



Food and Agriculture  
Organization of the  
United Nations



BUDAPEST 6-7 MARCH 2018



# Report Appendices

95<sup>TH</sup> SESSION  
OF THE EXECUTIVE COMMITTEE  
OF THE EUFMD COMMISSION

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

# **Appendix 1**

## Agenda



## 95<sup>th</sup> Executive Committee EuFMD

6-7 March– Budapest, Hungary

### Draft Agenda

Tuesday 6 <sup>th</sup> March 2018			
13.00	1	Welcome & Adoption of the Agenda	L. Bognar, J-L Angot
	2	<b>Follow-up to the 94<sup>th</sup> Session</b> i. Summary of actions since October 2017	K.Sumption, EuFMD
	3	<b>FMD situation and progress of FMD laboratory surveillance contracts</b> a) Report of the WRL [Report required under Contract-LOA] b) Report of ANSES/EU-RL	D. King, WRL L. Bakkali
	4	<b>Evaluation of the progress of the Phase IV Contract , EC support to EuFMD Activities [for decision]</b>	K.Sumption,
	5	<b>Training Programme - Progress Updates and Plans</b> a. Training Program for Member States b. Training in support of neighbourhood and global strategy (Pillars II and III) c. Joint OIE/EuFMD training initiative on better application of the TAHC (FMD chapter)	M.Hovari J.Maud <i>adobe</i>
	6	<b>Progress on tools for emergency preparedness</b> a. European multi-country FMD Spread model (EuFMDiS) b. EuFMD emergency vaccine reserve – interest of producers to participate in a new modality for vaccine banks	G.Garner <i>adobe</i> K.Sumption
Break			
Wednesday 7 <sup>th</sup> March 2018			
8.30	7	<b>Regional FMD programmes –progress</b> a. REMESA: Report on recent meetings and progress in N Africa and Mid-East b. Turkey, Georgia and Transcaucasus a. Report of the meeting in Georgia on progressive control programmes in TransCaucasus b. Report of Turkey on FMD control progress c. Update on the pipeline FAO/Russian Federation project for FMD control in Transcaucasia and Central Asia	F. Rosso L. Avaliani GDFC FAO
	8	<b>Support to the Global Programme (Pillar III)</b>	N. Lyons/K Sumption
	9	<b>Standing Technical Committee (STC) Report</b> 1. Progress of FAR Fund projects 2. Open Session 2018 3. Biorisk Management Committee – upcoming Meeting (Palermo, March)	E. Ryan K.Sumption
	10	<b>Financial and Administrative Reports</b> Administrative Fund, and future budget/Emergency and Training Fund/EC Fund	K.Sumption
Finish / Lunch			

# **Appendix 2**

## **Report on activities**

## Item 2

**Report on Activities of the Secretariat - October 2017 – March 2018****1. SUMMARY**

It has been an intense and productive five months since the Dublin (94<sup>th</sup>) Session of the Executive Committee, held in October 2017. At that Session, the set of sixteen, 24 month workplans were agreed, and with immediate effect for implementation. As the budget proposal for the overall four-year plan remained within the terms of the agreement for extent of variation of budget elements, the changes were accepted by the Financial Unit of DG-SANTE. The rapid implementation of the plans were enabled by having a full team in place, with exception of the expertise for the Balkans Component. The additional heavy workload imposed by FAO administrative procedures has been managed, but it has been a stressful period for many. The budget position has been very well managed by Cecile Carraz and team and the expansion in the current biennium of the communications and training programme has been assisted by establishing a funding base for **internships**, with these working alongside experienced EuFMD team members. The Pillar III work has been assisted by having Nick Lyons (UK) join the Rome-HQ team on full time basis in January. This has enabled a focus on the initiatives in support of GF-TADS WG, particularly Progressive Control Pathway (PCP) support to countries, and working with international partners for an integrated approach to West Africa and South Asia.

On the **partnership** side, agreements have been reached with IZSLT (Italy) and CIRAD (Montpellier) which will greatly help the Pillar II and III work in the Mediterranean and West and North Africa in 2018. The working agreement with OIE, on joint training courses, has proceeded well, with Turkey offering to host the first course in April.

Relating to **Member States**, the development of a **multi-country disease spread** model has gone really well, and is now ahead of schedule, and the Committee needs to consider if a wider conference/workshop (“Europe wide” scenario modelling) could be a good target for achievement in 2019.

The **training programme** for MS is now in full swing with most training for the biennium planned for delivery by mid-2018. New courses have also been launched, one being for the CaribVet network which includes British, French and Netherlands overseas dependences in the Caribbean region, which are under risk from the situation in Venezuela.

The other major news is that **Montenegro** has submitted its Instrument of Acceptance of the EuFMD Constitution. We still await legal office clearance, for our “39<sup>th</sup>” member state.

2. Actions taken in follow-up to the Recommendations of the 94<sup>th</sup> Session

Recommendation (94 <sup>th</sup> Session, Dublin)	Follow-up
1. Relating to the financial closure of Phase III, a meeting is recommended to take place between EuFMD, FAO and DG-SANTE to resolve issues associated with the verification process and reach agreement over eligibility of certain expenditures.	<b>See point #25</b>
2. Relating to recruitment processes for consultants, the President and Officers undertook to identify if messages of concern might be sent by the Member States or through the EU Presidency.	Interventions of Irish Representation (on consultants) and French Representations (relating to contract extension delays of the P1 officer). Both had some immediate impact, the latter on the single case.
3. The Committee noted with concern the continuing volatile and rapidly changing pattern of risk for the member states in South and East Europe, and to all member states from the situation of continued spread in the Far –East (Pool 1).	Higher attention to risk in THRACE/ South and East Europe activities. The Bulgaria Presidency is well aware of the risk situation.
4. The Secretariat should arrange a meeting to discuss the future arrangements for the EuFMD support to the Proficiency Test System (PTS) with the new EU-RL and with The Pirbright Laboratory, when the new EU-RL nomination has been finalized.	Not yet held. Will occur on margins of the 95 <sup>th</sup> ExCom. The new EU-RL is ANSES/CODA-CERVA.
5. The Secretariat should ensure the new EU-RL is informed about future Sessions of the Executive Committee since their participation in such Sessions could be a benefit for co-ordination.	Informed, invited and in attendance 95 <sup>th</sup> ExCom.
6. The risk monitoring activities in Pillar II were supported, including the proposal to encourage, under the Fund for Applied Research, the development of a working system for integrating livestock price monitoring data with regional movement data in North Africa.	Contracting with CIRAD has proceeded and work programme initiated.
7. Endorsed the proposal to undertake a feasibility study on assurance options to enable access to emergency reserves of FMD antigens and vaccines, and re-confirmed the importance to be placed on achieving progress in this domain over the next year.	Call for expressions of interest launched by FAO. Six vaccine producers responded, and consultations were held with them in January 2018. High interest to participate. Next stage is tenders to identify costs of the storage options.
8. Endorsed the workplan for the animal disease spread model and recommended an update on progress should be an item on each upcoming Session of the Executive Committee.	Good progress being made and will be reported.
9. Endorsed the workplan for the Balkan countries and the further development of the “GET Prepared Pathway” as a tool for development of exercises to evaluate national FMD preparedness plans	In pipeline to apply in Balkan countries.
10. Agreed upon the necessity of forming a working group on how public sector may better achieve engagement with private stakeholders in preparedness and response planning, under the leadership of Vice-President (C. Bruschke).	To be followed up.
11. Recommended that a Tripartite Meeting be held in June 2018 (in Istanbul, Turkey) to decide on the focus of future surveillance activities for Component 1.3 THRACE after September 2018, and that a further post vaccination serology study conducted in Turkish Thrace be repeated, in first half of 2018.	To be discussed at Excom
12. Took note of the reports of the recent Epidemiology and Laboratory network meetings held as part of the GF-TADS West Eurasia Roadmap, and requested the Secretariat to prepare the	Follow-up workshop (Georgia) held week of 12 <sup>th</sup> February 2018, organized by EuFMD with OIE presence.

response in line with the target and funds available within the Component 2.1 of Phase IV work programme.	Follow-up actions under the Epi and Lab networks undertaken.
13. Endorsed the proposal for the new joint training initiative with the OIE within the Pillar II workplan, and instructed the Secretariat to proceed with the development on a bilateral basis with the OIE and to report on progress at the next Executive	Good progress being made. Initial course (Safe Trade) planned for April 2018, in Istanbul), and training in Containment Zones planned to follow (prepared after May 2018).
14. The Session endorsed the set of sixteen workplans contained in the Phase IV workplan, second biennium, for the period October 2017-September 2019, and the proposed budget, subject to the clarifications provided in the report on this item.	Implemented immediately after 94 <sup>th</sup> Session.
15. The Chair asked if the Session endorsed the programme or work and budget for the biennium, and received unanimous support.	Budget submitted to EC (DG-SANTE) with indications received back of acceptance.
16. Recommended an in-depth review to identify priorities for technical studies and for applied research be undertaken and report to the Open Session in October 2018. In so doing, the EuFMD should encourage and if needed, assist the gap analysis to be conducted by GFRA in early 2018.	The GFRA review of research is ongoing.
17. Endorsed the proposals for the 6 <sup>th</sup> call for research proposals under the FAR Fund, and that more details be provided to the next Session for the decision on the priorities for the 7 <sup>th</sup> call	Ongoing.

### 3. Global Surveillance Reports

The EuFMD – with support of the WRL (Pirbright) has produced Monthly Reports which are sent every month to the global community, summarizing information received from the monthly push-pull process of contacting informants in six of the seven viral epizones (Virus Pools).

The major FMD risk events of the note in the period, of most concern to Europe have been:

- Evidence of FMD viruses of African origin (O/EA-3), and SAT 2 moving into the near East (in Israel and Palestinian AT), with outbreaks in Palestine in November 2017;
- The continued presence of A/ASIA/G-VII lineage in Turkey and mid-East, as seen from outbreaks in northern Israel;
- Unexplained movement of infection into Russian Federation, with emergence of a new genetic lineage of serotype O/ME-SA in Russia (Bashkortostan), probably from Central Asia;
- New FMD cases due to serotype Asia 1 in West Eurasia (such as in Pakistan) that may be early predictors of a fresh wave of cases due to this serotype that may occur, via Iran into Turkey;
- The threats of infection from Pool 1, where spread of O/ME-SA/Ind-2001 – particularly in China, Mongolia, South Korea and Russia), and the recognition that there are at least two genetic clades of this FMDV lineage circulating within the Indian sub-continent that have caused exotic outbreaks (named O/ME-SA/Ind-2001d and O/ME-SA/Ind-2001e).

On a more positive note, there have been no further reported outbreaks in North Africa (Algeria and Tunisia) since April 2017, after the incursions from West Africa of viruses within the A/AFRICA/G-IV clade.

### 4. The major achievements in the six months

#### Pillar I:

Progress with development of the **EuFMD-iS** (European FMDisease Spread model), with good progress made to establish country levels datasets to establish the model with seven European countries, and the agreement with MS on the training credits /course to be run in 2017-19.

#### Pillar II:

- Significant progress in Georgia, Jordan on their Risk Based Strategic Plans;

- with Morocco/Algeria/Tunisia towards agreement in the surveillance for early detection of FMD infection;
- Online, multi-country FMD investigation course run with Russian speaking countries.

#### **Pillar III:**

Establishment of a system to support the FMD-WG of OIE and FAO, with "PCP Support Officers", to ensure countries have access to guidance after Roadmap meetings;

- Successful pilot courses "post-vaccination monitoring" and FMD Laboratory Investigation course (FLITc), for multiple regions, with very good take up from South Asia (vaccination monitoring).

#### **5. The most significant delivery problems have been**

- Lack of agreement with the Veterinary Services, **Kenya**, to host further Real-time Training Courses (RTT), which led to shifting the February 2018 course from Kenya to Nepal;
- Delivery issues relating to the **Balkan** region component (1.4), where delays in recruitment of a Short Term Placement (STP) were faced, with consequent delays in the work on laboratory emergency co-ordination in the region.

#### **6. Operational and administrative issues**

The severe problems associated with Consultant re-hire (reported October 2017) have not yet been resolved, since the imposition of the new FAO procedures. EuFMD has managed to re-hire (on "One Shot" basis) the essential consultants to the team, but on the agreement that the competitive processes will be followed for rehires in 2018. The announcement of vacancies has been made on the FAO site, and a series of interviews will be held in March-April 2018.

The other major problem has been the extension of the P1 Officer (Cecile Carraz), which was not resolved until after intervention of the Ambassador of France to the FAO. The problem here relates to the need for high level clearance on almost every professional position, whether project, Commission or regular programme. In the case of Ms Carraz, the need for such a position and such a qualified person has been agreed at previous Executive Committees to ensure the EuFMD programme is managed professionally, with less reliance on consultants (who would themselves be supervising other consultants).

#### **7. New developments of note**

- Special Committee for Biorisk Management – first session planned in Palermo (Italy), March 15-16 2018;
- Open Session 29-31 October: agreed location is Puglia, Italy, hosted by *Ministero della Salute*, Italy, with assistance of the regional *Istituto Zooprofilattico*;
- Funding obtained by TPI, Pirbright, to develop improved e-learning content of the online course "post vaccination monitoring" (100,000 STG).
- USA (APHIS) and Canada have both indicated high interest in funding national application of the online training course (FITc) and to contract EuFMD to provide these.
- Scientific progress:
  - expert meeting on replacing the "r-value" made good progress; a workplan and budget to identify new predictors for protection were drawn up;
  - breakthrough progress in the milk surveillance project (Kenya/Iran);
  - breakthrough also in environmental sampling: FMD detected on farms and at markets in Nepal at the time of real-time courses.

#### **8. Secretariat**

The composition of the Secretariat is indicated in **point 17**, and Phase IV team for implementing the EC project activities is given in **Table 1**.

## EuFMD Program Report

### A. EC program implementation, Phase IV, since 1<sup>st</sup> October 2017

Following the 94<sup>th</sup> ExCom comments and conclusions, the final 24-months budget for workplan (October 2017-September 2019) 2<sup>nd</sup> Biennium for the Phase IV programme and the four-year Budget as in GAF have been amended, shared with DG –Sante. The reply was received there were no comments; BR to proceed. (Table 10.)

#### 9. In support of Pillar I, since the last Executive Committee (October 2017)

- a **Component 1.1.** Training for Member States:  
Three real-time training courses were held, in Kenya in November/December 2017, and Nepal in Feb 2018;  
 On line resources: accessed over 10,000 times, in the past six months;  
 On-line FMD Investigation Course (FITc) delivered in Spanish and English, for UK, FR and NL territories in the Caribbean epidemiology network (CaribVet), circa 150 participants;  
 FITc on line course for the UK: initiated Feb 2018, timed to prepare for a UK simulation exercise.
- b **Component 1.2.**Contingency Planning: the **CroBoDiMo** initiative and the adaptation of the AADIS model for Europe has been combined, the pilot study has got off to a good start, with Graeme Garner leading the work with Italy and several Central - Eastern European countries. The feasibility study on **Options for Emergency Access to Vaccines** has begun.
- c **Component 1.3.** THRACE: activities continued across three countries, with the Tripartite (October 2017) reported and decisions follow-up. No cases of FMD, or sero-conversions detected.
- d **Component 1.4.** The Balkans Consultant hired and undertook field missions, but parts of the delivery delayed by the process of recruiting an STP from the region.
- e **Component 1.5** Activities of the **FAR** Research Fund: calls 5 and 6 were completed, and contracts with CIRAD and VSF-Suisse developed. Funded projects reporting good progress.

#### 10. In support of Pillar II, of most significance has been

- a. Operational delivery/progress indicators are **on track** or exceeded target for the period.
- b. **Component 2.1.** TransCaucasus Workshop in Georgia held (Feb 2018), for the review of the risk based plans (RBSP), surveillance and control plans for the potential establishment of zones with PCP Stage 3;
- c. **Component 2.2.** Workshop in Jordan to finalize the revision of the RBSP, and identify modalities for establishing post-vaccination monitoring and small scale immunogenicity trials for vaccines to be used in the Mid-East (Feb 2018);
- d. Workshop held for the Maghreb countries on development of the surveillance action plan for the three countries to achieve early detection of FMD (Feb/march 2018);
- e. Launch of the post-vaccination monitoring (PVM) course for Pillar II countries, Feb 2018;
- f. Completion of two online courses: Russian speaking countries (FITc course), and Risk Analysis in the Value Chain (Pillar II, English).

#### 11. In support of Pillar III, of most significance has been

- a. Highly successful completion of **new online courses**:
  - i. First online South-Asia (**SAARC**) FMD investigation course for ten countries very well received;
  - ii. First Post-vaccination monitoring (**PVM**), six-week course for South Asia and Southern Africa;
  - iii. First FMD Laboratory Investigation Training Course (**FLITc**) – co-organized with The Pirbright Institute;

- b. Establishment of a PCP Support Officers scheme, to support the OIE/FAO working group by providing guidance to countries; agreed with FMD-WG, and populated by EuFMD trained experts.
- c. Development of a pilot study on the role of para-vets to collect FMD samples in West Africa (implemented by VSF-Suisse, with training from ANSES/EuFMD).
- d. Progress to sign the letter of agreement (contract) with Pirbright (TPI) on the Pillar III (Global Surveillance).

Strong interest from India to cascade the EuFMD training to >1000 staff in state field labs and field offices.

## B. Additional developments (including Non-EC funded pipeline)

- 12. The EuFMD operates an Emergencies and Training Fund (MTF/INT/004/MUL), as agreed with the MS in April, the Fund will be continued until December 2019, and extended thereafter if subsequent Sessions are in agreement.
- 13. Under the Australian/New Zealand funding, **two** Real-Time Training (RTT) Courses were successfully conducted in Nepal in November 2017. The difficulty faced was of a lack of reported cases, although both RTT courses saw FMD lesions, the scouting for fresh cases was hard and long and an agreed change to the case-finding and surveillance between courses was agreed with Nepal and Australia. Subsequently, more cases have been detected under the new system, even including Asia-1, for the first time in years. The isolates have been sequenced at WRL, providing vital information on Pool 2 virus circulation (since India has not been reporting Asia-1). The online FEPC courses for Australia are planned to be held in October each year. For year 2018, four real time training courses in Nepal are planned, with the first batch of two taking place from 12 to 23 March 2018. To be noted: two persons from OIE will take part in the courses (March/November).
- 14. An agreement with the Department of Agriculture, Food and the Marine (Ireland) to fund studies on the use of mobile phones to improve surveillance has been agreed as a joint signature, with implementation to be completed within 18 months (i.e. by end of 2019).
- 15. Request /interest from USA and Canada has been received to run National Level FITC courses, for both countries. For Canada, the model used with CaribVet (bilingual courses) would be followed. The cost of each is circa 15,000€ and costs would be fully covered by the requesting countries.
- 16. The IIAD/USA project 2017 for Foot and Mouth Disease Virus (FMDV) Field Trials in an International Setting, Comparison of Conventional and Novel Vaccines and Diagnostics, has been completed with final payment received from IIAD in January 2018. Total Funds 74'000\$.

## C. Administrative Report

- 17. The **Secretariat staff** are listed below (as of February 2018)

### Technical team:

Executive Secretary	(P5)	Keith Sumption
Communications and Networks Officer	(P2)	Nadia Rumich
Chief Operations Officer	(P1)	Cecile Carraz
Pillar I Supervisor/ Contingency Planning Officer:		Mark Hovari
Pillar II Supervisor/Deputy Executive secretary		Fabrizio Rosso
Pillar III Supervisor		Nicholas Lyons
Risk Management Support Officer		Graeme Garner
Training Programmes Manager		Jenny Maud

Short Term Placements	Ruth Oliva Abascal (Spain) Ipek Keskin (Turkey) Abdenacer Bakkouri (Morocco)
Consultants (Component Managers) Knowledge Leaders:	Carsten Potzsch, Chris Bartels Kees van Maanen (Vaccination) Dinara Imanbayeva (Safer Trade Training) Paolo Motta (Livestock movement risk) Melissa Mc Laws (Risk Analysis/Pragmatist tool)

**Administrative team:**

Operational support team	Erica Tomat, Francesca Renzetti, Silvia Epps, Maurizio Licastro
E-learning Support Assistant Finance assistant	Chiara Addari Filippo Pedullà

**Interns: Spring 2018 intake**

- Angela Fanelli Pillar I &II (from 01-03-2018)
- Co shared Cirad Pillar II
- Juan Manuel Ayerbe Posada (R value + comp. 3.3 + Operational support) (12-02)
- Alessandra Alviti (E-Learning Support Comp. 3.3 communication + Operational support) (12-02)
- Bryan Ross (E-Learning Support Comp. 3.3 communication + Operational support) (26-02)
- Tiziano Federici (E-Learning Support Comp. 3.3 communication + Operational support) (05-03).

**18. Linkage of staff positions to budget, under Phase IV**

**BOLD** script indicates positions funded under the EC programme, and *italics* those funded by EuFMD under MTF/INT/011/MUL. (September 2017).

**Table 1. Staff in Phase IV**

Component (Output) Number	Pillar Supervisor	Output Manager	Lead - Network and training support
1.1	M. Hovari (PI)	<b>STP 1</b>	P2 (80:20 EC AND MUL/11)
1.2		RMSO	P2 (80:20 EC AND MUL/11)
1.3		STP 2	
1.4		STP 2	
1.5		RMSO	P2 (80:20 EC AND MUL/11)
1.7		Consultant2	
1.8		RMSO	
2.1		F.Rosso (PII)	<b>Consultant-3</b>
2.2	<b>Consultant-2/STP</b>		
2.3	<b>STP</b>		
2.4	TPM		P2 (80:20 EC AND MUL/11)
3.1	N.Lyons (PIII)	<b>Consultant</b>	
3.2		<b>Consultant-4</b>	
3.3		<b>Consultant-2</b>	
3.4		TPM (P2 EQUIV)	P2 (80:20 EC AND MUL/11)
<b>Key:</b> EXSEC P5 Animal Health Office, Executive Secretary; NTSO Network and Training Support Officer P2; CPO Contingency Planning Officer, consultant with experience/terms equivalent to P2; RMSO Risk Management Support Officer; TPM Training Programmes Manager, consultant with experience/terms equivalent to P2.			

## D. Financial Report

### 19. Financial position

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).

### 20. Position of the Administrative Fund (MTF/INT/011/MUL)

Balance	01-01-2017	<b>USD 470,146</b>
Total MS contributions received	31-12-2017	<b>USD 621,860</b>
Total expenditure		<b>USD 602,539</b>
Balance	31-12-2017	<b>USD 489,467</b>

The commitments from the 011 Funds are in line with the budget allocated. The closure of the financial year 2017 was on the 19 February 2018, with the automatic re-allocation of unspent funds from 2017 to year 2018.

**(See Financial Report Table 3)**

### 21. Position of the Administrative Fund (MTF/INT/011/MUL) – MS Contributions Year 2017/2018

*(See Member State Contributions report Table 4)*

Total contributions expected	2017	<b>USD 606,997</b>
Contributions received	31-12-2017	<b>USD 489,467</b>
Outstanding	31-12-2017 (Albania- Croatia- Italy - Luxembourg (2016/2017)- Portugal – Romania - Turkey)	<b>USD 117,442</b> (includes 4.504 outstanding 2016)
Total contributions expected	2018	<b>USD 611,501</b>
Contributions received	15-02-2018	<b>USD 41,397</b>
Contributions expected	2017/18	<b>USD 687,546</b>

In 2018, Contributions will also be requested from Iceland after the decisions taken at the GS42 on their status.

For information, the Republic of Montenegro deposited their instrument of acceptance of the constitution with FAO DG (18 December 2017). It has been the practice to not request contributions until the next full calendar year after acceptance, therefore in 2019.

### 22. Position of the Emergencies and Training Fund ((MTF/INT/004/MUL) – Table 5/6)

The position of the Fund and its baby (Australia) account is shown in **Tables 7 and 8**.

Emergency and training	2017	<b>USD 34,000</b> (USA:IIAD (total fund 74,000)
	2018	<b>USD 155,000</b> from Ireland, Canada, USA
Baby	2018	>USD <b>241,000</b> Support the upcoming training courses and activities plan to be conducted in 2018.

Both project balance at year end 2017 are in line with expectations. The yearly commitments and funds are in line with the budget endorsed at the 42<sup>nd</sup> General Session.

**23. Position of the EC Program Fund (MTF/INT/003/EEC).** (Financial Statement at 31-12-2017 **Table 7**).

The 2<sup>nd</sup> Biennium Budget Revised **Table 10** as per 94<sup>th</sup> ExCom comments, is in full compliance with, and in full support of the agreed work programme. The budget revision actions into the FAO System will be taken after the closure of the 2017 financial year, together with re-allocation of funds 2017 to year 2018.

The 2<sup>nd</sup> biennium expenditures are reported on a monthly basis to Pillars and Component Manager. They include expenditure tracking by budget line to allow better monitoring by components, supported by a Indicator/Milestones report every three months. The expenditure for activities for the second biennium at 31-12-2017 was **USD 352,018**.

The contracts line forecast and partly committed since October 2017 is circa **EUR 865,897** (shown by component **Table 8**).

The detailed three-month expenditures and six-month activities plan are shown in **Table 9**.

The proposal of a contract for 2<sup>nd</sup> Biennium (2017-2019) with the Pirbright Institute (€ 455,106) was shared with DG-SANTE as agreed and specified in the GAF (*the Financial Unit of DG-SANTE have cross-checked the proposed agreement, in order to rule-out double financing of activities under other EC contracts held with the same Institute*). DG-SANTE agreed EuFMD could proceed with the finalization of the Letter of Agreement according to FAO's standard contracting modality with non-profit organisations.

**24. EC Phase III EC Financial Verification Report**

FAO is in process of replying to the final report of the verification mission, made by the EC in October 2017, contesting about USD 15,000 of the overall "ineligible" findings of **USD 30,551.08**. Delay in FAO reply is due to the fact of the responsible officer *FAO EU verification support* was out of contract in December and January. The letter should be sent to EC by early March 2018. It must be noted that "ineligible" findings bear a direct consequence for EuFMD Member States, since the amount for now (USD 30,551) would need to be found from the Administrative Funds, provided by the MS.

**Table 2 – Management Responsibility: Pillar and Component Managers September 2017****EuFMD /EC Action 2017 (Phase IV)**

**BOLD= Continuity. Red= change.** TSO: Training Support Officer. STP: Short Term Placement. KS: Keith Sumption;  
NR: Nadia Rumich; FR: Fabrizio Rosso; GG: Graeme Garner; JM: Jenny Maud; AUS: Australian funds (to 12/2013)

Pillar	Comp	Comp.	Supervisor	Component (Output) Manager	Assisted by
I	1.1	<b>Training-RT</b>	M.Hovari	STP: R. Abascal	
	1.2	<b>Contingency Planning</b>		RMSO: G.Garner	
	1.3	<b>THRACE</b>		STP: P. Motta	
	1.4	<b>Balkans</b>		STP: vacant	
	1.5	<b>Res Fund</b>		RMSO: G. Garner	
	1.6	<b>Crisis</b>			
	1.7	<b>PTS</b>			
	1.8	<b>Surveillance Rep</b>		RMSO: Graeme Garner	M.McLaws, M. Scicluna
II	2.1	<b>Turkey/GEO</b>	F.Rosso	D.Imanbayeva	I. Keskin
	2.2	<b>Israel/Cyprus</b>		A.Bakkouri	
	2.3	<b>REMESA</b>		A.Bakkouri	
	2.4	<b>PII- Training</b>		J.Maud	D.Imanbayeva, I. Keskin
III	3.1	<b>Monitoring</b>	Nick Lyons	C. Bartels	N. Lyons/N.Rumich
	3.2	<b>PCP</b>	Nick Lyons	C. Bartels	
	3.3	<b>Global Lab</b>	Nick Lyons	K.van Maanen	
	3.4	<b>PIII- Training</b>	Nick Lyons	J. Maud, STP: B.Adhikari	

Table 3 - Financial Statement at 31-12-2017 – MTF/INT/011/MUL –TF 904200

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 2017				
	USD	USD	Eur	Eur
<b>Balance as at 1 January 2017</b>		470,146		419,370
Interest received	0			0
Contributions from member countries and institute	621,860		554,699	0
Project Income Earned (Child)	0		0	0
<b>Expenditure</b>				
Salaries	80,741		72,021	
Consultant	464,548		414,377	
Contracts	6,760		6,030	
Duty Travel	51,614		46,040	
Locally Contracted labour	510		455	
Training		-6,733		-6,006
Hospitality	0		0	
General Operating Expenses	3,562	3,430	3,177	3,060
Expendable Equipment	649		579	
Non-Expendable Equipment	4,319		3,853	
Total Expenditure		<u>602,539</u>		<u>537,465</u>
<b>Balance as at 31 December 2017</b>		<b>489,467</b>		<b>436,605</b>

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Table 4 – Member State Contributions at 31-12-2017

TRUST FUND No. 9042.00 - MTF/INT/011/MUL - Inter-Regional - European Commission for the Control of Foot-and-Mouth Disease							
Status of Contributions year 2017 as at 31 December 2017							
ORACLE CODE: TF-AGADD-TFAA97AA89122							
Member Governments	Outstanding previous year at 01/01/2017	Contribution due for 2017	Received up to 31/12/2017	Outstanding year 2016-2017 at 31/12/2017	Contribution Due for 2018	Received up to 15/02/2018	Outstanding at 31-12-2018
ALBANIA	16,570	4,504	16,570	4,504	4,504	-	9,008
AUSTRIA	-	15,650	15,650	-	15,650	-	15,650
BELGIUM	23,386	23,386	46,772	-	23,386	-	23,386
BOSNIA	-	4,504	4,504	-	4,504	-	4,504
BULGARIA	17,290	4,504	21,794	-	4,504	-	4,504
CYPRUS	-	4,504	4,504	-	4,504	-	4,504
CROATIA	-	4,504		4,504	4,504	-	9,008
CZECH REPUBLIC	-	13,809	13,809	-	13,809	13,809	-
DENMARK	-	23,386	23,386	-	23,386	-	23,386
ESTONIA	-	4,504	4,504	-	4,504	-	4,504
FINLAND	-	13,809	13,809	-	13,809	-	13,809
FRANCE	-	46,611	46,611	-	46,611	-	46,611
GEORGIA	-	4,504	4,504	-	4,504	-	4,504
GERMANY	-	46,611	46,611	-	46,611	-	46,611
GREECE	-	15,650	15,650	-	15,650	-	15,650
HUNGARY	-	13,809	13,809	-	13,809	13,809	-
ICELAND					4,504	-	4,504
IRELAND	-	15,650	15,650	-	15,650	-	15,650
ISRAEL	-	13,809	13,809	-	13,809	-	13,809
ITALY	-	46,611		46,611	46,611	-	93,222
LATVIA	-	4,504	4,504	-	4,504	-	4,504
LITHUANIA	-	4,504	4,504	-	4,504	-	4,504
LUXEMBOURG	4,504	4,504		9,008	4,504	-	13,512
FYR of MACEDONIA	29,524	4,504	34,028	-	4,504	-	4,504
MALTA	4,504	4,504	9,008	-	4,504	-	4,504
NETHERLANDS	-	23,386	23,386	-	23,386	-	23,386
NORWAY	-	15,650	15,650	-	15,650	-	15,650
POLAND	23,386	23,386	46,772	-	23,386	-	23,386
PORTUGAL	13,809	13,809	13,809	13,809	13,809	-	27,618
ROMANIA	-	15,650		15,650	15,650	-	31,300
SERBIA	-	13,809	13,809	-	13,809	-	13,809
SLOVAK REPUBLIC	-	13,809	13,839	(30)	13,809	13,779	-
SLOVENIA	-	4,504	4,504	-	4,504	-	4,504
SPAIN	-	23,386	23,386	-	23,386	-	23,386
SWEDEN	-	23,386	23,386	-	23,386	-	23,386
SWITZERLAND	-	23,386	23,386	-	23,386	-	23,386
TURKEY	-	23,386		23,386	23,386	-	46,772
UNITED KINGDOM	-	46,611	46,611	-	46,611	-	46,611
<b>TOTALS</b>	<b>132,973</b>	<b>606,997</b>	<b>622,528</b>	<b>117,442</b>	<b>611,501</b>	<b>41,397</b>	<b>687,546</b>
The Slovak Republic and Hungary have paid their 2018 Contributions in december 2017							

Table 5 - Financial Statement MUL 004 Child - Emergency Aid Programme 31-12-2017

**STATEMENT 3**

**MTF/INT/004/MUL - TF number 909700**

**Foot and Mouth Disease - Emergency Aid Programme**

**Financial Report from 1 December 2017 to 31 December 2017**

	USD	USD	Eur	Eur
<b>Balance as at 1 December 2017</b>	(9,088)		(8,106)	0
Interest received			0	
Contribution received	0		0	0
Refund to donor		0		0
<b>Expenditure</b>				
Salaries Professional			0	
Consultancy		(5,241)	0	-4,675
Contracts	331		295	
Locally Contracted Labour	142		127	
Duty Travel	0		0	
Training	742		662	
Hospitality			0	
Technical Support Services	0		0	
General Operating Expenses	460		410	
Expendable Equipment		(7,388)	0	-6590,096
Non-Expendable Equipment	1,190		1,061	
Support Costs 6%		(2,274)	0	-2,028
Loss: Total Expenditure		(12,038)		(10,738)
<b>Balance as at 31 December 2017</b>		2,949		2,630,508

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Table 6 - Financial Statement MUL 004 Baby 01 - Emergency Aid Programme (Australia) at 31-12-2017

**STATEMENT 4**

MTF/INT/004/MUL - TF number 909700 Baby 01 Australia

Foot and Mouth Disease - Emergency Aid Programme

Financial Report from 1 January 2017 to 31 December 2017

	USD	USD	Eur	Eur
<b>Balance as at 1 January 2017</b>		116,734		104,127
Interest received	0			
Contribution received	228,373		203,709	0
Refund to donor		0		0
<b>Expenditure</b>				
Salaries Professional			0	
Consultancy	123,976		110,587	
Contracts	0		0	
Locally Contracted Labour	0		0	
Duty Travel	27,220		24,280	
Training	56,941		50,791	
Hospitality			0	
Technical Support Services	0		0	
General Operating Expenses	10,131		9,037	
Expendable Equipment	12,589		11,229	
Non-Expendable Equipment	0		0	
Support Costs 6%	11,276		10,058	0
Less: Total Expenditure		242,133		215,983
<b>Balance as at 31 December 2017</b>		102,974		91,852.8080

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Table 7 - Financial Statement at 31-12-2017 – MTF/INT/003/EEC

<b>STATEMENT 2</b>			
<b>MTF/INT/003/EEC - TF number 617197</b>			
<b>EU Funded Activities (Phase IV: 2015 - 2019) carried out by the FAO European Commission for the Control of Foot-and-Mouth Disease (EuFMD)</b>			
<b>Financial Report from 1 January to 31 December 2017</b>			
	USD	USD	Eur
<b>Balance as at 1 December 2017</b>		357,935	318,278
Interest received	0		
Contribution received	2,283,654		2,037,019
Refund to donor		0	0
<b>Expenditure</b>			
Salaries Professional	218,249		194,678
Consultancy	966,244		861,890
Contracts	177,474		159,307
Locally Contracted Labour	0		0
Duty Travel	330,516		294,820
Training	57,173		50,998
Hospitality	161		144
Technical Support Services	0		0
General Operating Expenses	44,834		39,892
Expendable Equipment	49,391		44,057
Non-Expendable Equipment	0		0
Support Costs 7%	69,701		62,179
<b>Less: Total Expenditure</b>		<b>1,913,741</b>	<b>1,707,057</b>
<b>Balance as at 31 December 2017</b>		<b>727,848</b>	<b>649,240,4160</b>

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**Table 8 – Details commitment Contract Line since 01-10-2017**

Supplier	LoA Name	Total Amount LoA	Comp.
Friedrich-Loeffler Institut (FLI) (USD 28,332.58)	Improved system for Monitoring and Evaluation of the progress of regional programmes on FMD control under Pillar III - Improved uptake of the global strategy for the progressive control of FMD	EUR 23,715.23	1.5
French Agricultural Research Centre for International Development (CIRAD) (USD 200,709.60)	Services for the development of Foot and Mouth Disease (FMD) risk map surveillance system based on risk information and mapping tool for southern European neighbourhood and for the evaluation of the potential for development FMD control options in West and Central Africa	EUR 168,000	1.5 - 50% 2.2.3 - 2% 2.3.1- 5% 2.3.2 - 6% 2.3.3 - 23% 2.4.1 - 8% 3.1.3 - 6%
Istituto Zooprofilattico Sperimentale delle Regioni Lazio e Toscana (IZSLT) (USD 91,752.96)	Services for the reduction of the Foot-and-Mouth Disease (FMD) risk to European Commission for the control of Foot-and-Mouth Disease (EuFMD) Member countries and for improving the uptake of the global strategy for progressive control of FMD	EUR 76,800	2.1.1 - 16% 2.1.2 - 25% 2.2.2 - 9% 2.2.3 - 8% 2.4.1 - 11% 3.1.3 - 11% 3.2.3 - 20%
The Pirbright Institute (TPI) (USD 543,715.14)	World reference laboratory services in support of the FAO/OIE global FMD laboratory network as part of the global FMD strategy and in support of FMD control in the European neighbourhood	EUR 455,106	3.3/1.7
Vétérinaires Sans Frontières (VSF) - Suisse (USD 23,893)	Services for the development of a system for Foot and Mouth Disease (FMD) outbreak detection, sample collection and submission, and for the evaluation of the potential for development FMD control options in Mali	EUR 20,000	3.3
The Pirbright Institute (USD 55,355.49)	Improved system for Monitoring and Evaluation of the progress of regional programmes on FMD control under Pillar III - Improved uptake of the global strategy for the Progressive control of FMD	GBP 42,919.21	1.5
French Agency for Food, Environmental and Occupational Health & Safety (ANSES) (USD 86,546.75)	Progressive control of FMD Improved system for Monitoring and Evaluation of the progress of regional programmes on Foot and Mouth Disease (FMD) control under Pillar III - Improved uptake of the global strategy for the Progressive control of FMD" and "Improved FMD management in Turkey and neighbours under Pillar II - Reduced risk to Members from the European neighbourhood: Progressive Control in neighbouring regions"	(EUR 46,336) EUR 75,940	1.5
<b>USD 1,030,309.52</b>		<b>EUR 865,897</b>	

Table 9: Three Months Expenditures - Activity Plan October 2017- March 2018

	3 months Expenditures 1 Oct. 2017 - 31/12/2017					Calendar activities October 2017 - March 2018						
	Overall PILLAR Manager Keith Sumption		Total Budget Allocated Phase IV 2nd biennium	3 months Expenses Oct. 2017 - Dec. 2017	12.5 % of project completion	Balance available	Oct'17	Nov'17	Dec'17	Jan'18	Feb'18	Mar'18
	Components Beneficiaries	Component s Managers										
<b>PILLAR I</b> Supervisor Mark Hovari 2'07'906 €	1.1.E-learning programme		€ 522,975	€ 27,078	5%	€ 495,897	_Post Vaccination Monitoring (P. II) _Risk Analysis Along the Value Chain (P. II) _FMD Investigation Training Course in Russian (P.II)	_Post Vaccination Monitoring (P. II) _Risk Analysis Along the Value Chain (P.II) _FMD Laboratory Investigation Training Course (P.III) _FMD Emergency Preparation Course for Australia (Baby 01)	_FMD Emergency Preparation Course for the Caribbean (P. I) _FMD Emergency Preparation Course for the UK (P. I) _Post Vaccination Monitoring (P.III)	_FMD Emergency Preparation Course for the Caribbean (P. I) _FMD Emergency Preparation Course for the UK (P. I) _Post Vaccination Monitoring (P.III)	_Post Vaccination Monitoring (P.III)	
	1.1	Training for Member States	Mark Hovari/ Ruth Abascal oliva					_NTC 27 Real Time Training Course - Nakuru, Kenya	_NTC 28 Real Time Training Course - Nakuru, Kenya	_NTC 29 Real Time Training Course - Kathmandu, Nepal	_Crisis Management Workshop - Kaunas, Lithuania	
	1.2	Improved Contingency Planning	Mark Hovari / Graeme Garner	€ 142,154	€ 18,920	13%	€ 123,234		_1st WS of the Project: Development and application of a European FMD Spread Model - Vienna, Austria			
	1.3	THRACE Region	Paolo Motta / Ipek Keskin	€ 377,000	€ 60,594	16%	€ 316,406	Tripartite Meeting - Dublin, Ireland				_EuFMD - 1st Disease Reporting Training course - Svilengrad, Bulgaria _THRACE Management Meeting - Svilengrad, Bulgaria
	1.4	BALKANS Region	Mark Hovari + STP (TBC)	€ 202,110	€ 1,972	1%	€ 200,138					
	1.5	EuFMD Fund for applied RESEARCH	Keith Sumption	€ 372,387	€ 107,492	29%	€ 264,895	_Support mission for EuFMD-FAR project in Iran _GFRA Scientific Meeting-Seoul, S.Korea	_OS'18 Site inspection in Apulia and Sicily (Carraz-Tomat)	_Expert group on alternatives to the r-value; improving quantitative indices for probability of protection - FAO HQ		
	1.6	Emergency Response	Keith Sumption	€ 323,780	€ -	0%	€ 323,780					
	1.7	Proficiency Testing Scheme	Kees Van Maanen	€ 46,300	€ 2,185	5%	€ 44,115					
1.8	Risk Analysis and Communication	Melissa McLaws / Maria Teresa Scicluna	€ 84,200	€ 15,451	18%	€ 68,749						
<b>PILLAR II</b> Supervisor Fabrizio Rosso 1'090'500 €	2.1	SOUTH EAST EUROPE SEE/ West Eurasia	Carsten Potzsch / Dinara Imanbayeva	€ 356,500	€ 30,642	9%	€ 325,858	_Meeting at FAO HQ on Comp. 2.1 (Potszsch)		_Trans Caucasus Regional WS on FMD control and PCP - Telavi (Kakheti), Georgia	_EuFMD meetinf FAO HQ	
	2.2	South East MEDITERRANEAN SEM / Cyprus - Israel	Fabrizio Rosso	€ 260,000	€ 16,730	6%	€ 243,270	_2nd PPR and 4th FMD Regional Roadmap Meetings Middle East - Amman, Jordan		_FMD-PCP workshop for Risk Based Strategic Plan development in Jordan - Amman, Jordan		
	2.3	Support to REMESA North Africa	Fabrizio Rosso / Abdenacer Bakkouri	€ 326,000	€ 9,658	3%	€ 316,342	_Mission to Tunis, Tunisia (Bakkouri) _Mission to Algiers, Algeria (Bakkouri)	_15th JPC REMESA - Amman, Jordan _Meeting at CIRAD - Montpellier, France (Rosso)	_Mission to Rabat, Morocco (Bakkouri)	_Atelier sur la détection précoce et la confiance en l'absence de circulation virale de la Fièvre aphteuse en Algérie, Maroc et Tunisie - Tunis, Tunisie	
	2.4	Pillar II Training development and coordination	Jenny Maud	€ 148,000	€ 24,904	17%	€ 123,096					
<b>PILLAR III</b> Supervisor Nicholas Lyons 1'067'152 €	3.1	Support to Global progress monitoring	Nadia Rumich / Nick Lyons	€ 86,894	€ 2,796	3%	€ 84,098					
	3.2	Method and guidelines for application of PCP-FMD	Chris BARTELS	€ 155,954	€ 14,230	9%	€ 141,724			_EuFMD team meeting in FAO HQ (Bartels) _Safe Trade and FMD Control Training (STFC) Course - FAO HQ	_EuFMD meetinf FAO HQ	
	3.3	Laboratory Support FMD reference lab serv. support regional epidemio surv. lab networks	Kees Van Maanen	€ 628,772	€ 16,340	3%	€ 612,432	_Meeting in FAO HQ (vanMaanen)	_OIE Think Tank Meeting in OIE HQ - Paris, France	_The 12th OIE/FAO FMD Reference Laboratories Network Annual Meeting - Pretoria, South Africa _Meeting on FMD for the EARLN - Addis Ababa, Ethiopia (vanMaanen) _Pirbright Institute Meetings - Pirbright, UK (Sumption)		
	3.4	Global access to PCP-FMD training resources	Jenny Maud / Chris Bartels	€ 195,532	€ 3,026	2%	€ 192,506					
<b>4'228'558 €</b>	<b>Total Budget Allowances 2017-2019</b>		<b>€ 4,228,558</b>	<b>€ 352,018</b>	<b>8%</b>	<b>€ 3,876,540</b>						
MTF/INT/011/MUL Title EuFMD Executive Committee Meeting & Workshop							_94th Executive Committee Meeting - Dublin, IRH23:W24eland			_1st International Veterinary Vaccinology Network Meeting - Nairobi, Kenya (Sumption - funded) _MSU Conference - Washington	_95th Executive Committee Meeting - Budapest, Hungary _EuFMD Special Committee for Biorisk Management (SCBRM) - Palermo, Italy	
Trainings /Contributions Donor Australia Training Contributions Emergency (UK, Lebano, US, Spain, and Germany,China Link Tads ,Ireland)							_KTC 25 Real Time Training Course - Kathmandu, Nepal _KTC 26 Real Time Training Course - Kathmandu, Nepal			_KTC 27 Real Time Training Course - Kathmandu, Nepal _KTC 28 Real Time Training Course - Kathmandu, Nepal		

Table 10: Revised 4 year Budget Phase IV 2015-2019 (GAF)

Revised Budget Phase IV - 4 years (GAF)																							
PILLARS I - II - III						Components Pillar I										Components Pillar II				Components Pillar III			
Accounts	Description	Pillar I	Pillar II	Pillar III	Proposed Total		Component 1.1	Component 1.2	Component 1.3	Component 1.4	Component 1.5	Component 1.6	Component 1.7	Component 1.8	Component 2.1	Component 2.2	Component 2.3	Component 2.4	Component 3.1	Component 3.2	Component 3.3	Component 3.4	
		EURO	EURO	EURO	EURO		EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	
5300	Salaries Professional	229,690	100,998	68,418	399,106	399,106	0.0%	59,730	30,408	40,182	19,548	30,408	18,462	544	30,408	40,182	24,978	30,408	5,430	4,344	29,322	9,774	24,978
5570	Consultants Op	279595	185631	128239	593,464	566,708	4.7%	109115	29367	68358	28230	18189	5645	5645	15047	62434	33876	38880	50441	45174	50700	17789	14575
5570	Consultant Tech	923,807	633,023	336,518	1,893,348	1,695,550	11.7%	262,310	37,006	398,875	71,191	63,481	27,923	4,201	58,820	272,515	114,396	123,404	122,708	52,871	131,899	52,702	99,046
5650	Contracts	766,393	201,015	953,839	1,921,247	1,687,725	13.8%	50,649	42,773	10,000	0	311,419	240,000	101,552	10,000	40,000	33,000	61,000	67,015	25,000	23000	820,984	84,855
5900	Duty Travel	812,513	417,548	161,806	1,391,867	1,456,390	-4.4%	382,719	94,433	101,998	102,351	92,604	9,221	4,187	25,000	136,242	130,718	143,588	7,000	35,110	56,620	38,746	31,330
5920	Training	141,836	269,551	28,000	439,387	584,894	-24.9%	78,246	5,000	12,000	35,000	5,000	890	1,500	4,200	90,651	55,781	123,119	0		11,500	11,500	5,000
6000	Procurement	255,302	86,835	114,363	456,500	605,894	-24.7%	33,942	0	94,141	42,571	3,100	81,548	0	0	13,000	26,931	46,904	0		9,000	105,363	
6150	Report Costs	5,376	2,050	1,778	9,204	9,204	0.0%	953	494	738	708	874	867	176	566	712	512	450	376	302	32	878	566
6160	Project Evaluation Cost	47,924	12,668	13,420	74,012	74,012	0.0%	7,544	2,886	8,740	6,500	5,416	15,144	1,136	558	4,856	3,436	3,840	536	2,664	886	8,880	990
6300	General Operating Expenses	206,678	67,943	23,879	298,500	397,152	-24.8%	78,241	7,500	48,580	37,784	33,608	965	0	0	19,691	22,667	4,585	21,000		19	0	23,860
	<b>Subtotal</b>	<b>3,669,114</b>	<b>1,977,262</b>	<b>1,830,260</b>	<b>7,476,635</b>	<b>7,476,635</b>		<b>1,063,449</b>	<b>249,867</b>	<b>783,612</b>	<b>343,883</b>	<b>564,099</b>	<b>400,665</b>	<b>118,941</b>	<b>144,599</b>	<b>680,283</b>	<b>446,295</b>	<b>576,178</b>	<b>274,506</b>	<b>165,465</b>	<b>312,978</b>	<b>1,066,616</b>	<b>285,200</b>
<i>Grand Subtotal</i>	€ 7,476,635																						
<i>Support Cost. 7%</i>	€ 523,364	1,203,402	818,654	464,757	2,486,812		371,425	66,373	467,233	99,421	81,670	33,568	9,846	73,867	334,949	148,272	162,284	173,149	98,045	182,599	70,491	113,621	
<b>GRAND TOTAL</b>	€ 8,000,000																						
								CONSULTANT (ALL)															

Revised 2<sup>nd</sup> Biennium Phase IV 2017-2019 (WP)

Budget Phase IV - 2nd Biennium (WP)																							
PILLARS I - II - III						Components Pillar I								Components Pillar II				Components Pillar III					
Accounts	Description	Pillar I	Pillar II	Pillar III	Proposed Total	Compon ent 1.1	Compon ent 1.2	Compon ent 1.3	Compon ent 1.4	Compon ent 1.5	Compon ent 1.6	Compon ent 1.7	Compon ent 1.8	Compon ent 2.1	Compon ent 2.2	Compon ent 2.3	Compon ent 2.4	Compon ent 3.1	Compon ent 3.2	Compon ent 3.3	Compon ent 3.4		
		EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	EURO	
5300	Salaries Professional	114,845	50,499	34,209	199,553	29,865	15,204	20,091	9,774	15,204	9,231	272	15,204	20,091	12,489	15,204	2,715	2,172	14,661	4,887	12,489		
5570	Consultants Op	161395	106368	74977	342,740	59513	16183	41855	16183	10960	3236	3236	10229	36631	19420	24420	25897	25897	29131	7000	12949		
5570	Consultant Tech	471,300	302,000	184,191	957,491	130,000	20,000	190,000	33,500	40,000	10,000	2,800	45,000	126,000	50,000	53,000	73,000	27,960	71,954	24,600	59,677		
5650	Contracts	642,736	181,000	599,388	1,423,124	40,000	42,773	10,000	0	260,963	240,000	39,000	10,000	40,000	33,000	61,000	47,000	25,000	23000	466,533	84,855		
5900	Duty Travel	512,881	276,000	133,434	922,315	223,000	66,881	69,000	73,000	48,000	5,000	3,000	25,000	90,000	88,000	91,000	7,000	33,934	40,500	36,000	23,000		
5920	Training	125,094	190,000	28,000	343,094	62,294	5,000	12,000	35,000	5,000	100	1,500	4,200	70,000	45,000	75,000	0		11,500	11,500	5,000		
6000	Procurement	170,790	80,500	99,139	350,429	17,500	0	56,000	25,610	3,100	68,580	0	0	13,000	24,000	43,500	0		9,000	90,139			
6150	Report Costs	2,688	1,025	889	4,602	477	247	369	354	437	434	88	283	356	256	225	188	151	16	439	283		
6160	Project Evaluation Cost	23,962	6,334	6,710	37,006	3,772	1,443	4,370	3,250	2,708	7,572	568	279	2,428	1,718	1,920	268	1,332	443	4,440	495		
6300	General Operating Expenses	148,105	61,000	23,000	232,105	50,181	7,500	40,000	35,000	15,324	100	0	0	17,500	20,000	2,500	21,000		0	0	23,000		
	<b>Subtotal</b>	<b>2,373,796</b>	<b>1,254,726</b>	<b>1,183,937</b>	<b>4,812,459</b>	<b>616,602</b>	<b>175,231</b>	<b>443,685</b>	<b>231,671</b>	<b>401,696</b>	<b>344,253</b>	<b>50,464</b>	<b>110,195</b>	<b>416,006</b>	<b>293,883</b>	<b>367,769</b>	<b>177,068</b>	<b>116,446</b>	<b>200,205</b>	<b>645,538</b>	<b>221,748</b>		
<i>Grand Subtotal</i>	€ 4,812,459																						
<i>Support Cost. 7%</i>	€ 336,872	632,695	408,368	259,168	1,300,231	189,513	36,183	231,855	49,683	50,960	13,236	6,036	55,229	162,631	69,420	77,420	98,897	53,857	101,085	31,600	72,626		
<b>GRAND TOTAL</b>	€ 5,149,331																						
								CONSULTANT (ALL)															

## 1. Report

### FAO-EuFMD/EC/OIE Tripartite Meeting on control of FMD and other exotic diseases in the Southern Balkans

*12<sup>th</sup> October 2017 - Backweston, Ireland*

#### Introduction

A meeting of the FAO-EuFMD/EC/OIE Tripartite on the Control of FMD and other exotic diseases in the Southern Balkans was held in Backweston, Ireland, on 12<sup>th</sup> October 2017, with the participation of representatives from the State Veterinary Services of Bulgaria, Greece, Turkey and from the EC, FAO, EuFMD, and OIE (see **Appendix 1** for Agenda and **Appendix 2** for list of participants).

The **main objectives** of the meeting were to:

- provide an overview of the activities since the last Tripartite meeting held on 27<sup>th</sup> February 2017 in Sofia, Bulgaria, under EuFMD Workplan 2015-17 Component 1.3. THRACE;
- present and agree on the upcoming plan under the EuFMD workplan 2017-19 for component 1.3 THRACE, featuring the main change of incorporating more activities to better understand farmer reporting in the region;
- review and discuss the epidemiological situation and the control measures implemented in the three countries for Foot and Mouth Disease (FMD), Sheep and Goat Pox (SGP), Peste des Petits Ruminants (PPR), Lumpy Skin Disease (LSD) and other major transboundary animal diseases.

#### 1. Conclusions and Recommendations

##### Conclusions

1. The EuFMD Workplan 2017-19 for Component 1.3 THRACE was discussed and considered in depth, gaining the support of the Tripartite and the three countries;
2. The active surveillance activities under the THRACE program will continue without interruptions until September 2018. Further information will be gathered through EuFMD activities to develop a better understanding of the sensitivity of the farmer reporting in the Thrace area, in this time frame. Based on the outcome of these activities, a decision will have to be made on continuing with active surveillance activities (started in 2013) or shift focus to increasing the level of farmer reporting. A Tripartite meeting will be held in June 2018 to address this issue;
3. The THRACE surveillance programme, implemented as part of the EC funded activities and managed by EuFMD, has provided high (above 95 %) level of confidence in the absence of circulating FMDV in European part of Turkey and the neighbouring areas of Greece and Bulgaria;
4. SGP is still a significant concern for the area. Information on outbreak investigation on SGP both in Greek Islands and Turkish Thrace was shared. The route of introduction of SGP to these areas is still unclear, highlighting the need for improved local capacity building in farmer reporting and enhancing skills in outbreak investigation;

5. The Assured Emergency Supply Option (AESOP) for FMD vaccine was discussed with the group as a solution for rapidly providing adequate vaccine doses and strains to react to an FMD emergency in Thrace region;
6. The results of the post-vaccination serology study conducted on cattle originating from Turkish Thrace, vaccinated against FMD serotype A, G-VII with vaccine produced in Turkey were satisfactory and viewed as a valuable step moving forward. The initial aim of the study was to test the level of protection provided by the vaccine(s) developed and administered in Turkey against circulating strains of the G-VII. More work on the reporting of the results was requested along with further studies, to be conducted in the future;
7. The surveillance and information sharing between the three countries is broadly consistent with the Statement in Intentions signed during the 42<sup>nd</sup> EuFMD General Session, on April 2017, in Rome Italy;
8. The implementation of the Risk-Based Strategic Plan for FMD control by the Turkish authorities, starting from 2017, is a cause for optimism for the improvement in the control of FMD in west Anatolia in 2017-18, and for its progression towards PCP stage 3. However, some elements, such as the lack of strategy for small ruminant population or the implementation of animal movement control, remain a point of concern;
9. Turkish Thrace areas have launched a disease control program to achieve PPR zonal free status by 2019, vaccination having ceased since the beginning of 2017. Turkey has requested EuFMD's assistance with the design of their PPR active clinical surveillance program aiming at early detection of the disease. The activities conducted in Turkey are considered to be in line with the Global PPR strategy. The PPR Global Secretariat will be kept informed on the progress and if needed consulted;
10. Bulgaria will lead the EU presidency in the first half of 2018. One of the topics proposed is wildlife and EuFMD was invited to contribute to this topic. This would be a good opportunity to show progress made on FMD in connection to wildlife in recent years;
11. For reconfirmation of the OIE status of freedom for FMD, the OIE highlighted that member states need to include evidence of freedom for their entire country, not just specific regions. Providing evidence on the level of passive surveillance and follow up was also encouraged;
12. Greece expressed its desire to receive national training on exotic disease crisis management in early 2018 as set in their Co-Financing plan agreed with EC. The budgetary funds to do so are not available under the EC. EuFMD offered to assist with provision of in-house experts, if available, but travel, venue and logistical costs of such a workshop are outside the scope of the current EuFMD workplan component 1.3.

### **Recommendations**

1. A Tripartite Meeting be held in June 2018 (in Istanbul, Turkey) to decide on the focus of future surveillance activities for Component 1.3 THRACE after September 2018;
2. The post vaccination serology study conducted in Turkish Thrace be repeated;
3. There be more in-depth information sharing on SGP outbreak investigation outcomes between the three countries, with special attention on Mediterranean area of Turkey.

### **Acknowledgements**

The Department of Agriculture, Food and the Marine (DAFM), Ireland is gratefully acknowledged for hosting the Meeting. The excellent support of Dr Eoin Ryan is highly appreciated.

## County Presentations

### Greece

Dr Sotiria-Eleni Antoniou gave the country presentation on behalf of Greece. The surveillance activities under the Thrace project have continued, and clinical surveillance activities for FMD are carried out throughout the country through slaughterhouse inspections and in synergy with other control programs, such as LSD vaccination. The telephone surveillance program focusing on farmers reporting the absence or presence of FMD or other TADs set up two years ago is still ongoing with varying degree of participation by farmers. In July 2017, an on-line simulation exercise was carried out to test the familiarity of veterinary staff with contingency plans and relevant documentation in case of an emergency. PPR awareness training continues in the country. New outbreaks of SGP have occurred on the Greek Islands (Lesvos) starting from September 2017. It is unclear if this is a continuation of the outbreak starting end of 2016 or a new incursion. Slaughterhouses were mentioned as a risk factor as some animals slaughtered there might not originate from the island, but from other places. Having more in depth information on the SGP situation in the coastline region of Turkey bordering the islands would be valuable. A co-financing program funded by European Commission on protective measures against transboundary animal diseases (TADs) for 2017 was approved and implementation will start shortly.

### Bulgaria

Dr Tsviatko Alexandrov gave the country presentation on behalf of Bulgaria. The surveillance activities in Thrace region have continued. Bulgaria, similarly to Greece, has an approved co-financing program funded by European Commission on protective measures against transboundary animal diseases (TADs) for 2017. Mass vaccination against LSD will be continued in order to prevent re-occurrence of the disease and maintain the immunity of the animals. There have been no outbreaks of SGP or PPR reported since the last meeting. An example was given where the suspicion of FMD and TADs was raised in Bulgaria and the outbreak investigation concluded that the animals were suffering from Orf. To note, Bulgaria is taking part in two international projects: one with The Pirbright Institute on Crimean-Congo haemorrhagic fever and one on non-invasive surveillance for LSDV in wild ruminants with Friedrich Loeffler Institute (FLI).

### Turkey

Dr Abdalnaci Bulut reported on the FMD situation in Turkey and the control measures in place to prevent entry into Turkish Thrace. Anatolia is still endemic for FMD. Currently, the circulating virus strains are Serotype O (O PanAsiall), A (Asia/GVII) and Asia1, although the latter has not been recorded since July 2015 in Turkey. One hundred and eighty-eight outbreaks of FMD were reported between January and August 2017. This is below the average number of outbreaks over the past ten years. Turkish Thrace still remains free with vaccination (since 2010).

There was one outbreak of SGP in Turkish Thrace, on March 2017 in İpsala, Edirne (in 2016 the total number of outbreaks was three in Turkish Thrace). The outbreak investigation results were shared during the meeting: 120 young goats died. There were no apparent clinical sign, but Pendik laboratory confirmed SGP. A further 80 young goats kids were slaughtered due to control measures and ring vaccination was applied around the outbreak area. Dr Sumption highlighted that the manifestation of the sudden death syndrome seems strange assuming maternal immunity of the kids. Dr Alf Füssel enquired about the transportation protocol for small ruminants from Anatolia to Thrace in respect of SGP and PPR. Dr Bulut stated that movement restriction in case of outbreaks are in place and in case of PPR a similar stringent protocol (as the one for FMD) will be applied in the future. SGP outbreaks still occur in the Mediterranean Region of Turkey, bordering the Greek Islands.

In Thrace, the last PPR outbreak was in 2013 and vaccination has stopped since early 2017. The aim is to achieve zonal freedom in Thrace by 2019. In Anatolia, 33 outbreaks have occurred up till August 2017. A strategy plan has been implemented in Turkey since 2016 for regional progressive eradication of the disease by 2023. Since implementing the LSD mass vaccination, there have been no outbreak of LSD in 2017 in Turkish Thrace. Dr Bulut also summarized the new FMD control strategy for Turkey, specifically Anatolia. The targets are to reach PCP stage 3 by 2018, PCP stage 4 by 2021, PCP stage 5 by 2022 and reach freedom with vaccination status by 2023. The main elements are to focus on “aggressive activities” such as more stringent movement restriction and vaccination (booster for young stock). Also mentioned was the use of high potency vaccines,

increased active clinical surveillance and stamping out if outbreaks occur in key livestock areas. The new strategy will be finalized by November 2017. Dr Sumption highlighted the need for a definite strategy for small ruminants as in Turkey there are 44 million small ruminants and 14 million large ruminants.

### AGENDA

Day 1 - Thursday		
<b>EuFMD Component 1.3 and future, Chair: EuFMD</b>		
09:00 - 09:30	Short summary on the recent activities and outcomes of the THRACE Component 1.3	EuFMD
09:30 - 09:45	Confidence of Disease Freedom: overall results and output of the Cameron Model	EuFMD
09:45 - 10:15	Upcoming plans (Passive Surveillance workshop, Rethinking arrangements for emergency supply of FMD vaccine stocks, strengthening PPR clinical surveillance in Turkish Thrace, Overall Surveillance Strategies for the next biennium)	EuFMD
10:15 - 10:30	<b>Coffee break</b>	
<b>FMD and other exotic disease surveillance and control in Greece, Bulgaria and Turkey Chair: OIE</b>		
10:30 - 10:40	FMD and other exotic animal disease (SGP and PPR) surveillance and disease control activities in Greece (including brief update on SGP outbreak in Levsos Island)	Greece
10:40 - 10:50	FMD and other exotic animal disease (SGP and PPR) surveillance and disease control activities in Bulgaria	Bulgaria
10:50 - 11:00	FMD and other exotic animal disease (SGP and PPR) surveillance and control measures in Turkish Thrace (including brief recap on the SGP outbreak in Turkish Thrace)	Turkey
11:00 - 11:15	Overall FMD situation and vaccination program in Turkey	Turkey
<b>Any further business, Chair: FAO</b>		
11:15 - 11:30	Update on the National RBSP to achieve FMD free status with vaccination by in Anatolia by 2023 & Support, training or other assistance needed	Turkey
11:30 - 11:45	Training on FMD and exotic diseases (request to EC from Greece)	All
11:45 - 12:00	Meeting Recap and discussion of the minutes	All
12:00 - 12:15	Closing remarks, next meeting dates/venue	All

#### List of participants

Name	Institution	Email
Keith Sumption	EuFMD	<a href="mailto:Keith.Sumption@fao.org">Keith.Sumption@fao.org</a>
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Chrysoula Dile	Greek Animal Health Directorate	<a href="mailto:chdile@minagric.gr">chdile@minagric.gr</a>
Sotiria-Eleni Antoniou	Greek Animal Health Directorate	<a href="mailto:seantoniou@minagric.gr">seantoniou@minagric.gr</a>

## 2. Report

### Workshop for the project: Development and application of a European foot-and-mouth disease spread model

#### EuFMD-iS

5<sup>th</sup> to 7<sup>th</sup> December 2017, Vienna, Austria

### Introduction

The Australian Department of Agriculture and Water Resources' foot-and-mouth disease (FMD) model, Australian Animal Disease Model (AADIS) (Bradhurst et al., 2015), was successfully used in two EuFMD-funded disease modelling training workshops in 2014 and 2016. Participants identified the potential for AADIS to be used to support emergency disease preparedness in Europe.

