



Food and Agriculture
Organization of the
United Nations

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



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

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96ExCom

Six-Monthly Report April- September 2018

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EuFMD Phase IV

Report to the EuFMD Executive

April 2018 - September 2018

Component 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, including e-learning, training resources and staff support.

1.1.2: Improved capacity in each of the MS to recognize, respond 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	1,377
1.1.2	Implement >85 % of the demand driven programme	85%	85 %	Training credits allocated by the 39 MS to training activities or regional initiatives have been delivered by EuFMD	55 %

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. Furthermore, these funding sources support recruitment of additional personnel, as listed in the table below:

Description	Contribution	Funding source
Component Supervisor: Training Programme Manager	50% of one FTE role (consultant P2 equivalent)	EuFMD Trust Fund- MS contributions, Australian Real Time Training
Network and Training Support Officer	30% of one FTE role (P2)	80% EuFMD Trust Fund, 20% EC project
Development of training materials	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>
Pillar Manager	Mark Hovari	Contingency Planning Officer
Component Manager	Rodrigo Nova Chavez	Short Term Placement
Training Manager	Jenny Maud	Training Programme Manager
Training and networking support	Nadia Rumich	Training and Networking Officer/Secretariat
Member State partners	Training Focal Point in each EuFMD MS	n/a
ExCom oversight	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.

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

Rodrigo Nova Chavez (UK) joined on a Short Term Placement from July 2018 and will be responsible for the management of component 1.1.

Chiara Addari (Operational, e-learning and training logistics) assists the EuFMD e-learning platform, including 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 specialist learning technologist and instructional designer consultant for ad-hoc instructional design of new e-learning courses alongside advanced technical troubleshooting support to the e-learning programme.

Jenny Maud co-ordinates training development across the EuFMD program, and oversees the delivery of the e-learning program under Pillar I.

Mark Hovari (Contingency Planning Manager) supervised component 1.1 to **end July 2018**.

Nadia Rumich manages communications on training, the webinar programme and networks.

Interns recruited across the EUFMD program have assisted in providing support to the e-learning program and the development of new training materials.

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

The EuFMD e-Learning Virtual Learning Environment (VLE) now has over 7300 users, with 1600 new users added in the last six months.

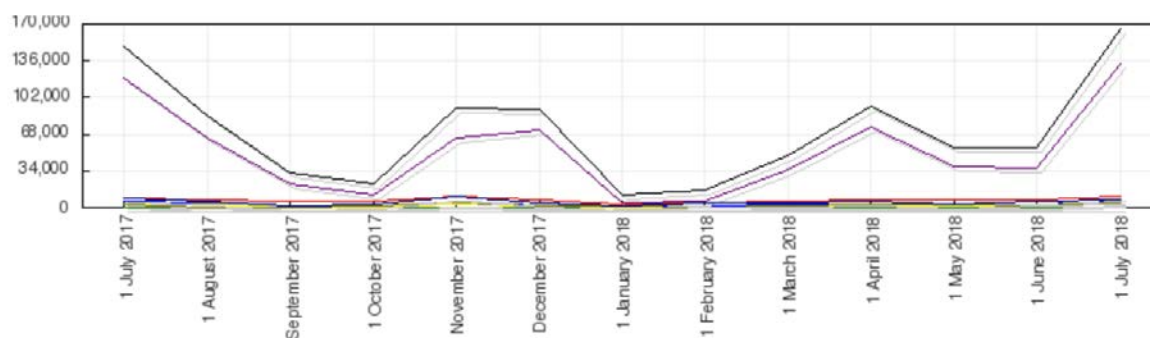


Figure 1: Activity on the EuFMD e-learning site (number of clicks by different participant types) over the last 12 months, illustrating sustained increase in user numbers.

Since 2013, the VLE has been hosted and managed by the Royal Veterinary College, University of London, UK (RVC) through a letter of agreement. As the EuFMD e-learning program has expanded, and consequently e-learning related staffing capacity within EuFMD has increased, the management of the VLE has become autonomous within EuFMD. It has therefore been decided, by mutual agreement with the RVC, to move the EuFMD e-Learning website to a dedicated commercially-managed server solution, rather than to continue to host the platform at the RVC. A competitive tender process was initiated in order to identify a suitable company to provide this hosting service.

While server hosting may move away from the RVC, it is recognized that continued partnership with an academic institution has potential benefits in terms of:

- sharing of training materials and e-learning content;
- sharing of pedagogical and technical expertise in e-learning development;
- academic accreditation or certification of courses.

A call for expression of interest in collaboration in the development and delivery of e-learning has therefore been developed and publicized in order to identify academic institutions with whom such beneficial collaborations may be established in future.

Technical Resources: Webinars

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

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

The online EuFMD Knowledge Bank is a searchable database of FMD related resources. It was developed as a pilot system by the Royal Veterinary College (<http://kb.eufmdlearning.works/>) and now contains over 450 resources and over 80 webinar recordings. The system will now be migrated to the main EuFMD website on the fao.org platform, which will assist increasing the visibility of this important resource. During this migration improvements will be made in the search functionality, such that prioritization of search results is more logical.

1.1.1.3 Open access areas of EuFMD e-Learning website

An open access “**Contingency Planning Self-Assessment Tool**” has been developed. 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.

Under Pillar II activities, the open access course “Introduction to the Progressive Control Pathway” has been updated in line with the updated PCP-FMD guidelines, and a new open access course on the development of Risk Based Strategic Plans for FMD control has been developed.

Developing and implementing a communication strategy to improve awareness and completion of the open access e-learning courses will be an important activity for September to December 2018.

1.1.1.4 Training infrastructure: framework for monitoring and evaluation

Regular monitoring of achievement of learning objectives of online courses occurs through online assessment and participant feedback surveys. Outcomes of face to face training courses are monitored through trainer reports and participant feedback surveys. As the phase IV training program enters its fourth year, the training team recognizes the need to go beyond outcome monitoring to a wider evaluation of the quality and impact of both the face-to-face and e-learning courses provided across EuFMD’s three pillars.

A call for expression of interest for experts to assist as external evaluators has been publicized and these evaluators will be asked to review a dossier of materials and attend meetings in Rome to discuss the program as initial steps in the evaluation process.

The expert advisory group will be asked to evaluate and advise on future improvements to:

- 1) procedures for course development;
- 2) quality of existing face-to-face and e-learning courses produced;
- 3) existing procedures for feedback and monitoring of the outcomes of each training and e-learning course;
- 4) how the impact of the training programme may be assessed;
- 5) the overall training strategy, its partnerships and the value of certification or formal recognition of the quality of courses.

The first expert meeting is expected to take place in September or October.

1.1.1.5 Develop knowledge transfer tools and job aids

The Training menu uptake has not required the implementation of new courses.

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. This new approach should 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 country participant	Nb of cascade planned	Nb of cascade training completed*
NTC24	12	9	6	3
NTC25	12	11	4	3
NTC26	10	10	4	4
NTC27	7	6	1	1
NTC28	11	9	1	1
NTC29	12	11	2	2
TOTAL	64	56	18	14

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

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 received from all 38 Member States. Also as Montenegro joined EuFMD as 39th Member State, the National Training Focal Point was appointed, and allocation sheets for training credits were send out.

Thanks to Montenegro joining, the total number of Training Credits (TC) available to MS has increased to 398 out of which 352 are allocated by MS to training activities, 46 TC are not allocated.

Cyprus and Luxemburg have not allocated any training credits up to this point.

Albania also has eight unallocated TC

If no response is received by end of September, reusing the unspent TC of these MS for various regional initiatives should be considered.

The 56 unused Training Credits (TC) from the first biennium, not included in the total account of Training Credits for this second biennium are being used to support various initiatives.

- a) The 10 TC of Montenegro, as initially new entry Member State TC were not budgeted ;
- b) Support of a Training Course on Containment Zone, in the value of 30 TC;
- c) Regional approach initiatives, in the value of 16 TC, specifically Cross-border simulation exercise between Spain-Portugal planned for November 2018

Also to note, that Switzerland has donated their ten TC, for biorisk training initiatives.

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)
1) Real Time Training (now with the requirement that participants carry out cascade training when they return home)	3 credits for 1 participant	32 (44)	96 (138)
2) Online FMD Emergency Preparation Course: English language Online course for multiple Member States in English	1 credit for 20 participants	120 (440)	9 (22)
3) Online FMD Emergency Preparation Course: Tailored National Course Online course in national language, tailored to specific country requirements	6 training credits for 120 participants	(240)	(12)
4) Online FMD Emergency Preparation Course: subsequent national course	4 training credits for 120 participants	480 (480)	15 (15)
5) Workshop: “Managing a crisis” Establishing train of command and managing communication within and outside the veterinary service in a crisis situation	2 training credits for one participant	19 (19)	38 (38)
6) Workshop: “FMD Simulation exercises” Design, implementation and evaluation of simulation exercises	2 training credits for one participant	(17)	(34)
7) Workshop: “Putting vaccination into practice” 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	(12)	(24)
8) Workshop: “FMD Wildlife surveillance” Better understanding of FMD surveillance in wildlife, particularly by using non-invasive methods.	2 training credits for one participant	13 (13)	26 (26)
9) Workshop: “Veterinary Ethics” Exploring ethical conflicts, clarifying professional roles and responsibilities.	2 training credits for one participant	(3)	(6)
10) In-country support on FMD modelling: Assistance to the country in order to progress in the development of national disease spread models.	2 training credits for one mission	15 (50)	4 (11)
11) Laboratory Training Course Two week intensive course on FMD diagnostics run by the Pirbright Institute	4 training credits for one participant	1 (2)	4 (8)
12) Regional event: 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	(20)	(8)
Biorisk Training in collaboration with TPI			(10)
Total number of training credits Delivered – (Allocated)			192 (352)

A balance of the 398 credits available for training in 2017-19 to date is as follows:

- ❖ 354 TC have been allocated, and **54.5% of the allocated training credits have been delivered by EuFMD**
- ❖ They are still **46** unallocated training credits at this point.

