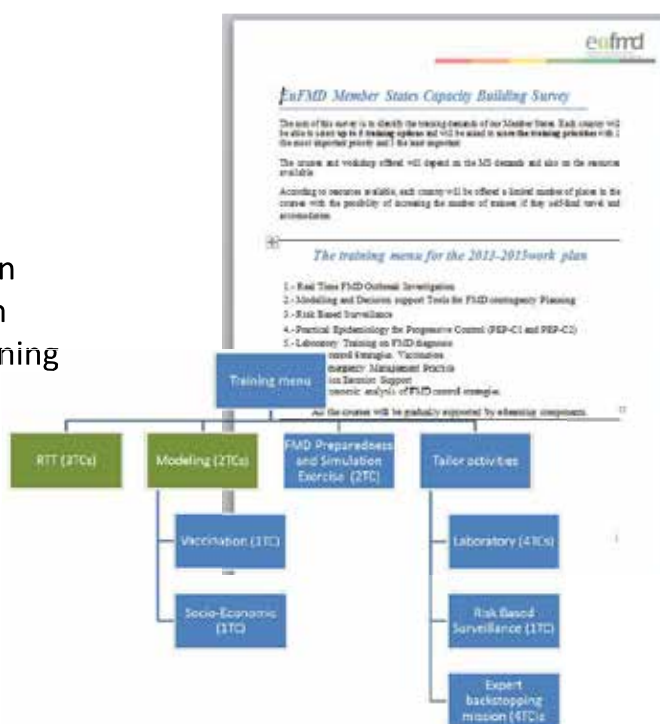


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Training Focal Points

- Each member state was asked to appoint a Training Focal Point
- Training Focal Points completed an initial training needs survey which included ranking a number of training courses by priority



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Training Focal Points

- Training focal points updated on training opportunities through regular **webinars and newsletters**
- **Periodic questionnaires** to assess ongoing training needs and receive nominations for courses
- Relationship established with focal points has allowed recent **telephone consultation** exercise on training needs



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Training Credits System

Training courses offered to Member States have included:

Real Time Training

Laboratory FMD
Diagnosis (Pirbright)

Modelling as a Decision
Support Tool

Socio-economic analysis
of FMD control strategies

E-Learning Emergency
Preparation Course

Vaccination as a Control
Strategy

Risk Based Surveillance

Bespoke in country
training

FMD Simulation Exercise
Support

Good Emergency
Management Practice

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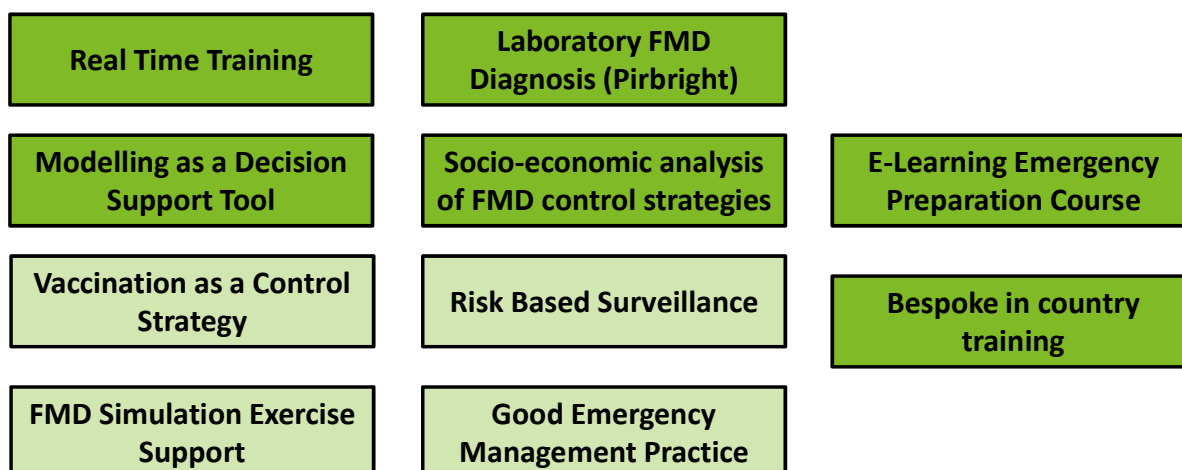


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Training Credits System

Training courses offered to Member States have included:



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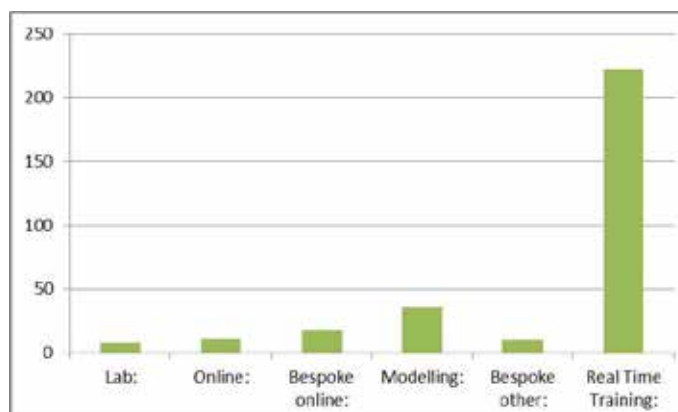


Training Credits System

To date: 93 % of training credits spent or allocated to upcoming courses



■ Spent/allocated ■ Remaining



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Courses selected by country (to March 2015)



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Training Credits “Top-Up” System

- Since October 2014, MS have been able to purchase additional training credits at **EUR 1600 per credit**
- Mechanism whereby countries with greater training needs can obtain additional training
- Two countries have so far taken up this opportunity



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Looking forwards

Training credits system is working, and can be continued and further improved by:



Encouraging **longer term planning** of training needs and courses



Continuing to improve **two way communication** with focal points



Encouraging countries to ensure **training focal points are well placed and supported** to assess their country's training needs and suitable trainees

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Output 2

“Improved MS capacity to recognise, respond to and manage FMD through **provision of training programs** on clinical recognition, outbreak management and CP and improved use of models/DST to support managers ”

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Real Time Training

- **8 courses** have been held in Kenya and 1 in Turkey. One course was held in **French** language (inc REMESA countries) and one in **Russian** (inc neighbours of Turkey and Georgia)



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Real Time Training



23-24 April 2015
41st General Session

*European Commission for the
Control of Foot-and-Mouth Disease*

1 small
FMD outbreak
in 2015
could cost
as much as
2500 years of
membership

Your
commission
wasn't built
in a day

**A brief tour of the real time training
courses**

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Real Time Training

e-Learning now forms a key part of this training course.

- Participants take a **3 hour induction course** before arriving, freeing up time during the course for practical work, discussion and advanced training.
- Participants also take a **refresher course** 6-12 months later: retaining the valuable links with trainees and encouraging cascade training.

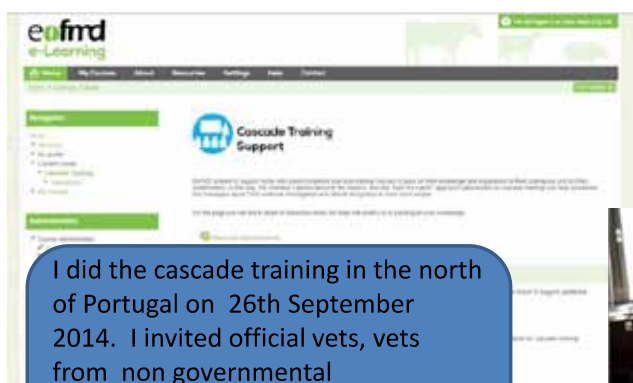


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Real Time Training

We place new emphasis on **Cascade Training** – passing knowledge on to others



I did the cascade training in the north of Portugal on 26th September 2014. I invited official vets, vets from non governmental organisations of agricultures and also municipal vets, from the north region.



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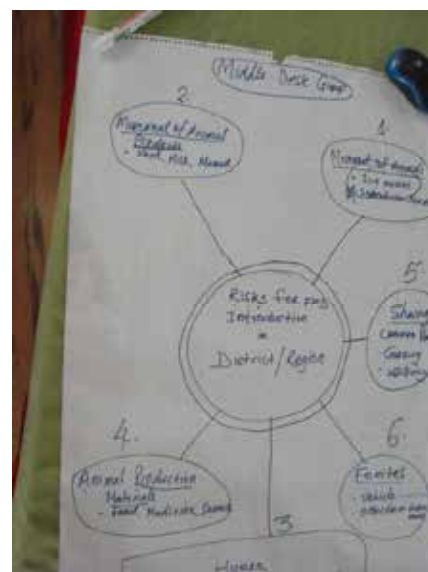
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Real Time Training

Support continues to be provided to the **host country veterinary services** to improve FMD control through:

- Training of host country veterinary staff
- Improved laboratory capacity
- Progressive Control Pathway support



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Real Time Training

How do you rate the course overall?



(collated results of post-course survey 2014-15)

"Thank you for a very very good course and a fantastic experience!"

"It is very important that this training was as the real work on the field with the opportunity for participants to see a real case of FMD outbreaks, examine sick animals in compliance with all rules and requirements of biosafety, and to collect data and materials of the epidemiological situation in the area"

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Modelling as a Decision Support Tool



**1 week workshop, held Frascati, Italy
September 2014**

- Aim to develop **“Intelligent customers”** of models to assist contingency planning
- **Interactive**, scenario led training
- Included disease spread **modelling and socio-economic** interpretation of outputs
- Used newly developed **Australian Animal Disease Spread (AADIS)** model as training tool
- Extremely valuable contributions from **Ron Bergevoet (Wageningen UR)** and **Sharon Roche and Richard Bradhurst (AUS)**



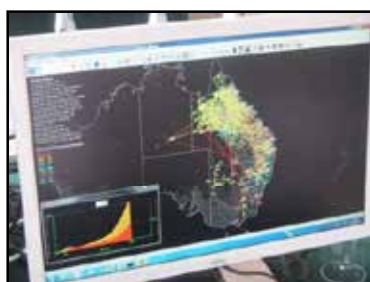
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Modelling as a Decision Support Tool



Use of AADIS

Economic
evaluation



Practical
group
tasks



Participatory
multi-criteria
decision
making
“Stakeholder”
consultation



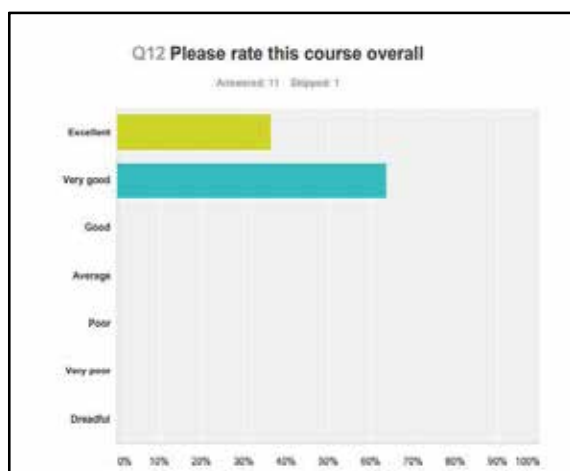
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Modelling as a Decision Support Tool



Covered exactly what I wanted in a way so I could understand it

I enjoyed: getting into details with the disease and the strategies available, and having the opportunity to discuss with other countries participants about all these matters

I enjoyed the: multi-disciplinary approach which combine epidemiology, modelling and economics. -The insight on results presentation

I would like to have gone into detail a bit more

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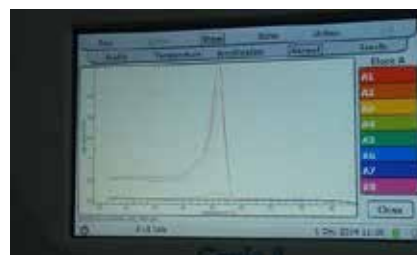


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Additional training courses

- 2 week FMD laboratory diagnostics course organised by **Pirbright Institute**
- **Bespoke training options** regional epidemiology training in Turkey, following a needs assessment



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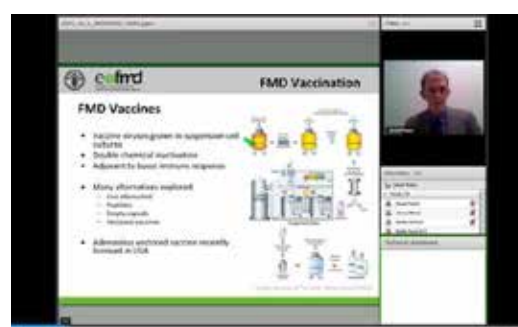
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e-Learning FMD Emergency Preparation Course

Standalone e-learning course developed

- 4 weeks
- 100 trainees
- 2 webinars
- Comprehensive assessment



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e-Learning FMD Emergency Preparation Course

Can be used in a variety of ways:

- EuFMD wide course
- Country specific course (UK and Spain)
- Emergency use (North Africa)



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e-Learning FMD Emergency Preparation Course

Translated versions

- Courtesy of the DG-SANTE
- So far French, Russian, upcoming Serbian/Croatian and Spanish



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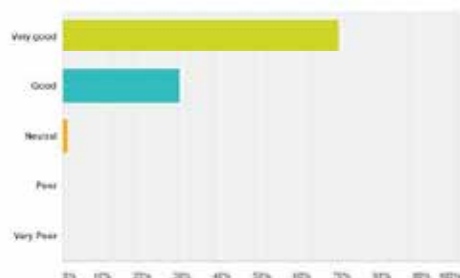
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e-Learning FMD Emergency Preparation Course

How do you rate this online course overall?

Answers: 10 | Skipped: 0

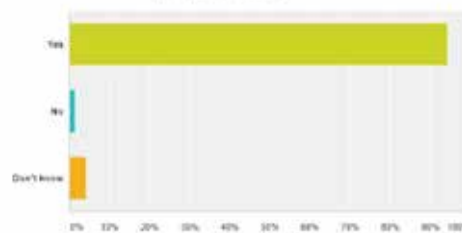


Very useful course. I have investigated a suspicion of FMD in Norway. This course will make me much calmer next time.

The ranking of sources of infection should have been a little more detailed (mostly the principles of ranking). The pictures, figures and the opportunity to discuss every question were really useful and practical.

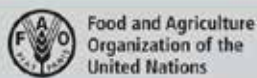
Would you recommend others in your country to take part in the online FMD Emergency Preparation Course in the future?

Answers: 12 | Skipped: 0



A great opportunity to participate in a course without spending time travelling. Perfect to be able to go through the material whenever you want to.

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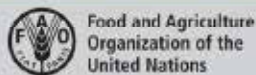
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Looking forwards

Based on consultation with EuFMD Executive Committee and Training Focal Points:

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Looking forwards

Based on consultation with EuFMD Executive Committee and Training Focal Points:



Does EuFMD have a role in reaching **wider audiences, stakeholders** (field veterinarians, industry) and **equipping national trainers?**

- translated courses
- job aids, extension materials
- knowledge banks
- open resources
- Real Time training becomes more “train the trainer” focused
- Support to national training courses

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Looking forwards

Based on consultation with EuFMD Executive Committee and Training Focal Points:



Does EuFMD have a role in reaching **wider audiences, stakeholders** (field veterinarians, industry) and **equipping national trainers**?

- translated courses
- job aids, extension materials
- knowledge banks
- open resources
- Real Time training becomes more “train the trainer” focused
- Support to national training courses



Which **new courses** will need to be developed to support growing/newly identified needs?

- Vaccination
- Contingency planning, simulation exercises
- Risk Based Surveillance

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Output 3

“Infrastructure for knowledge transfer in place, including e-learning, training resources and staff support ”

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Infrastructure for training

Training is an activity that is carried out across all of EuFMD's three pillars

- Resources developed under component 1.1 are used to support many aspects of EuFMD's work programme



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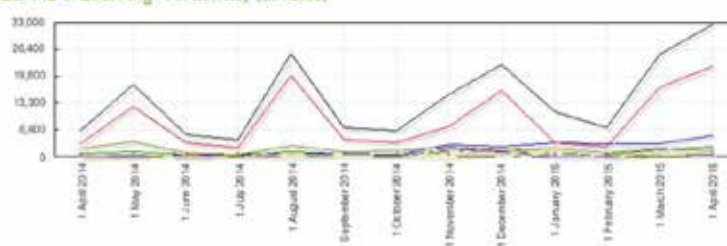
EuFMD e-Learning

E-Learning platform developed in partnership with Royal Veterinary College (UK)

- Close to 1500 registered users
- Enables networking, discussion forums, secure resource sharing alongside provision of formal e-learning training courses



EuFMD e-Learning - All activity (all roles)



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EuFMD e-Learning

Examples:

Open Session Online

- Recordings of all presentations given at Open Session, along with a discussion forum for communication with presenter and delegates
- Enable Open Session to reach over 340 **additional** participants
- Valuable reference resource



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EuFMD e-Learning



Resources



Networking



Support face to face training

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Webinars

Webinars are now used extensively across EuFMD's work programme

- As part of online training courses
- Regional training (West Eurasia)
- Networking (contingency planning, training focal points, modelling)
- Considerable cost saving on face to face meetings
- **Over 35 webinars have been held, with 10 of these in the last month**



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E-Learning and staff support

Training support officer position, plus part of the costs of development of e-learning website have been funded through agreement with Governments of Australia and New Zealand for provision of Real Time Training in Nepal.

- To date 138 participants from Aus/NZ have been trained, in 15 Real Time courses
- Significant support has been provided to the Department of Animal Health, Nepal, in improving FMD control
- Agreement recently extended to include provision of four Real Time courses and an e-learning course in 2016
- Collaboration also brings considerable knowledge- sharing and innovation to EuFMD



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Looking forwards



Build **effective infrastructure** for training across all 3 pillars:

- Additional e-learning resources developed
- Not all about e-learning! **Blended learning approaches**
- Quality assurance and impact assessment
- Re-usable training resources



Seek partnerships and **accreditation:**

- Where beneficial can we **avoid duplication and increase depth** of expertise by working together with universities or other providers?
- Does academic accreditation of EuFMD courses provide valuable trainee motivation?

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Towards breadth and depth of European FMD expertise

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Towards breadth and depth of European FMD expertise


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Towards breadth and depth of European FMD expertise

- e-learning
- translated courses
- webinars
- equipping national trainers
- knowledge banks, job aids

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Towards breadth and depth of European FMD expertise

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Towards breadth and depth of European FMD expertise

- new (demand led) courses
- partnerships
- bespoke training options

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Appendix 12

Improving Contingency Planning



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IMPROVING CONTINGENCY PLANNING

Progress with modelling, contingency planning networks and support to national simulation exercises

Fabrizio Rosso

Animal Health Officer, EuFMD

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PILLAR 1 - Improve readiness

1. **Improve readiness** for FMD crisis management by Members
2. **Reduce** the risk to Members of an FMD incursion from the neighborhood
3. **Promote** the global FMD control strategy



Component 1.2 – CONTINGENCY PLANS



Component 1.3 - THRACE



Component 1.4 - BALKANS



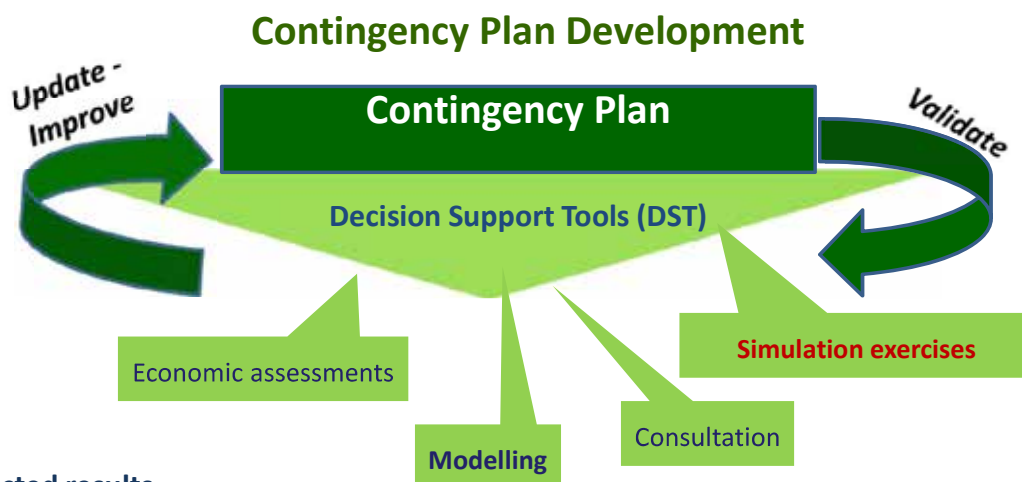
Activity indicators
Result indicators



Impact

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Component 1.2 Developing training material on Modelling , Decision Support Tools and Simulation Exercises



Expected results

1. EuFMD modelling network
2. Resources for training (modelling – socio/economic analysis - simulation exercise)
3. Network of managers in contingency planning and simulation exercise

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Activity indicators

1. Modelling

- ✓ An **EuFMD modelling network** has been established and it is growing



82 participants

- EU
- USA - Canada
- Australia - NZ

✓ Resources for training:

- Workshop on **"To vaccinate or not to vaccinate: using modelling to evaluate FMD control options"** in October 2014 (16 participants from 11 countries)
- Webinar on **"Making modelling useful for contingency planners"** in January 2015
- Webinar on **"Data-driven models of FMD dynamics: reviewing outbreak models and highlighting new research in an endemic setting"** February 2015
- Webinar on **"Modelling spread of highly infectious diseases in the EU before detection – the example of African Swine Fever"** in April 2015



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Activity indicators

1. Modelling

- ✓ An **inventory of models** and other decision support tools implemented
- ✓ A **prototype model** for the rapid assessment of FMD impacts (RVC)

2-3. Contingency planning and simulation exercise

- ✓ Supporting CPs with a **Knowledge Bank**
- ✓ **Network** of CP managers
- ✓ Development of **guidelines for simulation exercises** and other exercise (*assessment of the needs*)
- ✓ **Consultation on vaccine and diagnostic banks** (report, prioritization, coordination)



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What are the possible needs ?

According on what we have learned

- Continue the **Modelling network** webinar series.
- Development of an accessible and **easy-to-use calculator** to assess the socio-economic impact of FMD and resources needed.
- Implementation of **webinars focused on contingency planning**: Risk Communication, Diagnostic Banks and Planning Simulation Exercises.
- Development of **guidelines** with categorization and definitions of **CP exercises**
- Support on **vaccination issue** for CPs development

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Component 1.3

Establish a system which provides continuous confidence in disease freedom and which improves the chances of detecting an out break at an early stage



Expected results

1. Establishment a **co-ordination framework**
2. Establishment **system for real-time data entry** to support management of surveillance activities aimed at maintaining disease freedom confidence
3. Achieving **two years of risk based surveillance** results for FMD (and other diseases as requested by the beneficiaries countries)

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Activity indicators

1. Management and tripartite meetings →

Tripartite meetings	Management meeting
November 2013	November 2013
April 2014	February 2014
October 2014	August 2014
	December 2014

2. Database and regular reporting →



3. Active and passive surveillance and laboratory support

THRACE : FMD Report 2013-2014			
Country	N. controls in epi-units	N. animals sampled	N. cattle inspected
BULGARIA	126	5,722	13,140
GREECE	1013	5,179	7,315
TURKEY	1809	6,843	69,107*
TOTAL	2,948	17,744	89,562*

*The surveillance performed in low risk area of Turkey has been reported and included in the model

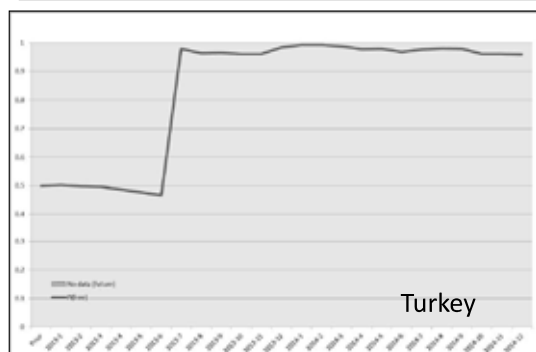
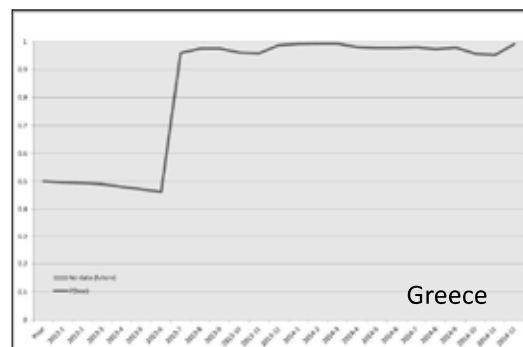
Kits delivered		
	ELISA Ab	ELISA Ag
Bulgaria	21	1
Greece	25	1
Turkey	28	2
TOTAL	74	4



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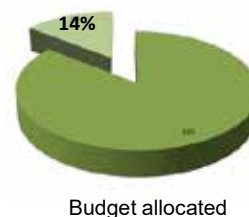
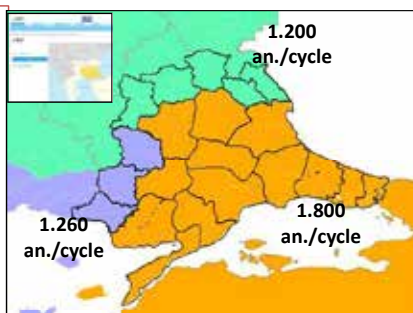
Year	Percentage of GDP
2007	0.5
2008	0.48
2009	2.9
2010	2.95
2011	2.98
2012	2.95

Bulgaria

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"Sheep and Goat Pox, Peste des Petits Ruminants, Lumpy Skin Disease"

- leaflets and posters



Passive farmer reporting sensitivity parameters				
Sensitivity of risk assessment of diseases		Food safety of products		Weighted sum
Unassisted	Strong	20	0.0	0.00
	Weak	10	0.00	0.00
Assisted	Strong	20	0.0	0.00
	Weak	10	0.00	0.00
Farmer advice disease				
Native	Enlightening	20	0.00	0.00
	Dry	10	0.0	0.00
Unassisted	Enlightening	10	0.0	0.0
	Dry	10.0	0.0	0.0
Farmer safe occurrence				
High occurrence (high risk area)	Good understanding	10	0.0	0.00
	Low understanding	10.0	0.0	0.00
Low occurrence (low risk area)	Good understanding	10	0.0	0.0
	Low understanding	10	0.00	0.00
Probability of introduction of PPR				
Personal value	Enlightening	20	20	20
	Enlightening	20	20	20
Consequences of infection (number of secondary outbreaks)				
Low risk	Enlightening	10	10	10
	Enlightening	10	10	10
Population parameters (total holdings)				
		Page no.		Year of study

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Results indicators

- ✓ **Early warning surveillance system** in high risk area for Europe
- ✓ **Network between countries** with rapid information exchange and collaboration in the area
- ✓ **Preparedness** of laboratories (regular support and testing)
- ✓ **Regular monitoring** and possibility to **adapt** to other geographic areas the programme aimed to produce an **outcome** easy to understand for policy/decision makers.
- ✓ Pilot programme for **integrated animal diseases surveillance** (FMD, PPR, SGP, LSD) implemented between different countries

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Major issues



- ☐ **Sustainability** of the activities in case of lack of resources;
- ☐ **Overlooking risks** not previously identified in the development of the targeted surveillance in 2013;
- ☐ **Adequate preparedness** of Thrace for the possible introduction of other diseases (e.g. LSD) and consequences;

What are the possible needs ?