In 2016 at a Central European CVO meeting, Austria proposed a regional cross-border modeling initiative for Transboundary Animal Diseases, and the group asked EuFMD to support this activity. The EuFMD Technical Committee approved the use of FAR funding to support adaptation of the AADIS model to European jurisdictions, datasets, and control options. In October 2017 the EuFMD Executive Committee endorsed support for this work with a pilot project involving a number of central European countries.

The project "Development and application of a European foot-and-mouth disease spread model" aims to work with the participating central European countries to develop a disease model that simulates the spread and control of FMD within and between countries. Following consultation with the collaborating countries, a workshop was organized to progress the project.

### Objectives

The purpose of the workshop was to bring the participating countries and EuFMD staff and modelling expertise together to discuss the scope of a multi-country European disease spread model. Also, to identify the country-specific data required to set up and parameterize a European FMD spread model and agree on a process for countries to provide this data in agreed formats so it can be incorporated into the model.

Key issues for the workshop were:

- the scope and functionality of a European FMD spread model
- the data required for setting up livestock populations for disease modelling studies
- the approaches to, and data required for, representing FMD transmission within and between countries
- the approaches to, and data required for, modelling FMD control, consistent with the European FMD directive.
- data requirements for assessing the economic impact of outbreaks and costs of control measures
- the importance of, and approaches to, model testing and verification

### Workshop Summary

The workshop was held in Vienna, Austria from the 5<sup>th</sup> to the 7<sup>th</sup> of December 2017 with participation of representatives from the State Veterinary Services of Austria, Bulgaria, Croatia, Hungary, Italy and Romania, the EuFMD, and an observer from The European Food Safety Authority (EFSA). Slovenia, a late inclusion in the project, was unable to attend. The list of participants and their affiliations is provided as Appendix 2. The purpose of the workshop was to:

- engage with project collaborators and share information on livestock industries, animal health infrastructure and emergency disease preparedness arrangements;
- introduce participants to disease modelling principles and approaches;

- consider data requirements to build a European FMD spread model;
- agree on a modelling approach, including livestock production regions and herd categories;
- develop a work plan for countries to provide national data in agreed formats;
- agree on project time frames and deliverables.

The workshop covered a range of issues relevant to developing a multi-country FMD spread model and included presentations, demonstrations, discussions and exercises.

The first day covered the project background, aims and objectives, country presentations on livestock industries and animal health infrastructure including emergency disease preparedness. It also introduced participants to the AADIS model and to applications and use of disease models in policy, planning and training. Data sharing and confidentiality were discussed.

Day two considered data needs for building a European FMD model. The main areas covered were setting up national datasets, modelling disease spread and modelling FMD control. Issues discussed included defining livestock production regions within countries, developing a common system for classifying herds; approaches and data sources for parameterizing disease models, using the European Trade Control and Expert System (TRACES) to analyze and summarize livestock movement patterns between countries, and incorporating disease control measures including cost implications.

Day three was on collecting and reporting country data; the importance of model testing, verification and validation; and the logistics, hardware and software requirements for running the model. The short-term and long-term milestones were discussed and participants worked on country action plans.

The full workshop agenda is provided as **Appendix 1**.

## Conclusions and Recommendations

The workshop met its objectives. There was good engagement with participants, with countries reaching agreement on key aspects of the project including defining livestock production regions and herd categories for modelling (see below). Countries have agreed to supply the data needed to parameterize the model according to defined templates (to be provided by EuFMD).

The EFSA observer was enthusiastic about the modelling project and indicated his interest in continuing to be involved. He noted that EFSA have a mandate to do a risk analyses on animal health and will be seeking similar data to that required by the model (herd populations, movement of animals, etc).

EuFMD will brief Slovenia on the workshop outcomes and expectations for participating countries.

Workshop participants reached agreement on the following key areas:

### 1. Regions

AADIS allows regional heterogeneity in livestock production systems to be represented through the division of a country into regions. For example, a beef herd in the mountainous north of a country may have quite different animal movement characteristics to a beef herd in the southern plains of a country. The following regions based on the NUTS (Nomenclature des Unités Territoriales Statistiques) territorial classification system were tentatively proposed by the countries:

- Italy: 4 regions (North, Central, South and Islands)
- Croatia: 2 regions (equal to the NUTS 2 areas)
- Bulgaria: 5 Regions (based on the 6 NUTS 2 areas with the merging of the two northern NUTS 2 areas)
- Romania: 4 regions (based on the NUTS 1 areas)
- Austria: 3 regions (North, West and South)
- Hungary: 4-6 regions (consolidation of the 20 NUTS 3 areas)
- Slovenia: not present at workshop, thus not known at this point.

Each country is to finalize their regional definitions and advise EuFMD. Ideally each country should include a geospatial shapefile corresponding to the defined regions, however if this is not possible then a NUTS area map marked up with regional boundaries will suffice.

All countries agreed to share their mappings of region to Local Veterinary Units (LVUs) with each other.

## 2. Herd Types

The AADIS epidemiological unit of spread is the herd – defined as a group of co-mingling animals of the same species and under the same production system. A farm (or holding) may have one or more herds. The following common herd types were agreed to by the countries:

1. Large commercial dairy - a herd of cattle kept to primarily produce and sell milk (i.e., specialist milk production).
2. Large commercial beef – a herd of cattle kept to primarily produce and sell meat (i.e., specialist beef production).
3. Small commercial cattle – a herd cattle kept to primarily produce and sell meat and/or milk on a smaller, more local scale. Herd sizes are typically smaller than a large commercial beef herd.
4. Commercial buffalo – a herd of buffalo kept for milk or meat production.
5. Commercial small ruminants – a herd of small ruminants kept to primarily produce and sell meat/milk/wool commercially.
6. Large-scale commercial fattening pig – a herd of pigs kept under intensive production system that are grown and sold for slaughter for pig meat production.
7. Large-scale commercial breeding pig – a herd of pigs kept under intensive production system for producing replacement pigs to be sold to other holdings (e.g. fattening farms).
8. Small-scale commercial pig – a herd of pigs kept primarily to produce and sell meat on a smaller, local scale. Biosecurity is generally lower than large scale intensive production systems.
9. Backyard – a small herd of animals (cattle, buffalo, sheep, goat, pig) kept primarily for self consumption (i.e., non-commercial).

## 3. Herd datasets

(i) Countries are to first provide EuFMD with a preliminary herd dataset containing location coordinates, species and number of animals in each herd.

- Austria, Italy and Croatia have coordinates available for all herds.
- Romania, Bulgaria and Hungary have coordinates for commercial holdings but not for small scale or backyard holdings.
- If there is sensitivity about using exact locations, countries may choose to scramble locations by adding some random variability to the exact coordinates
- The focus of the first herd dataset is on commercial farms.
- Artificial locations should be created for small holdings that do not have location data. EuFMD is available to assist with this process.

(ii) Countries are to subsequently provide EuFMD with a full herd dataset in which herds are allocated to one of the agreed common herd types.

- Data for the calendar year 2016 should be used.
- Herds should be classified on the basis of species and key differences in production systems and biosecurity risks.
- When allocating herd types to herds, the first step should be to separate backyard farms from commercial farms.
- If a holding has more than one herd type (e.g. cattle and small ruminants, cattle and pigs), these should be entered into a country's herd dataset as separate herds with the same location coordinates.
- If a herd could be associated with more than one herd type then it should be assigned the herd type with the highest risk category. (For example, if a large-scale commercial pig herd is involved both in fattening and breeding, it should be categorised as a breeding herd type).
- Each herd must have a herd type however a herd type need not have any herds assigned. That is, if no herds match a given herd type in a country there is no need to use the herd type.

#### 4. TRACES data

- Countries agreed to access their TRACES data for the purposes of modelling between-country spread of disease.
- Only countries within the project will be required to access their TRACES data (i.e., seven countries including Slovenia).
- Only one year of TRACES data should be used, that for calendar year 2016.
- All countries indicated that they are likely to be able to obtain the data requested.
- EuFMD will provide countries with data templates and a guideline on how to download the data.
- An additional expert will be contracted by EuFMD to provide technical support on TRACES.
- An “R” (R Core Team, 2013) tool will be provided by Austria to assist countries in the extraction of the necessary animal movement data from TRACES.

#### 5. Control Measures

Countries agreed that both standard EU control measures and optional emergency vaccination strategies should be available in the model.

#### 6. Assembly Centres

Countries agreed that assembly centres/animal markets should be included in the model, but further research is needed on how to best proceed. This might be discussed on a country-by-country basis as the function and importance of assembly centres/animal markets varies between countries. Control posts/resting places could also be explored at a later stage.

#### 7. Data confidentiality

Austria, Bulgaria, Croatia and Romania had no data confidentiality concerns by the end of the workshop. Hungary and Italy are to undertake internal discussions and advise EuFMD of any concerns.

### Project Plans

#### Model data milestones

Task	Target date	Actionee
Data templates (in spreadsheet form) for the herd dataset and regions provided to the participating countries.	15 Dec 2017	EuFMD
Definition of the <u>regional boundaries</u> within each country (with respect to NUTS areas). Creation of regional shapefiles OR provision of a scanned map of NUTS areas marked up with the regional boundaries. Mapping of each region in a country to the LVUs they contain.	10 Jan 2018	Countries
<u>Preliminary herd dataset</u> provided to EuFMD with the following fields: <ul style="list-style-type: none"> <li>• herd location (lat/long coordinates)</li> <li>• species</li> <li>• number of animals in the herd</li> </ul> Note that the focus is commercial herds. Backyard herds should only be defined if the data is readily available. There is no need to categorize the herds by herd type at this time.	10 Jan 2018	Countries
Data template for the TRACES data (required to model between-country spread) provided to the countries.	10 Jan 2018	EuFMD
Combined master list of all agreed regional boundary definitions provided to the countries.	17 Jan 2018	EuFMD
“R” tool created to facilitate the extraction of TRACES data.	17 Jan 2018	Austria

TRACES data (required to model between-country spread) provided to EuFMD.	22 Jan 2018	Countries
On-line meeting on herd type categorization. Each country to describe how they plan to do (or have done), the herd type categorization.	22 – 26 Jan 2018	EuFMD + Countries
Final herd dataset provided to EuFMD with the following fields: <ul style="list-style-type: none"> <li>herd location (lat/long coordinates)</li> <li>species</li> <li><u>herd type</u></li> <li>number of animals in the herd</li> </ul>	15 Feb 2018	Countries
On-line meeting to better understand the data needed to model within-country spread	19 – 23 Feb 2018	EuFMD + Countries
Template for the data required to model within-country spread provided to the countries.	28 Feb 2018	EuFMD
Data required to model within-country spread provided to EuFMD.	15 Mar 2018	Countries
Templates for the parameterisation data for control measures and resources (numbers of available teams and vaccine doses) provided to countries.	15 Apr 2018	EuFMD
Parameterisation data required for control measures and resourcing provided to EuFMD.	15 May 2018	Countries

#### Model software development milestones

Component	Target date	Actionee
<u>Prototype 1 – proof of concept featuring a test herd dataset, test spread pathways, test control measures and test resources:</u> <ul style="list-style-type: none"> <li>Visualisation of country/region boundaries (based on country/region shapefiles supplied by countries/EuFMD)</li> <li>Visualisation and GUI employs EU terminology</li> <li>Test herd dataset comprising commercial premises only (generated by EuFMD based on the preliminary herd data supplied by countries).</li> <li>Simplified test spread pathways that apply to <u>all</u> countries (using generalised default parameterisation supplied by EuFMD)</li> <li>Test control measures defined per country (using generalised default parameterisation supplied by EuFMD)</li> <li>Test resources (teams and vaccine doses) defined per country (using generalised default parameterisation supplied by EuFMD)</li> </ul>	28 Feb 2018	EuFMD + countries
<u>Prototype 2 – incorporation of a realistic herd dataset and country-dependent test spread pathways:</u> <ul style="list-style-type: none"> <li>Herd dataset updated with country-supplied data (herds, herd types and herd locations) for commercial premises only</li> <li>Test spread pathways defined <u>per country</u> (using generalised default parameterisation supplied by EuFMD)</li> </ul>	31 Mar 2018	EuFMD + countries
<u>Prototype 3 – realistic spread pathways, control measures and resources:</u> <ul style="list-style-type: none"> <li>Realistic spread pathways defined per country (using country-specific parameterisation)</li> <li>Realistic control measures defined per country (using country-supplied parameterisation)</li> <li>Realistic resources defined per country (using country-supplied parameterisation)</li> <li>Preliminary model verification and validation</li> </ul>	30 Jun 2018	EuFMD + countries

**Acknowledgements**

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**References**

*Bradhurst R.A., Roche S.E., East I.J., Kwan P. and Garner M.G. (2015). A hybrid modelling approach to simulating foot-and-mouth disease outbreaks in Australian livestock. *Frontiers in Environmental Science*, 3(17). doi:10.3389/fenvs.2015.00017*

*R Core Team (2013). A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL <http://www.R-project.org/>.*

**Agenda**

Day 1 – Tuesday		
14.00 – 14.30	Opening welcome	Austria
	EuFMD Welcome and Introductions	M. Hovari, EuFMD
14.30 – 15.00	Project aim and objectives Background and why we here?	G. Garner, EuFMD
15.00 – 15.30	Country presentations (10 minutes summaries each) Livestock industries, animal health infrastructure, emergency disease preparedness	Group – AT, IT, HR
15.30 – 16.00	<i>Coffee Break</i>	
16.00 – 16.30	Country presentations (10 minutes each) - continued	Group – HU, RO, BG
16.30 – 16.50	Overview of AADIS – what is it?	R. Bradhurst,
16.50 – 17.00	Applications and use of models for policy/planning/training and exercises	G. Garner
17.00 – 17.15	Data requirements to build Europe FMD spread model	G. Garner
	Data confidentiality and sharing (within - between countries)	All
Day 2 - Wednesday		
08.30 - 09.15	Country adaptations: Description and key features of livestock production in each country - linking LVUs and NUTS 2 areas	All
09.15 – 09.45	Demonstration: Using herd population data in the model	M. De La Puente R. Bradhurst
09.45 – 10.30	Discussion: Common herd classification system – the best common approach	R. Bradhurst, M. Hovari, All
10.30 - 11.00	<i>Coffee Break</i>	
11.00 - 11.30	Demonstration: Modelling FMD spread in AADIS	R. Bradhurst
11.00 – 11:45	Discussion on spread pathways: <ul style="list-style-type: none"> <li>• Aggregated versus disaggregated pathways</li> <li>• Within country and between country spread</li> </ul>	G. Garner, All
11.45 – 12.30	Information needs from countries for the model: <ul style="list-style-type: none"> <li>• Direct movements</li> <li>• Indirect movements</li> <li>• Local spread</li> <li>• Markets / Assembly Center / Control Posts</li> <li>• Wind-borne spread</li> </ul>	All
12.30 - 13.30	<i>Lunch</i>	
13.30 - 14.00	Alternate approaches and data sources for parametrizing disease spread Exercise 1: Allocating movement destinations	G. Garner
14.00 – 15.00	Between country spread Using TRACES to analyse and summarise livestock movement patterns (demonstration)	M. De La Puente
15.00 - 15.30	Recap – any questions on data requirements	M. Hovari, All
15.30 – 16.00	<i>Coffee Break</i>	
16.00 - 16.30	FMD control policies in Europe – What is most important to include	M. Hovari, All
16.30 – 17.00	Control measures in AADIS demonstration and what data is needed <ul style="list-style-type: none"> <li>• Effectiveness of different measures</li> <li>• Resources for control</li> </ul>	G. Garner, R. Bradhurst
	Exercise 2: Effectiveness of tracing	
17.00 – 17.30	Economic impact - reporting in AADIS demonstration <ul style="list-style-type: none"> <li>• Cost data required for estimating impact and comparing control strategies</li> </ul>	R. Bradhurst G. Garner
	Exercise 3: Allocating resources for disease control	

Social Event		
Day 3 - Thursday		
08.30 - 09.00	Summary of yesterday's outcome (conclusions)	M. Hovari
09.00 – 09.30	Collecting and reporting country data – use of the e-learning site	All M. Hovari
09.30 – 10.30	Overview of model testing, verification and validation	G. Garner R. Bradhurst
10.30 - 11.00	<i>Coffee Break</i>	
11.00- 11.30	Short and long term milestones in the project	M. Hovari G. Garner
11.30- 12.00	Country action plans	M. Hovari G. Garner
12.00 – 12.30	Logistics of using AADIS modelling platform (hardware, licencing, future developments)	R. Bradhurst
12.30 – 13.00	Close and wrap up	M. Hovari
13.00 -	<i>Lunch</i>	

**List of participants**

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**Appendix 3**  
Six-month report  
(Full)

Component	Team
<b>Pillar Manager</b>	<b>M.Hovari</b>
<b>1.1 - Training for Member States</b>	Component Supervisor: M.Hovari-Component Manager: R.OlivaAbascal-Reporting: R.OlivaAnascal - M. Hovari - J. Maud; Executive Committee: M. Blake
<b>1.2 - Improved Contingency Planning</b>	Component supervisor: M. Hovari -Component Manager: G. Garner; Reporting: M. Hovari/ G. Garner; Focal point Executive Committee: /
<b>1.3-Thrace</b>	Component Supervisor: M. Hovari; Component Manager: P. Motta; Reporting: P. Motta – M. Hovari; Focal point Executive Committee: /
<b>1.4 -Balkans</b>	Component Supervisor: M. Hovari; Component Manager: - Reporting:– M.Hovari; Focal point Executive Committee: /
<b>1.5- EuFMD Fund for Applied Research</b>	Component Manager: P. Motta; Reporting: K. Sumption / P. Motta; Focal points, Executive Committee: C. Brusckke; Standing Technical Committee: E. Ryan, Chairman
<b>1.6 -Emergency Technical response</b>	Component Manager: K. Sumption; Reporting: K. Sumption; Focal points, Executive Committee: L. Bognar
<b>1.7 - Proficiency Testing Scheme</b>	Component Manager: K. van Maanen; Reporting: M. Hovari; Executive Committee: C. Brusckke
<b>1.8 - Risk Analysis and Communication</b>	Component Manager: M. Hovari; Reporting: M. Hovari – P. Motta – M. Scicluna – G.Garner; Focal point Executive Committee: L. Bognar
<b>Pillar Manager</b>	<b>F. Rosso</b>
<b>2.1 - South East Europe</b>	Component Manager: C. Potzsch; Reporting: C. Potzsch; Focal point Executive Committee: J. Angot
<b>2.2 - South East Mediterranean</b>	Component Manager: A.Bakkouri/D.Imandayeva; Reporting: F.Rosso; Focal point Executive Committee: J. Angot
<b>2.3 - Support to REMESA</b>	Component Manager: A. Bakkouri; Reporting A. Bakkouri; Focal point Executive Committee e: J. Angot
<b>2.4 - Pillar II Training Development and Coordination</b>	Component Supervisor: F. Rosso; Component Manager: J. Maud; Reporting: J.Maud; Focal point Executive Committee: M. Blake
<b>Pillar Manager</b>	<b>N. Lyons</b>
<b>3.1 - Improved system for monitoring and evaluation of progress of regional programmes on FMD control</b>	Component Manager: N. Lyons / N. Rumich; Reporting: N. Lyons; Focal point Executive Committee: /
<b>3.2 - Support to Global Progress Monitoring of FMD Control programmes</b>	Component Manager: C. Bartels; Reporting: C. Bartels; Focal point Executive Committee: /
<b>3.3 - Laboratory support</b>	Component Manager: K van Maanen; Reporting: K van Maanen; Focal point Executive Committee: /
<b>3.4 - Global access to PCP-FMD training resources</b>	Component Manager: N.Lyons Reporting: J. Maud Focal point Executive Committee: M. Blake

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**October 2017 - March 2018**

### **Component 1.1 – *Training for Member States***

**Pillar Manager: M.Hovari**

**Component Manager: R.OlivaAbascal**

**Reporting: R.OlivaAbascal / M. Hovari / J. Maud**

**Executive Committee: M. Blake**

## 1.1-Training for Member States

### 1-Objectives of component

#### The overall objective of this component is:

Increased European expertise in FMD crisis management and improved quality of national FMD preparedness training programmes.

#### The activities (expected results) are:

**1.1.1:** System in place to enable every member state to cascade appropriate training and learning on FMD control to their public and private animal health services supported by infrastructure for learning and knowledge transfer in place, including e-learning, training resources and staff support.

**1.1.2:** Improved capacity in each of the MS to recognize, respond to and manage FMD through provision of a demand driven training programme supplied in response to MS priorities for training in areas of prevention, detection, and contingency planning for control operations and recovery.

Activities	Indicators	Baseline Sep. 2017	Target 2 years	Unit of measure	Current Status
1.1.1	Knowledge Bank created and in use by member states	500	3,000	Number of participants that have accessed at least one open access training course or knowledge bank resource	1,273
1.1.2	Implement >85 % of the demand driven programme	85%	85 %	Training credits allocated by the 38 MS to training activities or regional initiatives have been delivered by EuFMD	29 %

#### Additional non-EC funded contributions

External funding received for development of training outside the EC funded programme, including the Real Time Training courses held in Nepal and funded by Australia and New Zealand, and the additional training purchased by Member States under the "Training Credits Top-Up Scheme" contribute funding which support the development of new training courses and materials which are then also used as part of training provided to MS under the EC funded programme. In addition, these funding sources support recruitment of additional personnel, as listed in the table below:

Description	Contribution	Funding source
<b>Component Supervisor: Training Programmes Manager</b>	50% of one FTE role (consultant P2 equivalent)	EuFMD Trust Fund- MS contributions, Australian Real Time Training
<b>Network and Training Support Officer</b>	30% of one FTE role (P2)	80% EuFMD Trust Fund, 20% EC project
<b>Development of training materials</b>	New online training materials, course materials or job aids	Australian Real Time Training and Training Credits Top Up fund

## 2-Project team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Pillar Manager</b>	Mark Hovari	Contingency Planning Officer
<b>Component Manager</b>	Ruth OlivaAbascal	Short Term Placement
<b>Training Manager</b>	Jenny Maud	Training Programmes Manager
<b>Training and networking support</b>	Nadia Rumich	Training and Networking Officer/Secretariat
<b>Member State partners</b>	Training Focal Point in each EuFMD MS	n/a
<b>ExCom oversight</b>	Martin Blake	ExCom member (Ireland)

## 3-Countries or partner organizations involved

All EuFMD Member States are direct beneficiaries of component 1.1.

The main partners are:

- Training focal point in each MS. A good relationship has been established and maintained with many focal points through the first two years of the training credits scheme.
- Letter of Agreement (LoA) with Royal Veterinary College (RVC), University of London. This will be mainly for RVC to maintain the EuFMD e-Learning website, and may extend to development of the Knowledge Bank and provision of technical and pedagogical assistance in the development of new online training courses.
- Memorandum of Understanding (MoU) with the Directorate of the Veterinary Services (DVS) in Kenya on the collaboration on the Real Time Training Courses in Kenya.

## 4-Progress Report

**1.1.1** System in place to enable every member state to cascade appropriate training and learning on FMD control to their public and private animal health services supported by infrastructure for learning and knowledge transfer in place, including e-learning, training resources and staff support.

### Activities:

#### 1.1.1.1 Training infrastructure: staffing and technical resources

##### *Staffing*

Ruth OlivaAbascal (Spain) joined on a Short Term Placement from September 2017 has managed component 1.1. for the six-month period of her placement.

Chiara Addari (Operational, e-learning and training logistics) manages the administration for the EuFMD e-learning platform, including creation of online resources, registration and liaison with training participants and co-ordination of webinars. The rapidly rising number of e-learning courses being delivered demands increased staffing.

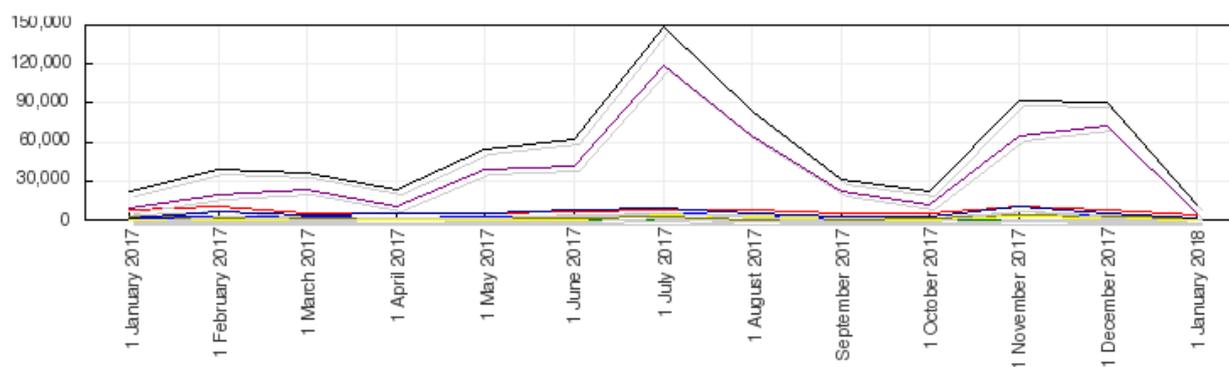
Amir Shurrab continues as a consultant specialist learning technologist and instructional designer for ad-hoc instructional design of new e-learning courses alongside advanced technical troubleshooting support to the e-learning programme.

Jenny Maud (Training Programmes Manager) co-ordinates training development across the EuFMD programme, and oversees the delivery of the e-learning programme. Mark Hovari (Contingency Planning Manager) supervises component 1.1. Nadia Rumich manages communications on training, the webinar programme and networks.

Recruitment of additional interns is currently underway, and experience of development and management of e-learning will be part of these new internships, providing valuable administrative support to the e-learning programme.

*Technical resources: EuFMD e-Learning Platform (<https://eufmdlearning.works>)*

The EuFMD e-Learning Virtual Learning Environment now has over 5700 registered users. The site is hosted on servers at the Royal Veterinary College, who provide technical support for its maintenance. Advanced discussions are underway with the Royal Veterinary College for the potential continuation of their support to the e-learning programme.



*Figure 1: Activity on the EuFMD e-learning site (number of clicks by different participant types) over the last 12 months, illustrating sustained increase in user numbers.*

*Technical Resources: Webinars*

Webinars are organized frequently, with on average two per week. The software used has been recently upgraded to allow up to 500 simultaneous users.

Upgrade of the EuFMD e-Learning website to a new Moodle instance is scheduled for mid-2018. Negotiations are underway with Royal Veterinary College for continued support to EuFMD e-Learning, including increasing server capacity to manage a larger number of users.

#### **1.1.1.2 Training infrastructure: online knowledge bank development (in co-operation with other training components)**

The online EuFMD Knowledge Bank (<http://kb.eufmdlearning.works/>) includes 430 resources, and these resources have been accessed nearly 10,000 times over the last six month period (individual “clicks” on resources).

A review of the Knowledge Bank has taken place and planned improvements include:

- Alterations in the ordering and prioritization of search results;
- Improved, tighter categorization of resources;
- New section of e-learning website showcasing resources in the knowledge bank, including a “Resource of the Month”.

#### **1.1.1.3 Open access areas of EuFMD e-Learning website**

An open access “**Introduction to FMD**” course has been developed and made available on the EuFMD e-Learning website. This course takes approximately 90 minutes to complete and is a shortened version of the FMD Emergency Preparation Course. It is hoped it will be a useful tool for all member states to direct their staff to, and should also attract users to the e-learning site, encourage them to explore the networks and other training resources available. It will be suitable for Member States to use as an introduction to face to face national

training courses, and also as a resource for veterinary students. Following initial use in English, the course will be translated into additional priority EU languages.

The open access “**What is the PCP?**” and “**Introduction to the PCP**” courses (see component 2.4) have been made available since February 2017.

An open access “**Contingency Planning Self-Assessment Tool**” is in the final stages of development. This tool, which has a game-like interface, will serve dual functions. It will allow contingency planners to assess their own plans and direct them to resources which may be used to improve contingency plans. In addition, as an open access resource, the tool will be available to anybody interested in FMD contingency planning, signposting users to resources available in the Knowledge Bank and contingency planning network.

#### 1.1.1.4 Training infrastructure: framework for monitoring and evaluation

All training courses are evaluated by an online survey immediately after the final task, with summative assessments to verify participant’s knowledge at the end of each online training courses. A protocol for evaluation of each training course, based on the evidence provided by the survey and assessments is now well used. All results of surveys and evaluation documents are stored on a dedicated “trainers” section of the EuFMD e-Learning platform, and are shared with relevant nominating organizations.

#### 1.1.1.5 Develop knowledge transfer tools and job aids

New knowledge transfer tools and job aids developed in the last four months include:

##### Videos:

- Clinical examination for FMD
- Diagnostic sampling for FMD
- Taking a Probang Sample
- Biosecurity (entry and exit) with German subtitles.

##### Factsheets:

- Lesion ageing (new)
- Diagnostic sampling according to stage of disease.

#### 1.1.1.6 Support to in-country training courses

EuFMD introduced at the NTC24, June 2016, a written agreement with the Member States’ participants of the Real Time Training Kenya to deliver a national cascade training, based on the knowledge and experience acquired during the course in Kenya, after their return from the RTT. All participants are given one year to develop this national course, with the assistance, if required, from EuFMD Training Team. The idea behind this new approach is to increase the impact of the RTT courses on the preparedness of the countries on foot-and-mouth. EuFMD records any planned and completed cascade national course after the NTC courses since June 2016. In the case of various participants from the same country attending the same RTT, the EuFMD is not asking for more than one cascade training and they are encourage to collaborate for a single cascade training. Therefore, both number of participants (as individual) and number of countries (in case of more than one participant from the same country in the same RTT) for each of the NTC, are recorded.

NTC Real Time Training	Nb of participants	Nbr of countries participant	Nb of cascade planned	Nb of cascade training completed*
NTC24	12	9	3	3
NTC25	12	11	1	3
NTC26	10	10	4	4
NTC27	7	6	-	-
NTC28	11	9	-	-
<b>TOTAL</b>	52	45	14	10

\*The cascade training planned do not include the training already delivered and completed

NTC27 and NTC28 were held in November and December 2017 and the participants are not expected to have delivered any cascade training at this point in time.

**1.1.2:** Improved capacity in each of the MS to recognize, respond to and manage FMD through provision of a demand driven training programme supplied in response to MS priorities for training in areas of prevention, detection, and contingency planning for control operations and recovery.

## Activities

### 1.1.2.1 Training Credits system and needs assessment

During this six-month period, several training courses were implemented in order to cover the needs assessed and received from all 38 Member States. At the beginning of the second biennium, 344 of the 388 Training Credits (TC) available for training in 2017-19 were allocated by Member States. 56 unused Training Credits from the first biennium, not included in the total account of Training Credits for this second biennium, should be converted for the use of the Regional approach for the current biennium (please see 1.1.2.5). There are still 45 Training credits unallocated for this biennium currently. The focal points from the MS will be contacted and will be able to allocate any TC left for any event they request. If not, these TC will be included in the pool of unallocated Training Credits to be added to the Regional approach events. The EuFMD has received a very good response from the MS regarding the allocation of Training Credits and an improvement of the overall quantity of TCs used has been observed.

Nevertheless, there are still four MS whom have not allocated any of the TCs, neither have they reallocated these unused TC for the benefit of another MS or a particular region. The EuFMD has not received to date any response on allocation of Training Credits from Cyprus, Luxembourg, Netherlands and Switzerland.

The table below shows an update on the courses delivered since the beginning of the training period to date with the number of credits allocated. This is still the beginning of the biennium which is, predominantly, the planning stage and many of the events are planned for later.



Table 1: Training courses **Delivered** and (Allocated) to date

Course	Training credits	Number of trainees	Training credits delivered (allocated)
<b>1) Real Time Training</b> (now with the requirement that participants carry out cascade training when they return home)	3 credits for 1 participant	<b>32</b> (44)	<b>96</b> (132)
<b>2) Online FMD Emergency Preparation Course: English language</b> Online course for multiple Member States in English	1 credit for 20 participants	(380)	(19)
<b>3) Online FMD Emergency Preparation Course: Tailored National Course</b> Online course in national language, tailored to specific country requirements	6 training credits for 120 participants	(240)	(12)
<b>4) Online FMD Emergency Preparation Course: subsequent national course</b>	4 training credits for 120 participants	<b>123</b> (480)	<b>4</b> (16)
<b>5) Workshop: "Managing a crisis"</b> Establishing train of command and managing communication within and outside the veterinary service in a crisis situation	2 training credits for one participant	(19)	(38)
<b>6) Workshop: "FMD Simulation exercises"</b> Design, implementation and evaluation of simulation exercises	2 training credits for one participant	(15)	(30)
<b>7) Workshop: "Putting vaccination into practice"</b> Desktop simulation based workshop looking at contingency planning on all aspects of FMD vaccination and subsequent proof of freedom	0 training credit for one participant	(10)	(20)
<b>8) Workshop: "FMD Wildlife surveillance"</b> Better understanding of FMD surveillance in wildlife, particularly by using non-invasive methods.	2 training credits for one participant	(15)	(30)
<b>9) Workshop: "Veterinary Ethics"</b> Exploring ethical conflicts, clarifying professional roles and responsibilities.	2 training credits for one participant	(4)	(8)
<b>10) In-country support on FMD modelling:</b> Assistance to the country in order to progress in the development of national disease spread models.	2 training credits for one participant	(4)	(8)
<b>11) Laboratory Training Course</b> Two week intensive course on FMD diagnostics run by the Pirbright Institute	4 training credits for one participant	(3)	(12)
<b>12) Regional event:</b> A possibility for each sub-region to have a tailored course to meet their specific needs to increase FMD preparedness.	2 training credits for each country with the support by additional training credits	(9)	(19)
<b>Total number of training credits Delivered – (Allocated)</b>			<b>100</b> (344)

A balance of the 370 credits available for training in 2015-17 to date is as follows:

- ❖ 344 TC have been allocated, and **29% of the allocated training credits have been delivered by EuFMD**
- ❖ They are still **45** unallocated training credits at this point. Nevertheless the EuFMD Member States focal points will be contacted to discuss the best way to proceed with these credits.

#### 1.1.2.2 Development of new training courses

New courses were developed during the last six months, including a bilingual training (English/Spanish) in FMD Emergency Preparation Course for the Caribbean Region, delivered in collaboration with PANAFTOSA.

The EuFMD is planning to develop and deliver a new online course on Veterinary Ethics as an alternative to the Workshop expected to take place, as there may not be enough interest by the Member States to participate in a workshop. Allocations to this workshop from several MS have been received and it is an initial approach to the theme with a potential workshop in the future.

#### 1.1.2.3 Delivery of training courses

To date, the following training courses have been delivered during the work programme:

- **Real Time Training** courses in Kenya were held in November and December 2017. One Real Time Training course was held in Nepal in February 2018, originally planned for Kenya. There should be one course in November-December 2018. All the countries that allocated credits to this training option had the opportunity to nominate participants to attend to one of these courses.

The EuFMD has two major online courses during this six-months training period.

- **On-line FMD Emergency Preparation Course for the Caribbean Region** was held in January-February 2018. The aim of this training was to make participants familiar with the concepts of surveillance, risk based surveillance and surveillance systems for: early detection, case detection during an outbreak and surveillance to prove freedom with emphasis in the particularities of the Caribbean region. This course has been delivered with close collaboration with PANAFTOSA.
- **On-line FMD Emergency Preparation Course for the UK (UK3)** was held in February-March 2018, for 123 participants. The aim of the course is to prepare veterinarians to recognize, diagnose and investigate an FMD outbreak. It also covers biosecurity measures to be taken when visiting premises suspected of infection and provides an overview of contingency planning. This particular on-line course was also aimed to link up with the on-going emergency preparedness in the UK, "Exercise Blackthorn".

#### 1.1.2.4 Training focal points informed of training opportunities and feedback

Training focal points have been contacted regularly about upcoming courses, to request their nominations of participants, to give their feedback on different issues, etc.

In October 2017 the EuFMD held the 1<sup>st</sup> webinar for the MS National Training Focal Points (NTFP) in this biennium, to discuss the new Training Menu and, in particular, the new courses and events included in the Training menu for the second biennium of Phase IV, such as:

- The Veterinary Ethics workshop;
- The Regional event was explained to the focal points in details;
- The new In-country support on FMD modelling was also presented and explained;

- The new possibility of reallocation of Training credits to sub-region or another country was introduced as well.

Before the development of the new Training Menu for this biennium, the EuFMD took into consideration the responses received from the consultations that was held in August 2017, to discuss overall satisfaction of the MS with the training provided, the changes to the current Training Menu, to foreshadow the Regional approach and gain a better understanding on the needs for novel training courses. In particular, the interest observed in the new courses on wildlife surveillance workshop, Veterinary Ethics and in-depth Risk Communication and an overall support for the Regional approach.

### **1.1.2.5 Regional approach**

The EuFMD developed a proposal for the Executive Committee on a sub-regional collaboration of the Member States for training purposes. The possible benefits of this approach considered were:

- strengthen the relationships between neighbouring countries;
- improve the cooperation in activities related to FMD preparedness and surveillance;
- Cost- effectiveness of spend training credits.

The proposal was to receive a donation of two TC, from their ten TC pool, from each MS for their region to be spent on a regional activity. Each TC donated was going to be supported by EuFMD with another TC derived from unspent training credits of the first and second biennium.

In order to apply a regional approach to organize EuFMD training courses, sub-regional discussions needed to be held with the training focal points to allow find the regional needs and the best way to apply this concept.

There was a very good response from the survey in August 2017 which supported this new concept. It was considered an ideal use of the unused TC, which could also explore the possibilities of developing events with neighbouring countries with similar necessities.

Nine MS have opted to allocate TC for regional events. Unfortunately, as these countries do not belong to the same regions, there is the need to rethink how to manage these intentions, as the benefits of neighbouring countries for reduced travel costs cannot be implemented

It is probable that the limited number of the TC available for each MS, and the necessities on allocating to other courses might have been an impediment to allocate any TC for this regional events.

### **5-Issues for Executive Committee attention arising during implementation**

To date, 45 credits have not been allocated. Some countries have never allocated their training credits or not all of them, despite repeated reminders. In some cases, participation in Real Time Training was cancelled at the last minute.

The countries with the highest number of unallocated or unspent training credits were: Cyprus, Switzerland, Netherlands and Luxembourg. An improvement from the previous biennium has been observed.

On one side, the EuFMD is looking for options to improve the engagement and participation from the countries that are not answering to our requests to allocate and use their training credits. On the other, the EuFMD would like to allocate unspent TC to the regional approach both from the first biennium and during the second biennium in order to recycle these funds and redistribute equally between the MS.

Even if the completion rates of the FMD Emergency Preparation Courses are generally good, there is a significant variability between the Member States taking these courses. There is the need for an analysis of why in some cases the completion rate was lower than average, in order to adapt better the course to the needs of each particular country.

The need for continued increase in human resource support for the expanded e-learning has been met by the recent recruitment of an e-learning technologist.

## 6-Priorities for the next six months

### 1.1.1: System in place to enable every Member State to cascade appropriate training and learning on FMD control to their public and private animal health services supported by infrastructure for learning and knowledge transfer in place, including e-learning, training resources and staff support.

- The knowledge bank will be upgraded with new features and search functions following review of current use;
- Open access online courses will be publicized to Member States to ensure good uptake;
- Development of additional job aids and training resources for the Knowledge Bank;
- Follow up on additional opportunities to promote national cascade training.

### 1.1.2: Improved capacity in each of the MS to recognize, respond to and manage FMD through provision of a demand driven training programme supplied in response to MS priorities for training in areas of prevention, detection, and contingency planning for control operations and recovery.

In the next six months the focus will be on continue to organize the online courses, workshops and events which have been allocated by the Member States.

- **Online FMD Emergency Preparation Courses (FEPC)** will be delivered during the second biennium. These course have been delivered to more than 1000 veterinarians from Member States on seven courses to date and three more are planned to comply with the Member States request for this period of time (there is a request of at least 380 new participants, from 19 different Member States for this biennium). These courses are run in English and have participants from several Member States.
- **National tailor made FMD Emergency Preparation Courses** were held, in their own national languages, The EuFMD has, up to date, national courses tailored for Spain, France, United Kingdom, Estonia and Serbia.  
This biennium, subsequent national courses for France, Serbia, Spain and United Kingdom will be delivered (which will include the role of the participants to the Simulation Exercise that will take place after the course).  
Additionally, there are two new national courses for this biennium: Hungary and Poland. This tailored national courses will be delivered in their own language, which will increase the capacity of FMD Emergency Preparation Courses in diverse languages.
- **Workshop on Crisis Management** has been organized for mid-March 2018, in Kaunas (Lithuania). The aim of the workshop was to increase the ability of Veterinary Services in Member States to manage an outbreak of foot-and mouth disease by effective emergency management and excellent internal and external communication.
- **Workshop on Wildlife surveillance** has been organized for May 2018, in Sofia (Bulgaria). The aim of this workshop is to provide participants with a better understanding of FMD surveillance in wildlife, particularly by using non-invasive methods.
- **Workshop on Simulation exercises** will be organized for November 2018. The aim of the workshop is to teach participants about how to select, design, conduct and evaluate simulation exercises through actually designing and carrying out small simulation exercises during the workshop. Furthermore the workshops aimed to make participants aware of the value of having a strategic approach to simulation exercises and use them within the context of their overall emergency preparedness.

- **In-country support on FMD modelling** has been organized for April 2018 to Spain. The EuFMD is organising three more missions for In-country support on FMD modelling to FYR of Macedonia, Romania and Turkey.

The use of unused TC for this biennium must be taken into account. What is the best approach for the Regional Event for the nine Member States which have allocated two of their TC for this option?

After the initial TC allocation, steps have been taken to plan for the various activities requested and hopefully deliver e-learning and/or workshops before the next Executive Committee in April 2018.

In parallel, after the regional approach concept will be established, initial consultation with the relative groups has to begin so that the activities can be implemented with minimum delay.

## 7 - Success stories and future emphasis

A major success is the inter-organizational collaboration with CaribVet and PANAFTOSA on the FMD Emergency Preparation Course for the Caribbean Region, January – February 2018. It involves over 120 participants from 16 countries, including the overseas territories of United Kingdom, France and The Netherlands. This is the first course developed and delivered simultaneously in two languages (English and Spanish) and lead by bilingual expert trainers.

Future emphasis of the component will be mostly on delivery of the training courses selected by the member states and maintain the support to Member States to facilities their own FMD trainings with the help of open access courses and the materials found on the knowledge bank.

## 8- Budget (€)

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses Oct 17 – Dec. 17</b>	<b>Expenses Jan 18 - Mar 18 (forecast)</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
522,975	27,078	115,200	29 %	371,570



# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### **Component 1.2 –**

### **Improved Contingency Planning**

**Pillar Manager: M. Hovari**

**Component Manager: G. Garner**

**Reporting: G. Garner / M. Hovari**

**Focal point Executive Ctte:**

## 1.2. – Improved Contingency Planning

### 1-Objectives of component

**The overall objective of this component is:** to improve contingency planning by Members and at European Level.

**The activities (expected results) are:**

1. System (networks) in place to assist contingency planning in every member state through providing technical support to the contingency planners and FMD modelling expert groups to improve the national capability on modelling, contingency planning, simulation exercises;
2. Improved system established for providing central resources for crisis situations including decision support tools (including disease spread and economic models), provision for diagnostic supplies, emergency access to national or regional vaccine banks, and sharing of critical human resources.

<i>Activities</i>	<i>Indicators</i>	<i>Baseline Sept. 2017</i>	<i>Target years</i>	<i>2</i>	<i>Unit of measure</i>	<i>Current Status</i>
<b>1.2.1</b>	Annual Participation in online meetings or webinars	300	300		Participation in online meetings or webinars	424
<b>1.2.2</b>	Number of published: Decisions Support Tools, discussion papers and guidelines that have been peer-reviewed	2	5		Published tools and guidance that has been peer-reviewed	2

### 2-Project team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Pillar Manager</b>	Mark Hovari	Contingency Planning Officer
<b>Component manager</b>	Graeme Garner	FMD Risk Management Support Officer
<b>Training and networking support</b>	Nadia Rumich	Network and Training Support Officer
<b>Other EuFMD team members</b>	Melissa McLaws	Risk analysis/Pragmatist tool
<b>Advisors</b>	Modelling and CP advisory groups	Volunteer representatives from the modelling and CP networks.
<b>STC oversight:</b>	Eoin Ryan	STC
<b>ExCom oversight</b>		

### 3-Countries or partner organizations involved

The direct beneficiaries of the work of component 1.2 are all of the EuFMD member states, and in particular modeling groups and contingency planners at academic and government institutions. Beyond EuFMD Member States, component 1.2 has sought to network with partners in other regions of the world actively involved in using modeling to inform contingency planning.

Consultation will occur with the **Food and Veterinary Office of the European Commission (FVO)** in order to ensure that the activities of component 1.2 are complementary to FVO activities on Contingency Planning.

The FMD Economic Impact Calculator was developed through a Letter of Agreement with Prof. Jonathan Rushton and colleagues at the **Royal Veterinary College, London, UK**.

### 4-Progress Report

**Output 1.2.1.** System (networks) in place to assist contingency planning in every member state through providing technical support to the contingency planners and FMD modelling expert groups to improve the national capability on modelling, contingency planning, simulation exercises.

#### *Activities*

##### **1.2.1.1 Contingency planning network**

The contingency planning network currently counts 315 members.

There were no new webinars held in this period, but all of the previous webinars can be accessed through the EuFMD e-learning website's Contingency Planning Network page.

##### **1.2.1.2 Modelling network:**

The Modelling network is continuing to grow and engage members from Europe, North America, Australasia, and beyond. There are presently 292 members.

The webinar series is a popular platform for modellers working with FMD to present their work to the international community of modellers and contingency planners. In September 2017, Dr Graeme Garner took over the role of network coordinator from Melissa McLaws.

Since the 94<sup>th</sup> ExCom, two webinars, a main tool for learning and information sharing, were delivered:

- In December 2017, Siyi Feng presented "[Market Impact of Foot-and-Mouth Disease Control Strategies: A UK Case Study](#)"
- In October 2017, Graeme Garner presented "[Evaluating options for managing vaccinated animals after an FMD outbreak. A modelling study](#)".

All records of the webinars are available on the EuFMD e-learning website under the Modelling Network tab.

##### **1.2.1.3 Emergency Vaccination network:**

The Vaccination Network currently has 213 members.

There were no new webinar held in this period. But all records of the webinars are available on the EuFMD e-learning website under the Vaccination Network.

##### **1.2.1.4 Development of guidelines:**

In synergy with the European FMD spread model under Component 1.2, a series of guides have already been written that guide countries step-by-step in which data is needed to be extracted and provided in order to be used in the EuFMD-IS.

To meet the indicator 1.2.2, the following items have been completed or will be completed in this biennium

1. A Position paper on FMD vaccination issues was delivered in June 2016;
2. The AESOP (Assured Emergency Supply Options) paper was delivered in October 2017;
3. Emergency Vaccination Guideline will be finalized in 2018;
4. Crisis Communication Guideline will be finalized in 2018;
5. EuFMDiS, a major decision support tool, will be delivered in 2018.

### **1.2.1.5 European, multi-country animal disease spread model**

Graeme Garner is leading this project to develop a European multi-country modelling capability, following endorsement of the project proposal to adapt the Australian FMD model (AADIS) for use in Europe, by EuFMD's Executive Committee in October 2017. Seven countries have enrolled in the European FMD spread model (EuFMD-iS) project (Austria, Bulgaria, Croatia, Italy, Hungary, Romania and Slovenia).

Discussions have been held with Australia regarding an intellectual property deed of license for access to the Australian Animal Disease model (AADIS) software and a draft that meet's FAO's legal requirements has been prepared. The project is progressing well. An on-line network, for project partners, to provide a discussion forum and share resources has been established. Contact is maintained by regularly through on-line meetings and a workshop was held 5-7 December 2017, in Vienna, Austria, to bring the participating together to discuss the scope of a multi-country European disease spread model, and to identify the country-specific data required and agree on project time frames, and deliverables. Participants have identified and defined livestock production regions within their respective countries and agreed on a common herd classification system which are essential to make progress in the project.

**Output 1.2.2.** Improved system established for providing central resources for crisis situations including decision support tools (including disease spread and economic models), provision for diagnostic supplies, emergency access to national or regional vaccine banks, and sharing of critical human resources.

#### *Activities*

##### **1.2.2.1 Economic impact calculator:**

Under a Letter of Agreement (LoA), a prototype economic impact calculator was developed by a team at the Royal Veterinary College lead by Jonathan Rushton, with a final report submitted at the end of June 2015. This calculator is intended to assist previously free countries to rapidly assess the impact of an FMD outbreak, as well as guide the selection of the most economically favorable strategy to control the outbreak. Wider socioeconomic impacts are also considered qualitatively.

Whilst the prototype calculator has been developed, the tool must still be validated and refined further to comments from users and simulations with data input. Integration with other decision support tools (e.g. disease spread models) should also be considered.

##### **1.2.2.2 Support to development of diagnostic banks:**

No activities have been carried out.

##### **1.2.2.3 Support to emergency access to vaccine banks:**

An Expressions of Interest (EoI) for eligible companies for a public tender to establish a Long-Term Agreement for the "Storage of concentrated antigens, formulation and supply of vaccines for foot-and-mouth disease for FAO projects worldwide" was launched in 14 December 2017 and was closed on 15 January 2018. Responses were received from 10 companies.

##### **Activity 1.2.2.4 Support to sharing critical human resources:**

No activities have been carried out.

##### **1.2.2.5 Other decision support tools**

No activities have been carried out.

##### **1.2.2.6 Private Sector involvement in Emergency Preparedness and management**

No activities have been carried out.

## 5-Issues for Executive Committee attention arising during implementation

The various discussion papers under 1.2.2 such as: the development of diagnostic bank, sharing critical human resources and private sector involvement in emergency preparedness and management were not addressed during this period. This is due to the focus of the component resources (CM and CS) toward the initial development of the EuFMD-iS. After the initial work on the EuFMD-iS is completed the workload can shift back to the topics listed under 1.2.2.

The Contingency Planning (CP) and Vaccination networks are behind in delivery, due to the current focus of the EuFMDiS. Once the EuFMDiS first working versions are delivered, the application of this DST will deliver several webinars for the Pillar I networks.

## 6-Priorities for the next six months

**Outcome 1:** System (networks) in place to assist contingency planning in every member state through providing technical support to the contingency planners and FMD modelling expert groups to improve the national capability on modelling, contingency planning, simulation exercises.

### Activity 1.2.1.1 Contingency planning network:

The main focus is on continuing with the FMD practical management series to cover the final topics on biosecurity and laboratory. Following which, in line with the work of the GET Prepared Pathway, a new webinar series will be drafted. It will focus on Emergency Preparedness and its related topics (planning, training and exercises) as the main theme.

### Activity 1.2.1.2 Modelling network:

Further webinars have been lined up for early 2018:

- Rowland Kao presenting “An integrated framework for process-driven model construction in ecology and animal health”.
- Thomas Rawdon presenting “Evaluating vaccination strategies to control foot-and-mouth disease: a country comparison study”.
- APHIS, USDA (to be advised) presenting “Estimating FMD modelling parameters using experimental data”.

### Activity 1.2.1.3 Vaccination discussion network:

The main focus is to hold a webinar introducing the guidelines on developing an FMD emergency vaccination operational plan and explore other topics which could be covered under this network.

### Activity 1.2.1.4 Development of guidelines:

- The work on the guidelines to develop an FMD emergency vaccination operational plan close to final.
- In synergy to the upcoming Crisis Management workshop under component 1.4 the guide on crisis communication will also be finalized by April 2018;
- In synergy with the upcoming GET Prepared workshop under Component 1.4 Balkans, the first outline and annexes of the get prepared will be delivered;

### 1.2.1.5 European, multi-country animal disease spread model

A work plan has been developed and work on collecting and processing country data, including population data sets and animal movement data and data on inter-country movements from the TRACES system is underway. An implementation plan for the EuFMD-iS model software development is in place, with the aim of a working prototype being available by 30 June 2018.

**Outcome 2:** Improved system established for providing central resources for crisis situations including decision support tools (including disease spread and economic models), provision for diagnostic supplies, emergency access to national or regional vaccine banks, and sharing of critical human resources.

**Activity 1.2.2.1 Economic impact calculator:**

Search for new opportunities to receive feedback in the impact calculator.

**Activity 1.2.2.2 Support to development of diagnostic banks:**

Continuing work on development of diagnostic bank is needed.

**Activity 1.2.2.3 Support to emergency access to vaccine banks:**

Continuing work on the AESOP.

**Activity 1.2.2.4 Support to sharing critical human resources:**

Continuing work on development on sharing critical human resources is needed.

**1.2.2.5 Other decision support tools**

Continuing work on decision support tools is needed.

**1.2.2.6 Private Sector involvement in Emergency Preparedness and management**

Continuing work on Private Sector involvement in Emergency Preparedness and management is needed.

## 7 - Success stories and future emphasis

Improving readiness to manage an FMD outbreak is a priority of the EuFMD program and improving the use of decision-support tools has been a focus of EuFMD training. At the 41<sup>st</sup> General Session, *Continuing support to animal movement and disease spread modelling, with the outputs to inform contingency planning activities* was identified as a priority for the Standing Technical Committee (STC), to be supported through the allied components of the workplan. Following discussions, a project proposal to adapt the Australian FMD model (AADIS) for use in Europe was submitted and approved under EuFMD – Future Animal Research (FAR) funding in 2017. In October 2017, EuFMD’s Executive Committee endorsed support for this work, with a pilot study involving a number of central European countries. This collaboration builds on an initiative proposed by Austria in 2016, during the CVO meeting, held in Budapest, Hungary to establish regional cross-border modeling for Transboundary Animal Diseases (CroBoDiMo initiative).

The project objective is to adapt the AADIS model to provide a robust, flexible training tool (EuFMD-iS) to support FMD planning, training and response in European countries. AADIS, developed with funding by the Australian Government, is a sophisticated disease modelling platform and decision-support tool for FMD that has been used in EuFMD disease modelling training workshops (in 2014 and 2016), where its potential to be adapted to support FMD planning and training in EU member states was identified.



The activity has received a very positive response with seven countries (Austria, Bulgaria, Croatia, Italy, Hungary, Romania and Slovenia) enrolled in project. Other countries, including Spain, are also showing interest. A workshop to discuss the scope of a multi-country European disease spread model, and to identify the country-specific data required and agree on project time frames, and deliverables was held in Vienna Austria 5-7 December.

A work plan has been developed and work on collecting and processing country data is underway. The project is on track to deliver a working prototype by 30 June 2018.

### 8- Budget (€)

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses Oct 17 – Dec. 17</b>	<b>Expenses Jan 18 - Mar 18 (forecast)</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
142,154	18,920	0	13 %	123,234



# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**October 2017 - March 2018**

### **Component 1.3 – *Thrace***

**Pillar Manager: M. Hovari**

**Component Manager: P. Motta**

**Reporting: P. Motta / M. Hovari**

**Focal point Executive Ctte:**

## 1.3 THRACE

### 1. Objective of the component

The **Objective of this component** is improved surveillance and management of FMD and other exotic diseases in the Thrace region of Greece, Bulgaria and Turkey.

#### The activities (expected results) are:

1. Maintenance of FMD freedom in Thrace region, and confidence at all times in this status on the basis of co-ordinated surveillance, and maintenance of confidence in capacity for early detection of FMD and containment if incursions were to occur.
2. Maintenance and improvement of a system for real-time data entry to support management of national surveillance activities aimed at maintaining disease freedom confidence;
3. Achievement of four years of risk-based surveillance results through activities implemented in each country for FMD (and other diseases as decided by Coordination Framework); in 2015-17 with the expected result of providing evidence for freedom from FMD, PPR and LSD in European Turkey and the neighbouring countries;
4. Improvement of capacity to respond to exotic disease incursions into the common border region, through participation in joint exercises and development of harmonised levels of contingency planning.

<i>Activities</i>	<i>Indicators</i>	<i>Baseline: Sept.2017</i>	<i>Target 2 years</i>	<i>Unit of measure</i>	<i>Current Status</i>
<b>1.3.1</b>	Tripartite Management Meetings held	5	9	Tripartite Management Meetings held involving staff of the three countries	6*
<b>1.3.2</b>	Maintain the data entry system with data entry meeting agreed targets	>75%	75%	Percentage of reports entered by field operatives within expected time frame	>75%
<b>1.3.3</b>	The level of confidence in FMD disease freedom in Thrace region is higher than if activities stopped	> 90%	90%	Confidence in disease freedom	>90%
<b>1.3.4</b>	Joint exercises	2	3	Joint exercises of the three countries	2*

Management Meetings: 13 November 2015, Alexandropoulos, Greece; 18 October 2016, Alexandropoulos, Greece; 27 February 2017, Sofia, Bulgaria; 08 September 2017, Athens, Greece

Tripartite: 27 February 2017, Sofia, Bulgaria; 12, October 2017, Backweston, Ireland

\*Simulation Exercise Workshop in Sofia February 2017; Erzurum Training July 2017.

## 2 - Project team

Role	Name	Status
<b>Pillar Manager</b>	Mark Hovari	Contingency Planning Officer
<b>Component manager</b>	Paolo Motta	Short Term Professional
<b>National focal points</b>	Tsviatko Alexandrov (Bul) Sotiria Roula Antoniou (Gr) Naci Bulut (Tur)	Consultant, SCRPD member Hellenic Animal Health Directorate Consultant
<b>National consultants:</b>	Aris Exakoidis (Field)	PSAs and Consultants
<b>Greece:</b>	Christina Fouki (Lab) Alexandra Miteva Georgi Georgiev	
<b>Bulgaria:</b>	Stoyan Moldovanov Abdulnaci Bulut	
<b>Turkey</b>	OktayTezal	
<b>ExCom oversight</b>	-	-

## 3 - Countries or partner organizations involved

EuFMD member states: Bulgaria, Greece, Turkey.

## 4 - Progress Report

**Output 1.3.1.** Maintain the co-ordination framework for surveillance for FMD freedom in Thrace on the basis of coordinated surveillance, and maintenance of confidence in capacity for early detection of FMD and containment if incursions were to occur.

### 1.3.1.1. Co-ordination framework between veterinary services and laboratories of the three countries maintained and improved through tripartite, management, and technical meetings

The Tripartite meeting will be held in Dublin, Ireland, on 12<sup>th</sup> October 2017. The meeting was chaired by EuFMD, OIE and FAO and attended by the European Commission, the Bulgarian Food Safety Agency, the Greek Animal Health Directorate, the Şap Institute (Turkey), National Focal Points (NFPs) of Greece, Bulgaria and Turkey, component supervisor. Online meetings are held with the NFPs to ensure regular communication and planning of the technical aspect between formal face-to-face meetings.

### 1.3.1.2. Regular assessment of FMD risk present in Thrace, and of preventive and control measures implemented in the area

The FMD risk is regularly assessed with the review of the ongoing surveillance and control measures in the region through the communication of changes affecting the programs defining these measures. Regularly, during the Management meetings Greece, Bulgaria and Turkey directly report on their respective FMD situations. The updated situations on the activities and outcomes, within the framework of FMD surveillance, as well as of other transboundary diseases (TADs), is presented and openly discussed. If risks are identified for the incursion of FMD and other TADs in Thrace these are also jointly addressed and actions discussed.

*1.3.1.3. Continuation of system for regular active and passive surveillance of presence and absence of FMD and other TADs*

There are currently six national consultants implementing the activities for the surveillance programme in the Thrace region. Campaigns of awareness and communication for the risk of FMD and other TADs were targeted at farmers, aiming to promote their involvement in reporting presence or absence of infectious diseases including FMD. Together with the Bulgarian National Focal Point (NFP), the EuFMD developed awareness raising materials on FMD in wildlife for stakeholders involved in wildlife management and hunters. The leaflets and fact sheets focused on clinical symptomatology and disease transmission dynamics and have been translated into Bulgarian and are foreseen to be delivered in Greek and Turkish.

In Bulgaria, between October - February 9,836 animals have been clinically examined and 1,404 samples taken. In Greece, in the same time period, 5,052 animals examined and 1,176 samples were taken. In Turkey, in the same period, 32,349 animals were examined and 1,643 samples taken.

**Output 1.3.2.** Maintain and improve a system for real-time data entry to support management of national surveillance activities aimed at maintaining DF confidence.

*1.3.2.1 System for real-time data entry maintained*

The current online Database through the Google Fusion Tables platform is free of charge and enables sharing online surveillance data from the region. This software automatically provides visualization of geographical locations of the epidemiological units (farms or villages). It also allows to create “heat maps” showing density of population of susceptible animals by species as well as of epi units visited more frequently. The software allows to include data on other Transboundary animal diseases (TADs) (LSD, PPR, and SGP) providing the opportunity for future applications and modeling for confidence of freedom for these diseases.

The national consultants regularly provided surveillance data on FMD, LSD, SGP, and PPR in all three countries. The data are regularly entered into the database in all the countries. This system is now standardized and only minor discrepancies are sometimes identified between the direct reporting from the consultants and the data uploaded on the database. Although these do not affect the outputs of the modeling and the confidence in FMD freedom, these discrepancies, and any other issue relating to the real-time data entry system, are regularly communicated and discussed during the Management meetings.

**Output 1.3.3.** Implement activities in each country for FMD risk-based surveillance (and other diseases as decided by Coordination Framework); in 2017-19 with the expected result of providing evidence for freedom from FMD, PPR and LSD in European Turkey and the neighbouring countries

*1.3.3.1 Regular analysis of the active surveillance carried out for FMD and other TADs and reports of such activities shared between countries and institutions*

The confidence in FMD freedom in the Thrace region was constantly above 95% for both the 4<sup>th</sup> cycle of 2017 and the first two months of 2018. The data on clinical and laboratory surveillance for the SGP and PPR were also provided. The cycle reports have been sent to the NFP for approval and will be presented and discussed at the upcoming Management meeting (tentative March 2018).

*1.3.3.2 Provision of evidence on effectiveness of FMD and other TADs vaccination (if relevant) in the Thrace region, building on the outcomes of 2015-2017*

Following the FMD post-vaccination immunity study carried out in Turkish Thrace in 2017, a new study on post vaccination serology should be carried out in 2018 to validate the previous results. A study on vaccine effectiveness in Turkish Anatolia, outside the Trace region, is also under development and it is planned to be carried out in 2018.