1.1.2.2 Development of new training courses

The training menu covered all the needs by MS and no requests for new courses were made in this period.

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 delivered four online courses during this six-months training period.

- **On-line National FMD Emergency Preparation Course for Spain**
- **On-line National FMD Emergency Preparation Course for France**
- **On-line National FMD Emergency Preparation Course for Serbia**
- **On-line Generic FMD Emergency Preparation Course in English**

EuFMD has also delivered two workshops in this time frame:

- **Workshop on Managing a Crisis, in March 2018**
- **Workshop on FMD wildlife surveillance in May 2018**

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.

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.

Two initiatives are being defined:

- 1) A cross border simulation exercise between Spain and Portugal, in November 2018. A proposal was sent to EuFMD from the two MS, and EuFMD has agreed to support this initiative.
- 2) Joint training between Slovenia and Hungary, but preliminary discussion are needed to identify the main topic.

Funds from the regional approach are used to support delivery of a training in Serbia on Containment Zone.

5-Issues for Executive Committee attention arising during implementation

To date, 46 credits have not been allocated. Some countries have never allocated their training credits or not all of them, despite repeated reminders.

The countries with the highest number of unallocated or unspent training credits were Cyprus, and Luxembourg. 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.

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 national languages, The EuFMD has, up to date, national courses tailored for Spain, France, United Kingdom, Estonia and Serbia. 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** organized in 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** was organized for April 2018 to Spain.

7 - Success stories and future emphasis

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 (€)

Total Budget Workplan activity 24 months	Expenses Oct 17 – Aug 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
522,975	195,236	42,890	46 %	271,517

9-Gantt charts - Planned activities

1.1 Training for MS	OUTPUT 1.1 Increased European expertise in FMD crisis management and improved quality of national FMD preparedness training programmes		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
	1.1.1 Develop the training infrastructure to enable every member state to cascade appropriate training and learning on FMD control to their public and private animal health services	1.1.1.1 Training infrastructure: staffing and technical resources																								
		1.1.1.2 Training infrastructure: online knowledge bank development (in co-operation with other training components)							P																	
		1.1.1.3 Open access areas of the EuFMD e-Learning website																								
		1.1.1.5 Develop knowledge transfer tools and job aids																								
		1.1.1.6 Support to in country training courses																								
	1.1.2 Implement demand driven training in response to MS priorities in areas of prevention, detection, and contingency planning for control operations and recovery	1.1.2.1 Training credits system	P W	P	P									P					P							
1.1.2.2 Development of new training courses																										
1.1.2.3 Delivery of training courses			TR		EL	TR EL	W S EL		W S	EL			EL		TR W S			E L	W S		EL	EL				
1.1.2.4 Training focal points informed of training opportunities and feedback																										
1.1.2.5. Regional approach		P	P	P	P	P	P	W ST R				W ST R	WS TR		W ST R				W ST R						WS TR	

EuFMD Phase IV

Report to the EuFMD Executive Period April 2018 - September 2018

Component 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.

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	517
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	4*

* Position paper on FMD vaccination issues; The AESOP (Assured Emergency Supply Options) paper; EuFMDiS v.1.3 and EuFMDiS user guide

2-Project team

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

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 355 members.

Two new webinars were held in this period

- In March J. Arzt and C. Stenfeldt presented “Pigs and Foot and Mouth Disease”, focusing on two specific topics, one on comparing the clinical signs of Seneca Virus and FMD in pigs, and one on the implications of pigs not being carriers of FMD. The webinar has over 100 attendees.
- In April T. Alexandrov and M. Masiulis presented “Foot-and-Mouth Disease in Wildlife”.

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 344 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 95th ExCom, three webinars, a main tool for learning and information sharing, were delivered:

- In February R. Mancy, P. Brock and R. Kao presented “Process-driven model construction in disease ecology and animal health: model types and uses”
- In March 2018 K. Moreno-Torres and A. Delgado presented “The impact of incubation-phase transmission of Foot-and-Mouth Disease in pigs: from individual infection dynamics to national preparedness”
- In May 2018 Z. Poljak presented “Network analysis and disease transmission: Porcine epidemic diarrhea outbreak in Canada”.

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 248 members.

There were no new webinar held in this period. All past webinars are available on the EuFMD e-learning website under the Vaccination Network tab.

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 v.1.3, a major decision support tool, will be delivered in 2018 along with its user guide.

1.2.1.5 European, multi-country animal disease spread model

Graeme Garner led 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 central Europe, by EuFMD's Executive Committee in October 2017.

The first workshop was held in Vienna, Austria on 5-7 December 2017, and focused on functionality, expected outputs and data requirements. This involved six pilot countries (Italy, Austria, Croatia, Hungary, Romania and Bulgaria). Slovenia subsequently joined the pilot project bringing the number of countries to seven, exceeding the performance benchmark of at least three countries. A licensing Deed between FAO and the Australian Department of Agriculture and Water Resources was finalized in July 2018 granting a royalty-free license for EuFMD to use and adapt the AADIS Model and create and use derivative works

Since the 95th ExCom meeting, work focused on software development and supporting the participating countries in data collection and analysis. The project has proceeded on schedule and delivered a working prototype of a European Disease Spread Model (EuFMDiS) by the scheduled date of 30 June 2018. A second workshop was held Budapest, Hungary, 10-13 July 2018. The objectives of this workshop were to:

- Install the modelling software and provide training for the seven pilot countries and other interested member states, in running the EuFMDiS model and using the outputs to support FMD planning;
- Hold an open day for interested parties;
- Discuss ongoing support and future development priorities.

There was good interest and engagement in the workshop by participants. EuFMDiS was successfully installed on most of the participants' computers and all countries provided with EuFMDiS User manuals in addition to hands-on training. Following testing and, in response to workshop comments, a number of program modifications will be made. These will be completed under the existing contract. A review of the country data supplied to parameterize the model identified missing data from several countries and several areas where countries considered it would be useful to revisit some of the initial values/data provided. Countries agreed to supply missing and/or updated data by September/autumn 2018.

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 J. 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:

Interviews are conducted with Balkan Laboratory Network focal points to develop a concept note to establish a diagnostic bank in the region. The interviews are conducted by K. Krstevski (Balkan Laboratory Network Leader).

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

The EuFMDiS was developed and delivered to pilot countries.

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 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 EuFMDiS. Now with the closing of the EuFMDiS pilot project workload can shift back to the topics listed under 1.2.2.

The Contingency Planning (CP) and Vaccination networks are behind in delivery.

Successful completion of the pilot EuFMDiS project has raised the issue of maintain momentum and ensuring on-going user support for central European countries and other MS interested in using decision-support tools.

Key aspects to be considered include:

- User support and maintaining model updates;
- Updating parameters and maintaining data integrity;
- Building confidence and skills through a user forum.

One option could be to consider a regional modelling group/network to support FMD policy/planning with leadership to rotate between participating countries. This group could undertake projects and joint activities in response to priorities and issues identified by CVOs. While EuFMD can continue to support this area in the short-term, consideration will need to be given to longer term funding/support.

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 to start a new webinar series in line with the work of the GET Prepared Pathway focusing on preparedness and its related topics (planning, training and exercises). This will be in addition to the previous series where the focus was on response

Activity 1.2.1.2 Modelling network:

Further webinars planned for 2018 include:

- Mike Tildesley: Modelling FMD transmission in Kenya using results of transect studies;
- Graeme Garner: Building a multi-country FMD model for Europe – the EuFMDiS project.

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 in 2018;

1.2.1.5 European, multi-country animal disease spread model

Participants at the July workshop considered it important to keep the EuFMDiS regional modelling initiative active through a collaborative approach. This could be done by building a regional modelling group/network to support FMD policy/planning in central Europe, continuing to use the existing online project platform, and sharing experiences. EuFMD will facilitate the future contacts, organise online meetings and support follow-up activities.

Future developments could include adding additional countries, adaption of the model to other diseases and incorporation of a wildlife component. The 95th Executive Committee meeting identified incorporation of wildlife into the model as a priority area. A call has gone out under the Future Applied Research program. Several other European MS have expressed interest in using EuFMDiS in their countries.

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:

Drafting a concept note to establish a diagnostic bank in the Balkans.

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 41st 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 multi-country disease spread modelling study has been an outstanding success. The drive of this small, but dedicated community involved in this project conveys a strong sense of ownership and despite the ambitious time frame has been able to deliver a sophisticated disease modelling tool (EuFMDiS) that can be used to support FMD planning and response at both national and regional scales in Europe.