According on what we have learnt

- Maintaining and promoting the **collaboration** between countries;
- Providing **regular support** for preserving the targeted risk-based surveillance and allowing continuous improvement of awareness;
- **Using the model developed** for FMD to analyze the surveillance implemented for other diseases (e.g. PPR)
- Assessing the **needs** (CP), if Turkey will stop FMD vaccination in Turkish Thrace
- Programme develop might be relevant for **other regions** for confidence in disease freedom

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Component 1.4

Support the development of FMD emergency capacity in the Balkan region

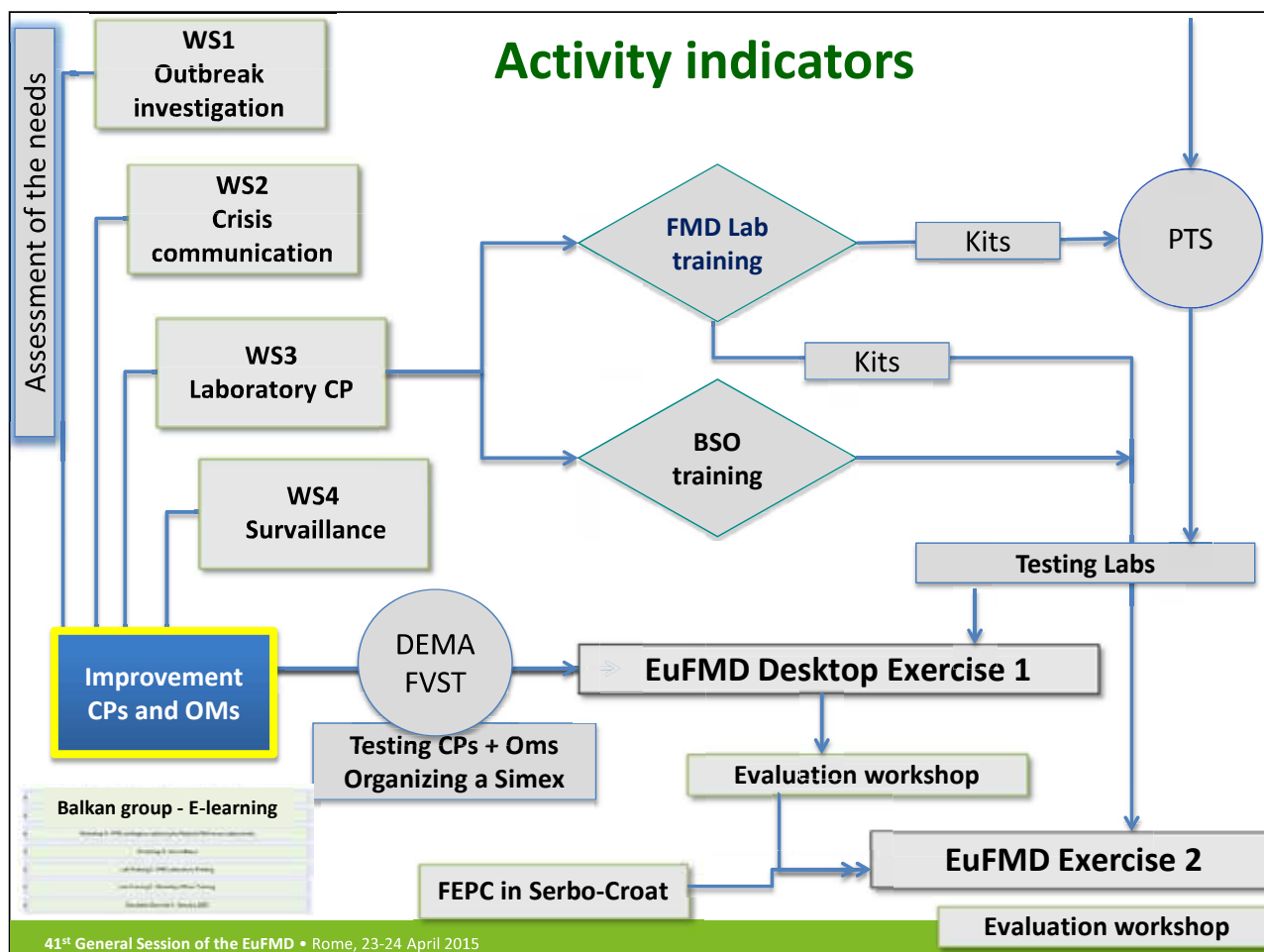


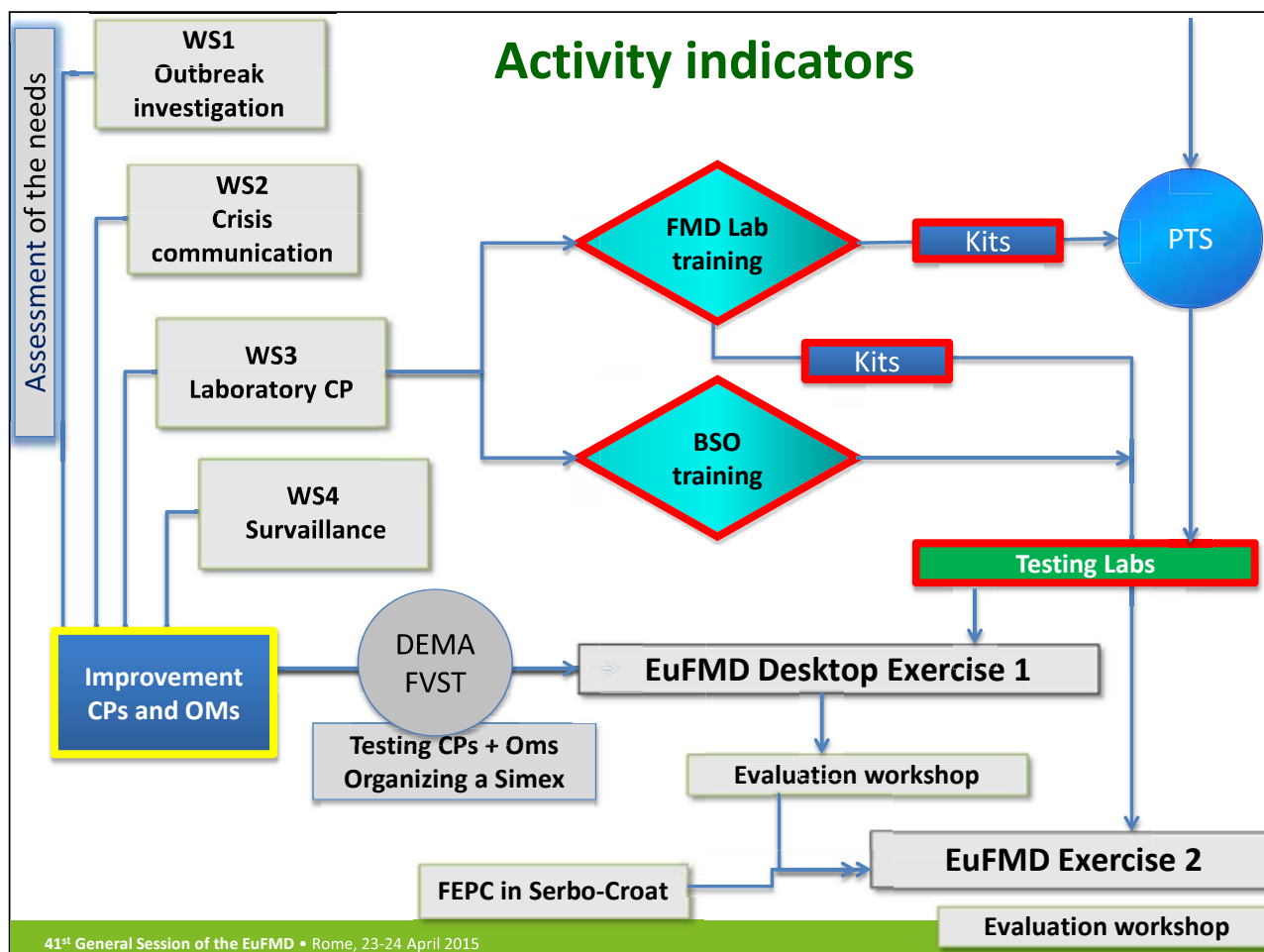
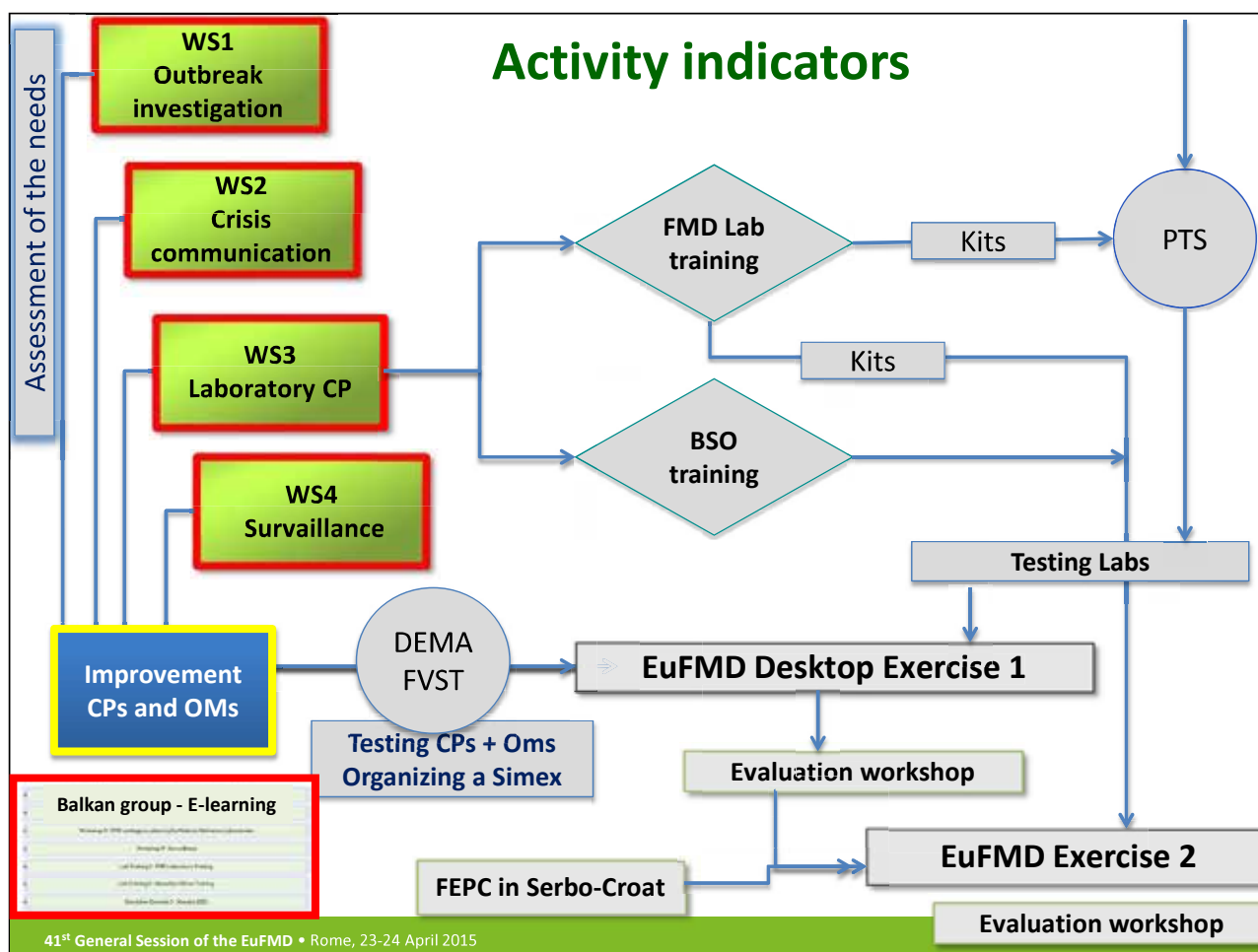
EuFMD Members: Bulgaria, Serbia, FYRO Macedonia, Croatia, Bosnia and Herzegovina, Albania,, and Greece (more recently); **EuFMD Non-members:** Montenegro, Kosovo and Moldova.

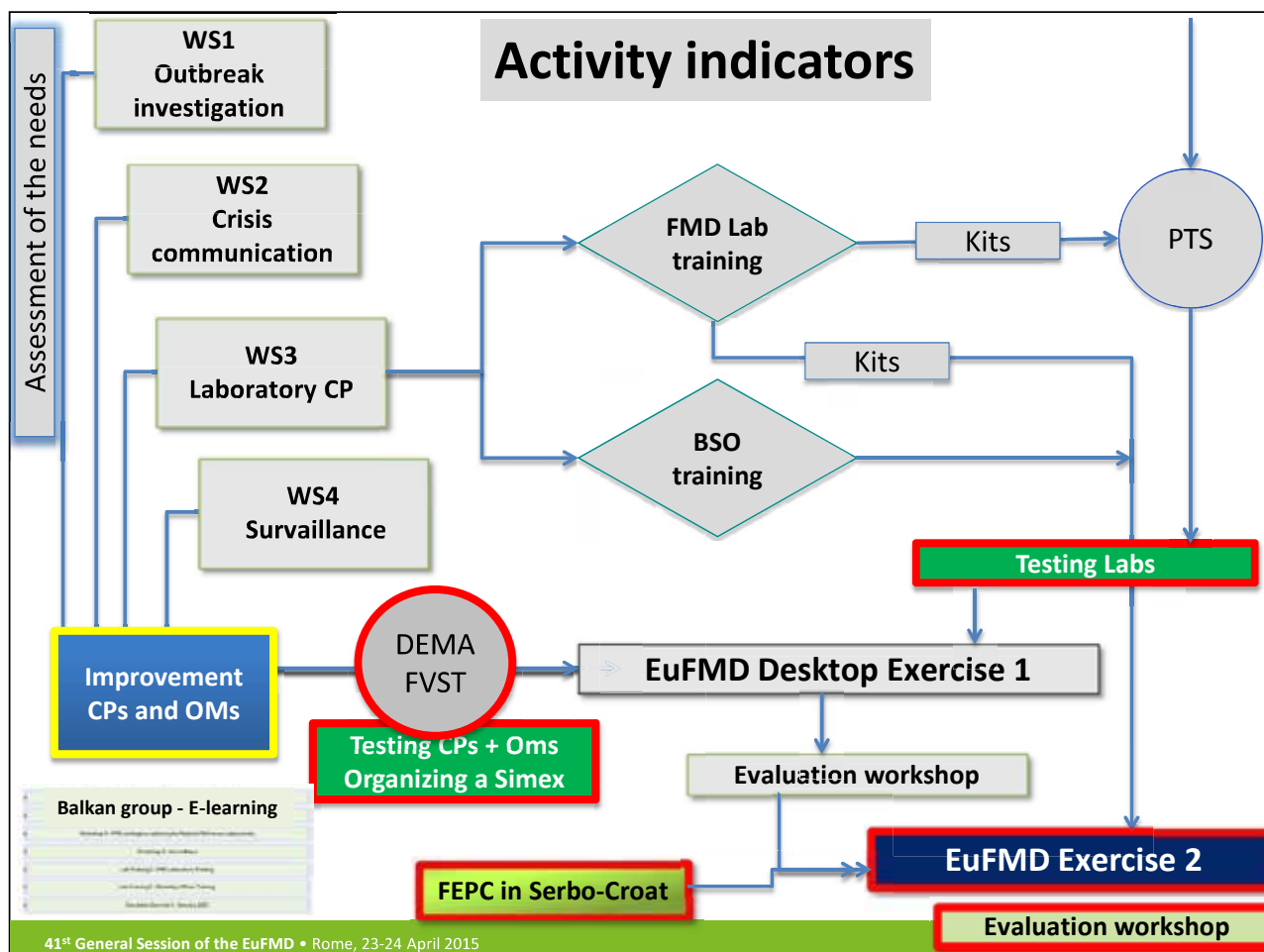
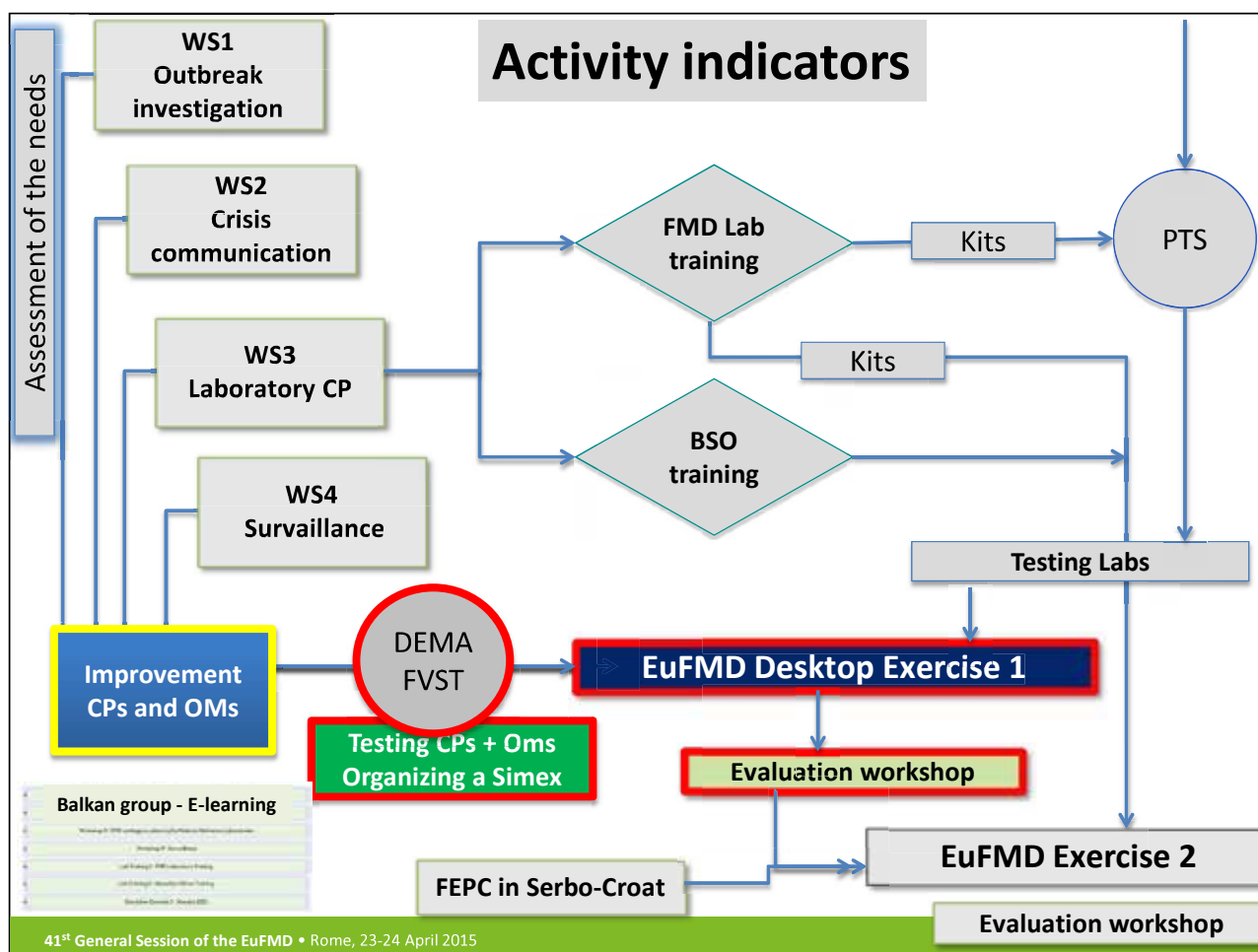
Expected results

1. **Co-ordination framework** for the western Balkan countries for emergency planning including laboratory sub-network
2. **Improving contingency plans** (training, simulation exercises)
3. Integration of **national FMD reference centres** in national CPs and **improvement of regional FMD diagnostic capacity**

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From 2012

The European Commission for the Control of FMD supports STP staff for the purpose of gaining professional experience in FMD risk management and of work in an international environment on FMD control. In 2015 the EuFMD has accepted Visiting Scientists (VS) to assist without cost.

STPs are expected to help manage work components, travel and participate in meetings and workshops, disease investigations and field missions as required and appropriate to their skill set and aspirations.

We support gender equality

57% 49%

Short Term Professionals Programme

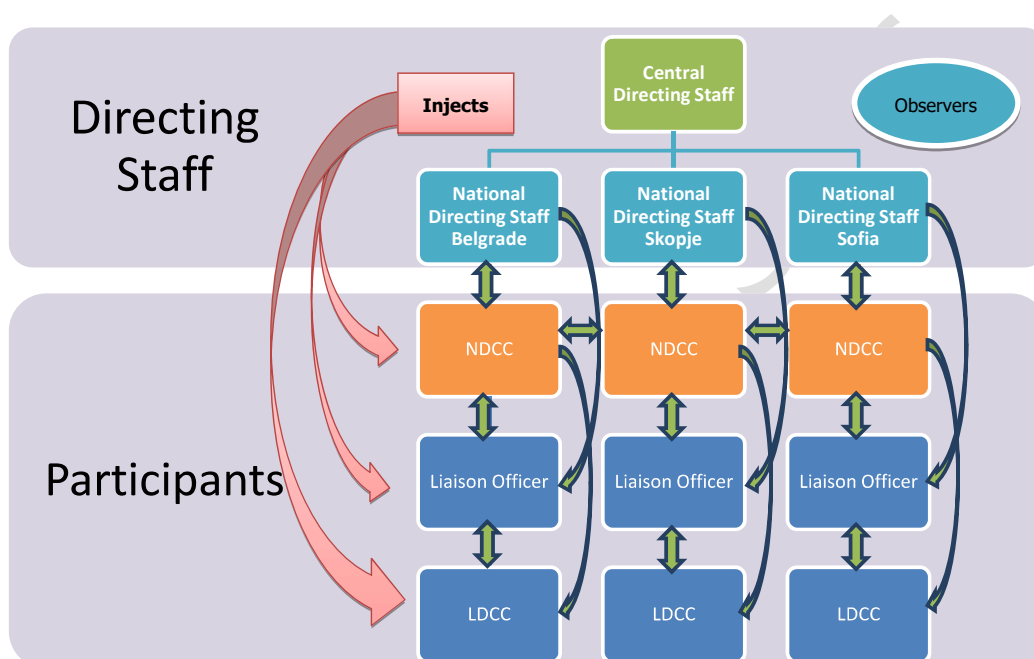
STP

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Desktop Simulation Exercise

Objectives of the desktop simulation exercise

- 1) Assist the **organization of a simulation exercise**
- 2) Drive the veterinary services in the **self assessment of their CPs**

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*How the exercise started**NDCC at work**Regular debriefings**Distaff Communication*41st General Session of the EuFMD • Rome, 23-24 April 2015*How the exercise started**NDCC at work**Regular debriefings**Distaff Communication*41st General Session of the EuFMD • Rome, 23-24 April 2015

Result indicators



- ✓ **Establishment of network** of National Focal Points and Laboratory Sub-network Contact Points
- ✓ **Positive regional impact** as the countries making progress can assist the other countries
- ✓ Development and improvement **of Contingency plans and Operational Manuals**
- ✓ Good **synergy** with other EuFMD components (1.1 and 1.2)
- ✓ **Preparedness** of laboratories (regular support and monitoring improvements)
- ✓ Development of **training material** on simulation exercise and other exercises

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Major issues



- ☐ Finalization of **national contingency plans**;
- ☐ **Procedures** of the operational manuals need to be practiced to assess their feasibility and effectiveness;
- ☐ **Lack** of sufficient dedicated **resources** can affect the contingency planning capacity
- ☐ Capability to use the '**lessons learnt**' from the activities implemented

What are the possible needs ?