*1.3.3.3 Assessing and improving regular farmer reporting (passive surveillance) for FMD and other TADs in the Thrace region*

A training workshop has been designed and developed by EuFMD (**1<sup>st</sup> Disease Reporting Training of the EuFMD: How to evaluate FMD reporting in Thrace?**), and will be carried out in Svilengrad, Bulgaria on the 13-16 March 2018. This workshop will review the current disease reporting systems in the Thrace region, identifying major gaps and barriers in the system, and simultaneously provide training for official veterinarians from the three countries, and operating in the region, in conducting formal assessments of the disease reporting systems to inform future interventions.

*1.3.3.4 Activities to improve farmer reporting in the Thrace region*

The workshop conducted in Bulgaria in March 2018 will provide an initial baseline assessment of the status of disease reporting in the region, identifying its current major gaps and barriers, for informing the discussion of the conceiving and design of further initiatives during the Biennium 2017-19.

**Output 1.3.4.** Improved capacity to respond to exotic disease incursions in to the common border region, through participation in joint exercises and development of harmonized levels of contingency planning.

*1.3.4.1 Regular support for laboratory (reagents and trainings) on FMD and other TADs.*

The procurement of diagnostic and sampling materials is managed regularly between NFPs and EuFMD. The diagnostic kits are currently procured centrally by EuFMD in coordination with the NFPs and national PSAs. The field and laboratory consumables are, conversely, being directly procured within each country by the national PSAs.

*1.3.4.2. Organization of joint trainings and/or exercises to improve and assess the emergency preparedness in Thrace region and strengthen the coordination between countries in case of an emergency*

The Workshop “THRACE foot and mouth disease (FMD) Training and Exercise” was carried out in Erzurum (Turkey), 3-6 July 2017, to improve the preparedness of the veterinary services in the Thrace region in the event of detection of a suspected incursion of an exotic livestock infectious disease, notably FMD and PPR. The outcomes and recommendations following this workshop, highlighted the need to improve understanding of disease reporting in the Thrace region and identify major current gaps and barriers. A joint workshop has been designed and organized following these recommendations, with the aim of assessing the disease reporting system in the region and train official veterinarians in conducting field surveys and data collection (1st Disease Reporting Training of the EuFMD: “How to evaluate FMD reporting in Thrace?” - Svilengrad, Bulgaria on the 13-16 March 2018).

## **5 - Issues for Executive Committee attention arising during implementation**

The result-based approach of EuFMD component 1.3 is ensured by the ongoing active surveillance programme in the three countries. Although the active surveillance expenditure in the first biennium was higher than originally anticipated during the planning of PHASE IV under the consultancy budget line, adjustments were implemented to ensure that the active surveillance activities can continue overall till September 2019. Nevertheless, the planning during the second biennium of PHASE IV is increasing the focus also on the disease reporting systems for FMD and other TADs. This, in practice, is starting with an evaluation and training workshop in March 2018, which will provide an initial assessment of the status of disease reporting in the region for informing the discussion of the conceiving and design of further initiatives to reduce potential gaps and barriers.

## 6 - Priorities for the next six months

### Outcome 1.3.1:

- 1.3.1.1 To organize and hold the next Management meeting in spring 2018.  
The current THRACE active surveillance is ensured to be continued in the three countries up until September 2019;
- 1.3.1.2 To continue the on-going co-operation and updating on the FMD situation in Thrace (including preventive and control measures and information of the passive surveillance in the countries).
- 1.3.1.3 To draw recommendations based on the outcomes of the workshop on disease reporting in the region held in March 2018 and discuss at the next Tripartite Meeting in summer 2018.

### Outcome 1.3.2:

- 1.3.2.1 To continue use the online platform, develop and implement system of backups, and improve the Operational Manual if needed. Explore possibilities for improving data management and spatial visualizations.

### Outcome 1.3.3:

- 1.3.3.1 To produce and circulate on quarterly basis the relevant cycle reports for 2018 using data regularly uploaded in the online platform.
- 1.3.3.2 To support a new study on post vaccination serology should be carried out in 2018 to validate the previous results, and the design and implementation of a study on vaccine effectiveness in Turkish Anatolia, outside the Trace region, to be carried out in 2018.
- 1.3.3.3 To conduct the 1st Disease Reporting Training of the EuFMD in March 2018 (Bulgaria) and, based on the outcomes, discuss at the next Tripartite Meeting (Summer 2018) the outcomes to identify possible follow-up activities for formal assessment of disease reporting and/or for targeting potential gaps.
- 1.3.3.4 Based on the outcomes of the workshop conducted in March 2018 possible options for intervention will be discussed for prioritization.

### Outcome 1.3.4:

- 1.3.4.1 To continue to procure necessary laboratory and field material and consumables for the surveillance activities according to the direct procurement started in June 2017. Laboratory diagnostics are continuing to be procured by EuFMD in coordination with the NFPs.
- 1.3.4.2 Follow the FMD wildlife leaflet translations in the three countries. Based on the outcomes of the 1st Disease Reporting Training of the EuFMD in March 2018 assess if joint simulation exercise for the three countries would be beneficial to support outcomes 1.3.3.3 and 1.3.4, if support from the countries and funds are available.

## 7 - Success stories and future emphasis

The second Tripartite Meeting of the IV Phase was held in October 2017 in Dublin (Ireland) with the participation of representatives of Turkey, Bulgaria, Greece (including the CVO), OIE, FAO, EC, EuFMD and EC. The EuFMD Workplan 2017-19 for Component 1.3 THRACE was presented and discussed to identify priorities and key activities. One key highlight focused on providing evidence on the level of passive surveillance in the region. Following these recommendations, the 1st Disease Reporting Training of the EuFMD has been developed and will be held in Bulgaria 13-16 March 2018. This training and elicitation workshop will serve the double purpose of providing an initial evaluation of the status of the FMD reporting system in the region, and of training official veterinarians from the three countries in principles of field investigations for survey implementation and in communication techniques. Based on the outcomes of this workshop, and on the expected follow-up activities from the three countries, future interventions will be assessed and jointly discussed in the next Tripartite Meeting in summer 2018. The post vaccination serology study should also be repeated in Turkish Thrace during 2018, to validate the results and outcomes from 2017.

**8 - Budget (€)**

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses Oct 17 – Dec. 17</b>	<b>Expenses Jan 18 - Mar 18 (forecast)</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
377,000	60,594	3,000	16.8%	313,406

## 9-Gantt charts - Planned activities

OUTPUT 1.3 Improved surveillance and management of FMD and other exotic diseases in the Thrace region of Greece, Bulgaria and Turkey		YEAR 1												YEAR 2											
Target (Expected Result)	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
1.3.1 Maintain the coord framework for surveillance for FMD freedom in Thrace	1.3.1.1 Co-ordination framework between VS & labs of the 3 countries maintained and improved through tripartite, mgt and technical meetings	M					M						M						M					M	
	1.3.1.2 Regular assessment of FMD risk present in Thrace, and of preventive & control measures implemented in the area																								
	1.3.1.3 Continuation of a system for regular active and passive surveillance of presence and absence of FMD and other TADs																								
1.3.2 Maintain and improve a system for real-time data entry to support mgt of nat surv activities aimed at maintain DF confidence	1.3.2.1 System for real-time data entry maintained																								
1.3.3. Implement activities in each country for FMD (and other diseases as decided by Coordination Framework); in 2015-17 with the expected result of providing evidence for freedom from FMD, PPR and LSD in European Turkey and the neighbouring countries	1.3.3.1 Regular analysis of the active surveillance carried out for FMD and other TADs and reports of such activities shared between countries and institutions.																								
	1.3.3.2 Provision of evidence on effectiveness of FMD and other TADs vaccination in the Thrace region.																								
	1.3.3.3 Assessing and improving regular farmer reporting (passive surveillance) for FMD and other TADs in Thrace region						W S							G T P	GT P										

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 – March 2018**

### **Component 1.4 – *Balkans***

**Pillar Manager: M.Hovari**

**Component Manager: -**

**Reporting: M. Hovari**

**Focal point Executive Ctte:**

## 1.4 BALKANS

### 1. Objective of the component

The **objective of component** is to improve emergency management capacity for FMD in the Balkan region.

The **targets (expected results)** are:

1. Confidence in the coordination framework for western Balkan countries as a tool to ensure the continuous development, testing and improvement of national emergency management plans, and to ensure sufficient FMD laboratory capacity for crises;
2. Contingency plans for FMD agreed at national level and tested through at least one exercise. Contingency plans comply with EU legislation;
3. Integration of national FMD reference centers (laboratories) in the national CPs and establishment of a system of immediate regional diagnostic support for an FMD crisis.

Activities	Indicators	Baseline: Sept 2017	Target 2 years	Unit of measure	Current Status
1.4.1	Management and High Level Policy Meetings held compared to if project was not supported.	0	3	Number of meetings	1
1.4.2	Number of countries having a national or multi-country FMD simulation exercise	4	7	Number of countries having a national FMD exercise	4*
1.4.3	Participation in Balkan region proficiency test exercises	6	8	Number of National participations in exercises in 24 months	6

- On-line Greek national SimEx, July 2017

### 2. Project team

Role	Name	Status
<b>Pillar Manager</b>	Mark Hovari	Contingency Planning Officer
<b>Component manager</b>	Vacant	Short Term Placement
<b>Expert Support</b>	Mirzet Sabirovic(Sept – Nov 2017)	Consultant
<b>National focal points:</b>		
<b>Albania</b>	Veli Stafa	Veterinary Specialist
<b>Bosnia and Herzegovina</b>	Zorana Mehmedbasic	Head of Dept for Animal Health & Welfare
<b>F.Y.R of Macedonia</b>	Biljana Strojmanovska	
<b>Kosovo</b>	Bafti Murati	
<b>Montenegro</b>	Mevlida Hrapovic	
<b>Serbia</b>	Budimir Plavsic	Head of Animal Health Dept
<b>Bulgaria</b>	Tsviatko Alexandrov	Member SCRD, Head of Animal Health Dept
<b>Romania</b>	Ioana Alexandra Neghirla	Head,AHCD Service Nat. Sanitary Vet &FSA
<b>Croatia</b>	Martina Rubin	
<b>Moldova</b>	Maxim Sirbu	
<b>Ukraine</b>		
<b>Greece</b>		
<b>Turkey</b>		
<b>Laboratory network coord.</b>	Vesna Milicevic	Head of Serbian FMD NRL
<b>ExCom oversight</b>		

### 3. Countries or partner organizations involved

- EuFMD member states directly involved: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Serbia, FYR of Macedonia and Romania;
- Non EuFMD member states directly involved: Kosovo, Montenegro, Moldova and Ukraine (as per 42nd EuFMD General Session);
- Greece and Turkey are beneficiaries and supported under Component 1.3 THRACE.

### 4-Progress Report

**Output 1.4.1.** Confidence in the coordination framework for western Balkan countries as a tool to ensure the continuous development, testing and improvement of national emergency management plans, and to ensure sufficient FMD laboratory capacity for crises.

#### *Activities*

#### **1.4.1.1 System of mutual assistance and coordination between countries implemented (networking – diagnostic support – expertise)**

Work on drafting a Statement of Intentions (Soi) which aims to establish a cooperation in the Balkan region and beyond for increased emergency management capacities through knowledge exchange and mutual resource sharing for Foot and Mouth Disease and other priority TADs was started, but it is not ready to be circulated.

#### **1.4.1.2. Co-ordination framework between veterinary services of the region maintained and improved through high level policy and management meetings**

An on-line management meeting was held in October 2017 to introduce the National Focal Points to the 2017-2019 Workplan, agree on the topic of the first workshop and select the pilot countries for the GET Prepared pathway (see below).

#### **1.4.2. Contingency plans for FMD agreed at national level and tested through at least one exercise. Contingency plans comply with EU legislation.**

#### *Activities*

#### **1.4.2.1 Workshops/trainings held to address specific themes of emergency management**

Only preparatory work (defining main topics and drafting Term of Reference) was done for an upcoming workshop.

#### **1.4.2.2 GET Prepared and simulation exercises**

The aim of the Exercise and Training (GET) prepared pathway is to lay out a path where smaller exercises and training will lead up to designing and delivering more complex simulation exercises, with the final goal of improving a specific aspect of the overall emergency preparedness at national and regional level. Three countries applied to pilot the GET Prepared pathway: Bulgaria, Serbia and F.Y.R. of Macedonia

#### **1.4.2.3. Veterinary Services and veterinary Faculty partnerships**

As a pilot program the component has opened up STP positions not only for official veterinarians, but also for university staff. A selection for a new STP was conducted and a suitable candidate from a university was selected in end of 2017. Unfortunately the contract was not signed by the candidate at the last minute. Shortlisted and alternative candidate are being contacted in order to fill the current vacancy as soon as possible.

**Output 1.4.3** Integration of national FMD reference centers (laboratories) in the national CPs and establishment of a system of immediate regional diagnostic support for an FMD crisis.

No progress was made in the past six months.

## 5-Issues for Executive Committee attention arising during implementation

Although actions were taken (such as planning and recruitment) no progress was made to better understand and to improve the emergency preparedness levels of the Western Balkan countries.

## 6-Priorities for the next six months

**Outcome 1.4.1: Confidence in the coordination framework for western Balkan countries as a tool to ensure the continuous development, testing and improvement of national emergency management plans, and to ensure sufficient FMD laboratory capacity for crises**

- Maintain contact with the National Focal Points (NFPs)
- Finalize the Sol (statement of intentions) and organize a management meeting for NFPs

**Outcome 1.4.2: Contingency plans for FMD agreed at national level and tested through at least one exercise. Contingency plans comply with EU legislation.**

- Conduct in country missions for the GET Prepared
- Organize a workshop mid-April in Ohrid on the topic of Risk analysis – disease prioritization and GET Prepared

**Outcome 1.4.3: Integration of national FMD reference centers (laboratories) in the national CPs and establishment of a system of immediate regional diagnostic support for an FMD crisis**

- Follow up with the outcome of the 2018 PTS
- Explore the possibilities for laboratory training and integration into the GET Prepared pathway

## 7 - Success stories and future emphasis

The emphasis of the component, until the end of the phase IV will be to deliver the GET Prepared pathway to the three pilot countries and disseminate the experience to the other member states in this component.

## 8. Budget (€)

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
202,110	1,970	8,750	5%	191,390



# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

### **Component 1.5 -**

### ***FAR - Fund for Applied Research***

**October 2017 - March 2018**



**Pillar Manager: M.Hovari**

**Component Manager: P.Motta**

**Reporting: K. Sumption / P.Motta**

**Focal points, ExCttee: C. Bruscke**

**Standing Technical Committee: E.Ryan**

## 1.5 – EuFMD Fund for Applied Research (EuFMD-FAR)

### 1-Objective of component

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.

### Summary

In 2017, the EuFMD, issued three (3) Calls for small applied research projects, of which one (1) in the semester between October 2017 and March 2018. These Calls are relevant to technical issues seen as priorities of the EuFMD member states under the specific Research fund (Fund for Applied Research - EuFMD-FAR) adopted as a component (1.5) of the EC funded Workplan of the Commission:

- I. *4<sup>th</sup> EuFMD-FAR in February 2017*: twelve (12) project proposals were in-line with the priorities of the call and submitted for review, four (4) were selected for funding.
- II. *5<sup>th</sup> EuFMD-FAR in July 2017*: three (3) project proposals were selected as in-line with the priorities of the call and submitted for review, one (1) were selected for funding.
- III. *6<sup>th</sup> EuFMD-FAR in December 2017*: one (1) project proposals were selected as in-line with the priorities of the call and submitted for review, one (1) were selected for funding.

### 2-Project team

Role	Name	Status
Pillar Manager	M.Hovari	Contingency Planning Officer
Component manager	P. Motta	Secretariat
Standing Technical Committee	E. Ryan, Chairman	
Special Committee for Research:	18 persons acting as experts for the first round technical reviews reviewers	
Focal Point Executive Cttee	C. Bruschke	

### 3-Countries or partner organizations involved

The STC and SCRPD Committees are the main partners involved.

## 4-Progress Report

### I. 4<sup>th</sup> EuFMD-FAR (issued February 2017)

- 1) European multi-country FMD Spread model (EuFMDiS) - Project Lead Applicant: Dr Graeme Garner

Signed: 18 October 2017/Duration: 18 months

#### Overview of project:

This proposal aimed at modifying and developing the Australian Animal Disease model (AADIS) as a training tool to support FMD planning and response, for use by European Union Member States to improve the capability of evaluating vaccination policy, resource management, post outbreak surveillance and management of vaccinated populations. Software modifications and updates are required to adapt the AADIS model to simulate FMD spread and control in European context. The EuFMD, the AADIS team and interested Central European EU States are working together to incorporate representative input data (e.g. livestock populations, farm types and distributions, weather data and animal movement data) to parameterize FMD spread and control.

**Overall cost:** € 48 600.00

#### Status update:

The project has received a very positive response from seven countries (Austria, Bulgaria, Croatia, Italy, Hungary, Romania and Slovenia). An initial workshop to get the project underway was held on 5-7 December 2017, in Vienna, Austria, to bring the participating countries together to discuss the scope of a multi-country European disease spread model, and to identify the country-specific data required and agree on project time frames, and deliverables. A dedicated e-learning page was developed, for project partners, to provide a discussion forum and a depository to share resources. On-line meetings are held at regular intervals to share progress and to discuss upcoming milestone or relevant issues.

The project is on-track to deliver a working model that will simulate spread and control of FMD within and between the participating central European countries by 30 June 2018. A report on the workshop held 2-4 December 2017, including a detailed work plan, will be annexed to the 95<sup>th</sup> ExCom Report.

**Issues/delays:** none

- 2) Validating the use of bulk tank milk for surveillance of FMD among commercial dairy farms in endemic settings - Project Lead Applicant: Dr Nicholas Lyons, The Pirbright Institute

LoA Signed: 20 July 2017/Duration: 12 months

#### Overview of project:

This proposal aimed at evaluating the use of bulk-milk as a prospective, integrated surveillance tool for infection among large-scale commercial farms in the endemic settings of Iran and Kenya. In Iran, in collaboration with the Iranian Veterinary Services (IVO), samples and information are being collected from 20 dairy farms in an animal complex in the Tehran Province (samples collected every 2 weeks for 6 months, followed by NSP-testing of young stock at the end of the 6 month period). Samples, in duplicate, will be tested for tested by rRT-PCR, NSP ELISA and VNT (if sufficient RNA sequence analysis will be performed) at The Pirbright Institute (UK) and the FMD laboratory in Tehran. The observations in the milk will be correlated to reports on clinical disease and the NSP seropositivity at the herd level. In Kenya samples have been collected from 5 dairy co-operatives and one large scale dairy farm (collection ended November 2017). Samples are shipped to The Pirbright Institute (TPI) (UK) and will be coupled with data on the incidence of clinical disease and the levels of virus detected in the pooled milk.

**Overall cost:** € 48 881.00

**Status update:**

Iran: a mission to Iran by researchers at TPI in coordination with collaborators within the Iranian Veterinary Organization (IVO) and the Central Veterinary Laboratory (CVL) was undertaken in October 2017. During the mission the study site was visited, and the study design developed based on discussion with farmers, complex managers and staff at IVO. The capacity of the CVL in performing diagnostic tests was assessed and training requirements identified. The sampling is started in mid-February and the first sample shipment is scheduled in mid-May and the final at the end of the project.

Kenya: milk samples have been collected (by November 2017) and the duplicates shipped to TPI in December 2017. A training session was held in Embakasi FMD laboratory, Nairobi, (27-29th September 2017) for the detection of FMD viral genome from pooled milk samples using the pan serotypic rRT-PCR from pooled milk samples.

**Issues:** Any issues with the project development are highlighted. Minor technical issues at the Embakasi laboratory were identified during the mission in September 2017 (e.g. cross-contamination issues).

- 3) *Evaluation in field conditions of a safe and cost-effective protocol for shipment of samples from Foot-and-Mouth Disease suspected cases for laboratory diagnostic (FIELD EVAL INACT)* – Dr Sandra Blaise-Boisseau, French Agency for Food, Environmental and Occupational Health & Safety (ANSES)

LoA Signed: 18 October 2017/Duration: 18 months

**Overview of project:**

The aim of this project is to evaluate/validate, in real situation under field conditions, the performance and safety of a protocol for improving the cost-effectiveness of FMD samples shipment, based on the inactivation of FMDV on the Lateral Flow Device (LFD). Samples are currently being collected on the field using LFDs in Turkey, Nigeria and Pakistan. LFDs will be processed for viral isolation in national laboratory (NVRI in Nigeria, SAP in Turkey and UM in Pakistan) and submitted to the French Agency for Food, Environmental and Occupational Health & Safety (ANSES), for viral isolation, genome detection, typing and virus rescue after transfection. Test of FMDV detection protocol from inactivated LFDs will be carried out by Merial. In addition, the impact of temperature and storage conditions of the inactivated LFD on the FMDV detection ability will also be tested (ANSES).

**Overall cost:** € 75 940.00

**Status update:**

The collection of epithelium and/or vesicular fluid samples from clinical cases (at least 20 samples) is currently being carried out by the national partners in Nigeria, Turkey and Pakistan under the supervision of the leading Institutions (ANSES). The field study started in December 2017 and is due to end in June 2018.

**Issues:** No issues were reported with the implementation and development of the project at this stage.

- 4) Validating multiplex real-time RT-PCR as a tool for FMD detection in bulk tank milk (Acronym: Tank Milk Multiplex) – Dr. Michael Eschbaumer, The Friedrich-Loeffler Institut (FLI)

LoA Signed: 26 January 2018/Duration: 6 months

**Overview of project:**

This project is aiming at providing a proof of concept by developing a tool for milk screening, testing the application of multiplex RT-PCR for foot and mouth disease virus (FMDV) for the viral detection in bulk-milk sample. The 1<sup>st</sup> stage of the project consist of a laboratory validation of modified multiplex RT-qPCR assay with spiked milk obtained from a commercial source in Germany. Batches of milk will be spiked with defined amounts of culture-grown field strains of FMDV covering a range of serotypes and epidemiological pools. The 2<sup>nd</sup> stage of the project will aim at evaluating the performance of multiplex RT-qPCR with field samples from an endemic region. Milk samples from endemic countries will be sourced from an external provider (The Pirbright Institute).

**Overall cost:** € 23 715.23

**Status update:**

The project has just started at the end of January 2018.

**Issues:** the delay in the signature (about 2 months) was related to minor administrative issues between FLI and the FAO but did not have major impacts on the overall project schedule.

**II. 5<sup>th</sup> EuFMD-FAR (issued July 2017)**

- 1) FMD RiskmapS (FMD Risk map surveillance system): Development of a FMD surveillance program on risk information and mapping tools for southern European neighbourhood, integrating movement patterns of domestic livestock - Project Lead Applicant: Dr Thierry Lefrancois, French Agricultural Research Centre for International Development (CIRAD),

Signed\*: by the end of February 2018/Duration: 18 months

**Overview of project:**

The main goal of this project is to reinforce national capacities and to assist the veterinary services of countries in North and West Africa to prevent the introduction and spread of transboundary animal diseases (TADs) and to detect new outbreaks with risk-based surveillance systems. As part of the project, these activities are planned to be potentially extended to European neighborhood South countries (Egypt, Libya and Sudan) in 2019, to promote a regional approach. An innovative method combining qualitative risk analysis with its geographical representation will be applied to disease risk mapping of TADs, integrating domestic livestock movements to better identify high risk areas, and provide decision makers with indicators to target surveillance and control actions

The method propose to improve the capacity to identify risks and risk areas for TADs and progressively train the national veterinary services for collecting, handling, analyzing and mapping livestock flows to identify the associated risks. A special attention is dedicated to information technology for data collection in the field as well as, tools for handling geospatial information, data visualization and risk assessment. A specific emphasis is given to the production of maps, as an essential tool for scientific communication between animal health stakeholders.

The services that will be provided include, the analysis of information collected by countries on market prices, animal movements between countries, the development of a specific web platform, and the assistance in the design of risk based surveillance system in high risk areas, particularly of Morocco, Algeria and Tunisia to improve confidence to

detect FMD incursion at an early stage. Additionally, the SP will adapt the EuFMD training material according to the context of the beneficiary countries of North, Central and West Africa and deliver the EuFMD e-learning course on FMD socio-economic impact assessment. Finally, the SP will review the FMD vaccine-uptake potential and other FMD control options over the next 20 years in West and Central Africa.

**Overall cost:** € 168 000.00

**Status update:**

The first activity under this project will be a workshop that will take place in Tunis (Tunisia) (27 February- 1 March 2018) on surveillance for early detection and confidence of freedom in Algeria, Morocco and Tunisia ("*Fièvre aphteuse, la détection précoce et la confiance en l'absence de circulation virale : Algérie, Maroc et Tunisie*").

**Issues/delays:** none.

**III. 6<sup>th</sup> EuFMD-FAR (issued December 2017)**

- 1) *A pilot project for the evaluation of a system for engaging para-veterinarians and animal health workers for FMD surveillance and sample collection and for the preliminary assessment of the demand for FMD control services in Mali* - Project Lead Applicant: Dr Abdoulaye Diaoure, Vétérinaires Sans Frontières Suisse (VSF-Suisse)

Signed\*: by the end of February 2018/Duration: 18 months

**Overview of project:**

The project aims at developing a pilot study to assess the feasibility of engaging para-veterinarians, private animal health service providers or other non-state actors in Mali for FMD sample collection and submission to the national laboratories/authorities and international reference laboratories. Training will be provided to these non-state actors on case detection, sample collection and management (particularly using rapid diagnostic test) to improve their capacity and effective engagement in FMD surveillance in Mali. The project will also provide an evaluation of the potential for this system to be exported and adapted to other countries in West and Central Africa and the potential for FMD vaccine-uptake potential and other FMD control options in Mali.

**Overall cost:** € 20 000.00 (\*although the project proposal has been received though a FAR Call the funds will be mobilized under Component 3.3.2).

**Status update:** the project is expected to start by the end of March 2018

**Issues/delays:** -

**Budget**

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
372'387	107'492	190'353	51%	182'203

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### ***Component 1.6 - Emergency technical responses***

**Pillar Manager: M.Hovari**  
**Component Manager: K. Sumption**  
**Reporting: K. Sumption**  
**Focal point Executive Ctte: L. Bogнар**

**NO UPDATE**

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### **Component 1.7 - *Proficiency Testing Scheme***

**Pillar Manager: M.Hovari**

**Component Manager: K. van Maanen**

**Reporting: M. Hovari**

**Executive Committee: C. Brusckke**

## 1.7 Proficiency Testing Scheme

### 1-Objectives of component

The **overarching objective (output)** is Harmonized Proficiency Testing Service for EU and non-EU Members in the European neighbourhood.

The **activities (expected results)** are:

1.7.1 Commission regional PT for better national alignment of the NRLs in the European neighbourhood to the EuFMD and EU standard for FMD diagnostic NRLs performance

1.7.2 Promote and support the participation of 20 non EU EuFMD member states and neighbourhood countries in annual PTS

<i>Activities</i>	<i>Indicators</i>	<i>Baseline Sept 2017</i>	<i>Target 2 years</i>	<i>Unit of measure</i>	<i>Current Status</i>
1.7	Proportion of target reference laboratories participating	16	21	Number participating over total of neighborhood countries indicated in contract with service provider	16

### 2-Project team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Pillar Manager</b>	M.Hovari	Contingency Planning Officer
<b>Component manager</b>	K. van Maanen (until Nov.17)	FMD Risk Management Support Officer
<b>Partner organization</b>	The Pirbright Institute (TPI)	Contracted through a Letter of Agreement
<b>ExCom oversight</b>	C.Bruschke	Executive Committee (Netherlands)

### 3-Countries or partner organizations involved

The **direct beneficiaries** of this component are the 9 EuFMD MS and 15 neighborhood countries who are supported to undergo laboratory proficiency testing (see table below).

The **Pirbright Institute** is contracted to carry out this proficiency testing through a Letter of Agreement (LOA).

The 24 laboratories to be included in the PTS under this section of the agreement are:

EuFMD MS not in the EU	European neighborhood states:
Serbia; Albania; FYRO Macedonia; Bosnia; Turkey Georgia; Switzerland; Norway; Israel	Kosovo; Montenegro; Armenia; Azerbaijan; Ukraine Belarus; Moldova; Iran; Egypt; Lebanon; Libya; Morocco; Tunisia; Algeria; Iraq

The results of the annual Proficiency Test 2015 and 2016 are presented in the table below (courtesy Don King and Anna Ludi, TPI). PT results are scored according to criteria agreed by the NRLs within Europe, each laboratory receives a personalized anonymous feedback letter to highlight areas in which they could improve, and performance of each laboratory is broadly categorized into one of four groups: (Category 1) to emphasize critical issues where immediate action is required that impact upon the laboratory to correctly identify FMD virus (virology tests) or FMDV infected animals (serological tests), (Category 2) laboratories with serious issues with the performance of individual tests that need to be addressed, (Category 3) to record additional observations which may need to be considered by the laboratory to improve the local performance of individual tests and (Category 4) laboratories whose tests which are fit for purpose and where no further action is required.

For the 2015 participating EuFMD (non EU) and European neighborhood labs (altogether n=16), none of the labs was in category 1 or 2, so none of the labs had critical or serious issues with individual tests. For the European neighborhood countries that participated in 2015, the proportion of labs in categories 3 and 4 was 63% and 38%, respectively. This was a positive development as compared with 2014 (83% and 17%, respectively).

In the PT 2016, there has been a change in emphasis from previous years, i.e. the PT has focused on 1) the laboratory's response to an outbreak within the country and 2) laboratory methods and analysis of results for quality assurance purpose. Three panels were available: Panel 1 –Outbreak scenarios for vesicular diseases (including FMD and SVD); Panel 2 –Quality Assurance Panel FMDV samples; Panel 3 –Continuation of outbreak scenarios of FMD and SVD. In total 17 out of 24 invited EuFMD non-EU or European neighborhood countries participated in the 2016 PTS (Israel, Ukraine, Belarus, Bosnia & Herzegovina, Egypt, Iraq, Kosovo and Libya did not participate).

During the 2017 annual workshop of EU national reference laboratories for foot-and-mouth disease and swine vesicular disease, 9–10 May 2017, Horseley, UK, the results and conclusions of the Proficiency Testing Scheme (PTS) 2016 were presented. Altogether 65 countries participated in 2016. The EU NRLs performed well, all scored in category 3 and 4. It was also checked which labs were ISO 17025 accredited for which tests. For NSP tests this was for example only true for 12/27 EU NRLs. Overall, the results for virological tests and NSP antibody tests were very satisfactory, whereas some more problems were encountered with the interpretation (and cross-reactivity) of SP antibody tests.

On a related subject, the results of a PTS in the Balkan countries were presented, this work was carried out under component 1.4 of the EuFMD work program in collaboration with IZSLER, Brescia and with ANSES for the PCR reagents. Despite many positive observations still several concerns remain regarding sustainability, import problems, and operationality of test capacity.

Fig.1 Results of the annual Proficiency Test 2015 and 2016

	2015	2016
Total invited laboratories <sup>1</sup>	91	94
Total number of shipments <sup>1</sup>	66	70
Participants from European Union (funded by EURL for FMD)	27 (EU member states)	28 (EU member states)
% of labs meeting target performance <sup>4</sup>	Cat-1 0 %	Cat-1 0 %
	Cat-2 0 %	Cat-2 0 %
	Cat-3 67 %	Cat-3 60.71 %
	Cat-4 33 %	Cat-4 39.29 %
<b>EuFMD funded participants</b>		
Participants from Global Network Labs <sup>2</sup>	Panaftosa Brazil, Pakchong Thailand, BVI Botswana, OVI South Africa, ARRIAH Russia, NVRI Nigeria, LNERV Senegal, Emabakasi FMD laboratory Kenya, NAHDIC Ethiopia, USDA USA <sup>3</sup>	BVI Botswana, Brazil, China, Ethiopia, Kenya, Nepal, Nigeria, Russia, South Africa, Thailand.
% of labs meeting target performance <sup>4</sup>	Cat-1 0 %	Cat-1 0 %
	Cat-2 10 %	Cat-2 0 %
	Cat-3 60 %	Cat-3 60 %
	Cat-4 30 %	Cat-4 40 %
Participants from EuFMD Member states (non-EU)	Serbia, Albania, FYRO Macedonia, Turkey, Georgia, Switzerland, Norway, Israel	Albania, Georgia, Macedonia, Norway, Serbia, Switzerland, Turkey
% of labs meeting target performance <sup>4</sup>	Cat-1 0 %	Cat-1 0 %
	Cat-2 0 %	Cat-2 0 %
	Cat-3 88 %	Cat-3 66.6 %
	Cat-4 13 %	Cat-4 33.3 %
Participants from neighbourhood countries	Montenegro, Armenia, Azerbaijan, Ukraine, Egypt, Lebanon, Morocco, Algeria	Algeria, Armenia, Azerbaijan, Iran, Lebanon, Moldova, Montenegro, Morocco, Tunisia
% of labs meeting target performance <sup>4</sup>	Cat-1 0 %	Cat-1 0 %
	Cat-2 0 %	Cat-2 0 %
	Cat-3 63 %	Cat-3 77.7 %
	Cat-4 38 %	Cat-4 22.2 %
<b>Summary of EuFMD funded participants</b>		
Invited		
Panels shipped	Panel 1 7	Panel 1 23
	Panel 2 23	Panel 2 23
	Panel 3 25	Panel 3 26
	Panel 4 -	Panel 4 14
Total number of participants funded by EuFMD	26	26

<sup>1</sup> Additional countries participate in the PTS at their own expense (not funded via the EURL for FMD or EuFMD)

<sup>2</sup> Not including IZSLER and CODA-CERVA who participate as European NRLs

The impact of Brexit for future plans and maintenance of schemes that support EU NRLs were also briefly discussed and are also mentioned here in the context of the organization of the PTS by WRLFMD. In the FMD directive it is not explicitly written that the EU ref lab should be in one of the EU member states, but that was certainly the intention. If the UK becomes a third country there will be an end to the Pirbright lab as EU ref lab. This has nothing to do with the WRLFMD task. In 2018 the EURL meeting will still be organized as usual, but after that the situation may change. For about ten years (1996 – 2006 or so) there was no EURL, but it has been maintained since 2007 at the Pirbright Institute, and now awarded (with services starting in 2019) to ANSES/CODA-CERVA. Service contracts between NRLs and TPI also have to be reviewed. Eleven member states do have such a contract to handle live virus/ship samples etc. and should review these contracts. In summary, EURL in Pirbright will have an extension of the contract with one year, so also 2018. After that the PTS for EU NRLs and for third countries may be organized separately by EURL and WRLFMD. It seems preferable if there could be a joint PTS where the new EURL subcontracts the preparation of the panels for the EU to WRLFMD. UK will be expected to stay as a EuFMD member after Brexit.

#### 4-Progress Report

**Output 1.7.1** Commission regional PT for better national alignment of the NRLs in the European neighbourhood to the EuFMD and EU standard for FMD diagnostic NRLs performance

##### *Activities*

**1.7.1.1: Negotiation of LOA with the Pirbright Institute and**

**1.7.1.2 Liaison with and review of reports from the Pirbright institute**

Negotiation on the new LOA with the TPI are under way. Final reports of the previous LOA are to be received yet.

**1.7.2.1: Pirbright manages annual proficiency testing**

The summary results of the 2016 PTS are detailed above.

The results of the on-going 2017 PTS are expected to be available in May 2018.

**1.7.3.1. The Pirbright Institute promotes and organizes participation in annual EU reference laboratory meeting for some of the countries listed under 1.7.2.1**

No activity in this period. Previous EU reference laboratory meeting was held 9-10 May 2017, UK.

#### 5-Issues for Executive Committee attention arising during implementation

No specific issues up to date.

#### 6 - 7 Priorities for the next six months and future emphasis

- Finalize and implement the new LoA with TPI
- Acquire the results of the 2017 PTS
- Provide support in the 2018 PTS with laboratory contacts available with EuFMD.

#### 8- Budget (€)

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
46,300	2,185	39,000	89%	5,115



# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period March 2017 - September 2017**

### **Component 1.8 –**

### ***Risk Analysis and Communication***

**Pillar Manager: M. Hovari**

**Component Manager: M. McLaws**

**Reporting: M. McLaws / P. Motta /  
M.T.Scicluna / G. Garner**

**Focal point Executive Ctte: L. Bogнар**

## 1.8– Risk Analysis and Communication

### 1 Objective(s) of component

The overall objective of this component is: to improve the quality, utility and availability of information gathered relevant to FMD risk of entry into member states and facilitate the use of this by risk managers.

#### OUTPUTS (EXPECTED RESULTS):

- System established and routinely operated to update and communicate the antigen bank priorities based on risk information gathered from Pillar 1 to 3 activities, and others;
- System established to ensure that changes in FMD incidence and FMDV circulating lineages/threats in the virus pools is communicated to surveillance managers;
- Tools for improving assessment of risk of entry and consequence of entry into EuFMD MS are improved and used to better identify specific areas for EU/EuFMD attention;
- System for gathering and assessing information on specific risk drivers, such as differential in meat prices between Europe and third countries, is developed and validated for at least one driver.

Activities	Indicators	Baseline: Sept. 2017	Target 2 years	Unit of measure	Current Status
1.8.1	System available to predict Antigen Prioritization	1	1	System available to predict Antigen Prioritization	1
1.8.2	Number of Global Monthly Reports	24	48	Number of Global Monthly Reports	30
1.8.3	Number of Risk Manager Summaries	0	4	Summaries published	0
1.8.4	Pilot study	1	1	Study completed	1*

## 2 - Project team

Role	Name	Status
Pillar Manager	Mark Hovari	Contingency Planning Officer
Component Manager	Melissa McLaws	EuFMD
EuFMD Monthly Reports	Maria-Teresa Scicluna	STP
National FAO Focal Point: (Co-ordination-national level)	FAO assistant representatives in countries of interest (TBC)	FAO Staff in national offices
FAO HQ Contact	Julio Pinto	Animal Health Officer (Animal Disease Emergencies and Early Warning)
National focal points	Naci Bulut (Turkey) TBC (other countries)	Consultant, SCRPD member
ExCom oversight	Lajos Bognar	ExCom member

### 3 - Countries or partner organizations involved

- i. All EuFMD Member States are direct beneficiaries of this component, and in particular, this component will involve work with Turkey.
- ii. Non EuFMD Member States will also be involved, for instance for information gathering and WelNET: Iran, Pakistan.

### 4 - Progress Report

#### 1.8.1 System established and routinely operated to update and communicate the antigen bank priorities based on risk information gathered Pillar 1 to 3 activities, and others.

##### *Activities*

##### **1.8.1.1 Antigen prioritization tool (PRAGMATIST) is finalized and available to interested users**

The Prioritization of Antigen Management with International Surveillance Tool (PRAGMATIST) has been developed in collaboration with the WRL to assist vaccine bank managers select which strains are most important to maintain in their vaccine bank. It is a spreadsheet model that considers 1) which strains pose the greatest threat of incursion and 2) ability of available vaccines to protect against the most important antigens are calculated for each vaccine. Draft outputs (tables and charts) from this tool have been produced to include in the Global Monthly Report.

##### **1.8.1.2. System developed and applied for regularly updating both the global distribution of virus strains and the vaccine matching results to inform PRAGMATIST**

In this reporting period, a more user-friendly version of the tool has been developed. WRL took the lead in this second version, with review and input from EuFMD. The tool was presented at the OIE/FAO Reference Laboratory meeting in Pretoria in December 2017. Experts present at the meeting reviewed the data, and we are currently working on updating the tool with more current data. In general, the WRL will maintain the vaccine matching data and EuFMD will monitor the global prevalence data in conjunction with activities in 1.8.2. The EuFMD is also working with WRL on ensuring that the uncertainty inherent in the data is appropriately represented and communicated to users.

##### **1.8.2.3. Format for communicating PRAGMATIST outputs to end-users (vaccine bank managers in free and endemic countries)**

Upon request of Australian, PRAGMATIST has been shared to trial as part of their vaccine bank selection process.

#### 1.8.2 System established to ensure that changes in FMD incidence and FMDV circulating lineages/threats in the virus pools is communicated to surveillance managers:

##### *Activities*

##### **1.8.2.1 Global Monthly Reports are issued and format is improved**

The report continues to be produced on monthly basis by Dr Maria-Teresa Scicluna. Different information sources are used, including OIE WAHID, FAO World/Regional/National Reference Laboratories for FMD and FAO Global Animal Disease Information System data basis, also FAO/EuFMD supported FMD network and FAO/EuFMD projects and field officers information. The report takes an overview on the changes of FMD virus strain distribution within the different pools, to highlight the differences in the FMD movement and to allow an overview evaluation of the

effectiveness of the FMD control and eradication adopted in the countries. A ready to print version distributed through EuFMD.

In this reporting period, a questionnaire survey was sent out for feedback on the report from the readership. The results from the survey are being used to update the format of the report. We are revising the format to include:

- A quarterly newsletter on Risk Highlights, potentially in collaboration with WRL
- Continuously updated data in the form of graphs and tables for an immediate view of the relative distribution of the most recent various FMD serotypes/viral lineages at Pool and country level.
- A forecast of expected changes in relative prevalence of serotypes at country level

We plan to accomplish these changes with the input of experts from the Reference Laboratories and Progressive Control Practitioners globally. Collection of information will be coordinated by global focal points that will be recruited and trained in the next reporting period.

**1.8.2.2 A quarterly summary for Risk Managers is produced on the basis of the information collected under 1.8.1.1 and 1.8.3.1. and is issued at every quarterly GMR**

No progress on the quarterly summary was made as 1.8.2.3. was not established.

**1.8.2.3 Network of Global Focal Points**

Plans have been made to establish a global network of FMD experts, selected from the different FMD pools that will routinely provide data for the constant update of the PRAGMATIST.

A draft call has been prepared and the possible funding was assessed.

**1.8.3. Tools for improving assessment of risk of entry and consequence of entry into EuFMD MS are improved and issued to better identify specific areas for EU/EuFMD attention**

Planning to improve collection and reporting of field data is underway but is dependent on the outcomes of 1.8.2.

**1.8.4 System for gathering and assessing information on specific risk drivers, such as differential meat prices between Europe and third countries, is developed and validated for at least one driver:**

*Activities*

**1.8.4.1 Identify and review and descriptive analysis of historical data on livestock and meat prices differential and FMD incidence in Europe and 1 or 2 selected regions ("West-Eurasia", South/East Asia, North-Africa)**

No activities have been carried out.

**1.8.4.2 Identification of data sources (meat price and animal movements) for the selected regions in Europe and the European neighbourhood ("West-Eurasia", North-Africa); identification of partners for other regions (West/Central Africa, South/East Asia)**

Support is currently provided to the Veterinary Authorities of single countries in the European neighborhood to gather information directly on livestock mobility (e.g. State of Libya) or on economic drivers for livestock trade-related movements, like prices of livestock and animal products (meat) (e.g. Turkey).

A Letter of Agreement (LoA) has been designed with an external Service Provider (CIRAD) to build a partnership for the development and implementation of risk mapping system in North and West Africa for the duration of the current biennium (2018-2019). This partnership, developed mainly under Component 2.3, is aiming at building potential for sustainability of a system for collecting movements and price data over time. For further details, please refer to Component 2.3.

#### **1.8.4.3 Prospective studies on meat/livestock price differentials, movements and FMD incidence within countries and between countries in the selected regions are run based on available funds and data**

Regular sources of information and data on meat price in Turkey have been identified and discussions with neighboring countries of West Eurasia are under development for expanding a system for sharing this information within the framework of a Statement of Intentions for the cooperation in the region.

### **5-Issues for Executive Committee attention arising during implementation**

As the work progresses, there is close contact with the WRL to ensure that information about FMD risk is analyzed and communicated to risk managers. This is exemplified in the ongoing development and updating of PRAGMATIST, as well as the revision of the Global Monthly Report and the planned Newsletter on Risk Highlights.

The delivery of recruitment and selection of Global Focal Points for each of the pools is progressing slower than originally planned, therefore delivery of the Risk Manager Summaries was also delayed.

Original plans to initiate a meat price monitoring in Trans-Caucasus, Turkey and Iran were not realized yet, promising discussions were held with Georgia and Turkey.

### **6-Priorities for the next six months**

#### **1.8.1 System established and routinely operated to update and communicate the antigen bank priorities based on risk information gathered Pillar 1 to 3 activities, and others**

- Update data in the PRAGMATIST
- Represent and communicate aspects of uncertainty inherent in the data
- Communicate with potential users regarding the tool, and facilitate their use of it

#### **1.8.2 System established to ensure that changes in FMD incidence and FMDV circulating lineages/threats in the virus pools is communicated to surveillance managers**

- Continue with publication of monthly reports
- Make a call to establish a pool of global experts to review prevalence data and initiate forecasting activities
- Select and train the global experts
- Revise format of Global Monthly Report to include relative prevalence of serotypes/strains at national and pool level, as well as forecasting (at a later date)
- Initiate quarterly Newsletter on Risk highlights

#### **1.8.4 System for gathering and assessing information on specific risk drivers, such as differential meat prices between Europe and third countries, is developed and validated for at least one driver**

- Build on the outcomes of the Mission conducted in Iran.

### **7- Success stories and future emphasis**

This component is bringing together, analyzing and applying existing data in new ways. Through collaboration with the WRL and colleagues working on FMD around the world, we are aiming to provide risk managers with better information to prevent and control FMD through choices that they make about vaccines and awareness of events in other countries.

The appetite for this information was affirmed with the results of the survey about the Global Monthly Report. Of the 29 respondents, all of them stated that they found it useful and 72% consult it every month. There were respondents from every continent, and most (72%) are based in FMD-free countries.

Future emphasis should be on strengthening the collaboration with the WRL and improving the flow of information to- and from- professionals working to control FMD globally. This will be done by establishing a system to regularly update the PRAGMATIST data, working with the WRL and OIE/FAO Reference Laboratory colleagues and engaging volunteers and focal points to ensure that the available data are captured and communicated to those who will find it useful to prevent and control FMD.

In the State of Libya EuFMD is supporting the National Center of Animal Health and the University of Tripoli in conducting a field study to characterize the livestock markets in the country and identify the key locations for the future implementation of a systematic monitoring system. The future applications of this study will be developed under the framework of the partnership agreement with CIRAD and in coordination with this partnership.

Following the Trans-Caucasus Regional Workshop on FMD control and PCP progress (February 2018) in Kakheti (Georgia) a proposal for supporting the Georgian National Food Agency (NFA) is being discussed. The aim of the proposal is the development of a system for gathering information on risk drivers for the circulation and spread of FMD integrating movement patterns of domestic livestock and price differentials of live animals and meat products.

#### 8- Budget (€) – by activity

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses Oct 17 – Dec. 17</b>	<b>Expenses Jan 18 - Mar 18 (forecast)</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
84,200	15,451	2,160	21 %	66,589

9-Gantt charts - Planned activities

1.8 Risk analysis and Comm	OUTPUT 1.8 Improved early warning system, risk communication and its uptake by member states into prevention and early detection operations		YEAR 1													YEAR 2												
	Target (Expected result)	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S		
1.8.1 Develop and routinely operate a system for antigen bank prioritization based on risk information gathered Pillar I to III activities, and others	1.8.1.1 Antigen prioritization tool (PRAGMATIST) is finalized and available to interested users		P	P	G T P																							
	1.8.1.2. System dev.& applied for regularly updating both the global dist. of virus strains and the vaccine matching results for PRAGMATIST		P	P	P																							
	1.8.1.3. Format for communicating PRAGMATIST outputs to end-users (vaccine bank managers in free and endemic countries)		P	P	P	P	P	P																				
1.8.2 Monthly and quarterly review system implemented to ensure that changes in FMD incidence, and FMDV circulating lineages/threats in the virus pools is communicated to surveillance managers	1.8.2.1 Global Monthly Reports are issued and format is improved		G T P																									
	1.8.2.2 A quarterly summary for Risk Managers is produced on the basis of the info collected under 1.8.1.1 and 1.8.3.1. and is issued at every quarterly GMR							G T P																				
	1.8.2.3 Network of Global Focal Points		P	P	P	P	P	P																				
1.8.3 Dev.of tool for improving assessment of risk of entry and conseq of entry into EuFMD MS are improved/ used to better id. specific areas for EU/EuFMD attention	1.8.3.1 A system is developed to capture unofficial information on FMD spread dynamics collected during EuFMD activities																											
1.8.4 Pilot study undertaken on differential in meat prices between Europe and third countries	1.8.4.1 Id/review/ descriptive analysis of historical data on livestock and meat prices differential and FMD incidence in Europe and 1 or 2 selected regions ("West-Eurasia", South/East Asia, North-Africa)																							G T P				
	1.8.4.2 Id. of data sources (meat price and animal movements) for the selected regions in Europe and the European neighbourhood ("West-Eurasia", North-Africa); id of partners for other regions (West/Central Africa, South/East Asia)		P	P	P																			G T P				
	1.8.4.3 Prospective studies on meat/livestock price differentials, mvts and FMD incidence within countries and between countries in the selected regions are run based on available funds and data		P	P	P																			G T P				

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### **Component 2.1 – *South East Europe***

**Pillar Manager: F. Rosso**

**Component Manager: C. Potzsch**

**Reporting: C. Potzsch**

**Focal point Executive Ctte: J. Angot**

## 2.1 SOUTH EAST EUROPE

### 1-Objective(s) of component

**The overall objective of this component is:** To improve the ability of Turkey, Georgia and neighbouring West Eurasia countries in FMD management and control to promote their progress along PCP stages and to reduce the risk posed by FMD in the region, with FAO, OIE, EC and EuFMD and the countries in the W. Eurasia region working in coordination under GF-TADS.

### OUTPUTS (EXPECTED RESULTS):

2.1.1 Member states (Turkey, Georgia) and immediate neighbours (Armenia, Azerbaijan), and other countries on request, achieve progress within their current Stage of the PCP and in their capacity to manage their programme, and evaluate the feasibility of achieving and maintaining higher stages.

2.1.2 Regional Capacity to manage the FMD risks is improved through development of regional expertise in epidemiology and laboratory disciplines to support the PCP, and on management of control programs, and regional networking to support better information exchange between risk managers in the West Eurasia Roadmap countries

**DIRECTLY INVOLVED BENEFICIARIES:** The direct beneficiaries of this component are the EuFMD member states Turkey and Georgia and non EuFMD members: Armenia, Azerbaijan, (and possibly other countries in region including Iran, Russian Federation). Indirect beneficiaries: West Eurasia Roadmap participants

### RESOURCE BASE

**HR:** HQ operational costs are identified for support of activities under Pillar II and included in the budget. 2 STPs from Turkey and Kazakhstan support the activities under this component (support shared with other components)

**Budget: € 416,006** Agreed at ExCom 94 (including HQ based support services/costs)

**Budget for activities (EC-TF): € 356,500** Agreed at ExCom 94 (excluding HQ based support services/costs)

### 2-Project team

Role	Name	Status
<b>Pillar Manager</b>	Fabrizio Rosso	Animal Health Officer
<b>Component manager</b>	Carsten Potzsch	EuFMD
<b>Other EuFMD Team members:</b>	Ipek Keskin	EuFMD STPs
	Dinara Imanbeyeveva	EuFMD STPs
<b>National FAO Focal Point: (Co-ordination-national level)</b>	FAO assistant Representatives in Turkey, Georgia	FAO Staff in national offices
<b>FAO Sub-regional animal health focal points (Co-ordination – Central Asia, Eastern Europe))</b>	Andriy Rozstalnyy (Georgia/Eastern Europe)	FAO Animal Production and Health Officer based in Budapest Office
<b>FAO HQ Contact</b>	Eran Raizman	Head, EMPRES, AGAH Rome
<b>National focal points</b>	Abdulnaci Bulut (Turkey) Lasha Avaliani (Georgia) Zurab Rukhadze (Georgia) Satenik Kharatyan (Armenia) Tamilla Aliyeva (Azerbaijan)	National consultants National consultants National consultants National consultants
<b>ExCom oversight</b>	Jeanluc Angot	ExCom (France)

### 3 - Countries or partner organizations involved

- EuFMD member states (Direct Assistance) : Turkey, Georgia;
- Non EuFMD members (information gathering and WelNET) : Armenia, Azerbaijan, (and possibly other countries in region including Iran, Russia);
- FAO and OIE (regional roadmap activities) and the EU (coordination of activities in Georgia).
- *Istituto Zooprofilattico Sperimentale del Lazio e Toscana, Italy (IZSLT).*

### 4 - Progress Report against indicators

Activities	Indicators	Baseline Sept.15	Target 2 years	Unit of measure	Current Status
2.1.1	Number of countries in region with a Risk Based Strategic Plan that has been accepted by GF-TADs FMD Working Group.	2 (Georgia and Turkey)	4 (Georgia, Turkey, Armenia, Azerbaijan)	Number of countries	4 RBSPs accepted by GF-TADS (Georgia, Turkey, Armenia, Azerbaijan)
2.1.2	Participation level from at least 5 countries in the region in online training courses	0	480	Participants engaging in EuFMD e-learning events	430

#### Output 2.1.1. Assist with development and monitoring of risk-based strategic plans in the Member states (Turkey, Georgia) and immediate neighbours (Armenia, Azerbaijan) and evaluate the feasibility of achieving and maintaining higher PCP stages

All **TransCaucasus countries** (TCC) are in PCP stage 2 and have approved RBSPs.

The TCC presented their country progress during the 1st West Eurasia FMD Epidemiology & Laboratory Networks Meeting on 18-20th September 2017 in Georgia. Representative from Georgia presented their standard operating procedures (SOPs) for FMD surveillance and control, including FMD vaccination, NSP and SP serological and clinical surveys, biosecurity and disinfection. Another presentation covered the regional FMD simulation exercise in Georgia in 2016. All TCC presented their current FMD control and surveillance activities. Armenia presented their A/GVII outbreak control measures in 2016 and introduced the new central veterinary laboratory. Risk based vaccination was further implemented and the total number of ruminant vaccine doses used decreased from 1.5 M in 2016 to 0.5 M in 2017. Georgia and Azerbaijan presented their PCP stage 3 candidate zones. An animal identification and registration system is currently being implemented in both countries. In Azerbaijan all farms are registered and animal movement control was improved specifically during religious holidays (Qurban bayram, Ramazan bayram, Nouruz Bayram). The Azeri FMD Contingency Plan is currently being updated. Revaccination of primo-vaccinates is now implemented with varying coverage in all TCC.

The RBSPs of Georgia, Azerbaijan and Armenia are currently being updated. A workshop on RBSP monitoring and evaluation was held on 12 – 15 February 2018 in Georgia (TransCaucasus Regional Workshop on FMD control and PCP progress). The main points of the amended FMD control strategy were presented and discussed at this workshop. The RBSPs will be amended after the workshop (first quarter of 2018).

FMD low risk zones, which are PCP stage 3 candidate zones, were proposed by the veterinary services (VS) of Georgia, Azerbaijan and Armenia. These zones are the Racha-Lechkhumi region in Georgia and the Absheron region in Azerbaijan. In Armenia (to be discussed during the WS, not available at the time of this report). Intensified FMD surveillance, including serological and clinical surveillance, was proposed to be conducted by the VS. The results were presented during the 2018 workshop and further activities agreed. In a training workshop held in June 2017 in Georgia measures for a more aggressive FMD control and surveillance were covered, improved surveillance and early detection of FMD to reduce the risk of FMD spread and introduction, the use of clinical investigations improve confidence of FMD freedom and improved FMD awareness.

An online meeting was conducted with TCC and Turkey to assess progress in RBSP updating, planning and implementation of PCP FMD stage 3 activities and the preparation of the TCC workshop in February 2018.

With regards to **Turkey** the amended RBSP is currently under development and it is planned to be completed in the first quarter of 2018. Turkey presented its country progress during the 1st West Eurasia FMD Epidemiology & Laboratory Networks Meeting on 18-20<sup>th</sup> September 2017 in Georgia. The new Strategic Plan for Turkey includes all Anatolian provinces in a FMD Control Zone, except border provinces with Syria, Iran and the TCC. The strategic goal of the plan is that Turkish Thrace becomes free without vaccination, the FMD Control Zone (CZ) becomes free with vaccination by 2021 and entire Anatolian Turkey becomes free with vaccination by 2023.

GDFC requested EuFMD to provide three additional workshops on FMD control for Eastern Anatolian regions included in the control zone. The training topics are consistent with the trainings conducted in 2017. However, during 2018 GDFC will lead the trainings with EuFMD assistance, and EuFMD support will be decreased over the course of the three workshops. It is also planned that the GDFC epi unit will comprehensively conduct outbreak investigations with forward and back tracing as part of the workshops. The first workshop is planned for end of March 2018.

**Output 2.1.2. Support better information exchange between risk managers in the West Eurasia Roadmap countries and develop regional expertise in epidemiology and laboratory disciplines to improve regional capacity to manage the FMD risks.**

During the 1<sup>st</sup> West Eurasia FMD Epidemiology & Laboratory Networks Meeting on 18-20<sup>th</sup> September 2017 in Georgia representatives of the West Eurasia Roadmap countries provided information about the regional FMD risk situation, including currently circulating FMD strains, results of national FMD surveillance and control measures. The meeting was attended by representatives of 10 countries, namely Afghanistan, Armenia, Azerbaijan, Georgia, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey and Uzbekistan, as well as of the WEA Secretariat, GF-TADS FMD Working Group, EuFMD experts, OIE RR and SRR and Reference Laboratories on FMD (The Pirbright Institute and ARRIAH), DTRA and Boehringer - pharmaceutical company. A training session was conducted by C.Potzsch on FMD serosurveillance and jointly with A.Bulut on outbreak investigation and skills needed in PCP Stage 3. It is clear that countries at their PCP stage 1 need to have a support on the FMD serosurveillance strategy development (design). Support on development of the RBSP (Tajikistan, Uzbekistan) was also asked.

EuFMD provided assistance in preparation of the meeting and support of participation of from Iran and Turkey, as well as expert assistance in delivery of the workshop. The GFTADS Working Group decided that the next West Eurasia Roadmap meeting will be organized in 2018.

**Action-plans** have been drafted during this meeting for the epidemiology (EpiNet) and laboratory (WelNet) network of the WestEurasian roadmap countries for 2017-2018. Main points of the action plan are for EpiNet:

- Sharing of information and data on vaccination (Turkey, Armenia, Azerbaijan, Georgia, Iran, Russia) and exploring the possibilities of extension to other West Eurasian countries
- Monitoring movement/prices (live animal price at markets and meat prices)
- Establishment of a West Eurasian advisory group on serological survey design and data analysis and for WelNet:
- Participate in annual proficiency test scheme

- Assess the capacity/capability and performance of the national veterinary diagnostic labs.
- Training on FMD laboratory diagnosis, based on gaps identified during the assessment
- Sharing information/data on serotyping and molecular analysis from samples collected in the region

With regards to the EuFMD programme connected to the capacity building, the following e-learning courses were delivered:

- a) in-depth e-learning courses in the reporting period:
  - Risk Analysis along the value Chain;
  - Post Vaccination Monitoring (23 nominations from the WestEurasian countries up to 14/02/18);
- b) FITC (FMD Field Investigation Training Course)
  - in Turkish, for Turkey (June 2017)
  - in Russian with participation of the veterinarians of Armenia, Azerbaijan, Georgia, Tajikistan, Kyrgyzstan, Kazakhstan, Belarus, Moldova, Ukraine was organized between October and November 2017 (October 19<sup>th</sup>-November 20<sup>th</sup>). The course has been taken by free and endemic countries. The new initiative of involving Eastern Europe (Ukraine, Belarus, and Moldova) countries to refresh their knowledge on FMD was highly supported by the countries and created a good discussions from different perspectives throughout the course. 190 participants enrolled and 52 completed it.

Training material and all webinar audio/video recordings are available on the EuFMD e-learning website. The training logistics team constantly develops the training websites in cooperation with the trainers, training participants and pillar II staff and improves content and user friendliness.

An online survey on data sharing was conducted for the West Eurasian countries. The objective of the survey was to informally explore the type of available information, the availability and interest to share this information. Despite the overall positive feedback to the proposal and the reported availability of information, further action shall follow a preliminary assessment. The TransCaucasus Regional Workshop on FMD control and PCP progress (February 2018) was aimed, in addition to other objectives, to discuss a possibility to extend the Statement of Intention on the type of information to be shared based on the survey result and the Workshop outcome.

Needs assessment was also conducted via online webinar to the Focal points on Trainings update. 7 representatives from Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, and Tajikistan were present. Participants have been asked on their opinion regarding training needs assessment results previously conducted and eventual gaps in training their countries have. All participants confirmed the relevance of the training needs assessment process and importance of the courses selected for the in-depth online training based on needs assessment. Participants have prioritized following trainings: Laboratory training, PVM and Risk analysis. All participants responded as high importance of conducting these trainings in Russian, emphasizing the difficulty of finding English speaking experts in their countries.

With reference to the assistance to **the regional cooperation between Transcaucasian and neighbouring countries in the prevention and control of FMD and other major TADs (Statement of intention of territories within or neighbouring to the Caucasus)**, according to the Statement of intention the TCC, Turkey, the Russian Federation and Iran regularly submit reports of vaccination figures and outbreaks to the EuFMD. From these national reports, monthly reports are collated by EuFMD and circulated among these countries. The territories considered for the reporting are: Georgia, the Republic of Armenia, the Republic of Azerbaijan, the Republic of Turkey (provinces: Artvin, Ardahan, Kars, Igdir, Agri), the Islamic Republic of Iran (provinces: West Azerbaijan, East Azerbaijan, Ardebil, Gilan), the Russian Federation (the Krasnodar Krai, the Karachayev-Cherkessian Republic, the Kabardino-Balkarian Republic, the Republic of North Ossetia, the Republic of Ingushetia, the Republic of Chechnya, the Republic of Dagestan, Adygeya). During this reporting period reports were not submitted by Iran whether Russia submitted the reports on a six-month basis.

To further improve the quality of the vaccination and outbreak reports, a mapping tool is planned to be implemented based on Google Fusion Tables (situation, progress). Indicators for FMD risk control and vaccination coverage are currently reviewed in cooperation with the *Istituto Zooprofilattico Sperimentale del Lazio e della Toscana*.

To follow up the progress of activities agreed under the “Statement of Intentions”, a part of the TCC workshop that was conducted from 12 to 15 February 2018 in Georgia (TransCaucasus Regional Workshop on FMD control and PCP progress) was dedicated to provide an update of the level of implementation of the Statement of Intentions concerning the control of FMD and other major epizootic transboundary diseases. Representatives of Iran, Russia and Turkey attended this part of the workshop together with representatives of Armenia, Azerbaijan and Georgia who were involved in the whole workshop aimed to assess the level of implementation of RBSP in TCC countries and provide support in planning and implementation of progression to PCP Stage 3 in candidate zones.

## 5- Areas which need more attention/emphasis in the next 24 month period

### 1. Progress

- FMD control and surveillance measures identified for stage 3 candidate zones of TCC and Turkey
- Action-plans have been developed and agreed for WelNet and EpiNet 2017-18
- E-learning (courses and webinars) are delivered based on training needs assessment
- Level of implementation of the Statement of intention monitored and discussed.

### 2. Major Issues

- Implementation of the WelNet and EpiNet action plan 2017-18; the plans are ambitious and need close follow-up and assistance
- Drafting and implementation of more aggressive zonal FMD control and surveillance strategy for TCC and Turkey
- Progress with RBSP development for stage 1 countries in the WestEurasian region, i.e. Turkmenistan, Uzbekistan, Tajikistan (not included in the EuFMD workplan).