Other countries, including Spain, FYR Macedonia and Turkey), are also showing interest. Future developments could include adding additional countries, adaption of the model to other diseases and incorporation of a wildlife component. Following 95th Excom discussions, the current focus for the future is on incorporating wild boar in the EuFMDiS model framework.

8- Budget (€)

Total Budget Workplan activity 24 months	Expenses Oct 18 – Aug. 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
142,154	55,975	48680	74 %	37,499

9-Gantt charts - Planned activities

1.2 Improv ed CP	OUTPUT 1.2 Improved contingency planning by Members and at European level		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
1.2.1 Provide technical support to maintain and strengthen three networks of contingency planners and FMD modeling expert groups to improve the national capability on modelling, contingency planning, simulation exercises	1.2.1.1 CP network						W EB	W EB						W EB	W EB	WEB	WEB	WEB	WEB	WEB	WEB	WEB				
	1.2.1.2 Modelling network	W EB		W EB		W EB	W EB		WE B								WEB	WEB				WEB	WEB			
	1.2.1.3 Emergency vaccination network															WEB	WEB	WEB								
	1.2.1.4 Dev. of guidelines	G TP									GTP	G TP											GTP			
	1.2.1.5 EU, multi-country animal disease spread model	O M	O M	W S	O M	O M							W S													
1.2.2 Develop the system of support to contingency planners for crisis situations including decision support tools (including disease spread and economic models), system for provision for diagnostic supplies, emergency access to national or regional vaccine banks, and sharing of critical human resources	1.2.2.1 Economic impact calculator													G TP												
	1.2.2.2 Support to dev. of diagnostic banks																								GT P	
	1.2.2.3 Support to emergency access to vaccine banks													G TP												
	1.2.2.4 Support to sharing critical HR													G TP												
	1.2.2.5 Other decision support tools													G TP												
	1.2.2.6 Priv. Sector invlm in Emergency Prep & mgt																								GT P	

EuFMD Phase IV

Report to the EuFMD Executive

April 2018 - September 2018

Component 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.

Activities	Indicators	Baseline: Sept.2017	Target 2 years	Unit of measure	Current Status
1.3.1	Tripartite Management Meetings held	5	9	Tripartite Management Meetings held involving staff of the three countries	7*
1.3.2	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%
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 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; 27 July 2018, Istanbul, Turkey
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
Pillar Manager	Mark Hovari	Contingency Planning Officer
Component manager	Paolo Motta (until June 2018) Daniel Donachie (from July 2018)	Short Term Professional
National focal points	Tsviatko Alexandrov (BG) Ilektra Fragko (GR) Naci Bulut (TR)	Consultant, SCRPD member Veterinary Services Consultant
Greece	Aris Exakoidis (Field) Christina Fouki (Lab) Alexandra Miteva (Field) Georgi Georgiev (Field)	PSAs and Consultants
Bulgaria	Stoyan Moldovanov (Field)	
Turkey	Abdulnaci Bulut (Lab)	
ExCom oversight	-	-

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

A Management Meeting was held in Istanbul, Turkey, on 27 July 2018. The meeting focused on the current PPR outbreak reported by Bulgaria and looking at the changes of risk due to the upcoming Kurban festival (20 – 24 August). The meeting was attended by EuFMD, National Focal Points (NFPs) of Bulgaria and Turkey and one representative from Greece.

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 five national consultants/PSAs 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.

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 1st cycle 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 were discussed at the Management Meeting in July.

During the PPR outbreak in Bulgaria, regular contact was maintained with the three countries. Bulgaria provided an update on a weekly basis, while Turkey has shared their surveillance and control measures due to the outbreak. Greece was made aware of the situation and filed consultant was contacted to further increase vigilance in the areas bordering Bulgaria and Greece.

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

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.

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 (**1st Disease Reporting Training of the EuFMD: How to evaluate FMD reporting in Thrace?**), and was carried out in Svilengrad, Bulgaria on the 13-16 March 2018. The aims of the workshop were to 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.

The training activities included:

- A pre-workshop expert elicitation exercise on the effectiveness of the disease reporting system was conducted with central veterinary administrations (repeated with field veterinary officers at the workshop)
- Face-to-face training focused on principles of surveillance for early detection and characterization of the reporting system in terms of linked events (components) using decision/scenario trees.
- Questionnaire surveys of livestock owners.

1.3.3.4 Activities to improve farmer reporting in the Thrace region

The workshop conducted in Bulgaria in March 2018 has provided an initial baseline assessment of the status of disease reporting in the region.

Both the central administration and the local veterinary authorities reported similar levels of effectiveness (around 40-50% that a single infected farm would be notified) and identified disease and reporting awareness as key issues in the disease reporting system. Disease awareness was the key weakness identified by central administration in Bulgaria and Greece, and in the latter country it was coupled with the correct implementation of investigations following reporting of a suspicion. Conversely, in these two countries the local officials

highlighted that farmer reporting of a suspicion was the key concern from their perspective, nevertheless, this outcome varied between livestock production systems. In Turkey, disease awareness was identified as the key weakness in the disease reporting system by field veterinarians, particularly among backyard and small producers, while the central authorities did not report any particular weakness in the current reporting system. These findings were confirmed through the survey of Bulgarian livestock owners

Although the number of livestock owners surveyed for the field survey was small and biased by convenience sampling, the awareness of foot and mouth disease (FMD) and of disease reporting procedures were identified as priorities for improvements.

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.

New kits were procured by EuFMD for Greece over summer 2018.

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

Further with the NTFs is needed to define the aim and objective of the next joint exercise.

5 - Issues for Executive Committee attention arising during implementation

Currently, by maintaining the current active surveillance activities for FMD, PPR and SGP in the THRACE region, the project can fulfill its initially set objectives with the current budget available.

6 - Priorities for the next six months

Outcome 1.3.1:

1.3.1.1 To organize and hold the next Tripartite meeting.

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).

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 Implement a new study on post vaccination serology s 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.

- 1.3.3.3 Follow-up the findings from the 1st Disease Reporting Training of the EuFMD in March 2018 (Bulgaria), with the National Focal Points and support upcoming initiatives.
- 1.3.3.4 Draw up a concept note for a joint simulation exercise for the region.

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 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 was held in Bulgaria 13-16 March 2018. This training workshop was well-received by participants. Key outcomes increased knowledge of methods for reviewing disease reporting systems and improved skills for conducting field surveys to investigate and evaluate livestock owner disease reporting by the participants. In all the three countries awareness of disease and of reporting procedures varied between livestock production systems. Awareness of both disease and reporting procedures was consistently lower among commercial small ruminant farms (in Greece and Bulgaria), small-scale commercial pig and backyard herd farms (Greece), large commercial beef herds (Bulgaria) and backyard herd farms (Turkey). Targeted communication campaigns should be designed and conducted particularly for these categories of livestock owners.

8 - Budget (€)

Total Budget Workplan activity 24 months	Expenses Oct 17 – Aug 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
377,000	119,919	63,500	49%	193,581

9-Gantt charts - Planned activities

1.3 Thrace	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																		

EuFMD Phase IV Report to the EuFMD Executive

Period April 2018 – September 2018

Component 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.

<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>
1.4.1	Management and High Level Policy Meetings held compared to if project was not supported.	0	3	Number of meetings	2*
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	8***

* On-line management meeting, October 2017, Small management meeting, Ohrid, F.Y.R. of Macedonia 17-19 April 2018

**On-line Greek national SimEx, July 2017

*** PTS 2017: Croatia, Bulgaria, Romania, Albania, F.Y.R Macedonia, Serbia, Kosovo and Moldova

2. Project team

<i>Role</i>	<i>Name</i>	<i>Status</i>
Pillar Manager	Mark Hovari	Contingency Planning Officer
Component manager	Daniel Donachie (start July 2018)	Short Term Placement
National focal points:		
Albania	-	
Bosnia and Herzegovina	Zorana Mehmedbasic	Head of Dept for Animal Health & Welfare
F.Y.R of Macedonia	Biljana Strojmanovska	
Kosovo	Bahti Murati	
Montenegro	Mevlida Hrapovic	
Serbia	Budimir Plavsic	Head of Animal Health Dept
Bulgaria	Tsviatko Alexandrov	Member SCRD, Head of Animal Health
Romania	Ioana Alexandra Neghirla	Head,AHCD Service Nat. Sanitary Vet &FSA
Croatia	Martina Rubin	
Moldova	Maxim Sirbu	
Ukraine	-	
Greece	Chrysoula Dile	
Turkey	Abdulnaci Bulut	
Laboratory network coord.	Kiril Krstevski (from June 2018)	Junior STP

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

New component manager Daniel Donachie has started his appointment in July 2018.

New JSTP and leader of the Balkan Laboratory Network Kiril Krstevski started his assignment in June 2018.

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 (Sol) 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

The EuFMD Workshop on “Risk Assessment and GET Prepared Pathway” was held in Ohrid, F.Y.R. of Macedonia – 17-19 April 2018 acted as a short management meeting for the Balkans.