According on what we have learnt

- Providing **assistance and guidance** for contingency plans and operational manuals, including Turkey in the activities;
- Improving the sustainability through a **system for mutual assistance**
- Developing the capacity of the countries to **design, implement, evaluate** different type of exercises;
- Facilitate a **Serbo-Croatian version** of the e-learning FEPC and other training material (job aids)

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Appendix 13

Pillar II



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Pillar 2: Reduce Risk to members from the FMD Situation in the European Neighbourhood *Accomplishments and Lessons Learned*

Melissa McLaws and Ibrahim Eldaghayes
EuFMD

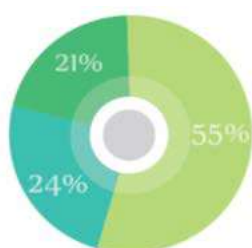
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Pillar 2 overview



EU donor: Proposed budget: Euro 4,000,000

Allocation of funds for pillar

- Improve readiness for FMD crisis management by Members
- Reduce risk to Members from the FMD situation in the European neighbourhood (Progressive Control in neighbouring regions)
- Greater implementation of the Global Strategy for the control of FMD



THREE components:

2.1: SE Europe (Turkey, Georgia and Neighbours)

2.2: SE Mediterranean (Israel, Cyprus & Neighbours)

2.3: REMESA



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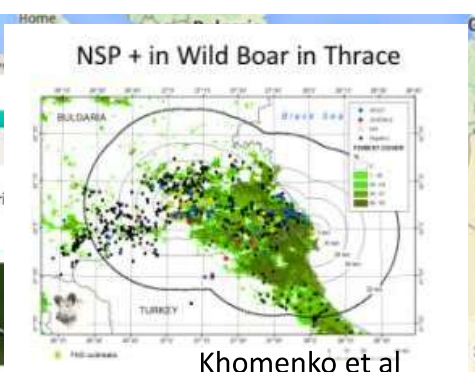
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Pillar 2 overview: *Reduce Risk to members from the FMD Situation in the European Neighbourhood*

Important risk, due to proximity and:

- N. Africa outbreaks
- Land border – movement of wildlife and possible illegal/informal trade
- Unrest in region: migrating people and animals within region and to Europe
- 3-4 serotypes circulating endemically (O, A, Asia-1, SAT2)



Khomenko et al

Source: BBC

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Pillar 2: Overview

PCP approach taken in Pillar 2

- Countries we work with are generally in PCP Stage 1 or 2
 - (exceptions: Turkish Thrace and N. Africa)
- PCP Stage 0-1: **investigating FMD epidemiology** in order to define **risk hotspots**. The final outcome of PCP Stage 1 is a **risk-based strategic plan (RBSP)** endorsed by the national VS
- PCP Stage 2: reduce FMD impact by **implementing** the RBSP – and **monitoring** that it is implemented as planned and having the desired effect
- PCP Stage 3: moving towards virus **eradication**



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Component 2.1: South-east Europe



Objective: To reduce the impact of FMD in Turkey and Georgia and to reduce the risk posed by FMD in the region to all EuFMD Member states.



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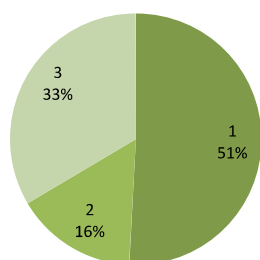


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Expected results

1. Risk based control programmes (PCP Pathway) adopted and implemented in TURKEY
2. Risk based control programmes (PCP Pathway) adopted and implemented in GEORGIA
3. Improved information system for regional risk managers which supports the West Eurasia Roadmap countries.



€ 298,100
Agreed by ExCom 86

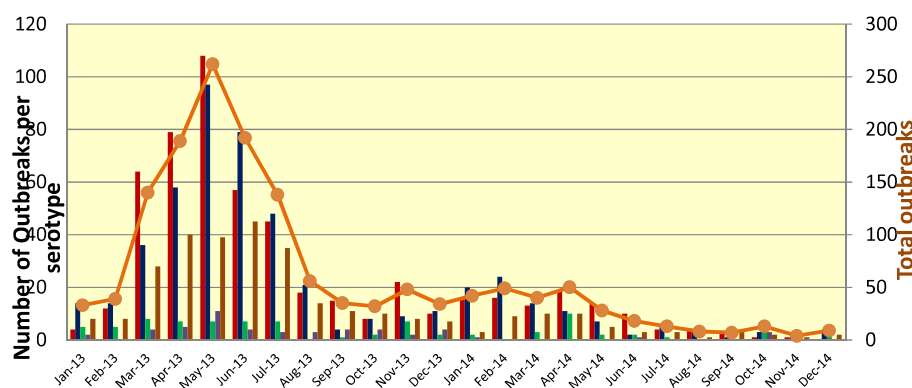
% use of funds on achieving each
results

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Slide from GDFC and Sap Institute

Outbreaks in Anatolia

Thrace region has been free of FMD with vaccination since May 2010.



- In 2013 and 2014, there has been a serious decrease of outbreak numbers in Turkey
- FMD types A, O, Asia-1 are present in Turkey
- Risk-based strategic plan is implemented
- Vaccine strains homologue with viruses seen in Turkey are used
- Vaccines are prepared and used in 6PD50 level instead of 3PD50.

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Component 2.1: South-east Europe

Achievements *Turkey*:

- Risk-based strategic plan developed.
- Monitoring and epidemiology unit initiated at headquarters

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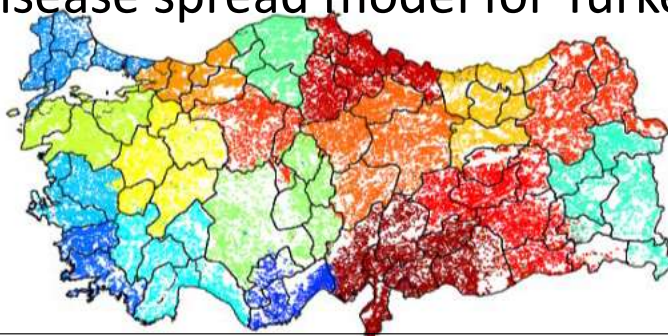


Component 2.1: South-east Europe



Achievements *Turkey*:

- Training in epidemiology provided through several short and one longer mission
- Ongoing collaboration with Warwick University to develop a disease spread model for Turkey



'communities' identified through network analysis (from Peter Dawson)

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Component 2.1: South-east Europe



Georgia

- No outbreaks reported in last 2 years

Achievements

- Risk-based strategic plan developed and being implemented.
- Georgia provisionally accepted into PCP Stage 2 in W. Eurasia Roadmap
- Technical support for serological survey design
 - Results pending



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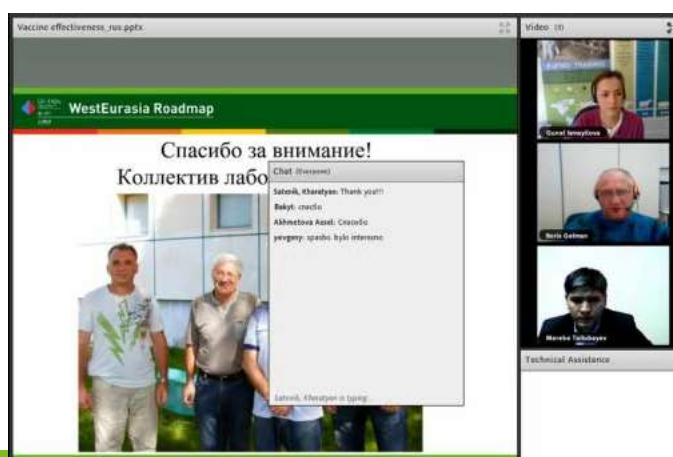
Component 2.1: South-east Europe



Achievements *West Eurasia*:

- Technical support to the **W. Eurasia Roadmap meetings** (Astana, 2014; Almaty April 2015)
- **Webinar Series** established
 - 3 webinars: English and Russian versions

2014 PCP-FMD Stages
West Eurasia Roadmap



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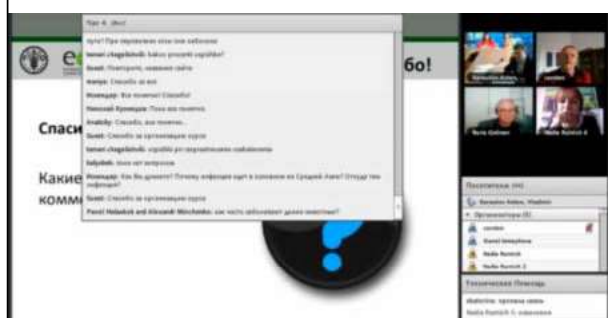


Component 2.1: South-east Europe



Achievements *West Eurasia*:

- **Real-time training course** held in Erzurum, Turkey, in Russian and Turkish (June 2014).
 - Participants from Turkey, Azerbaijan, Armenia, Georgia, Kazakhstan, Moldova, Ukraine
- **Russian-language FMD emergency preparation course** (FEP-c) held with 90 participants from 8 countries
 - Trainers from EuFMD, Kimron Institute (Israel) and ARRIAH



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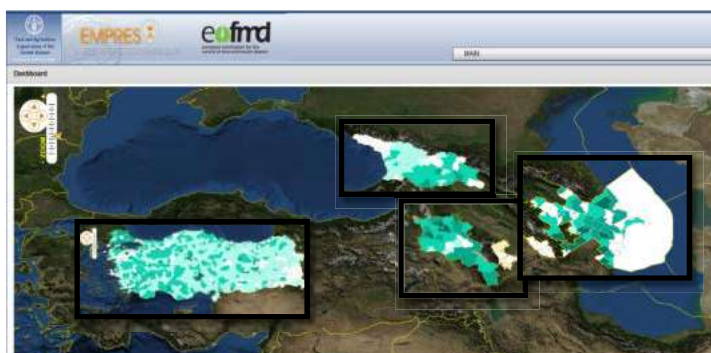
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Component 2.1: South-east Europe

Achievements *W Eurasia*:

- **West Eurasia Database:**
 - data on vaccination and outbreaks input monthly from Turkey, Georgia, Armenia and Azerbaijan
- Workshop to **scope regional project** with Russian Federation (Ankara, Jan 2015)



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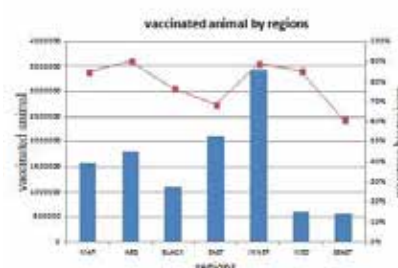
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Component 2.1: South-east Europe

Lessons Learned

- Risk-based strategic plan approach has been fully embraced by many
- RBSP development takes time.
 - with leaders in the region it might get easier (Georgia, Turkey)
- Developing a system of implementation and monitoring takes even longer
 - new way of working
 - full support and engagement of vet services essential
 - need further development in data management and epidemiology capacity



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Component 2.1: South-east Europe

Lessons Learned

Building on recommendations from W. Eurasia Roadmap meetings (held under GF-TADs umbrella) to enhance communication and information sharing in the region:

- EuFMD can offer a platform for regional networking, information exchange that is valued
 - webinars, courses, workshops
- Regional information system
 - needed to provide timely information about changing risks



Курс по Подготовке к Экстренной Ситуации по ящуру



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Component 2.1: South-east Europe

Next steps

- Moving from developing the RBSP to monitoring and implementation
- There is a demand for training:
 - In epidemiology
 - Turkey has requested further training in epidemiology for staff at headquarters and regional institutes.
 - Training of trainers (from headquarters to field)
 - To apply strategy

2012 Georgia NSP Serosurvey



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Component 2.1: South-east Europe

Next steps

- Continue to assist in W. Eurasia region in coordination with GF-TADs
 - PCP progress
 - Requests for assistance with RBSP development
 - Training materials in region languages
 - Facilitate communication/information to risk managers
 - Eg possible further development of regional database



Village epidemiological interview in Turkey

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Component 2.2: SE Mediterranean



Objective: To improve FMD management in the neighbourhood of Cyprus and Israel to support progressive control of FMD in the neighbourhood



FMD taskforce during PCP-FMD workshop

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Component 2.2: South-east Mediterranean

Expected results



1. **Risk Based Strategic Plans (RBSP)** adopted and **PCP progress** achieved (Palestine and Egypt);
2. **System established to improve confidence in disease detection and/or freedom** (as applicable) in neighbourhood of Israel;
3. **Coordination framework** in place to oversee and assist activity implementation nationally and regionally;
4. System in place to provide **improved disease risk information** to managers in Israel and Cyprus re: current threats from sub-Saharan East Africa.



Local expert on vet epidemiology, teaching data management

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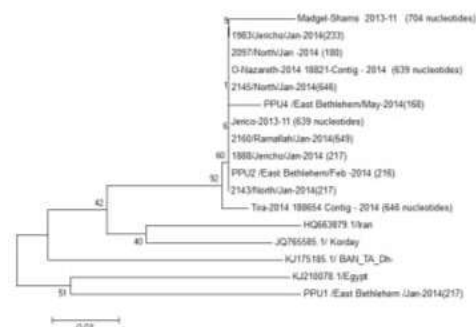


Component 2.2: South-east Mediterranean

- Last outbreaks reported: Israel Jan 2014; Palestine Nov 2014

Achievements *Palestine*

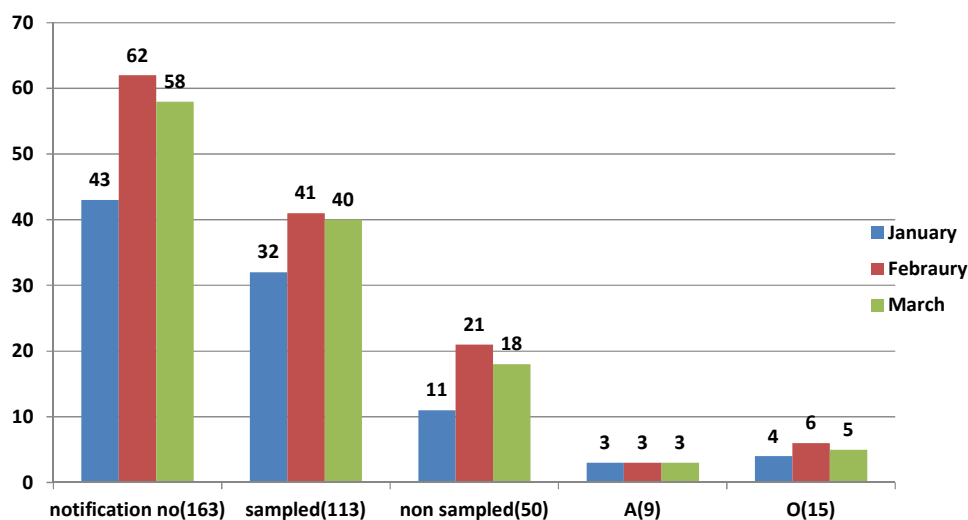
- 4 workshops on risk-based strategic plan development and laboratory capacity.
- Training:
 - disease outbreak investigation, survey data collection
- Serological survey
- Collaboration with Hebron Polytechnic University on sequencing



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Component 2.2: South-east Mediterranean

Egypt: notification and confirmed serotypes



➤ *O EA-3 (African origin) and A Iran05 Bar08 probably predominant*

Chart from GOVS

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Component 2.2: South-east Mediterranean

Achievements *Egypt*

- 4 workshops on RBSP development and lab capacity.
- Training on disease outbreak investigation, forms and SOPs
- Technical backstopping in data management and epidemiology (through local expert on vet epi)
- Postvaccinal monovalent bovine antisera against Egyptian vaccine strains produced and submitted to WRLFMD for vaccine matching together with FMDV vaccine strains ;



Figure 2: THREE Components
1. SouthEast Europe: Turkey, Georgia and neighbours
2. SouthEast Mediterranean: Israel, Cyprus
3. REAMES



Discussion with farmers during ring vaccination

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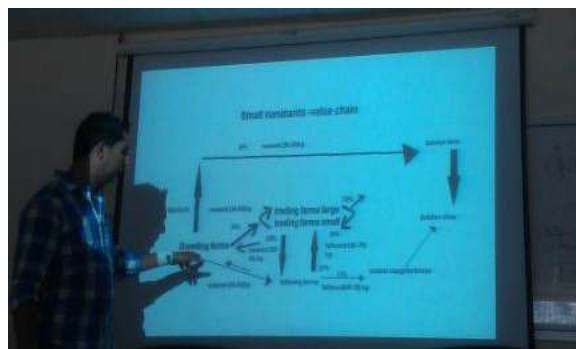
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Component 2.2: South-east Mediterranean

Lessons Learned

- RBSP approach well received
- Lack of information from neighbouring countries in region is an important gap
 - Lebanon, Jordan
- Needs and challenges similar to other Pillar 2 countries
 - Training,
 - Capacity building in VS



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Component 2.2: South-east Mediterranean

Next steps

- Continuation of workshops and capacity building in Palestine and Egypt:
 - Finalise RBSP and move to implementation
 - Emphasis on monitoring and evaluation;
 - Need for capacity building in epidemiology foreseen
- Work in coordination with others to ensure risk managers have the information they need
 - GF-TADs Middle East Roadmap is stimulating PCP progress in the region



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Acknowledgements

- *Consultants and Component managers:* Chris Bartels, Kees van Maanen, Carsten Potzsch, Nick Honhold, Gunel Ismayilova
- *Veterinary Services:* Egypt, Georgia, Israel, Libya, Mauritania, Palestine, Turkey
- *ARRIAH:* Alexei Mischenko and Anton Karaulov
- *Kimron Veterinary Institute:* Boris Gelman

Appendix 14

Report on Global Strategy



Report on the Global Strategy

Samia Metwally (FAO) and Joseph Domenech (OIE)
on behalf of the FAO-OIE GF-TADs FMD Working Group

S. Metwally
G. Ferrari
J. Pinto



J. Domenech
N. Leboucq
L. Weber-Vintzel



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GF-TADs
GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES



41th General Session of the EuFMD, 23-24 April 2015, Rome

Presentation Outlines

- FAO field support to membership towards FMD control
- Implementation of the global strategy
- OIE support to membership



Institute for Animal Health

FAO Strategic Objectives in Context of FMD Control



SO1: Contribute to the eradication of hunger, food insecurity and malnutrition



SO2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner



SO5: Increase the resilience of livelihoods to threats and crises



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3

Mission to DPRK March 2014

- ❖ Request by the CVO to:
 - assess the new incursion of FMD
 - advise on control and response plan
 - evaluate and support capacity development in dx and epidemiology
 - ❑ **Swine: O/Mya-98**
 - ❑ **Cattle: O/ PanAsia and A/SEA97**
- ❖ Supported by FAO Technical Cooperation Program for emergency for:
 - Strengthening dx capability
 - Improving farm biosecurity- swine production
 - Bldg capacity in epidemiology, disease investigation and sample collection



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CMC-AH Mission in Uganda July 2014

The overall objective of the mission was to support the Government's emergency response to the current Foot-and-Mouth Disease outbreaks.

- Outcome: supported vaccine purchasing and will assist in PVM



- serotype O
- Clinical diagnosis
- SAT + O

Legend

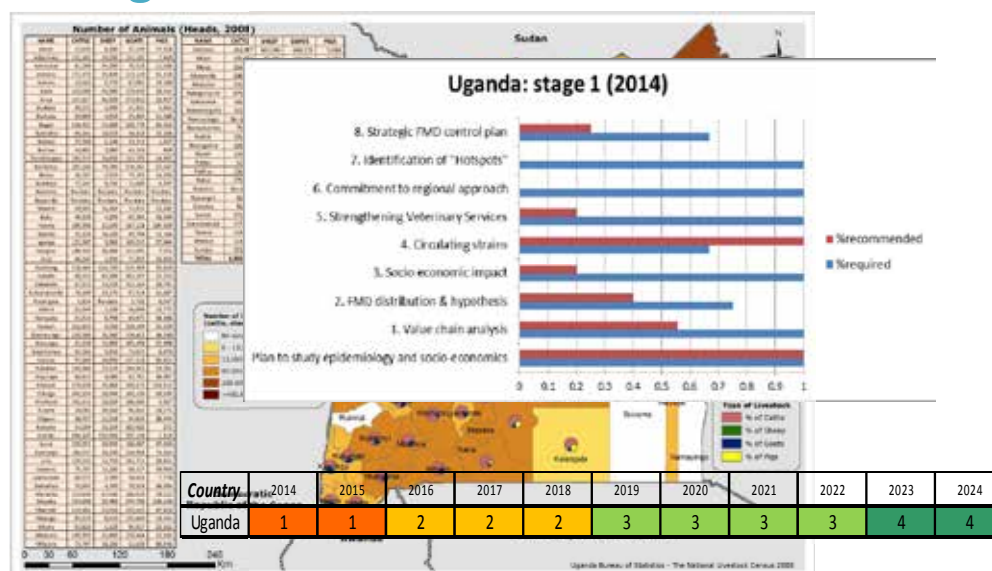
- Lakes
- FMD Reported Districts
- District Boundaries

0 25 50 100 150 200 Kilometers



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Uganda FMD Status 2012-2014



FMD outbreaks: in 2012, 2013 and 2014.

FMD Serotypes: Serotypes O, A, SAT 1, SAT2 AND SAT 3

It was reported that the **buffalo populations** have increased

This represents an **increased of risk of future outbreaks** as there is no control over the cattle/wildlife interface.



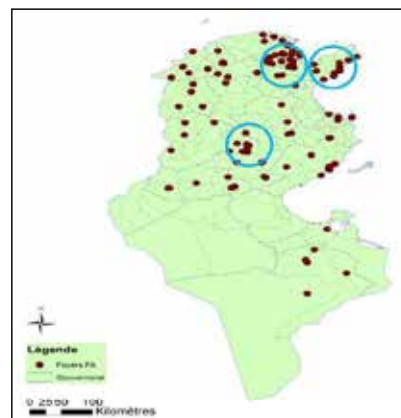
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Tunisia- Emergency support to the incursion of O/ME-SA/Ind-2001

- Review FMD status and identifying high risk area and hotspots
- Increase resilience for response and control
- Improve surveillance capacity
- Improve diagnostic capabilities and provide dx reagents
- Evaluation of vaccination program effectiveness

Project started in December 2014

- Support to lab equipment and supplies
- Regional training (train the trainer program)
- National surveillance is about to start
- Vaccination strategy is in the planning



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Egypt 2014-2015

- FMD surveillance at borders with Sudan and Libya
- Providing Dx kits
- Bench training at IZSLER, Italy

Algeria 2015

- Ongoing outbreak of **O/ME-SA/Ind-2001** strain
- FMD surveillance; NSP and PVM
- Dx kits

Sri Lanka 2014

- Vaccine tendering process and doses

China – Mongolia – Russia

TCP: 'Cross border trade and TAD risk reduction'

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FAO Projects on FMD and PPR in Afghanistan and Pakistan



Objective of the project for Afghanistan is to advance to stage 2

	validated stages							provisional stages (not validated)																
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025						
Afghanistan	0	1	1		1	1	1	1	2	2	3	3	3	4	4	4	4							



Pakistan to achieve PCP stage 2 this year

	validated stages							provisional stages (not validated)														
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025				
Pakistan	0	1	1		1	1	2*	2	2	2	3	3	3	3	3	4	4					



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9

South America

FAO supported FMD control in Bolivia, Ecuador, Venezuela, Peru and Colombia (2009-2013) through Spanish and Italian Cooperation (2009-2013). No outbreaks reported since 2012.