### 3. Significant Plans

- Georgia and Azerbaijan to apply for zonal PCP stage 3 during the 2018 WestEurasia roadmap meeting
- Revision of current RBSP and evidence of monitoring and evaluation process.
- Assist and improve the epinet and welnet through through a series of webinars on 'vaccinology' with both epi and lab components included (for Pillar II).
- Development of database for collection of vaccination coverage and risk information in TCC area
- Providing e-learning courses in Russian for the countries of the WestEurasian roadmap.

## 7. Budget

Total Budget Workplan activity 24 months	Expenses Sept. 17 –Dec. 17	Expenses (forecast) Jan 18-Mar 18	% project completion	Actual available
€ 356,500	€ 30,642	€ 25,000	15%	300,858 €

## 8-Gantt charts – Planned, and Progress Update/ revised program

Activities	indicators	O N D J F M A M J J A S												O N D J F M A M J J A S											
		Activity completed no further actions												Activity completed no further actions											
<b>2.1.1 Assist with dev &amp; monitoring of RBSP in MS (Turkey Georgia) &amp; immediate neighbours (Armenia, Azerbaijan) &amp; evaluate feasibility of achieving and maintaining higher stages</b>	2.1.1.1 Assist with development of risk-based strategic plan (RBSP) in Armenia and Azerbaijan. Update of RBSP in Georgia	Activity completed no further actions												Activity completed no further actions											
	2.1.1.2 Assist with establishment and implementation of monitoring of RBSP in Georgia , Armenia and Azerbaijan; assist progression towards PCP stage 3				W		O			M			O			W		O			M				
	2.1.1.3 Assist with implementation of monitoring of RBSP and technical support for national epi-network in Turkey. Assist Turkey in the progression along the PCP	T	T	T	W								W					M				W			
	2.1.1.3 Assist component 1.8 in meat price monitoring systems				V						V					V							V		
<b>2.1.2 Support better information exchange between risk managers in the West Eurasia Roadmap countries and Develop regional expertise in epidemiology and laboratory disciplines to improve Regional capacity to manage the FMD risks</b>	2.1.2.1 Support better information exchange between risk managers in the West Eurasia Roadmap countries		W		O		W		W			O		W		W		O		W		O			
	2.1.2.2 Development of regional expertise in epidemiology and laboratory disciplines				O				E			O				M		E				O			
	2.1.2.3 Assist the regional cooperation between Transcaucasian and neighbouring countries in the prevention and control of FDM (statement of intention of territories within or neighbouring to the Caucasus)			O								O		R								S			

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### **Component 2.2 – *South East Mediterranean***

**Pillar Manager: F. Rosso**

**Component Supervisor: F. Rosso**

**Component Manager: A. Bakkouri / D.  
Imanbeyeva**

**Reporting: F. Rosso**

**Focal point Executive Ctte: J. Angot**

## 2.2 South East Mediterranean

### 1-Objective(s) of component

**The overall objective of this component is:** better FMD management in the neighbourhood of Cyprus and Israel

#### **OUTPUTS (EXPECTED RESULTS):**

1. Risk-based Strategy Plans (RBSP) adopted, implemented and monitored in Egypt;
2. Risk-based Strategy Plans (RBSP) adopted, implemented and monitored in Palestine and Israel;
3. Risk-based Strategy Plans developed and PCP-FMD progress achieved in Jordan and Lebanon;
4. System in place to provide improved disease risk information through networking for better information exchange to managers of countries under this component for planning risk-based FMD control re: risk-based surveillance, risk-based vaccination programmes and vaccine selection for the threats from particularly bordering areas in the Middle-East and sub-Saharan East Africa.

**DIRECTLY INVOLVED BENEFICIARIES:** Israel, Cyprus, Palestine, Egypt, Lebanon, Jordan.

#### **RESOURCE BASE**

**HR:** HQ operational costs are identified for support of activities under Pillar II and included in the budget. 2 STPs from Morocco and Kazakistan support the activities under this component (support shared with other components)

**Budget: € 293,883** Agreed at ExCom 94 (including HQ based support services/costs)

**Budget for activities (EC-TF): € 260,000** Agreed at ExCom 94 (excluding HQ based support services/costs)

### 2-Project team

<i>Role</i>	<i>Name</i>	<i>Status</i>
Pillar Manager	Fabrizio Rosso	Animal Health Officer
Component manager	Abdenacer Bakkouri/Dinara Imanbeyeva	EuFMD STP
Other EuFMD team members	N/A	N/A
Regional and National consultants		
National focal points		
Israel	Shilomo Garazi	CVO Israel
Palestine	Iyad Adra	CVO Palestine
Egypt	Mohamed Atea	Deputy CVO Egypt
Jordan	Majed Hawaasha	Head of Animal Health
Lebanon	Ibrahim Elias	Division
EARLN	Sabenzia Wekesa	CVO Lebanon EARLN Coordinator
ExCom oversight	Jean-Luc Angot	Executive Committee (France)

### 3-Countries or partner organizations involved

The activities will be mainly implemented in Israel and Cyprus as EuFMD members and in Palestine, Egypt, Lebanon and Jordan as neighbouring countries.

The EuFMD works in coordination with FAO offices in Jerusalem and Cairo, and with approval from OIE Beirut and GfTADS' approval of the East African Regional Laboratory Network (EARLN).

The EuFMD is collaborating with *Istituto Zooprofilattico Sperimentale del Lazio e della Toscana* for implementing the activity described in the programme and with Jordan University of Science and Technology (JUST, Jordan).

### 4-Progress against indicators

Activities	Indicators	Baseline Sept.15	Target 2 years	Unit of measure	Current Status
2.2.1 2.2.2 2.2.3	Number of countries in region with a Risk Based Strategic Plan that has been accepted by GF-TADs FMD Working Group.	1 (Egypt)	4 (Egypt, Jordan, Palestine, Lebanon)	Nb of countries	Achieved: 2 RBSPs developed: Egypt and Palestine (1 RBSP accepted by GF-TADs FMD Working Group), 1 RBSP drafted: Jordan
2.2.4	Assist networking through online meetings and sharing of FMD information to risk managers of countries under this component	0	140 participants in 24 months involving 6 countries	Nb of reg. participations in online meetings	185 participants from 11 Arabic speaking countries in the NENA region.

### Progress Report

#### Output 1. Risk-based Strategy Plans (RBSP) adopted, implemented and monitored in Egypt

EuFMD has been working for many years in Egypt to progress FMD control. EuFMD has supported the veterinary services of Egypt in reviewing the FMD control strategy and Egypt has finalized a risk-based strategy plan (RBSP) for FMD control. This RBSP was presented during the third Regional meeting of the FMD Control Roadmap for the Middle East in Doha, Qata, December 2015 and in Jordan, October 2017 and Egypt has been assessed by the Regional Advisory Group to be in PCP stage 2.

Samples are regularly shipped to WRLFMD in Pirbright and the results illustrated again the predominance of African O EA-3 strains and their very close relatedness with the recent outbreak strains in the Gaza strip, Israel and the West Bank, the absence of O Ind2001 strains and the continued presence of A/AFRICA/G-IV strains.

Despite the presence of a RBSP and the importance of providing evidence of the monitoring of its level of implementation the regular reports produced by Egypt with data of passive and active surveillance activities are produced with some delays and not on a monthly basis. This reduce the understanding of the evolution of the disease in the country and the capacity to assess the effectiveness of the control plan implemented.

EuFMD support for 2017-2018 will continue in coordination with LLNL/US-DOS funded activities. The LLNL/US-DOS programme was supposed to end in November 2017 but it was officially extended until May 2018. Currently the implementation of project is facing some problems due to the need of a security clearance for any activity implemented in the country and the less pro-active attitude of the Egyptian veterinary services.

Following national training courses (carried out six times now by Egyptian trainers) supported and implemented in the country from January to March 2017, a real-time training course on advanced outbreak investigation was delivered in July 2017 guided by two experienced EuFMD trainers.

A vaccine audit was carried out in April 2017 and a follow up mission in October 2017 with two international experts in FMD vaccine production accompanied by an EuFMD expert in the framework of improvement of FMD vaccine manufacturing in Egypt through auditing on vaccine quality (including efficacy and safety data and all relevant aspects of QA/QC) at the 2 plants in the country (one government owned and one private) and the vaccine control institute. The missions revealed many challenges and deficiencies and has led to many recommendations to all relevant parties involved.

Monitoring and evaluation of vaccine quality and vaccination programs is little addressed in current FMD programs in Egypt. This situation seems to disregard the complexity of appropriate assessment of the vaccine quality and evaluation of the effectiveness of vaccination programs.

To support Egypt and other countries in the area (Palestine, Lebanon, Jordan) in gaining a better understanding of these multiple aspects, the EuFMD workplan 2017-2019 foresees in supporting the establishing of monitoring and evaluation mechanisms and to support regional technical meetings on this subject. It is proposed to organize a sequence of events including online-training, a regional technical meeting and in-country workshops on FMD vaccination and post-vaccination monitoring based on the FAO/OIE guidelines on Post-vaccination Monitoring (PVM). By integrating different approaches of knowledge transfer, regional networking and sharing of information and experience, it is foreseen that the capacity building on this aspect of monitoring and evaluation is sustainable both in the specific countries as well as in the region.

The different events consist of: 1) EuFMD online training on PVM based on the FAO/OIE PVM guidelines in April for 2 members of the national FMD task force of participating countries; 2) Regional technical meeting; 3) EuFMD-facilitated bi-country workshops (Egypt-Palestine and Jordan-Lebanon) for 5 participants per country in which the approaches to PVM (as discussed under 1 and 2) will be disseminated to a wider group of epidemiologists, diagnosticians and other relevant staff of the veterinary services.

## **Output 2. Risk-based Strategy Plans (RBSP) adopted, implemented and monitored in Palestine and Israel**

Palestine has been supported for the development of the Risk Based Strategic Plan with several workshops during the years 2016-2017. The activity carried out has been presented at the road map meeting for the Middle East held in Jordan in October 2017. Although the RBSP has been developed and available the country has been assessed in PCP stage 1, in agreement with the Palestinian veterinary services, as the plan is not yet endorsed by the political level. The assessment can in fact allow the Veterinary Services to have the political and financial support requested for the implementation of the plan.

The following activities were identified to support Palestine in the upcoming months: monitoring and evaluation of RBSP, enhance of passive/active surveillance, risk based vaccination, post vaccination monitoring, shipment of samples to Pirbright, laboratory support.

In January 2017 a FMD outbreak was reported in Israel, in a Kibbutz dairy farm 4 km from the border with the Gaza strip (fortunately contained to this Kibbutz) and clearly connected to outbreaks ongoing on in the Gaza strip for several weeks before. The virus was identified and characterized as FMDV/O/EA-3 which is dominant in Egypt. The hypothesis at that time was that this virus has arrived in the Gaza Strip through transport of animals from Egypt by tunnels. In May and June 2017 additional outbreaks were reported in the West Bank and in Israel close to the border with the West Bank. All virus strains were characterized as FMDV/O/EA-3 and are very closely related to each other and to all FMDV/O/EA-3 strains (n=21) collected in 2016 and 2017 in Egypt. The regular shipment of samples from Egypt with EuFMD support allowed to show that the sequences from GS/Israel/WB were indeed most closely related to Egyptian O/EA-3 rather than the virus isolated from Ethiopia in 2017 corroborating the hypothesis that these viruses have arrived by smuggling of animals through tunnels between Egypt and the Gaza strip. In November FMD outbreaks were detected in three sheep flocks in villages near Hebron in the PA. Samples of heart tissue was delivered to KVI for diagnosis and an O FMD virus from the O/EA-

3 lineage was isolated from the sample. From genotyping that the virus appears to be close related to the virus that was isolated in the PA and in Ein Shala in May 2017.

It is still unclear how the virus has travelled from the Gaza strip to the West Bank and how the disease affected Israel considering that the borders of the Gaza strip with Israel are completely under Israeli military control.

On the vaccination side the type O is well covered by the vaccine strains currently available (acceptable r1 value for O 3039 and O/TUR/5/09) and there are less worries then about for example type A and SAT2.

### **Output 3. Risk-based Strategy Plans developed and PCP-FMD progress achieved in Jordan and Lebanon**

In order to develop Risk-based Strategic Plans in Jordan and Lebanon different workshops have been planned with focal points of the two countries.

The development of RBSP started in Jordan and the first workshop has been held in Amman from 16 to 21 April 2016 followed by other workshops carried out on 20-22 November 2016 and on 14-16 May 2017 and a laboratory assistance mission held on 23-24 November 2016. The main focuses of these workshops were the analysis of value chain, risk pathway, risk hotspots and benefits of FMD control. During the third workshop, considering that it was carried out during the occurrence of outbreaks the following topics were also covered: outbreak investigation, contingency planning, risk based surveillance and control measures, including risk based vaccination. Already mentioned in previous reports but important to remember are the observations and outcomes which highlight the difficulties in the country: 1) farmers are reluctant to notify of outbreaks because they are afraid of the negative consequence in milk sales ; 2) politically, there is high pressure related to the export to Saudi Arabia; 3) due to the above stated problems, no samples were shipped to The Pirbright Institute (samples are still available at JUST); 4) doubts regarding the effectiveness of the ARRIAH vaccine; 5) budget shortages to deal effectively with the outbreaks; 6) the absence of a relevant contingency plan.

At the FMD Road Map Meeting for the Middle East held on 17-19 October 2017 the Regional Advisory Committee has assessed Jordan in provisional stage 2 of the Progressive Control Pathway (PCP) with the condition of finalizing the RBSP by February 2018.

A workshop was then carried out on the 30 January – 1st February 2018 with purpose to finalize the development of a Risk Based Strategic plan and to build upon the lessons learnt from recent outbreaks, epidemiology and control measures already implemented. During the workshop the EuFMD and Jordan task force experts worked on: a) definition of impact of FMD and risk hotspot (RBSP chapters 1 and 2), b) identification of goals and strategic objectives for FMD control and related tactics and activities (RBSP chapter 3), c) building a logframe: definition of indicators, targets and means of verification (RBSP chapter 5), d) formulation of an operational plan for the RBSP implementation (RBSP chapter 6), e) identification of improvements needed within the Veterinary Services for efficient and sustainable FMD prevention and control and identification of the technical assistance required (RBSP chapter 4 and 7).

The RBSP was drafted with specific focus on the following sectors and objectives: dairy sector (decrease FMD outbreaks and FMDV transmission in cattle), small ruminants (decrease number of outbreaks during seasonal migration), livestock markets (reduce transmission in high risk markets), trade (reduce risk related to international trade and improve exportations). In addition specific actions were identified to ensure vaccine effectiveness (immunogenicity studies), improve awareness and biosecurity of stakeholders, improve passive surveillance, and improve collaborations with academics and countries of the region. A financial support for the implementation of the plan has been granted by the Ministry (500.000 JD/year for the next three years).

Jordan has experienced FMD outbreaks and has reported these outbreaks to World Organisation of Animal Health (OIE) on March 13th 2017 (according to the report, the outbreaks started on February 21st 2017), which is 10 years after the last reported outbreaks. To the OIE 3 outbreaks were reported but the actual number of outbreaks was 54. Collaboration with the Jordanian University of Science and Technology (JUST) has revealed that these outbreaks have been caused by the FMDV lineage O/Ind2001d where the Jordan isolates are most closely related to isolates from Saudi Arabia (2016). There is no evidence of the effectiveness of the current ARRIAH vaccine used against the strains circulating in Jordan and in the area. During the last workshop it was discussed and agreed to carry out field studies on the quality of vaccines distributed and available in the country (ARRIAH, Schelkovo, VETAL and Merial) with the participation of the Veterinary Service, private sector and JUST.

In Lebanon, the first workshop was carried out in June 2016 by EuFMD focused on livestock production systems, analysis of the value chains and the construction of risk pathways to support risk estimation and prioritization. The first priority identified for Lebanon was to provide evidence of the assumed absence of FMD virus circulation through conducting a number of sero-surveys (discussed/designed during the workshop). The follow up on the workshop was for the participants to elaborate on the situation analysis in Lebanon, including aspects of livestock distribution and seasonal movements, risk hotspots and their pathways and the identification of gaps and needs with the Veterinary Services for their role in controlling FMD. Despite several attempts we have not been able to plan a second workshop. The Lebanese counterpart indicated that the shortage of personnel available at the central level and the reduced budget did not allow until now to carry out any of the activities agreed during the workshop for the development for RBSP.

**Output 4. System in place to provide improved disease risk information through networking for better information exchange to managers of countries under this component for planning risk-based FMD control re: risk-based surveillance, risk-based vaccination programmes and vaccine selection for the threats from particularly bordering areas in the Middle-East and sub-Saharan East Africa**

EuFMD produces the Global Monthly Report (GMR). For this report, many sources are used and information is also received from a number of focal contact persons. The GMR adds to the quarterly and annual WRLFMD reports, and – since it is on a monthly basis – provides more real-time information. The timely information sharing of the new type A/ASAI/Genotype VII strain by all involved is exemplary including the relatively rapid generation of vaccine matching results. The information has been shared through GMRs and online meetings and directly by the WRLFMD representing the FAO/OIE FMD laboratory network. Also the available and already published information regarding the predominance of FMDV/O/EA-3 in Egypt and access to the most recent information from GOVS and AHRI in Egypt enabled EuFMD to correctly predict the toptype and lineage of the FMD virus responsible for recent outbreaks in the Gaza strip and Israel and inform the Israeli and Palestinian authorities already about available vaccine matching information in collaboration with WRLFMD in Pirbright.

Initiatives for improving animal mobility knowledge in the region have been planned under the LoA with CIRAD for the development of a FMD surveillance programme on risk information and mapping tools for southern European neighbourhood, integrating movement patterns of domestic livestock. Egypt, Libya and Sudan will be involved in the activities. In the GMR the gaps in virological surveillance in pools 4 and 5 are illustrated clearly. Some budget is available for facilitating shipments from countries in sub-Saharan East Africa representing putative threats to countries in the Middle-East.

Sudan was included in the workplan 2017-2019 considering the epidemiological connections with Egypt. The Sudanese veterinary services were contacted in order to prepare the workshop planned in April and aimed to analyse the value chain, risk pathways and hotspots. It has been asked to the veterinary services to conduct preliminary activities fundamental to gain a common understanding of the work to be implemented and targets to be achieved and to provide essential information that can be analysed during the workshop. For this reason it was suggested to Sudan to provide in advance the composition of the task force for FMD control and ask the members to be involved in the e-learning courses on PCP available on the EuFMD e-learning website. In addition specific tasks have been assigned to the task force in order to collect the basic information needed for the value chain and risk pathways analysis.

Virtual networking through webinars and online meetings has been organized in connection with similar activities that have started already under component 2.3 REMESA with a focus on the NENA countries.

At the end of February 2017, a Letter of Agreement (LoA) was signed between JUST and EuFMD/FAO in which the following outputs were agreed upon: 1) adapt FMD Investigation Training Course (FITC) to the Near East/North African (NENA) context and deliver to participants from NENA countries (more specifically Jordan, Lebanon, Palestine, Egypt, Libya and Syria); 2) make appropriate recommendations for improving FMD preparedness related training methodology and national level training for official veterinarians in the above mentioned NENA countries; 3) produce Training material for private veterinarians, animal health workers and farmers on biosecurity and notification of FMD outbreaks; 4) develop and deliver a 4-hour long pilot on-line course for private veterinarians, animal health workers and farmers. The Arabic FITC course was delivered to 185 participants from 11 Arabic speaking countries in the NENA region and a report was produced with the

recommendations for improving the training methodology in particular with the use of e-learning for official veterinarians for the NENA countries. Leaflets were produced in Arabic addressed to farmers and aimed to improve biosecurity and notifications of outbreaks. The activity related to points 4 of the LoA was not completed and therefore part of the budget allocated for the LoA was not used.

### 5-Issues for Executive Committee attention arising during implementation

- In Egypt, activities have continued, but the current FMD situation in the country is a point of concern. The vaccine is no longer supplied for free and vaccination coverage has dropped dramatically. Also the management and performance of the virology department within AHRI is a point of concern. Since Egypt is part of two FMD pools and on a crucial crossway between Africa and the Middle East EuFMD should definitely continue and maybe extend activities in Egypt. In the recent months a little response has been received from Egypt on the initiatives proposed under the LLNL/US-DOS project despite the fact that the programme was preliminary agreed.
- In Lebanon, only one workshop has been organized until now and planning of a second workshop has not yet succeeded. The Lebanese suggestion that FMD is circulating at a very low level and that the country or zones within the country may even be free with vaccination will have to be substantiated by the proposed serosurveillance studies. Also the recent FMD outbreak in Northern Israel caused by A/ASIA/G-VII can represent an incursion from Lebanon or Syria.

### 6-Areas that require more attention in the next period

- Continued support to Egypt (monitoring and evaluation of RBSP implementation, passive and active surveillance, laboratory support, regular shipments to Pirbright, risk based vaccination and post vaccination monitoring);
- Continued support to Jordan (RBSP development, passive and active surveillance, laboratory support, regular shipments to Pirbright, risk based vaccination and post vaccination monitoring, vaccine effectiveness studies);
- Support for Lebanon to be planned according to the response from the country (implementation of the work assigned);
- Continued support to Palestine (monitoring and evaluation of RBSP implementation, passive and active surveillance, laboratory support, regular shipments to Pirbright, risk based vaccination and post vaccination monitoring);
- Implementation of vaccine effectiveness studies in the region in collaboration with local centres of excellency;
- Assist and improve the network among countries through through a series of webinars on 'vaccinology' with both epi and lab components included (for Pillar II).
- Provide technical assistance to Sudan for PCP/RBSP in collaboration with/supported by the FAO Khartoum office.

### 7. Budget

Total Budget Workplan activity 24 months	Expenses Oct. 17 –Dec. 17	Expenses (forecast) Jan 18-Mar 18	% project completion (forecast)	Actual available (forecast)
€ 260,000	€ 16,730	€ 15,000	12%	€ 228,270

## 8-Gantt charts – Planned program

Activities	Indicators	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
<b>2.2.1 Support to implementation and monitoring of FMD Risk Based Strategic Plan in Egypt</b>	2.2.1.1 a) TOTs: training on outbreak investigation and follow-up of TOT training 2.2.1.1 a) TOT: training on outbreak investigation and follow-up of TOT training; b) Training on advanced outbreak investigation; c) Training on local response in case of FMD outbreak; (activity is dependent on contribution to funding provided by LLNL, USA)		W E B				W E B				W E B				W E B				W E B			W E B			
	2.2.1.2 Establishing monitoring and evaluation mechanism at GOVS activity is dependent on contribution to funding provided by LLNL USA)				W S			W S																	
	2.2.1.3 Vaccine quality audit	M																							
	2.2.1.4 Regional technical meeting (activity is dependent on contribution to funding provided by LLNL, USA)							W S																	
	2.2.1.5 Support to Animal Health Research Institute(activity is dependent on contribution to funding provided by LLNL, USA)					M																			
	2.2.1.6 Promoting strategic vaccination and assessment of vaccination effectiveness						W S						M												
<b>2.2.2. Assist finalization &amp; implementation &amp; monitoring of the RBSP in Palestine &amp; Israel</b>	2.2.2.1 Finalization of risk-based strategy plan in Palestine	Activity completed no further actions																							
	2.2.2.2 Establishing M&E mechanism on implementation and impact of RBSP	Activity completed no further actions																							
	2.2.2.3 Support to Central Vet. Laboratory Al Aroub and to Polytechnic University Hebron									M															
	2.2.2.4 Workshops on RBS and risk-based vaccination				W S				O M	M		O M	M		O M				O M						
	2.2.2.5 Steering committee convened and regular meetings held										M												M		
<b>2.2.3 Assist dev. of RBSP in Jordan &amp; Lebanon</b>	2.2.3.1 Needs assessment prior to missions	Activity completed no further actions												Activity completed no further actions											
	2.2.3.2 Provision of training and support			W S			W S			W S					W S				W S			W S			
<b>2.2.4 Assist networking through online meetings and sharing of FMD info to risk managers of countries under this comp</b>	2.2.4.1 Implementation of a lab and epi network		W E B			O M	W E B			O M	W E B				O M	W E B			W E B		O M	W E B		W E B	
	2.2.4.2 Sample submission from regions posing risk to Israel supported			L S				L S				L S				L S				L S			L S		
	2.2.4.3 Information on disease risk collated and communicated to risk managers in Israel					V	O M				V	O M				V	O M					V	O M		
	2.2.4.4 Support to progressive FMD control in Sudan to reduce risk to Egypt and subsequently to Israel							M			L S		W S			L S			W S			L S			

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**October 2017 - March 2018**

### **Component 2.3 - Support to REMESA**



**Pillar Manager: F. Rosso**

**Component Manager: A. Bakkouri**

**Reporting: A. Bakkouri**

**Focal point Executive Cttee: J. Angot**

## 2.3 SUPPORT TO REMESA

### 1-Objective(s) of component

**The overall objective of this component is:** To assist national FMD risk management as part of the REMESA action plan.

### OUTPUTS (expected results):

1. Progress to develop, adopt and implement Risk Based Strategic Plans for FMD control in Libya and Mauritania, and capacity to achieve and maintain PCP Stage 3 or 4 in Morocco, Algeria, Tunisia;
2. Coordination framework in place to facilitate communication, review and guide upon activity implementation nationally and regionally, as needed to progress the REMESA Strategic Plan, including the establishment of surveillance measures aimed to improve security of sanitary barriers between countries or zones with different FMD situations;
3. System in place to provide improved disease risk information for planning of vaccination programmes, including vaccine banks, to support managers in REMESA.

**Directly involved beneficiaries:** *Algeria, Libya, Mauritania, Morocco , and Tunisia*

### Resource base:

**HR:** HQ operational costs are identified for support of activities under Pillar II. 1 STP from Morocco

**Budget :** € 367,769 Agreed at ExCom 94 (including HQ based support services/costs)

**Budget for activities (EC-TF):** € 326,000 Agreed at ExCom 94 (excluding HQ based support services/costs)

## 2. Project team

Role	Name	Status
<b>Pillar Manager</b>	Fabrizio Rosso	Animal Health Officer
<b>Component Manager</b>	Abdenacer Bakkouri	EuFMD STP
<b>REMESA RCU contacts</b>	M. Bengoumi (FAOSNE)	
<b>FAO Regional Contact (Coordination with FAO NE regional activities)</b>	Mayen Friederike (FAORNE)	FAO Regional Animal Production and Health Officer, Near-East (Cairo)
<b>ExCom oversight</b>	Jean-Luc ANGOT	Executive Committee (France)

## 3 - Countries or partner organizations involved

OIE sub regional office in Tunis as part of the REMESA co-secretariat

*Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna" (IZSLER, Brescia, Italy)*

Jordan University of Science and Technology (JUST, Jordan).

An agreement with CIRAD has being currently finalized for the delivery of services and carrying out activities that covers components PII and PII, namely the planned activities for the 2.3 components. The pursued overall objectives will contribute to (1) develop a FMD surveillance programme on risk information and mapping tools for southern European neighbourhood, integrating movement patterns of domestic livestock; (2) assist in the

designing of a surveillance for FMD early detection in high-risk areas of North Africa; (3) evaluate the potential for development of FMD control options in West and Central African countries.

#### 4-Progress against indicators

Activities	Indicators	Baseline Sept.15	Target 4 years	Unit of measure	Current Status
2.3.1	Nb of countries in region with a RBSP accepted by GF-TADs FMD WG	0	1	Nb of countries	First drafting Mauritania
	Nb of countries in region accepted in PCP Stage 3 or above by the GF-TADs FMD WG	1	2	Nb of countries	3 (Tunisia, Algeria, Morocco)
2.3.2	Nb of high-risk border areas where a surveillance system is designed, implemented and functioning	0	1	Nb of implemented risk based surveillance	0
2.3.3	Nb of participants from region taking part in online training course or webinars annually.	0	200	Participants taking part in online training course or webinars annually.	93

#### Progress report

The activities are addressed mainly to the North African countries within the REMESA framework: Tunisia, Libya, Algeria, Morocco, and Mauritania. The EuFMD Member States (France, Portugal, Spain, Italy, Cyprus, Greece, and Malta) are also involved as during the REMESA-JPC meetings the programme and results are shared, commented and approved. Other North African countries, part of REMESA but not directly involved in the present workplan component (Egypt, Lebanon and Jordan), can benefit of the activities supported by this component to improve the coordination framework to progress the REMESA action plan (output 2).

#### Outcome 1: Progress to develop, adopt and implement Risk Based Strategic Plans for FMD control in Libya and Mauritania, and capacity to achieve and maintain PCP Stage 3 or 4 in Morocco, Algeria, Tunisia

##### a. Libya

Following the re-establishment of the contact in November 2017 with the Libyan Veterinary Services in the margin of the REMESA meeting, an update of WorkPlan for Libya was agreed with the objective to assist FMD control and surveillance activities in Libya:

- With regard to the development of RBSP started with 2 workshops in 2014, a possibility of implementing desktop assistance with regular on-line meetings with a restricted Task Force and specific assignments provided will be examined.
- Diagnostic kits were provided and the serosurveillance protocol designed in February 2017 to identify the serotypes circulating in the country in Libya is being implemented. Positive samples will be sent to ISZLER at the end of the survey.
- The study on Livestock movement monitoring in the markets is being implemented in Libya to allow a better understanding of the risk for North Africa (for details, see component 1.8.4). EuFMD will assist the implementation of the survey with the provision of technical assistance for the finalization of the questionnaire and the analysis of the information collected.
- In support to Laboratory diagnostic capacity and to the extent that IZSLET accepted to provide training for two Libyan laboratory trainees, EuFMD will assume the related travel and accommodation costs.

**b. Mauritania**

A series of six workshops was organized in Mauritania between February 2015 and March 2017 with the objective to assist the country for the development and implementation of the RBSP and to improve the knowledge on FMD circulation in the country. After the activity implemented, efforts were stepped up from September to December 2017 as specific commitments were assigned to the FMD task Force for the finalization of the RBSP (a draft RBSP was expected for July 2017). The implementation of future activities aiming to progress toward the development of the national RBSP remains conditioned by the effective commitment of the country to achieve this cornerstone.

**c. Algeria, Morocco and Tunisia**

Three missions were carried out in Tunisia, Algeria and Morocco between November 2017 and January 2018 with the objectives to discuss and assess general and specific needs for the implementation of an early detection and risk-based passive/active surveillance and to prepare the delivery of a regional workshop planned in February 2018 dedicated to promote and set up the FMD risk-based surveillance and early detection system in North Africa. The need of implementing such ongoing surveillance (with the focus on the role of key stakeholders) is considered fundamental to provide good level of confidence that the control measures implemented are effective and the early detection system has a good level of sensitivity.

**Outcome 2: Coordination framework in place to facilitate communication, review and guide upon activity implementation nationally and regionally as needed to progress the REMESA Strategic Plan, including establishment of surveillance measures aimed improving security of sanitary barriers between countries or zones with different FMD situations**

The **FMD Francophone network** was created with the aim of improving the networking and facilitate the exchange of knowledge and experience on FMD prevention and control between French speaking countries. Currently, this network that was merged with North African network is counting more than 136 participants from 20 countries with a forecasted enlargement following the intensification of pillar III activities, particularly in Central and West Africa.

A **series of webinars** have been organized within the Francophone network and the North African network to cover the thematic identified as priorities within the beneficiary countries ((i) Control and Management of the outbreaks; (ii)Epidemiology ; (iii) Laboratory diagnostics; (iiii) Risk assessment and monitoring. In line with activities planned for North Africa (Implementation of trainings and workshops to promote risk based surveillance and early detection in Algeria, Tunisia and Morocco), a webinar was carried out in December 2017 on “Public-private partnership: Involvement and role of livestock-holders and their representatives in early detection and animal health crisis preparedness and management” with the plan to organize the second part of the **public-private –partnership** webinar series on the role of private veterinaries.

Within activities of components 2.4 (training development and coordination) and 2.3 (support to REMESA network), a six weeks On-line in-depth course on risk value chain analysis along the value chain was delivered between 25<sup>th</sup> September to 10<sup>th</sup> November 2017. 14 participants from Libya, Morocco and Tunisia among 33 participants from 7 countries of MENA region have attended this online course.

**Outcome 3: System in place to provide improved disease risk information for planning of vaccination programmes, including vaccine banks, to support managers in REMESA**

Diagnostic kits have been delivered to Algeria and Tunisia in order to carry out the surveillance on small ruminant planned for the region (Algeria, Tunisia and Morocco) with the aim to detect the possible circulation of the disease among the small ruminant population. The surveillance has been carried out in Morocco (723 samples, 33 positives that represent 4.6% as seroprevalence) and Algeria (1480 samples were collected and tested with results are not published yet). In Tunisia the serosurveillance started in January 2018 and samples are currently being sent to the national laboratory.

The field study on vaccine effectiveness, proposed to Algeria, Morocco, and Tunisia in order to evaluate the effectiveness of FMD vaccines currently used has been conducted, including national tests. Samples from both Algeria and Tunisia, went rejected, during the shipment to IZSLER due to traceability problems. In Morocco the testing is ongoing. Tunisia has recently sent a new sample package to IZSLER with ANSES coordination.

## 5. Issues for Executive Committee attention arising during implementation

The programme should focus on a better understanding of the risk associated with the incursion of FMDV in the region (e.g. animal movements) and on the analysis of the factors that drive the change of such risks (e.g. market demand). This will be addressed by the activities organized in collaboration with CIRAD on risk mapping. Implementation of studies in Libya on animal mobility and FMD circulation with the support of the Libyan Veterinary Services should be encouraged despite the instability of the country.

Risk based surveillance for early detection and a risk-based vaccination should be promoted in Algeria, Tunisia and Morocco despite the tendency of the countries to prioritize mass vaccination and surveillance carried out in specific periods.

The development of RBSP and further activities aiming to progress toward its implementation and monitoring remains conditioned by the commitment of Mauritania to finalize the RBSP, and the social-political stability in Libya.

## 6. Areas that require more attention in the next 24 month period

- a. Implement risk mapping studies connected to animal mobility in Maghreb, with the assistance of CIRAD
- b. Maintain the collaboration and coordination established with FAO and OIE in order to provide proper joint assistance and support to the development of a regional FMD control strategy;
- c. Support the Libyan Veterinary Services in the FMD control and a better understanding of their current epidemiological situation and FMD risks linked to animal movement and trade;
- d. Implement FMD early detection system and continuous risk based surveillance in Morocco, Algeria and Tunisia (borders and areas at risk);
- e. Support the development of the coordination framework - REMESA networks (webinar series);
- f. Depending on country commitment, finalize the development of RBSP in Mauritania and promote a regional laboratory network;
- g. Finalize the design and implementation of field vaccine studies, and promote risk based vaccination strategies in Morocco, Algeria and Tunisia;
- h. Support studies on risks associated to livestock value chain and animal mobility and trade.

## 7. Budget (€)

Total Budget WorkPlan activity 24 months (2017-2019)	Expenses Oct. 17 – Dec17	Expenses (forecast) Jan 18-Mar 18	% project completion (forecast)	Actual available (forecast)
326,000	9,658	25,000	10%	291,342

## 8.Gantt charts – Planned and Progress Update/ revised programme

2.3 Support to REMESA	OUTPUT 2.3 Remesa: Assist national FMD risk management as part of the REMESA action plan	YEAR 1													YEAR 2												
	Target (Expected Result)	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	
2.3.1 Actions to develop, adopt, and monitor implementation of RBSP for FMD control in Libya and Mauritania, and capacity to achieve and maintain PCP Stage 3 or 4 in Morocco, Algeria, Tunisia	2.3.1.1 Training to assist national staff to complete RBSP in Mauritania					W S																					
	2.3.1.2 Socio-economic study on FMD in Mauritania	Activity completed; no further actions													Activity completed; no further actions												
	2.3.1.3 Support field FMD serosurveillance and outbreak investigations in Mauritania	Activity completed; no further actions													Activity completed; no further actions												
	2.3.1.4 Support lab. diagnosis in Mauritania																										
	2.3.1.5 Assistance on training (e-learning,) for nat. taskforce members based in Libya					E L	T M												E L								
	2.3.1.6 Support lab. diagnosis in Libya				L S									LS					L S					L S			
	2.3.1.7 Implementation of trainings and workshops to promote RB Surv., early detection and control progs in Algeria, Tunisia and Morocco			O M			W S		M M	O M				O M				O M									
	2.3.1.8 Support lab. diagnosis in Algeria, Tunisia, Morocco				L S									LS					L S				L S				
	2.3.1.9 Support emergency preparedness and test emergency response in Algeria, Tunisia and Morocco																										
2.3.2 Coordination activities as needed to progress the REMESA Strategic Plan, including the establishment of an epi-network, and design of surveillance measures aimed improving security of sanitary barriers between countries or zones with different FMD situations	2.3.2.1 Support REMESA coord. activities		M						M						M					M							
	2.3.2.2 Implementation of epi-network between countries and development of a training credit system		W E B		W E B		W E B		W E B		W E B		W E B		W E B		W E B		W E B		W E B		W E B		W E B		
	2.3.2.3 Assistance and support to the development of a regional control strategy		M			M			M						M			M			M						
	2.3.2.4 Design surveillance system to be implemented in high risk areas and support with models and diagnostic kits the active surveillance																		W S		O M		O M		O M		
2.3.3 Activities to implement a reg. lab. network to provide improved disease risk information for planning of vaccination programmes, including vaccine banks, to support managers in REMESA	2.3.3.1 Support implementation of reg. lab. network in Maghreb and Western Sahel countries						W S			L S								W S		L S							
	2.3.3.2 Support the dev. of regional vaccine bank		M						M						M					M							
	2.3.3.3 Support the vaccination programmes with tools for designing, implementing, assessing				O M				O M				O M		O M				O M				O M		O M		
	2.3.3.4 Support studies on risk associated to livestock value and animal mobility					V						V							V						V		

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 – March 2018**

### **Component 2.4 – Training development and coordination**

**Pillar Manager: F. Rosso**

**Component Manager: J.Maud**

**Reporting: J. Maud**

**Focal point Executive Ctte: M. Blake**

## 2.4 Training development and coordination

### 1. Objective of the component

**The overall objective of this component is:** Improved national and regional capacity for management of FMD through development and evaluation of training programmes for national staff.

**The targets (expected results) are:**

**2.4.1.** To have developed a wide range of PCP-FMD resources and training materials in various modes (e-learning, training of trainers, face to face, webinars) and languages for countries in Pillar II.

**2.4.2.** To have established a method of monitoring and evaluation of PCP-FMD training materials and resources to safeguard the uptake and appropriateness by the intended target audiences (beneficiaries).

**2.4.3.** Fit for purpose training courses and resources are available for wider use by neighbourhood countries which are largely appropriate and adaptable to the needs of the global community (Pillar III update/ GF-TADs)

#### Resource base

**HR:** HQ operational costs are identified for support of activities under Pillar II. 1 STP from Kazakhstan (shared with other components)

**Budget : € 177,068** Agreed at ExCom 94 (including HQ based support services/costs)

**Budget for activities (EC-TF): € 148,000** Agreed at ExCom 94 (excluding HQ based support services/costs)

### 2. Project team

Role	Name	Status
<b>Pillar Manager</b>	Fabrizio Rosso	Animal Health Officer
<b>Component Manager</b>	Jenny Maud	Training Programmes Manager
<b>Network and training support</b>	Nadia Rumich	Network and Training Officer
<b>Co-ordination with components 2.1, 2.2 and 2.3</b>	Pillar II component managers	Secretariat
<b>ExCom oversight</b>	Martin Blake	Executive Committee

### 3. Countries or partner organizations involved

#### Countries involved:

The direct beneficiaries of this component are the countries involved in Pillar II activities and listed as beneficiaries under components 2.1, 2.2 and 2.3. In some instances, and with the agreement of direct beneficiaries, training opportunities (particularly e-learning) may be extended to additional neighbouring countries. Additionally, it is intended that the training resources developed under this component will be repurposed for use for the wider global community under component 3.4.

#### Partner organizations:

The Royal Veterinary College, London, UK, (RVC) provide technical inputs and pedagogical advice in the development of training courses, particularly the Introduction to the Progressive Control Pathway e-learning course.

Online training courses already developed will be adapted and delivered in French through the partnership with CIRAD.

The Jordan University of Science and Technology (JUST) have signed a letter of agreement for the adaptation and delivery of the online Field Investigation Training Course in Arabic language, and for the development of additional online tools to provide training on local biosecurity to farmers and field veterinary staff.

#### 4. Progress against indicators

Activities	Indicators	Baseline Sept.15	Target 4 years	Achieved March 18	Explanation of indicator
2.4.1	New courses developed after regional gap analysis	0	4	4 Socio-economic impact Risk Analysis Along the Value Chain; Field Investigation Training; Introduction to the Progressive Control Pathway; Post Vaccination Monitoring (in combo with PIII); FMD Laboratory Investigation Training Course (in comb with P III)	New online training courses developed, one course equivalent to 20 study hours
2.4.2	Percentage of training courses satisfying monitoring and evaluation criteria	0	100	100	Percentage of courses meeting M and E criteria

#### 5. Reporting of activities

Reporting format	Responsibility	Output	Distribution	Sent out by
<b>Six monthly report to ExCom</b>	Component manager	Written report for ExCom	ExCom, STC	Network and Training Officer
<b>Report on results of monitoring and evaluation of training courses</b>	Component manager	Written report	Executive, summary to ExCom, STC	Component manager
<b>Report on usage statistics of e-learning website</b>	Component manager and Royal Veterinary College	Written report	Executive, summary to ExCom, STC	Component manager
<b>Annual Report for General Session</b>	Training Programme manager	Written report	Member States	Network and Training Officer

#### 6. Progress report

##### *Recruitment of Animal Health Officers on Short Term Placements (STP)*

Dinara Imanbayeva (Kazakhstan), Ipek Keskim (Turkey) and Abdenacer Bakkouri (Morocco) have assisted with the training activities under component 2.4.

**Output 2.4.1: To have developed a wide range of PCP-FMD resources and training materials in various modes (e-learning, training of trainers, face to face, webinars) and languages for countries in Pillar II**

Regular communication has been established with nominated training focal points in each “Pillar II” country in order to guarantee an **ongoing needs assessment framework**. This includes feedback sent to focal points after each training course on the performance of their nominated participants, alongside regular updates of upcoming courses. We aim to use this network of focal points to consult on changes to training needs later in 2018. In addition, after every course, the feedback received guides future training development needs (see monitoring and evaluation framework).

The training needs assessment process was conducted prior to September 2016 and reported at the Executive Committee meeting held in September 2016.

A guideline **timetable for e-learning development and delivery** in 2018 under pillar II has been developed and is shown below:

<b>New e-learning course development for Pillar II 2018</b>												
<b>Course</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
Risk Based Strategic Plan Open Access												
Safer trade introductory modules												
French upgrading of FMD Investigation Training Course												
French language socio-economics												
French language post vaccination monitoring												
Russian language post vaccination monitoring												
<b>E-learning course delivery for Pillar II 2018</b>												
<b>Course</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
Post Vaccination Monitoring for Pillar II												
French Language Socio-economic impact assessment												
FMD Investigation Training Course in French												
FMD Investigation Training Course in Arabic												
FMD Investigation Training Course in Turkish												
FMD Investigation Training Course in Russian												
Russian Language Post Vaccination Monitoring												
French Language Post Vaccination Monitoring												
Progressive Control Practitioners' Network (funded PIII)												

Currently two new e-learning courses are under development:

**1 - Risk-Based Strategic Plan**

The learning objectives of this short online course are that by the end of the course the participants will be able to describe the position and purpose of the RBSP in the PCP-FMD framework; Include the results of the OIE-PVS evaluation and/or gap analysis to define the needs for strengthening the veterinary services on the control of infectious diseases in general and FMD in particular; Be able to convert risk hotspots, gaps and needs identified into component objectives for FMD control, and strategic risk-based tactics and activities; Be able to define monitoring and evaluation indicators using SMART approach; Be aware of the need for stakeholder consultation for the RBSP to be practically feasible and complied with; Consider the RBSP as a living document for policy development on FMD control.

One module of the short course has been piloted as part of the FMD Risk Analysis Along the Value Chain course (see reported below). The final short course will be made available as an open-access resource and additionally used as an online induction course prior to workshops on Risk-Based Strategic Plan Development.

## **2- Safer Trade**

A workshop on Safer Trade and FMD is being developed, in co-ordination with the OIE, under component 2.1.

This course will have an online induction course which participants will follow in the month prior to the workshop, providing a solid basis in theoretical concepts so that the workshop itself can be interactive and simulation based.

The learning objectives of the online induction course are that after completion of the e-learning, participants will be able to Describe the obligations of WTO Member States with respect to international trade, as specified in the SPS Agreement; Identify the role of the OIE in the SPS Agreement, and know where to find the relevant standards; Explain the features of FMD virus infection and epidemiology relevant to international trade; Explain how the PCP-FMD is relevant to safe trade; Define 'risk' in the context of international trade, and explain its relevance to trade.

For objectives one and two new e-learning modules are being developed. Following the training course the modules will be made available as open access e-learning resources.

### **Delivery of training courses**

The following e-learning courses have been delivered to Pillar II countries in the period September 2017 to March 2018:

#### **1-FMD Investigation Training Course in Russian**

(See also component 2.1)

This course was conducted in October 2017 entirely in Russian. The learning objectives were that after studying this course the participants would be able to: recognize the clinical signs of foot-and-mouth disease in cattle, pigs and small ruminants and conduct a clinical examination of suspected animals; Age foot-and mouth disease lesions and understand the epidemiological and diagnostic importance of lesion ageing; Take appropriate samples for laboratory diagnosis and describe the diagnostic tools available for the detection of foot-and-mouth disease; Construct a timeline to carry out source and spread tracing and identify dangerous contacts, being able to prioritize them; Identify risk factors for local disease spread; Describe the basic principles of biosecurity; Describe the risks of foot-and-mouth virus spread associated to veterinary personnel and relate the characteristics of the virus with appropriate biosecurity strategies; Use personal protective equipment (PPE) effectively and establish and effective cleaning and disinfection protocol for visiting foot-and-mouth disease suspected premises; Understand the key features of foot-and-mouth disease vaccines and the basic concepts related to vaccine programme implementation and monitoring; Understand the different epidemiological settings that determine the objective of a foot-and-mouth disease vaccination programme and outline different vaccination strategies; Describe key features of an effective emergency vaccination programme; Understanding the key features of the Progressive Control Pathway; Understand the key concept of the Global Foot and Mouth Disease Control Strategy.

The course involved 12 hours study over a four week period and included two live webinars and a tutored discussion forum.

There were 190 participants from 11 countries (Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Uzbekistan, Ukraine) who were nominated by the National Focal Points of the countries. 52 of the participants who were nominated for the course (27%) completed the course, considerably lower than the completion rates achieved in European settings. This was attributed to a combination of internet access issues and inappropriate nomination of participants.

The feedback from those who completed the course was overwhelmingly positive with 77% of survey respondents rating the course as very good overall:

## 2-FMD Risk Analysis Along the Value Chain

This “in-depth” online course took place in October and November 2017 and involved 55 nominated participants from Pillar II countries and associated FAO country and regional offices.

The learning objectives of the course were to increase confidence to conduct a risk analysis and value chain mapping, and use this directly in work to develop or implement the FMD control strategy in your country. In particular, to apply the key concepts and principles of risk analysis; map value chains in order to identify disease transmission risks and control options; assess the impact and feasibility of candidate risk mitigation measures; apply lessons learnt to the develop a Risk-Based Strategic Plan for FMD control.

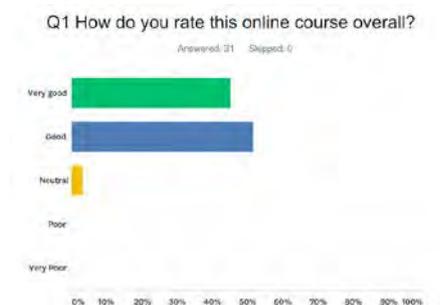
The course involved four hours study per week over a six-week period, with participants working in country groups to complete an assignment each week.

65% of those nominated by countries completed the course, which is considerably higher than experienced for other courses of this type, where the time involved is particularly challenging for participants.

The breakdown of course completion was as follows:

Country	Nominated	Completed
Armenia	3	1
Azerbaijan	2	0
Egypt	6	6
Georgia	4	0
Jordan	4	4
Kazakhstan	1	1
Lebanon	2	0
Libya	7	4
Morocco	5	4
Palestine	5	5
Tunisia	4	2
Turkey	5	4
FAO officers	7	2

Participant feedback was sought in an online forum and their overall feedback given is shown below:



The high participation rate by many counties, and qualities of work produced in the assignments for this course were a particular highlight of this online course.

## 3-Post Vaccination Monitoring

This course started in February 2018. It is the second edition of the Post Vaccination Monitoring online course, with the first edition having been conducted for Pillar III countries under components 3.2 and 3.4.

**Output 2.4.2: To have established a method for monitoring and evaluation of PCP-FMD training materials and resources to safeguard the update and appropriateness by the intended target audiences and beneficiaries and 2.4.2.1 Development of monitoring and evaluation methodology and 2.4.2.2 Monitoring and evaluation of training**

All training courses are evaluated by an online feedback survey immediately after the workshop, with summative assessments to verify participant's knowledge used at the end of online training courses. A protocol for evaluation of each training course, based on the evidence provided by the survey and assessments has been developed. All results of surveys and evaluation documents are stored on a dedicated "trainers" section of the EuFMD e-Learning platform, and are shared with relevant nominating organizations.

**Output 2.4.3: Fit for purpose training courses and resources are available for wider use by neighbourhood countries and are largely appropriate and adaptable to the needs of the global community**

The open access introductory e-learning course on the PCP has been made available as a freely available open access resource globally. The Field Investigation Training course is used for both pillar II and pillar III countries. As illustrated by the Socio-Economic Impact Assessment course, some places on the "in-depth" e-learning course will be made available to non-Pillar II countries, through collaboration with FAO and OIE partners.

## 6. Issues for Executive Committee attention arising during implementation

A key upcoming priority is the translation of the English language e-learning courses that have now been developed into French and Russian, and their delivery in these new languages. A delivery partner (CIRAD) has been identified and contracted for the delivery of French language e-learning. A similar delivery partner(s) and Russian language experts are now being sought.

The low completion rate in the Russian language online course is disappointing and merits further investigation.

## 7. Priorities for the next six months

The next six months will focus on:

- Development of the following e-learning courses:
  - Risk Based Strategic Plan e-learning;
  - Safer Trade e-learning induction course;
  - French language FMD Socio-economic Impact Analysis.
- Delivery of the following e-learning courses:
  - FMD Post Vaccination Monitoring;
  - Safer Trade induction course;
  - French language FMD Socio-economic Impact Analysis;
  - FMD Investigation Training Course in Arabic;
  - FMD Investigation Training Course in French;
  - FMD Investigation Training Course in Turkish.
- Further in-depth analysis of the monitoring and evaluation framework for e-learning and training programmes (see also components 1.1.1 and 3.4).
- Identification of partners for Russian language e-learning.
- Continue improvement of the monitoring and evaluation system of e-learning

### 8. Success stories and further emphasis

The Risk Analysis Along the Value Chain e-learning course was a particular success, with high completion rates, enthusiastic participation of a number of pillar II countries and quality assignments produced.

The interest and enthusiasm generated by the February Post Vaccination Monitoring e-learning demonstrates the need for increased capacity in this area across the pillar II region, and this area will be focused on, not only in the e-learning course but also in follow up workshops and activities across Pillar II.

The new e-learning and training courses on Safer Trade are an important new addition to EuFMD's repertoire with the potential for high impact across pillar II and beyond.

### 8. Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
148,000	24,904	30,000	37%	93,096

### 9. Updated Gantt Chart

Currently, there is no deviation from planned activities.

OUTPUT 2.4 National and Regional Capacity for the Management of FMD through dev. and evaluation of training programmes for national staff		YEAR 1												YEAR 2												
Target (Expected Result)	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	
2.4.1 Develop new courses after completion of regional needs and capacity assessment	2.4.1.1 Implement ongoing needs assessment framework																									
	2.4.1.2 Pillar II component managers conduct needs assessment	Activity completed; no further actions																								
	2.4.1.3 Research existing training resources available	Activity completed; no further actions																								
	2.4.1.4 Plan for training courses and resources to be developed and delivered is completed																									
	2.4.1.5 Development of training courses and resources																									
	2.4.1.6 Delivery of training courses and resources																									
	2.4.1.7 Clear structure for delivery costs of training courses set up	Activity completed; no further actions																								
2.4.2 Monitoring and evaluation of training	2.4.2.1 Monitoring and evaluation of training occurs	Activity completed; no further actions																								
	2.4.2.2 Courses adapted as necessary following results of monitoring and evaluation																									
	2.4.2.3 Courses adapted as necessary following results of monitoring and evaluation																									
2.4.3 Development of courses and resources that are also largely appropriate and adaptable to the needs of the global community (Pillar III uptake/GF-TADs)	2.4.3.1 Training materials and resources are designed to be readily translated and adaptable																									

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### **Component 3.1 - *Improved system for monitoring and evaluation of progress of regional programmes on FMD control***

**Pillar Manager: N.Lyons**

**Component Manager: N. Lyons / N. Rumich**

**Reporting: N.Lyons**

**Focal point Executive Ctte**

### 3.1 IMPROVED SYSTEM FOR MONITORING AND EVALUATION OF PROGRESS OF REGIONAL PROGRAMMES ON FMD CONTROL

#### 1. Objective of the component

The overall objective of this component is: *to improve the system of monitoring and evaluation of regional programmes on FMD control*

#### **OUTPUTS (EXPECTED RESULTS):**

*Support the activities of the FAO-OIE FMD working group including support for producing relevant reports and providing follow-up between roadmap meetings; Development of the GF-TADs website for relaying the results of PCP-FMD Roadmap meetings; Provide relevant training to the activities of the FAO-OIE working group including expert missions as indicated.*

*Specific Outputs:*

1. Gather information, author reports for the FMD Working Group;
2. Activities to support global communication of the PCP situation.
3. Provide training support to the FAO:OIE working group activities.

**DIRECT INVOLVED BENEFICIARIES:** Activities under this component assist the GF-TADs FMD Working Group in advancing Global FMD Control Strategy

#### **RESOURCE BASE**

- HQ based: Staff 2% - Consultant 49.7% (Operational and Technical)
- Budget for activity: 89,894EUR excluding HQ and support costs, total: 116,446 EUR

#### 2-Project team

Role	Name	Status
<b>Pillar Manager</b>	Nick Lyons	Animal Health Officer
<b>Component manager</b>	Nick Lyons/Nadia Rumich	EuFMD
<b>GFTADS-FMD WG</b>	Samia Metwally	FAO
	Laure Weber-Vintzel	OIE
<b>National consultants:</b>	Not applicable	
<b>ExCom oversight</b>		

#### 3-Countries or partner organizations involved

Countries involved: this component involves collection of data at a global level from countries working through the PCP-FMD, and support through roadmap meetings to regional groups.

Activities under this component are carried out in order to assist the activities of the GF-TADs FMD Working Group.

#### 4-Progress against indicators

Activities	Indicators	Baseline	Target 2 years	Unit of measure	Current Status
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Sept 2015					
3.1.1	Gather information, author reports for the FMD Working Group	4	4	Number of reports	0
3.1.2	Activities to support global communication of the PCP situation	0	50% increase	Website usage statistics	0
3.1.3	Provide training support to the FAO:OIE working group activities	1	1	International training events	1

### Progress Report

Progress in this component is reliant on receiving relevant requests from the FAO-OIE FMD working group. There has been no recent progress on the annual Global FMD report. Meetings have been held with the current staff in charge of the GFTADs website and an intern has been recruited to begin work on the website. A Letter of Agreement is in process to secure support from IZSLT (*Istituto Zooprofilattico Sperimentale delle Regioni Lazio e Toscana*) in assisting the FAO-OIE FMD working group in providing training support and expert missions including support between PCP-FMD Roadmap meetings.

### 5. Priorities

Recruitment of Short Term Placement to assist and co-ordinate the activities of the component.  
Further consultation with the GF-TADs FMD working group.

### 6. Budget

Total Budget Workplan activity 24 months	Expenses (actual) Oct 17 – Dec. 17	Expenses (forecast) Jan 18-Mar 18	% project completion	Forecast available
86,894	7,885	15,000*	26.3	64,009

\*IZSLT and CIRAD LoA

## 7. Gantt Chart

3.1 Support to Global Progress monitoring	OUTPUT 3. Improved system for M&E of the progress of regional programmes on FMD control		YEAR 1												YEAR 2											
	Target (Expected Result)	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
3.1.1 Gather information, author reports for the FMD Working Group	3.1.1.1 Information gathering																									
	3.1.1.2 Provide support to monitoring and evaluation activities of FAO-OIE FMD Working Group including contributions to reports (subject to requests) and providing follow-up between roadmap meetings																									
3.1.2 Activities to support global communication of the PCP situation	3.1.2.1 Website (in collaboration with FAO:OIE working group)		OM			WS		OM		OM		OM														
3.1.3 Provide training support to the FAO:OIE working group activities	3.1.3.1 Contribute to training 12-15 experts on FMD control measures to support countries when requested					WS		OM		OM		OM														
	3.1.3.2 Collaborate with FAO and OIE to support two or three expert team missions each year		TM	TM	TM		WS						WS					WS				WS				

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### **Component 3.2 – *Support to Global Progress Monitoring of FMD Control programmes***

**Pillar Manager: N. Lyons**

**Component Manager: C. Bartels**

**Reporting: C. Bartels**

**Focal point Executive Ctte**

## 3.2 PROGRESSIVE CONTROL PATHWAY (PCP)

### 1. Objective of the component

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

#### **OUTPUTS (EXPECTED RESULTS):**

*Dissemination of the principles and applications of PCP-FMD, primarily for countries endemic with FMD but including EuFMD member states and neighbourhood; Developing guiding documents (guidelines and technical notes), trainings and workshops on PCP-FMD*

#### *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

**DIRECT INVOLVED BENEFICIARIES:** the FMD WG of FAO/OIE; international pool of expertise at national and regional level that utilise the PCP in their work with countries, including European neighbourhood; and Pillar 2 activities of EuFMD that will use the guidelines/training resources.

#### **RESOURCE BASE: as bullet points and**

- **HR: Management** P5 (10%), P2 (5%). Products/Activities: developed with 3 consultants.

- **Budget for Activities** (EC - TF): *excludes HQ based support services/cost: €155,954*

### 2-Project team

Role	Name	Status
<b>Pillar Manager</b>	Nick Lyons	Animal Health Officer
<b>Component manager</b>	Chris Bartels	EuFMD consultant
<b>GFTADS-FMD WG</b>	Samia Metwally Laure Weber-Vintzel	FAO OIE
<b>National consultants:</b>	Not applicable	
<b>ExCom oversight</b>		

### 3-Countries or partner organizations involved

Application of PCP-FMD is worldwide, particularly for endemic situations (PCP-FMD Stage 1-3). Therefore, there is no tailoring to specific countries. EuFMD will work with FAO and OIE where appropriate in developing these tools and guidelines.

As West Eurasia (component 2.1), South-east Mediterranean (component 2.2) and North Africa (component 2.3) are focal areas for EuFMD, new developed PCP-FMD tools and training may well be first applied in these regions.

#### 4-Progress against indicators

Activities	Indicators	Baseline Sept 2017	Target 2 years	Unit of measure	Current Status
3.2.1	Development and Revision of PCP guidelines for joint FAO/OIE application	5	6	Number of guidelines	5
3.2.2	Training of PCP-FMD experts	6	30	Number of people trained	50
3.2.3	Support the facilitation of regional roadmap meetings, their follow-up actions and associated training or assessment processes	4	a) 5 b) 5 c) 2	a) No of roadmaps supported by EuFMD trained expert annually b) Between roadmap meeting webinars c) Workshops for RAP development	a) 2 b) 1 c) 0

#### Progress Report

##### Outcome 1: PCP toolbox further developed for PCP-FMD user community, including norms set, guiding documents developed for joint FAO/OIE application

The revision of the general PCP guidelines was finalized through an intense review process of the OIE/FAO FMD Working Group. Subsequently, the EuFMD has and are updating existing materials and online training resources to include the major changes to the PCP guidelines.

For countries in PCP-FMD Stage 0, the template for the “Risk Assessment Plan” developed by EuFMD was finalized by the FAO/OIE FMD Working Group. At the time of writing, it is anticipated that the FMD Working Group is going to call for a webinar to explain the template and to support countries in West Africa to develop the RAP. EuFMD will support these countries in doing so.

Based on the FAO/OIE guidelines on Post-vaccination monitoring, EuFMD conducted an online-training course for the SAARC and SADC region between September and October 2017 (reported under 3.4).

The materials of the online training on “Assessment of the socio-economic impact of FMD” (an online training conducted for veterinary staff of Pillar II and Pillar III countries (75 participants) between May and June 2017) are due to be reviewed by CIRAD under a LoA prior to conducting the same online training in French. Concurrently, this review will provide the impetus to convert this training material into a technical paper (instead of a guideline) on “How to conduct socio-economic impact assessment of FMD?”

##### Outcome 2: System for training PCP-FMD experts well established, and as part of the GF-TADS led implementation of the GF-TADS strategy, contributes to national and regional PCP progress

- a) Needs for PCP-FMD training in Asia and Africa (activity 3.2.2.1) are investigated in part with components 2.4, 3.3 and 3.4. Assessment of PCP-FMD related training in Asia and Africa formed the basis for multiple online training courses as indicated under Output 1.
- b) Training for FAO/OIE regional officers is an ongoing discussion for the FMD Working Group: the actuality of the training, the selection of appropriate FAO and OIE regional staff and sustained support for those trained and applying the training. The same applies for the training of FMD Experts on the PCP-FMD. The FMD Working Group is currently reviewing a core list of FMD experts for this training.
- c) As a result of the most recent MENA workshop, the Kingdom of Saudi Arabia requested a follow-up workshop on supporting the development of a risk-based strategy plan. The FMD Working Group is discussing the idea to extend such workshop to other countries in the region. It is foreseen to conduct such workshop in Spring 2018.

### Outcome 3: The GF-TADS system for PCP assessment is maintained and/or further improved, and the quality and impact of regional roadmap meetings in at least 3 regions further improved

EuFMD participated in the MENA regional roadmap meeting in Amman, Jordan in October 2017, and was part of the epinet and labnet workshop for West Eurasia in 2017. At this point in time, no dates are known for regional roadmap meetings later this year. Plans are currently under development to provide more support to countries between roadmap meetings.

### 5-Issues for Executive Committee attention arising during implementation

An issue for the Executive Committee's attention is that activities under this component are entangled with activities under components 2.4 and 3.4 in which training needs are addressed. In particular the PCP Practitioner Network intends to establish a network of active users in FMD endemic countries in Africa and Asia of the PCP through monthly themes with development of presentations, exercises and job-aids. These materials are the basis for additional training (online or workshops in country) of veterinary officers.

Although, the vision of the FAO/OIE FMD Working Group is defined, it remains an issue to implement activities under outputs 2 and 3. As repeatedly indicated, there is a need to provide more direct support to individual countries, particular those repeatedly assessed as being in a provisional stage by the Regional Advisory Group (RAG). In January 2018, EuFMD has forwarded a proposal to the FAO/OIE FMD Working Group to follow-up activities from regional roadmap meetings. This proposal introduces the concept of a PCP-support officer (PSO) to provide follow-up to individual countries between roadmap meetings:

1. The PSO will liaise with the country PCP focal points and the local or regional FAO and OIE offices to follow up the recommended actions of the WG/RAG including providing technical advice where appropriate;
2. The method of follow-up provided by the PSO will be tailored to the individual needs of the country but will potentially include follow up communications and online meetings with a nominated focal-point in each country. In occasional instances country missions may be performed if deemed necessary and if funds are available;
3. PSOs will provide a summary of all their activities to EuFMD and the WG;
4. A list of PSOs, their specialism(s) and their geographical areas of interest will be produced. This action will also highlight deficits in particular regions and indicate areas for training in PCP-FMD.