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

A EuFMD Workshop on “Risk Assessment and GET Prepared Pathway” was held in Ohrid, F.Y.R. of Macedonia – 17-19 April 2018. During this workshop the principles of the Get prepared pathway were delivered and the first step in the assessment step was done. Follow up with the three pilot countries is ongoing, to set dates for upcoming national simulation exercises.

1.4.2.2 GET Prepared and simulation exercises

The concept note was finalized, presentation and handouts were drafted for the workshop in Ohrid. Also the concept and outcome were shared with FAO EMC-AH.

1.4.2.3. Veterinary Services and veterinary Faculty partnerships

Kiril Krstevski, from Ss. Cyril and Methodius University in Skopje Faculty of Veterinary Medicine, Skopje, was recruited and started home based work in June 2018 and will join the team in HQ in September 2018. His tasks will focus on output 1.4.3, and to support the component manager.

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.

Kiril Krstevski is contacting NRL focal points to encourage them to take part in the PTS 2018. Furthermore, discussions are held on what kind of laboratory activity would be the most beneficial for the Balkan Laboratory Network.

5-Issues for Executive Committee attention arising during implementation

The delivery of the component, especially activity 1.4.2 – national simulation exercises - is significantly behind, therefore most attention should be given to this.

The current financial and human resources make swift progress a realistic goal.

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, by January 2019;
- Organize a management meeting by January 2019;
- If possible conduct an in country mission to Albania or Kosovo to gain a better understanding in their emergency preparedness and laboratory capacity.

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.

- Organize national simulation exercises in Bulgaria, Serbia and F.Y.R of Macedonia, with a focus on drills and desktop. Outcomes should feed development on the GET prepared pathway and the lessons learnt shall be presented in a management meeting
- Review existing EuFMD materials and explore use for undergraduate studies in the Western Balkan region.

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 and encourage NRLs to participate;
- Based on a concept note in agreement with the Balkan Laboratory Network, organize a laboratory activity by January 2019.

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 – Aug 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
202,110	28,999	26,300	27%	146,811

9-Gantt charts - Planned activities

1.4 Balkans	OUTPUT: Increased confidence in the national capacities of countries in the Balkan region to manage at national and subregional level an FMD emergency		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	
	1.4.1 Activities to maintain and improve the coordination framework for western Balkan countries as a tool to ensure the continuous development, testing & improvement of nat. emergency mgt. plans and to ensure sufficient FMD laboratory capacity for crises	1.4.1.1 System of mutual assistance and coordination between countries implemented (networking – diagnostic support – expertise)	P	P	P	P	P	P																			
		1.4.1.2. Co-ordination framework between veterinary services of the region maintained and improved through high level policy and management meetings	O M							M M		M							M				M				
	1.4.2 Improve quality and completeness of Contingency plans for FMD agreed at national level and test these through at least one exercise	1.4.2.1 Workshops/trainings held to address specific themes of emergency management							W S																		
		1.4.2.2 GET Prepared and simulation exercises																									
		1.4.2.3. Veterinary Services and veterinary Faculty partnerships																									
	1.4.3 Activities to improve preparedness of national FMD reference centers (laboratories) and establishment of a system immediate regional diagnostic support for an FMD crisis	1.4.3.1 Procurement of lab reagents/kits to support a minimum diagnostic capacity and enable participation in PTS														LS											
		1.4.3.2 Lab training w/s within Balkans through inter-lab partnership												P	EL W S												

EuFMD Phase IV

Report to the EuFMD Executive

Component 1.5 – FAR: Fund for Applied Research

April 2018- September 2018



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 Calls for small applied research projects, of which one 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. *4th 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. *5th 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. *6th 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. 4th 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 (*although the project proposal has been received though a FAR Call the funds are mobilized under Component 1.2.5).

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.

An interim report was submitted on July 2018 and the second funding instalment released.

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 FMD 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.

An interim report was submitted on February 2018 and the second funding instalment released. Final reports are due by September 2018.

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.

An interim report was submitted on June 2018 and the second funding instalment released. Final reports are due by November 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 1st 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 2nd 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 started at the end of January 2018.

An interim report was submitted end of May 2018 and the second funding instalment released. The final report was submitted end of July 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.

- 5) Alternative vaccine selection techniques – Dr. Anna Ludi, The World Reference Laboratory for FMD (WRLFMD), The Pirbright Institute

LoA signed: 14 May 2018/Duration: 12 months

Overview of project: The project will test and validate improved methods to evaluate the quality of vaccine-induced antibodies and transfer the technology for the test on panels of post-vaccination sera from previously conducted challenge studies. More straightforward protocols for purifying antigens to simplify later technology transfer work to other laboratories will also be developed. **Overall cost:** € 46 834

Status update:

The project started May 2018. An interim report will be submitted by the WRLFMD detailing activities implemented and results achieved and will be presented at the EuFMD Open Session in October 2018.

Issues/delays: none.

II. 5th 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*").

An interim report is due by February 2019.

Issues/delays: none.

III. 6th 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 are mobilized under Component 3.3.2).

Status update: the project is expected to start by the end of March 2018 and the second funding instalment released. An interim report was submitted on July 2018.

Issues/delays: -

5. Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 –Aug 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
372,387	279,645	38,800	86%	53,942

EuFMD Phase IV

Report to the EuFMD Executive

Period April 2018- September 2018

Component 1.6 - Emergency technical responses



NO UPDATE

EuFMD Phase IV

Report to the EuFMD Executive

Period April 2018- September 2018

Component 1.7 - Proficiency Testing Scheme



1.7 Proficiency Testing Scheme

1-Objectives of component

The **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	14

2-Project team

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

3-Countries or partner organizations involved

The **direct beneficiaries** of this component are the nine 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 and Montenegro	Kosovo; Montenegro; Armenia; Azerbaijan; Ukraine Belarus; Moldova; Iran; Egypt; Lebanon; Libya; Morocco; Tunisia; Algeria; Iraq

The results of the annual Proficiency Test 2016 and 2017 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.

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. During the 2018 annual workshop of EU national reference laboratories for foot-and-mouth disease and swine vesicular disease, 8 - 9 2018, Horseley, UK, the results and conclusions of the Proficiency Testing Scheme (PTS) 2017 were presented. The EU NRLs performed well, all scored in category 3 and 4. Overall results were quite good and especially the interpretation of SP ELISA test results has improved than in 2016

Out of the supported countries, Bosnia and Herzegovina, Montenegro, Kosovo, Ukraine, Belarus, Egypt, Jordan, Libya Iran and Iraq, did not take part in the PTS 2017. Comparing the results of 2017 with 2016 we also conclude that two laboratories (Iran and Montenegro) who participated in 2016, did not join in 2017.

For 2017 participating EuFMD (non EU) and European neighborhood labs (altogether n=15, including Israel), 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 2017 the proportion of labs in categories 3 and 4 was 57.1% and 42.9% respectively. This is a positive improvement compared with 2016 (77.7% and 22.2%, respectively)

On a related subject, the results of a PTS in the Balkan countries and Eastern Europe: Bosnia and Herzegovina was contacted by EuFMD and encouraged to take part in PTS 2018, Montenegro has informed TPI that they will join in 2018 and Ukraine was contacted by EuFMD who showed interest to participate in PTS 2018.

Phase XXVIII (2016)			Phase XXX (2017)	
Total invited laboratories ¹	94		81	
Total number of shipments ¹	70		70	
EURL funded participants				
Participants from European Union (funded by EURL for FMD)	28 (EU member states)		27 (EU member states)	
% of labs meeting target performance ⁴	Cat-1	0 %	Cat-1	0 %
	Cat-2	0 %	Cat-2	0 %
	Cat-3	60.71 %	Cat-3	44.44 %
	Cat-4	39.29 %	Cat-4	55.56 %
EUFMD funded participants				
Participants from Global Network Labs ²	BVI Botswana, Brazil, Canada ³ , China, Ethiopia, Kenya, Nepal, Nigeria, Russia, South Africa, Thailand, USA ³ .		Argentina, Botswana, Brazil, Canada ³ , Ethiopia, Kenya, Nigeria, Russia, South Africa, Thailand, USA ³ .	
% of labs meeting target performance ⁴	Cat-1	0 %	Cat-1	0 %
	Cat-2	0 %	Cat-2	0 %
	Cat-3	60 %	Cat-3	72.73 %
	Cat-4	40 %	Cat-4	27.27 %
Participants from EuFMD Member states (non-EU)	Albania, Georgia, Macedonia, Norway, Serbia, Switzerland, Turkey		Albania, FYR Macedonia, Norway, Georgia, Serbia, Switzerland, Turkey	
% of labs meeting target performance ⁴	Cat-1	0 %	Cat-1	0 %
	Cat-2	0 %	Cat-2	0 %
	Cat-3	66.6 %	Cat-3	71.43 %
	Cat-4	33.3 %	Cat-4	28.57 %
Participants from neighbourhood countries	Algeria, Armenia, Azerbaijan, Iran, Lebanon, Moldova, Montenegro, Morocco, Tunisia		Algeria, Armenia, Azerbaijan, Egypt, Jordan, Kosovo, Lebanon, Moldova, Morocco, Tunisia.	
% of labs meeting target performance ⁴	Cat-1	0 %	Cat-1	0 %
	Cat-2	0 %	Cat-2	0 %
	Cat-3	77.7 %	Cat-3	70 %
	Cat-4	22.2 %	Cat-4	30 %
Summary of EUFMD funded participants				
Invited				
Panels shipped	Panel 1	23	Panel 1	22
	Panel 2	23	Panel 2	23
	Panel 3	26	Panel 3	25
	Panel 4	14	Panel 4	15
Total number of participants funded by EUFMD	26		25	
Self-funded participants				
Participants			Australia, Israel, Kazakhstan, Namibia, Pakistan, Senegal, Singapore, Swaziland, UAE, & Zambia	
% of labs meeting target performance ⁴	Cat-1	0 %	Cat-1	0 %
	Cat-2	0 %	Cat-2	0 %
	Cat-3	50 %	Cat-3	50 %
	Cat-4	50 %	Cat-4	50 %

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.