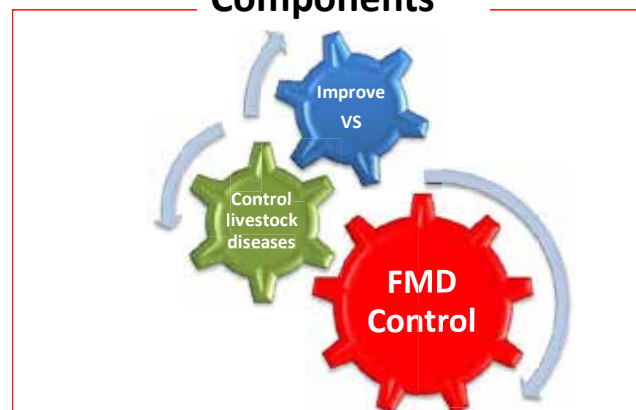




FAO- OIE Global FMD Control Strategy, 2012

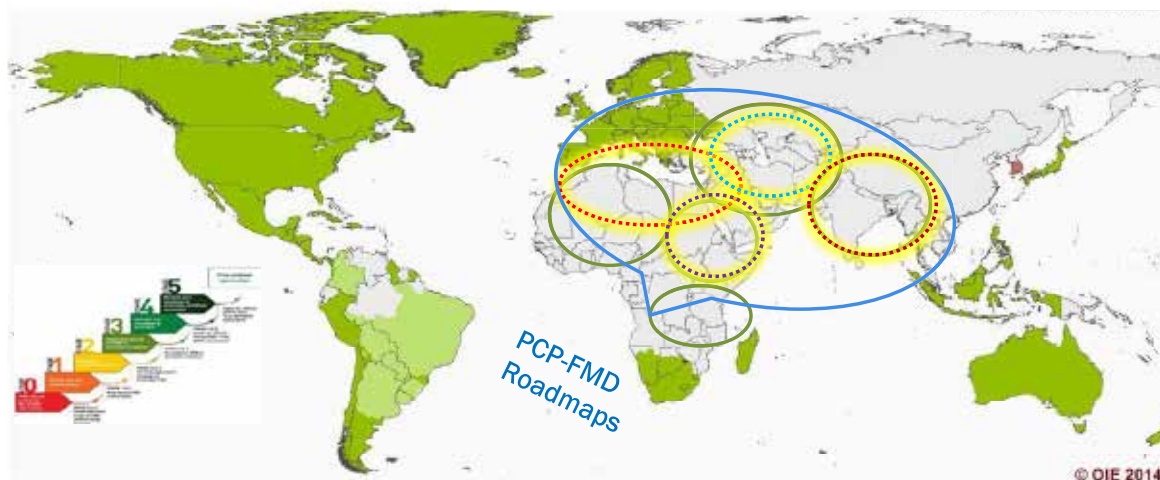
- Developed in consultation with FMD experts and representatives of key countries and regional organizations
- Fifteen-year plan with five-year increments
- Implementation is tasked and coordinated by GF-TADs FMD WG (meets every 2-3 months + TCs when required)

Components



Virus Pools and FMD Control Programs Roadmap Meetings Since 2012

OIE Member Countries' official FMD status map



Country/zone free without vaccination
Country/zone free with vaccination

Suspension of the status free without vaccination
Suspension of the status free with vaccination

No recognised status



GF-TADs
GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES
OIE

2nd SAARC Roadmap (virus pool 2) October 2013

First roadmap 2011 - 5 countries

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bangladesh	1	1	1	2	2	2	3	3	3	4
Bhutan	1	1	1	1	1	2	2	3	3	3
India	3	3	3	3	4	4	4	4	4	4
Nepal	1	1	1	1	1	2	2	2	2	3
Sri Lanka	1	1	1	2	2	2	3	3	4	4



2nd East Africa Roadmap (virus pool 4) October 2014

First roadmap in 2012 - 12 countries

Country	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Burundi	1	1	1	2	2	2	3	3	3	4	4
Djibouti	1	1	1	2	2	2	3	3	3	4	4
DRC	1	1	1	1	2	2	2	3	3	4	4
Eritrea	1	1	1	1	2	2	3	3	3	4	4
Ethiopia											
Kenya	1	2	2	2	2	2	3	3	3	4	4
Rwanda	2	2	3	3	3	4	4	4	4	4	4
Somalia	1	1	1	1	2	2	2	2	2	2	2
South Sudan	1*	1	1	1	1	1	1	1	1	2	2
Sudan	2*	2	2	2	3	3	3	3	3	4	4
Tanzania	1	1	2	2	2	2	3	3	3	4	4
Uganda	1	1	2	2	2	3	3	3	3	4	4

*Provisionally accepted

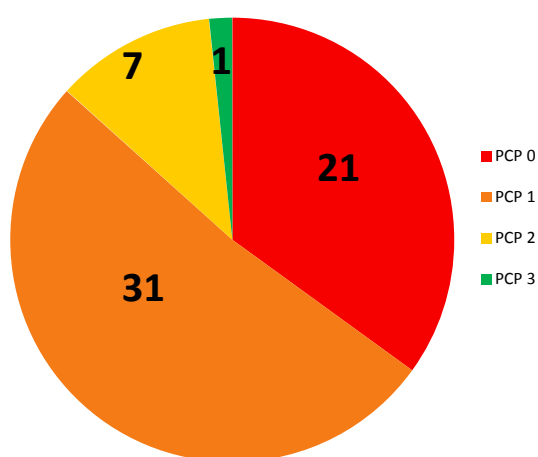
EuFMD supported this with technical experts



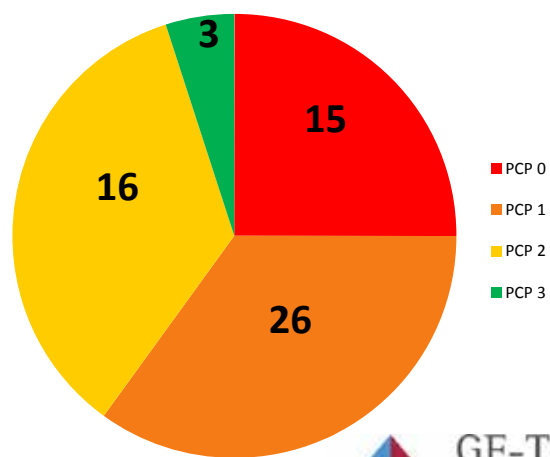
Food and Agriculture Organization
of the United Nations

PCP-FMD Progress of Participating Countries (60) 2012- 2014

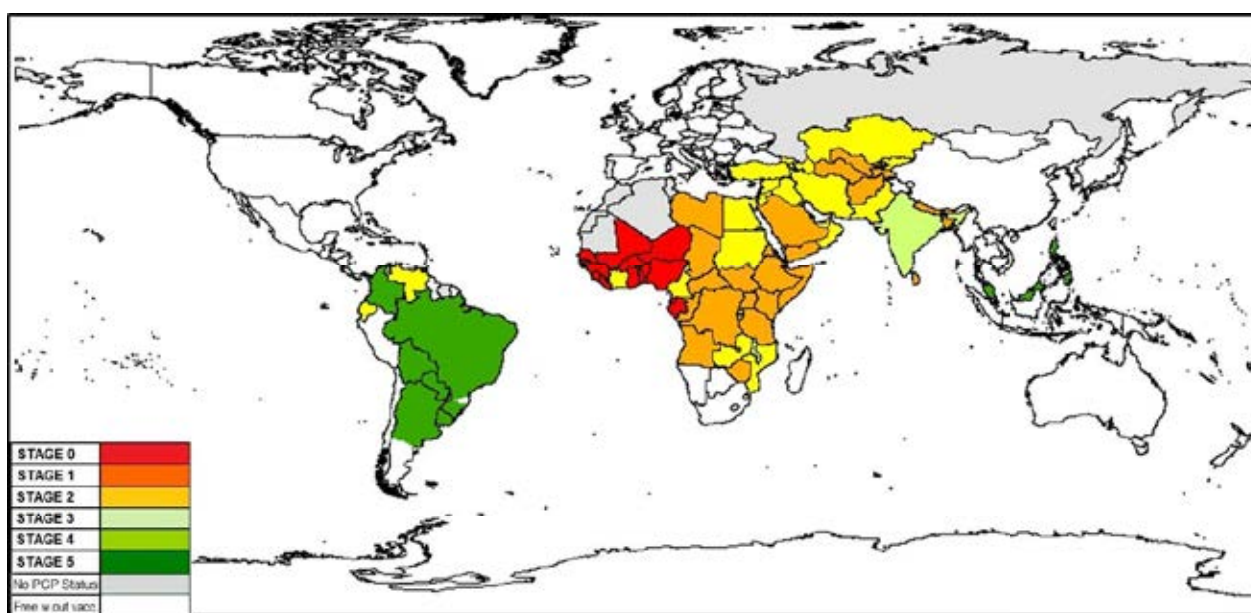
PCP Stages 2012



PCP Stages 2014



Global PCP-FMD Map 2014



1st PCP-FMD HQs Training for FAO Staff July, 2014

1. Two-day workshop for 20 participants
2. Objectives:
 - a. Share knowledge and experience in implementing PCP in the field with main focus on stages 1-2
 - b. Learn how organize and implement a Risk-Based Strategic Plan (RBSP) and how to determine risk hotspots through a simulation exercise



EuFMD supported this training with PCP-experts



Food and Agriculture Organization
of the United Nations

1st PCP-FMD Field Training for FAO Staff in Africa and Middle East, October 2014

Main Objectives:

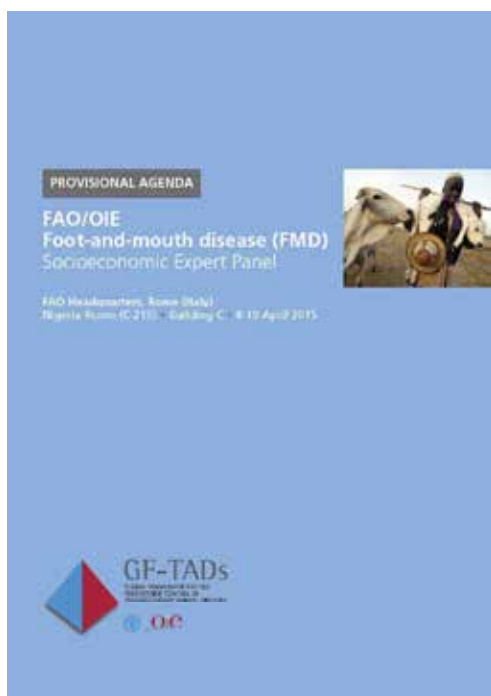
- support national veterinary services in assessing their PCP-FMD status
- support countries to enter Stage 1 (assessment plan) and Stage 2 (Risk based strategic plan)
- conduct training at national and regional levels on the PCP principles
- assist in conducting a Regional Roadmap meeting

**EuFMD supported this
training with PCP-experts**



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Socioeconomic Guidelines



To develop guidelines on FMD socioeconomic issues along PCP pathway to support Joint FAO/OIE Global FMD Strategy:

- FMD socioeconomic impact assessment
- Cost effectiveness and cost benefit analysis of FMD control interventions
- Financial investments for FMD control and elimination and FMD risk management

Chair of the Panel: Helmut Saatkamp (Wageningen University)

Report Global FMD Control Status

- Progress on FMD Control
- Global virus circulation – ref lab network
- FMD research - GFRA
- Capacity development
- Change in international standards

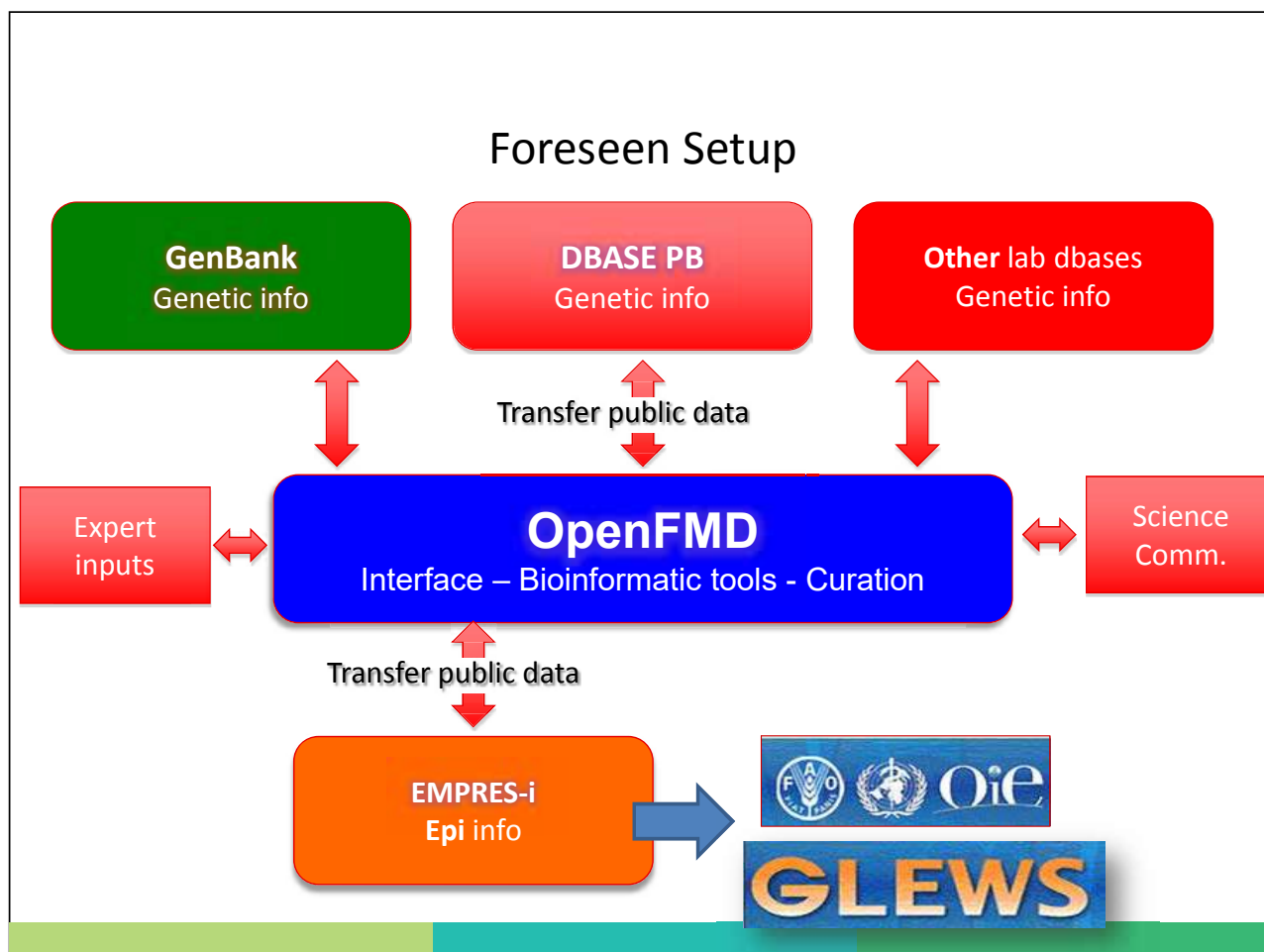
To publish in 2015

EuFMD supported this with short term professional staff and technical experts



OpenFMD Database

- The existing GenBank / EMBL / DDBJ are data repositories have no quality check
- Provide an open access database for scientists
- BETA Version developed: - www.openfmd.org
- Open access with easy upload
- Curation – automatic (sequences and annotations)
- Data mining tools inside a specialized browsing database
- Sequence Similarity Maps, alignment, phylogenetic trees, geo-location
- Vaccine matching data



FAO-OIE FMD WG Work Plan 2015-2016

1. Prepare a joint FAO-OIE FMD concept Note for resource mobilization
2. Prepare FMD Global report, publish in 2015
3. Technical Workshops in collaboration with EuFMD (PCP, PVM, Socioeconomics, etc.) for Middle East, North Africa and/or East Africa
4. GF-TADs FMD Roadmap Meetings: West and Central Africa, SADC, SAARC, [West Eurasia](#) and Middle East/North Africa
5. Mini RAG meeting for East Africa roadmap with OIE general session in 2015
6. Publish the second edition of PCP-FMD Guidelines and Questionnaire (Expert meeting)
7. Develop socioeconomic Guidelines
8. Finalize post-vaccination monitoring Guidelines
9. OpenFMD database for FMD genomic exchange and vaccine matching
10. Establish the FMD global expert and support group and trained them (support from EuFMD)
11. Finalize assessment and control plan guidelines for PCP stage 2 as GF-TADs documents



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Acknowledgments

- FAO Decentralized offices, AGAH staff, and ECTAD teams
- EuFMD secretariat
- Continental and Regional organizations: AU-IBAR, IGAD, EU
- Italian government for funding the FMD global secretariat, 2013-2015

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Appendix 15

Progress on implementation



The Global FMD Control Strategy State of play after the Bangkok Conference

**Joseph Domenech and Samia Metwally
on behalf of the FAO/OIE GF TADs Working Group**



**40th General Session of the European Commission for the
control of Foot and Mouth Disease (EuFMD)
22-24th April 2013, Rome, Italy**

40th General Session of the EuFMD • 22-24 April 2013, Rome (Italy)



Towards Global Control and Eradication of FMD

**OIE/FAO Global Conference on Foot and Mouth Disease
with the support of the EC
THE WAY TOWARDS GLOBAL CONTROL
24-26 June 2009, Asunción Paraguay**

**FAO/OIE GLOBAL CONFERENCE ON
FOOT AND MOUTH DISEASE CONTROL**



**BANGKOK, THAILAND
27-29 JUNE 2012**





Head lines of the joint FAO/OIE Global FMD Control Strategy

- FMD control is not an utopia: we can do much better with existing means and methods**
- Only regional approaches will be successful as history has shown (Europe, South America, SE Asia)**
- Regional approaches should take into account regional differences (for instance wildlife issue in Southern Africa)**
- FMD-endemic countries should be better aware of the damage caused by FMD and the opportunities lost [clear need for more socio-economic studies]**



Head lines of the joint FAO/OIE Global FMD Control Strategy

- Focus should be on FMD-endemic countries using a progressive, risk-based approach**
- Maintain FMD-free status and countries are requested to support the Global FMD Control Strategy, for reasons of solidarity as well as well-understood own interest (control at source)**
- FMD control hand in hand with improvement of Veterinary Services (VS) – FMD Control Strategy Component 2**
- Will create better possibilities to control other major diseases of livestock – FMD Control Strategy Component 3**



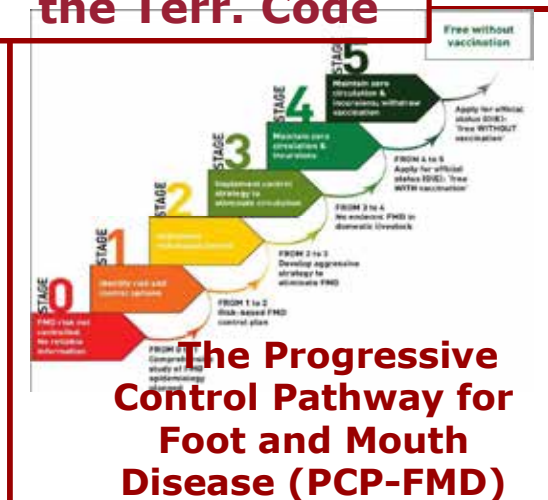
The FMD Control Strategy intends to strengthen the vital disease control supporting functions:

- **Laboratories:** national, regional, international, coordinating global lab and Networks; provision of additional expert staff
- **Epidemiology (and economics):** national teams, regional, international centers/Collaborative Centers, Networks; additional expert staff
- **Vaccines:** availability, Quality Assurance; Quality Test Centers, regional vaccine banks; correct use, vaccination planning

Tools

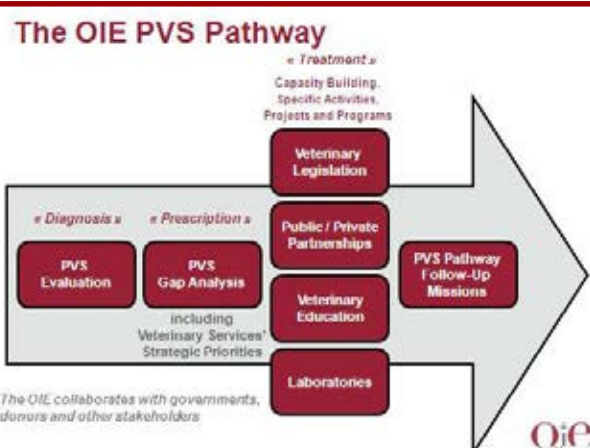
Epidemiology teams

OIE: Standards, new article in the Terr. Code



The Progressive Control Pathway for Foot and Mouth Disease (PCP-FMD)

Laboratories Vaccines





The FMD Control Strategy supports in the more advanced FMD-PCP control stages:

- Emergency responses
- Identification of farms and animals
- Biosecurity
- Public/private partnerships

The FMD control Strategy advocates for continued research, in particular in the field of diagnostics, strain characterization, vaccines, vaccine quality control and epidemiology



Chronogram of the Global FMD Control Strategy (Component 1)

PCP Stage at year 0	PCP Stage at the end of year 5					PCP Stage at the end of year 10					PCP Stage at the end of year 15				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
0	100 ⁸					10	75	15				50	50		
1	10	75	15				60	30	10			10	70	20	
2	–	25	50	25				60	30	10			25	50	25
3	–		50	25	25			10	50	40			10	20	70
4	–			50	50				25	75					100
5	–				100					100					100



Expected results:

Of the countries presently in FMD-Progressive Control Pathway (PCP) stage, at the end of year 5:

- **0. 100% has reached PCP stage 1**
- **1. 75% has reached stage 2; 15% stage 3 and 10% remained in stage 1**
- **2. 50% has reached stage 3, 25% stage 4 and 25% remained in stage 2**
- **3. 25% has reached stage 4, 25% stage 5 and 50% remained in stage 3**
- **4. 50% has reached stage 5 and 50% remained in stage 4**
- **5. (Officially FMD-free with vaccination): 100% maintained their status**



Action plan

Action plan was worked out in the form of typical activities

- **At country level – for each of the PCP stages and for each of the Strategy components**
- **At regional level (for stages 1 - 5)**
- **At global level (for stages 1 – 5)**

The Global FMD Control Strategy and supporting documents are available on the websites

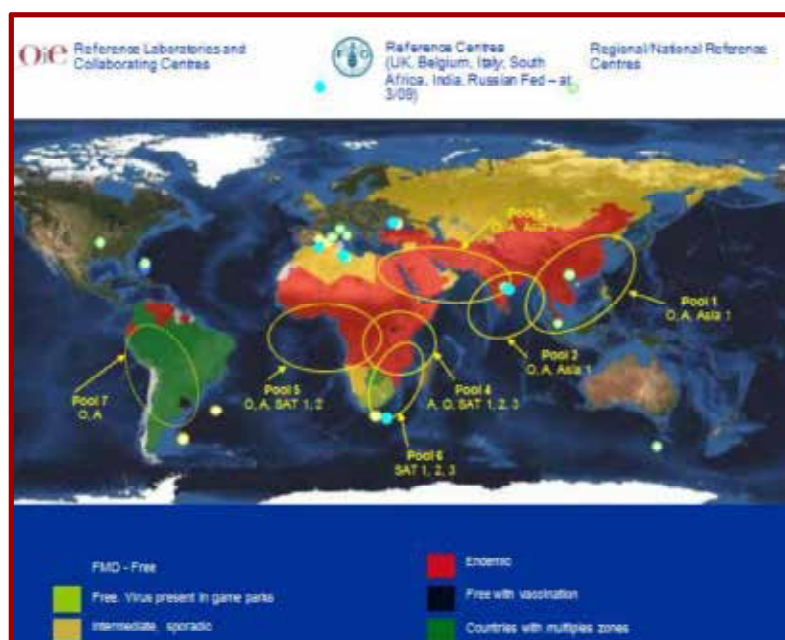
- www.FMDconference2012
- <http://www.oie.int>



From concept to practice

- Bangkok was not a pledging conference
- Over 100 countries, regional org., development partners and stakeholders supported the FAO/OIE Global FMD Control Strategy

New or intensified FMD control programmes at the national level, but in a regional context, in particular in virus pool, regions 3, 4, 5 and 6





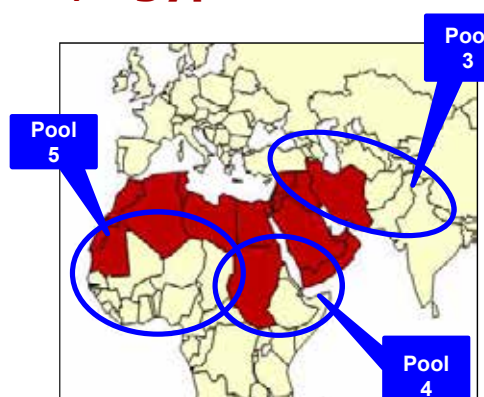
To convince countries to step up their FMD control activities Regional meetings

- To advocate for more commitment and investment.
- To promote harmonized preparation of national strategies and project proposals
- To monitor the situation and control program implementation
- To develop regional and sub regional strategies when appropriate



Regional meeting Near East and North Africa 4-5 December 2012, Cairo, Egypt

- Presented approaches in the development of regional contingency plan and methodologies of conducting socioeconomic impact analysis
- Identified priorities and actions for regional support
- Drafted and reviewed the regional strategy for the Near East and North Africa



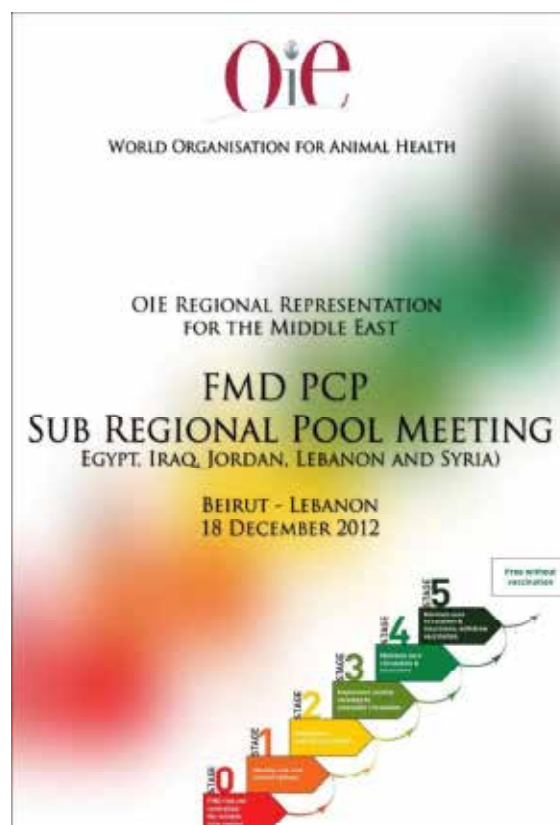
Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Algeria	OIE-CP									
Bahrain	1	2	2	3	3	3	4	4	4	4
Egypt	1	1	1	1	2	2	2	2	3	3
Iran	2	2	2	3	3	3	4	4	4	4
Iraq	2	2	2	2	2	2	2	3	3	3
Jordan	1	1	2	2	3	3	4	4	4	4
Kuwait	2	2	3	3	3	4	4	4	4	4
Lebanon	1	1	2	2	3	3	3	4	4	4
Libya	1	1	1	2	2	2	2	2	3	3
Morocco	OIE-CP									
Mauritania										
Oman	2	2	3	3	3	4	4	4	4	4
Qatar	2	2	3	3	3	4	4	4	4	4
Saudi Arabia	1	1	1	1	2	2	3	3	3	3
Sudan zone A	1	2	2	2	2	2	2	3	3	3
Sudan zone B	1	2	2	2	2	2	2	2	2	2
Sudan zone C	1	2	2	2	2	2	2	2	2	2
Syria	2	3	3	3	4	4	4	4	5	5
Tunisia	OIE-CP									
UAE	1	2	2	3	3	3	4	4	4	4
Yemen	1	1	1	1	2	2	2	2	3	3