A short-term professional (STP) supervised by EuFMD will support the activities of PSOs to individual countries based on the type of support required and at the instruction of the WG and RAG. It is not anticipated that every country will need a PSO, only those in provisional stages and if deemed appropriate by the WG/RAG.

**Table 1.** Countries in provisional PCP-FMD stages by region from the latest Roadmap meeting.

Region	Date of latest Roadmap meeting	PCP-FMD stage	Countries in provisional stage
East Africa	October 2014	1	South Sudan
		2	Sudan
Middle East	October 2017	2	Bahrain, Iraq, Jordan, Lebanon, Saudi Arabia, Syria, UAE
		3	Kuwait
		1	Bangladesh
SAARC	December 2016	2	Afghanistan
SADC	September 2017	1	DRC
		2	Malawi, Mozambique, Tanzania, Zimbabwe
West Africa	September 2016	1	Benin, Burkina-Faso, Côte d'Ivoire, Guinea, Guinea-Bissau, Niger, Togo
West Eurasia	April 2016	2	Kyrgyzstan

The STP and PSOs will be funded under Pillars II and III of the EuFMD workplan. Currently there are 25 countries in provisional stages (see table above) which will be prioritized for support in the initial phase of this proposal. It is expected for each of these countries country, one day of consultancy will be required equivalent to approximately €10,000 to be provided by output 2.2.3 or 2.2.4 for Pillar 2 countries and 3.2.3 for Pillar III countries. Missions will be funded by outputs 2.2.3, 2.2.4 and 3.1.3 as appropriate depending on funds available.

EuFMD was invited to take part in the last FMD Working Group meetings. This has facilitated a better understanding of the near-future plans laid out by the FMD Working Group and more direct collaboration between EuFMD and the FMD Working Group.

In the GANTT chart below, progress is indicated alongside the original planning.

## 5. Areas proposed to give more attention/emphasis in the next 24-month period

With the Global Strategy for FMD control in place for just over five years and the PCP-FMD approach being taken up well by the international communities with multiple groups using the approach for controlling other infectious diseases (Rabies, PPR, Trypanosomiasis), it is suggested to conduct an in-depth review of the PCP approach with the reality of progressive control of FMD in FMD-endemic countries. This in-depth review should answer questions such as:

What are the tangible changes in countries progressing on the PCP-FMD in terms of:

- FMD incidence and impact:
- Strengthened capacities of the Veterinary Services in the fields of outbreak investigation, risk analysis and monitoring and evaluation;
- Sustained long-term control of FMD integrated with other priority infectious diseases through policy development and stakeholder consultation mechanisms.

## 7. Budget

Total Budget Workplan activity 24 months	Expenses Oct. 15 –Dec. 17	Expenses Jan. – Mar. 18	% project completion	Actual available
155,954	14,230	29,230	28%	112,494

## 8. Gant chart

3.2 Methods and guidelines for application of PCP-FMD	OUTPUT 3.2 Improved capacity, methods, and guidelines for application of the EuFMD, FAO and OIE progressive control pathway (PCP) for FMD	YEAR 1												YEAR 2												
	Target	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
3.2.1 Dev. and Revision of PCP guidelines for joint FAO:OIE application	3.2.1.1 Revision of general PCP-FMD guidelines																									
	3.2.1.2 Support to developing guidelines on socio-economic impact assessment of FMD																									
	3.2.1.3 Dev. additional guidelines relevant to PCP-FMD stage 0-3 (incl. that requested by the FAO/OIE WG) including: RAP, NCP, conducting sero-surveys; value-chain analysis; risk assessment; stakeholder consultation; PCP check lists.																									
	3.2.1.4 In response to country requests, development and broadcasting of e-learning materials including organizing PCP-FMD e-learning courses for countries in stage 0-3 (in line with activities under components 2.4, 3.3 and 3.4)																									
3.2.2 Training of PCP-FMD experts	3.2.2.1 Explore financial resources for training PCP-FMD experts																									
	3.2.2.2 Support the dev.t of PCP-FMD experts training prog																									
	3.2.2.3 Support and maintain a network of PCP-FMD experts through their involvement with the PCP Practitioners Network (see comp 3.4)																									
	3.2.2.4 Explore ways to accredit PCP-FMD trainers (see also comp3.4)																									
3.2.3 Support facilitation of reg.roadmap meetings, follow-up actions and associated training or assessment processes	3.2.3.1 Support the facilitation of regional roadmap meetings (MENA, West Eurasian, Eastern Africa, SADC, SAARC, others), including reporting																									
	3.2.3.2 Support to follow-up on Target (Expected Result) and actions agreed during the regional roadmap meetings																									
	3.2.3.3 Adaptation of PCP-FMD assessment materials and procedures at reg. roadmap meetings, dependent on revision of PCP-FMD guidelines (activity 1.1) and request from FMD-Working Group.																									

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period October 2017 - March 2018**

### **Component 3.3 - *Laboratory support***

**Pillar Manager: N. Lyons**

**Component Manager: K. van Maanen**

**Reporting: K. van Maanen**

**Focal point Executive Ctte:**

### 3.3 Laboratory support

#### 1. Objective of the component

**The overall objective of this component is:**

improved international FMD reference laboratory services and their contribution to regional epidemio-surveillance networks

This component will continue to give support for improved international FMD reference laboratory services and their contribution to regional epidemio-surveillance networks. The outputs of this component should result in an increased level and quality of surveillance information from the OIE/FAO Lab Network, with progress towards the targets required for regional roadmap vaccine priority setting in at least the 4 priority virus pools (pools 4, 5 and 6 in Africa and pool 3 in West Eurasia).

Most activities under this component will be subcontracted to the Foot-and-Mouth Disease World Reference Laboratory (WRLFMD) under a Letter of Agreement (LoA) between FAO and The Pirbright Institute (TPI). Expected results include: improved coordination and international harmonization in methods and other support to activities by the OIE/FAO global FMD laboratory network; a level of international surveillance performance in priority virus pools and countries that meet or exceed minimum the required for regional vaccine match recommendations; through diagnostic activities managed by the WRL, epidemio-surveillance networks in priority pools that function effectively in gathering, sharing and improved use made of surveillance information; and support for a global proficiency test scheme to include 12 laboratories in the global network.

Activities will in 2017-19 re-invigorate regional laboratory networks, with better epidemiology linkages, to ensure better technical expertise development at regional levels, underpinning surveillance and regional roadmaps. The Foot-and-Mouth Disease Laboratory Investigation Training Course (FLITC) for which modules have been developed by TPI has been delivered for the first time in October 2017 in collaboration between EuFMD will be delivered again at least once in 2017 – 2019.

In West and Central Africa, the initial focus will be on identifying regional partners for collaboration, and a thorough assessment of competency gaps, training needs and appropriate training modalities for the region (see also component 3.4). We will explore the use of Francophone institutions with existing experience in the region as delivery partners for relevant projects with the aim to subcontract activities under a LoA. Considering the significant gaps in virological surveillance and disease intelligence in West and Central Africa, local partners have already been sought to undertake a project to enhance surveillance through the use of lateral flow devices working with the newly appointed EU FMD reference laboratory at ANSES.

**OUTPUTS (EXPECTED RESULTS):**

1. Coordination of international harmonization in methods and support activities by the OIE/FAO global FMD laboratory network.
2. Support to international surveillance performance in 3 priority virus pools including sample shipment, training and supervision of Regional Support Laboratories (RSLs) to meet or exceed minimum surveillance requirements.
3. Development and implementation of training materials and courses for epidemio-surveillance networks in 3 priority pools.
4. Support for a global proficiency test scheme, to include 12 laboratories in the global network

**DIRECTLY INVOLVED BENEFICIARIES:** The direct beneficiaries from this component are the WRLFMD and all countries that submit samples and make use of the epidemiological and vaccine matching advice provided. Also the laboratories in the global network that benefit from the proficiency tests and other laboratories that benefit from the training provided. Finally the partners in West and Central Africa who will be delivering on the surveillance project in development.

**RESOURCE BASE**

HR: HQ operational costs € 11,887

**Budget for Activities** (EC - TF): *excludes HQ based support services/costs.*

**€ 628,772** (€ 455,106 contracted to WRLFMD).

**2-Project team**

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Pillar Manager</b>	Nick Lyons	Animal Health Officer
<b>Component manager</b>	Kees van Maanen	EuFMD
<b>STC members involved in oversight role</b>	Stephan Zientara (lab) Nick Lyons (epi)	STC
<b>Contractor</b>	The Pirbright Institute- Donald King	Head, World Reference Laboratory, Pirbright
<b>FAO Contact</b>		Lab Unit coordinator, FAO
<b>Excom oversight</b>	TBC	Executive Committee

**3-Countries or partner organizations involved**

FAO and OIE developed the joint global laboratory network proposal in collaboration with the World Reference Laboratory at the Pirbright Institute.

**4-Progress against indicators**

<i>Activities</i>	<i>Indicators</i>	<i>Baseline Sept 2017</i>	<i>Target 2 years</i>	<i>Unit of measure</i>	<i>Current Status</i>
3.3.1	Number of OIE/FAO Laboratory Network meetings	2	4	Annual International Meeting	3
3.3.2	Number of samples typed in relation to minimum surveillance requirements per pool	0	6	Number of pools where target reached (120 samples per year per target pool from at least 5 countries)	0
3.3.3	Number of new modules for e-learning and training on laboratory surveillance meeting quality standards	0	3	e-learning modules	1
3.3.4	Number of laboratories supported to take part in global proficiency testing scheme annually	0	10	Laboratories taking part in proficiency testing scheme annually	0

## Progress Report

### **Output 1. Coordination of international harmonization in methods and support activities by the OIE/FAO global FMD laboratory network.**

The 12<sup>th</sup> OIE/FAO FMD Laboratory Network Meeting was organised in Pretoria, South Africa 28<sup>th</sup> – 30<sup>th</sup> of November 2017. The meeting started with a closed session, followed by an open session and lasted three days, thus creating more opportunities for discussion and interactions. A summary report of the meeting is available. The OIE/FAO FMD Reference Laboratory Network is a vital contributor to the global control of FMD and provides opportunities and expertise for developing and sustaining laboratory capacity and capability, exchange of materials and technologies, harmonising approaches to diagnosis and supporting complementary research. Laboratories within the network regularly receive samples for FMD diagnosis from many parts of the world. The in vitro antigenic properties of selected isolates are assessed for vaccine matching and nucleotide sequencing allows precise characterisation of new isolates and tracing of their origin by comparison with viruses held in virus collections. This analysis assists the monitoring of the ‘real time’ emergence and spread of FMD virus globally.

The text of a Memorandum of Understanding (MoU) that describes the working relationship between the 15 OIE and FAO Reference Laboratories that have responsibility for FMD has been drafted by WRLFMD and agreed by all partners (via the Annual meetings and follow-up teleconferences), and OIE and FAO. The final version of the document has been circulated during 2017 for official signatures.

Exchange of viral sequence data is occurring regularly, for example in the previous two years WRLFMD has exchanged viral sequence data with the OIE/FAO global FMD laboratory network (and other laboratories) including BVI (Botswana), PD-FMD (India), RAHO 6 (Vietnam), APQA (South Korea), LVRI (China) FGBI-ARRIAH (Russia), OVI (South Africa), KVI (Israel), CODA-CERVA/NVRI, (Belgium/Nigeria) JUST (Jordan), SAP Institute (Turkey), ANSES (France), IZSLER (Italy), VRI (Sri Lanka). Where new sequence data has been provided to WRLFMD, genotyping reports have been prepared and circulated to OIE and FAO.

Collaborative studies involving WRLFMD included the coordination and exchange of information associated with the emergence and spread of the viral lineages, evaluation of FMDV vaccines and the development of new diagnostic tests (see publications: Bachanek-Bankowska et al., 2016; Knowles et al., 2016; Eldaghayes et al., 2017; Qiu et al., 2017; Ularanu et al., 2017; Lyons et al., 2017; Saduakassova et al., 2017; Howson et al., 2018; Souley Kouato et al., 2018).

Recent achievements of the OIE/FAO Foot-and-Mouth Disease Reference Laboratory Network:

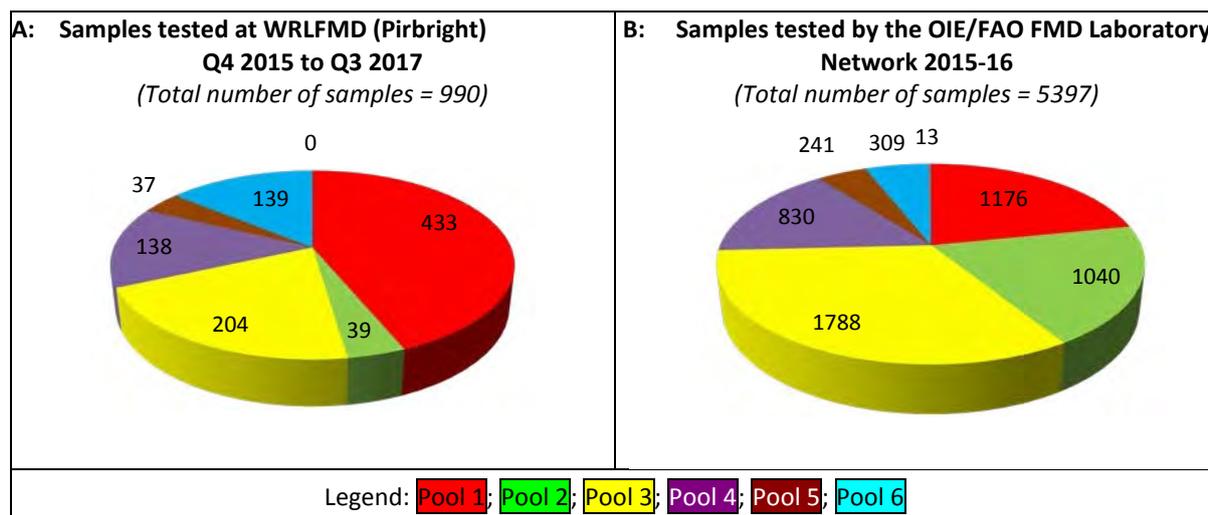
- Agreement on a memorandum of understanding (MoU) to cover Network activities.
- Initiated and contributed expertise to an OIE Resolution relating to FMDV serotype C ([http://www.oie.int/fileadmin/Home/eng/About\\_us/docs/pdf/Session/2017/A\\_RESO\\_2017\\_Public.pdf](http://www.oie.int/fileadmin/Home/eng/About_us/docs/pdf/Session/2017/A_RESO_2017_Public.pdf) adopted by the OIE-GS in 2017).
- Rapid exchange of data to track the recent spread of emerging FMDV lineages in Asia.
- Publication of the 2016 Annual Network Report summarising the global situation regarding the distribution of FMD in different regions of the world (<http://www.foot-and-mouth.org/publications/oiefao-fmd-laboratory-network-2016>).
- Contributed expertise to an updated chapter (Chapter 2.01.08) of the OIE Terrestrial Manual that covers diagnostic tests for FMD (approved in May 2017).
- Prepared a draft outlining an inter-laboratory exercise for FMDV vaccine-matching (to be submitted for publication shortly).

### **Output 2. Support to international surveillance performance in 3 priority virus pools including sample shipment, training and supervision of Regional Support Laboratories (RSLs) to meet or exceed minimum surveillance requirements**

Over three thousand clinical samples from suspect cases of FMD were tested by laboratories in the Network (and associated laboratories) during 2016. However, sampling within these pools is not equivalent: surveillance

within West Africa (Pool 5) is particularly sparse and efforts are currently underway to collaborate with local partners to enhance sampling for FMDV in this region.

Under the previous LoA covering the period Q4 2015 – Q3 2017 WRLFMD has tested about 500 virological samples per year and the network altogether has tested about 2,700 virological samples per year (see figure below).



Training and supervision to regional support laboratories: in this reporting period, the WRLFMD staff have provided training in a range of FMD diagnostic and field methods as part of an OIE Twinning Project with NAHDIC in Ethiopia (covered under a separate OIE contract). In the previous two years, the WRLFMD continued to provide two-week practical training courses in FMD diagnostics which have involved delegates from Albania, Malta, Sweden (for 2016), and Israel, Lithuania, New Zealand and Singapore (for 2017). This course covers practical instruction in virological and serological diagnostic methods including virus isolation, real-time RT-PCR, sequencing, Ag-ELISA, SP and NSP serological methods, VNT and vaccine-matching. In addition, tailored courses have been offered at Pirbright to cover RT-PCR methods (2 delegates from Botswana in 2016, and one student from Kazakhstan in 2017), FMD serology (1 delegate from Ireland in 2017), as well as visits to overseas laboratories to deliver specific training in real-time RT-PCR (Kenya; travel for two WRLFMD staff funded under this LoA), sequencing (Tanzania) and vaccine-matching (South Korea). Written advice (via email) on FMD diagnostic methods has been regularly provided to FMD Reference laboratories in many different countries on multiple occasions.

### **Output 3. Development and implementation of training materials and courses for epidemio-surveillance networks in 3 priority pools**

To revitalise the networks in East Africa, a core group was formed to organize a series of webinars and online meetings. Since February 2016 these have been organized on a monthly basis. In 2016, nine webinars were organised, and the structure has been amended after discussions in the core group and feedback from the audience. In 2017 it appeared quite difficult to organize webinars. However, a major achievement of WRLFMD has been the recent development of new eLearning modules for field investigation, diagnostic methods and quality assurance. Specific funding to cover the generation of the eLearning packages was provided by BBSRC (UK), but technical content and oversight of the project came from WRLFMD staff and all the material was reviewed by EuFMD staff. EuFMD provided the Elearning platform and expertise and hosted the first **FMD Laboratory Investigation Training Course (FLITC)**. This joint WRLFMD/EuFMD FLITC course was successfully provided to >100 scientists during October 2017 with three webinars co-hosted by WRLFMD and EuFMD (inputs and outputs under components 3.3 and 3.4 of the EuFMD work program).

Networks in West Africa also need to be revitalised. Since most countries in pool are Francophone, a Francophone network has been set up under the EuFMD umbrella with the valuable assistance of Dr Labib Bakkali-Kassimi, ANSES, Maisson-Alfort, Paris. In 2017, four webinars have been organized with the following topics: 1) Réseau francophone pour le contrôle de la fièvre aphteuse - lancement du réseau et de ses activités; 2) Situation épidémiologique de la fièvre aphteuse et les mesures à prendre pour une détection précoce; 3) Cartographie des risques et leurs utilités dans le contrôle de la fièvre aphteuse; 4) Impact socio-économique de la fièvre aphteuse et le rôle du commerce transfrontalier du bétail dans l'amplification et la dissémination des maladies.

In West Eurasia (pool 3) networks also need to be revitalised. Steps forward for development of the West Eurasia networks Epi-net and Welnet in support of better information share have been discussed during the West Eurasia networks online meeting: West Eurasia Networks-discussion on regional needs and networks activity plans proposals, carried out on 11<sup>th</sup> May 2017, and were discussed in more detail during the "First Regional West Eurasia FMD Epidemiology and Laboratory Networks Meeting" in Tbilisi, Georgia on 18-20 September, 2017. The aim is to support sustainable regional networks development, to promote technical discussions and coordination to address existing gaps in regional FMD control, as well as to consolidate on the past activities and recommendations from the West Eurasia Roadmap meetings. See component 2.1 report for more information.

#### **Output 4. Support for a global proficiency test scheme, to include 12 laboratories in the global network**

WRLFMD activities have continued as planned, under the current LoA describing outputs and activities in the time period October 2015 – October 2017. The 2016 PTS has been finished and results are summarized in the 2016 annual report of the OIE/FAO FMD Laboratory Network. Ten out of 13 FMD laboratories in the global network invited to participate funded by EuFMD actually participated in this PTS (India, Senegal and Argentina did not participate). In the ongoing 2017 PTS only China (has indicated to participate every other year) and India (no response) are not participating.

### **5-Issues for Executive Committee attention arising during implementation**

- In December 2017 an East African Regional Laboratory Meeting was organised in Ethiopia under the umbrella of an OIE twinning project between The Pirbright Institute (TPI) and the National Animal Health Disease Investigation Centre (NAHDIC) in Ethiopia. A representative from EuFMD attended the meeting. Many issues were identified regarding the sustainability of this network and actions were agreed. EuFMD in collaboration with TPI/WRLFMD should follow up on these actions.
- In West Africa (pool 5) only few countries are active with collecting, testing and reporting samples. Since most of these countries are Francophone, a Francophone network has been created. The challenge is now to identify subjects and speakers for webinars and to enhance the uptake of this form of communication. There is also a clear need for more field training and laboratory training in pool 5, related to outbreak investigation, sample collection, sample transport and investigation and international sample shipments. Locally active partners have been identified and a project will be supported under this component to use lateral flow devices for enhancing disease surveillance.
- Webinars and online meetings for East Africa (EARLN, pool 4) continued and for West Africa (RESOLAB, pool 5) planned in conjunction with the Francophone network and for West Eurasia (WELNET and WE epinet, pool 3) planned in conjunction/collaboration with component 2.1.
- Shipments from priority pools (3, 4, 5) realised to fulfil requirements for adequate virological surveillance and disease intelligence (as formulated during 39<sup>th</sup> General Session). For pool 3 targets are reached, but pool 4 and in particular pool 5 are challenging.
- Organisation of training courses for regional support laboratories in pools 3, 4 and 5. Availability of WRLFMD staff for missions abroad can be challenging considering their other duties and responsibilities.

### 6-Areas that require more attention in the next 24 month period

- Better virological surveillance in East Africa (pool 4) and West and Central Africa (pool 5) by involving more countries in each pool and focussing on field and laboratory training in passive and active clinical surveillance, early warning, sample collection, use of LFDs or other carriers in the field and funding shipments of specimens and inactivated LFDs;
- Continue virtual networking in pools 3, 4 and 5 and use E-learning and online meetings for Continuous Professional Development.
- Organization of a second Anglophone FLITC course in October/November 2018.
- Organization of several FLITC courses, also in other languages (French, Russian, Arabic should be considered).

### 7. Budget

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses (actual) Oct. 17 –Dec.17</b>	<b>Expenses (forecast) Jan 18-Mar 18</b>	<b>% project completion</b>	<b>Forecast available</b>
€ 628,772	€ 16,340	€411,558*	65%	€ 200,874

\*WRL LoA and contract for West and Central Africa LFD surveillance project

3.3 Lab. support	OUTPUT 3.3 Improved international FMD reference lab services and their contribution to regional epidemio-surveillance networks		YEAR 1											YEAR 2												
	Target	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
3.3.1 Coord. of international harmonization in methods and support activities by the OIE/FAO global FMD lab. network	3.3.1.1 Harmonization of communication and data sharing between network lab. (managed by Pirbright Institute- World Reference Laboratory- WRL)								M																	
	3.3.1.2 Org. of the annual OIE/FAO ref lab meeting including support to reg. support labs to attend (managed by WRL)					W	S			O	M		O	M		O	M		O	M						
	3.3.1.3 Annual report on global FMD status (managed by WRL)										M												M			
	3.3.1.4 Diagnostic services for samples submitted to WRL (managed by WRL, some tests may be delegated to leading lab. in the global network with WRL support and supervision)																									
3.3.2 Support to intl. surv. perf in 3 priority virus pools including sample shipment, training and supervision of RSL lab to meet or > min.surv. req.	3.3.2.1 Support to sample shipment from labs in pools 4, 5 & 6 and labs from countries/regions with relevant gaps in virological surv. to WRL (managed by WRL)			W	S				W	S			W	S			W	S			W	S				
	3.3.2.2 Training and supervision to reg. support laboratories in pools 4, 5 and 6 regarding sample collection, lab. analysis, sample archiving and sample selection for shipment (managed by WRL)		W	E	B			O	M	W	E	B			O	M	W	E	B			O	M	W	E	B
	3.3.2.3 Support to obtain samples from outbreaks			L	S					L	S			L	S			L	S			L	S			
	3.3.2.4 Procurement of reagents and kits					V		O	M			V		O	M			V		O	M			V		O
3.3.3 Dev. & implementation of training materials and courses for epidemio-surveillance networks in 3 priority pools	3.3.3.1 Current status of laboratory and epidemiology networks in pools 4, 5 and 6 analyzed and needs assessed								M						W	S					W	S				
	3.3.3.2 Development of training material for all relevant FMD laboratory tests including pitfalls and trouble-shooting, biosafety, sample archiving, laboratory management, quality systems etc. (contracted to WRLFMD in Pirbright)					W	S																			
	3.3.3.3 FLITC courses delivered, discussion forums created and moderated, online meetings and webinars org. for all endemic regions/pools in close collaboration with comp 2.1, 2,4 & 3.4																									
	3.3.3.4 Online meetings concerning network mgt, issues, priorities, topics of interest, organized twice a year																									
3.3.4 Support for a global PTS, to include 19 lab in the global network	3.3.4.1 global PTS for 12 network labs including 4 RSLs located in pools 4 & 5																									

# **EuFMD Phase IV**

## **Report to the EuFMD Executive**

**Period September 2017-March 2018**

### **Component 3.4 –**

### ***Global access to PCP-FMD training resources***

**Pillar Manager: N. Lyons**

**Component Manager: J. Maud**

**Reporting: J. Maud**

**Focal point Executive Ctte: M. Blake**

### 3.4 Global access to PCP-FMD training resources

#### 1. Objective(s) of component

The overall objective of this component is:

**Improved national and regional capacity for the roll-out of the Global Strategy and the management of FMD: Pillar III Training Component.**

#### Outputs (expected results):

**3.4.1** PCP and associated training resources tested, evaluated and available for use (in more than one official language) in African and Asian FMD endemic regions in line with the intentions of the GF-TADS FMD WG.

**3.4.2** System established to safeguard the sustainable use of PCP training resources in at least two regions outside the European neighborhood, and supportive to the establishment of regional and global PCP-FMD networks of trainers and users.

#### Resource base:

**Total component budget (EC funded): 221,748 EUR**

#### 2. Project team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Pillar Manager</b>	Nick Lyons	Animal Health Officer
<b>Component Manager</b>	Jenny Maud	Training Programmes Manager
<b>Knowledge Leader PCP and Practitioners' Network</b>	Chris Bartels	
<b>Partner Organizations</b>	Training activities carried out in collaboration with regional partners and organizations in support of the GF-TADS Global Strategy for FMD control.	n/a
<b>ExCom oversight</b>	Martin Blake	Executive Committee

#### 3. Countries or partner organizations involved

For the roll-out of PCP-FMD training and resources in Asian and African regions, a close collaboration is foreseen with regional FAO or OIE offices. Additionally roll-out may make use of non-governmental organizations (NGOs), bi-lateral or multilateral organizations, especially where such partnerships might bring sources of additional funding or resources. Activities in this component are in support of the roll-out of the Global Strategy for FMD Control.

To date activities under this component have been carried out in close collaboration with the FAO Sub-Regional Office for Southern Africa and the FAO Regional Support Unit for South Asia.

New partnerships are foreseen in South Asia, with Indian academic and governmental institutions, and additionally with NGO's and academic institutions based in, or working in West and Central Africa.

E-learning courses are delivered through a letter of agreement with the Royal Veterinary College, UK.

#### 4. Progress against indicators

Activities	Indicators	Baseline Sept 2015	Target 2 years	Achieved Sept 2017	Explanation of indicator
3.4.1	e-learning courses delivered	0	12	<b>4</b> <b>Southern Africa:</b> FMD Investigation Training Course FMD Post Vaccination Monitoring (joint South Asia) FMD Laboratory Investigation (global) <b>South Asia:</b> FMD Investigation Training Course FMD Post Vaccination Monitoring (joint Southern Africa) FMD Laboratory Investigation (global)	Number of e-learning courses delivered to South Asia or African regions.
3.4.2:	Nb of participants from region taking part in online training course or webinars.	0	200	92	Participants engaging in single e-learning event annually (eg joining online course or webinar).

#### 5. Progress report

**Target 3.4.1: PCP and associated training resources tested, evaluated and available for use (in more than one official language) in African and Asian FMD endemic regions in line with the intentions of the GF-TADS FMD Working Group.**

*Activities:*

##### 3.4.1.1 Plan for modification and delivery of training courses and resources for Asia region

A detailed plan for the activities to be carried out in support of South Asia across the Pillar III programme has been developed and is being used for ongoing consultation with regional partners.

The e-learning planned in South Asia under this plan for the next biennium is detailed below:

Course	2017	2018				2019		
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Open Access: Introduction to the Progressive Control Pathway								
Open Access: Risk Based Strategic Plan								
Progressive Control Practitioners' Network								
In-depth Post vaccination monitoring								
FMD Laboratory Investigation Training Course								
In-depth Risk Analysis Along the Value Chain								
FMD Investigation Training Course Regional								
National Level Course								
In depth FMD Socio-Economic Impact Assessment								

##### 3.4.1.2 System for M&E established

The system for monitoring and evaluation of training is now well established. All training courses are evaluated by an online feedback survey immediately after the workshop, with summative assessments to verify participant's knowledge used at the end of online training courses. A protocol for evaluation of each training course, based on the evidence provided by the survey and assessments has been developed. All results of

surveys and evaluation documents are stored on a dedicated “trainers” section of the EuFMD e-Learning platform, and are shared with relevant nominating organizations.

A more detailed consultation on the monitoring and evaluation of the training programme, including external evaluation, is planned for the first half of 2018 (see components 1.1 and 2.4)

#### 3.4.1.3 Courses delivered and evaluated Asia region

Two e-learning courses have been conducted for South Asia (alongside other regions) in the period September 2017-March 2018.

##### FMD Post Vaccination Monitoring

(funded additionally under component 3.2)

This course was an in-depth online course requiring six weeks of study, with four hours study per week. Each week participants were asked to read background materials, answer questions in an online interactive quiz and complete an assignment. Tutorial support was provided by Giancarlo Ferrari, David Paton and Nick Lyons. Each week a webinar was held and individual feedback on each participant’s assignment was provided by the tutors.

The course was based around the OIE/FAO Guidelines on Vaccination and Post Vaccination Monitoring.

The learning objectives were that after studying the course participants would be able to:

- *make rational decisions on vaccine selection and purchase; perform and use serological studies to assess vaccine quality and population immunity; describe different vaccination strategies and how these integrate into the broader FMD control strategies; explain the importance of monitoring vaccination coverage and perform appropriate quantitative studies; conduct investigation into reported vaccination failures; explain the difference between efficacy and effectiveness and have the ability to perform vaccine effectiveness studies when outbreaks occur in vaccinated populations; formulate a broader evaluation of a vaccination programme and use this information to make adjustments to improve the efficiency of control measures relevant to the programme objectives.*

Countries in Southern Africa (support with e-learning for the 2015-17 programme) and South Asia were each asked to nominate four participants for this course. In addition, FAO officers working closely with government veterinary services in the target regions were invited to join the course. The breakdown of nominations received and those completing the course is shown below:

Country	Nominated	Completed
Afghanistan	1	
Bangladesh	3	
Bhutan	4	
India	7	4
Mongolia	4	
Nepal	4	1
Pakistan	3	2
Sri Lanka	3	3
Botswana	3	
DRC	5	
Lesotho	3	
Malawi	3	1
Mauritius	3	3
Mozambique	1	
Namibia	3	2
South Africa	2	1
Swaziland	2	1
Tanzania	4	1
Zambia	3	2
Zimbabwe	5	1

23 participants completed the full course; a further 10 participants took part in significant areas of the course but did not complete all the elements needed to achieve their certificate.

In the post-course feedback survey, 86% of respondents rated the course as very good with 91% stating that the courses was very relevant to their specific needs.

Many commented positively on the relevance and importance of the course topics to FMD control in their country, and additional requests for participation in future courses from institutions in India were received. All those who did not complete the course were contacted by e-mail and asked for feedback on what they had found difficult. Those responding recognized that the course content was important, but had either had difficulty with internet connectivity in remote locations or with finding the time to complete the course alongside other work commitments.

### **FMD Laboratory Investigation Training Course**

(funded and additionally reported under component 3.3)

This course was organized in partnership with the Pirbright Institute under the Letter of Agreement (see component 3.3).

The learning objectives of this course were that after studying the course participants would be able to:

- *Interact with field staff and guide them in collection and submission of quality diagnostic samples; Submit appropriate samples to reference laboratories; Select appropriate diagnostic tests to detect FMD virus and FMD virus-specific antibodies, and interpret the results of these tests; Understand the principles of accurate virus detection test methods (virus isolation, ELISA and RT-PCR) and assays used for serology (VNT and ELISA); Outline techniques for further characterization of FMD virus including genomic sequencing and vaccine matching tests; Understand the importance and basic principles of laboratory Quality Assurance; Explain the key principles of biosecurity and biosafety measures to be carried out in an FMD laboratory.*

The course involved approximately 12 hours of study, with two webinars, and fourteen short online modules. The course modules were authored by the Pirbright Institute, and hosted on the EuFMD e-learning platform. EuFMD was responsible for seeking nominations to the course, managing all course logistical and technical hosting, organizing the webinars and co-ordinating the discussion forum.

Countries and participants: Albania: 1; Algeria: 2; Armenia: 2; Azerbaijan: 1; Bangladesh: 2; Belarus: 2; Belgium: 2; Bhutan: 2; Bosnia and Herzegovina: 1; Botswana: 2; DRC: 2; Egypt: 2; Eritrea: 2; Ethiopia: 4; France: 2; FYRoM: 2; Georgia: 1; Greece: 2; India: 2; Iran: 2; Iraq: 2; Italy: 2; Jordan: 2; Kenya: 2; South Korea: 2; Lebanon: 2; Libya: 2; Malta: 2; Mauritania: 2; Mauritius: 2; Moldova: 1; Morocco: 2; Mozambique: 2; Nepal: 2; Norway: 2; Pakistan: 2; Palestine: 2; Serbia: 2; South Sudan: 2; Spain: 2; Sri Lanka: 2; Syria: 2; Tajikistan: 2; Tanzania: 2; Thailand: 2; Tunisia: 2; Turkey: 2; Turkmenistan: 2; Zimbabwe: 2; OIE: 3; PANAFTOSA: 1; The Pirbright Institute: 5

**59%** of those nominated completed the course.

Survey feedback results were positive with 76% of respondents rating the course as “very good”. Before the course respondents felt reasonable confident about the learning objectives with a range of 2.5 – 3.5 on a scale of 1- 5 (total average 3.28). After the course respondents felt confident to very confident about their competencies related to the learning objectives mentioned below with a range of 3.8 – 4.5 on a scale of 1-5 (total average 4.23).

The findings of this initial pilot course will now be used to make improvements, with the intention that the course will be offered again later in 2018.

#### **3.4.1.4 Training needs assessment carried out in West and Central Africa and plan for training to be delivered in the region developed**

Initial activities in West and Central Africa have been initiated, with activities initially focused on understanding needs related to field submission of samples and veterinarian/para-veterinarian capacity related to FMD control (see reported elsewhere under Pillar III programme).

The letter of agreement concluded with CIRAD includes a short assessment of training needs in West and Central Africa.

A French language online FMD Investigation Training Course is being organized, to which countries in West and Central Africa are invited to participate. This pilot course will be an important part of the training needs assessment process and identify key capacity building gaps and also the potential for e-learning to be used as a training modality in this region.

#### **3.4.1.5 Training courses and resources are delivered and evaluated in West and Central Africa.**

A French language FMD Investigation Training Course is currently being organized for April (see above).

#### **3.4.1.6 Training courses and resources are made available to countries outside the target regions, based on demand from the GF-TADs working group**

Places on upcoming English language e-learning courses (notably FMD Risk Analysis Along the Value Chain planned for May/June) will be offered to countries outside West/Central Africa and South Asia, following consultation with the GF-TADs working group.

#### **3.4.2.1 Develop webinar series and network for global PCP practitioners**

##### **Progressive Control Practitioners' Network**

The latest training "month" of the Progressive Control Practitioners' network was held in November and December. The focus was on Risk Analysis Along the Value Chain and the training content created included:

- Webinar: introduction to risk and value chain analysis
- Webinar: examples from Kazakhstan, Zimbabwe and South East Asia
- Reading and quiz: Reading: Analyses of the Poultry Value Chain and Its Linkages and Interactions with HPAI Risk Factors In Nigeria
- Reading, recording and quiz: Reading and recording: The broiler meat system in Nairobi Kenya using a value chain framework to understand animal and product flows governance and sanitary risks
- Webinar: How to identify risk hotspots

The network now has 120 members and between 20 and 30 participants attended each of this month's webinars.

Five members of the network have been awarded their "Bronze Level" certificate, indicating that they have taken part in at least ten hours to training activities through the network. An online "awards ceremony" was held and each practitioner presented their interests and areas of work:

A new communication strategy has been developed to encourage greater participation in the network, currently the relatively low participation is a concern, and may be due to low awareness amongst target audiences of the availability and benefits of network membership.

The next training topic of the network starts in February and focusses on "vaccine failure or failure to vaccinate?".

##### **Francophone network**

(Please also see reported under component 2.3)

The Francophone network has global reach with webinars conducted in French language. A webinar on “*Partenariat Public-Privé : Rôle des détenteurs d’animaux dans la détection précoce, la surveillance passive et la préparation à la gestion du risque de la fièvre aphteuse*” was conducted on 21<sup>st</sup> December with 23 participants and lively subsequent discussion in the online forum. A series of webinars for this network are planned for 2018 and the Francophone network will form an important part of activities in West and Central Africa.

#### **3.4.2.2 Support regional networks in target regions identified under 3.4.1, and provide assistance to networking activities in other regions if appropriate**

A proposal to support laboratory and epidemiology networking in South Asia with a series of webinars and online meetings has been developed and communicated to the co-ordinators of the networks.

#### **3.4.2.3 Assist collaborating organizations to develop a sustainable system for training**

Contact has been made with several Indian institutions (National Dairy Development Board, ICAR National Institute of Veterinary Epidemiology and Disease Informatics, Punjab Agricultural University) to explore potential partnerships for training delivery in India and South Asia.

#### **3.4.2.4 Research additional sources of funding to support training**

Following the interest generated by the first Post Vaccination Monitoring Course and the successful partnership with the Pirbright Institute for the delivery of the FMD Laboratory Investigation Training Course, EuFMD assisted colleagues at the Pirbright Institute to compile a proposal for funding under the UK Government Global Challenges Research Fund. This proposal was successfully funded and will see the Pirbright Institute develop additional e-learning modules on vaccination and post vaccination monitoring, with technical advisory input from EuFMD, and with EuFMD hosting and organizing taught e-learning courses using the modules.

## **6. Issues for Executive Committee attention arising during implementation**

In order to achieve its stated aims, and to offer the required impact in return for investment, the Progressive Control Practitioners’ network requires higher numbers of a participants. A communication strategy has been developed to improve awareness of the resource, and ongoing consultation should occur to ensure that the training resources produced are appropriate, interesting and useful for the target audiences.

## **7. Priorities for the next six months**

Priorities for the next six months include:

#### **South Asia:**

- Exploration of partnerships with regional institutions
- Virtual support to laboratory and epidemiology networking
- Next regional e-learning courses: FMD Risk Analysis Along the Value Chain
- National level e-learning course in India, through newly developed partnerships.

#### **West and Central Africa:**

- Training needs assessment through delivery of French language FMD Investigation Training Course and partnership with CIRAD.

#### **Progressive Control Practitioners’ Network:**

- At least two new month’s training activities
- Enhanced communication strategy to significantly widen participation in the network activities.

## 8. Success stories and emphasis

Both the Post Vaccination Monitoring e-learning course and the FMD Laboratory Investigation Training courses are particular successes, due to the interest generated and the transformative potential of these courses if they achieve wider global uptake. The successful application for additional funding to further develop the post vaccination monitoring e-learning with the Pirbright Institute is a promising next step in this regard.

The roll-out of national level e-learning courses in South Asia, particularly in India, have the potential to reach wide audiences with new ideas on FMD control, to build new partnerships and to enhance our understanding of the risks in this strategically important region.

## 9 .Budget €

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses Oct 17 – Dec. 17</b>	<b>Expenses Jan 18 - Mar 18 (forecast)</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
<b>195,532</b>	30,026	20,000	12%	172,506

## 10.GANTT chart //indicate change

3.4 Global access to PCP-FMD training resources	OUTPUT 3.4 Improved National and Regional Capacity for the Roll-Out of the Global Strategy and the Management of FMD: Pillar III Training Component		YEAR 1												YEAR 2											
	Target	Activities	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
3.4.1 Development and evaluation of PCP and associated training resources, including pilot training in several regions	3.4.1.1	Plan for modification and delivery of training courses and resources in Asia region																								
	3.4.1.2	System for M&E established																								
	3.4.1.3	Courses delivered and evaluated Asia region				/	/																			
	3.4.1.4	Training needs assessment carried out in West and Central Africa and plan for training to be provided in the region developed																								
	3.4.1.5	Training courses and resources are delivered and evaluated in West and Central Africa																								
	3.4.1.6	Training courses and resources are made available to countries outside the target regions, based on demand from GF-TADs FMD working group																								
3.4.2 Develop and implement a support network including training programmes for the practitioners of the PCP in at least two regions outside the European neighbourhood	3.4.2.1	Develop webinar series and network for global PCP practitioners				/	/																			
	3.4.2.2	Support regional networks in target regions identified under 3.4.1, and provide assistance to networking activities in other regions if appropriate.																								
	3.4.2.3	Assist collaborating organizations to develop a sustainable system for training																								
	3.4.3.4	Research additional sources of funding to support training																								

**Appendix 4**  
Six-month report  
(Summary)

## Component 1.1 Training for Member States

### Indicators

Activities	Indicators	Baseline Sept. 2017	Target 2 years	Unit of measure	Current Status
1.1.1	Knowledge Bank created and in use by MS	500	3,000	Number of participants that have accessed at least one open access training course or knowledge bank resource	1,273
1.1.2	Implement >85 % of the demand driven programme	85%	85 %	Training credits allocated by the 38 MS to training activities or regional initiatives have been delivered by EuFMD	29 %

### Progress

<b>Training credits system</b>	The allocation and delivery of the training credits is fully on track. The number of training credits allocated by the Member States to EuFMD training is above 85% and 29% of the allocated training credits has already been delivered.
<b>New training courses</b>	The introduction of new courses/events – i.e wildlife surveillance - to the Training Menu have received a very good response from the Member States. The first bilingual Online FMD Emergency Preparation Courses (FEPC) was delivered simultaneously in English and Spanish. This course was held in January-February 2018 for the Caribbean Region aimed to provide training for veterinarians working in the overseas territories UK, France and The Netherlands. The course was planned together with CaribVet and delivered in collaboration with PANAFTOSA.
<b>Main issues</b>	There are still several Member States which are not allocating any of their Training Credits to any of the training courses. Some of the Training credits have been allocated to the new concept of Regional Approach, but, unfortunately, the Member States which are allocating some of their TC for this event are not in the same region. The Veterinary Ethics workshop might need to be reconsidered as an online course due to the insufficient number of participants allocated to a face to face event. The Real Time Training Course planned for February, in Kenya, had to be relocated to Nepal, because the Memorandum of Understanding (MoU) was not extended for 2018-2019 by the Veterinary Service of Kenya. Negotiations with VSK on a new Memorandum are underway.
<b>Priorities for the next six months</b>	There is a request from two new countries to create a national tailored Online FMD Emergency Preparation Courses (FEPC). EuFMD has to develop these two online courses in their own language: Hungarian and Polish. There are four countries who have requested a subsequent national tailored Online FMD Emergency Preparation Courses (FEPC) which will be delivered. There is a need to consider the best approach to proceed with the Regional Approach to include countries which are not in the same region, nevertheless a joint Spanish-Portuguese cross-border simulation exercise is planned under the initiative.

### Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
522,975	27,078	115,200	29 %	371,570

## Component 1.2 Improved Contingency Planning

### Indicators

Activities	Indicators	Baseline Sept. 2017	Target years	2	Unit of measure	Current Status
1.2.1	Annual Participation in online meetings or webinars	300	300		Participation in online meetings or webinars	424
1.2.2	Number of published: Decisions Support Tools, discussion papers and guidelines that have been peer-reviewed	2	5		Published tools and guidance that has been peer-reviewed	2

### Progress

<b>EU-FMD-iS</b>	The European FMD spread model (EU-FMD-iS) project is progressing well and seven European countries have entered the pilot project and contributing data to build the model;
<b>DSTs, discussion papers and guidelines</b>	A Position paper on FMD vaccination issues was delivered in June 2016; The AESOP (Assured Emergency Supply Options) paper was delivered in October 2017 and Expressions of Interest (EoI) for the AESOP was issued and 10 vaccine producer companies are showing interest; Emergency Vaccination Guideline will be finalized in 2018; Crisis Communication Guideline will be finalized in 2018; EuFMDi-S a major decision support tool will be delivered in 2018.
<b>Networks</b>	The Contingency Planning, Modelling and Vaccination Networks continue to grow in numbers now counting above 800 members.
<b>Major issues</b>	More emphasis in the next periods is needed on the topics of: private sector involvement in emergency preparedness and management, development of diagnostic bank and human resource sharing The Contingency Planning (CP) and Vaccination networks are behind in delivery, due to the current focus of the EuFMD-iS. Once the EuFMD-iS first working versions are delivered, the application of this DST will deliver several webinars for the Pillar I networks.
<b>Significant plans</b>	Work on the <b>EU-FMD-iS</b> is continued with the countries and a working prototype is foreseen to be ready in June 2018; The <b>AESOP</b> (Assured Emergency Supply Options) work will be continued with the parties that have shown interest; Drafting a discussion paper with the focus on private sector involvement in emergency preparedness and management Delivery of webinars under the Pillar I networks.

### Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
142,154	18,920	0	13%	123,234

## Component 1.3 Thrace

### Indicators

Activities	Indicators	Baseline: Sept.2017	Target 2 years	Unit of measure	Current Status
1.3.1	Tpt Mgt Meetings held	5	9	Meetings held involving staff of the 3 countries	6
1.3.2	Maintain the data entry system with data entry meeting agreed targets	>75%	75%	% of reports entered by field operatives within expected time frame	>75%
1.3.3	The level of confidence in FMD disease freedom in Thrace region is higher than if activities stopped	> 90%	90%	Confidence in disease freedom	>90%
1.3.4	Joint exercises	2	3	Joint exercises 3 countries	2

### Progress

<b>Procurement system (PS)</b>	The PS updated during the last trimester of the 1 <sup>st</sup> Biennium is now fully operational. The direct procurement of laboratory and field consumables under the PSAs responsibility, provides a faster, and cheaper, supply also reducing the risks for interruptions of the active surveillance activities.
<b>Active surveillance</b>	The active surveillance activities are regularly implemented: samples are collected on time and analysed in each of the three countries, and data uploaded on the online repository for analysis and communications. In Bulgaria, between October - February 9,836 animals have been clinically examined and 1,404 samples taken. In Greece, in the same time period, 5,052 animals examined and 1,176 samples were taken. In Turkey, in the same period, 32,349 animals were examined and 1,643 samples taken. The confidence in FMD freedom in the Thrace region was constantly above 95% for both the 4 <sup>th</sup> cycle of 2017 and the first two months of 2018
<b>Training Workshop</b>	Following the last Tripartite Meeting recommendations a training workshop was designed by the EuFMD. The twofold objective of this workshop is to review the current disease reporting systems in the Thrace region and simultaneously provide training for official veterinarians from the three countries in strategies for assessing disease reporting systems.
<b>Major Issues</b>	The FMD post-vaccination immunity study carried out in Turkish Thrace in 2017 requires a follow-up in 2018 to validate the previous results and provide solid evidence of the immunity currently provided in the field.
<b>Significant Plans</b>	To draw an initial evaluation of the status of the FMD reporting system in the Thrace region based on the Workshop held in March and the expected follow-up activities from the three countries in order to discuss during the Tripartite planned in summer 2018, if funds should be allocated from the active surveillance to carry out an in depth study to identify key areas where interventions are needed to increase the sensitivity of disease reporting in Thrace; Maintain the achieved high (above 95 %) level of confidence in the absence of circulating FMDV in European part of Turkey and the neighbouring areas of Greece and Bulgaria; To further strengthen the collaboration between the three countries at different operational levels (regular joint training workshops for official veterinarians, improved communication and review of the epidemiological situation and the control measures in the three countries for FMD and other TADs).

### Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 - Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
377,000	60,594	3,000	16.8%	313,406

## Component 1.4 Balkans

### Indicators

Activities	Indicators	Baseline: Sept 2017	Target 2 years	Unit of measure	Current Status
1.4.1	Management and High Level Policy Meetings held compared to if project was not supported.	0	3	Nb of meetings	1
1.4.2	Number of countries having a national or multi-country FMD simulation exercise	4	7	Nb of countries holding a national FMD exercise	4
1.4.3	Participation in Balkan region proficiency test exercises	6	8	Nb of National participations in exercises in 24 months	6

### Progress

<b>Meeting</b>	On-line Management Meeting held in October 2017 with Member States and National Focal Points
<b>Collaboration</b>	Started but not active. A pilot program for the component has opened up STP positions for official veterinarians and university staff.
<b>Issues</b>	Although actions were taken (such as planning and recruitment) progress has been delayed and the planned start date is now April 2018.
<b>Significant plans</b>	Fill in existing human resource gaps to deliver efficiently the objectives of the component; Finalizing the text of the statement of Intentions (Sol) to be proposed to the Member States to aid in their collaboration for emergency preparedness; Workshop on Risk Assessment – Disease prioritization and GET Prepared in April, held in Ohrid, The former Yugoslav Republic of Macedonia.

### Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
202,110	1,970	8,750	5%	191,390

### Component 1.5 Fund for Applied Research (FAR)

#### Progress

<b>6<sup>th</sup> Call Dec 2017</b>	A pilot project for the evaluation of a system for engaging para-veterinarians and animal health workers for FMD surveillance and sample collection and for the preliminary assessment of the demand for FMD control services in Mali - Project Lead Applicant: Dr Abdoulaye Diaoure, Vétérinaires Sans Frontières Suisse (VSF-Suisse)	<b>Overall cost:</b> € 20 000.00 (*although the project proposal has been received through a FAR Call the funds will be mobilized under Component 3.3.2). <b>Status update:</b> the project is expected to start by the end of March 2018
<b>5<sup>th</sup> Call July 2017</b>	FMD RiskmapS (FMD Risk map surveillance system): Development of a FMD surveillance program on risk information and mapping tools for southern European neighbourhood, integrating movement patterns of domestic livestock - Project Lead Applicant: Dr Thierry Lefrancois, French Agricultural Research Centre for International Development (CIRAD)	<b>Overall cost:</b> € 168 000.00 <b>Cost 1.5 50%:</b> € 84 000.00 <b>Status update:</b> The first activity under this project will be a workshop that will take place in Tunis (Tunisia) (27 February- 1 March 2018) on surveillance for early detection and confidence of freedom in Algeria, Morocco and Tunisia (" <i>Fièvre aphteuse, la détection précoce et la confiance en l'absence de circulation virale : Algérie, Maroc et Tunisie</i> ").
<b>4<sup>th</sup> Call (Feb2017)</b>	European multi-country FMD Spread model EuFMDiS:	<b>Overall cost:</b> € 48 600.00 <b>Status update:</b> Very positive response from seven countries (Austria, Bulgaria, Croatia, Italy, Hungary, Romania and Slovenia). Dedicated e-learning page; On-line meetings. The project is <b>on-track</b> to deliver a working model that will simulate spread and control of FMD within and between the participating central European countries by 30 June 2018.
	Validating the use of bulk tank milk for surveillance of FMD among commercial dairy farms in endemic settings) - Project Lead Applicant: Dr Nicholas Lyons, The Pirbright Institute	<b>Overall cost:</b> GBP 42,919.21 (€ 46,336) <b>Status update:</b> <u>Iran:</u> A mission undertaken in October 2017. The sampling is started in mid-February and the first sample shipment is scheduled in mid-May and the final at the end of the project. <u>Kenya:</u> milk samples have been collected (by Nov2017) and the duplicates shipped to TPI in De2017.
	Evaluation in field conditions of a safe and cost-effective protocol for shipment of samples from Foot-and-Mouth Disease suspected cases for laboratory diagnostic (FIELD_EVAL_INACT) – Dr Sandra Blaise-Boisseau, (ANSES)	<b>Overall cost:</b> € 75 940.00 <b>Status update:</b> Collection of epithelium and/or vesicular fluid samples from clinical cases is currently being carried out by the national partners in Nigeria, Turkey and Pakistan
	Validating multiplex real-time RT-PCR as a tool for FMD detection in bulk tank milk (Acronym: Tank Milk Multiplex) – Dr. Michael Eschbaumer, The Friedrich-Loeffler Institut (FLI)	<b>Overall cost:</b> € 23 715.23 <b>Status update:</b> The project started at the end of January 2018.

#### Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
372'387	107'492	190'353	51%	182'203

**Component 1.7 Proficiency Testing scheme****Indicators**

<i>Activities</i>	<i>Indicators</i>	<i>Baseline Sept 2017</i>	<i>Target 2 years</i>	<i>Unit of measure</i>	<i>Current Status</i>
1.7	Proportion of target reference laboratories participating	16	21	Number participating over total of neighborhood countries indicated in contract with service provider	16

**Progress**

<b>LOA</b>	Negotiations on the new Letter of Agreement with The Pirbright Institute are progressing well Commitment forecast contract line 39,000
<b>PTS</b>	Results of the 2017 Proficiency Testing Scheme (PTS) will be available in May 2018
<b>Major issues</b>	None
<b>Significant Plans</b>	Finalization and implementation of the Letter of Agreement with The Pirbright Institute. Reviewing the results of the 2017 Proficiency Testing Scheme. Assisting with EuFMD contact points during the implementation of the 2018 PTS, where needed.

**Budget**

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses Oct 17 – Dec. 17</b>	<b>Expenses Jan 18 - Mar 18 (forecast)</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
46,300	2,185	39,000	89 %	5'115

## Component 1.8 Risk analysis and communication

### Indicators

<i>Activities</i>	<i>Indicators</i>	<i>Baseline: Sept. 2017</i>	<i>Target 2 years</i>	<i>Unit of measure</i>	<i>Current Status</i>
1.8.1	System available to predict Antigen Prioritization	1	1	System available to predict Antigen Prioritization	1
1.8.2	Number of Global Monthly Reports	24	48	Number of Global Monthly Reports	30
1.8.3	Number of Risk Manager Summaries	0	4	Summaries published	0
1.8.4	Pilot study	1	1	Study completed	1

### Progress

<b>PRAGMATIST</b>	More user-friendly version of PRAGMATIST now available (lead by WRL, with review by EuFMD). New format of the Global Monthly Report and PRAGMATIST were presented and well received at the OIE/FAO Reference Laboratory meeting.
<b>Global Monthly Report</b>	Questionnaire survey of Global Monthly Report readership showed broad support for the report and global readership.
<b>Partnership</b>	Development of partnership with an external Service Provider (CIRAD) (through a Letter of Agreement) for the design and implementation of risk mapping system in North and West Africa during the current biennium (2018-2019).
<b>Major Issues</b>	The delivery of recruitment and selection of Global Focal Points for each of the pools is progressing slower than originally planned, therefore delivery of the Risk Manager Summaries was also delayed. Original plans to initiate a meat price monitoring in Trans-Caucasus, Turkey and Iran were not realized yet, promising discussion were held with Georgia and Turkey.
<b>Significant Plans</b>	Revise format of Global Monthly Report to include new charts/tables to communicate the relative prevalence of serotypes and strains and forecasting; Recruitment and training of Global Focal Points – call is made in March and selection in April 2018; Development of a quarterly Newsletter on Risk Highlight; Collaboration with the State of Libya (National Center of Animal Health) in supporting to conduct a field study to characterize the livestock markets in the country and identify the key locations for the future implementation of a systematic monitoring system under the CIRAD partnership; Supporting the Georgian National Food Agency (NFA) with the aim to develop a system for gathering information on risk drivers for the circulation and spread of FMD integrating movement patterns of domestic livestock and price differentials of live animals and meat products.

### Budget

<b>Total Budget Workplan activity 24 months</b>	<b>Expenses Oct 17 – Dec. 17</b>	<b>Expenses Jan 18 - Mar 18 (forecast)</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
84,200	15,451	2,160	21 %	66,589

## Component 2.1 South East Europe

### Indicators

Activities	Indicators	Baseline Sept.15	Target 4 years	Unit of measure	Current Status
2.1.1	Nb of countries in region with a Risk Based Strategic Plan that has been accepted by GF-TADs FMD Working Group.	2 Georgia and Turkey	4 Georgia, Turkey, Armenia, Azerbaijan	Nb of countries	4 RBSP accepted by GFTADS WG (Geo, Tr, Arm, Azer)
2.1.2	Participation level from at least 5 countries in the region in online training courses	0	480 participants	Participant s engaging in EuFMD e-learning	430

### Progress

<b>Risk based strategic plans</b>	RBSPs of three TCC countries and Turkey available and implemented and in the process of being updated.
<b>Regional workshops and training</b>	A workshop on RBSP monitoring and evaluation and progression towards PCP Stage 3 in candidate zones was carried out in February 2018 in Georgia. The workshop was attended by Armenia, Azerbaijan and Georgia. During the first 1.5 days the WS countries involved in the statement of intention were also invited (Russia and Turkey - Iran did not attend) with the purpose to discuss the level of implementation and agree on improvements.
<b>Online training</b>	A FMD Investigation Training Course was conducted in Russian in October 2017 for 190 Participants from 11 countries of West Eurasia In-depth e-learning course <i>Risk Analysis along the value Chain</i> was conducted with 14 participants from the TCC and Turkey, 4 completed the course. An in-depth e-learning course on <i>Post-vaccination monitoring</i> is planned for 2018. The Russian language FITC course was delivered in October/November 2017. 190 participants enrolled to the course and 52 completed it The FITC in Turkish is planned to start on middle March for 150 participants. Last course held in June.
<b>Issues</b>	Implementation of the WelNet and EpiNet action plan 2017-18, the plans are ambitious and need close follow-up and assistance. Progress with RBSP development for stage 1 countries in the WestEurasian region, i.e. Turkmenistan, Uzbekistan, Tajikistan (not included in the EuFMD workplan but epidemiological connected with TCC).
<b>Priorities</b>	Definition and implementation of control and surveillance measures for PCP stage 3 candidate zones in Racha-Lechkhumi of Georgia, Absheron region of Azerbaijan and Lory and Kotayk regions of Armenia. Revision of current RBSP and evidence of monitoring and evaluation process. Assist and improve the epinet and welnet through a series of webinars on 'vaccinology' with both epi and lab components included (for Pillar II). Revision of current RBSP and evidence of monitoring and evaluation process. Development of database for collection of vaccination coverage and risk information from TCC area.

### Budget

Total Budget Workplan activity 24 months	Expenses Oct. 17 –Dec. 17	Expenses (forecast) Jan 18-Mar 18	% project completion	Actual available
€ 356,500	€ 30,642	€ 25,000	15%	300,858 €

## Component 2.2 South East Mediterranean

### Indicators

Activities	Indicators	Baseline Sept.15	Target 4 years	Unit of measure	Current Status
2.2.1 2.2.2 2.2.3	Number of countries in region with a Risk Based Strategic Plan that has been accepted by GF-TADs FMD Working Group.	1 (Egypt)	4 (Egypt, Jordan, Palestine, Lebanon)	Nb of countries	Achieved: 2 RBSPs developed: Egypt and Palestine (1 RBSP accepted by GF-TADs FMD Working Group), 1 RBSP drafted: Jordan
2.2.4	Assist networking through online meetings and sharing of FMD information to risk managers of countries under this component	0	140 participants in 24 months involving 6 countries	Nb of regional participations in online meetings	185 participants from 11 Arabic speaking countries in the NENA region.

### Progress

Training	A real-time training course on advanced outbreak investigation was delivered by EuFMD in July 2017. EuFMD and JUST implemented a 30 day on-line FMD Investigation Course (FITC) in Arabic.
Risk based strategic plan	In order to develop the RBSP in Jordan, a workshop was carried out in January 2018 and RBSP has been drafted. Palestine has presented the draft RBSP at the Road map meeting in October 2018 which should be now endorsed by the national political level A vaccine audit was carried out in April 2017 in Egypt and a follow up mission in October 2017.
Issues	In the recent months a little response has been received from Egypt on the initiatives proposed under the LLNL/US-DOS project despite the fact that the programme was preliminary agreed. Lack of evidence of the effectiveness of the vaccine used in Lebanon and Jordan as well as in Egypt and Palestine In Lebanon, only one workshop has been organized until now and planning of a second workshop has not yet succeeded.
Priorities	Continued support to Egypt according to the programme. Support for Lebanon to be specified and reconsidered. Continued support to Palestine. Implementation of field vaccine effectiveness studies. Assist and improve the network between countries through a series of webinars on 'vaccinology' with both epi and lab components included (for Pillar II). Provide technical assistance for PCP/RBSP development in Sudan.

### Budget

Total Budget Workplan activity 24 months	Expenses Oct. 17 –Dec. 17	Expenses (forecast) Jan 18-Mar 18	% project completion (forecast)	Actual available (forecast)
€ 260,000	€ 16,730	€ 15,000	12%	€ 228,270

**Component 2.3 Support to REMESA****Indicators**

<i>Activities</i>	<i>Indicators</i>	<i>Baseline Sept 2015</i>	<i>Target 4 years</i>	<i>Unit of measure</i>	<i>Current Status</i>
<b>2.3.1</b>	Nb of countries in region with a RBSP accepted by GF-TADs FMD WG	0	1	Nb of countries	First drafting Mauritania
	Nb of countries in region accepted in PCP Stage 3 or above by the GF-TADs FMD WG	1	2	Nbof countries	3
<b>2.3.2</b>	Nb of high-risk border areas where a surveillance system is designed, implemented and functioning.	0	1	Nb of implemented systems	0
<b>2.3.3</b>	Nb of participants from region taking part in online training course or webinars annually.	0	200	Participants engaging in single e-learning event annually	93

**Progress**

<b>Progress along PCP</b>	FMD serosurveillance, FMD Lab training and livestock movement monitoring in the markets are being implemented in Libya. Planned serosurveillance for detection of FMDV circulation concluded in Morocco and Algeria and ongoing in Tunisia. Workshop to promote and design FMD risk-based surveillance for FMD early detection (borders and risk areas) carried out on the end of February 2018. 14 participants from Libya, Morocco and Tunisia participated in the RACV course. Four participants from each country were being nominated to attend the next PVM course.
<b>Merged Francophone and North African networks</b>	A series of webinars covering the thematic identified as priorities were planned and started to be delivered in French. In December 2017 a webinar on ‘Public-private partnership: Involvement and role of livestock-holders and their representatives in early detection and animal health crisis preparedness and management’ was held
<b>Issues</b>	Need for Mauritania commitment for the finalization of RBSP in order to progress with the activities planned to support the country. The activities in Algeria, Tunisia and Morocco should be more focus on a better understanding of the risks (e.g. animal movements) and on the analysis of the factors that drive the change of such risks (e.g. market demand). Implementation of studies in Libya on animal mobility and FMD circulation with the support of the Libyan Veterinary Services should be encouraged despite the instability
<b>Priorities</b>	Implement Risk mapping studies with assistance of CIRAD; Maintain the collaboration and coordination established with FAO and OIE to provide joint assistance and support for the development of a regional FMD control strategy; Support Libyan vet services; Continue follow up in Morocco, Algeria and Tunisia on the design / implementation of FMD early detection and risk based surveillance (borders and risk areas); improve the regional assessment of risk and promote risk based vaccination strategies.