1.7.2.1: Pirbright manages annual proficiency testing

The summary results of the 2017 PTS are detailed above. Details about the PTS 2019 are not yet known

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

EU reference laboratory meeting was held 8-9 May 2018, UK. EuFMD was represented by Kees van Maanen.

5-Issues for Executive Committee attention arising during implementation

More emphasis needs to be made to make EuFMD funded countries to participant at the PTS.

6 - Priorities for the next six months and future emphasis

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

7- Budget (€)

Total Budget Workplan activity 24 months	Expenses Oct 17 – Aug. 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
46,300	43,395	800	95%	2,105

8-Gantt charts - Planned activities

1.7 Prof. Testing Service	Emergency technical responses that assisted rapid management of FMD and/or other epidemiologically related exotic diseases outbreaks in the member state or the European neighbourhood		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
	1.7.1 Commission regional proficiency tests for better national alignment of the NRLs in the European neighbourhood to the EuFMD and EU standard for FMD diagnostic NRLS performance	1.7.1.1 Negotiating contract for LOA TPI																								
		1.7.1.2 Liaison with and review of reports from the Pirbright institute																								
	1.7.2 Promote and support the Participation of 20 non-EU EuFMD member states and neighbourhood countries in annual PTS	1.7.2.1 TPI organizes participation in proficiency testing for reference laboratories (NRL) from 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												L S	L S	L S										L S
1.7.3 Management and participation in annual EU reference laboratory meetings	1.7.3.1. TPI organizes participation in annual EU reference laboratory meeting for the countries listed under 1.7.2.1						L S												L S							

EuFMD Phase IV

Report to the EuFMD Executive

Period April 2018 - September 2018

Component 1.8 - Risk Analysis and Communication

Pillar Manager: M. Hovari

Component Manager: M. McLaws

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

Focal point Executive Ctte: L. Bognar

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 I to III 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	36
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)	SCRPD member
ExCom oversight	Lajos Bogнар	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 I to III 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, the WRL has adopted output from PRAGMATIST for use in their quarterly report (Figure 1). The EuFMD continues to work 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 the user, PRAGMATIST has been shared with the Ukraine (A. Skrypnik) and the N. American Vaccine Bank (T. Smylie and H. Duque).

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. An online version distributed through EuFMD website.

In this reporting period, a draft of a proposed new format for the GMR was developed.

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 call for applications was published and funding was established. 45 applications were received and the shortlisted applicants were interviewed to establish suitable candidates.

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

A draft outline and workplan for a quarterly FMD risk report has been prepared. This activity depends on:

- Inputs and advice from global FMD intelligence focal points (FPs) for the FMD pool regions
- development of a system and training to collect information from FPs;
- redesign/revision of the GMR;
- availability of findings from EUFMD's regional livestock marketing/animal movement projects

It has been on hold pending recruitment and training of the FPs.

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)

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

No activities have been carried out.

5-Issues for Executive Committee attention arising during implementation

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.

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 I to III activities, and others

- Update data in the PRAGMATIST;
- Represent and communicate aspects of uncertainty inherent in the data;
- Workshop in conjunction with the Open Session 2018 to inform potential users regarding the tool, and facilitate their use of it. WRL will participate as co-trainers in this workshop.

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;
- Establish a pool of global experts to review prevalence data and initiate forecasting activities;
- 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).

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 CIRAD LoA and the Mission conducted in Iran.

7- Success stories and future emphasis

The inclusion of output from the PRAGMATIST in the Quarterly Report of the WRL is a significant milestone towards providing risk managers with the data and information that they need to make decisions the most important antigens to maintain in a vaccine bank. The inclusion of PRAGMATIST information in the Quarterly Report has stimulated interest from potential users, including managers of the N. American Vaccine Bank

Future emphasis should continue to 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.

8- Budget (€) – by activity

Total Budget Workplan activity 24 months	Expenses Oct 17 –Aug 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
84,200	16,535	21,700	45 %	45,965

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																							
		1.8.2.3. 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	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	G T P	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			G T P			G T P			G T P			G T P			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 April 2018 – September 2018
Component 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
Pillar Manager	Fabrizio Rosso	Animal Health Officer
Component manager	Carsten Potzsch	EuFMD
Other EuFMD Team members:	Ipek Keskin	EuFMD STPs
	Dinara Imanbeyeveva	EuFMD STPs
National FAO Focal Point: (Co-ordination-national level)	FAO assistant Representatives in Turkey, Georgia	FAO Staff in national offices
FAO Sub-regional animal health focal points (Co-ordination – Central Asia, Eastern Europe))	Andriy Rozstalnyy (Georgia/Eastern Europe)	FAO Animal Production and Health Officer based in Budapest Office
FAO HQ Contact	Eran Raizman	Head, EMPRES, AGAH Rome
National focal points	Abdulnaci Bulut (Turkey)	National consultants
	Lasha Avaliani (Georgia)	
	Zurab Rukhadze (Georgia)	National consultants
	Satenik Kharatyan (Armenia)	National consultants
	Tamilla Aliyeva (Azerbaijan)	National consultants
ExCom oversight	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 FMD WG (Georgia, Turkey, Armenia, Azerbaijan)
2.1.2	Participation level from at least 5 countries in the region in online training courses	0	480 participants	Participants engaging in EuFMD e-learning event	480 participants

5. Progress report

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

Progressive control Pathway (PCP) and Risk Based Strategic Plans for FMD Control (RBSP)

- All **TransCaucasus countries** (TCC) are in PCP stage 2 and have approved RBSPs. The Georgia and Armenia RBSPs are currently being updated. The Azeri RBSP will be updated after the current restructuring of the veterinary services.
The establishment of FMD low risk and PCP stage 3 candidate zones in the **TCC** 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 further discussions are needed on this topic. The updated Georgia RBSP reflects the more aggressive national and zonal FMD control, as Georgia plans to move to zonal stage 3 in 2018. An evaluation mission to verify the effectiveness of the FMD control measures and recommend on improvements was conducted by the 2.1. component manager to Georgia in July. The mission was focused on FMD control and surveillance, improved surveillance and early detection of FMD to reduce the risk of FMD spread, use of clinical investigations to improve confidence of FMD freedom and improvement of FMD awareness. The Racha –Lechkhumi region has a lower risk of FMD introduction and spread because of mountain boundaries and one-way roads leading to this area. Clinical investigation were introduced to increase sensitivity of surveillance. During the mission improvements of FMD control and measures in candidate zone were identified, including corrective actions for vaccine storage/checks, improvements/more risk based clinical investigations to increase sensitivity. An immunogenicity study will be implemented in autumn, and the

workplan of the FMD surveillance advisory group was better defined. The application of Georgia for the PCP Stage 3 (zone of Racha –Lechkhumi) will be presented in November 2018.

- **Turkey** is currently amending the RBSP according to its national FMD strategy. The new plan will include all Anatolian provinces in the 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 becomes free with vaccination by 2021 and entire Anatolian Turkey becomes free with vaccination by 2023.
- To support this process, GDFC requested EuFMD to provide three additional **workshops on FMD control and outbreak investigation for Eastern Anatolian regions** included in the control zone. The training topics are consistent with the trainings conducted in 2017 but GDFC will lead the 2018 trainings with EuFMD assistance. EuFMD has supported one workshop with two trainers in March 2018, the remaining two workshops will be conducted in the second half of 2018. During these workshops the GDFC epi unit will comprehensively conduct outbreak investigations with forward and back tracing as part of the workshops.

Monitoring FMD control and risks

- The TCC and Turkey presented their national FMD situation and progress during the **FMD Surveillance and Post-Vaccination Monitoring Workshop** in Ankara on 14 – 17 May 2018. The objectives of this workshop were to enhance the expertise on evaluating FMD vaccination and post-vaccination monitoring and surveillance planning in TCC countries and Turkey and to further improve FMD control and progress on PCP-FMD.

The following topics were covered during the workshop:

1. FMD vaccination program, overall objectives and designing a monitoring and evaluation system;
2. Serological surveys as a supporting tool to surveillance and post-vaccination monitoring;
3. Evaluation of the immune response in vaccinated livestock;
4. Evaluation of immunity at population level (combining PVM with sero-surveys for NSP and SP antibodies);
5. Monitoring effectiveness of vaccination program and other control measures;

All countries in the region have consolidated FMD control according to the PCP stage 2 requirements and gradually preparing to move to (zonal) stage 3. Gaps in all countries include irregular booster vaccination, limited coverage of small ruminants and enforcement of legislation and regulations, specifically concerning animal movements.