Regional meetings for the Middle East

**18 December 2012
Beirut, Lebanon**

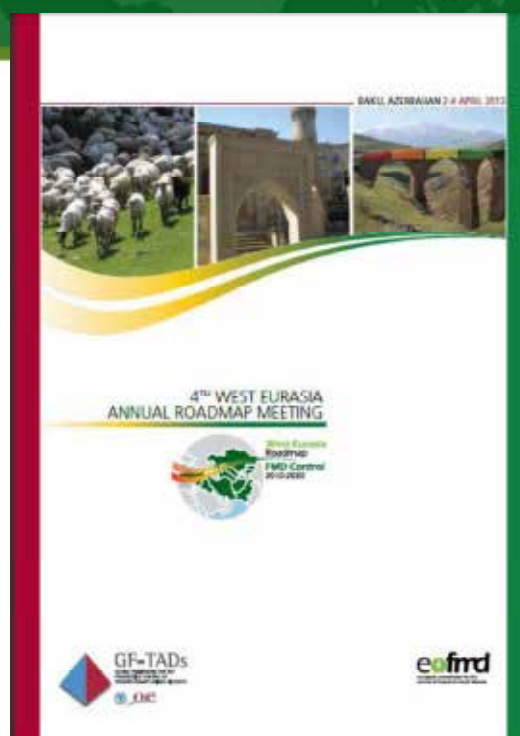
**East Mediterranean
Countries
Egypt, Iraq, Jordan,
Lebanon, Syria**



WestEurasia Roadmap

**2-4 April 2013
Bakou, Azerbaijan**

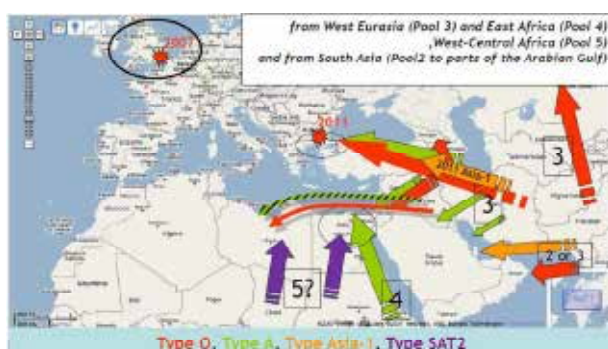
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
West Eurasia													
Afghanistan													
Armenia													
Azerbaijan													
Georgia													
I.R. Iran													
Iraq													
Kazakhstan													
Kyrgyzstan													
Pakistan													
Syria													
Tajikistan													
Turkey													
Turkey Thrace													
Turkmenistan													
Uzbekistan													



**8 April 2013, Dubai,
United Arab Emirates**

**Gulf Cooperation
Council (GCC) + Yemen**

**Bahrain, KSA, Kuwait, Qatar,
Oman, UAE and Yemen**



**FMD Control
Roadmap**



North Africa



- REMESA meetings (Secret FAO-OIE)



- FMD Regional meeting of the UMA Permanent Veterinary Committee (FMD control strategy in the Maghreb area, Rabat, July 2012)

- CMC-AH mission to Libya (re-emergence of FMD SAT2 in the country, May 2012)



FAO Wide meeting Dec 2012

Review FMD programs in FAO five regions with the goal to harmonize and identified needs:

- Support countries in embarking on FMD control program (i.e) formulating project proposal**
- Establishing regional programs for FMD management**
- Develop guideline for socioeconomic impact study**



FAO IAEA research coordination meeting, Rome, April 8-12 2013

Upcoming Events



- Second regional roadmap workshop for SAARC countries in India, 2013**
- Roadmap meeting in West and Central Africa**





FAO Support to Regions & countries

Regional Coordination:

- **China-Mongolia-Russia:** TCP on cross border trade and TAD risk reduction (special focus on FMD)
- **NENA:** Regional coordination program
- Southeast Asia:** FMD control through application of PCP

National Projects (selected, on going):

- **Pakistan:** Development of Technical Framework for the Progressive Control of FMD
- **Ethiopia:** Strengthening the capacity of FMD diagnosis and surveillance
- **Kenya:** National FMD control programme
- **Tanzania:** Establishment of Disease Free Zone in Rukwa Region to facilitate international trade in Livestock and Livestock Products
- **Sudan:** Surveillance and Diagnosis of FMD

OIE Specialized Commissions and Groups

- **OIE Ad Hoc Group on FMD
Status Evaluations**
October 2012
December 2012
- **OIE Scientific Commission
for Animal Diseases (SCAD)**
February 2013
- **Terrestrial Animal Health Standards
Commission (Code Commission)**
February 2013

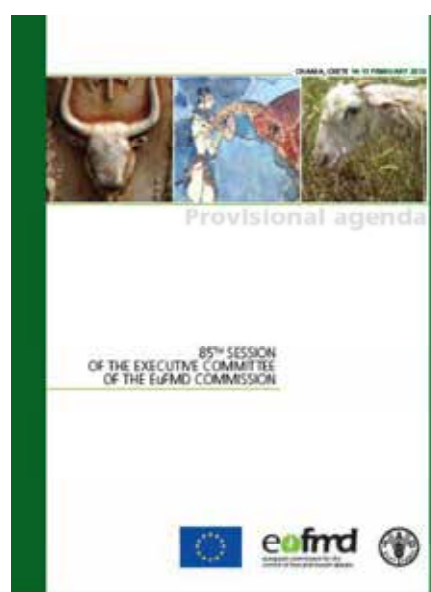


OIE Support to countries

- Support to South East Asian countries: SEA FMD OIE Sub-Commission SEACFMD Programme**
- Support to South American countries: Agreements with CVP-PAMA ...**
- Near future: establishment of an OIE FMD Unit for Central Asia in Astana, Kazakhstan**



- 85th Executive Committee meeting, 14-15 February Chania, Crete, Greece**
- 40th General Assembly 22-24 April 2013, Rome, Italy**





Pillars 2 and 3 of the New EUFMD Strategic Plan



Activities of EUFMD contributing to the control of FMD worldwide besides of reducing the risks to European countries



Joint FAO/OIE FMD Working Group Meets every two months

- Support to and coordination of regional meetings
- PCP guide update and Assessment tool preparation with EUFMD
- Bangkok Conference follow up and website update
- Support to the preparation of regional control strategies
- Establishment and training of a group of experts



- Resource mobilization:

Support countries to bring resources for national projects: Beirut, Dubai and Bakou meetings

Regional and global resources

- Support to the preparation of regional control strategies**
- Promotion of socioeconomic impact studies**
- Annual report to the Global GF TADs Steering Committee on the implementation of the Global FMD Control Strategy**

Global Laboratory Network see specific presentation by S Metwally



Post Vaccination Monitoring Guidelines

Coordination:

**WG of the OIE-FAO FMD Reference Laboratory
Network, with associated experts**

Objective:

**To describe methodologies to use PVM in
different epidemiological situations with
regard to FMD status in a country.**

Appendix 16

EuFMD support to PCP and Global lab surveillance



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Pillar III

41th General Session of the EuFMD

Chris Bartels, Kees van Maanen
Consultants with EuFMD

41st General Session of the EuFMD • Rome, 23-24 April 2015



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United Nations



Pillar III

- Components:
- 3.1: Support global progress monitoring of FMD control programmes
→ FAO/OIE FMD Working Group
- 3.2: PCP-FMD, progressive control pathway support
→ Chris Bartels
- 3.3: Global laboratory: to support the FAO/OIE Global FMD laboratory networks as part of the global FMD control strategy
- → Kees van Maanen

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Component 3.2: Global PCP-FMD support

Objective:

To enhance international capacity for the application of the PCP-FMD through development of tools, guidelines and knowledge transfer

Specific outputs:

1. PCP-FMD toolbox for PCP-FMD user community
2. System of training PCP-FMD experts
3. Representation in regional roadmap meetings



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Output 1: PCP-FMD Toolbox

- Strategy plan for FMD control
 - RAP: risk-assessment plan for countries entering PCP-FMD Stage 1
 - RBSP: risk-based strategy plan for entering PCP-FMD Stage 2
 - NCP: national control plan for entering PCP-FMD Stage 3
- Webinars
 - Under Components 2.1 & 2.3
- Guidelines
 - Outbreak investigation
 - Post-vaccination monitoring
 - Scheduled:
 - Sero-surveys
 - Economic impact
 - Risk analysis along value-chain



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Output 1: PCP-FMD Toolbox

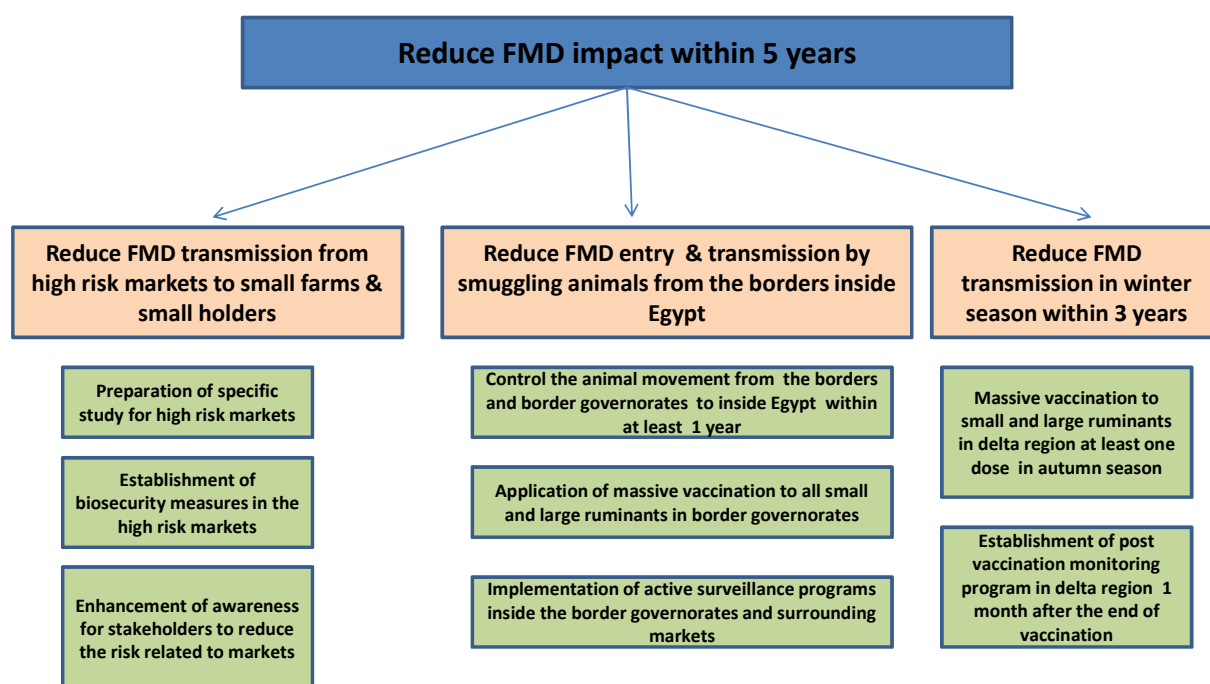
- Sequence of PCP-FMD workshops to develop Risk-based Strategy Plan with Veterinary Services
 - Palestine – component 2.2
 - Egypt – component 2.2, including FAO staff trained in Oct2014
 - Libya – component 2.3
 - Nepal – Australian project
 - Mauretania – component 2.3 - scheduled



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Output 2: Training on PCP-FMD

Simulation exercise “Aptostania”

- Classroom simulation to develop RBSP for imaginary country, making use of
 - data provided through assignments
 - stakeholder consultation
 - competition between 2 or 3 groups
- practised in Tripoli, Rome, Kigali and Cairo



PCP-FMD training for trainers

- FAO HQ, Rome
- Regional FAO Eastern Africa, Kigali
 - Participants from Somalia, Sudan, Ethiopia, Kenya, Uganda, Rwanda, Egypt



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Output 3: PCP-FMD regional roadmap meetings

- 2013 – West Eurasia (Azarbaijan)
- 2014 – West Eurasia (Astana), Middle East and Northern Arica(Amman), Eastern Africa (Kigali)
- 2015 – West Eurasia (Alma Aty)
- Support to FAO/OIE FMD WG in the assessment of FMD control plans
- Support to Regional Advisory Groups on assessment of countries in the PCP-FMD



	control plan progress				protection plan progress			
	2013	2014	2015	2016	2013	2014	2015	2016
Azerbaijan	1	1	1	1	1	1	1	1
Armenia	1	1	1	1	1	1	1	1
Georgia	1	1	1	1	1	1	1	1
Iran	1	1	1	1	1	1	1	1
Israel	1	1	1	1	1	1	1	1
Jordan	1	1	1	1	1	1	1	1
Lebanon	1	1	1	1	1	1	1	1
Lithuania	1	1	1	1	1	1	1	1
Malta	1	1	1	1	1	1	1	1
Moldova	1	1	1	1	1	1	1	1
Montenegro	1	1	1	1	1	1	1	1
North Macedonia	1	1	1	1	1	1	1	1
Romania	1	1	1	1	1	1	1	1
Serbia	1	1	1	1	1	1	1	1
Slovakia	1	1	1	1	1	1	1	1
Slovenia	1	1	1	1	1	1	1	1
Turkey	1	1	1	1	1	1	1	1
Ukraine	1	1	1	1	1	1	1	1
Yemen	1	1	1	1	1	1	1	1



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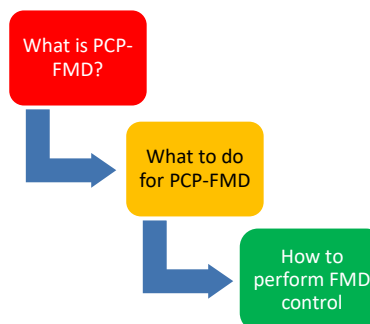
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Significant plans



- E-learning modules
 - upon request from countries: supportive materials for veterinary staff (background materials, and to inform/train additional staff of VS)
 - May possibly have a wider use for countries interested in FMD control but not directly under the EuFMD working plan, for private stakeholders, for academia
- Different levels
 - Introduction: What is PCP-FMD?
 - What to do?
 - How to do?
 - Accreditation/RVC
- Additional 'job aids'
 - Ready to use field materials
- FMD Knowledge Bank
 - Resource centre for FMD control in endemic countries



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Lessons learnt

There is great demand for PCP-FMD training and support

- Breadth as well as depth in understanding of the PCP
 - many people in a country need to know a little, which means that at least 2 people need to know a lot
- Continued training support:
 - People change jobs – turnover
 - Staff get promoted: people coming into senior positions now
- Language: PCP experts/trainers to lead discussions in Russian, Arabic
- PCP assessment processes have evolved over 2 years (FMD WG) and there is a need to support communication and training for countries

The FAO/OIE FMD WG has not met frequently ...

Demand for FMD control materials through private sector (cooperatives, industry, NGOs, etc)



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Component 3.3: To support the FAO/OIE global FMD lab networks as part of the global FMD control strategy

Objective: To support the FAO/OIE global FMD laboratory network as part of the global FMD control strategy



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Component 3.3: Outputs/expected outcomes

1. *Creation of a framework for coordination of laboratory support activities within the FAO/OIE global laboratory network;*
2. *System in place for supporting diagnostic activities to be carried out by WRL;*
3. *System in place for supporting the collection of samples from outbreaks in pools 4 and 5;*
4. *Support for a global proficiency test scheme, to include 19 laboratories in the global network;*

The EuFMD/FAO- TPI contract is the main device used under 3.3, with EuFMD providing a limited scale of additional support in 2014-15.

in 2014-15 focus on the global lab network (including RSLs) and NOT on encouraging regional lab networks as result of decisions taken at 40th Session

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Output 1: Creation of a framework of laboratory support activities

Annual OIE/FAO FMD laboratory network meetings, annual reports etc.

Establishment of two Network Working Groups to:

- a) address isolate, strain and toptype nomenclature and to provide recommendations about coherent naming of FMD viruses;
- b) to explore vaccine recommendations for endemic settings including harmonization of in-vitro vaccine matching methods.

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Output 2: supporting diagnostic activities carried out by WRL

Under the LoA between FAO/EuFMD and WRLFMD/TPI significantly increased submission of samples to and exchange of sequences with WRLFMD; In 2014 about 2,000 virological samples tested by the network as compared with 1,037 samples in 2013



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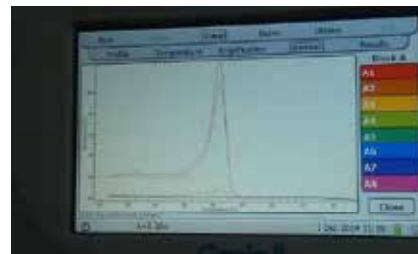
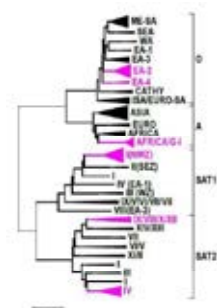


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Output 3: supporting the collection of samples from outbreaks in pools 4 and 5

1. Training local vets in Kenya in the context of real-time training courses;
2. Field evaluation of new methods facilitated and (type-specific) PCR methods implemented in Kenya;
3. Several shipments of clinical specimens from Nigeria, Ethiopia, Cameroon, Tanzania, and Kenya to WRLFMD realised/funded;
4. Laboratory support/training in Kenya;
5. Provision of kits and technical advice to Nigeria and Senegal.



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Output 4: Support for a global proficiency test scheme

1. Increased participation in the proficiency tests organized by WRLFMD
2. Almost all invited EuFMD non-EU and European neighborhood NRLs participated
3. All 4 RSLs for pools 4 and 5 participated
4. 27 participants from European Union (funded by EURL for FMD);

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Significant plans

1. Development of MoU's for regional support labs in pools 4 and 5;
2. Additional training, supervision, sample collection and sample shipment from pools 4 and 5;
3. Harmonization and improvement of communication with network labs;
4. Support to initiative "European partnerships and Global FMD surveillance: networking between European NRLs for improvement of support to FMD surveillance in Africa and Asia"
5. Improving vaccine matching and harmonization of nomenclature of FMDV strains (working groups OIE/FAO FMD laboratory network).

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Lessons learnt

Collaboration within the network, supporting shipments and exchange of information/sharing of sequences significantly contributes to FMD disease intelligence

Supporting proficiency test schemes significantly increases the number of participating labs and will ultimately lead to more reliable test results

There are still big information gaps with respect to circulating FMDV lineages and strains in pools 4 and 5.

Regional lab networks are vital (if primary screening is to occur in country, and NRLs begin to function as national expertise centres)

Until these networks are self sustaining (regional economic communities) they need support.

EuFMD could assist the virtual networking at limited cost.

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Lessons learnt - continued

More efforts are needed to increase good quality sample submissions from especially pools 4 and 5. European-African partnerships and coordination of activities between European NRLs could help improve this.

Improved outbreak investigation, sample collection and sample transport are of major importance.

Sustainability requires that NRLs are valued at national level – wherever they are. Epidemiologists and risk managers in each country should appreciate each others role/problems; and RECs should support regional networks.

Africa is changing fast - chances for sustainability are growing if a good start is made, and FMD support complements that of PPR and HPAI (in line with global strategy)

Appendix 17

Update of the Strategic Plan



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Updating of the Strategic Plan and Work Programme

Keith Sumption

EuFMD Executive Secretary

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Conclusions of the Executive Committee (89th Session)

- The Outline and balance of **Pillar I** is good, no major changes are needed although some **development of the communication and risk assessment on the FMD situation will help MS**.
- The suggested changes indicated above will be considered in developing the details of the components and the **trend towards supporting the national training and contingency planning** focal points should continue.
- The **sub-regional projects** (THRACE, Balkans) are important for **risk reduction** to the MS and a further project on the **practical application of modelling** would make a tangible outcome to Component 1.2. To ensure willingness and commitment, such a project could be restricted to MS that have not modelling capacity in the VS and which could show commitment (volunteer) to take part.

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Conclusions of the Executive Committee (89th Session)

- For **Pillar II**, in summary, the systems put in place in the past 12-18 months, for **co-ordination in each sub region**, under GF-TADS and between FAO, OIE, EC and EuFMD and the parties/countries concerned that have largely shown to be useful to ensure an agreed work programme and should be continued.
- The **training credits system** might be useful across Pillar II, based on the model for Pillar I, and may efficiently benefit from more **limited range of languages** involved.
- For **Pillar III**, the feedback from FAO and OIE was appreciated and indicates there is a **positive impact** of the working processes and their outcomes so far under Pillar III.
- **Greater emphasis** in the workplans for the Pillar should be made upon ensuring that epidemiologists are assisted, for example with **webinar series** that will improve their engagement and understanding of **FMD epidemiology** and how to assist national **PCP application**.
- Consideration must be given to developing **efficient training modalities** that can be used by FAO and OIE and the MS they serve. The EuFMD expertise in **e-learning** and training could assist in this, particularly if the courses developed for the Pillar II countries can assist in Pillar III.

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UPDATED STRATEGIC PLAN FOR 2013-2017

proposed Updated elements as a result of the
89th Session of the Executive Committee
Pillar I



Strategic goal 1 – Improve readiness for FMD crisis management by Members

In 2015-17, more emphasis will be placed upon **national ownership** of actions under each component, continuing the trend towards **demand driven training**, towards joint decision on training development through **regular interactions** (webinars/online meetings) with MS representatives and ExCom advisors (1.3, 1.4).

The greater involvement of **livestock industry** actors and pan-European **livestock sector representatives** on self funding basis in training, may assist towards better public/private **sector interactions** on contingency planning issues.

There appears to be a demand from national training focal points for more **training aids/assistance** to them to engage /train their **national vet personnel**. This could be met through more emphasis on developing “**job aids**” that focal points in the MS can translate/adapt to national use.

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Component 1.1 Develop European expertise in FMD crisis management and assist national FMD preparedness training programmes.

This component in future will continue to include all training activities under the **training credits system**; to build on the channel of communication with the 37 MS training network, and provide e-learning courses in **national languages**; supporting focal points to provide national training, “**Equipping National Trainers In Relevant Expertise**”.

Additional courses to be offered **on demand**: training on management of a crisis response at local and national disease control centre level; contingency planning and simulation exercises.

The potential for training courses to be recognised (accredited) as modules will be explored to enable our FMD training to be part of **accredited courses** for training the “next generation of TADS managers”. This recognises the **long term importance** for countries to have management as well as technical skills in their senior managers and the potential our courses may play to promote this approach. .



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Component 1.2 Support contingency planning of Members and at European level – Developing decision support tools for managers.

In 2015-17, following **strong demand** this component should continue the FMD modelling network, contingency planning (CP) knowledge bank and CP/simulation exercise manager networks.

This component should ensure some **development of support tools** for MS also, e.g. The FMD impacts calculator.

A common **joint project** (e.g. European livestock movements modelling project) and a more specific **support project** (e.g. regional project for MS wishing to establish modelling for decision making, could be a group of countries at **similar stage of capacity**.

This component may include a **Vaccine Banks/Vaccination issues** Working Group or Network.



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Component 1.3 Thrace region: programme for early warning surveillance in Greece/Bulgaria/Turkey.

This component is of proven value and importance and to be continued 2015-17. Consider further development, specifically:

- Better tools for ease of **data entry** and **analysis** to support national managers;
- Activities to assess **capacity** for implementing **non-vaccination** against FMD in **Turkish Thrace**;
- To ensure **surveillance for other exotic diseases** at the same time as FMD, with appropriate diagnostic support;
- The development of **contingency plans** in event of introduction of exotic diseases into Turkish Thrace (this inclusion of Turkey in Component 1.4 support this for FMD).



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Component 1.4 Improved emergency management capacity for FMD in the Balkan region.

This component is of proven value and importance, need to continue with trend towards **self-governance** and **ownership** -e.g. of the regular meetings on CP/simulation exercise planning. The workplan will be identified after the outcomes of first full sim-ex, and may provide a demand led **support on “difficult” issues** with drafting national CPs.

The question of **diagnostic banks** for these countries /**Lab support** needs to be solved.

A second **full simulation exercise** may be part of the two-year programme – e.g. mid 2016 or 2017. Moldova and Greece will continue to be invited to participate, and for the first time, **Turkey**.