**Budget**

<b>Total Budget WorkPlan activity(2017-2019)</b>	<b>Expenses Oct. 17 – Dec17</b>	<b>Expenses (forecast) Jan 18-Mar 18</b>	<b>% project completion (forecast)</b>	<b>Actual available (forecast)</b>
326,000	9,658	25,000	10%	291,342

**Component 2.4 Training development and Co-ordination****Indicators**

Activities	Indicators	Baseline Sept.15	Target 4 years	Achieved March 18	Explanation of indicator
2.4.1	New courses developed after regional gap analysis	0	4	4	New online training courses developed, one course equivalent to 20 study hours
				Socio-economic impact 24hrs, Risk Analysis Along the Value Chain (24hrs); Field Investigation Training (12 hrs); Introduction to the Progressive Control Pathway (6 hrs); Post Vaccination Monitoring (24 hrs- in combo with PIII); FMD Laboratory Investigation Training Course (12hrs- in comb with P III)	
2.4.2	%of training courses satisfying monitoring and evaluation criteria	0	100	100	Percentage of courses meeting M and E criteria

**Progress**

<b>Progress</b>	In-depth online course “FMD Risk Analysis Along the Value Chain” organised in October-November 2017 with strong participation and high quality of course assignments. Open access modules on Risk-Based Strategic Plan development in final stages of development. FMD Investigation Training Course in Russian conducted.
<b>Major Issues</b>	Identification of partners and experts for delivery of Russian language version of in-depth e-learning modules.
<b>Priorities</b>	Continue improvement of the monitoring and evaluation system for the e-learning In-depth online course FMD Post Vaccination Monitoring planned to begin mid-February in English. Development and delivery of new e-learning on Safer Trade and FMD as part of pilot workshop planned for April 2018, working in partnership with OIE. Development of French language version of FMD Socio-economic impact analysis in partnership with CIRAD. Delivery of repeat language versions of FMD Investigation Training Course (French, Turkish and Arabic).

**Budget**

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
148,000	24,904	30,000	37%	93,096

### Component 3.1 Improved system for monitoring and evaluation of progress of regional programmes on FMD control

#### Indicators

Activities	Indicators	Baseline Sept 2017	Target 2 years	Unit of measure	Current Status
3.1.1	Gather information, author reports for the FMD Working Group	4	4	Number of reports	0
3.1.2	Activities to support global communication of the PCP situation	0	50% increase	Website usage statistics	0
3.1.3	Provide training support to the FAO:OIE working group activities	1	1	International training events	1

#### Progress

<b>Requests</b>	The FAO-OIE GF-TADS working group have requested the provision of support between roadmap meetings for individual countries in provisional stages of the PCP-FMD. A system of PCP support officers (PSO) has been proposed and gained acceptance within the working group.
<b>Reports</b>	There has been no recent progress on the annual Global FMD report. PSOs will be reporting on their activities to the FMD working group.
<b>GF-TADS Website</b>	An intern has been recruited to begin work on the GF-TADS website. The website will be developed for relaying the outcome of roadmap meetings and provide links to supportive materials for countries relevant to their PCP stage.
<b>Priorities</b>	Recruitment of a Short Term Placement to support Pillar II activities with South Asia and West Africa
<b>LoA</b>	In process to secure support from IZSLT in assisting the FAO-OIE FMD working group in providing training support and expert missions including support between PCP-FMD Roadmap meetings. A request for assistance in West and Central Africa initiated a report request from CIRAD on the long-term potential vaccine market in the region.

#### Budget

Total Budget Workplan activity 24 months	Expenses (actual) Oct 17 – Dec. 17	Expenses (forecast) Jan 18-Mar 18	% project completion (forecast)	Forecast available
86,894	7,885	15,000*	26.3%	64,009

\*IZSLT and CIRAD LoA

**Component 3.2 Progressive Control Pathway (PCP)****Indicators**

Activities	Indicators	Baseline Sept 2017	Target 2 years	Unit of measure	Current Status
3.2.1	Development and Revision of PCP guidelines for joint FAO/OIE application	5	6	Number of guidelines	5
3.2.2	Training of PCP-FMD experts	6	30	Number of people trained	50
3.2.3	Support the facilitation of regional roadmap meetings, their follow-up actions and associated training or assessment processes	4	a) 5 b) 5 c) 2	a) No of roadmaps supported by EuFMD trained expert annually b) Between roadmap meeting webinars c) Workshops for RAP development	a) 2 b) 1 c) 0

**Progress**

PCP guidelines	The revision of the general PCP guidelines was finalized. Subsequently, update of existing materials and online training resources to include the major changes to the PCP guidelines. The template for the "Risk Assessment Plan" (stage 0) developed by EuFMD was finalized by the FAO/OIE FMD Working Group.
Online training	An e-learning module on developing a Risk-based strategic plan, which is open access, has been developed (reported under 3.4) and is due to be available online by March 2018. Based on the FAO/OIE guidelines on Post-vaccination monitoring, EuFMD conducted an online-training course for the SAARC and SADC region between September and October 2017;
Meetings /Workshops	Saudi Arabia requested a follow-up workshop on supporting the development of a risk-based strategy plan (Spring 2018). EuFMD participated in the MENA regional roadmap meeting in Amman, Jordan in October 2017, and was part of the epinet and labnet workshop for West Eurasia in 2017.
Issues	Need to provide more direct support to individual countries, particularly those repeatedly assessed as being in a provisional stage by the Regional Advisory Group (RAG). In January 2018, EuFMD forwarded a proposal to the FAO/OIE FMD Working Group to follow-up activities from regional roadmap meetings. This proposal introduces the concept of a <b>PCP-support officer (PSO)</b> to provide follow-up to individual countries between roadmap meetings particularly, but not restricted to, those in provisional stages.
Of note	Multiple groups using the PCP approach for controlling other infectious diseases (Rabies, PPR, Trypanosomiasis)

**Budget**

Total Budget Workplan activity 24 months	Expenses (actual) Oct. 17 –Dec. 17	Expenses (forecast) Jan. 18 – Mar. 18	% project completion (forecast)	Forecast available
155,954	14,230	29,230	28%	112,494

### Component 3.3 Laboratory support

#### Indicators

Activities	Indicators	Baseline Sept 2017	Target 2 years	Unit of measure	Current Status
3.3.1	Nb of OIE/FAO Laboratory Network meetings	2	4	Annual International Meeting	3
3.3.2	Nb of samples typed in relation to minimum surveillance requirements per pool	0	6	Nb of pools where target reached (120 samples per year per target pool from at least 5 countries)	0
3.3.3	Nb of new modules for e-learning and training on laboratory surveillance meeting quality standards	0	3	e-learning modules	1
3.3.4	Nb of labs supported to take part in global PTS annually	0	10	Labs taking part in PTS annually	5

#### Progress

<b>Meetings</b>	12 <sup>th</sup> OIE/FAO FMD Laboratory Network Meeting was organized in Pretoria, South Africa 28 <sup>th</sup> – 30 <sup>th</sup> of November 2017. East Africa Regional Laboratory FMD network meeting, Sabeta, Ethiopia, 12-14 December 2017
<b>E-learning</b>	<b>FLITC:</b> recent development of new eLearning modules for field investigation, diagnostic methods and quality assurance. Specific funding by BBSRC (UK), technical content and oversight of the project came from WRLFMD staff and all the material was reviewed by EuFMD staff. EuFMD provided the E-learning platform and expertise and hosted the course.
<b>Surveillance gaps</b>	FMDV surveillance in West and Central Africa (Pool 5) has historically been poor. To address this issue, a call for proposals was made and a LoA is being signed with Vétérinaires Sans Frontières (VSF) to pilot a system of sample collection by paravets using lateral flow devices in central and border regions of Mali.
<b>Networks</b>	A Francophone network established under the EuFMD umbrella, with relevant webinars. A network of surveillance focal points is being established to provide ground intelligence on current disease situations to inform the PRAGMATIST tool.
<b>PTS</b>	PTS 2017: only China (has indicated to participate every other year) and India (no response) are not participating.
<b>Issues</b>	In 2017, the EARLN webinars were not as well attended by local participants as 2016 and there are doubts over the sustainability of the EARL FMD sub-network. Plans for re-invigoration have been made at the 2017 meeting in Ethiopia. Involvement with laboratory networking in South Asia is lacking and needs attention. Availability of WRLFMD staff for missions abroad can be challenging considering their other duties and responsibilities.

#### Budget

\*WRL LoA and contract for West and Central Africa LFD surveillance project with VSF

Total Budget Workplan activity 24 months	Expenses (actual) Oct. 17 – Dec. 17	Expenses (forecast) Jan 18-Mar 18	% project completion (forecast)	Forecast available
€ 628,772	€ 16,340	€411,558*	65%	€ 200,874

### 3.4 Global access to PCP-FMD training resources

#### Indicators

Activities	Indicators	Baseline Sept 2015	Target 4 years	Achieved March 2018	Explanation of indicator
3.4.1	e-learning courses delivered	0	12	4 Southern Africa: FMD Investigation Training Course FMD Post Vaccination Monitoring (joint South Asia) FMD Laboratory Investigation (global) South Asia: FMD Investigation Training Course FMD Post Vaccination Monitoring (joint Southern Africa) FMD Laboratory Investigation (global)	Nb of e-learning courses delivered to South Asia or African regions.
3.4.2:	Nb of part. from region taking part in online training course /webinars.	0	200	0 (measured on an annual basis, no events so far in 2018)	Participants engaging in single e-learning event annually (eg joining online course or webinar)

#### Progress

<b>E-learning</b>	<b>FMD Post Vaccination Monitoring</b> (Oct-Nov 2017) for South Asia and Southern Africa. <b>FMD Laboratory Investigation Training Course.</b> <b>Upcoming courses include:</b> <ul style="list-style-type: none"> <li>• Training needs assessment and first online course in French to involve Francophone countries in North, West and Central Africa</li> <li>• Online courses in <b>South Asia</b> to include FMD Risk Analysis Along the Value Chain and national level FMD Investigation Training Course</li> </ul>
<b>Issues</b>	<b>PC Practitioners network:</b> relatively low participation. <b>South Asia:</b> Slow rate of progress in South Asia though establishing local partners and networks is continuing. <b>West and Central Africa:</b> Need to establish a focal point network for training delivery and a needs/feasibility assessment for internet based delivery.
<b>Networks</b>	<b>PC Practitioners network Two network training months organised.</b> 120 members; Five members of the network have been awarded their "Bronze Level" certificate (ten hours of training activities through the network) <b>Francophone:</b> global reach with webinars conducted in French. A series of webinars for this network are planned for 2018 and the Francophone network will form an important part of activities in West and Central Africa.
<b>Support</b>	A proposal to support laboratory and epidemiology networking in South Asia developed; Contact has been made with several Indian institutions (National Dairy Development Board, ICAR National Institute of Veterinary Epidemiology and Disease Informatics, Punjab Agricultural University) to explore potential partnerships.

#### Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Dec. 17	Expenses Jan 18 - Mar 18 (forecast)	% project completion (forecast)	Actual available (forecast)
195,532	3,026	20,000	12%	172,506

# **Appendix 5**

## FMD global and regional situation





## Update from WRLFMD

**Donald King**

*donald.king@pirbright.ac.uk*

**WRLFMD Team:** Valerie Mioulet, Nick Knowles, Anna Ludi, Ginette Wilsden, Mehreen Azhar, Hannah Baker, Kasia Bachanek-Bankowska, Lissie Henry, Antonello Di Nardo, Jemma Wadsworth, Clare Browning, Britta Wood, Bob Statham, Abid Bin-Tarif, Ashley Gray, Beth Johns, Mark Henstock, Alison Morris, David Paton, Nick Lyons, Dexter Wiseman, Julie Maryan, Sarah Belgrave






## OIE/FAO FMD Laboratory Network



- **Global surveillance and changing patterns in risk**
- **Harmonised and improved lab capacity**
- Working Groups for:
  - Virus nomenclature
  - Vaccines (selection and PVM)
- MoU now signed by 14/15 of the “core members”
- Thanks to  and 
- Meeting report available:

Core Network Members and affiliates:



Pretoria– November 2017

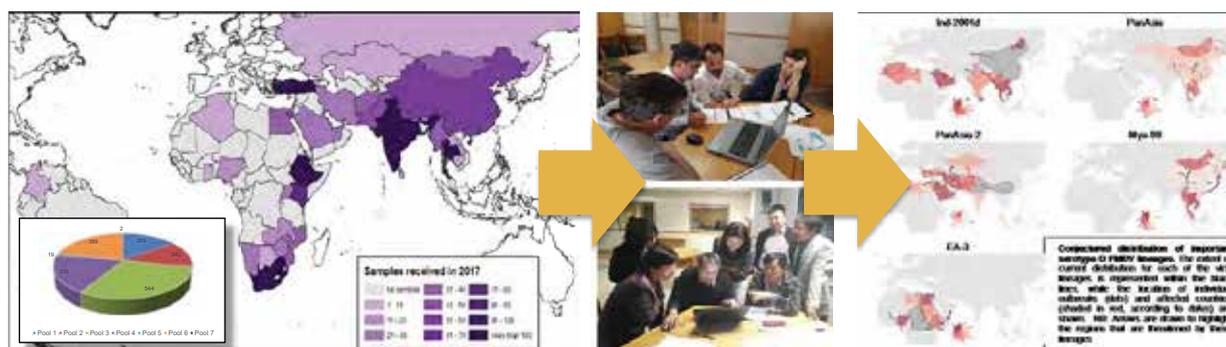
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## Global surveillance

via the OIE/FAO FMD Laboratory Network



- Since 2014 >2000 virological samples pa
- Results collated in Annual Report (2017 in draft form)
- Review geographical distribution of transboundary FMDV lineages
  - new way to highlight risks
- Gaps in surveillance remain in West/Central (and East Africa)



\*preliminary data for 2017

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## Recent submissions to WRLFMD Pirbright

Q4 2017 to date:

### Reports issued for:

Afghanistan, Botswana, Bhutan, China\*, Egypt (and\*), Ghana, Hong Kong SAR, Israel, Kenya, Malawi, Mongolia\*, Myanmar\*, Namibia, Nepal, Pakistan, Palestine, Russia\*, Sri Lanka, Tunisia\*, Turkey\*, Uganda, Zambia, Zimbabwe (23 countries – including sequence exchange\*)

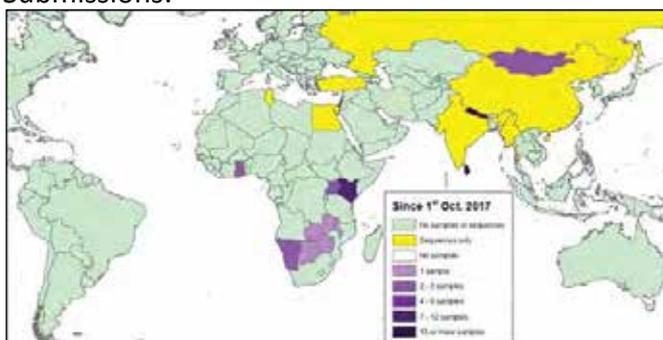
### Results pending for:

Vietnam

### Arranging shipments:

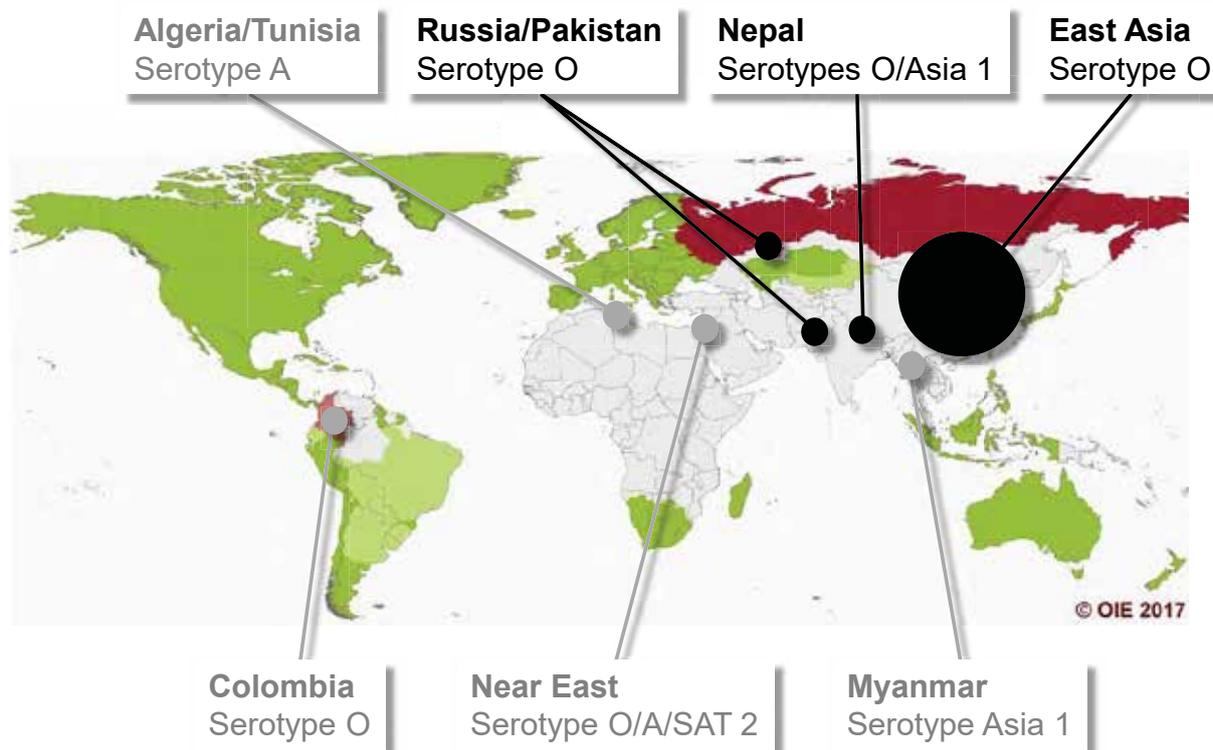
Ethiopia, Iran, Swaziland

Submissions:



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## FMD situation – “highlights”

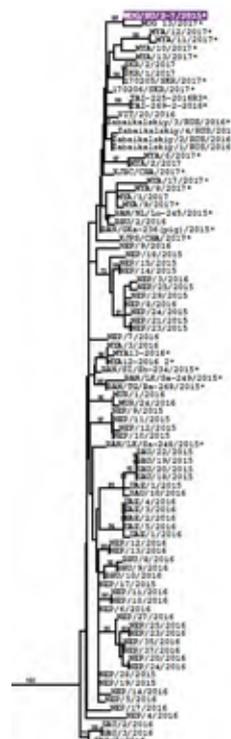


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## Google O/ME-SA/Ind-2001

Evidence that this lineage has been in Mongolia for > 2 years

- Sequences from NIAH/NARO, Japan (from Genbank)
- Samples collected in March, 2015 from Bayan-Ulgii (western-most Aimag of Mongolia)
- 99.4% identity to sequences from FGBI-ARRIAH (collected in Eastern Mongolia in 2017) – reported in Dublin
- Pre-dates reports of this lineage in China and Russia – similar dates to first reports of this lineage in mainland SEA

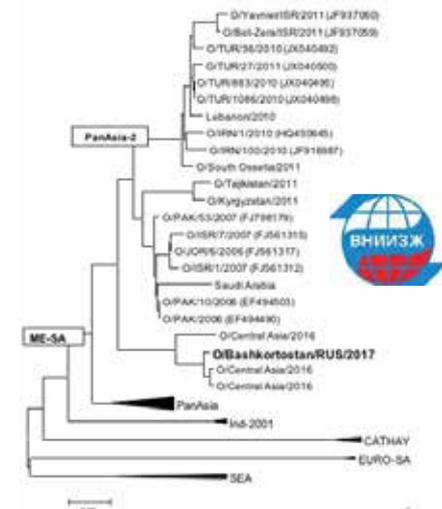
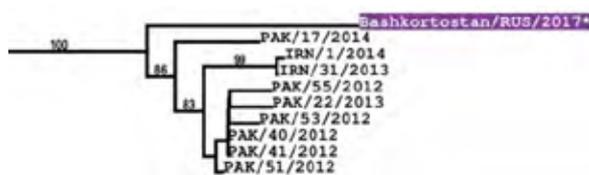


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## O/ME-SA lineage in Russia

October 2017

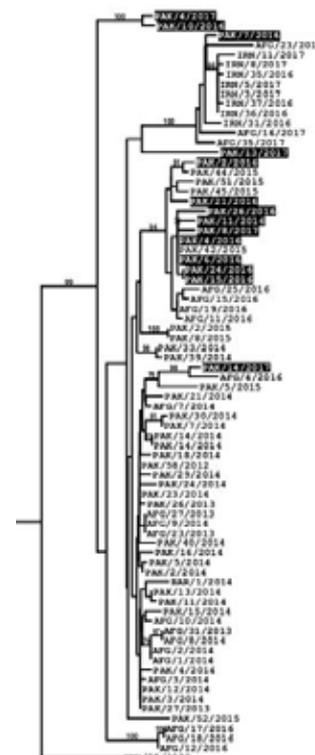
- 5 FMD outbreaks reported in **Bashkortostan** (in the FMD-free zone without vaccination)
- Reported cases in cattle, sheep and goats
- New FMDV lineage in ME-SA toptotype (not PanAsia or PanAsia-2)
- Most closely related to FMD viruses in Pakistan and Iran (2014)
- Reporting of cases in “central Asia”?



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## Poor ag-match for serotype O viruses from Pakistan

- Two isolates in a new genetic clade within O/ME-SA/PanAsia-2<sup>ANT-10</sup>
- Discrete from other ANT-10 viruses
- Collected in Punjab, Pakistan (2016/17) from cattle and water buffalo
- No neutralization in VNT with BVS for O-Manisa, O-3039 or O-TUR-5-09
- **New antigenic variant?**
- **Spread of this lineage needs to be closely monitored** – esp. wrt evidence of vaccine failure in the field



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## Preliminary analyses:

Vaccine matching	O 3039	O Manisa	O TUR/5/2009
O/PAK/14/2017	0.62	0.32	0.48
O/PAK/10/2016	0	0	0
O/PAK/4/2017	0	0.10	0

- VP1
 

10 20 30 40 50 60 70 80

Ag site 3

O/PAK/14/2017 TTSAGESSDFVTATVENYGGETQVORRQHTDVSFILDRFVKVTPKDCQINVLDMQTPAHTLVGALLRTATYFFADLEVAV

O/PAK/10/2016 .....A.....T.....

O/PAK/4/2017 .....A.....

90 100 110 120 130 140 150 160

Ag site 1

O/PAK/14/2017 KHEGNLTWVPNGAPEAALDNTTNPTAYHKAPLTRALPYTAPHRVLTAVYNGNCKYGESHVFPNVRGDLQVLAOKAARALP

O/PAK/10/2016 .....D.....T.....T.....

O/PAK/4/2017 .....D.....T.....S.....T.....

170 180 190 200 210

Ag site 1

O/PAK/14/2017 TSFNYGAIKATRVTELLYRMKRAETYCPRPLLAIHDPDAARHKQKIVAEVKQLL

O/PAK/10/2016 .....V.....NE.....

O/PAK/4/2017 .....NE.....

Known type O antigenically important residues are underlined

↑ Residue 198 has been shown to be part of site 1 in type A viruses

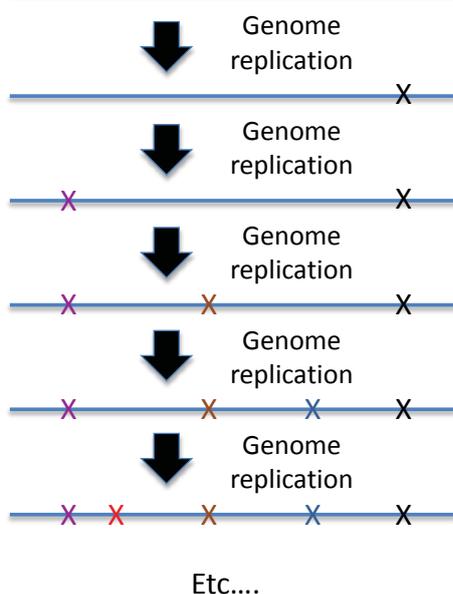
- Complete genome sequences will also be determined using the Illumina MiSeq

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## Molecular clocks

Are these a predictable indicator of FMDV replication in hosts?

FMDV genome (Error rate  $10^{-2}$ - $10^{-4}$  replication event)



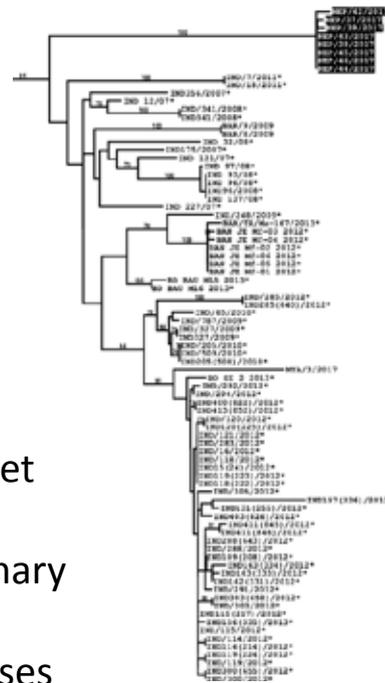
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# Analyses of samples from Nepal

## Highlights gaps in regional/National surveillance?

Serotype O:  
~94% identity with closest sequences

Serotype Asia 1:  
~91% identity with closest sequences

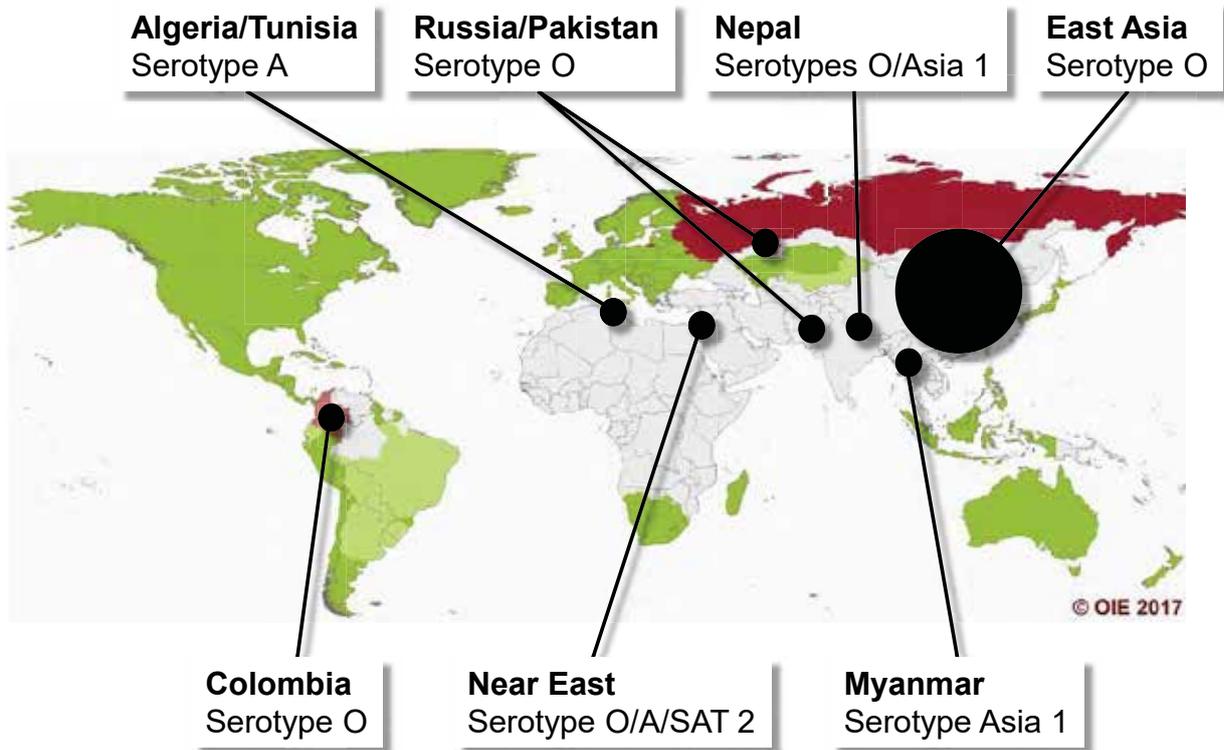


How do we interpret these trees?

1. Rapid evolutionary change
2. Un-sampled cases

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## 2017/18 FMD situation – "highlights"



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## Vaccine Bank Recommendations (October 2017)

<b>High Priority</b>	<b>A/ASIA/G-VII(G-18)*</b> 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)
<b>Medium Priority</b>	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)
<b>Low Priority</b>	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

- 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
- **Data can be challenged/modified (Excel format)**

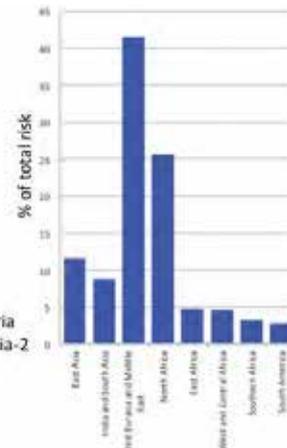
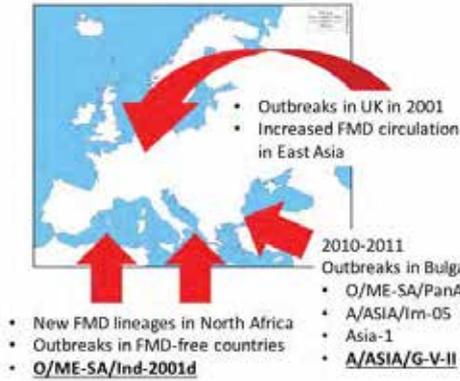
Determines scores as a **product** of two components

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

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# Estimating risks for Europe

Likely source of FMDV



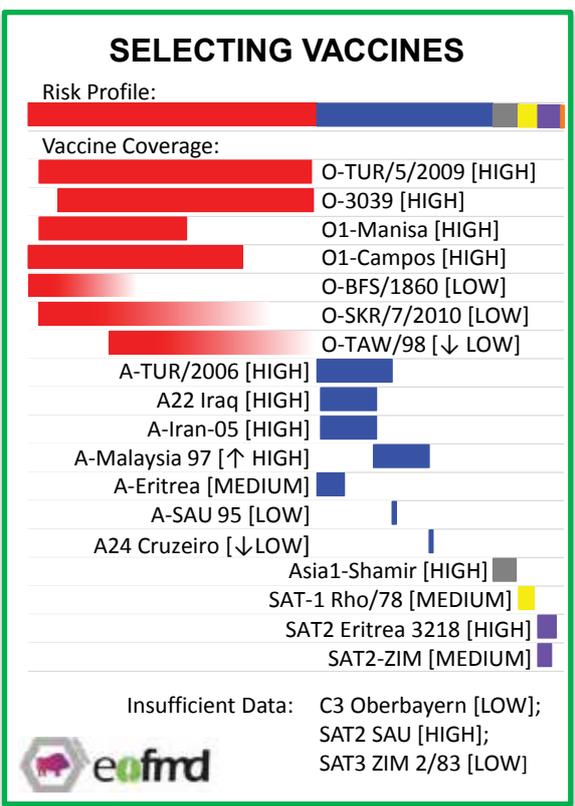
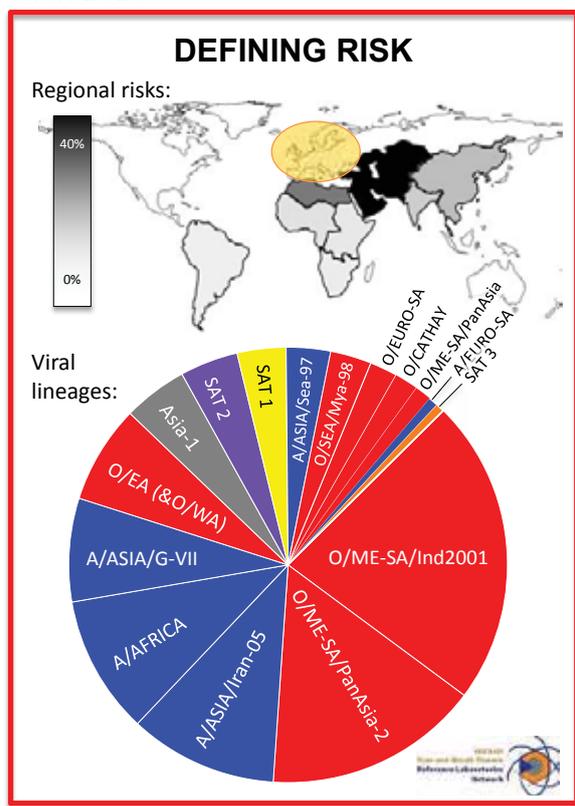
FMDV lineages that are present in "source" regions

	West Europe	East Asia	North Africa	West and Southern Asia	East Africa	West and Central Africa	Southern Africa	South America
O ME-SA/PanAsia-2	37							
O ME-SA/PanAsia-2		11						
O ME-SA/PanAsia-2		33						
O ME-SA/Ind-2001d	0	91	48	17				
O EA	3		48		25	10		
O EURO-SA								14
O CAT-VI		16.6						
A ASIA/Sea-97		29						
A ASIA/Sea-25		25.8						
A ASIA/G-VII		17.8						
A AFRICA			35		28	17		
A EURO-SA								38
Asia-1		1.8		1				
Asia-1		18.5			15	25	27	
SAT 1		0.5		4	22	28	17	
SAT 2					3			45
SAT 3								

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# Vaccine Antigen Prioritisation: Europe

March 2018



NB: Analyses uses best available data, however there are gaps in surveillance and vaccine coverage data

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## Update on the proficiency testing scheme



- To assist NRLs to employ accurate and reproducible FMD diagnostic tests
- Quality assurance programme requirements at ISO/IEC 17025
- 2017 PT panel(s) have been sent to 24 countries: Albania, Algeria, Armenia, Azerbaijan, **Botswana** (shipping 2<sup>nd</sup> March), **Brazil**, **Ethiopia**, Georgia, Israel, **Kenya**, Kosovo, Lebanon, Macedonia, Moldova, Morocco, **Nigeria**, Norway, **Russia**, **Senegal**, Serbia, **South Africa**, Switzerland, **Thailand** (shipping 2<sup>nd</sup> March), Turkey
- Awaiting export licences for: **Argentina**, Egypt, Iraq and Tunisia
- Following labs have been contacted but no response: Belarus, Bosnia & Herzegovina, **India**, Iran, Libya, Syria.
- Ukraine confirmed they were unable to participate and Republic of Korea, **China** and Montenegro would like to take part in 2018

**BOLD** countries – Global Network

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## East Africa Laboratory Network

- Regional meeting of EALN-FMD (December 2017)



### Aims:

- Share information about the FMD situation in the region
- Review FMD laboratory diagnostic capacity in East Africa
- Decide on immediate training priorities for lab diagnostics
- Develop and encourage a more sustainable Network platform for regional FMD lab activities

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## Observations regarding FMDV vaccines

Particularly for Africa (from OIE/FAO and EALN-FMD Network Meetings)

There are many gaps in our knowledge:

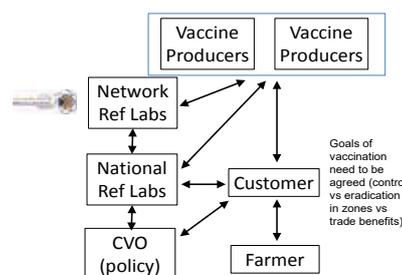
- [1] in vivo potency tests are rarely done, particularly those that define cross-protective responses
- [2] Immunogenicity studies for monovalent (or multivalent vaccines) are rarely reported
- [3] Reference reagents (such as validated BVS) from vaccines suppliers are not readily available to the Reference laboratory community
- [4] not clear that batch serological testing data is always supplied from manufacturers in Africa
- [5] Field evaluation studies are lacking



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## Priorities for FMDV vaccine quality assurance

- Defining key roles for the different “actors”
- Laboratory support to generate **independent** evidence regarding the suitability of vaccines in different endemic settings
- Generation/validation of tailored tools
- Developing capacity/expertise for these activities for *international* and *local* producers
- Scope to enhance these activities via proposed OIE Twinning Project (with PANVAC)



Activity	Vaccine Producer	National Ref Labs	Customer	Farmer	Overall Rating
Microbiological potency testing	++	++	++	++	++
Safety testing on animals	++	++	++	++	++
Batch testing (stability, sterility, etc.)	++	++	++	++	++
Defining regional risks and control zones	+	+	+	+	++
Developing regional diagnostic tools	+	+	+	+	++
Developing and validating reference reagents	++	+	+	+	++
Developing and validating reference reagents	+	++	+	+	++
Defining countries of origin and control zones	++	+	+	+	++
Field population surveys and control zones	+	++	+	+	++
Field population surveys and control zones	+	++	+	+	++
Field population surveys and control zones	+	++	+	+	++

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## 2018: some important dates

- May 8-9: EU Workshop – Horsley, UK
- May 14-25: FMD Diagnostics training course – Pirbright
- November 5-6: Symposium to celebrate 60<sup>th</sup> Anniversary of WRLFMD

### 50<sup>th</sup> Anniversary 2008



Royal Society, London, 2008

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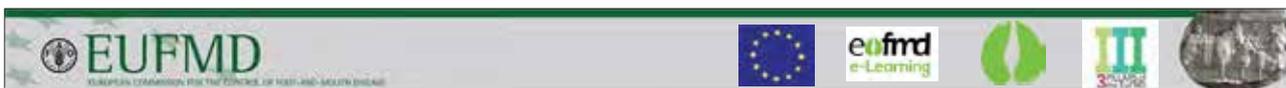
## Acknowledgements

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



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**Appendix 6**  
FMD Reference Centre  
at ANSES

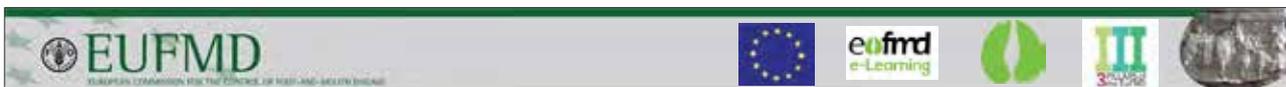


# Safe and cost-effective shipment of samples using lateral flow devices for laboratory diagnostic

**Aurore Romey, Anthony Relmy, Kamila Gorna, Eve Laloy, Stéphan Zientara, Sandra Blaise-Boisseau and Labib Bakkali-Kassimi**  
 Anses, Animal health laboratory  
 14 Rue Pierre et Marie Curie, 94700 Maisons-Alfort, France  
[labib.bakkali-kassimi@anses.fr](mailto:labib.bakkali-kassimi@anses.fr)

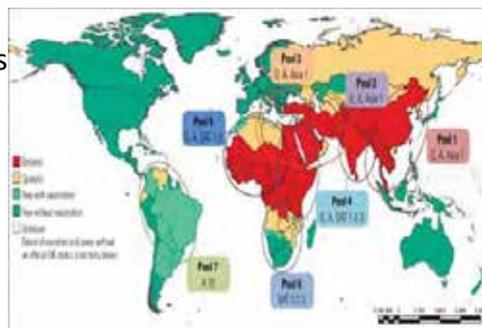


95<sup>th</sup> Executive Committee EuFMD, 6-7 March- Budapest, Hungary



## Towards global control and eradication of FMD:

- Identification of circulating virus strains in endemic regions
- Implementation of adequate control measures
- Determination of adequate vaccine strain to be used



Freimanis et al, 2016



**There is a need to improve regular submission of samples to reference laboratories**



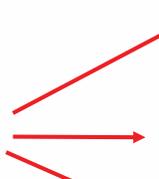
## One of the main barriers



UN3373  
Infectious  
materiel



UN1845  
Dry ice



Cost



Banned by some airlines



Delay (shipping company, authorisations...)

95<sup>th</sup> Executive Committee EuFMD, 6-7 March- Budapest, Hungary



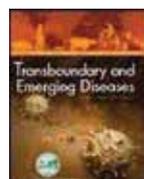




# EU FMD – Fund for Applied Research (EuFMD-FAR)



## Use of lateral flow device for safe and low cost shipment of FMDV suspected samples (FMDVINACT)

**ORIGINAL ARTICLE**  
**Safe and cost-effective protocol for shipment of samples from Foot-and-Mouth Disease suspected cases for laboratory diagnostic**  
 A. Rahimi, A. Ishtey, K. Gholi, E. Ledy, S. Zentari, S. Bina-Buzarji et al.  
 I. Sökücü-Karimov  
 First published: 7 April 2017  
 DOI: 10.1111/tbed.12042

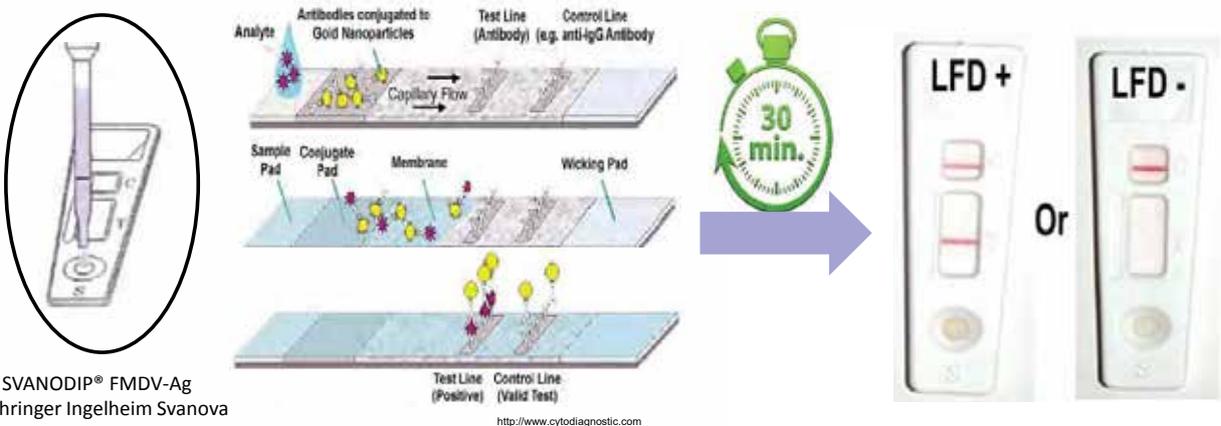
*95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary*





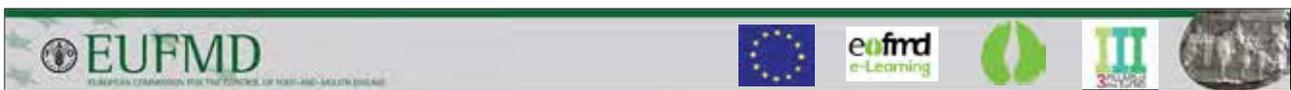
## The lateral flow device (LFD): a support for shipment

Early diagnosis method routinely used on field: immunodetection method on strip

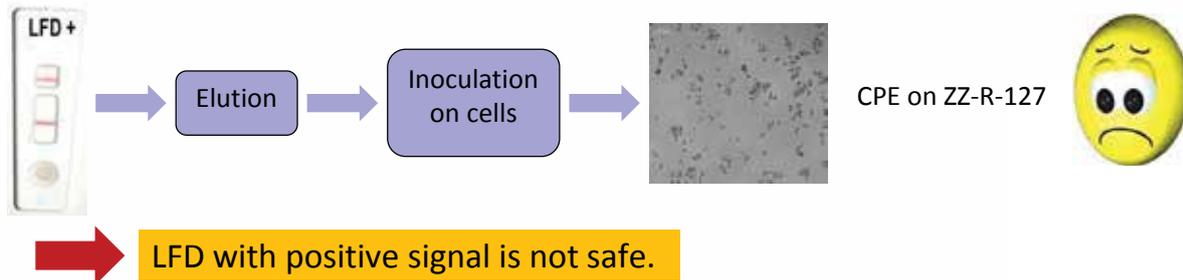


**SVANODIP® FMDV-Ag**  
 Boehringer Ingelheim Svanova  
<http://www.cytodiagnostic.com>

*95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary*

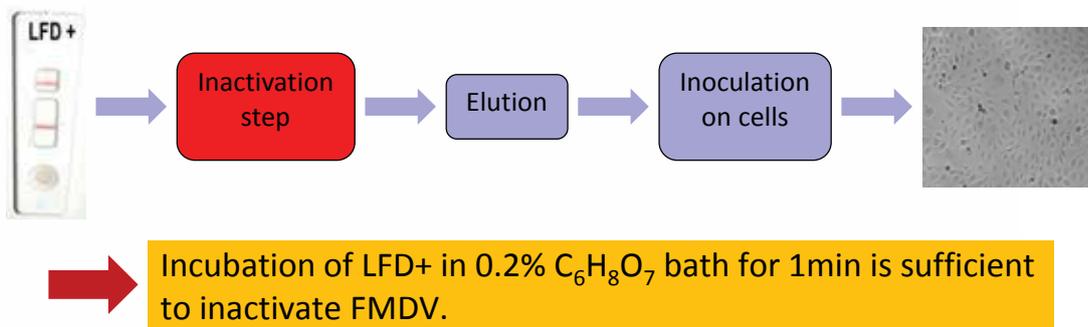


## How ensure safety from positive LFD ?



### Chemical inactivation of live FMDV

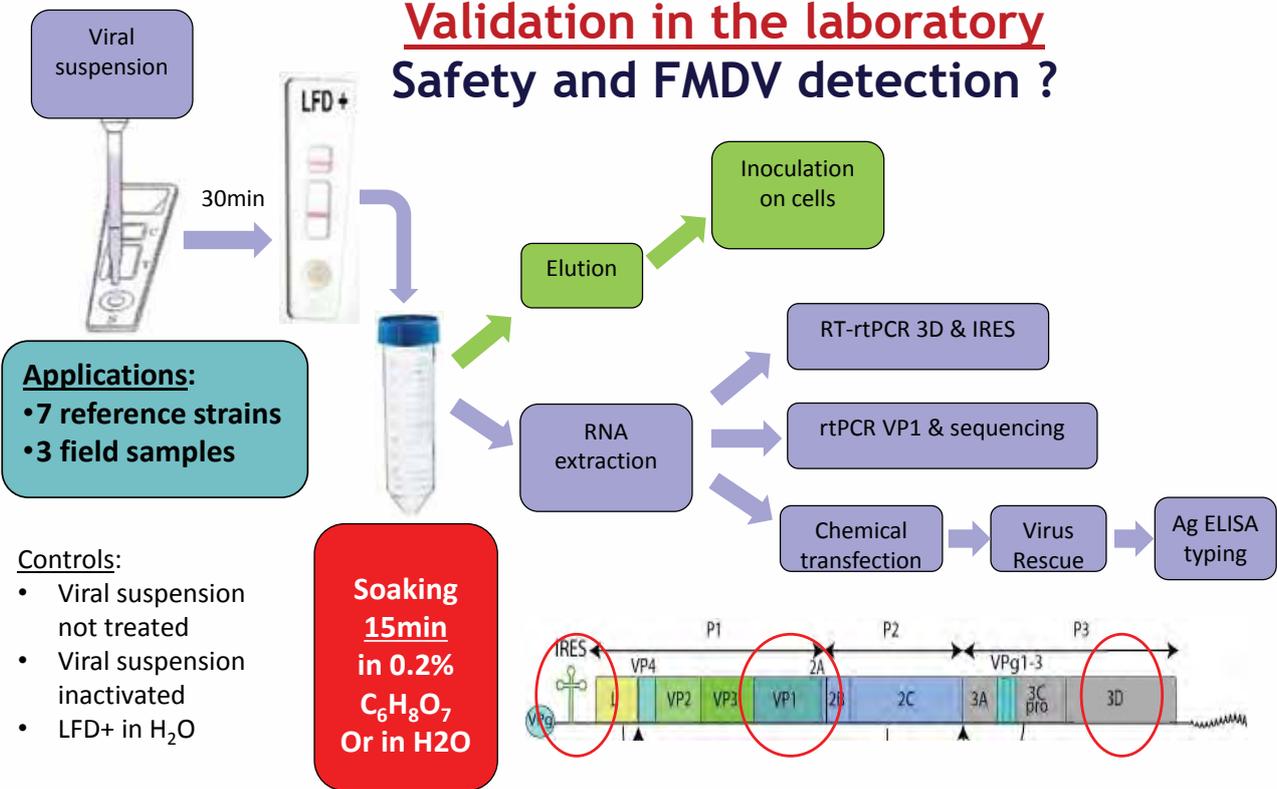
- Citric acid  $C_6H_8O_7$  (0.1 to 1%)
- Contact time: 15 sec to 15 min



95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary



## Validation in the laboratory Safety and FMDV detection ?



95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary

    									
<b>Evaluation on reference strains</b>									
Strain	Virus titre (TCID <sub>50</sub> /ml)	LFD result <sup>a</sup>	Soaking solution	CPE on cells after inoculation	3D Ct	IRES Ct	VP1 amplification	CPE on cells after RNA transfection	
O/IRN/13/2012	10 <sup>7.23</sup>	++	H <sub>2</sub> O	+24 hpi	19.41	16.50	1155 bp	+24 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	20.65	17.53		+48 hpt	
A/IRN05	10 <sup>7.48</sup>	++	H <sub>2</sub> O	+24 hpi	19.60	21.76	846 bp	+24 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	19.15	20.46		+48 hpt	
C1 Noville	10 <sup>7.72</sup>	+++	H <sub>2</sub> O	+24 hpi	18.01	24.01	837 bp	+24 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	17.29	23.21		+48 hpt	
SAT1/KEN/2/2011	10 <sup>5.82</sup>	++	H <sub>2</sub> O	+5 hpi	18.48	21.42	1023 bp	+24 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	16.91	20.71		+24 hpt	
SAT2/LIB40/2012	10 <sup>8.36</sup>	+	H <sub>2</sub> O	+24 hpi	14.12	39.37	1255 bp	+24 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	12.73	37.75		+24 hpt	
SAT3 Zim 4/81	10 <sup>6.95</sup>	++	H <sub>2</sub> O	+5 hpi	19.75	29.49	1254 bp	+24 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	18.24	26.88		+24 hpt	
Asia/ISR/3/89	10 <sup>6.69</sup>	+	H <sub>2</sub> O	+24 hpi	30.42	29.44	894 bp	+48 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	30.76	26.61		+48 hpt	

FMDV, foot-and-mouth disease virus; LFD, lateral flow device; -, no cytopathic effect after two passages on cells; hpi, hours post-inoculation; hpt, hours post-transfection.  
<sup>a</sup>+++ = strong, ++ = intermediary, + = weak.

➔ 0.2% citric acid treatment of positive LFD allows FMDV inactivation

➔ FMDV can be detected by rRT-PCR

➔ VP1 can be amplified and sequenced

➔ Live virus can be rescued (and typed by Ag-Elisa)

95<sup>th</sup> Executive Committee EuFMD, 6-7 March- Budapest, Hungary

    									
<b>Evaluation on archival epithelium field samples</b>									
Sample	Virus titre (TCID <sub>50</sub> /ml)	LFD result <sup>a</sup>	Soaking solution	CPE on cells after inoculation	3D Ct	IRES Ct	VP1 sequence homology <sup>b</sup>	CPE on cells after RNA transfection	
FMDV/TUN/1771/2014	10 <sup>5.95</sup>	+	H <sub>2</sub> O	+24 hpi	25.56	NA	100%	+24 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	25.00	NA		+24 hpt	
BEN/1/2011	10 <sup>3.48</sup>	+	H <sub>2</sub> O	+48 hpi	25.41	36.46	100%	+48 hpt	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	23.58	33.14		+48 hpt	
O/FRA/DPT77/2001	10 <sup>4.23</sup>	+++	H <sub>2</sub> O	+48 hpi	19.98	21.45	100%	-	
			C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 0.2%	-	20.23	20.95		-	

FMDV, foot-and-mouth disease virus; LFD, lateral flow device; -, no cytopathic effect after two passages on cells; hpi, hours post-inoculation; hpt, hours post-transfection; NA, not applicable.  
<sup>a</sup>+++ = strong, + = weak.  
<sup>b</sup>Based on comparison of the 639 bp of the serotype O VP1.

➔ The protocol is applicable on archival field samples (virus inactivation, genome detection, VP1 sequencing and rescue of live virus)

➔ **Needs to be validated on more field samples and in real situation**

95<sup>th</sup> Executive Committee EuFMD, 6-7 March- Budapest, Hungary



**Field validation**   

**EUFMD – Fund for Applied Research (EuFMD-FAR) - 2017**

Evaluation in field conditions of a safe and cost-effective protocol for shipment of samples from FMD suspected cases for laboratory diagnostic (FIELD\_EVAL\_INACT)

- Anses, France (coordinator)
- Technical University of Denmark (DTU)
- FMD Research Centre of Nigeria (NRVI)
- FMD Institute of Turkey (SAP)
- University of Malakand in Pakistan (UM)
- Merial- Boehringer Ingelheim (BI)



*95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary*

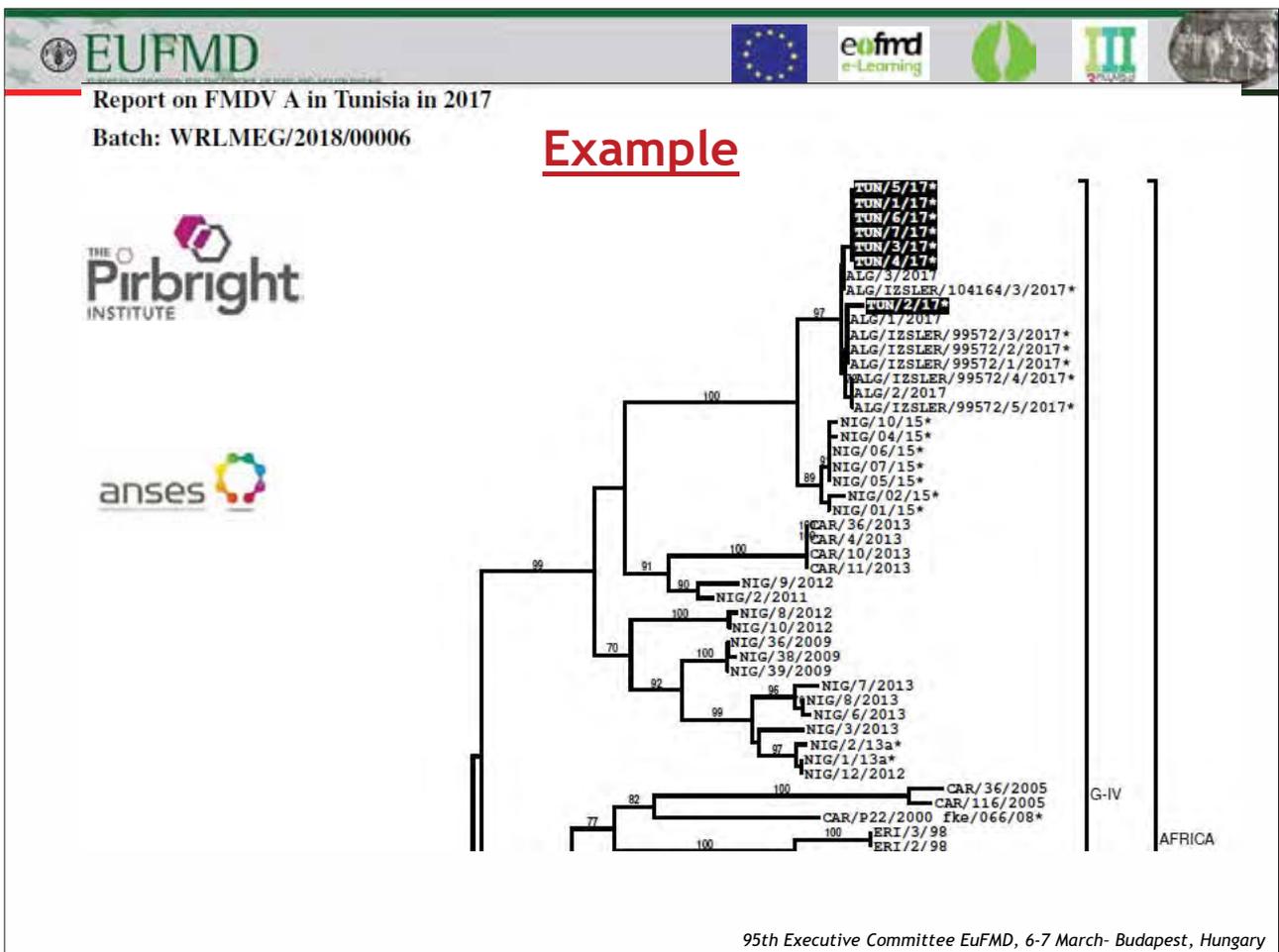


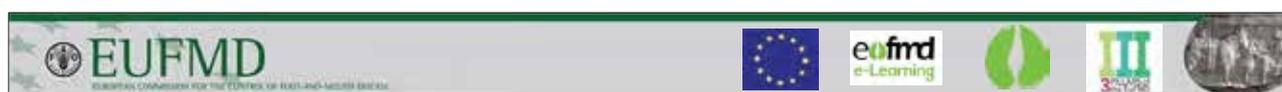
**The aims of the project:**

- Evaluate/validate the performance of the protocol in real situation through application under field conditions.
- Asses biosafety on fresh samples expected to contain large quantity of virus (vesicular fluid if available).
- Evaluate the impact of storage conditions of the inactivated LFD on the detection of FMDV.
- Optimization of RNA transfection to rescue live virus

In addition, the project will allow characterization of FMDV strains

*95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary*





**Application in the field**

**2018**

**6th Call EUFMD – Fund for Applied Research (EuFMD-FAR) – 2018**

**Pilot studies – West /Central Africa**

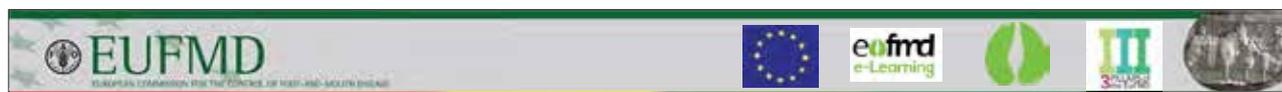
**Support**

 **VSF INTERNATIONAL VÉTÉRINAIRES SANS FRONTIÈRES** → **Pilot study in Mali**



1. Establish the feasibility of engaging paraveterinarians, private animal health service providers or other non-state actors in FMD sample collection and submission to the national laboratories/authorities;
2. A study on the demand of livestock keepers and other stakeholders for services for prevention or management of FMD, to establish if a market potential exists for services (including early warning of risk) and which will identify what will need to change if the demand is to be met and/or the service to be introduced

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## CONCLUSION

- Incubation 15 min in 0.2% citric acid is sufficient for inactivation of FMDV on LFD
- FMDV RNA can be extracted from LFD and FMDV detected by rtRT-PCR, VP1 sequenced and live virus rescued after RNA transfection
- Validation of the protocol on the field is ongoing (FAR 2017 & 2018)
- The protocol should facilitate the transport of samples and thus increase the submissions
- Useful for sending samples to laboratories not allowed to use live virus
- The safety needs to be evaluated and validated by the Biorisk Working Group of the EuFMD

*95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary*



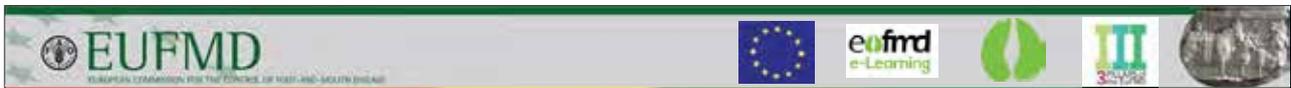
## Acknowledgement



Boehringer  
Ingelheim



95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary



## Thank you for your attention



95th Executive Committee EuFMD, 6-7 March- Budapest, Hungary

# **Appendix 7**

## **Item 3: Evaluation**

# ***Evaluation arrangement - of the Phase IV Agreement EC:FAO***

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## **Mandatory for projects > 4 mUSD**

**Not mandatory for Article XIV Bodies (the MS decide on evaluation)**

### **Options:**

1. DG SANTE or the Commission– manages an evaluation without OED participation. This evaluation, if needed, could be led by external, independent consultants or firm
2. OED manages the evaluation involving DG-SANTE throughout the evaluation process. This could be further formalised with an Agreement  
*Under #2, OED consults main stakeholders and resource partners at various stages, such as: i) at the ToRs preparation, ii) through dedicated interviews during the evaluation scoping and implementation; iii) sharing the draft evaluation report for comments, iv) discussing evaluation conclusions and recommendations in a stakeholder workshop.*

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<h1>Evaluation Management</h1>	
<ul style="list-style-type: none"> <li>• <b>FAO</b> and <b>OIE</b> made a formal agreement on the management of the evaluation</li> <li>• Joint Management Group formed</li> <li>• FAO (OED) led the management of the evaluation, including <b>contracting of experts, ensuring process</b> and <b>timetable</b> followed</li> </ul>	
<b>Evaluation Management Group</b>	<b>Functions:</b> <ul style="list-style-type: none"> <li>• Support and oversee the evaluation management</li> <li>• Provide inputs and review on key evaluation decision points           <ul style="list-style-type: none"> <li>▪ Evaluation Scope, Approach and Methods; Scheduling and Resource allocation</li> <li>▪ ToR</li> <li>▪ Evaluation team selection criteria and selection</li> <li>▪ Inception Report</li> <li>▪ Evaluation Report (draft for circulation and final draft)</li> </ul> </li> <li>• Act as a liaison for the evaluation with the appropriate technical units within their own organizations</li> </ul>
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<b>Evaluation Processes and Procedures</b>	
<b>FAO-OED Evaluation Quality Assurance System and Guidelines</b>	<p>FAO-OED procedures for Evaluation Conduct and Quality Assurance will be applied to all substantive aspects of the evaluation, including terms of reference, evaluation team selection, the inception report and draft and final evaluation report, internal peer review processes and external quality assurance (through an external independent expert to be recruited).</p> <p>The evaluation conduct will reflect the UNEG Norms and Standards. Its principles are common to all UN agencies. The present document is agreed between OIE-PMC and FAO-OED with respect to the following which are further covered below:</p> <ul style="list-style-type: none"> <li>• clearance processes and quality assurance</li> <li>• clarity on responsibility for the final evaluation report</li> <li>• clarity on responsibility for report as submitted within the agencies to management and governing bodies</li> <li>• clarity on responsibility for management response to the evaluation</li> </ul>
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<b>Evaluation Reporting</b>	
<b>Reporting to governing bodies</b>	<p>Each cooperating agency should operate in line with its own procedures in terms of reporting to its Governing Bodies and with the Secretariats of the two Organizations. Requirements from each Reference Group member should be documented in the ToR. Pro-active communications are encouraged.</p> <p>According to FAO-OED's Evaluation Policy, the Office of Evaluation is not required to report to the Governing Bodies for this type of evaluation but all evaluation reports are posted on the FAO-OED internet and intranet.</p>
ExCom95	

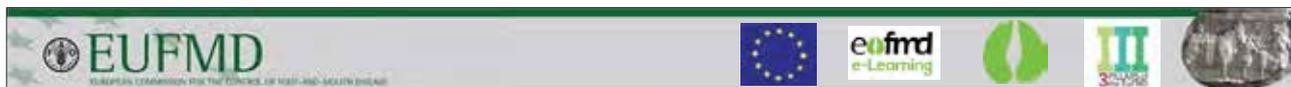
     	
<b>Evaluation outputs (deliverables)(based on the GF-TADS evaluation)</b>	
<p>The expected outputs are the following:</p> <ul style="list-style-type: none"> <li>– <b>Evaluation Matrix</b> — the evaluation team shall develop the evaluation matrix.</li> <li>– <b>Evaluation inception report</b>— the evaluation team will prepare an inception report before going into the fully-fledged data collection exercise.</li> <li>– <b>Draft evaluation report</b>- OED (or the MG if agreed with EC) will review the zero draft of the evaluation report submitted by the evaluation team to ensure it meets the required quality criteria. The draft evaluation report will then be circulated among key stakeholders for comments as well as to the external QA expert before finalisation; suggestions will be incorporated as deemed appropriate by the evaluation team.</li> <li>– <b>Final evaluation report:</b> should include an executive summary and illustrate the evidence found that responds to the evaluation issues and/or questions listed in the ToRs. <ul style="list-style-type: none"> <li>• The EMG (OED and EC) and ultimately, OED Director in consultation with the nominated DG-SANTE officer, will be responsible for the final version of the evaluation report.</li> </ul> </li> </ul>	
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## Evaluation methodology

- To be agreed – it depends on the objectives
- Desk reviews
- Structured Interviews (phone, in person)
- Country missions (if needed)
- Group Meetings: for evidence, for feedback to review findings

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## Proposal of the Timeline

- 3/2018 : agree with ExCom, EC on form of evaluation management
- 6/2018: agreement on terms of reference, timelines
- 9/2018: evaluation team experts agreed, contracted
- 10/2018 to 12/2018: evaluation period
- 1/2019: Draft Report developed
- 2/2019: report/consult on Draft, to Executive Committee/other stakeholders
- 3/2019: response of Management/ExCom to report
- 4/2019 : Final Report (reporting to the General Session if agreed)

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**Appendix 8**  
Item 4: Pillar I  
Training programme








# Training Program for Member States



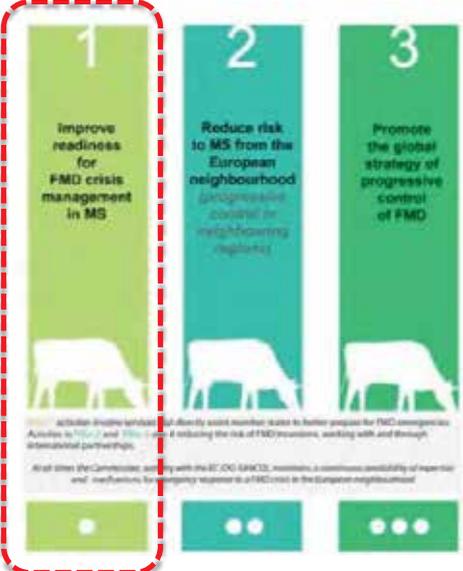
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## Pillar I – Component 1.1 Training for Member States



**Fact Sheet**

- 388 Training Credits available to MSs
- 354 Training Credits are allocated to training (91%)
- 100 Training Credits have been delivered by EuFMD out of the 354 TC allocated (28%)

MSs that have not allocated any TCs:

- Cyprus
- Luxemburg
- Switzerland

Major improvement compared to 2015-17 period

- 38 Member States, each with 10 Training Credits to spend on training of their choice;
- Training is selected based on the EuFMD Training Menu and NTFP allocations;
- Some MSs TC were adjusted based on the first biennium (-/+);
- Some training offered will not be realized due to low interest








## Past Six Month October 17 – March 18



**ExCom 94**  
• October 2017



**Webinar for NTFPs**  
• October 2017  
• “How To”



**Training Credits Allocation (sent)**  
• October 2017  
• Regional



**Training Credits Allocation (received)**  
• November 2017  
• Ranking of WSS



**RTT courses (3)**  
• NTC 27 Nov17  
• NTC 29 Nov18  
• N/KTC 29 Feb18



**Caribbean FEP-C**  
• Jan-Feb 18  
• On-line  
• Finished



**United Kingdom 3<sup>rd</sup> FEP-C**  
• Feb - Mar 18  
• On-line  
• On-going



Constant communication with MSs National Training Focal Points








## Plan for the next six month March – September 2018



**ExCom 95**  
• March 2018



**Crisis Management WS**  
• 19-23 March 18  
• Kaunas Lithuania  
• 19 participants



**Webinar for NTFPs**  
• May 2018  
• “Where we are”  
• Chasing up MSs



**Generic FEPC (EN)**  
• May 18  
• On-line



**Spanish 4<sup>th</sup> FEP-C**  
• 15 May 18  
• On-line



**Wildlife Surveillance WS**  
• 7-11 May 18  
• Bulgaria



**Simulation Exercise WS**  
• Tentative  
• Sept 18



- Modeling in-country missions: Spain (Apr '18), Romania, F.Y.R. of Macedonia
- Laboratory Training: Diagnosis of foot-and-mouth disease TPI, (May '18), waiting for nominations
- A possible National Tailored FEPC (Jun '18)

## Training for Member States – Minor Issues

- **Veterinary Ethics** did not have enough TC allocation to make a face-to-face workshop feasible. Alternative solution is an e-learning in this topic for interested / all MSs;
- EuFMD will set a deadline for **non responding MSs** and then use the unallocated TC for other initiatives;

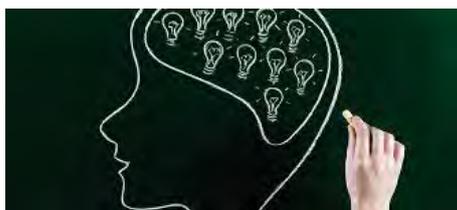
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## Training for Member States – Major Issues

### Regionalizing the Training Menu:

#### A regional approach

- Use 56 TC remaining from first biennium;
- Deliver training in issue of regional concern



### Solution for unspent TC:

- Use for new entry countries (Montenegro)
- Use funds to develop new training (Ethics)
- Other?