The main conclusions of the workshop included:

- Countries are encouraged to make use of the Post-Vaccination Monitoring (PVM) guidelines for FMD and also for other important diseases;
- The SAP Institute will support diagnostic capacity building in the TCC countries according to the Welnet workplan 2017-19 and is willing to offer its diagnostic services for the TCC and the countries of the WestEurasian (WE) roadmap.;
- The FMD Surveillance Working Group was launched according to the EpiNet workplan 2017-19;
- TCC countries will conduct one immunogenicity study in autumn 2018 in which the diagnostic kits will be provided by EuFMD;
- EuFMD supports the SAP Institute for additional costs in its increased role in regional diagnostic services and capacity building in the TCC region;
- Sharing information on the vaccination status of livestock and the outbreaks under the Statement of Intentions by using Google Fusion Tables needs to be further improved (difficulties identified with Armenia and Azerbaijan).

- TCC countries will store sufficient amounts of FMD emergency vaccine doses do efficiently respond to outbreaks;
- TCC have budget and logistics secured to conduct serological survey to assess the levels of NSP and SP antibodies and identify gaps in FMD control.

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.

Monitoring PCP progress in WestEurasia

- Through the GF-TADs FMD Working Group, the PCP Support Officer system (PSO) was introduced where a PCP expert is identified to support countries in provisional stages in the development of their RBSP. The 2.1. Component Manager is the PSO for countries in WE. With his assistance Kyrgyzstan has addressed issues raised by the GF-TADs FMD Working Group regarding the Kyrgyz draft RBSP; the reply from the Working Group is pending.

Improving the confidence in effectiveness of control programmes implemented and at FMD risk reducing in the region under the Statement of Intention (Sol)

- According to the Sol the TCC, Turkey, the Russian Federation and Iran agreed to submit regularly **reports of FMD vaccination and outbreaks** to the EuFMD. From these national reports, monthly maps displaying outbreak occurrence and vaccination progress are collated with EuFMD support and accessible to the participating countries and EuFMD. 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 (Krasnodar Krai, Karachayevo-Cherkessian Republic, Kabardino-Balkarian Republic, Republic of North Ossetia, Republic of Ingushetia, Republic of Chechnya, Republic of Dagestan, and Adygeya). Currently, Iran does not submit reports.
- **A meeting with representatives of the countries under the Sol** was held during the OIE World Assembly in Paris in May 2018 I.
The following actions were agreed:
 1. Maintenance of the online reporting system by EuFMD in operational form in 2018-19;
 2. The Russian Federation and the Islamic Republic of Iran are encouraged to participate in the Monthly Reporting system in 2018-19;
 3. To establish a “information sharing advisory group for the six countries” to guide the further development of the system, and provide additional training to improve the comparability of the data especially on vaccination in order to enable better in country analysis and comparison;
 4. Vaccination programmes, recognizing the need to monitor the effectiveness of vaccines used in the region:
 - EuFMD will provide training, with its partners, on FMD post-vaccination monitoring, and encourage each country to contribute data on performance of vaccines in use by undertaking small scale vaccination trials
 - Each participating country is encouraged (“agrees”) to continue the monitor its vaccination programme in line with the FAO/OIE Guidelines on PVM.
 5. Risk assessment capacity in the region:

- In support of the national and regional capacities for assessment of risk of FMD introduction/spread, EuFMD will support in 2018 the design of a risk mapping system that can utilise national data on live animals values, market activities and known movement patterns
 - Countries in the sub-region are encouraged to indicate willingness to participate in this action by nominating a focal point (which can be the same person nominated for the Advisory group, point 3)
- To further improve the quality of the vaccination and outbreak reports, a **mapping tool** was 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 under the partnership developed with EuFMD. The monthly reports of the TCC and Turkey about the regional FMD risk situation are entered in Google Fusion Tables and are displayed in maps. Improved reporting of vaccination coverage was agreed with the Turkey and TCC. A revised indicator of coverage is now based on the actual number of large and small ruminants vaccinated against the total number of large and small ruminants. There are currently issues in Armenia and Azerbaijan with reporting based on counts of animal vaccinations, these are planned to be solved in 2019.
- During the FMD Surveillance and Post-Vaccination Monitoring Workshop in Ankara in May 2018, the **improved sharing of information** on FMD vaccination and outbreaks under the Statement of Intentions was addressed. A part of this workshop was dedicated to the improved reporting under the Sol for Turkey and the TCC.
- To improve regional FMD risk assessments, animal mobility and livestock and meat market price monitoring will be included into the database of vaccination and outbreak reporting. A **information sharing advisory group** for the six countries will be established to guide the further development of the reporting system, and provide additional training to improve the comparability of the data especially on vaccination in order to enable better in country analysis and comparison.
- One example of regional information sharing and **early warning** under the Sol is that the TCC Veterinary Services were informed by Turkey in early July about the outbreak of lumpy skin disease (LSD) in Artvin province of Turkey.

Support for the West Eurasia Epidemiological (EpiNet) and laboratory (WelNet) network

- The WelNet and EpiNet have been established under the umbrella of WE Roadmap meetings as sustainable regional networks to harmonize the approaches for disease prevention and control. The leaders of the two networks (Lasha Avaliani from Georgia and Abdalnaci Bulut from Turkey) have defined an action plan aimed to support the technical capacity of national veterinary laboratories, to better assess the FMD risks and epidemiology in the region and to share the laboratory and epidemiological information available. EuFMD has assisted the implementation of the action plan with activities included in the Component 2.1. of the Pillar II workplan 2017-19.
- The WelNet and EpiNet action plan 2017-18 was revised at a component 2.1. Management meeting in June 2018. Under the action plan presented in the previous EuFMD Component Reports, the activities for Welnet and EpiNet in the second semester of 2018 will include:

Welnet

- a- Welnet focal points for TCC should be identified;
- b- An assessment questionnaire/interviews should be prepared and carried out to assess the capability of countries for implementing immunogenicity studies and including the outcomes of recent proficiency tests;
- c- Review of the assessment questionnaires for laboratory capacity developed by FAO and OIE and identification of way forward for making a comprehensive assessment of laboratory capacities of countries;
- d- Define the support that SAP institute can provide for the immunogenicity studies;
- e- Circulate a questionnaire for comprehensive assessment of lab capacity in TCC;
- f- Define the support that Sap institute can provide for laboratory capacity building in TCC.

Epinet

- a- The focal points of the Advisory group on animal mobility and Advisory group on information sharing should be identified;
 - b- Development of animal mobility work project in support of the national and regional capacities for the assessment of risk of FMD introduction/spread integrating national data on live animals values, market activities and movement patterns;
 - c- Sharing information tool (google fusion table) should be maintained in full operation and functionalities upgraded in order to fulfil the requirements from the Advisory groups on animal mobility and information sharing.
- A **Working Group on FMD surveillance in WestEurasia** was launched in May 2018 during the FMD Surveillance and Post-Vaccination Monitoring Workshop in Ankara. This was one objective of the 2017-19 workplan of the EpiNet of the WE PCP roadmap. The objectives of the group are to:
 - encourage countries of the WE roadmap to submit national plans for FMD serological, virological and clinical surveillance, FMD surveys and studies for review;
 - provide comments and advise to ensure that the plans follow epidemiological principles and are in line with the stage requirements of the PCP and the PVM guidelines;
 - contribute to the improvement and harmonization of the design and planning of FMD surveillance and analysis of data if necessary;
 - liaise with EuFMD as necessaryFive members have been nominated from the TCC and Turkey under the leader of the group from Georgia (L. Avaliabi). The EuFMD will support the work as necessary (C. Potzsch, EuFMD component manager, G. Ferrari, IZSLT). The group was also introduced during the Sol meeting during the OIE Paris General Session 2018 and will present itself at the 2018 WE Roadmap meeting.

Capacity building and FMD risk reduction in the WestEurasian region

E-learning

- The following e-learning courses were delivered:
 - In-depth e-learning courses on Post Vaccination Monitoring: participants (four per country) were nominated from Armenia, Azerbaijan, Georgia, Iran, Kazakhstan, Kyrgyzstan, Turkey, Tajikistan, and Turkmenistan. For full details of this course please see component 2.4.
 - FMD Field Investigation Training Course (FITC) The Turkish FITC course was delivered in May/June 2018. 163 participants from Turkey and Azerbaijan enrolled to the course and 85 completed it. For full detail see component 2.4.

- A Russian language webinar on Safe Trade and FMD Control course was delivered in June for 70 participants from Azerbaijan, Georgia, Belarus, Ukraine, Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, and Russia.
- Training material and all webinar audio records 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.

Workshops

- A workshop on Safe Trade and FMD control was held in Istanbul, Turkey on 23-26 April 2018 in collaboration with OIE. 15 participants from 12 countries (Armenia, Azerbaijan, Georgia, Turkey, Kyrgyzstan, Jordan, Lebanon, Libya, Algeria, Morocco, Palestine, Sudan, and Tunisia) participated. An e-learning induction course was delivered to participating countries before the workshop. The workshop was a step-by-step approach to the understanding of FMD impact on international trade, analysing risk, applying the principles and requirements of the relevant chapters of the OIE Terrestrial Code, and identifying options to reduce the FMD risk associated with trade.