Component 1.5 Research activities relevant to resolve policy issues

Continue successful mechanism, but with more efforts to:

- Obtain **additional support** to the Fund, e.g. partnership with other research funding providers to co-ordinate and complement;
- Strengthen role of **STC in setting priorities**.

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NEW Component 1.8 Activities to improve risk communication

Considering the current subdivision of tasks between Pillars and components, there is a need to ensure **information** is **collated**, **analysed** and **communicated** in forms that assist the MS at risk, to ensure:

- 1) the **antigen banks priority setting** information is kept updated;
- 2) the **change in lineages** and **epidemic trends** in key pools threatening to Europe is communicated to surveillance managers (e.g THRACE surveillance programme);
- 3) the development and use of **models developed** for transcontinental spread of FMD in Europe.

The component will identify means of the establishing a **system** for early warning based on **meat price differentials** since this factor is seen as a key driver for illegal imports

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UPDATED STRATEGIC PLAN FOR 2013-2017

proposed Updated elements as a result of the
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Pillar II



Strategic goal 2 – Reduce risk to Members from the European neighbourhood (progressive control in neighbouring regions)

The system of three sub-regional components has worked well, as there are **three sets** of MS with **specific interests** (Turkey + Georgia, Israel/Cyprus, and REMESA group).

The focus on Progressive Control Pathway (**PCP**) **progress** (national level, strategic planning) remains vital, but in 2015-17 as countries implement their strategic plans, a common supportive measure across the region, **building on experience** in Turkey, Georgia, Egypt, will be to establish a **Training Network** with focus on 1) common needs in **Epidemiology** and Monitoring at central Level and 2) Support to **national trainers** to roll out training (based on FEPC used in Pillar I), using the three **common languages** in the neighbourhood: Russian, Arabic, Turkish

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NEW Component 2.4 Training Component

Training Network will be established for the Pillar II countries, adapting the model used in Pillar I, of the Training Network, **Credits system** and **Menu of courses**. Some EuFMD e-learning has already been translated or provided in Arabic, English, French, Russian and Turkish, but other content must be adapted.

The use of **e- learning platforms** should be **cost effective** and enable greater participation at low cost, and spur the trend to national roll-out under national programmes



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UPDATED STRATEGIC PLAN FOR 2013-2017

proposed Updated elements as a result of the
89th Session of the Executive Committee
Pillar III



Strategic goal 3 – Promote the global strategy of progressive control of FMD

Considering the report of the 89th Executive Committee and recommendation to place effort on **improving the linkage** of epidemiologists to the “regional lab networks”, so becoming FMD technical networks underpinning regional Roadmaps and national programmes, and given the development of **guidelines** and **processes for PCP** under the GF-TADS working group, the two-year Phase will continue to work in **support of the Global Strategy** and provide as part of this, adapted training resources for potential take up under GF-TADS and national FMD control efforts (using Pillar I and II training resources).

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Component 3.3 Support the global system for improved FMD reference lab services (World Reference Laboratory Contract, supporting FAO/OIE Strategy and Gf-TADS .

Additional support will be provided to the re-invigorate **regional laboratory networks**, but including **epidemiology** linkages, to ensure better technical expertise development at regional levels, underpinning surveillance and regional roadmaps.

Virtual networking will be the most efficient and EuFMD expertise in these could assist WRL, FAO and OIE, using the model of the **webinar** programmes for West Eurasia. Other donor support will be needed for any physical meetings and GF-TADS are expected to find these. .



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NEW Component 3.4 Training Component

This component will make use of **training resources** and **expertise** generated under **Pillar I and II** programmes, such as PCP training resources used in the European neighbourhood, and make these available as training resources for international use.

This component will help make **available resources** for national and regional programmes, to **better communicate** what is possible through the PCP approach and how it can be applied at national level. It will include some adaptation based on feedback, at least once per year an online course to support the “**train the trainer**” approach and support **GF-TADS** regional roll out of **training**.

It will not be budgeted (EC) to provide the in country regional or national training, expecting that external donor /partner funding, e.g. FAO and OIE will find support for any in country application.



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Funding

As per Phase III, a budgetted workplan for each Component will be prepared, with a Results-based budget (every outcome has a value (cost)).

This will form the basis for negotiation with the EC.

The ExCom may propose modifications to components and associated budgets.

Assuming a flat budget then Table 2 indicates how the balance may be changed within Pillars to enable the proposed actions.

Management

As Per Phase III. Programme Steering Committee (ExCom Chairs+EC+Secret.)

Each Component has a Manager, Budget, expected Outcomes.

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Human Resources

The programme requires significant human resources with expertise that closely fits with the profiles of those we must assist in member countries.

The budget must reflect the need for long term as well as short term expertise.

Further reduction in travel costs are one of the few ways we can free resources for the expertise needed. Greater use will be made of online training/virtual meetings.

STPs provide expertise from MS and are given the opportunity to manage components, and grow through responsibility and international experience.

Each STP will be supervised by Professional Staff in the team or long term consultants.

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Leveraging additional support

The activities in the past two years have stimulated interest from member states and non-members to fund additional activities.

The ExCom has adopted a policy in 2013-15 relating to cost recovery that ensures these additional activities cover their full costs plus support administrative and technical work involved.

The training contract with AUS has supported the Training Officer and e-learning development and given the significant demand from additional parties, this is an opportunity for reducing the costs to the EC budget.

Appendix 18

Status of FMD antigen and vaccine banks



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Technical progress on vaccination-to-live issues and the implications for diagnostic and vaccine banks



Eoin Ryan¹ and Katie Hickey²

¹Acting Chair, Standing Technical Committee, EuFMD; Central Veterinary Research Laboratory, DAFM, Ireland

²Short-term professional Animal Health Officer, EuFMD

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Key messages

- Vaccination-to-live: technical progress & changes in societal attitudes.
- There is a need for an EuFMD-coordinated vaccine discussion network
- There is a need to continue to support European FMD modelling
- There is a need to improve the process of antigen selection for vaccine banks.
- EuFMD member states should consider establishing a shared diagnostic bank.
- There is a need to match vaccine antigens to SP detection kits
- There is a need to conduct an evaluation on the degree to which vaccination-to-live may influence market access to trading partners.



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Background

Technical progress on vaccination-to-live issues (Paton et al., 2014; Barnett et al., 2013; Geale et al., 2013):

- High quality, high potency vaccines reduce
 - the risk of subclinical circulation
 - the risk of carriers
- Differentiating infected from vaccinated animals is technically feasible
- Post-outbreak FMD risk: related to effectiveness of surveillance more than waiting period
- Acceptable level of statistical certainty for probability of FMD freedom post-outbreak, rather than set time period
- Importance of demonstrating vaccine effectiveness

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Technical progress on vaccination to live

- Current OIE rules: minimum time to regain FMD freed status is
 - 3 months (if vaccinate to kill, or culling with no vacc)
 - 6 months (if vaccinate to live)
 -> Clear implications for trade
- Culling of healthy animals (either vacc or non-vacc) may become harder to justify to the public
- The larger the outbreak, the harder to control by culling alone -> factors predisposing to large outbreaks support early adoption of emergency vaccination

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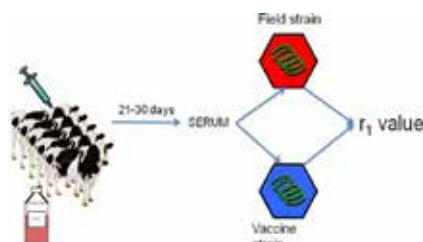
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Suitability of antigens:

For vaccination to work, must have

- Enough vaccine
- The right vaccine
- The vaccine antigen used must match the outbreak virus
- Spectrum of immunogenicity of antigens against virus lineages:
 - Lack of field data
 - Lack of in-vivo data
- Selection of antigens for vaccine banks: WRL makes recommendations to EuFMD ExCom and DG-SANCO
- Methodology being revised (*K. Hickey, 17.30 side event in Iran Room*)



 1 dose	 1/4 dose
 1/10 dose	 No dose

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Vaccinate to live or vaccinate to die?

- Logistics, market access concerns, consumers, public attitudes, relative importance of agri-food exports to national economy
- OIE: 3 months versus 6 months
- Emergency vaccination-to-live may alter the distribution of costs between government, the livestock sector and society generally (R. Bergevoet)
- Vaccinate to die: may involve similar scale of destruction of healthy animals as culling alone, but in a more controlled and manageable way



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Reaction of trading partners to use of vaccination?

- Re-establishment of trade in animals & animal products is key priority
- Bilateral trade negotiations, risk assessments, reviews by third countries
- Trade partners (and private customers) may wish to differentiate between products of vaccinated versus non-vaccinated animals

How much does vaccination influence bilateral trade? Hard to predict...

US delay in recognising FMD freedom after OIE freedom attained (USDA figures)

- UK 2001: +329 days (no vacc)
- Ireland, Netherlands 2001: +47 days (no vacc/IE, vacc-to-kill/NL)
- Japan 2000: +468 days (no vacc)
- Japan 2010: +560 days (vacc-to-kill)

Evaluation of the possible effect on market access would be useful (as has been done by non-European countries) as this is a key constraint

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How would vaccination affect surveillance?

- Prevalence of carriers – likely to be v. low (0.2%, Arnold et al, 2008)
- Design of surveys affected by tests Se/Sp (Paton et al. 2014)
- “Small herd problem”: herd-level freedom can’t be statistically demonstrated even if all animals tested
 - Census surveillance: overcomes this by allowing small herds to be treated as one stratum
- Pigs: concern is inadequately vaccinated pigs -> may emit vast amount of virus if infected
- **More emphasis needed on the effectiveness of the FMD control programme, including vaccine effectiveness**



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Implications for vaccine banks

Coordination between VB members:

- VB managers in different regions face similar problems: selection of antigen, manufacture, storage, regulation, renewal of vaccines
- International coordination: different regions?
- 2010: International FMD vaccine strategic reserve network founded
- Type C FMD?



→ **Need for an EuFMD-coordinated vaccine discussion network**

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Implications for vaccine banks

Estimating likely demand for vaccines:

- Use of emergency vaccination increasingly more feasible
 - If multiple countries were simultaneously affected and chose vaccination as a control tool, would there be sufficient stock?
 - Mechanisms for states to purchase vaccine from other states?
- **Need for continued support to disease spread modelling, including at continental level**
- **Integrate modelling outputs into contingency planning activities**



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Implications for vaccine banks

Selection of antigens in response to changes in risk:

- More work is needed to accurately prioritize vaccine antigens which should be held in vaccine banks
- A tool is being developed by EuFMD in partnership with the WRLFMD, Pirbright in order to improve the way recommendations are made to vaccine bank managers (M. McLaws, A. Ludi, K. Hickey; *see side event @17.30, K. Hickey*)



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International diagnostic bank – why?

- FMD outbreak – rapid rise in need for diagnostic kits
- Requirement to diagnose clinical cases
- Requirement to conduct mass serology in post-outbreak surveillance phase
- **How confident are we that we could access sufficient kits at short notice?**
- **Individual national diagnostic bank arrangements: efficient use of resources?**
- **What about countries which can't afford national diagnostic banks?**
- International diagnostic bank: conceptually similar to an international vaccine bank: pooling resources to reduce their individual costs

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International diagnostic bank: resource estimation

- Acute phase: diagnostic kits needed rapidly (e.g. Bulgaria 2011)
- Vaccination to live: census serosurveillance may increase need for serology kits and capacity

Examples:

UK 2001: >3 million sera tested (pers comm, Don King)

NL 2001: >190,000 sera tested (pers comm, Aldo Dekker)

Ireland 2001: >160,000 sera tested



→ importance of European disease spread modelling -> inputs in discussions on diagnostic resource estimates.

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Lab capacity estimation

- Importance of estimating lab resources and planning how lab capacity could be scaled up during an outbreak (“surge planning”)
- Detailed contingency plans for labs needed

Example: UK laboratory contingency plan

(<https://www.gov.uk/government/publications/contingency-plan-for-exotic-notifiable-diseases-of-animals>)

Nominated laboratory would be ready to start contingency surge capacity serological testing within three weeks of notification:

- Initial capacity of 7,000 tests per week,
- 20,000 tests in the second week,
- 40,000 in the third week
- 120,000 tests per week at week 10



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Matching serological assays with vaccines

- Importance of being able to demonstrate effectiveness of emergency vaccination -> provides assurance to trade partners, OIE, etc.
- Diagnostic bank should include kits matched to specific vaccines so vaccinated animals can be serologically tested to provide proof of efficacy.
- EuFMD SCRPD has all 3 OIE/FAO Reference Centres in Europe represented and has expertise to assist -> could be a priority task

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Mechanisms to administer a diagnostic bank

- Maintaining a baseline stock at all times
- Agreement on number of kits, type, time period for delivery
- Clarity on balancing national responsibilities to maintain a diagnostic minimum capacity with diagnostic bank membership
- Provision of training where required
- Financial commitments: clear descriptions of all costs required



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What might a European diagnostic bank look like?

- a) Rapid deployment kits for initial diagnosis. PCR, Ag ELISA, serology kits
- b) Serology kits for post-outbreak surveillance: longer lead-in time but much larger number of kits needed
- c) Provision of kits to detect structural proteins for vaccine effectiveness assays
- d) Clear protocol on expected delivery dates for each type of kit and the volume to be delivered
- e) Governance: agreement on funding, administration and the decision process for releasing kits.
- f) Expert advisory body: An advisory body or committee would be needed for issues such as choice of reagents, numbers of kits, etc

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Conclusions: Key messages

- Vaccination-to-live: technical progress and changes in societal attitudes.
- There is a need for an EuFMD-coordinated vaccine discussion network
- There is a need to continue to support European FMD modelling
- There is a need to improve the process of antigen selection for vaccine banks.
- EuFMD member states should consider establishing a shared diagnostic bank.
- There is a need to match vaccine antigens to SP detection kits
- There is a need to conduct an evaluation on the degree to which vaccination-to-live may influence market access to trading partners.

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Appendix 19

Amended Constitution

ANNEX I

**AMENDMENTS TO THE CONSTITUTION OF THE EUROPEAN COMMISSION FOR
THE CONTROL OF FOOT-AND-MOUTH DISEASE
PROPOSED BY AUSTRIA¹**

Generic change:

To replace “Chairman” with “Chairperson” wherever it occurs in the text of the Constitution.

Specific changes:

ARTICLE I

Membership

1. Membership in the European Commission for the Control of Foot-and-Mouth Disease (hereinafter referred to as "the Commission") shall be open to such European Member Nations of the Food and Agriculture Organization of the United Nations, to such States participating as members in the Regional Conference for Europe of the Food and Agriculture Organization of the United Nations and serviced by the Regional Office for Europe of the Food and Agriculture Organization of the United Nations and to such European Member Nations of the International Office of Epizootics that are Members of the United Nations, as accept this Constitution in accordance with the provisions of Article XV. The Commission may, by a two-thirds majority of the membership of the Commission, admit to membership ~~such other European States~~ that are Members of the United Nations, any of its Specialized Agencies or the International Atomic Energy Agency as have submitted an application for membership and a declaration made in a formal instrument that they accept the obligations of this Constitution as in force at the time of admission.

2. The Food and Agriculture Organization of the United Nations (hereinafter referred to as "the Organization"), the International Office of Epizootics (hereinafter referred to as "the Office"), and the European Community, ~~and the Organization for Economic Cooperation and Development~~ shall have the right to be represented at all sessions of the Commission and its Committees, but their representatives shall not have the right to vote.

ARTICLE II

Obligations of Members regarding National Policies and International Cooperation for the Control of Foot-and-Mouth Disease

1. Members undertake to control foot-and-mouth disease with a view to its ultimate eradication by the institution of suitable quarantine and sanitary measures and by one or more of the following methods:

- 1) a slaughter policy;
- 2) slaughter together with vaccination;

¹ Deletions appear as ~~strikethroughs~~ and insertions as underlined italics.

3) maintenance of ~~totally~~ immune cattle population by vaccination; other susceptible livestock may be vaccinated.

4) vaccination in zones surrounding outbreaks.

Methods adopted shall be rigorously carried out, and for members not recognised by the Office as having the status of freedom from foot-and-mouth disease, there should be in place a national plan for the progressive control of the disease.

2. Members should have available contingency plans for the immediate management of incursions of foot-and-mouth disease and ensure sufficient financial, human and technical resources are available for immediate application of the control methods indicated in Article II.1.

(following paragraphs to be renumbered)

ARTICLE III

Seat

1. The seat of the Commission and its Secretariat shall be in Rome at the Headquarters of the Organization, but may be temporarily located elsewhere in pursuance of a decision of the Commission at a previous session.

(...)

ARTICLE IV

General Functions

The following shall be the general functions of the Commission:

(...)

4. To promote the progressive control of foot-and-mouth disease, to stimulate and plan joint action wherever required in the implementation of prevention and control programmes and to this effect arrange means whereby adequate resources can be made available, for example, for the production and storage of vaccine, through agreements between Members.

(...)

ARTICLE V

Special Functions

The following shall be the special functions of the Commission:

(...)

2. To take suitable action in the following fields:
 - 2.1 Storage of antigen and/or vaccines, and of diagnostic kits or devices by or on behalf of the Commission for distribution to any Member in case of need.
 - 2.2 Promotion when necessary of the establishment by a Member or Members of "cordons sanitaires" to prevent the spread of disease.
 - 2.3 The training of personnel of Member as required for management of emergency response and the establishment of a cadre of trained personnel who can assist other Members in case of need.
 - 2.4 The maintenance and promotion of appropriate biocontainment standards for handling of materials containing foot-and-mouth disease virus by Members.

ARTICLE IX

Observers

(...)

2. States which, while not Members of the Commission nor Members or Associate Members of the Organization, are Members of the United Nations, any of its Specialized Agencies or the International Atomic Energy Agency may, upon request and subject to the concurrence of the Commission through its ~~Chairman~~ Chairperson and to the provisions relating to the granting of observer status to nations adopted by the Conference of the Organization, be invited to attend in an observer capacity sessions of the Commission or its Executive Committee.

(...)

ARTICLE X

Executive Committee

1. An Executive Committee shall be established and shall be composed of the ~~Chairman~~ Chairperson, two ~~Vice-Chairmen~~ Vice-Chairpersons of the Commission and ~~five-six~~ delegates of Members selected by the Commission at the end of its regular session. The Members of the Executive Committee should represent the geographic area of the Commission. The ~~Chairman~~ Chairperson of the Commission shall be the ~~Chairman~~ Chairperson of the Executive Committee.

2. The first Vice-Chairperson shall be nominated as the Incoming Chairperson, and the second Vice-Chairperson shall normally be the immediate Past-Chairperson of the Commission, and shall be elected by the Commission until the end of the next regular session.

~~2~~ 3. Members of the Executive Committee shall hold office until the end of the next regular session without prejudice to the right of re-election.

~~3~~ 4. If a vacancy occurs in the Executive Committee before the expiration of the term of appointment,

~~the Committee may request a Member of the Commission~~ the Member which provided the resigning Member shall be requested to nominate a new representative to fill the vacancy for the remainder of the term.

5. In the case of absence of the Chairperson, the first, followed by the second Vice-Chairperson may replace the Chairperson and an elected Member of the Executive Committee may replace the respective Chairperson.

4 6. The Executive Committee shall meet at least twice at reasonable intervals between any two successive regular sessions of the Commission.

5 7. The Secretary of the Commission shall act as Secretary to the Executive Committee.

Appendix 20

Amended Rules of Procedure

41ST SESSION PROPOSED AMENDMENTS TO THE

**RULES OF PROCEDURE OF THE EUROPEAN COMMISSION FOR THE
CONTROL OF FOOT-AND-MOUTH DISEASE**

Insertions are indicated by underlined text in italics. Deletions are indicated by ~~strikethrough~~.

*As amended by the Commission at its Thirty-Second Session (2-4 April 1997) and
approved by the Director- General of FAO on 7 September 1997*

Rule I - Sessions of the Commission

Notices convening a regular session of the Commission shall be dispatched by the Director General not less than 50 days and notices convening a special session not less than 20 days before the date fixed for the opening of the session, to Members of the Commission, to such Nations which are not Members of the Commission and to such international organizations as may be represented in accordance with Article IX of the Constitution, hereafter referred to as "participating Nations and international organizations".

Rule II - Agenda

1. A provisional agenda for each regular session of the Commission shall be drawn up by the Director-General and dispatched to Members and to participating Nations and international organizations not less than 50 days before the date fixed for the opening of the session.
2. The provisional agenda for a regular session shall consist of:
 - (a) All items the inclusion of which may have been decided upon by the Commission at a previous session.
 - (b) Election of members and Chairpersons and Vice-Chairpersons of the Executive Committee ~~Commission~~ (Articles VI and X of the Constitution).
 - (c) Application for membership in the Commission, if any (Article I of the Constitution).
 - (d) Draft programme and Administrative Budget (Articles IV and XI of the Constitution).
 - (e) Report of the Executive Committee on the activities of the Commission during the past biennium (Articles IV and XI of the Constitution).
 - (f) Reports by committees established under Article VII of the Constitution.

- (g) Proposals of the Executive Committee concerning policy matters (Article XI of the Constitution).
 - (h) Any modifications of the Scale of Contributions including the confirmation of the determination of the contribution of any States having acquired membership since the last regular session (Article XIII of the Constitution).
 - (i) Audited accounts for the preceding financial period and the budget and programme for the ensuing biennium (Articles IV and XI of the Constitution).
 - (j) Amendments to the Constitution, if any (Article XIV of the Constitution).
 - (k) Any items which the Conference, Council or the Director-General of the Organization refer to the Commission.
 - (l) Any items which the Conference, Council or the Director General of the Organisation refer to the Commission
 - (m) Other business arising out of the Commission's functions.
3. A provisional agenda for each special session of the Commission shall be drawn up by the Director-General and dispatched to Members and to participating Nations and international organizations not less than 20 days before the date fixed for the opening session
 4. The provisional agenda for a special session of the Commission shall consist of:
 - (a) All items the inclusion of which in the agenda of the special session may have been decided upon by the Commission at a previous session.
 - (b) Applications for membership in the Commission, if any (Article I of the Constitution).
 - (c) Amendments to the Constitution, if any (Article XIV of the Constitution).
 - (d) Any items proposed for consideration in a request by the Commission or by one third of the Members for the holding of the special session.
 5. Any Member may, not less than 30 days before the date fixed for the opening of a session, request the Director-General to include specific items on the agenda. These items shall be placed on a supplementary list, which shall be dispatched to Members and to participating Nations and international organizations, not less than 20 days before the date fixed for the opening of the session.
 6. During any session the Commission may, by a two-thirds majority of the votes cast,

add to the agenda any item proposed by a Member.

7. At each session the provisional agenda, together with the proposed additions or deletions, if any, shall be submitted to the Commission for approval as soon as possible after the opening of the session and, on approval of the Commission with or without amendments, shall become the agenda of the session.
8. Copies of all reports and other documents to be submitted to the Commission at any session, in connexion with any item which may be on the agenda, shall be furnished by the Director-General to Members and to participating Nations and international organizations at the same time as the item or as soon as possible thereafter.
9. The Commission shall not proceed to the discussion of any item on the agenda until at least 24 hours have elapsed since the documents referred to in Paragraph 7 have been made available to delegations of Members.

Rule III - Delegations and Credentials

1. For the purpose of these Rules the term "delegation" means all the persons appointed by a Member to attend a session of the Commission, that is to say its delegate and his alternate, experts and advisers.
2. The credentials of delegates and alternates and the names of other persons in their delegations and of the observers from participating Nations and international organizations shall, insofar as possible, be deposited with the Secretary of the Commission not later than the opening day of each session of the Commission. The Secretary shall examine the credentials and report thereon to the Commission.

Rule IV - Secretariat

The staff of the Secretariat of the Commission shall be appointed in accordance with Article XII of the Constitution and subject to the provisions of that Article. It shall be the duty of the Secretariat to receive, ~~translate into the working languages of the Commission~~ and circulate documents, reports and resolutions of the Commission and its committees, to prepare the records of their proceedings and to perform such other work as the Commission or any of its committees may require.

Rule V - Attendance at Plenary Meetings of the Commission

1. Plenary meetings of the Commission shall be open to attendance by all delegations and by observers from participating Nations and international organizations and such

members of the staff of the Organization as the Director-General may designate. Plenary meetings of the Commission shall be held in public unless the Commission decides otherwise.

2. Subject to any decision of the Commission the Secretary shall make arrangements for the admission of the public and of representatives of the press and other information agencies, to plenary meetings of the Commission.

Rule VI - Powers and Duties of Chairperson and Vice-Chairmen of the Commission

1. In addition to exercising such powers as are conferred upon him elsewhere by these Rules, the Chair~~man~~person shall declare the opening and closing of each plenary meeting of the session. He shall direct the discussion in plenary meetings and at such meetings ensure observance of these Rules, accord the right to speak, put questions, and announce decision. He shall rule on points of order, and subject to these Rules, shall have complete control over the proceedings at any meetings. He may, in the course of the discussion of an item propose to the Commission the limitation of the time to be allowed to speakers, the number of times each delegation may speak on any question, the closure of the list of speakers, the suspension or adjournment of the meeting, or the adjournment of the debate on the item under discussion.
2. In the absence of the Chair~~man~~person during a plenary meeting or any part thereof, one of the Vice- Chair~~man~~person shall preside. A Vice- Chair~~man~~person acting as Chair~~man~~person shall have the same powers and duties as the Chair~~man~~person.
3. The Chair~~man~~person, or a Vice-Chair~~man~~person acting as Chair~~man~~person, shall not vote but may appoint an alternate or adviser from his delegation to vote in his place.
4. The Chair~~man~~person, in the exercise of his functions, remains under the authority of the Commission.