### Fact Sheet

- 9 out of 38 MS have allocated TC;
- Geographically very spread-out;
- 1 strong initiative: Spain-Portugal joint SimEx in November 2018;
- Possible: **Hungary** + Slovenia
- Possible: **Bulgaria** + F.Y.R of Macedonia
- Germany? **Italy!**? Norway? -> Joint interest?

**Suggestion: Go ahead where possible!**

### Possible solution for countries:

- Reallocation to a different training

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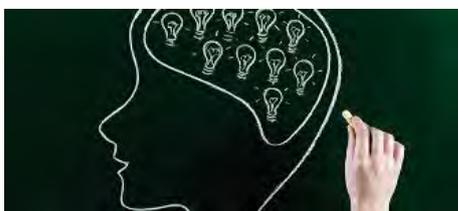
## Training for Member States – Major Issues

### Memorandum of Understanding with Veterinary Service of Kenya

- The main tool to deliver RTT for MSs in Kenya;
- Despite of initial correspondence the MoU was not extended in December 2017;
- The DVS was unsatisfied with the support Kenya received for each RTT

### Real Time Training Course N-KTC 29

- Due to the issues with the MoU NTC 29 was reallocated to Nepal, instead of Kenya (as originally planned);
- The RTT was successfully delivered for the MSs participants;
- The budge allocated for the NTC 29 was sufficient to cover the reallocation and delivery;



### Possible solution for issue:

- Short meeting at the OIE General Assembly Meeting, May 2018 with Kenya CVO?
  - Continue with delivery of RTT in Nepal?
- Possible benefit: better links with region (India)

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Reporting: Mark Hovari and Ruth Oliva Abascal

**Thank you for you  
attention  
Any questions?**

ExCom95

**Appendix 9**  
Item 4: Pillar II and III  
Training programme








## Training in support of the neighbourhood and global strategy



**Qui est dans notre réseau?**

Un bon collègue de la discipline de l'élevage de l'EuFMD a un profil particulier, tout est engagé à la tâche à jour en renforcement avec plusieurs programmes, mais peut aussi être un professionnel avec ses propres réseaux spécifiques.

La carte montrant la position de nombreux des membres du réseau est affichée au fur et à mesure de l'arrivée de nouveaux membres.



Report to EuFMD Executive Committee March 2018

Jenny Maud and Dinara Imanbayeva

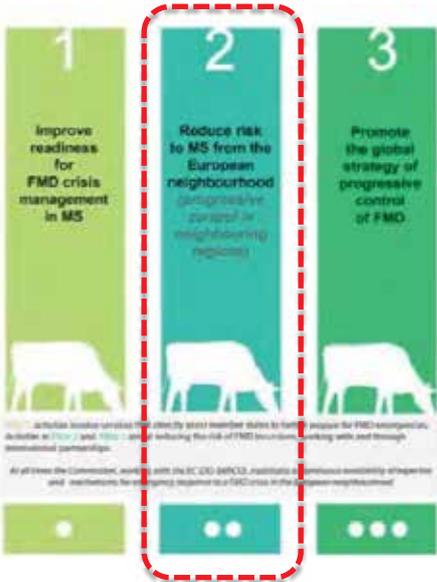







## Pillar II Training and Development

A trend from development to delivery in regional languages





## Recent courses for Pillar II countries

FMD Investigation Training Course in Russian

*In-depth* Risk Analysis Along the Value Chain

FMD Laboratory Investigation Training Course

Post Vaccination Monitoring



## Recent courses for Pillar II countries

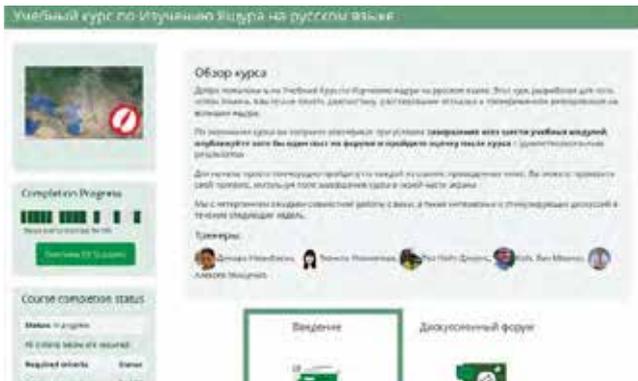
FMD Investigation Training Course in Russian

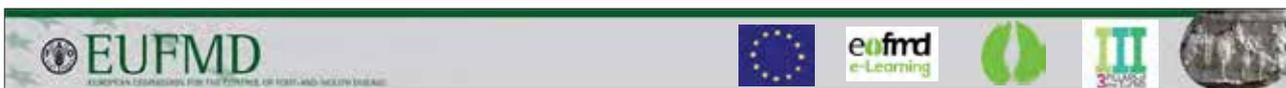
*In-depth* Risk Analysis Along the Value Chain

FMD Laboratory Investigation Training Course

Post Vaccination Monitoring

- 190 Participants from 11 countries
- 52 completed course (27%)
- 77% rate course as “very good”





## Recent courses for Pillar II countries

- FMD Investigation Training Course in Russian
- In-depth Risk Analysis Along the Value Chain**
- FMD Laboratory Investigation Training Course
- Post Vaccination Monitoring

- *In-depth* took participants through process of value chain analysis, identification of risk hotspots, decision making on control options → Risk Based Strategic Plan
- 55 nominated participants working in country groups (including regional FAO officers)
- 65% completion rate
- High quality of assignments from participants working in country groups

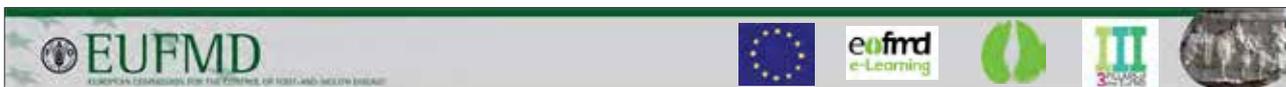
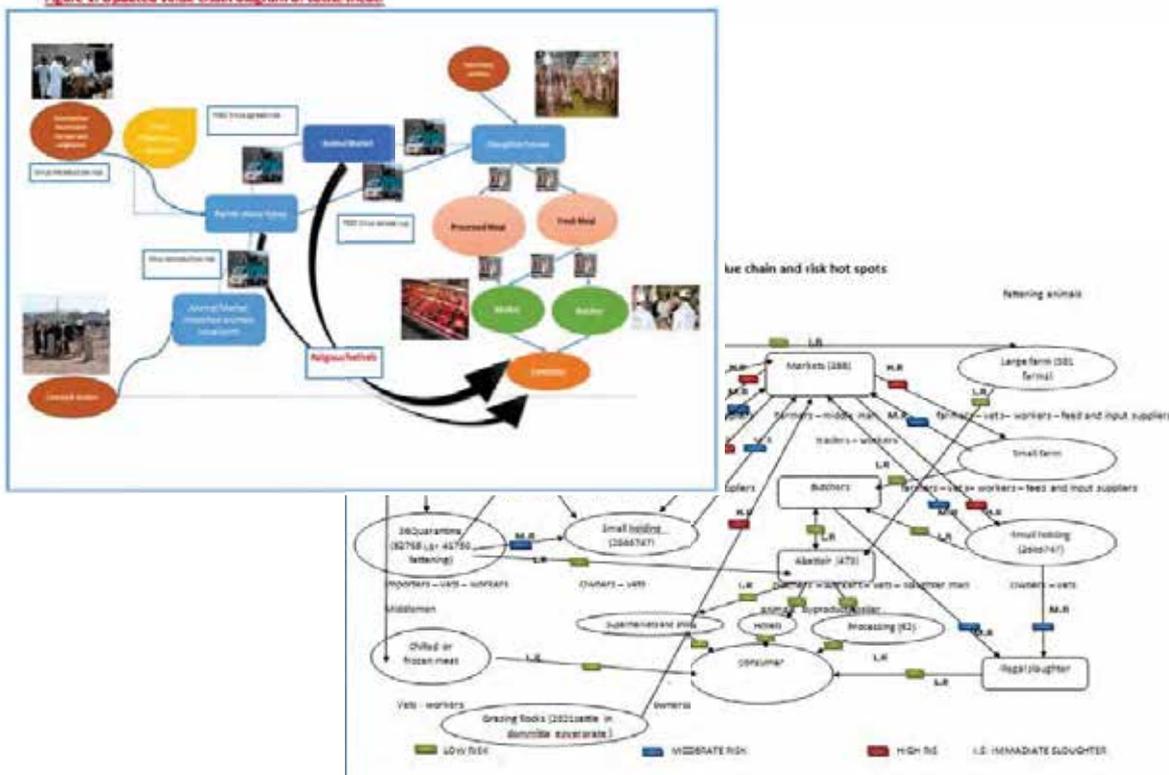


Figure 1. Updated value chain diagram of cattle meat:





## Recent courses for Pillar II countries

FMD Investigation Training Course in Russian

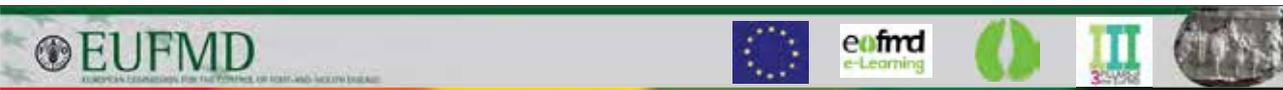
In-depth Risk Analysis Along the Value Chain

FMD Laboratory Investigation Training Course

➔

Reported under Pillar III

Post Vaccination Monitoring



## Recent courses for Pillar II countries

FMD Investigation Training Course in Russian

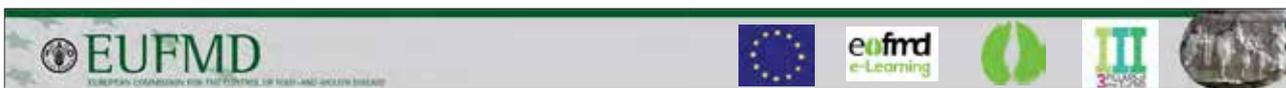
In-depth Risk Analysis Along the Value Chain

FMD Laboratory Investigation Training Course

Post Vaccination Monitoring

➔

- Currently underway
- Very high level of interest across pillar III
- To be followed by face to face workshops



## Upcoming courses

### FMD Investigation Training Course

- Turkish language
- French language: combination with Pillar II West and Central Africa
- Arabic language repeat course



### In-depth training in regional languages

- French language FMD Socio-economic Impact Assessment in partnership with CIRAD: **July**
- **Partners sought** for Russian language training



## New course development

Risk Based Strategic Plan  
Open access e-learning

Safer Trade and FMD  
OIE Collaboration

The strategy

Tactics are the approaches that will be taken to achieve the component objectives. Each component objective will have one or more tactics.

Goal      Strategic Objective      Component Objective      Tactics      Activities

19 / 31

4. PREVIOUS      NEXT >



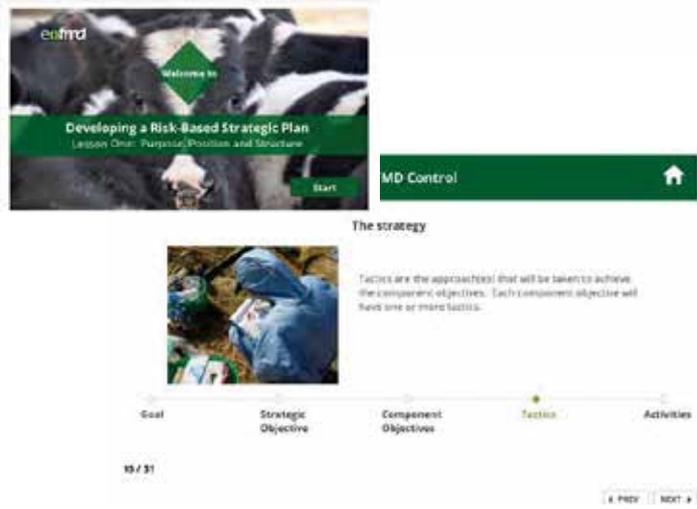





## New course development

Risk Based Strategic Plan  
Open access e-learning

Safer Trade and FMD  
OIE Collaboration



The strategy

Tactics are the approaches that will be taken to achieve the component objectives. Each component objective will have one or more tactics.

Goal    Strategic Objective    Component Objective    **Tactics**    Activities

19 / 31

4. PREV    NEXT >



Report from  
Dinara  
Imanbayeva at  
the end of this  
presentation



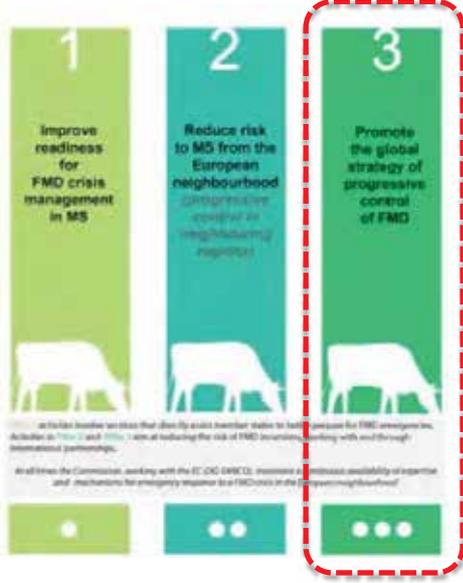





## Pillar III: Support to the Global Strategy

Particular support to:

- South Asia
- West and Central Africa



Pillar 1: Improve readiness for FMD crisis management in MS  
 Pillar 2: Reduce risk to MS from the European neighbourhood  
 Pillar 3: Promote the global strategy of progressive control of FMD



## Recent course delivery

Post Vaccination Monitoring

FMD Laboratory Investigation  
Training Course



## Recent course delivery

Post Vaccination Monitoring

FMD Laboratory Investigation  
Training Course

- Participants from South Asia and Southern Africa (4 per country)
- Based on OIE/FAO guidelines, tutored and written by Giancarlo Ferrari, David Paton, Nick Lyons
- High level of interest → change in mindsets on some issues
- 23 fully completed additional 10 strong participation
- Feedback survey: 86% very good, 91% very relevant










## Recent course delivery

Post Vaccination Monitoring

**FMD Laboratory Investigation Training Course**

- Aimed at staff of national FMD laboratories
- Course materials written by TPI, hosted on EuFMD site and EuFMD management of logistics
- First pilot course
- Over 50 countries pillars II and III
- 59% completion
- 76% rated course as very good
- Repeat courses planned for November 2018
- (funded 3.3)





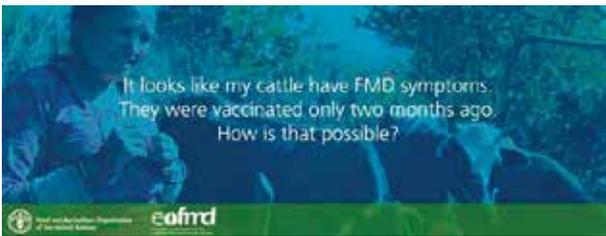






## Progressive Control Practitioners' Network

- November 2017: Risk Analysis Along the Value Chain
- February 2018: Investigation of suspected vaccine failures
- 130 members, 20-30 per live webinar → participation a concern
- Communication strategy development
- Development of bank of resources to support PCP Desk Officers






## Upcoming programme in South Asia

- Proposal and partner consultation document developed
- South Asia wide e-learning courses: FITC and Risk Analysis Along the Value Chain
- National level courses with India as a **priority**. ICAR-NIVEDI identified as a potential partner and formal consultation underway
- STP recruitment Rajendra Bambal (India) proceeding despite long administrative delays
- Lack of regional funding for Roadmap meeting and closure of Regional Support Unit remains a concern

No	Identification of funding partners (EU address)	MOU / SAs	EU/MSD					
<b>2 Support sharing of risk information through regional epidemiology and laboratory network</b> Regional epidemiology and laboratory networks have been established, although require (2nd) central at JICA. From these networks need continued support to facilitate activity and efficiency. Increased collaboration of MSU samples for regional and world reference laboratories is an important priority of risk information. Working closely with each national laboratory to identify appropriate training and mentoring activities may support improved collaboration of samples.								
20	Share information sharing centre (SIC) (2nd) (2nd) (2nd)	MSU						
21	Support to risk information sharing centre (SIC) (2nd) (2nd) (2nd)	EU/MSD	EU	MSD				
22	Support to risk information sharing centre (SIC) (2nd) (2nd) (2nd)	EU/MSD	EU	MSD				
23	Support to risk information sharing centre (SIC) (2nd) (2nd) (2nd)	EU/MSD	EU	MSD				



## Upcoming programme in West and Central Africa

- French language FMD Investigation Training Course
- Closely linked to the **Francophone Network**
- **CIRAD** advise on regional training gaps and needs under Letter of Agreement
- → These activities inform a **regional training needs assessment**



### Qui est dans notre réseau?

Quelques membres de la plateforme de e-learning de l'EuFMD à un profil professionnel, nous avons développé un réseau francophone pour le contrôle de la fièvre aphteuse, nous avons développé un réseau francophone pour le contrôle de la fièvre aphteuse, nous avons développé un réseau francophone pour le contrôle de la fièvre aphteuse.



- Rejoindre le réseau francophone
- Contacter la plateforme







## Seeking additional funding for training under Pillar III

- Component 3.4 also aims to seek additional funding or partnerships for extension of EuFMD training to wider audiences
- Assisted Pirbright in development of grant proposal to UK BBSRC GCRF STARS for enhancement of the Post Vaccination Monitoring course and delivery with a focus on vaccine research in East and Southern Africa










## Training on FMD and Safer Trade Dinara Imanbayeva

**Appendix 10**  
**Item 5: EuFMDiS**

# European multi-country FMD Spread model (EuFMDiS) project



**Graeme Garner, Mark Hovari, Keith Sumption**

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## Background

- EuFMD 41<sup>st</sup> General Session identified: *Continuing support to animal movement and disease spread modelling, with the outputs to inform contingency planning activities* as priority for STC
- Project to develop pilot European, multi-country animal disease spread model approved under FAR 4<sup>th</sup> Call and included in EuFMD workplan for 2017-19
- This activity comes under Component 1.2: to provide technical support to strengthen national capability on modelling, contingency planning, simulation exercises
- Endorsed at EuFMD 94<sup>th</sup> Executive Committee meeting in Dublin Ireland (12-13 October 2017)

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## Overview

- **The Australian Animal Disease Spread (AADIS) model is the basis of the project**
  - Developed with funding by the Australian Government
  - Sophisticated disease modelling platform and decision-support tool for FMD
  - Used in EuFMD disease modelling training workshops (in 2014 and 2016)
  - Potential to be used in Europe identified
  
- **A intellectual property deed of license document that meet's both Australia and FAO's legal requirements has been prepared**
  
- **The project has received a very positive response with seven countries (Austria, Bulgaria, Croatia, Italy, Hungary, Romania and Slovenia) enrolled.**
  - comfortably exceeds the performance indicator for this activity of three countries being involved in a cross border modelling study.
  - Spain, Turkey and F.Y.R. of Macedonia, are also showing interest in FMD modeling training

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## Approach

- **An initial workshop was held, in Vienna, Austria, 5-7 December 2017 to:**
  - bring the participating countries together
  - discuss the scope of a multi-country European disease spread model
  - identify the country-specific data required and
  - agree on project time frames, and deliverables
  
- **A workplan has been developed with key milestones**
  
- **A dedicated e-learning page** is set up to provide a discussion forum and a repository to share resources
  
- **On-line meetings** are held at regular intervals to share progress among the countries and to discuss upcoming milestone or relevant issues.












## Herd categories

ID	Species	Herd type	Description
1	bov	<b>Large commercial dairy herd</b>	Specialist milk producer. Cattle are kept to primarily produce and sell milk
2	bov	<b>Large commercial beef herd</b>	Specialist beef production. Cattle are kept to primarily produce and sell meat
3	bov	<b>Small commercial cattle herd</b>	Cattle are kept, usually in smaller herd sizes, to primarily produce and sell meat and/or milk on a smaller, local scale
4	buf	<b>Commercial buffalo</b>	Buffalo kept for milk or meat production
5	ovi/cap	<b>Commercial small ruminants</b>	Small ruminants are kept to primarily produce and sell meat/milk/wool commercially
6	sui	<b>Large-scale commercial fattening pig herd</b>	Pigs are kept under intensive production system to be grown and sold for slaughter, for pig meat production
7	sui	<b>Large scale commercial breeding pig herd</b>	Pigs are kept under intensive production system for producing replacement pigs to be sold to other holdings (e.g. fattening farms)
8	sui	<b>Small-scale commercial pig</b>	Pigs are kept primarily to produce and sell meat on a smaller, local scale. Generally lower biosecurity than intensive systems
9	mixed	<b>Backyard herd</b>	Small number of animals (cattle, buffalo, sheep, goat, pig) kept primarily for own consumption (non-commercial).

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## Model development

- While the AADIS has provided the underlying platform, a new multi-country FMD modelling tool - the European Foot and Mouth Disease Spread (EuFMDiS) model – is being developed



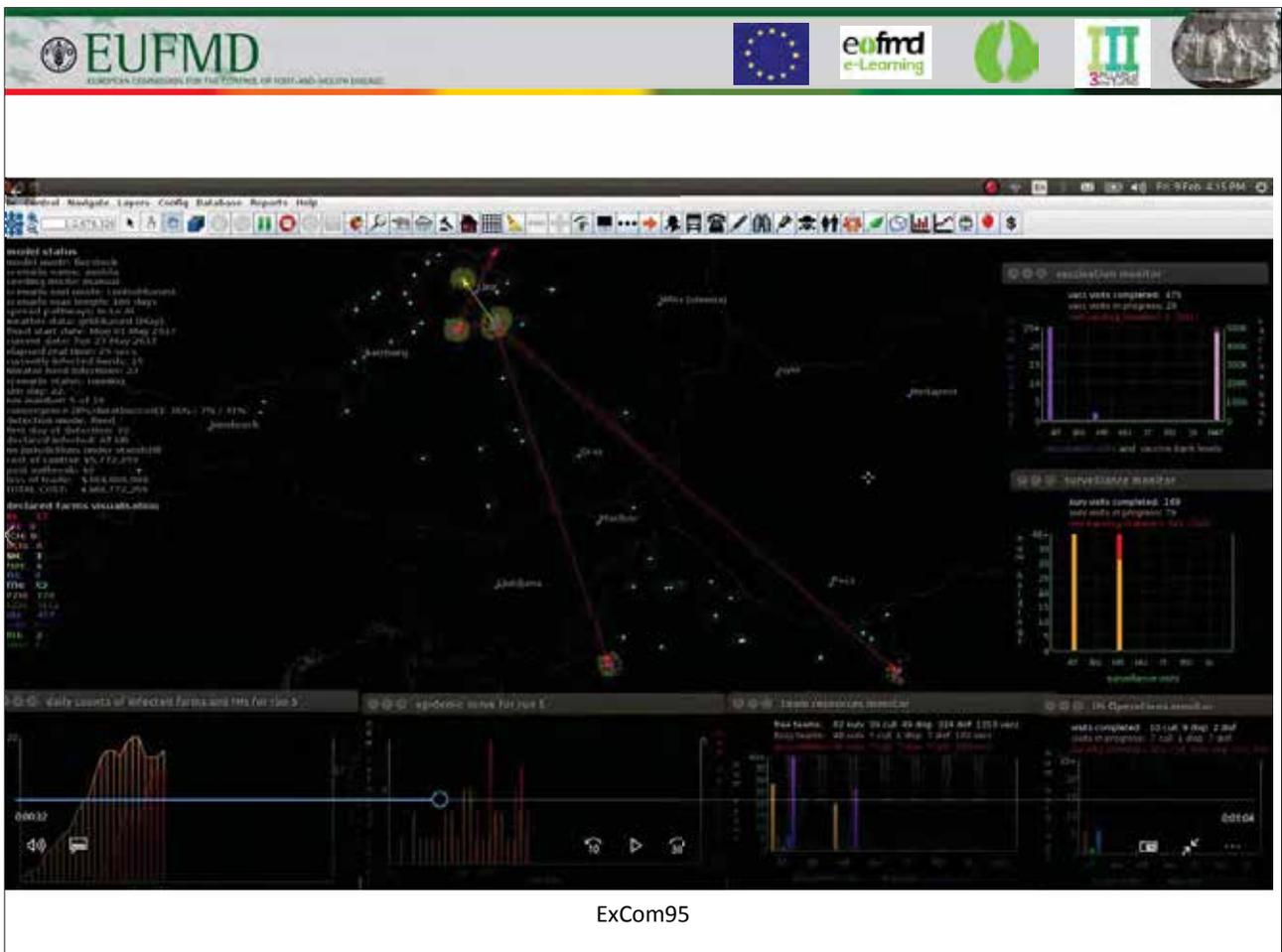
- Model development is proceeding through three prototypes progressively incorporating more detail and realism

Development phase	Milestone
<b>Prototype 1</b> – proof of concept featuring a test herd dataset, test spread pathways, test control measures and test resources	28 Feb 2018
<b>Prototype 2</b> – incorporation of a realistic herd dataset and country-dependent test spread pathways	31 Mar 2018
<b>Prototype 3</b> – realistic spread pathways, control measures and resources	30 Jun 2018

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## Summary

- **The project is on-track to deliver a working model that will simulate spread and control of FMD within and between the participating central European countries by 30 June 2018.**
- **A second workshop to install the software and train country representatives in using the model is proposed for July 2018.**
- **It is anticipated that countries will be able to use the model to:**
  - Study size, duration and economic impact of outbreaks
  - Assess potential for establishment and spread of FMD under local conditions
  - Test surveillance approaches - early detection
  - Look at resource needs and resource management issues
  - Compare different response strategies (including use of vaccination)
  - Support exercises and training activities

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**Thank you for you attention!**  
**Any questions?**



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# EuFMDiS - continued

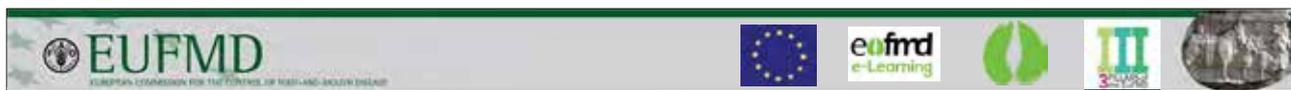
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## Looking ahead

- **EuFMDiS project on-track to deliver a working model by 30 June 2018**
  - **Where to from here?**
- **To build on the collaboration and to keep this initiative moving forward, EuFMD have identified following future developments for consideration:**
  - 1. Incorporating additional countries into the multi-country modelling framework**
  - 2. Adding a wild animal component to the model**
  - 3. Adapting the model to other priority diseases**

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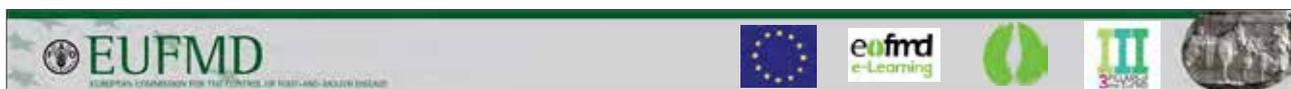
## 1. Involving additional countries

- Other EU MS
- Non-EU (e.g. Balkan countries)
- Could be separate regional initiatives OR part of a pan-European approach
- Considerations:
  - Interest from and engagement with other countries
  - Funding for coordination and technical support
  - Availability of data (especially movement data) for non-EU countries

## 2. Adding a wild animal component to the model

- Wildlife (e.g. wild boar) could be an important component of an FMD outbreak e.g. Bulgaria 2011
- Considerations:
  - Funding would be required for software development
  - Australia is already looking to add wildlife to the AADIS model
  - Availability and reliability of data on distribution of wild species and their interactions with livestock in central European countries is not clear

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## 3. Adapting the model to other priority diseases

- The EUFMiS platform could be used to model other livestock diseases
- To address country and regional priorities
- Considerations:
  - Disease priorities?
  - Out of scope for current EuFMD funding
  - Might be relevant on one or more MS or other organisations (e.g. FAO, EFSA)

## Other

- Handling multiple serotypes: currently model is set up to deal with single serotype, with most parameter values based on Type O.
- Appropriate parameter sets could be developed for modelling outbreaks of other serotypes e.g. A, Asia1, etc.

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**Appendix 11**  
Assured emergency  
supply options for FMD  
vaccines (AESOP)



## Assured Emergency Supply OPTions (AESOP) - for FMD vaccines

Update on progress of the financial feasibility study and initiative to establish long term agreements on supply

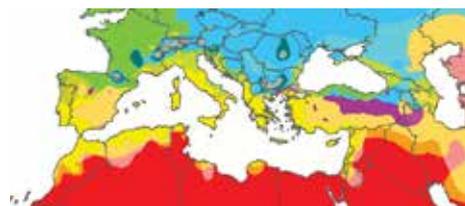
EuFMD Session of the ExCom, March 2018



### The current issues

1. Heavy reliance on the EU-VB in a crisis
2. European neighbourhood – dynamic risk situation
3. National VBs turnover is slow in relation to change in priority antigens
4. Alternative or additional system not in place to assure delivery
5. Funds not the principal issue – we need a system
6. Suitable antigens ARE an issue

- Recent meetings where the issues raised:
- EuFMD GS42, TAIEX Workshop under Maltese Presidency (June 2017)
- REMESA JPC item on vaccine banks–July 2017
- OIE Vaccine Banks Think Tank – November 2017 (AESOP examined as a model)
- AESOP presented to International Strategic Reserves teleconference (Feb 2018)





## Antigen banks, virtual banks and assured stock options

(OIE Think-Tank, November 2017, examined these)

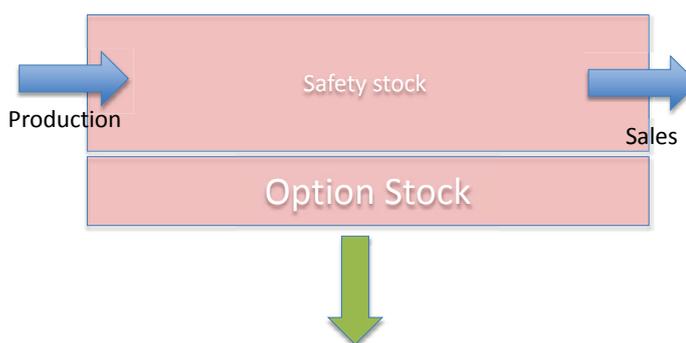
Differences -in ownership and availability

1. Purchase of antigen reserves - owned by purchaser but held by producer, formulated on demand. Fixed costs paid even if not used.
2. Virtual bank; no fixed costs, as antigens remain owned by producer. Price agreed for formulated products. "ideal" for buyer but risks for supplier if forecasts of future sales volumes do not materialise.
3. **Assured stock options (AESOP):** producers contracted to hold reserves (fixed costs likely); antigens remain owned by producer, until formulated vaccine procured by contract owner or "released" to 3<sup>rd</sup> party.



## Assured emergency supply options (AESOP) for FMD vaccine – how it may work

- Vaccine producers always carry safety levels of stock to deal with demand and level of re-supply from production cycles
- Under AESOP, these are contracted to carry **higher safety levels of stock** (Antigen OR vaccine) as "option stock"
- The **Option Stock** antigens remain property of the producer
- The holder of the contract has the **option to buy** the stock
- The system separates the cost of "holding the stock" from the **vaccine cost** (per dose supplied)



Option stock can be called upon by option owner

If called upon, supplier must replenish option stock within agreed period (probably 3 months)



## FAO Call – for Expression of interest to enter into Long Term Supply Arrangements

- Launched by FAO In December 2017
- 10 respondents, of which 6 were vaccine producers (1= regional agent of vaccine producer)
- Covering
  - AESOP (antigen storage, 5-10 day formulation)
  - and normal procurement of formulated vaccines (90 day delivery)
- Skype/phone consultations with 6 held in January 2018
- Confirmed interest to bid
- Attractive model - of contracts to hold additional stock
- Next stage: call for tender likely to be launched in April 2018



## Consultations with producers - January 2018

- ✓ All expressed high interest in the system, considering it an improvement
- ✓ Lead-in times: varied; from 30 days to one year to establish 1 million doses of antigens of interest
- ✓ Replenishment: from 1 month to 6 months, most agreed 3 months or less. One indicated that contracted arrangements will assist them to ensure plants are not diverted from FMD production.
- ✓ Scales of arrangements: for several large producers (200-400 million MV doses per year), system might work OK with up to 30 million doses of antigen as an "option".
- ✓ Likely problem is niche antigens, not part of routine high volume production and supply
- ✓ Changing antigens held under the contract every year was agreeable although some risks if the producer could not resell that antigen (niche issue)
- ✓ Most expressed willingness to supply DIRECT to 3rd party (direct financial route) if FAO/EuFMD releases the stock option. Some were concerned with issues affecting financial transfer (e.g. Governments in some countries)



## Quality issues: what system?

- pre-qualification of suppliers
- post-delivery inspections
- Mixed?
  
- The idea to have **routine, post-delivery inspection of immunogenicity** is proposed; allows system of suspending contracts if failure to explain the inadequate immunogenicity
- All suppliers were willing to participate in a system in which post-vaccinal sera are collected by a standard protocol (21 days). Some insist on specific Ref Centres that are independent (not tied to vaccine producer).
- This system is easier to introduce than a GMP based, pre-qualification system
- It also enables a **wider set of suppliers and data to be gathered from routine preventive vaccination programmes** to give confidence to titres expected in other formulations (higher potency).



## Options – and what to expect from the tender process

- Tender will call for storage/supply of priority antigens (circa 10, from WRL recommendation)
- Bids can be for any number of the antigens of interest.
- Invitation to bid (ITB) route: 80% price, 20% on other non-mandatory criteria
- Each bid must meet **Mandatory criteria**: - critical GO/no GO areas for quality
  - Tech spec have been drafted
  - Under consideration: for Post-vaccination immunogenicity: requirement to provide homologous viruses to elected OIE/FAO Reference Centres to enable routine small scale immunogenicity studies on delivered vaccines
- Other criteria:
  - Under consideration for scoring :
    - Shorter replenishment times (restocking from 0 to 100% of agreed level)
    - Added value that supplier can offer multiple antigens



## Price considerations - bids should indicate

- price per quantity of antigens held, different scales
- Cost per formulated MV vaccine, in offered adjuvants, emergency basis (5 days)
- Cost per indicate formulated vaccine, MV /multivalent, standard basis (90 days)



## Expected results

- At least
  - one valid bid for the AESOP supply (but - may be restricted in antigens offered)
  - and multiple for the preventive vaccine supply
- major range in cost per 1m antigen doses stored
- Expect multiple suppliers needed to cover 10 antigens
- Some difficulty to meet the mandatory requirements for AESOP quality
- Decisions then needed:
  - On AESOP cost effectiveness (storage vs outright purchase)
- Relating to vaccine quality uncertainties:
  - Can have different suppliers for emergency and preventive programmes (90 days delivery)
  - Build up evidence for immunogenicity studies - preventive programme purchases
  - Later rounds of AESOP contracting may consider this evidence (immunogenicity sufficient for emergencies?)
- AESOP: once costs identified, open consultation with interested parties (EC, member states, QUADS countries, others)
- Preventive programmes: the LTAs would become the standard procurement route (FAO)



## How AESOP could go forward: Pilot Phase

- EuFMD has an emergency reserve fund, for vaccine purchase
- After the tender bids evaluated:
  - Decision (EC/Secretariat) on awarding of the contracts (cost and service /coverage)
  - Contracts awarded – annual extension if cover antigens required
- If/When suppliers cannot cover the range required – additional tenders invited
- EuFMD/FAO responsibility to maintain the Framework Contracts with suppliers



## Assured emergency supply options (AESOP)

- Should assure the availability of stock
- *may be less cost than buying the physical vaccine stock*
- *and open the possibility of “assurance ” - a guarantee to others of availability*



### What is Optional Trading?

- It is a contract which gives right to the buyer but without any obligation to buy, sell etc.





## Progress – towards 2019 and beyond – a new system from 2020 ?

1. An additional “vaccine bank” mechanism, mainly as an “assurance option”
2. Addition - Not replacement – for conventional bank contracts
3. Potentially, EuFMD MS could opt-in to become AESOP owners (“assured supply options”), using the established EuFMD Multi-Donor Trust Funds (MTF).
4. Potential for the EuFMD General Sessions to become “share-holders” meetings for the AESOP (direction, agreement on “premium” costs, and cost-sharing).
5. We are on track to present the system, and cost of AESOP, by April 2019 to MS and others.
6. Potentially the system is a model for other emergency supplies as well.

# **Appendix 12**

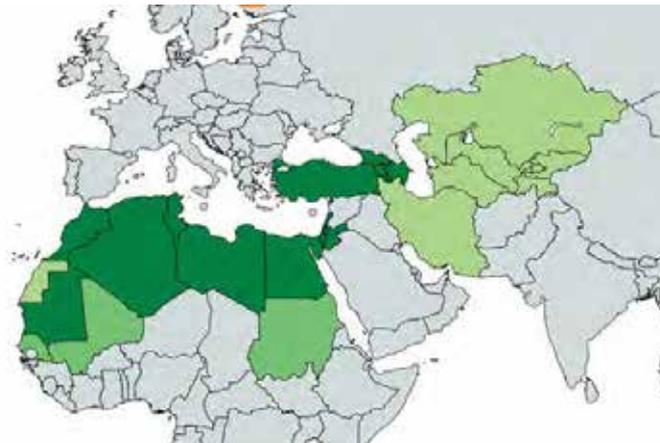
## **Remesa Report**



## Pillar II

### *Reduced FMD risk to Members from European neighbourhood*

*UPDATE September 2017 – March 2018*



*Targets  
across  
pillars II*

- ➡ 1. Progression along PCP
- ➡ 2. Improve assessment of risk
- ➡ 3. Implementation of risk based strategies
- ➡ 4. Improved national capacity for FMD management

#### MAIN ACTIVITIES



Workshop TCC + Turkey, Russia  
**Workshop on RBSP development, Jordan (30/1/18 – 1/2/18)**  
 Partnership with IZSLT



**Risk information and risk mapping in North Africa**  
 Partnership with CIRAD



**Workshop on FMD Early detection, Tunis (27/2/18 – 1/3/18)**  
 Reseau francophone



FITC in Russian (Oct 2017)  
 RAVC in English (Oct-Nov 2017)  
 PVM in English (Feb-March 2018)






**Fièvre aphteuse : Surveillance pour la détection précoce et confiance en l'absence de circulation virale.**  
27 février – 2<sup>nd</sup> mars 2018, Tunis, Tunisie

### Workshop main objectives

- ✓ to discuss surveillance options together with the main **national stakeholders'** representatives and veterinary services
- ✓ to **improve** their respective **role**
- ✓ to **assess the effectiveness** of the current FMD early detection system,
- ✓ to identify the **areas for improvement**
- ✓ to design an **ongoing risk based surveillance**

➡ Starting from national situation and needs to develop a regional strategy






### Preliminary on-line meeting and in-country missions







Presence of:

- **Veterinary services**
- **Representatives of private veterinarians**
- **Farmer associations**



### NEGATIVE ASPECTS

- Number of participants with **different background** (time for adapting to the context)
- Not possible to focus on the **active surveillance** design
- **Risk information** not yet collected, collated and analysed consistently

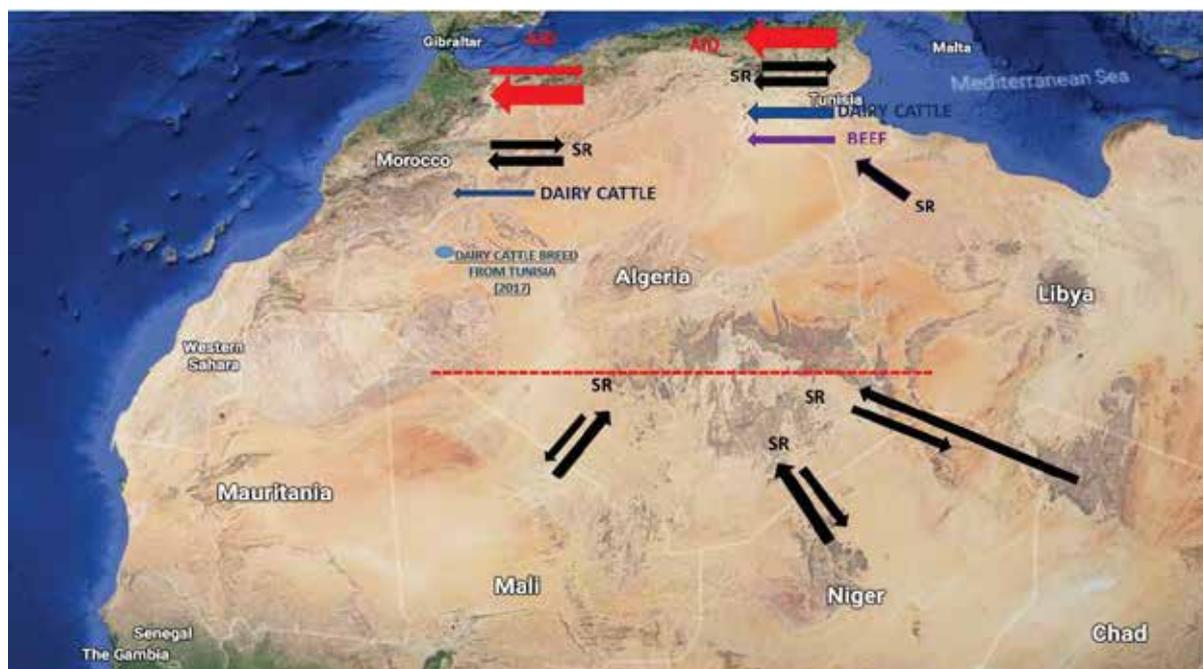
### POSITIVE ASPECTS

- Surveillance system analyzed from **different perspectives** (difficulties and weaknesses)
- **Planning with stakeholders** (important message)
- Contact established with private sectors (**risk information – e-learning**)

Tunisia: Campagne de surveillance du trafic des vaches vers l'Algérie



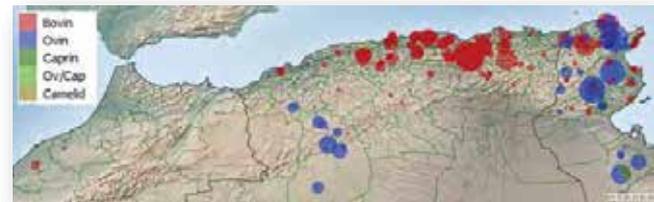
## Discussion with farmer representatives (animal movements)







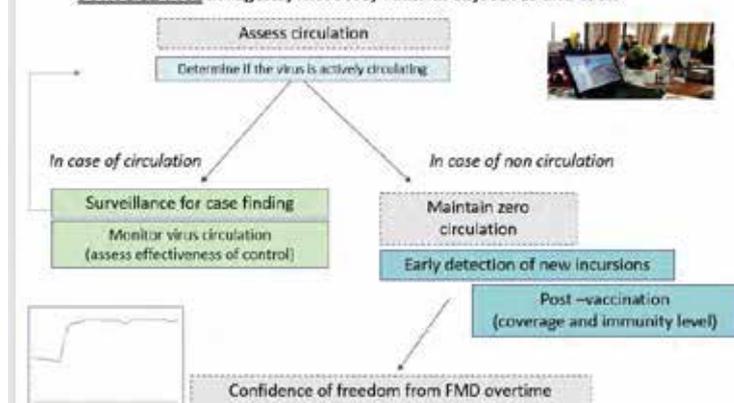

**Fièvre Aphteuse – surveillance pour la détection précoce et quantification de la confiance d’être indemne**  
(L1 et M1/Annexes – rapporteur F. J.)  
7th - 9th Mars 2016, Rabat, Maroc



*Epidemic 2014-2015*

**Implementation of risk based activities:**

**SURVEILLANCE in Algeria, Morocco, Tunisia: objectives and tools**



**Risk based surveillance to evaluate presence of FMDV circulation**

Target: small ruminants (6-12 months)

Risk factors considered:

- areas with previous outbreaks
- animal density
- animal movement
- markets




## Algeria

### FMD Epidemic 2017

**Wilayas touchées par la fièvre aphteuse épisode 2017**



**Bilan final**

- Nombre total de foyers : **108 Foyers** avec **416 cas** bovins et **169 cas** petits ruminants);
- **24** déclarations de découvertes de fièvre aphteuse au niveau des abattoirs maquignons/bouchers/éleveurs) avec **39 cas**;
- Nombre de wilayas et commune touchées : **65 communes** réparties sur **27 wilayas** ;



## Algeria

### FMD Epidemic 2017

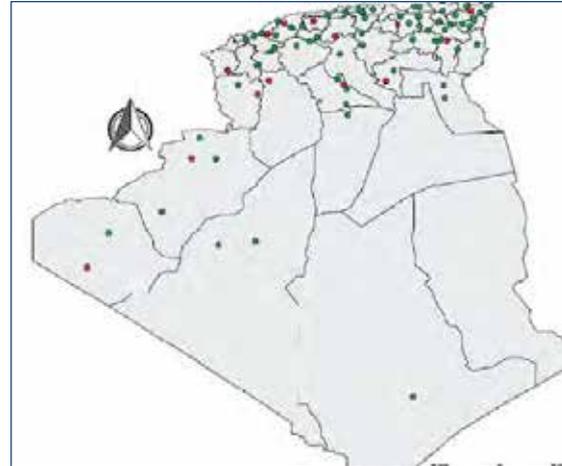


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- Nombre de wilayas et commune touchées : **65 communes** réparties sur **27 wilayas** ;

### Serosurv for FMDV circulation

(October 2017)



n. 1537 SR tested in 111 herds and 43 wilayas:

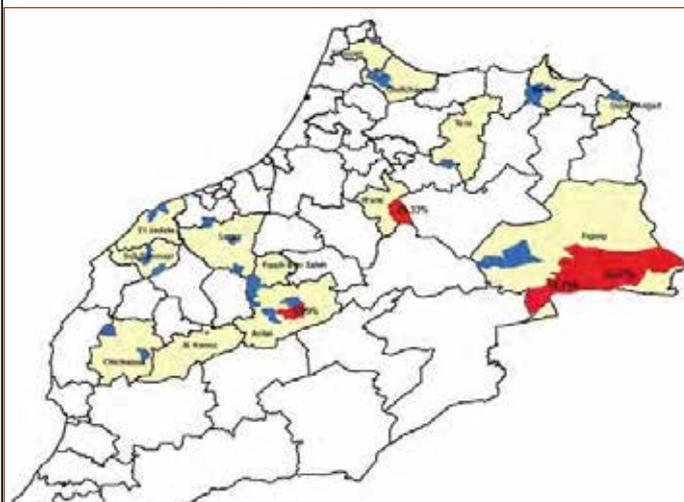
n.15 herds pos in 14 wilayas (13%)  
 41 samples NSP positive: n.18 (O), n.3(A),  
 n.1(O,A), n.16 O,A neg (?), 3 not SP tested



## Morocco

### Serosurv for FMDV circulation

(April-May 2017)



Sample n.739 SR from 78 herds in 14 provinces

n.33 positive from 8 herds in 3 provinces (Ifrane, Figuig et Azilal)

prevalence 4,47% with variation in provinces 0 - 23.33%.

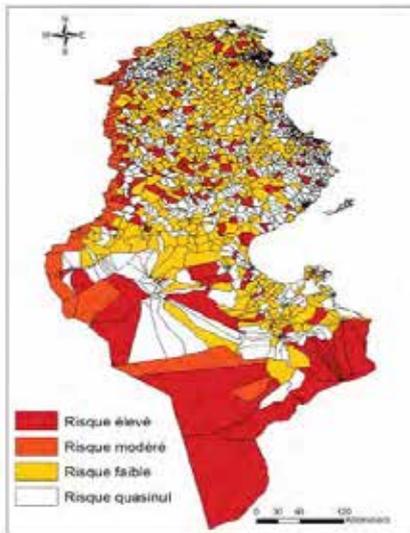
In some cases intra-herd positivity of 80%



# Tunisia

## Serosurv for FMDV circulation (Jan-Feb 2018 -> NOT YET CONCLUDED)

Risk study realized by Tunisia (based on animal mobility) with risk map and improved control in risk areas (parameters used not available)



### GROUP WORK (country based) :

- Definition of activities needed for FMDV early detection of circulation/incursion
- For each activity identified, definition of:
  - Objectives
  - Actions
  - Actors
  - Indicators
  - Timeframe
  - Assistance needed

Objectifs	Actions	Acteurs	Indicateurs	Moyens/Appuis
Adoption de l'approche basée sur le risque	- Formation technique en cartographie et mobilité animale	- vétérinaires épizeo-épidémiologistes et analystes	- introduction de cartes de risque (zones et pattern saisonniers)	- expertise technique (Organisation internationale)
Mise en place de la surveillance syndérmique FA chez les FE	- Formation en diagnostic de laboratoire en matière de tests de confirmation - l'accréditation d'un laboratoire de référence nationale	- Cadres de laboratoires (LQAR ONISA)	- Techniques de diagnostic validées - Accréditation du laboratoire	- Programme de jumelage
Mise en place d'un zonage progressif pour la FA	- Elaboration des fiches descriptives avec définitions des CAS - Organisation d'ateliers et de journées de formation et de communication sur la chaîne de notification	- ONISA/éleveurs /OP /VSM	- fiches élaborées	- Formateurs/animateurs
Mise en place d'un zonage progressif pour la FA	- Formation de terrain sur les tests de diagnostic rapide - Formation en temps réel	- ONISA	- Ateliers et journées effectifs formés et opérationnels	- Les organisations internationales
Mise en place d'un zonage progressif pour la FA	- Elaboration d'un cahier des charges techniques et financières (benchmarking, concepts, coût, faisabilité, impact, débouchés)	- ONISA et opérateurs économiques	- Cahier des charges robuste	- Expertise internationale - Identification de bailleurs de fonds potentiels

Activité	Action	Acteur	Quand	Coûts	Indicateurs
Couverture immunitaire	- Enquête sérologique	- ODSV	- 3 mois au début de campagne (avant de serger) - Résultat d'analyse 3 mois après réception de échantillons prélevés	- Logistiques	- Carte de couverture immunitaire élaborée
Etude prévalence/abondance de la maladie	- Enquête sérologique	- ODSV	- Prévalence à risque	- Logistiques	- Carte de prévalence de la maladie élaborée
Enquête cartographique	- Enquête participative	- ODSV	- Prévalence à risque	- Logistiques	- Carte de répartition des zones avec cartographie des zones à risque de la maladie
Visites dans les marchés aux bestiaux	- Visites d'inspection	- Services vétérinaires régionaux	- Prévalence à risque	- Logistiques	- Nombre de marchés visités - Nombre d'inspecteurs envoyés

Activités	Actions	Acteurs	Quand ?	Coûts	Indicateurs
Mise à jour de l'analyse de risque	- Formation de personnel - Révision des cartes de risque	- Epidémiologistes vétérinaires	- Mars 2018	- Formation à Montpellier (OIE)	- Formation réalisée - Carte de risque (Mars à Juin)
Phase pilote de l'identification des BV	- Création de BCNE - Sérotypage des éleveurs - Logistiques au niveau régional - Formation des vétérinaires	- MADRP / ODSV - ODSV - DNA - OIE	- 2018		- BD opérationnelle - Nombre d'actions de sensibilisation - Wilaya pilote équipée - Nombre de vétérinaires formés



## Common actions - recommendations

- **Risk mapping** with common approach (indicators, collection of information and analysis, regular sharing)
- Risk based **surveillance design** (active clinical and serological + improved passive surveillance in risk areas) to detect cases and assess effectiveness of control measures
- **Regular collection** of surveillance data
- Implementation of **risk based control measures** to reduce FMDV circulation
- Regular contact with reference labs

## Next steps (EuFMD)

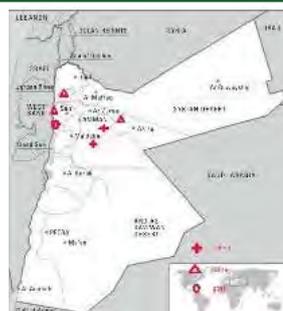
- Backstop support for **surveillance design**
- Regular on-line meeting with VS and stakeholders to **monitor the implementation of workplan**
- Assist Morocco for **zoning approach** (request for trade)



## RBSP Jordan

The following specific objectives were formulated:

- Eliminate clinical FMD from the **dairy sector**;
- Reduce the number of FMD outbreaks in small ruminants during seasonal **migration**;
- Enhance **export** opportunities.



Good progress is being made and currently the RBSP is structured with focus on four components (Diagnostic, Surveillance, Prevention and Control, Legislation) with in total nine component objectives (outcomes).