5-Issues for Executive Committee attention arising during implementation

A good collaboration between the countries (Turkey, and TCC) has been observed with proper sharing of risk information through the online tool made available. The Russian Federation and the Islamic Republic of Iran are not actively participations and should be encouraged to participate in the Monthly Reporting system in 2018-19.

Drafting and implementation of more aggressive zonal FMD control and surveillance strategy for TCC and Turkey should be followed up and countries should be continuously supported and assisted for the identification of key areas of improvement.

Immunogenicity and animal mobility studies should be supported to produce more evidence of effectiveness of control measures and FMD (and other TADs) risk of introduction and spread.

6- Areas proposed to give 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 for WelNet and EpiNet 2017-18 are being implemented;
- E-learning (courses and webinars) are delivered based on training needs assessment;
- Level of implementation of the Statement of Intention is constantly monitored. New activities are planned and implemented to further improve the quality of information sharing in order to reduce the FMD risk.

2. Major Issues

- Iran joined the meeting under the Statement of Intention during the OIE World Assembly in May 2018 but contributions and cooperation have not re-started yet.

- 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 but epidemiological connected with TCC).

3. Significant Plans

- Georgia to apply for zonal PCP stage 3 during the 2018 WestEurasia roadmap meeting
- Further development of database for collection of vaccination coverage and risk information in TCC area to improve mapping tool and include data on animal mobility and livestock and meat market price monitoring
- Improve monitoring and evaluation of current strategy and in particular implement small scale vaccination trials
- Providing e-learning courses in Russian for the countries of the WestEurasian roadmap

7. Budget

Total Budget Workplan activity 24 months	Expenses Oct. 17 –Aug 18	Expenses Sep 18 (forecast)	% project completion	Actual available (forecast)
356,500	121,238	29,050	42%	206,212

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											
2.1.1 Assist with dev & monitoring of RBSP in MS (Turkey Georgia) & immediate neighbours (Armenia, Azerbaijan) & evaluate feasibility of achieving and maintaining higher stages	2.1.1.1 Assist with development of risk-based strategic plan (RBSP) in Armenia and Azerbaijan. Update of RBSP in Georgia																								
	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						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	
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	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	M		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			L				O		R						S					

EuFMD Phase IV

Report to the EuFMD Executive

Period April 2018 - September 2018

Component 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. RBSP adopted, implemented and monitored in Palestine and Israel;
3. RBSP 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 on 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. Two STPs from Morocco and Kazakhstan 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>
Component Supervisor	Fabrizio Rosso	Pillar manager
Component manager	Abdenacer Bakkouri/Dinara Imanbeyeva	EuFMD consultants
Other EuFMD team members	N/A	N/A
Regional and National consultants:		
National focal points		
Israel		-
Palestine	Iyad Adra	CVO Palestine
Egypt	Mohamed Atea	Deputy CVO Egypt
Jordan	Majed Hawaosha	Head of Animal Health Division
Lebanon	Ibrahim Elias	CVO Lebanon
EARLN	Sabenzia Wekesa	EARLN Coordinator
ExCom oversight	Jean-Luc Angot	Executive Committee (France)

3-Countries or partner organizations involved

The activities will be implemented mainly 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 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)	Number of countries	2 RBSPs developed: Egypt and Palestine (1 RBSP accepted by GF-TADs FMD Working Group), 1 RBSP presented (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 involving 6 countries	Number of regional participations in online meetings	220 participants from 11 Arabic speaking countries in the NENA region.

5. 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 and has supported the veterinary services of Egypt in reviewing the FMD control strategy. Egypt has finalized a risk-based strategy plan (RBSP) for FMD control which 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.

Although in the Stage 2 of the PCP, it is important to provide evidence of the monitoring of the level of implementation of RBSP, the regular reports produced by Egypt with data of passive and active surveillance activities are produced with some delays and not on 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. Furthermore 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.

In 2018 the programme established in coordination with LLNL/US-DOS was put on hold by Egypt, creating some difficulties for the implementation of the activities originally planned to be implemented with LLNL funds and EuFMD support. Participants from Egypt cancelled their participation to the Workshop on Safe Trade in Turkey and the PVM workshop held in Jordan.

A meeting was carried out in June 2018 in Egypt in order to identify the way forward to re-start the collaboration with EuFMD and understand which support is requested to improve the FMD control and how EuFMD can assist. Representatives of Ministry of Agriculture, General Organization of Veterinary Services (GOVS), Central Laboratory for Evaluation of Veterinary Biologics (CLEBV), Veterinary Syndicate, and FAOEG, participated in the meeting.

The following points were discussed:

1- Vaccine production and control. Dr. Ali (Director of Central Laboratory for Evaluation of Veterinary Biologics) indicated some of the main findings of a recent audit performed on vaccine quality at VSVRI and MEVAC by D.Goovaerts and L.Elsken (November 2017) which should be considered with attention and particularly related to: a) implementation of potency testing by guinea pig serology by serum neutralization test, b) acquire proper BHK suspension cells to be used in fermenter production to improve the vaccine production.

2-Immunogenicity studies. Beside the tests on vaccine quality performed by CLEVB, the implementation of field immunogenicity studies for the vaccines distributed in Egypt has been identified as a priority (at present the following strains are used: O-PanAsia, A-Iran 05 and SAT2). This will require a limited number of samples to be tested through ELISA and VNT even though assistance is needed for capacity building at laboratories. EuFMD will support with the definition of the protocol for implementing the study and assistance for liaising with TPI and for the shipment of samples if required.

3- Effectiveness of vaccination programme. The vaccination coverage is at present considered to be at 80% for large ruminants (but no evidence has been provided) and much lower for small ruminants. The objective for 2018 is to improve the coverage for all susceptible species (increase SR up to 80%). The implementation of an identification and registration system (in course) will allow a better control of the animal population and the new system of collecting the animal census for each visit performed in the herds will assist the regular monitoring of the animal population present in different governorates. Regular serosurveillance is implemented for evaluating the immunity at population level but the serosurvey design should be revised.

4- Risk assessment and animal mobility. The main animal movement trends occur along the area of Nile and within the Delta region. Across the borders different control measures have been implemented to better control the importation of cattle from Sudan (specific control protocol implemented and slaughterhouses established close to the border) and for controlling illegal movements of small ruminants from Libya. The proposal of including Egypt in a specific project lead by EuFMD in partnership with CIRAD to improve the capacity of veterinary services to development of risk information and mapping tools and update surveillance protocols (with other participating countries Algeria, Morocco, Tunisia, Chad, Senegal, Mauritania, Libya, Sudan) was well received and can provide more risk information.

5-RBSP monitoring and evaluation. The number of outbreaks is reduced in comparison with last year and it is questioned the role of small ruminants for maintaining the circulation of the disease. Assistance should be provided to guide the monitoring and evaluation phase needed to provide evidence that the plan is effective. Specific attention should be given to: outbreak investigation, surveillance, effectiveness of vaccination, passive surveillance awareness, biosecurity (vets and markets), samples quality. A specific need connected to the RBSP is related to the contingency plan and specifically the opportunity of guiding the design and implementation of a simulation exercise.

6-Training. The FMD Investigation Training courses in Arabic are considered important to improve the awareness and capacities of field veterinarians. The knowledge bank is as well important for facilitating the use of material and tools made available.

All the above listed activities will be supported by EuFMD in the last year of the EuFMD workplan

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

Palestinian Auton. Territories. Palestine has been supported by EuFMD for the development of the Risk Based Strategic Plan. 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 Palestinian veterinary services were involved in the activities organized at regional level for improving their capacity to monitor and assess the effectiveness of the activities implemented to control the disease. In particular, six participants attended the PVM e-learning and two participants attended the sub-regional technical meeting on PVM. Palestine was as well invited at the workshop on Safe trade and FMD control organized in collaboration with OIE in Turkey.

FMD outbreaks in Palestine were detected in November 2017 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 appeared to be close related to the virus that was isolated in the PA and in Ein Shala in May 2017.

In June-July 2018 4 outbreaks were detected in in the north-eastern part of the Jenin governorate, along the Nablus-Jenin road 60. At the time of this draft report it may be assumed that the serotype of the FMD outbreaks in the PAT are homologous or closely related to the FMDV serotype O, which has been reportedly circulating in northeast Israel since April 2018, genotyped O/ME-SA/PanAsia-2. This assumption is underlined by the recent identification of the said strain in sheep in the Israeli village Baqa al-Gharbiyye, situated on the demarcation line ("green line") separating Israel from the Jenin governorate of PAT's West Bank. The aerial distance between Baqa al-Gharbiyye and Arabbeh is 15 km (Promed report)

Israel. Participants from Israel could not attend all the activities proposed under Pillar II due to security issue. In some specific cases the possibility to participate to the e-learning (safe trade induction course and PVM) allowed to keep the country informed and aware of the ongoing activities and to provide some distant training.