Rule VII - Executive Committee

1. In accordance with Article X of the Constitution, the Chair~~man~~person of the Commission shall be the Chair~~man~~person of the Executive Committee. He shall have, in relation to meetings of the Executive Committee, the same powers and duties as he has in relation to meetings of the Commission. In the absence of the Chair~~man~~person during a meeting of the Executive Committee or any part thereof, ~~one of the Vice-Chairman shall preside.~~ *the first Vice-Chairperson shall preside, and in the absence of the latter, the Second Vice-Chairperson shall preside. In the absence of the Chairperson and the two Vice-Chairpersons, the members shall select a member from amongst those present to preside.* A Vice-Chair~~man~~person acting as Chair~~man~~person shall have the same powers and duties as the Chair~~man~~person. A majority of the members of the Committee shall constitute a quorum. Decisions of

the Committee shall be taken by a majority of the votes cast. Each Member of the Committee shall have one vote. Meetings of the Committee shall be ~~held in private unless otherwise determined by the Commission.~~ open to observers when deemed appropriate. The Chairperson has the authority to invite observers, subject to confirmation by the Committee.

2. Without prejudice to such procedures that may be elaborated by the Organization, if the member is unable to attend in person, participation in the meetings of the Executive Committee may be through a virtual platform, providing that the member participates to an equivalent extent on the agenda items for decision as if present in person, and that participation by such means has been agreed in advance with the Chairperson. Such participation shall count towards meeting the quorum.

Rule VIII -Proposals and Amendments at Plenary Meetings

1. Proposals and amendments for plenary meetings shall be introduced in writing and handed to the ~~Chairman~~Chairperson of the Commission who shall circulate copies to the delegations. Subject to a contrary decision of the Commission in a specific instance, no proposal shall be discussed or put to the vote at any plenary meeting unless copies of it have been circulated to all delegations not later than the day preceding the meeting. The ~~Chairman~~Chairperson of the Commission may, however, permit the discussion and consideration of amendments or of motions as to procedure even though these amendments and motions have not been circulated or have only been circulated the same day.
2. A proposal may be withdrawn by its proposer at any time before voting on it has commenced, provided that the proposal has not been amended. A proposal which has thus been withdrawn may be reintroduced by any Member.

Rule IX - Conduct of Business and Voting Arrangements at Plenary Meetings

The conduct of business, voting arrangements and other related matters not specifically provided for in the Constitution or these Rules shall be governed by the General Rules of the Organization.

Rule X - Committees of the Commission

1. In addition to the committees provided for in Article VII of the Constitution, the Commission may set up at each session and for the duration of the session, such committees as it considers desirable and allocate to these committees the various items on its agenda.
2. Each such committee shall elect a ~~Chairman~~Chairperson and a Vice- ~~Chairman~~Chairperson.

- ~~3. Each delegate shall be entitled to sit or be represented by another member of his delegation on each such committee and may be accompanied at meetings by one or more members of his delegation, who may speak but shall not vote.~~
43. The Chair~~man~~person of each committee shall have in relation to meetings of his/her committee the same powers and duties as the Chair~~man~~person of the Commission has in relation to plenary meetings. In the absence of the Chair~~man~~person, the Vice-Chair~~man~~person of the committee shall preside with the same powers and duties.
54. The procedure in a committee shall be governed by the provisions of Rule X so far as applicable. A majority of the members of the committee shall constitute a quorum. *Without prejudice to such procedures that may be elaborated by the Organization, participation in the meetings of the Committee may be through use of a virtual platform, providing that the Member participates to an equivalent extent on the agenda items for decision as if present in person, and that participation by such means has been agreed in advance with the Chairperson.*
65. All committees established by the recommendations to the Commission shall report their conclusions and recommendations to the Commission.

Rule XI - Rapporteurs

Any committee referred to in any of the preceding Rules may, on the proposal of its Chair~~man~~person, appoint from among its members, one or more rapporteurs as required.

Rule XII - Participating International Organizations

Each participating Nation or international organization which has been invited to attend a session of the Commission may be represented by an observer. Such observer may, without vote, speak and, upon the request of the Chair~~man~~person, participate in the discussions of the Commission and its committees. They may circulate to the Commission or its committees, without abridgement, the views of the Nation or organization which they represent.

Rule XIII - Reports and Recommendations

1. Summary records shall be made of the proceedings of the Commission and its committees and shall be circulated as soon as possible to members of delegations who participated in the meeting concerned in order to give them the opportunity to suggest corrections.

2. At each session, or as soon as practicable following close of the session, the Commission shall approve a report embodying its views, recommendations and decisions including, when requested, a statement of minority views.
3. The conclusions and recommendations of the Commission shall be transmitted by the Secretariat to the Director-General of the Organization at the close of each session, who shall circulate them to the Members of the Commission, nations and international organizations that were represented at the session, and upon request, to other member Nations of the Organization, for their information.
4. Recommendations having policy, programme or financial implications for the Organization shall be brought by the Director-General to the attention of the Conference or Council of the Organization for appropriate action.
5. Subject to the provisions of the preceding paragraph, the Director-General of the Organization may request Members of the Commission to supply the Commission with information on action taken on the basis of recommendations made by the Commission.

Rule XIV - Election of Officers

~~At each regular session, nominations shall be called for by the Chairman from the floor for the offices of Chairman and two Vice Chairmen of the Commission for the ensuing term of office as provided for in the Constitution.~~

1. The Commission shall elect, at the end of each regular session a Chairperson, a First Vice-Chairperson, a Second Vice-Chairperson and other members of the Executive Committee. All shall be selected with due regard to ensuring that the membership of the Executive Committee is equitably geographically representative.
2. Each nomination shall be supported by a mover and seconded and shall carry the endorsement of the nominee. The First Vice-Chairperson shall normally be nominated for an ensuing term of office as Chairperson. The Chairperson shall normally be nominated for an ensuing term of office as Second Vice-Chairperson.
3. If a delegate in the Executive Committee becomes permanently unavailable for unavoidable reasons, the Member represented by that delegate shall be requested to nominate a new delegate for the remainder of the term.

Rule XV - Languages

English and French shall be the working language of the Commission.

Rule XVI - Suspension and Amendment of Rules

1. Subject to the provisions of the Constitution, any of the foregoing Rules may be suspended by a two-thirds majority of the votes cast at any plenary meeting of the Commission, provided that notice of the intention to propose the suspension has been communicated to the delegates not less than 24 hours before the meeting at which the proposal is to be made.
2. Subject to the provisions of the Constitution, amendments of or additions to these Rules may be adopted at any plenary meeting of the Commission, provided that the intention to propose the amendment or addition has been communicated to the delegates not less than 24 hours before the meeting at which the proposal is to be considered, and provided further, that the Commission has received and considered a report on the proposal by an appropriate committee.
3. The Executive Committee may propose amendments and additions to these Rules.

Appendix 21

Financial report



Food and Agriculture
Organization of the
United Nations



MS Contributions 2014

Status of Contributions as at 31 December 2014				
Member Governments	Outstanding 31/12/2013	Contribution due for 2014	Received up to 31/12/2014	Outstanding 31/12/2014
ALBANIA	12.400,00	4.170,00	4.170,00	12.400,00
AUSTRIA	0,00	12.786,00	12.786,00	0,00
BELGIUM	0,00	21.260,00	21.260,00	0,00
BOSNIA	0,00	4.170,00	4.170,00	0,00
BULGARIA	38.358,00	12.786,00		51.144,00
CYPRUS	0,00	4.170,00		4.170,00
CROATIA	0,00	4.170,00	4.170,00	0,00
CZECH REPUBLIC	0,00	12.786,00	12.786,00	0,00
DENMARK	0,00	21.260,00	21.260,00	0,00
ESTONIA	0,00	4.170,00		4.170,00
FINLAND	0,00	12.786,00	12.786,00	0,00
FRANCE	0,00	42.374,00	42.374,00	0,00
GEORGIA	0,00	4.170,00	4.170,00	0,00
GERMANY	0,00	42.374,00	42.374,00	0,00
GREECE	0,00	12.786,00	12.786,00	0,00
HUNGARY	0,00	12.786,00	12.786,00	0,00
IRELAND	25.597,00	12.786,00	38.383,00	0,00
ISRAEL	12.510,00	4.170,00	16.680,00	0,00
ITALY	1.803,13	42.374,00	40.973,70	3.203,43
LATVIA	4.170,00	4.170,00	8.340,00	0,00
LITHUANIA	0,00	4.170,00	4.170,00	0,00
LUXEMBOURG	0,00	4.170,00	4.170,00	0,00
FYR of MACEDONIA	16.680,00	4.170,00		20.850,00
MALTA	28,00	4.170,00	4.170,00	0,00
NETHERLANDS	0,00	21.260,00	21.260,00	0,00
NORWAY	0,00	12.786,00	12.786,00	0,00
POLAND	21.260,00	21.260,00	42.520,00	0,00
PORTUGAL	25.572,00	12.786,00	38.358,00	0,00
ROMANIA	0,00	21.260,00	21.260,00	0,00
SERBIA	0,00	12.786,00	12.786,00	0,00
SLOVAK REPUBLIC	12.786,00		12.786,00	0,00
SLOVENIA	0,00	4.170,00	4.170,00	0,00
SPAIN	0,00	21.260,00	21.260,00	0,00
SWEDEN	0,00	21.260,00	21.260,00	0,00
SWITZERLAND	0,00	21.260,00	21.260,00	0,00
TURKEY	0,00	21.260,00	21.260,00	0,00
UNITED KINGDOM	0,00	42.374,00	42.374,00	0,00
Totals	145.592,13	542.906,00	618.104,70	95.937,43

MS Contributions 2015

Status of Contributions as at 21 April 2015				
Member Governments	Outstanding 31/12/2014	Contribution due for 2015	Received up to 31/03/2015	Outstanding 31/12/2015
ALBANIA	12.400,00	4.170,00		16.570,00
AUSTRIA	0,00	12.786,00		12.786,00
BELGIUM	0,00	21.260,00		21.260,00
BOSNIA	0,00	4.170,00		4.170,00
BULGARIA	51.144,00	12.786,00	51.144,00	12.786,00
CYPRUS	4.170,00	4.170,00		8.340,00
CROATIA	0,00	4.170,00	4.146,20	23,80
CZECH REPUBLIC	0,00	12.786,00		12.786,00
DENMARK	0,00	21.260,00	21.260,00	0,00
ESTONIA	4.170,00	4.170,00	4.170,00	4.170,00
FINLAND	0,00	12.786,00		12.786,00
FRANCE	0,00	42.374,00	42.374,00	0,00
GEORGIA	0,00	4.170,00		4.170,00
GERMANY	0,00	42.374,00		42.374,00
GREECE	0,00	12.786,00		12.786,00
HUNGARY	0,00	12.786,00		12.786,00
IRELAND	0,00	12.786,00		12.786,00
ISRAEL	0,00	4.170,00		4.170,00
ITALY	3.203,43	42.374,00	33.429,89	12.147,54
LATVIA	0,00	4.170,00		4.170,00
LITHUANIA	0,00	4.170,00		4.170,00
LUXEMBOURG	0,00	4.170,00		4.170,00
FYR of MACEDONIA	20.850,00	4.170,00		25.020,00
MALTA	0,00	4.170,00		4.170,00
NETHERLANDS	0,00	21.260,00		21.260,00
NORWAY	0,00	12.786,00		12.786,00
POLAND	0,00	21.260,00		21.260,00
PORTUGAL	0,00	12.786,00		12.786,00
ROMANIA	0,00	21.260,00		21.260,00
SERBIA	0,00	12.786,00		12.786,00
SLOVAK REPUBLIC	0,00	12.786,00	12.786,00	0,00
SLOVENIA	0,00	4.170,00		4.170,00
SPAIN	0,00	21.260,00		21.260,00
SWEDEN	0,00	21.260,00		21.260,00
SWITZERLAND	0,00	21.260,00		21.260,00
TURKEY	0,00	21.260,00	21.260,00	0,00
UNITED KINGDOM	0,00	42.374,00		42.374,00
TOTALS	95.937,43	555.692,00	190.570,09	461.059,34

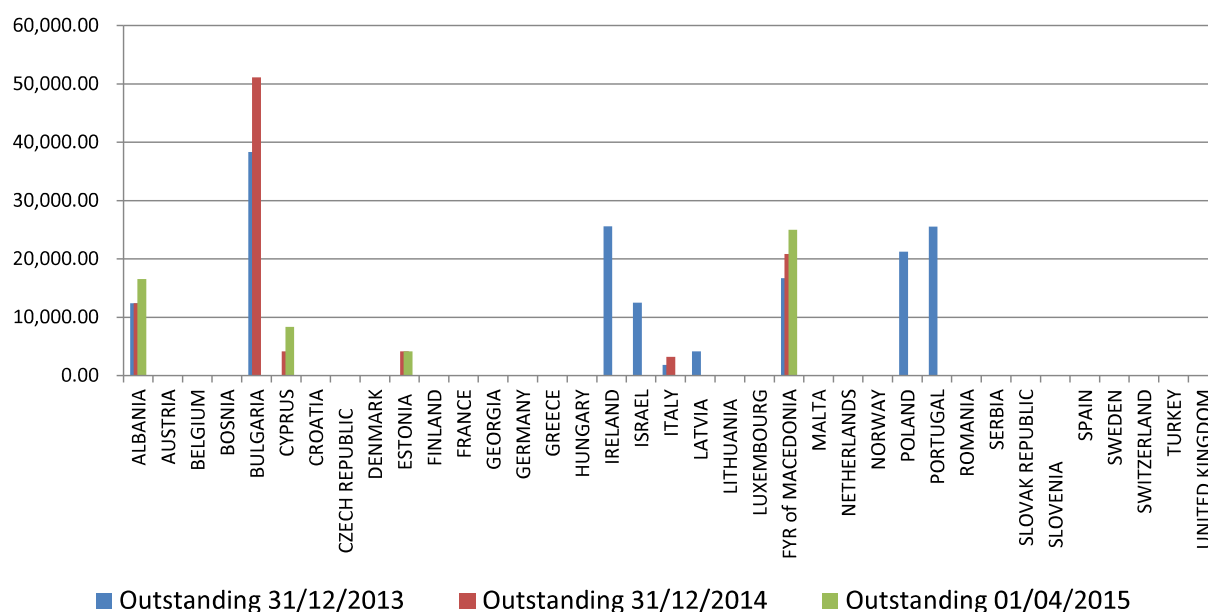
41st General Session of the EuFMD • Rome, 23-24 April 2015



Food and Agriculture
Organization of the
United Nations



Outstanding MS contributions 2013 – 2014-2015



41st General Session of the EuFMD • Rome, 23-24 April 2015

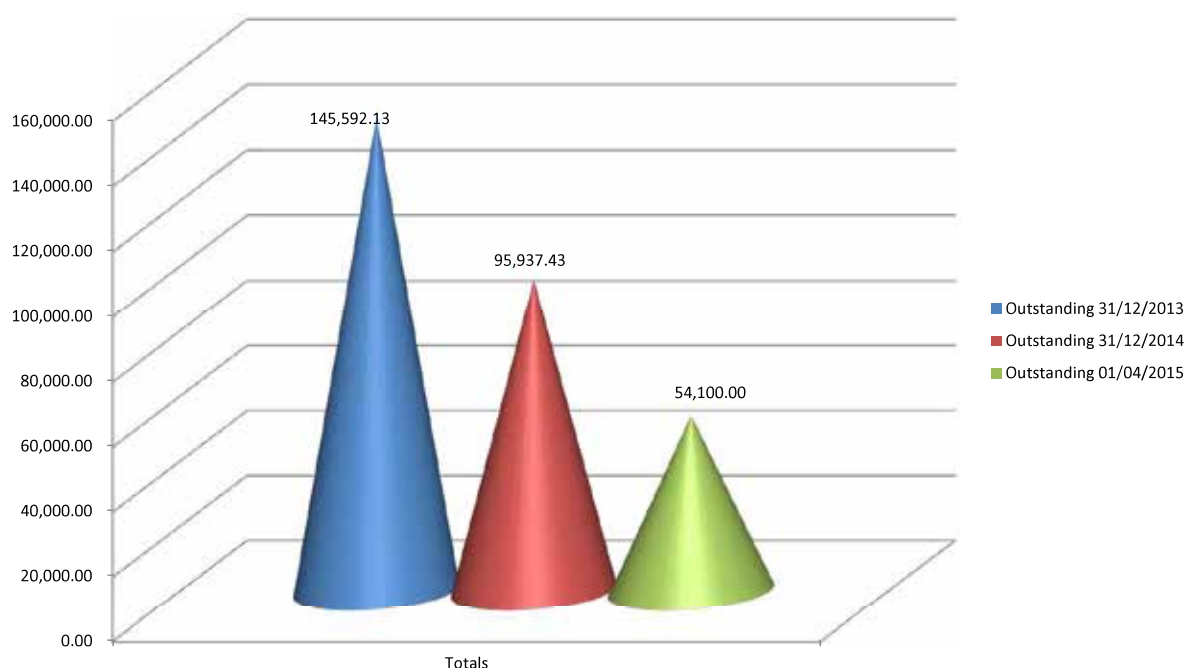


Food and Agriculture
Organization of the
United Nations

eofmd
European Commission for the
Control of Foot-and-mouth disease



MS - Outstandings 2013-2014-April 2015



Appendix 22

Proposal for revision

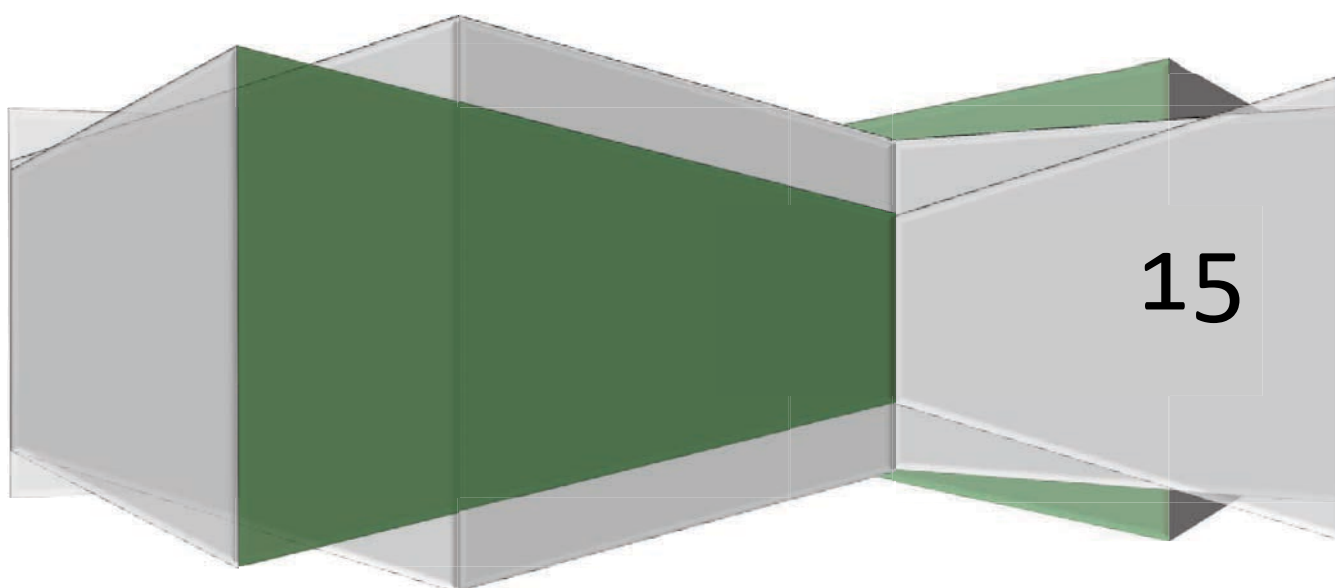
EuFMD

ITEM 9

PROPOSAL TO THE MEMBER STATES ON THE ADMINISTRATIVE BUDGET FOR TRUST FUND AND CONTRIBUTIONS TO MTF/INT/011/MUL FOR BIENNIUM 2016-17

2016- 2017 budgets (US\$) for approval by the 41st Session

EuFMD



PROPOSAL TO THE MEMBER STATES ON THE ADMINISTRATIVE BUDGET FOR TRUST FUND AND CONTRIBUTIONS TO MTF/INT/011/MUL FOR BIENNIUM 2016-17

2016- 2017 budgets (US\$) for approval by the 41st Session

Draft Proposal

The Draft Proposal for the 41st Session is as follows:

1. To adopt the categorisation of Member States into 5 categories for contribution based on their livestock populations and UN contributions, through application of the formula adopted at the 32nd Session, and with the thresholds for entry onto a category as indicated in the Table 3;
2. To adopt the scale of contributions for each category, as given in Table 4, which incorporates both the historic adjustment and an increment for inflation since the budget contributions were last changed in 2009.
3. To adopt the Budget for expenditure from the Administrative Fund of 705,437 USD in 2016 and 713,330 USD in 2017, accepting the reduction in the balance of the Trust Fund that results from income of 606,997 USD from annual membership contributions, being in each year being less than expenditure, before payment of arrears is taken into consideration.
4. That the agreement to be reached with the European Commission on the programme of work and budget for the next 4 years includes sufficient support for professional and other technical inputs required to undertake the programme activities, while the Administrative Fund is used to guarantee sufficient financial provision for the key members of the Secretariat to perform the duties required in fulfilment of the Constitution relating to governance, programme oversight, direction and reporting;
5. That the co-operation with non-member states continues on the current basis of the full costs of service provided being met by those requesting the service, and with clear benefits to the Commission in terms of the expertise maintained to serve the member states.
6. That additional states are encouraged to enter into membership, with the contributions being based on the categorisation adopted at the 41st Session.
7. That member states be given the option of a payment of higher contribution category for a biennium, and can state in so doing if they wish the additional contribution to cover training services under the training credits system, for their national needs or if desired to be in the form of credits donated to other states.

Background

1. The funding of the administrative activities of the Secretariat of the EuFMD Commission, and of the mandated activities required under the Constitution and for which no other sources of funding are available, is derived from the annual contributions of member countries to Trust Fund MTF/INT/011/MUL.
2. The administration of the Commission is wholly supported from the members contributions from MTF/INT/011/MUL. FAO provides office space, lighting and heating, which in the past were a contribution to the Commission but are now charged to the Commission budget, and has since 2013 introduced a levy of 8% (expected to rise to 10 or 12% this year on the decision of the FAO Council) on professional and consultant positions, which is used by FAO to pay for Central IT, security and other services. These additional costs must be found from savings and raised income.
3. The main programme of activities is supported under separate a financial agreement between FAO and the EC, activities on FMD control are financially supported for 4 m€ (current agreement for 24 months signed 28th August 2013) which is handled through Trust Fund MTF/INT/003/EEC. A third TF, for additional contributions by member states for specific actions, is maintained and has been used since 2012 for the funding of training programme contribution from Australia. This TF could be useful should MS or non-members wish to support certain actions, parallel to the situation of activities supported by the EC.

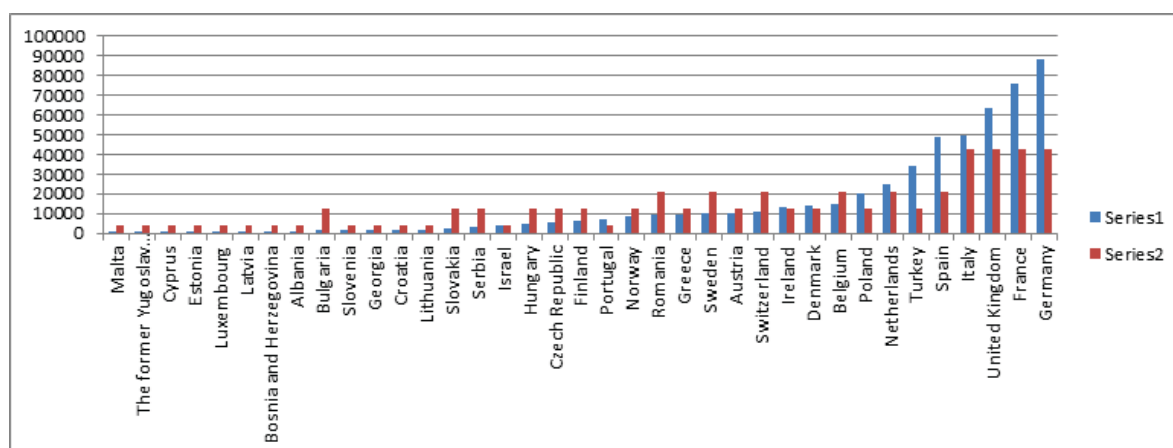
4. The 40th General Session in April 2013:

- Agreed an unchanged annual budget contribution to MTF/INT/011/MUL for 2014 and 2015, at US\$ 547,352, continuing the same level of contributions since the Session since January 2010;
- Agreed that the Executive Committee should review the categorisation of members for contributions and address the issue of raising income from contributions at the 41st Session
- Agreed that 2.5 professional posts plus two short term professionals could be supported from the Administrative Fund in 2014-15, with the Executive Committee to keep under review the balance in the fund given that expenditure would exceed income in 2014-15.