The RBSP is currently being re-drafted with feedback by the trainers



### Follow up

- ✓ *Backstopping support for finalization of RBSP (already 3 draft submitted)*
- ✓ *immunogenicity study to assess the quality of the FMD vaccines available in Jordan (planned and to be assisted)*





## RBSP Palestine

RBSP developed but to be endorsed by political level (PCP stage 1)

**Inter-herd Movements**

- Small herds are brought from Israel through Jordan and Gaza to West Bank
- Wildlife and cross border grazing in Israel, Jordan and West Bank
- Cattle from Israel in Jordan, Syria and Jordan to West Bank

**Intra-herd Movements**

- Large animal movements, particularly in Jordan/West Bank
- Traders, some registered, most not
- Some providers with small scale of animal movement
- Some providers with no movement, sharing of
- Domestic grazing in Jordan, West Bank and Palestinian territories
- All trucks and vehicles
- Shared open areas in West Bank and Gaza, in small holders

**Seasonal Transhumance**

- Unavailability and knowledge
- Insufficient biosecurity
- Insufficient, multistep reporting and outbreak response
- Weak surveillance and compliance
- Illegal animal movements

**Overview of component objectives and underlying tactics in relation to identified risks and gaps**

1. Strengthen national surveillance and early warning system for import outbreak detection and response	2. Enhance FMD surveillance and early warning system for import outbreak detection and response	3. Reduce risk of FMD entry through smuggling, wild animals and grazing near the borders	4. Reduce risk of accidental transport and introduction of clinical FMD including newly introduced FMD serotypes/strains	5. Reduce risk of FMD spread through routine movements of animals and people	6. Ensure highest risk animals are monitored
Capacity building in the areas of epidemiology and risk analysis	Establish outbreak investigation teams (for FMD and other diseases)	Inform farmers about risk posed by smuggled animals and grazing in border areas	Develop contingency plans in case of new serotypes/strains invasion	Ensure 100% compliance animal movements by destinations	Intensification twice per year for large ruminants
Train animal veterinary service providers (veterinarians, district and private vets) with	Train animal veterinary service providers to have consistent and complete investigation	Increase the surveillance with other public stakeholders to fight the smuggling	Enhance investigation team capacity to conduct rapid response in case of suspected new introduction	Reduce seroprevalence of FMD virus, including communication, biosecurity measures, movement restrictions and vaccination animal	Implement risk based vaccination for small ruminants
Improve capacity for laboratory diagnosis to ensure that the FMD virus serotype and strain are identified for different outbreaks	Improve the veterinary system to include the roles and responsibilities of the Veterinary Authority and private vets to safeguard compliance by setting sanctions or incentives	Establish quarantine facilities in the North and the South for intercepted livestock	Improve readiness for implementing rapid response	Substantive biosecurity of animal markets	Mandate private vets surveillance against FMD
Establish communication between districts, labs and central vet office	Improve veterinary inspection and registration authority for importation of livestock into Palestine			Establish veterinary supervision at animal markets	Ensure that vaccine used is most appropriate for circulating field strains and suitable at high risk for entry



## Libya (activities in the pipeline)

✓ Risk based serosurvey (EuFMD and IZSLER: support for design and kits)  
Objective: identify serotype circulating in the country

- Samples (520 SR) collected and tested from Tripoli area and West and South of Libya
- Eastern areas of Libya: Some samples (570) were collected but not tested yet (soon)

296 serum samples were tested in **Tripoli** lab, with 44 NSP positive (**14.8%**)

224 serum samples were tested in **Zawia** lab, with 30 NSP positive (**13.4%**)

All samples will be shipped to IZSLER in Italy for retesting with ELISA NSP and SP

- Samples collected from outbreaks
- No clinical outbreaks detected

- ✓ Laboratory training in IZSLER (ELIS)
- ✓ Provision of probangs and inclusion of LR in the surveillance
- ✓ Animal mobility (epicollect)
- ✓ RBSP development (distant assistance)





## Partnerships – activities for Pillar II countries



Improving the capacity of veterinary services of Algeria, Chad, Mauritania, Morocco, Senegal, and Tunisia (+ Libya, Egypt, Sudan) on **development of risk information and mapping tools** and **update surveillance protocols** (*animal mobility data collection, collation and analysis. Training component – field implementation – tools for analysis*) + additional activities (*surveillance NA, e-learning, FMD control option and demand of vaccination in WCA*)

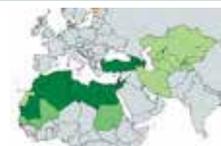


Improving country capacity to **design and implement** RBSP and **monitor and evaluate** the implementation of control activities under stages 2 and 3 of the Progressive Control Pathway (PCP);  
 Improving capacity of the Regional Advisory Groups to **better evaluate and follow-up** the acceptance of countries in stages from 0 to 3

**OIE:** development of courses on: Safer trade and FMD / Containment zone



## Issues to the attention of the ExCom



### COMPONENT 2.1

- Necessary to re-engage with **Iran** (lack of information sharing)
- Close follow-up and assistance needed for the **WelNet and EpiNet** action plan 2017-18

### COMPONENT 2.2

- Little response from **Egypt** in recent months under the LLNL/US-DOS project and from Lebanon
- Lack of evidence of the **effectiveness of the vaccine** used in Lebanon and Jordan as well as in Egypt and Palestine

### COMPONENT 2.3

- Slow process to harmonized activities (**risk based approach**) in Algeria, Tunisia and Morocco as different capacity and response from the three countries
- Maintain regular contact with **Libya** (animal mobility – situation monitoring)
- Need for **Mauritania** commitment for the finalization of RBSP

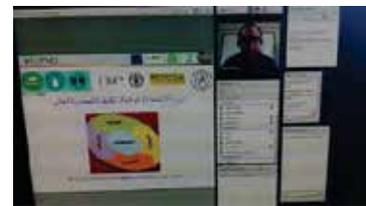
### COMPONENT 2.4

- Identification of partners and experts for delivery of **Russian language** version of in-depth e-learning modules
- Improve the **assessment** of courses delivered



## Upcoming activities (March – April)

- Outbreak investigation training (**TURKEY**)
- FITC in Turkish (**TURKEY+**)
- Follow up on line meeting on FMD early **detection (ALG – TUN – MOR)**
- Conclusion of PVM e-learning (**PILLAR II**)
- Regional technical meeting on PVM (**EGYPT – LEB – JORD – PAL**)
- Workshop on development of risk information and mapping tools (**ALG – TUN – MOR – SEN – CHA – MAU**)
- RBSP workshop (SUDAN)



**Thank you**



# **Appendix 13**

## **Georgia Report**

# Report of the meeting in Georgia on progressive control programmes in TransCaucasus

**Lasha Avaliani**

OIE delegate of Georgia

EuFMD executive committee observer

EpiNet Leader

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*TransCaucasus Regional Workshop on FMD control and PCP progress*

*12<sup>nd</sup>-15<sup>th</sup> February 2018; Georgia (Kakheti)*

**The objectives:**

- provide an update and agree on activities according to the Statement of Intentions concerning the control of FMD and other major epizootic transboundary diseases
- facilitate monitoring and evaluation of the implementation of RBSP in TCC countries and support in planning and implementation of progression to PCP Stage 3 in candidate zones

**Participants:**

**Two representatives of each of the participating countries (including national consultant):**

**Armenia, Azerbaijan, Georgia, Turkey, Russian Federation**

**EPINET and WELNET leaders**

**EuFMD representatives**



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*TransCaucasus Regional Workshop on FMD control and PCP progress*  
*12<sup>nd</sup>-15<sup>th</sup> February 2018; Georgia (Kakheti)*

- Update on the current situation of FMD and other major epizootic transboundary diseases
- Current status of information sharing according to the Statement of Intentions
- Update on FMD Epidemiology and Laboratory Networks activities and 2017/18 action plan
- Working group discussions on EPINET and WELNET networks activities
- Updates on the Risk Based Strategic Plans and PCP-FMD progress Discussion and guidance on RBSP monitoring and evaluation

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*TransCaucasus Regional Workshop on FMD control and PCP progress*  
*12<sup>nd</sup>-15<sup>th</sup> February 2018; Georgia (Kakheti)*

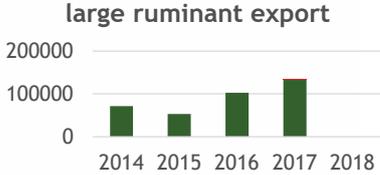
**Update on the current situation of FMD and other major epizootic transboundary diseases**

- Vaccination data
- Outbreak information (google fusion)
- Sero-survey results
- Clinical survey updates
- Achievements and news on animal health field
- Animal identification-registration
- Reorganization of veterinary services
- Animal movement control
- Public awareness
- Animal export information





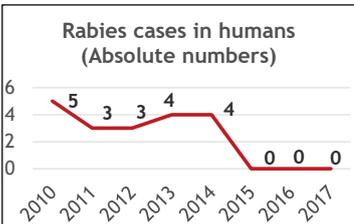
**large ruminant export**



Year	Export Count
2014	~50,000
2015	~40,000
2016	~100,000
2017	~150,000
2018	~180,000

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**Rabies cases in humans (Absolute numbers)**



Year	Cases
2010	5
2011	3
2012	3
2013	4
2014	4
2015	0
2016	0
2017	0



Item	Lead	Time	Status
Needs assessment for epi assistance to EPINET countries (survey monkey)	EpiNet Leader	Oct 2017	done
Database of identified EpiNet co-leaders by each country (name, email)	EpiNet Leader	Nov. 2017	done
To share information regarding existed documents from Georgia (example)	EpiNet Leader	Nov. 2017	done
To share information regarding existed documents from all countries	EpiNet Leader	Dec. 2017	done
Sharing data on vaccination/outbreaks	Artem Sryptnik	Regular	Pending
Share animal farming practice and locations of pastures on border line zones	EpiNet Leader	Febr. 2018	Pending
Monitoring movement/prices (live animal price at markets and meat prices)	Paolo Motta	Regular	Pending
Assistance in sero-survey design/analysis, assessment of FMD control measures	EuFMD for TCC	Ongoing	Pending
Assistance/guidance in RBSP development and amendment	EuFMD for TCC	Ongoing	Pending
Share field veterinarians training practice through country report	EpiNet Leader	March 2018	Pending
Provide EuFMD training materials regarding FMD to all countries	EuFMD	April 2018	Pending
Joint training (outbreak investigation/ management, FMD recognition etc.)	EuFMD	2018	Pending

Item	Lead	Time	Status
<p><i>TransCaucasus Regional Workshop on FMD control and PCP progress</i>  <i>12<sup>nd</sup>-15<sup>th</sup> February 2018; Georgia (Kakheti)</i></p> <p><b>Update on FMD Epidemiology and Laboratory Networks activities and 2017/18 action plan</b>  <b>1st West Eurasia FMD Epidemiology and Laboratory Networks Meeting 18-20 Sept. 2017</b></p> <p><b>EPINET existed gaps to be addressed</b></p> <ul style="list-style-type: none"> <li>• Strong involvement from Member Countries is needed</li> <li>• Busy schedule of Leader / Co-leaders (usual support is needed)</li> <li>• Lack of face to face meetings (workshop much was productive)</li> <li>• Networking frame has to be developed (email, google fusion etc.)</li> <li>• Experts support (questionnaires, data analysis, recommendations)</li> </ul>			



*TransCaucasus Regional Workshop on FMD control and PCP progress*

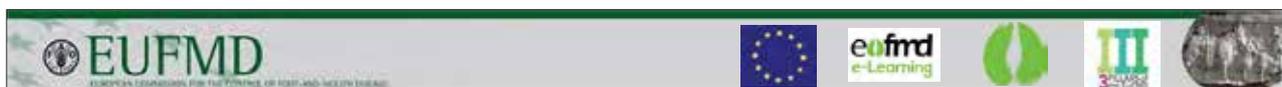
*12<sup>nd</sup>-15<sup>th</sup> February 2018; Georgia (Kakheti)*

Update on FMD Epidemiology and Laboratory Networks activities and 2017/18 action plan

1st West Eurasia FMD Epidemiology and Laboratory Networks Meeting 18-20 Sept. 2017

**EPINET co-leaders**

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*TransCaucasus Regional Workshop on FMD control and PCP progress*

*12<sup>nd</sup>-15<sup>th</sup> February 2018; Georgia (Kakheti)*

Updates on the Risk Based Strategic Plans and PCP-FMD progress Discussion and guidance on

RBSP monitoring and evaluation

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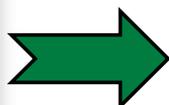


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## TransCaucasus Regional Workshop on FMD control and PCP progress 12<sup>nd</sup>-15<sup>th</sup> February 2018; Georgia (Kakheti)

**Updates on the Risk Based Strategic Plans and PCP-FMD progress Discussion and guidance on RBSP monitoring and evaluation**

**Component objective, Tactics, activities ...**



**Report of monitoring and evaluation of implementation of RBSP** Annex 4.1

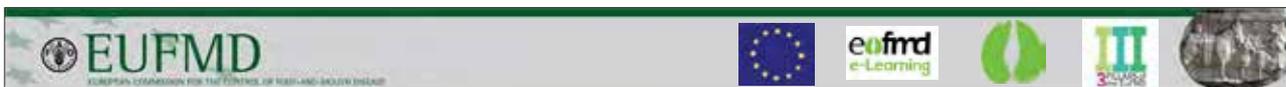
Implementation table for each tactic of strategic objectives of RBSP, Report 2017 - 2018

**Monitoring and Evaluation of implementation**

Activity description	Description	Indicator	Target	Means of verification	Date	Implementation status (implementable/implemented, not implemented)
<b>Component objective 1</b>						
<b>Implementation of stakeholders</b>						
Tactic 1.1	Establish FMD Focus group for monitoring the activity	Establishment of FMD Focus group members of local NGOs, Ministry of Agriculture	Establish FMD Focus group by October 2016 (and the meetings until 4 times per year)	Minutes of meetings shared with donor	2017	Not implemented. It is planned after RBSP 2018 meeting in spring 2018
Tactic 1.2	Selection of all stakeholders and writing them by group according to their interests in control of FMD	Complete list of stakeholders by group	Provide list of stakeholders by spring 2016	Report of stakeholders group	2017	Partly implemented. Only minimal list of stakeholders is provided (RBSP under review implementation)
Tactic 1.3	Establish information campaign by stakeholders group regarding disease and actions implemented by MoA	Number of implemented information campaigns, Number of FMD meetings/visits	Conduct information campaigns at least 5 campaigns per year. Conduct 10,000 FMD specific meetings/visits	Veterinary Department and Public Relations Department reports, FMD specific meetings/visits	2017	Partly implemented. An information campaign conducted up to 20 informative campaigns related to FMD. 20 records are available. Sources of information to be identified, identified FMD specific leaflets and poster will be developed and distributed in 2018



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# Thank you



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# **Appendix 14**

## Turkey report



# CURRENT FMD SITUATION, CONTROL STRATEGY IN TURKEY & PERSPECTIVES FOR THE BETTER CONTROL OF FMD IN WEST EURASIA

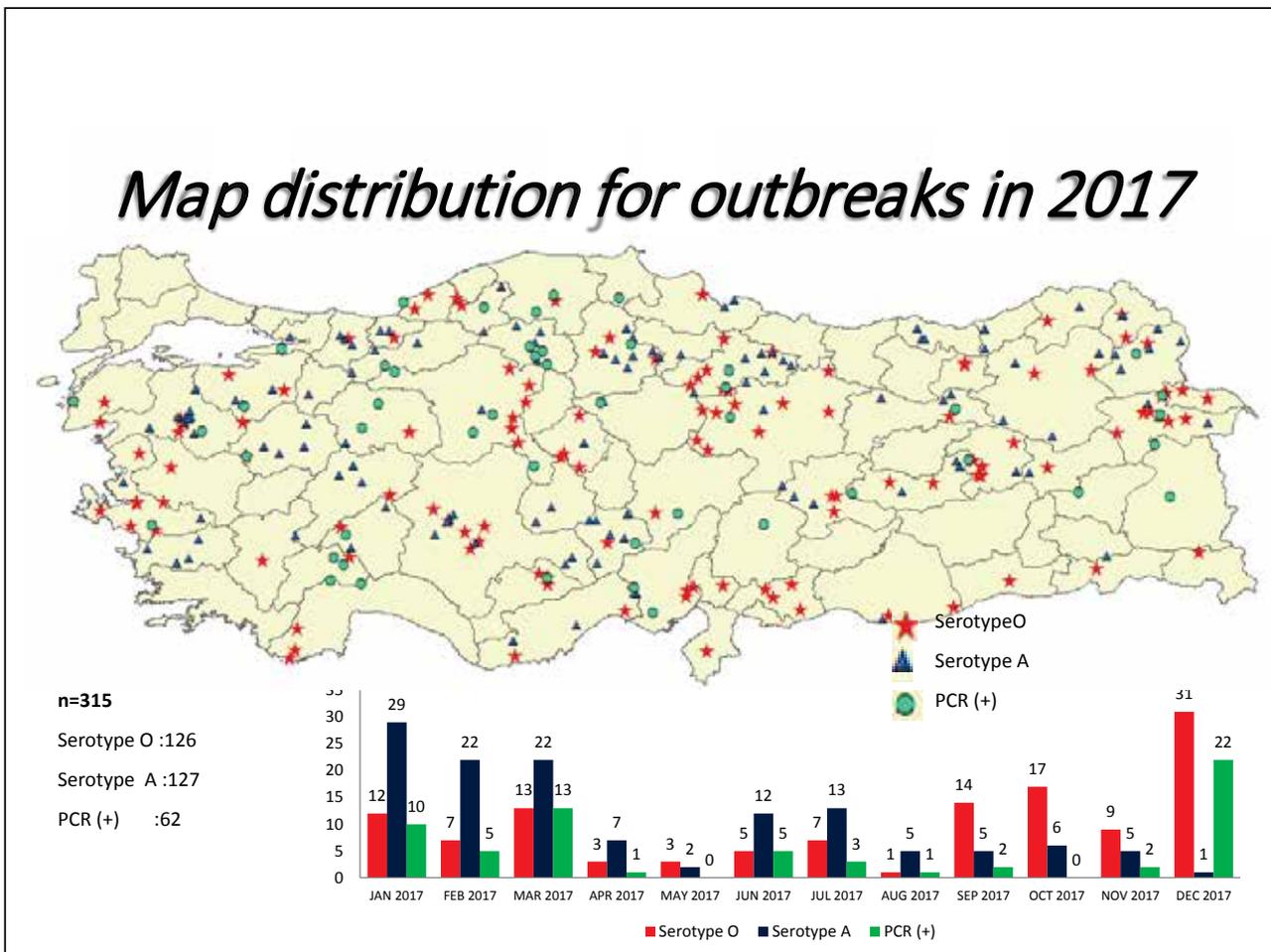
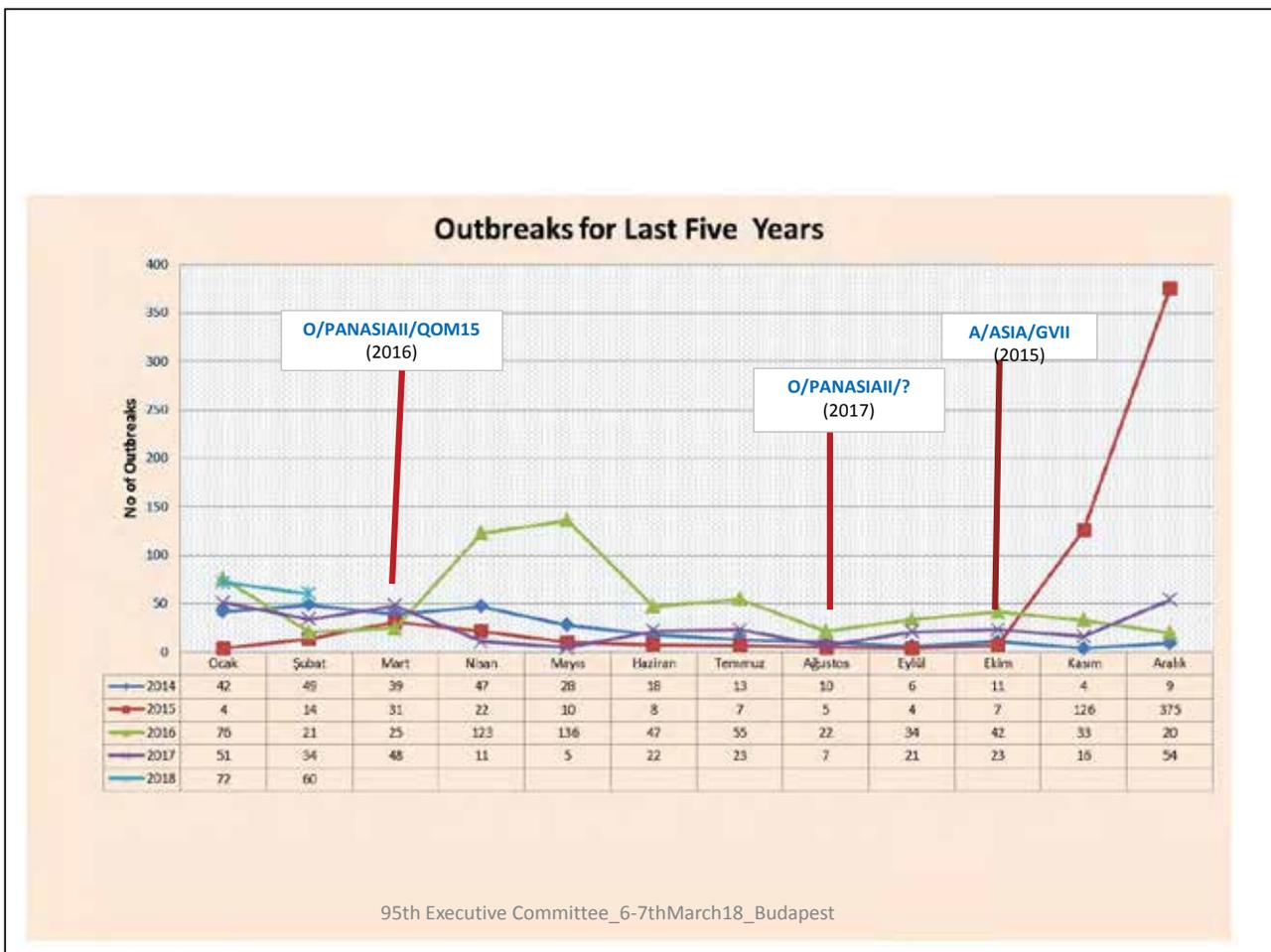
**A.Naci Bulut**

On Behalf of **Dr. Nihat Pakdil, CVO**  
Şap Institute, Ankara, Turkey



## CIRCULATED VIRUSES IN TURKEY

- FMD is endemic in Anatolia region in Turkey
- Current Circulating virus strains:
  - Serotype O (O PanAsiall): Qom15 and new one-subgenetic clade for Qom15
    - Vaccine Strain: O TUR2007
  - A (Asia/GVII) : A/ASIA/GVII and SAM16
    - Vaccine Strain: A/Asia/GVII and SAM16
  - (Asia1 has been not recorded since July 2015)
    - Latest circulated one was Asia-1(Asia1/SINDH08)
- Thrace region has been free of FMD with vaccination since May 2010



# Map distribution for outbreaks in 2018

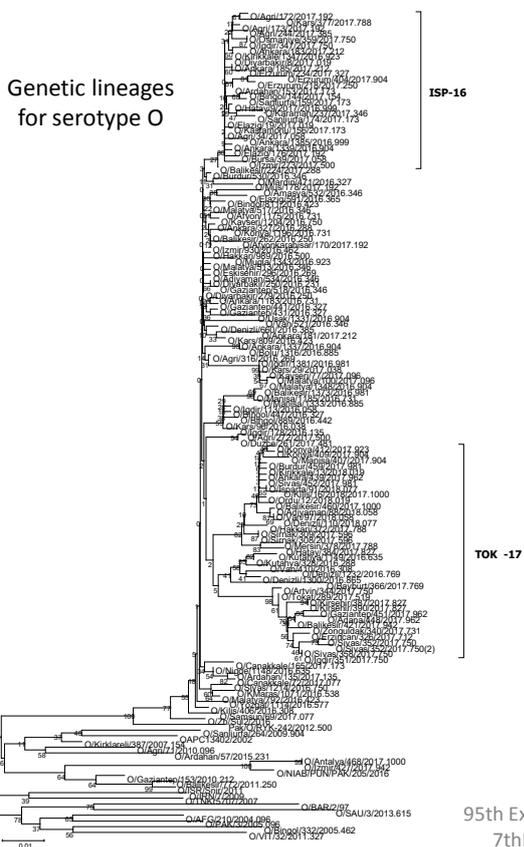


n=132  
 Serotype O :121  
 Serotype A :1  
 PCR (+) :10

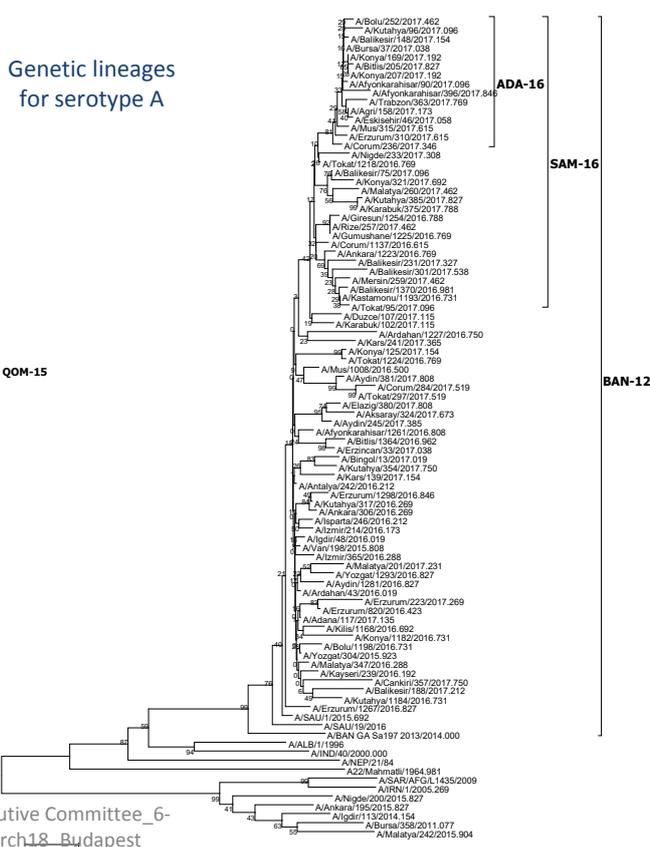
★ Serotype O  
 ▲ Serotype A  
 ● PCR (+)

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Genetic lineages for serotype O



Genetic lineages for serotype A



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## Summary of vaccine matching (antigenic characterisation by VNT):

	Vaccine strain		
	O1 Manisa	OTUR07	OTUR14
O QOM-(2015 isolate)	N	M	N
O QOM-(2016 isolate)	N	M	N
O QOM-(2017 isolate)	N	M	N
	Vaccine strain		
	GVII	ATUR16 /GVII	
A05 (2006 isolate)	N	N	
A05 (SIS10 / 2011 isolate)	N	N	
A05 (SIS10 / 2015 isolate)	N	N	
GVII (BAN-12 / 2016 isolate)	M	M	
GVII (BAN-12 / 2017 isolate)	M	M	
GVII (SAM16 / 2016-2017 isolate)	M (Partially)	M	
	Vaccine strain		
	As1 Shamir	Asia1 TUR11	Asia1 TUR 14
As1 Sindh 08 (2015 isolate)	N	N	M

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## VACCINATION POLICY

- Preventive campaign vaccination :
  - In Anatolia; twice a year for LR;\_ (SR not included/only request by owner)
  - In Thrace: : Three times a year for LR/twice for SR
- Ring Vaccination to response outbreak
  - in Surveillance zone of outbreak
- Targeting vaccination for identified “Hotspot»
- Small ruminant veccination where risk identified
- Booster vaccination introduced in country wide
- **Vaccination implemented based on risk assessment:**
  - Early Spring: population assured protection before releasing grazing time
  - Late Summer: population assured protection before Kurban Festival
- Post Vaccination Monitoring: SP surveillance will be implemented in Autumn Campaign

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# PROGRESS FOR NATIONAL FMD CONTROL STRATEGY



## A NEW STRATEGY TO ELIMINATE VIRUS ENTIRE OF THE ANATOLIA

*A Risk Based Control Program has been developed and applied since 2014*

The program has been **updated** with **agressive activities**

**GOAL OF NEW STRATEGY**  
 To contribute to the development of the livestock sector by achieving OIE status of FMD free with vaccination **by 2023**



## NEW REGIONAL APPROACH OF THE STRATEGY



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## Improvement Monitoring and Evaluation System

- **Monitoring and Evaluation System has been already established**
  - Central (GDFC)/Institute/Province level
    - Serial Epidemiology training by technical support of EuFMD has been conducted in order to build up of technical capacity
      - 4 weeks training series have achieved last year; and 3 week also will be conducted in this year
- **Continue Surveillance and sero-surveillance**
  - **New clinical surveillance program & OI procedure**
  - NSP Suro-surveillance: Assessment disease dynamics and identifying risk factors
  - Post vaccination sero-surveillance: Vaccination performance and antibody level
- **Reconstructed database with more functional and features**
  - Animal Registration System by TURKVET
    - LR/SR registered into the system with ear-tag; initiated replacement of electronic ear-tag
    - Animal movement managed and monitored by the system
  - Veterinary Information System (VIS)
    - Outbreak Management
    - Entering outbreak data all notifiable disease
    - Recording vaccination data
    - Sample Management System regulated by the database system
    - Recording surveillance questionnaire data

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## Stop Virus Incursion

- **Establish early detection system**
  - **Establish bilateral agreement for WE countries endemic**
- **Create effective clinical surveillance in the borderline provinces**
- **Implement *Extra High Potency Vaccine (>10 PD50)* in borderline province**
- **Improve cooperation and collaborative study with neighboring countries**
- **Establish network for molecular epidemiology data**
- **Include SR vaccination program in borderline provinces**
- **Improve infrastructure for inspection to stop illegal movement cross the border**
- **Implementation of Stamping out in borderline province (2018)**

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## Eliminate Risk Consisted by Animal Movement

- **Restriction of the movement**
  - Regulated all movement by TURKVET and VETBIS:
    - automatically restriction and double check system
  - requirement vaccination last six month for adult anim.
  - requirement booster vaccination for young animal: 2 vaccination in last six month
  - Clinical examination in destination place
- **Registration dealer and improve trading system**
  - Registration&Monitoring by TURKVET and VETBIS
  - Improve infrastructure of transportation vehicle
  - Continue training and awareness activities for dealer
- **Improve animal market system and increase certificated market**
- **Encourage trading through farm base**

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## Eliminate Virus Circulation

- **Maintenance of current routine vaccination**
  - whole susceptible LR population;
  - achieved 100% vaccination coverage in the last campaign (by eligible population)
- **Achievement booster vaccination ;**
  - already initiated but it needs to be reached at desirable level
- **Effort to achieve 100% booster vaccination coverage**
- **Continue subsidizing for booster vaccination**
- **Continue ring vaccination for all susceptible population with *Extra High Potency Vaccine (>10 PD50)***
- **Continue vaccination for SR population where the risk is identified**
- **Implement ring vaccination in Surveillance zone of outbreak with *Extra High Potency Vaccine (>10 PD50)***

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## Improvement outbreak management and disease control

- **Create a new SOP for outbreak investigation (OI)**
- **Create OI protocol for OI**
- **Implement OI based on the protocol**
- **Reach every single outbreak**
- **Improve biosecurity measures**
- **Implementation of Stamping out in some specific targeted sectors in the first year (2018)**
- **Extended stamping out policy to whole region in the next years**
- **Implement Extra high potency vaccine (>10 PD50) in ring vaccination in Surveillance zone of outbreak**

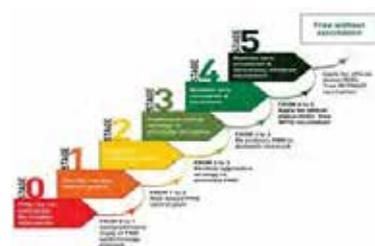
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## **PERSPECTIVES FOR THE BETTER CONTROL OF FMD IN WEST EURASIA**

### ***Achievement the West Eurasia Roadmap***

- The West Eurasia Roadmap has made good progress along the decade:
  - better awareness of the FMD risks
  - identifying "new epidemic events" at an earlier point
  - countries increasingly use PCP as tool in identifying gaps and for FMD control
  - training for capacity building for diagnostic skill to understand the disease
  - many project and activities on PCP staging
  - developing national PCP staging
  - developing national PCP staging
  - progress on PCP staging

However all these progress not enough to cover approach of the road map visions

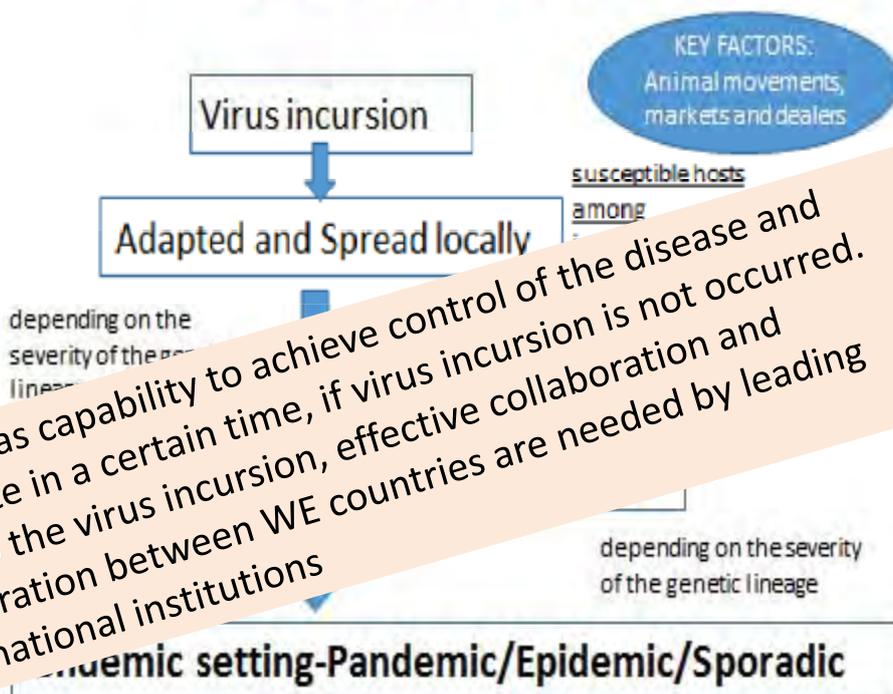


# Consideration

- Countries in the West EurAsia Regions are endemic, some intermediate sporadic by FMD; and some not clinically but still the virus circulated.
  - The region has been experienced highly effective control and eradication periodically.
  - It is essential that the region should be able to respond to any future occurrence.
  - To achieve all these, effective collaboration and cooperation between WE countries are needed by leading international institutions
- Indicators:
- Incidence and prevalence (nucleotide sequencing analysis) data,
  - Animal trading/movement patterns
  - Vaccination coverage values as indicator of vaccine sufficiency
  - Sero-surveillance results- NSP positivity rate and PI/PV antibody levels

## NATIONAL RISK BASED CONTROL STRATEGY

### WORKING HYPOTHESIS



Turkey has capability to achieve control of the disease and eradicate in a certain time, if virus incursion is not occurred. To stop the virus incursion, effective collaboration and cooperation between WE countries are needed by leading international institutions

## **PERSPECTIVES FOR THE BETTER DISEASE MANAGEMENT IN WE**

- Turkey would like to call to international institutions, OIE, FAO, EC and EuFMD, as well as countries in the region that;
  - *to ensure that every effort is given to the better continuation of the Roadmaps and that progress is maintained towards its vision of region free of clinical FMD by 2025.*
  - *Therefore, activities specified below should be considered particularly by EuFMD for achievement:*

## **FMD Investigation Training Course (FITc) in Turkish**

- EuFMD has been executes succesfully FITc in different languages until this time.
- FITc was realized for Turkish vets (159) and will be realized second one in this year again by request of General Directorate of Food and Control (GDFC).
- In favour of built up technical capacity of vet service in the WE, Turkey would like to kindly ask EuFMD to extention the course other Turkish speaker vets;
  - *By inviting Turkish/Azeri speakers from Iran to join a Turkish language FITc, alongside Turkish and Azeri participants.*
- *This would be an unique oppurtunity for extention of the training by low cost*

## Pilot study on Livestock Markets and Price Monitoring

- Data and information from surveillance on livestock markets and price monitoring is one of unique indicator for early detection and analysing of disease spread dynamics
- EuFMD has initiated a pilot study on livestock markets and price monitoring last year
- Turkey has identified some institutions and animal market for collection of data.
- A mission has been also conducted in Iran to seek opportunity for implementing the study in Iran.
- However, the study has not been fully started till now.
- Therefore, Turkey is ready to start carrying out the study and would like to ask to EuFMD:
  - ***Support to pilot study on livestock markets and price monitoring in Iran as well as TCCc and other endemic countries, if possible and feasible;***

## Data Sharing

- Establishment of early detection system is one of the **key** and **strategic** vision of the WE roadmap
- Some effort for achievement of the vision by EuFMD under the WELNET has been remained inconclusive along the decade
- Turkey recently has tried bilateral agreement between Iran as well as Afghanistan and Pakistan for collaboration of the disease control including early detection system
- Turkey would like to call to international institutions to encourage countries in the region for playing role on data sharing:
  - It could be initiated between Turkey and Iran to share sequence and vaccine matching data
  - This can be got in routine by visiting Iran experts from ŞAP Institute
- **The activities proposed above could be made into a specific agreement of EuFMD and IVO and signed in Paris in May at OIE Session (like the statement of intentions).**

## TCC FMD CONTROL PROJECT

- This project was proposed by Russian Federation; initiated technical support by EuFMD
  - To built up capacity on FMD (as well as other infectious diseases) control for Trans-Caucasian Countries
  - The project has been actively started asigment of «Statment Intention» by CVOs of Armenia, Azerbaijan, Georgia, Iran, Rusia and Turkey
  - Data sharing for outbreak and vaccination has been started last year
  - However, Iran hasnot actively involved data sharing under the project agreement
- ***Turkey would like to ask to FAO in order to ensure for data sharing between Iran (GISVET) and TCC information sharing system.***

## OWNERSHIP

- At regional level, STILL need for :
  - to reduce risk of animal movements
  - Risk /Socio-Economic analysis, involving stakeholder
  - sharing of data on vaccination, serological surveys and FMDV at suitable scale
  - improved human resources for epidemiology, risk assessment & management
  - **GREATER REGIONAL COLLABORATION-**
  - **THE MOST IMPORTED KEY POINT: NEEDING REGIONAL OWNERSHIP!!!**
    - Countries should manage their own risks with own resources
- Current effort by OIE/FAO by GF-TADs umbrella is not enough for achievement of the main goal the WE roadmap
- International support to the region has played a vital role in promoting reviews of national strategies, push/encourage the countries for better acting on the disease control
- Therefore, Welcomes the initiative of FAO and OIE and other international organization in order to invite national FMD project proposal, AND follow up principle of Bangkok Workshop for more financial support

## Thank you very much for your attention!

### Acknowledges

- General Directorate for Food and Control (GDFC)
- EuFMD
- The Şap Institute



### **RISK FACTORS AND GAPS ON THE STRATEGY**

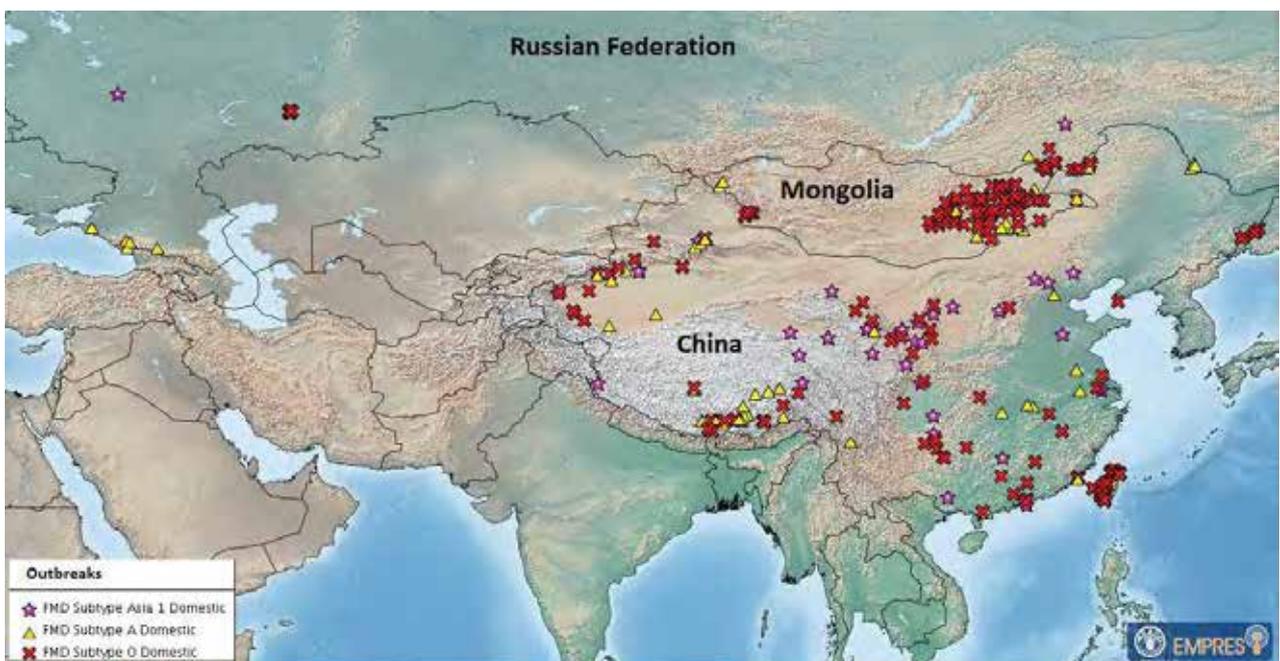
- Virus incursion
- Animal movement
  - Common grazing in the some region
  - Yayla system in the some region
  - Local movement
  - Movement throughout the country
  - Kurban period movement
  - Impact of animal market and deallers
  - Inadequate Biosecurity application
- Lack of booster vaccination
- Market and movement controls
- Poor notification and lack of disease awareness
- Inadequate outbreak management
  - a. clinical surveillance
  - b. Outbreak investigation
  - c. Infected animals can not be isolated from the susceptible animals because of common grazing
  - d. Bio-security
  - e. Quarantine measures
- 7. Border inspections
- 8. Early detection system for the detection of new strains
- 9. Monitoring and evaluation system

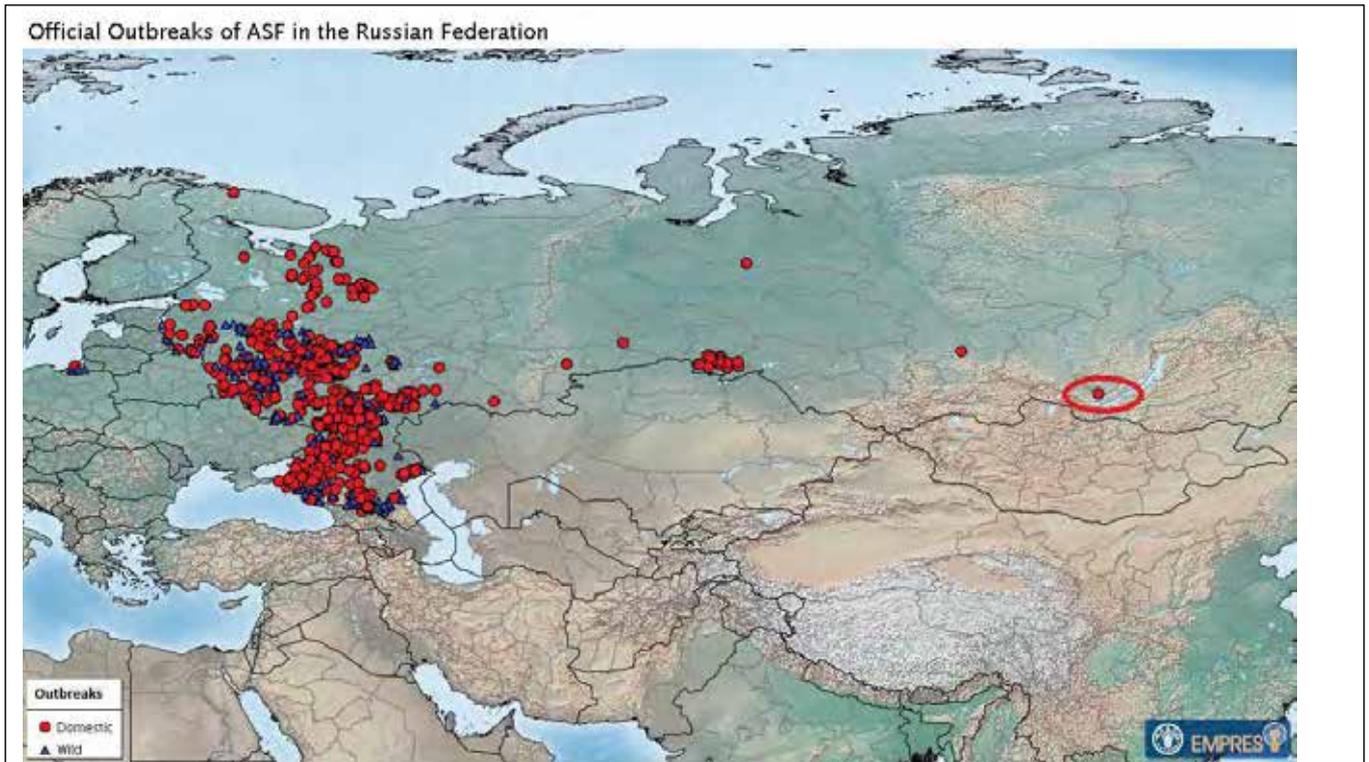
95th Executive Committee, 6-7th March 18, Budapest

**Appendix 15**  
Initiatives for FMD  
management

# Tripartite Initiative for TADs: Russia-Mongolia-China

Eran Raizman –FAO





Peste des petits ruminants reported outbreaks in Eastern Asia, January 2017 – 28 February 2018



## Surveillance in Mongolia

- Wild boar – ASF
- Domestic – FMD & PPR



## Objectives

- Share information on TADs with focus on FMD & ASF
- Draft an action plan aiming at improving collaboration of prevdntion, early detection, early response & control



# **Appendix 16**

## **Support to the Global Strategy**



# Pillar 3 – Promoting the Global Strategy for FMD control

Nick Lyons

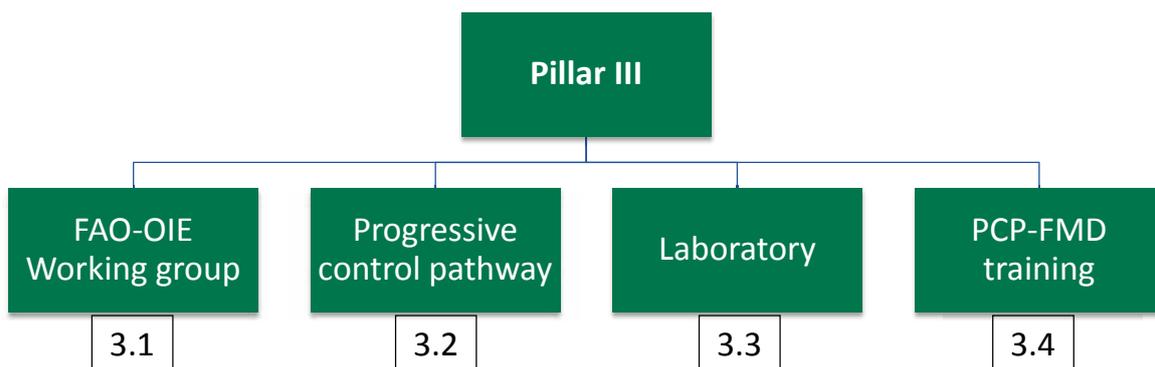
Executive Committee Meeting

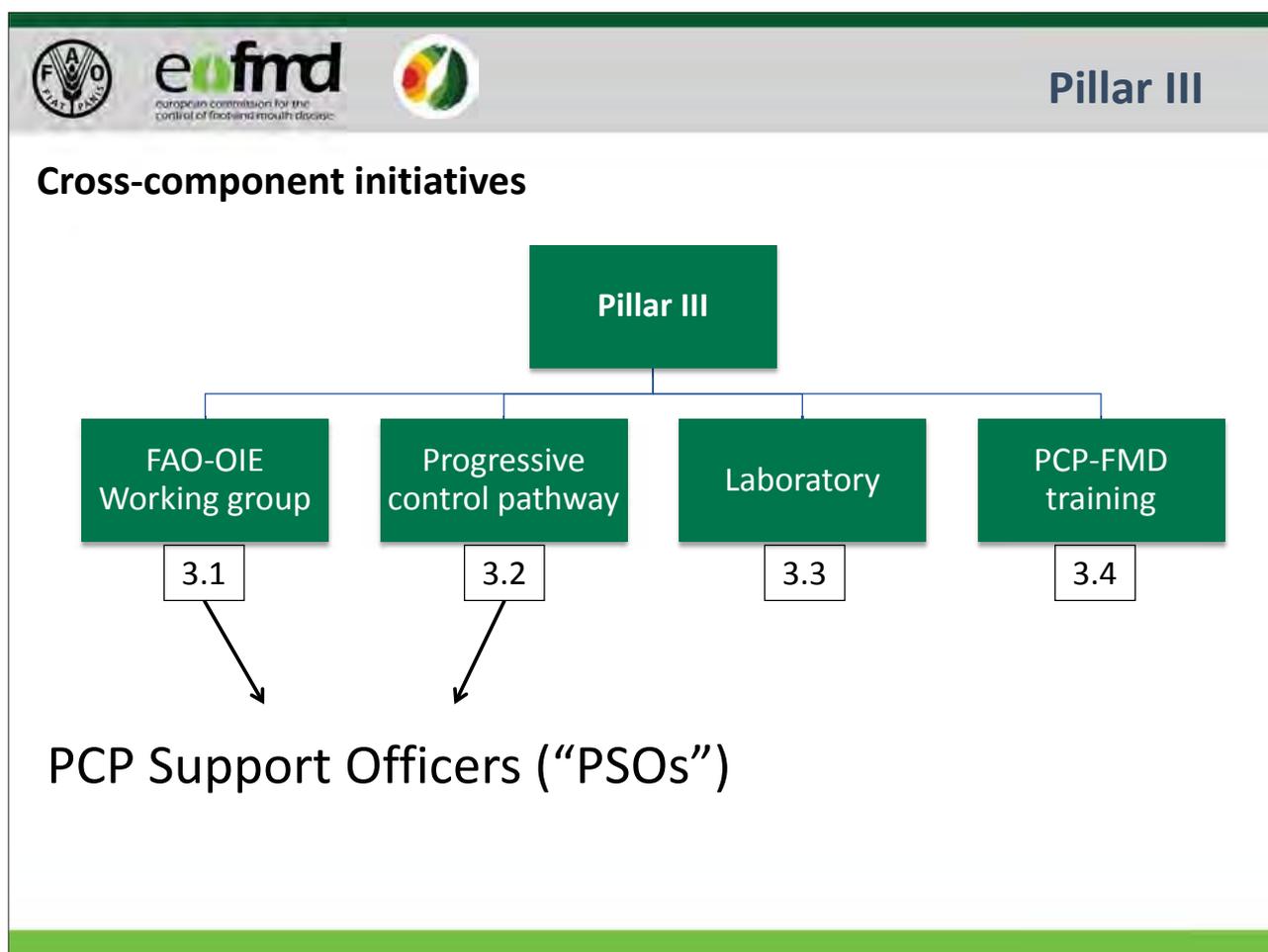
7<sup>th</sup> March 2018



**Pillar III**

## Promoting the Global Strategy for FMD control





The slide is titled 'PCP Support Officers' and features the same logos as the previous slide. It lists four key points about the initiative:

- New initiative to support countries in PCP stage advancement and maintain momentum between roadmap meetings
- Work with national PCP focal points and relevant regional FAO and OIE offices to provide guidance on PCP progression
- Initial focus on countries in provisional PCP stages (currently 25)
- System has been agreed by the FAO-OIE working group

To the right, a diagram shows the progression of PCP stages from 0 to 5. Stage 0 is 'Initial risk assessment and surveillance'. Stage 1 is 'Controlled study of FMD and/or animal movement'. Stage 2 is 'Risk-based FMD control plan'. Stage 3 is 'Controlled study of FMD and/or animal movement'. Stage 4 is 'Controlled study of FMD and/or animal movement'. Stage 5 is 'Controlled study of FMD and/or animal movement'. The final stage is 'Free without restriction'. A large 'Support' label is overlaid on the diagram, indicating the role of PCP Support Officers in providing technical assistance and guidance throughout the process.



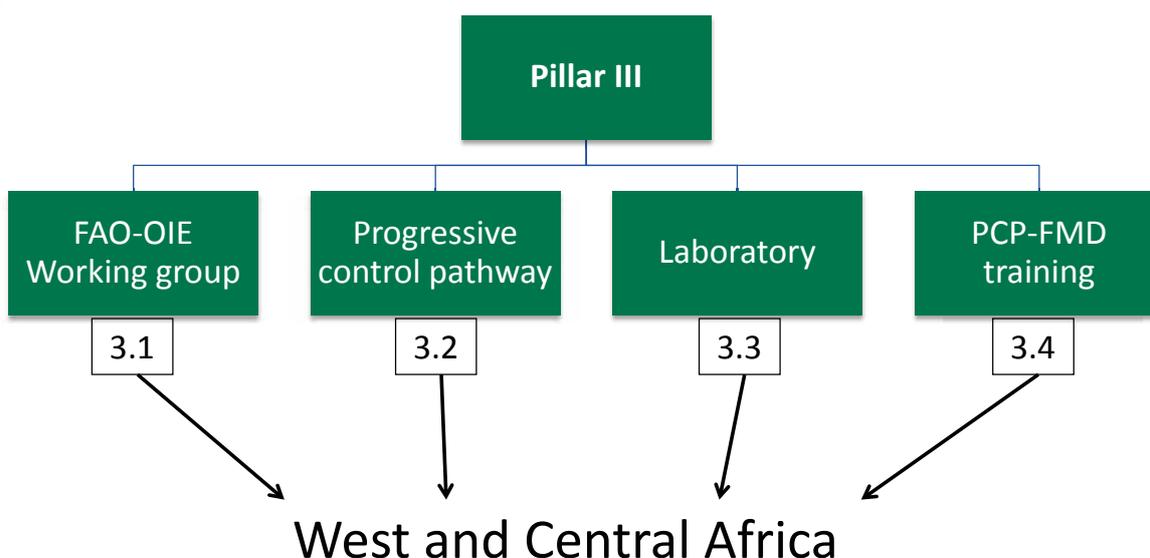
## PCP Support Officers

- PSOs will satisfy certain criteria including and understanding or experience of:
  - Supporting RAGS at Regional roadmap meetings
  - PCP online e-learning courses
  - Technical aspects of FMD (surveillance, epidemiology, etc)
  - OIE-PVS assessment processes
- A route for training new officers is foreseen for priority regions
- EuFMD can support process (mostly from PIII but also PII where appropriate) but further support from partners would maximise the potential of this system



## Pillar III

### Cross-component initiatives





## West and Central Africa

- Support to region requested from FAO-OIE Working group
- Limited data on disease impact and relative lack of surveillance...
  - ...yet there are risks to North Africa and beyond (e.g. 2017 reports of A/AFRICA/G-IV)
  - and limited knowledge on appropriate vaccine strains for region
- FMD control in the region is lacking with no countries in PCP stage 2 from 2016 Roadmap meeting in Togo



## West and Central Africa

- In time, FMD is expected to become more important for region as livestock systems develop
- As an example, recent evidence from ground level in Nigeria is that FMD is an important disease for farmers even if limited efforts to control from government
- Major projects in region (World Bank, USAID) do not currently address FMD





## West and Central Africa

- Internal Strategy Paper developed between EuFMD, FAO, OIE and reference centres
  - Following meeting in Paris on 7<sup>th</sup> November, 2017
  - Identifying priorities
  - How to efficiently use Pillar III resources to initiate change in region, but with limited financial support



## West and Central Africa

- Plans for support to WCA include:
  - Identifying key partners in region
  - FAR on regional surveillance using lateral flow devices (VSF/ANSES/BI)
  - CIRAD LoA
    - Review and translation into French of training material on socio-economic impact
    - Assessment of market potential of FMD vaccines in regional disease control from 2020-2050
  - Training (e-learning)
    - FITC courses in English and French; Socio-economic impact in French
  - Expert support to PCP advancement (to be decided with Working group); need for Francophone PSOs



## Pillar III - Conclusion

- Resources are very limited for the proposed cross-component work under Pillar III
- Proposed work has **sustainability** within the funds available within Pillar III
- **Efficient** use of resources by engaging with partners active in the region (WCA) and a desk-based system with people of relevant experience (PSO)
- Expect some results by Open Session, 2018

**Appendix 17**  
Standing Technical Committee  
report

# Item 8: Standing Technical Committee report

## Eoin Ryan

Chair, Standing Technical Committee

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- Progress on projects funded under FAR call
- Themes for 7<sup>th</sup> FAR call for proposals
- Special Committee on BioRisk Management



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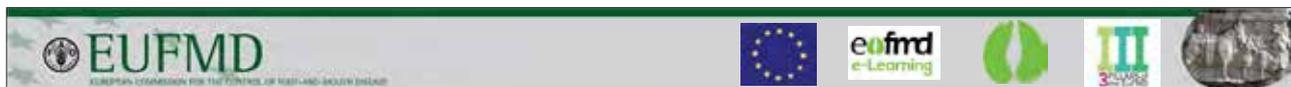
## Progress on projects funded under FAR call

4<sup>th</sup> EuFMD-FAR in February 2017: twelve project proposals were in-line with the priorities of the call and submitted for review, four were selected for funding

5<sup>th</sup> EuFMD-FAR in July 2017: three project proposals were selected as in-line with the priorities of the call and submitted for review, one selected for funding

6<sup>th</sup> EuFMD-FAR in December 2017: one project proposal selected as in-line with the priorities of the call and submitted for review, one selected for funding

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### 4<sup>th</sup> EuFMD-FAR (issued February 2017)

*European multi-country FMD Spread model (EuFMDiS)* - Project Lead Applicant: Dr Graeme Garner

Signed: 18 October 2017/Duration: 18 months. Overall cost: € 48 600.00

Modifying and developing the Australian Animal Disease model (AADIS) as a training tool to support FMD planning and response, for use by European Union Member States.

Status update:

An initial workshop to get the project underway was held on 5-7 December 2017, in Vienna, Austria. A dedicated e-learning page was developed, for project partners, to provide a discussion forum and a depository to share resources.

The project is on-track to deliver a working model that will simulate spread and control of FMD within and between the participating central European countries by 30 June 2018.

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*Validating the use of bulk tank milk for surveillance of FMD among commercial dairy farms in endemic settings* - Project Lead Applicant: Dr Nicholas Lyons, The Pirbright Institute

LoA Signed: 20 July 2017/Duration: 12 months . Overall cost: € 48 881.00

Evaluating the use of bulk-milk as a prospective, integrated surveillance tool for infection among large-scale commercial farms in the endemic settings of Iran and Kenya.

Status update:

Iran: a mission to Iran by researchers at TPI in coordination with collaborators within the Iranian Veterinary Organization (IVO) and the Central Veterinary Laboratory (CVL) was undertaken in October 2017. The sampling is started in mid-February and the first sample shipment is scheduled in mid-May and the final at the end of the project.

Kenya: milk samples have been collected (by November 2017) and the duplicates shipped to TPI in December 2017.

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*Evaluation in field conditions of a safe and cost-effective protocol for shipment of samples from Foot-and-Mouth Disease suspected cases for laboratory diagnostic (FIELD EVAL INACT)* – Dr Sandra Blaise-Boisseau, French Agency for Food, Environmental and Occupational Health & Safety (ANSES)

LoA Signed: 18 October 2017/Duration: 18 months. Overall cost: € 75 940.00

To evaluate/validate, in real situation under field conditions, the performance and safety of a protocol for improving the cost-effectiveness of FMD samples shipment, based on the inactivation of FMDV on the Lateral Flow Device (LFD). Samples are currently being collected on the field using LFDs in Turkey, Nigeria and Pakistan.

Status update:

The collection of epithelium and/or vesicular fluid samples from clinical cases (at least 20 samples) is currently being carried out by the national partners in Nigeria, Turkey and Pakistan under the supervision of the leading Institutions (ANSES). The field study started in December 2017 and is due to end in June 2018.

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*Validating multiplex real-time RT-PCR as a tool for FMD detection in bulk tank milk (Acronym: Tank Milk Multiplex)* – Dr. Michael Eschbaumer, The Friedrich-Loeffler Institut (FLI)

LoA Signed: 26 January 2018/Duration: 6 months. Overall cost: € 23 715.23

Providing a proof of concept tool for milk screening, testing the application of multiplex RT-PCR for foot and mouth disease virus (FMDV) for the viral detection in bulk-milk sample. The 1<sup>st</sup> stage of the project consist of a laboratory validation of modified multiplex RT-qPCR assay with spiked milk.

The 2<sup>nd</sup> stage of the project will aim at evaluating the performance of multiplex RT-qPCR with field samples from an endemic region

Status update:  
The project has just started at the end of January 2018.

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5<sup>th</sup> EuFMD-FAR (issued July 2017)

*FMD RiskmapS (FMD Risk map surveillance system): Development of a FMD surveillance program on risk information and mapping tools for southern European neighbourhood, integrating movement patterns of domestic livestock* - CIRAD

Signed\*: by the end of February 2018/Duration: 18 months. Overall cost: € 168 000.00

To reinforce national capacities and to assist the veterinary services of countries in North and West Africa with risk-based surveillance systems. To be potentially extended to European neighborhood South countries (Egypt, Libya and Sudan) in 2019, to promote a regional approach. Disease risk mapping of TADs, integrating domestic livestock movements and market prices between countries to better identify high risk areas, and provide decision makers with indicators to target surveillance and control actions

Status update:  
The first activity under this project will be a workshop that will take place in Tunis (Tunisia) (27 February- 1 March 2018) on surveillance for early detection and confidence of freedom in Algeria, Morocco and Tunisia

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6<sup>th</sup> EuFMD-FAR (issued December 2017)

*A pilot project for the evaluation of a system for engaging para-veterinarians and animal health workers for FMD surveillance and sample collection and for the preliminary assessment of the demand for FMD control services in Mali* - Project Lead Applicant: Dr Abdoulaye Diaoure, Vétérinaires Sans Frontières Suisse (VSF-Suisse)

Signed\*: by the end of February 2018/Duration: 18 months. Overall cost: € 20 000.00 (\*although the project proposal has been received though a FAR Call the funds will be mobilized under Component 3.3.2).

Pilot study to assess the feasibility of engaging para-veterinarians, private animal health service providers or other non-state actors in Mali for FMD sample collection and submission to the national laboratories/authorities and international reference laboratories.

Status update: the project is expected to start by the end of March 2018

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## Proposed themes for 7<sup>th</sup> FAR call for proposals

*Based on discussions with Secretariat, agreed by STC*

1. Developing an alternative to the R value as an estimate of vaccine efficacy.
2. Integrating wildlife transmission into the EuMFD disease spread model.
3. Environmental sampling as an early warning system.
4. Vaccine stability tests.

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## Proposed themes for 7<sup>th</sup> FAR call for proposals

1. Developing an alternative to the R value as an estimate of vaccine efficacy.

-> This is based on a workshop held last month with various experts and interested parties; the indications appear to be that there may be a good chance of strong and practical progress.

2. Integrating wildlife transmission into the EuMFD disease spread model.

-> Strong interest in this from Central and Eastern European veterinary services

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## Proposed themes for 7<sup>th</sup> FAR call for proposals

3. Environmental sampling as an early warning system.

-> This includes both air sampling and samples from the ground, and builds on the promising initial work done recently during real-time training courses in Nepal. There may be an opportunity to apply this to very large scale (30,000 pigs) pig farms endemically infected in Thailand, which could also answer other questions about quantifying the effects of biosecurity, vaccine efficacy in the face of overwhelming challenge, environmental persistence after clinical disease ends, etc.

4. Vaccine stability tests.

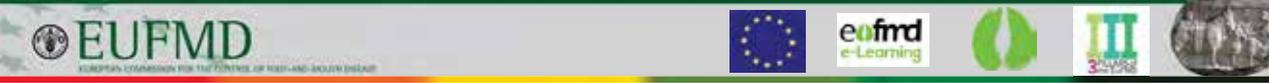
-> We have funded work on this in the past but a practical tool for use by veterinary services is not yet available. If this could be developed, the benefits are obvious.

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## Special Committee on BioRisk Management

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## Special Committee on BioRisk Management

- Douwe Kuperus, The Netherlands; Cesare Bernieri, Italy; Kathrin Summermatter, Switzerland; Kirsten Tjørnehøj, Denmark; Boris Gelman, Israel; Sharon Webster, UK; Gonzalo Pascual, Spain; Ulrika Allard, Sweden; Jens Peter Teifke, Germany
- First online meeting 24<sup>th</sup> November
- All members of SCBRM except Boris Gelman; observers Lynda Moore and Patrick Houston (TPI) attended



## SCBRM online meeting

- Revision of EuFMD minimum standards (MS-FMD) for laboratories: scope and pathway to developing a revised document.
- FMD biorisk management training for EuFMD member states: what is needed, what can be done, how can it be delivered
- Priorities for technical/validation reviews or studies relating to biocontainment
- Provision of technical advice and expertise to EuFMD members

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## Action points

- survey members opinion on sections of the MS-FMD for updating and attention
- identify/establish ways to achieve information, training and document sharing for the SCBRM, ahead of the next Session

Members agreed to join subgroups:

- Updating of the FMD-MS: Ulrika, Sharon, Kirsten, Douwe, Jens
- Training Group: Kirsten, Kathrin, Lynda -TPI, Sharon, Cesare, Gonzalo
- subsequent to the Online meeting, Jens agreed to review the Draft FAO Biosafety Manual for relevance to the work of the Committee.

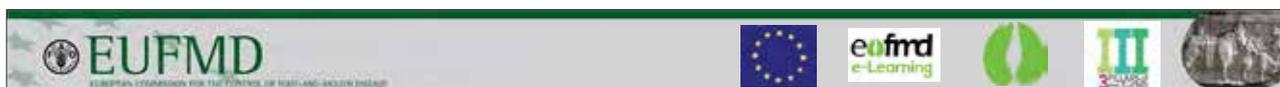
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## Special Committee on BioRisk Management

- Physical meeting next week in Palermo:
  - a) Developing a BRM training programme
  - b) Minimum Standards revision

Katharina Staerk is the STC focal point



## Thank you – any questions?

### The Standing Technical Committee:

Stephan Zientara

Sten Mortensen

Ron Bergevoet

Katharina Staerk

Karin Schwabenbauer

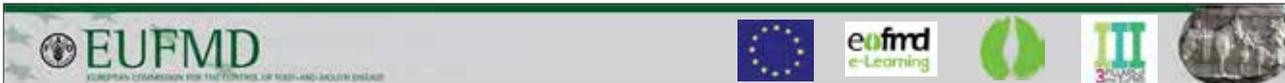
Eoin Ryan

*Thanks to Keith, Nadia, Mark, Fabrizio, Paolo and the team*



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**Appendix 18**  
The Open Session 2018



# ***Increasing Global security in the supply of effective FMD vaccines: can we really manage the risks and achieve progressive FMD control without it?***

## ***Open Session 2018***

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### **EuFMD Open Session (OS18)**

29-31 October 2018  
Borgo Egnazia - Savelletri di Fasano, Puglia  
Between two International Airports (Bari and Brindisi)

***“Increasing Global security in the supply of effective FMD vaccines: can we really manage the risks and achieve progressive FMD control without it?”***

Abstract submission deadline: 31 May

Fee Registration:

Early Bird (by May 31 <sup>st</sup> , 2018)	€ 330
Full Fee	€ 380
2 Persons	€ 550
Students (< 35 yrs)	€ 300
Emeritus	€ 200
On the spot	€ 550
New - 1 Day Fee	€ 150

Increase € 30 p.p. to cover location venue, logistics & arrangement



**Agenda**

28 Oct – Arrival  
29 Oct – Opening Session  
30-31 Oct – Session  
1 Nov – Closed Session

**Contact Italy:**  
MoHealth: **Dr. Borrello**  
IZSPB: **Dr. Fasanella** (Direttore)  
Regione Puglia: **Giancarlo Ruscitti**  
(Regione Puglia - Salute, Benessere Sociale e dello Sport)

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[www.fao.org/eufmd.html](http://www.fao.org/eufmd.html)