Review of the Categorisation of Member States for Budget Contribution

5. The Executive Committee, at the 87th Session reviewed the change in GDP per capita and livestock populations since 1997 and recognised that several countries have significantly changed position in relation to other European states in the 17 year period. The review of these changes, and options to achieve a fairer distribution of the categories, and discussions upon the budget, were held at the 89th Session in February 2015. The arguments presented and discussed are summarised below.
6. The current scale of contributions was adopted at the 32nd Session in 1997, with four categories, based on a classification that used two equal criteria, a) the FAO contribution and b) livestock population (formula – 1 for cattle, 0.5 for pigs, 0.2 for sheep and goats). At this time, it was agreed that the category for a member country would be reviewed every six years, but this has not happened as no proposal has been submitted by MS or the Executive in the period. The 40th Session recommended the categorisation be reviewed in 2015.
7. The 2013 national livestock and 2015 UN/FAO financial contributions by countries was compiled, and the “1997 formula” was applied and countries ranked, using the equal criteria mentioned in paragraph 6. (Data in **Annex 1**) It can be seen (Table 4) that the top 10 countries in ranking remain the same as in 1997, whereas there are significant changes in the order of the next 10 countries, as a result in changes in livestock or UN contribution (GDP related) since 1997. This is also evident from Chart 1 where the red columns indicate the CURRENT category of contribution and it can be seen this no longer follows the order based on livestock/UN contribution (blue).
8. It can be argued that the top ranked countries (current categories 1 and 2) are to an extent subsidised by the others, but also that each member state has needs for support and an expectation of basic benefits from membership that will be similar whatever the size of animal population, and therefore there should be a level of contribution for the small countries. Currently the differential between the smallest and larger contributors is 10: 1. It should also be noted that the steps between country contributions are big (double or triple), so Spain and Italy are almost equal on the ranking but one currently pays double the other.

Chart 1. **Current contributions** in \$US (red) under the 4 category system compared to the “continuous scale amount” (blue), the latter based on a countries livestock and UN contribution as a % of the European (37 states) total. This chart illustrates how the historic categories for contributions (red) are no longer well aligned for all countries to the livestock and UN contribution, as a result of changes since 1997.



9. Possible solutions to this were discussed by the Executive, with the fairest solution considered to involve the addition of one new category that captures the majority of the countries whose positions have moved either upwards or downwards significantly since 1997. This results in a fairer POSITION on the scale with least number of changes of position (Chart 2).
10. Alternative systems considered included a continuous scale, with or without a cap for minimum and maximum contributions, but this would result in all the top position/larger countries having significantly increased payments and overall, more countries that would face increased contributions compared to the categorisation system.
11. The change recommended by the Executive to introduce the new category and thresholds between categories would result in some five countries would paying more, relative to the current (2014-15) contributions. These countries are Israel, Norway, Greece, Austria and Ireland.
12. The Executive also recognised the need to address the relative underpayment (Chart 1) of the Category 1 and 2 countries compared to the lowest contributors. An increased 2% in contributions was decided upon, to be asked of the Category 1 and 2 countries in relation to the Category 4 and 5 members. The % increase for inflation over the 6 years was set at 1.3%¹ for all categories except the new Category 3.

¹ Equates to 8% over the 6 years since contributions were last raised.

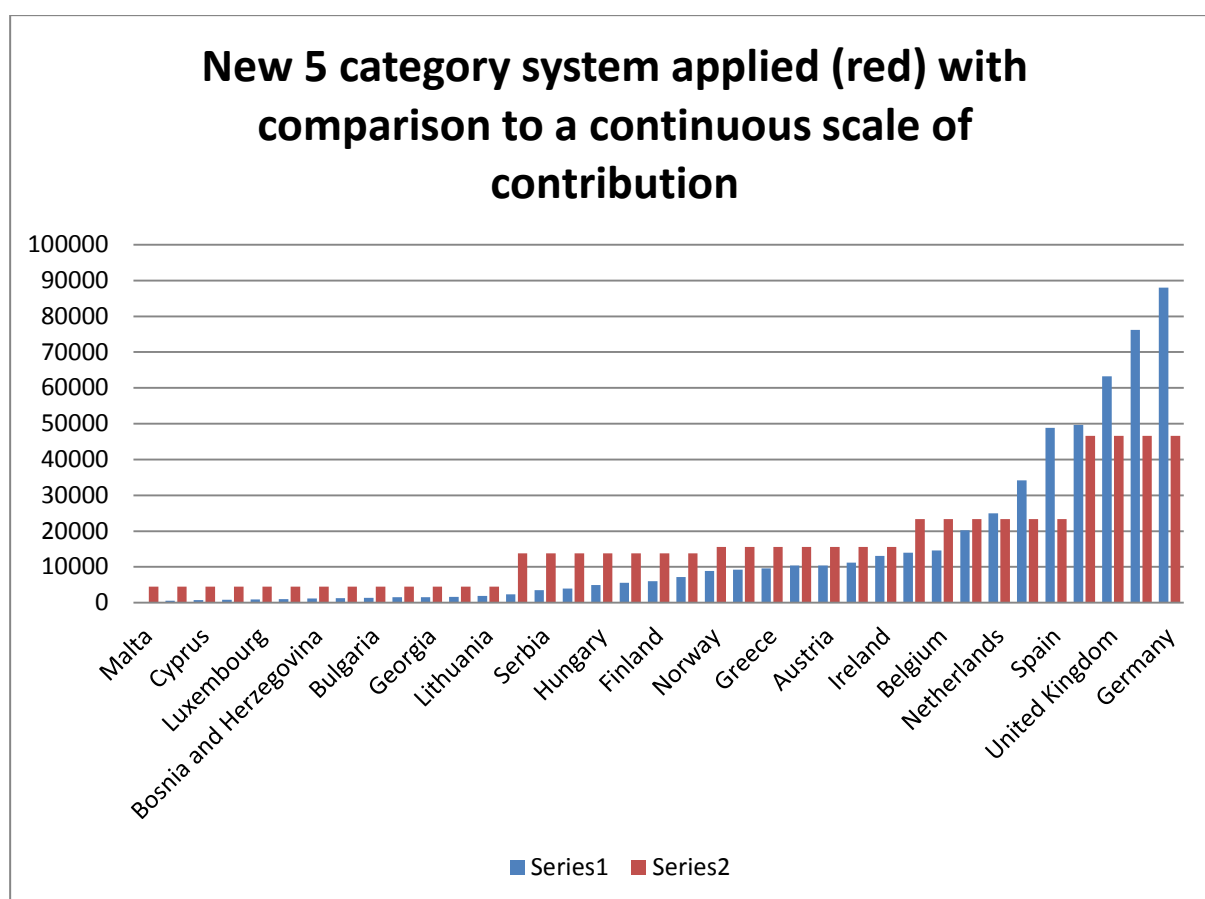


Chart 2 New 5 category system applied with comparison to a continuous scale of contribution.

Budget Contributions proposed : 2016-17

13. The new Categorisation system was developed to reflect the changes in wealth and livestock populations over the past 18 years. The need for an increase in the overall budget contribution was agreed at the 40th Session as being a priority for the 41st Session.
14. The 40th Session agreed an unchanged level of contribution per member state, with the expectation that the reserve fund in the Administrative TF would be depleted over the biennium, as follows, with year end balances predicted to fall to USD 295,000 and USD 195,000 in 2014 and 2015. Previous Sessions have recommended a reserve of circa USD 200,000 be kept given the volatility of currency rates (which recently have sung by about 25%) and other contingencies in the biennium between Sessions.
15. The year –end position of MTF/INT/011/MUL was at **332,040 USD, which is better than the predicted (295,088)**. It should be noted that in 2014 savings were made through the vacancy arising in the P3 position after Eoin Ryan returned to Ireland in January 2014, but bigger savings were not achieved in part because consultants were recruited to cover the vacancy.
16. The income in 2014 and 2015 was also assisted by the payment of arrears from MS of circa 65,000 in 2014 and 55,000 in 2015, which helped offset the expenditure in both years but would not be expected to continue in 2016.
17. The Executive considered that it would be essential to retain the 2.5 professional posts, as agreed at the 40th Session, as the core of the Secretariat, but ensure under the new agreement to be reached with the EC that sufficient professional and technical time is budgeted under the EC financial agreement to ensure a fair balance with that supported by the member states. For this reason, the professional line is increased to cover the 2.5 posts in 2016 and consultants line limited to 30,000 USD. Presuming recruitment
18. On the above basis, an income from contributions of at least 595,000 USD is needed each year to avoid the cash balance dropping below 100,000 at year end in 2017.

Table 2 – Proposed Budgets for 2016 and 2017

	Actual (2014), predicted (2015) and PROPOSED budgets for MTF/INT/011/MUL			
	2014	2015	2016	2017
	Actual	Predicted	Proposed 41st	Proposed 41st
Salaries ²	430,894	370,800	476670 ³	490970
Consultant	163,484	70,000	30,000	30,000
Contracts	0	1,000	1,000	1,000
Travel (inc STPs)	110,786	51500	50,000	40,000
STPs (Short Term Professional officers)		72,000	72,100	74,263
Training	7,036	6000	10,000	10,000
Gen Op Expenses	25,105	12,000	12,000	12,000
Expendable equipment	1171	1,000	1,000	1,000
Durable Equipment	0	2000	5,000	5,000
Central Service Charge		44000	47,667	49,097
Total	738,476	630,300	705,437	713,330
Income	618,105 ⁴	601,000	606,997	606,997
Deficit	- 120,371	-29,300	-91,440	-99,333
<i>Year END Balance</i>	332,904	303,604	212,164	112,832

19. If needed, during the course of the biennium the Executive Committee could achieve reduction in the costs to the Administrative Fund could be achieved by :
 - a. Reducing or shifting the STP programme to another funding source (savings of 36,000 USD per STP position per year);
 - b. Shifting one or more P posts to the EC budget.
20. The Executive Committee, having reviewed the categorisation of countries, the savings being achieved in 2015, and the need for a minimum of 2.5 professional positions in the Secretariat, and the need to adjust contributions after the 6 years without change, agreed upon the level of contributions per category that would achieve an income of circa 607,000 USD per annum.
21. Table 4 indicates the proposed Level of Contributions per category and for each MS. This would achieve the required income of over 600,000 USD per annum, which will avoid depleting the fund below the minimum cash balance at all times for administrative function.
22. That member states be given the option of a payment of higher contribution category for the upcoming biennium, with the option at the 42nd Session to revert to the categorisation as set in Table 3.
23. In electing for a higher category, the MS can indicate if they wish the additional funds contribution to cover training services under the training credits system, for their national needs or for the purpose of international capacity building to be donated to other states, irrespective of their membership of the EuFMD. The conversion rate at the time of the 41st Session is 1600 USD per training credit.

3 Assumes 2.5 professional posts filled throughout 2016 and 2017.

4 Includes payments of arrears of circa 65,000 USD above the annual contributions.

Table 3 Categorisation of countries: proposed divisions

AreaCode	Region	Area Name	A plus B/2	Continuous scale Budgetary formula	Current Category	NEW Category	New MS
125	E	Liechtenstein	0.00	7			
64	E	Faroe Islands	0.00	15			
134	E	Malta	0.03	144	4	5	
273	E	Montenegro	0.03	154			5
99	E	Iceland	0.06	334			5
154	E	The former Yugoslav Republic of Macedonia	0.09	487	4	5	
146	E	Republic of Moldova	0.10	524			5
50	E	Cyprus	0.11	628	4	5	
63	E	Estonia	0.12	676	4	5	
256	E	Luxembourg	0.14	757	4	5	
1	E	Armenia	0.15	826			5
119	E	Latvia	0.15	840	4	5	
80	E	Bosnia and Herzegovina	0.17	947	4	5	
3	E	Albania	0.19	1055	4	5	
27	E	Bulgaria	0.20	1121	3	5	
198	E	Slovenia	0.23	1238	4	5	
73	E	Georgia	0.23	1285	4	5	
98	E	Croatia	0.24	1330	4	5	
126	E	Lithuania	0.28	1523	4	5	
			>0.3				
199	E	Slovakia	0.35	1922	3	4	
113	E	Kyrgyzstan	0.42	2311			4
208	E	Tajikistan	0.49	2706			4
272	E	Serbia	0.51	2827	3	4	
105	E	Israel	0.59	3239	4	4	
52	E	Azerbaijan	0.73	4013			4
97	E	Hungary	0.73	4023	3	4	
167	E	Czech Republic	0.82	4532	3	4	
67	E	Finland	0.89	4873	3	4	

213	E	Turkmenistan	0.92	5086			4
174	E	Portugal	1.06	5818	3	4	
57	E	Belarus	1.13	6222			4
			>1.2				
162	E	Norway	1.31	7204	3	3	
183	E	Romania	1.36	7468	2	3	
84	E	Greece	1.42	7804	3	3	
210	E	Sweden	1.54	8445	2	2	
11	E	Austria	1.54	8468	3	3	
230	E	Ukraine	1.55	8549			3
211	E	Switzerland	1.66	9111	2	2	
108	E	Kazakhstan	1.75	9631			3
104	E	Ireland	1.93	10589	3	3	
			>2.0				
54	E	Denmark	2.07	11383	2	2	
255	E	Belgium	2.15	11820	2	2	
235	E	Uzbekistan	2.20	12106			2
173	E	Poland	2.99	16448	2	2	
150	E	Netherlands	3.69	20312	2	2	
223	E	Turkey	5.04	27742	2	2	
203	E	Spain	7.21	39659	2	2	
			>7.25				
106	E	Italy	7.33	40295	1	1	
185	E	Russian Federation	8.52	46875			1
229	E	United Kingdom	9.33	51321	1	1	
68	E	France	11.25	61852	1	1	
79	E	Germany	12.99	71452	1	1	
Total			100.00	550000 (USD)			

Table 4. Budgetary implications for member states of New Contribution, ordered by their Rank (Livestock/UN Contribution) in the 1997 assessment. The most affected countries for change in position are shown in **light green**

Member Country	1997 RANK	2015 Rank	1997 Cat. Level	Annual Contr-2006-2007	Contr-2008-9	Contr 2010-11	Contr 2012-13	Contr 2014-15 (40 th GS)		Contribution	
										2016-17	
										(41 st GS)	
				36 th GS	37 th GS	38 th GS	39 th GS	40 th Session	New Cat	Proposed	Change
GERMANY	1	1	1	39,650	41260	42,374	42,374	42,374	1	46611	4,237
FRANCE	2	2	1	39,650	41260	42,374	42,374	42,374	1	46611	4,237
U.K	3	3	1	39,650	41260	42,374	42,374	42,374	1	46611	4,237
ITALY	4	4	1	39,650	41260	42,374	42,374	42,374	1	46611	4,237
SPAIN	5	5	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
TURKEY	6	6	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
NETHER.	7	7	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
POLAND	8	8	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
BELGIUM	9	9	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
DENMARK	10	10	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
SWEDEN	11	14	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
ROMANIA	12	16	2	19,890	20700	21,260	21,260	21,260	3	15,650	-5,610
SWITZ.	13	12	2	19,890	20700	21,260	21,260	21,260	2	23386	2,126
AUSTRIA	14	13	3	11,960	12450	12,786	12,786	12,786	3	15,650	2,864
IRELAND	15	11	3	11,960	12450	12,786	12,786	12,786	3	15,650	2,864
GREECE	16	15	3	11,960	12450	12,786	12,786	12,786	3	15,650	2,864
FINLAND	17	19	3	11,960	12450	12,786	12,786	12,786	4	13,809	1,023
CZECH REPUBLIC	18	20	3	11,960	12450	12,786	12,786	12,786	4	13,809	1,023
NORWAY	19	17	3	11,960	12450	12,786	12,786	12,786	3	15,650	2,864
SERBIA	20	23	3	11,960	12450	12,786	12,786	12,786	4	13,809	1,023
PORTUGAL	21	18	3	11,960	12450	12,786	12,786	12,786	4	13,809	1,023

Member Country	1997 RANK	2015 Rank	1997 Cat. Level	Annual Contr-2006-2007	Contr-2008-9	Contr 2010-11	Contr 2012-13	Contr 2014-15 (40 th GS)		Contribution	
										2016-17	
										(41 st GS)	
				36 th GS	37 th GS	38 th GS	39 th GS	40 th Session	New Cat	Proposed	Change
HUNGARY	22	21	3	11,960	12450	12,786	12,786	12,786	4	13,809	1,023
BULGARIA	23	29	3	11,960	12450	12,786	12,786	12,786	5	4,504	-8,282
SLOVAK R.	24	24	3	11,960	12450	12,786	12,786	12,786	4	13,809	1,023
LITHUANIA	25	25	4	3,900	4060	4170	4170	4170	5	4,504	334
ISRAEL	26	22	4	3,900	4060	4170	4170	4170	4	13,809	9,639
ALBANIA	27	30	4	3,900	4060	4170	4170	4170	5	4,504	334
CROATIA	28	26	4	3,900	4060	4170	4170	4170	5	4,504	334
LATVIA	29	32	4		4060	4170	4170	4170	5	4,504	334
SLOVENIA	30	28	4	3,900	4060	4170	4170	4170	5	4,504	334
ESTONIA	31	34	4			4170	4170	4170	5	4,504	334
FYROM	32	36	4	3,900	4060	4170	4170	4170	5	4,504	334
LUXEMBOURG	33	33	4	3,900	4060	4170	4170	4170	5	4,504	334
CYPRUS	34	35	4	3,900	4060	4170	4170	4170	5	4,504	334
BOSNIA-H	35	31					4170	4170	5	4,504	334
ICELAND (withdrew from MS)	36		4	3,900	4060	4170[2]					
MALTA	37	37	4	3,900	4060	4170	4170	4170	5	4,504	334
GEORGIA	Not ranked	27	4					4170	5	4,504	334

Member Country	1997 RANK	2015 Rank	1997 Cat. Level	Annual Contr- 2006-2007	Contr- 2008-9	Contr 2010-11	Contr 2012-13	Contr 2014-15 (40 th GS)		Contribution	
										2016-17	
										(41 st GS)	
				36 th GS	37 th GS	38 th GS	39 th GS	40 th Session	New Cat	Proposed	Change
TOTALs as agreed by Session				496,210.00	528,890	547,352[3]	543, 182	551,522		606,997	

Annex 1. Livestock Populations (2013), Converted to Total Units (TU) by 1997 formula, % Contribution of the countries to UN system and position in the European scale based on an average of both (final column).

Area Code	Region	Area Name	Cattle2013 (Heads)	Goats 2013	Sheep 2013	Pigs 2013	Buffalo 2013	Total Units (1997 formula)	%TU in Europe (A)	UN Contrib 2015	%European Cont FAO (B)	(A plus B)/2
125	E	Liechtenstein	6,350	368	4,000	1,800	-	8,124	0.00	0	-	0.00
64	E	Faroe Islands	2,300	-	70,000	-	-	16,300	0.01	0	-	0.00
134	E	Malta	15,220	4,598	10,930	49,450	-	43,051	0.01	0.016	0.04	0.03
273	E	Montenegro	84,000	-	207,000	18,000	-	134,400	0.04	0.005	0.01	0.03
99	E	Iceland	68,014	877	463,807	26,033	-	173,967	0.06	0.027	0.06	0.06
154	E	The former Yugoslav Republic of Macedonia	238,333	75,028	731,828	167,492	640	483,450	0.16	0.008	0.02	0.09
146	E	Republic of Moldova	191,200	128,900	695,100	410,400	-	561,200	0.18	0.003	0.01	0.10
50	E	Cyprus	57,000	243,130	347,000	357,900	-	353,976	0.12	0.047	0.11	0.11
63	E	Estonia	261,400	4,900	81,900	358,700	-	458,110	0.15	0.04	0.10	0.12
256	E	Luxembourg	193,623	4,456	8,582	87,518	-	239,990	0.08	0.082	0.20	0.14
1	E	Armenia	661,003	29,020	645,711	145,044	531	868,471	0.28	0.007	0.02	0.15
119	E	Latvia	393,000	13,300	83,600	355,200	-	589,980	0.19	0.047	0.11	0.15
80	E	Bosnia and Herzegovina	446,893	69,369	1,019,782	529,644	-	929,545	0.30	0.017	0.04	0.17
3	E	Albania	498,000	810,000	1,808,000	158,000	120	1,100,600	0.36	0.01	0.02	0.19
27	E	Bulgaria	526,112	293,639	1,361,545	530,945	9,212	1,122,621	0.37	0.017	0.04	0.20
198	E	Slovenia	460,063	26,351	114,152	296,097	-	636,212	0.21	0.101	0.24	0.23

73	E	Georgia	1,128,800	54,400	688,200	204,300	18,000	1,379,470	0.45	0.007	0.02	0.23
98	E	Croatia	442,000	69,000	620,000	1,110,000	-	1,134,800	0.37	0.047	0.11	0.24
126	E	Lithuania	729,200	13,600	82,800	807,500	-	1,152,230	0.38	0.074	0.18	0.28
199	E	Slovakia	471,091	34,823	409,570	631,464	-	875,702	0.29	0.172	0.41	0.35
113	E	Kyrgyzstan	1,404,168	960,391	4,680,823	51,777	-	2,558,299	0.84	0.002	0.00	0.42
208	E	Tajikistan	2,043,725	1,772,982	2,959,495	662	15,000	2,990,551	0.98	0.003	0.01	0.49
272	E	Serbia	913,144	225,073	1,616,000	3,144,215	-	2,853,466	0.93	0.04	0.10	0.51
105	E	Israel	465,000	100,000	540,000	176,900	-	681,450	0.22	0.398	0.96	0.59
52	E	Azerbaijan	2,444,500	651,115	7,979,424	6,495	260,889	4,173,855	1.36	0.04	0.10	0.73
97	E	Hungary	760,000	89,000	1,185,000	2,989,000	-	2,509,300	0.82	0.268	0.64	0.73
167	E	Czech Republic	1,352,822	24,042	220,521	1,586,627	-	2,195,048	0.72	0.388	0.93	0.82
67	E	Finland	911,847	4,509	135,546	1,300,385	-	1,590,051	0.52	0.522	1.25	0.89
213	E	Turkmenistan	2,250,000	2,290,000	14,000,000	29,000	-	5,522,500	1.80	0.019	0.05	0.92
174	E	Portugal	1,471,000	398,000	2,073,000	2,014,000	-	2,972,200	0.97	0.477	1.14	1.06
57	E	Belarus	4,367,000	73,200	59,900	4,242,900	-	6,515,070	2.13	0.056	0.13	1.13
162	E	Norway	849,984	62,800	2,223,661	848,063	-	1,731,308	0.57	0.856	2.05	1.31
183	E	Romania	2,009,135	1,265,676	8,833,830	5,234,313	-	6,646,193	2.17	0.227	0.54	1.36
84	E	Greece	679,000	4,250,000	9,520,000	1,077,000	1,750	3,971,500	1.30	0.642	1.54	1.42
210	E	Sweden	1,496,526	-	576,769	1,398,875	-	2,311,317	0.76	0.965	2.32	1.54
11	E	Austria	1,955,618	73,212	364,645	2,983,158	-	3,534,768	1.15	0.802	1.92	1.54
230	E	Ukraine	4,645,900	664,800	1,073,400	7,576,700	-	8,781,890	2.87	0.1	0.24	1.55
211	E	Switzerland	1,563,214	90,000	410,000	1,487,704	-	2,407,066	0.79	1.053	2.53	1.66
108	E	Kazakhstan	5,851,227	2,362,824	15,197,780	922,296	10,000	9,824,496	3.21	0.122	0.29	1.75

104	E	Ireland	6,902,600	8,700	5,110,600	1,552,000	-	8,702,460	2.84	0.42	1.01	1.93
54	E	Denmark	1,614,644	-	151,300	12,075,750	-	7,682,779	2.51	0.679	1.63	2.07
255	E	Belgium	2,454,704	40,473	114,407	6,592,978	-	5,782,169	1.89	1.004	2.41	2.15
235	E	Uzbekistan	9,966,600	2,681,500	14,077,500	94,500	-	13,365,650	4.37	0.015	0.04	2.20
173	E	Poland	5,859,541	81,727	249,481	11,162,472	-	11,507,019	3.76	0.926	2.22	2.99
150	E	Netherlands	3,999,220	412,550	1,033,570	12,212,300	-	10,394,594	3.40	1.663	3.99	3.69
223	E	Turkey	13,916,924	8,357,286	27,425,233	2,986	107,435	21,074,921	6.88	1.335	3.20	5.04
203	E	Spain	5,696,910	2,609,990	16,118,590	25,494,720	-	22,189,986	7.25	2.989	7.17	7.21
106	E	Italy	6,091,500	891,604	7,015,700	8,661,500	402,659	12,003,711	3.92	4.472	10.73	7.33
185	E	Russian Federation	19,930,354	2,118,697	22,061,282	18,816,357	6,002	34,174,528	11.16	2.451	5.88	8.52
229	E	United Kingdom	9,844,000	98,000	32,856,000	4,885,000	-	18,877,300	6.17	5.207	12.50	9.33
68	E	France	19,095,797	1,291,028	7,233,720	13,487,588	-	27,544,541	9.00	5.623	13.49	11.25
79	E	Germany	12,587,020	165,000	1,641,000	27,690,100	5,000	26,793,270	8.75	7.18	17.23	12.99
		TOTALs	162,267,226	35,989,938	218,191,684	186,043,808	837,238	306,125,454	100.00	41.67	100.00	100.00