In April, an FMD type O was diagnosed in a beef herd in Gazit, from the Panasia2 lineage. This lineage was not involved in the last two years outbreaks. The herd was located 6.5 Km from the Jordanian border and 16.5 Km from the PA but no outbreaks were detected in the neighbouring areas. Several outbreaks are said to have taken place since then, including the current one in Baqa al-Gharbiyye, with west-southwards spread of the virus closer to central Israel; the route of spread could have been through PAT territory.

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

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

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. After the workshop held in January 2018 and following several draft produced and revised by the PCP Support Officer - PSO (G.Ferrari) assigned to the country, the RBSP of Jordan was finalized and submitted to the OIE/FAO FMD working group in May 2018.

The RBSP has been 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.

Jordan has not reported any outbreak in the first semester 2018 (in 2017, 54 outbreaks were notified due to FMDV lineage O/Ind2001d).

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. This field study has not been yet carried out.

Lebanon. In Lebanon, after the first workshop to assist the development of RBSP carried out in June 2016, the participants were asked 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. Very little activity has been done in the past two years. 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 but the Lebanese veterinary services recently contacted EuFMD indicating the intention to re-start the activities for the development of RBSP.

A second workshop was organized in July 2018 focused on the analysis of the current FMD situation, the gaps and needs for risk-based control of FMD (first chapter of the RBSP). The objectives identified were: a-have a good understanding of the PCP-FMD, the Risk-based Strategy Plan (RBSP); b-compile available information and understanding about the FMD risks and impact into the Situation analysis (chapter 1 of the RBSP); c-draft a long-term strategy for FMD control outlining the mid- to long-term objectives for FMD control and that can serve to as a policy note to be endorsed by the Ministry of Agriculture or the Government; d-plan for the continued development of a RBSP, a plan that enables the country to apply for PCP-FMD Stage 2. 12 participants from Lebanon attended, and three from Syria whom were invited in order to facilitate the development of a strategy for FMD control.

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

A workshop on **Safe Trade and FMD control** (Turkey 23-26 April 2018) was organized in collaboration with OIE and aimed to assist countries in the European neighbourhood to understand the impact of FMD on trade and to better use of the World Organisation for Animal Health Terrestrial Code for safer trade in animals and animal products. The workshop was held in Istanbul, Turkey, and attended by 15 participants from 12 countries (Armenia, Azerbaijan,

Georgia, Turkey, Kyrgyzstan, Jordan, Lebanon, Libya, Algeria, Morocco, Palestine, Sudan, and Tunisia). The workshop was a step-by-step approach to the understanding of FMD impact on international trade, analysing risk, applying the principles and requirements of the relevant chapters of the OIE Terrestrial Code, and identifying options to reduce the FMD risk associated with trade. The workshop included a field visit to a market and slaughterhouse facility where animal movements from non-FMD free zone to FMD free zone of Turkey are regulated. An e-learning induction course was delivered to participating countries before the workshop

A sub-regional technical meeting on **FMD surveillance and Post Vaccination Monitoring** to facilitate the establishing of a mechanism for Monitoring of control activities and Evaluation of the effectiveness of control measures implemented with particular reference to the assessment of the vaccine quality and evaluation of the effectiveness of vaccination programs. The meeting was held in Amman (Jordan) in May 2018 and attended by 16 participants from Jordan, Palestine, Lebanon, Libya and Sudan. The specific objectives of this sub-regional meeting were to revisit the content of the EuFMD online-PVM training by making use of different scenarios, share experiences and information on current approaches to FMD vaccination and PVM, agree on approaches and procedures to FMD vaccination and PVM in the participating countries, and strengthen regional networking on FMD vaccination and PVM. An e-learning induction course was delivered in March-April 2018 before the workshop.

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. A workshop has been organized in Sudan in April 2018 with the objectives to bring together the FMD task force for critical review of the current control strategy, identify gaps in the situation analysis and discuss the implementation of monitoring and evaluation of the control strategy, plan and agree on the activities for developing the RBSP based on the gaps identified including the roles of individual members of the FMD task force. The workshop was held in Khartoum (Sudan) and attended by 15 participants, members of the FMD Task Force and of the supporting committees.

5-Issues for Executive Committee attention arising during implementation

- The risk posed by the instability of Syria and the connected movement of animals across the borders increase the risk of introduction of new strain and spread of the disease in the area. The collection, collation and analysis of risk information connected with animal mobility is essential to better identify risks and risk mitigation measures.
- The current FMD situation of Egypt is a point of concern as evidence of the effectiveness of the control strategy implemented is not provided and report of FMD outbreaks and results of the PVM surveillance not shared with other countries. The recent meeting with General Organization of Veterinary Services and the main gaps identified and actions proposed is promising for achieve the expected objective identified in the EuFMD workplan.
- The approach of organizing a sequence of events including online-training, regional technical meetings and in-country workshops on specific topics (e.g. FMD vaccination and post-vaccination monitoring) is very effective for facilitating the sharing of information and capacity building of different countries.

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 Lebanon, Sudan and Jordan for RBSP development and implementation
- 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;
- Improving risk information available to FMD risks (sharing of information on vaccination coverage, vaccine quality, animal movements, animal market price).

7. Budget

Total Budget Workplan activity 24 months	Expenses Oct. 17 –Aug 18	Expenses (forecast)Sept 18	% project completion (forecast)	Actual available (forecast)
260,000	90,626	31,720	47%	137,654

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
2.2.1 Support to implementation and monitoring of FMD Risk Based Strategic Plan in Egypt	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				O M				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											
2.2.2. Assist finalization &implementation of the RBSP in Palestine & Israel	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		
2.2.3 Assist dev. of RBSP in Jordan & Lebanon	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	
2.2.4 Assist networking through online meetings and sharing of FMD info to risk managers of countries under this comp	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							W S					W S					

EuFMD Phase IV

Report to the EuFMD Executive

April 2018 - September 2018

Component 2.3 - Support to REMESA



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

3 - Countries or partner organizations involved

FAO and OIE sub regional offices in Tunis as part of the REMESA co-secretariat

Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna" (IZSLER, Brescia, Italy), involved as FMD reference laboratory expertise

Agence Nationale de Sécurité Sanitaire de l'Alimentation, de l'Environnement et du Travail (ANSES, France): experts from ANSES are involved in EuFMD activities in support to REMESA countries.

Jordan University of Science and Technology (JUST, Jordan) for Arabic course material preparation and online courses delivery.

The partnership with CIRAD has been signed (LoA) in January 2018 for the next two years for providing 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) design a surveillance for FMD early detection in high-risk areas of North Africa; (3) delivery of the EuFMD e-learning course on FMD socio-economic impact assessment to Francophone countries of North, Central and West Africa; (4) 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	Number of countries in region with a RBSP accepted by GF-TADs FMD WG	0	1	Number of countries	First drafting Mauritania (pending) Libya (in the pipeline)
	Number of countries in region accepted in PCP Stage 3 or above by the GF-TADs FMD WG	1	2	Number 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	Number of implemented risk based surveillance	0
2.3.3	Number 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.	150

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. State of Libya

Following the re-establishment of the contact in November 2017 with the the Libyan veterinary representatives in the margin of the REMESA meeting and subsequently to the meeting with Libyan representatives at FAO headquarters in March 2018 an update of WorkPlan to support Libyan veterinarian services was agreed with the objective to assist FMD control and surveillance activities in Libya:

- With regard to the development of RBSP started with two workshops in 2014, a backstop assistance with regular on-line meetings for a designed taskforce will be implemented as the Libyan veterinary authority -National Center of Animal Health (NCAH) - agreed the concept note on the continued support on progressive FMD control. Activities have not started yet.
- Diagnostic kits were provided and the serosurveillance protocol designed in February 2017 to identify the serotypes circulating in the country in Libya. Following this protocol, re-discussed in March 2018, the survey is being conducted, samples were collected and positive samples will shortly being sent to ISZLER.
- In support to laboratory diagnostic capacity and to the extent that IZSLER accepted to provide in September 2018 training for two Libyan laboratory trainees and EuFMD will cover the related travel and accommodation expenses.
- The study on livestock movement monitoring in the markets is currently being implemented in Libya with financial support and technical assistance of EuFMD to allow a better understanding and the mapping of the risks for North Africa. Initial fieldwork related to data collection Livestock markets is expected to be done by September 2018 while data transcription, analysis and reporting completion is expected for the end of September 2018. The next steps planned for 2019 consist on (1) monthly monitoring and data collection at key markets identified through the study implementation and (2) the development of integration process of the data with regional data within the CIRAD partnership.
- Libyan taskforce members are participating to EuFMD relevant online training courses (post vaccination monitoring course / field investigations training course / risk value analysis along value chain / progressive control practitioners network).

No outbreaks have been reported in Libya even though there is little evidence of an effective notification system. The prevalence of the disease is assessed at 15% according to a serosurveillance which is ongoing with samples mainly collected from the West part of the country and from small ruminants. In order to improve the capacity to identify the virus circulating EuFMD has provided different types of probang that will be used after during the serological surveillance in order to collect samples from seropositive young animals in order to identify the circulating virus strains.

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 and on as specific commitments were assigned to the FMD taskforces for the finalization of the RBSP (a draft RBSP was expected for July 2017). The implementation of future activities aiming at progressing towards the development of the national RBSP remains conditioned by the effective commitment of the country to achieve this cornerstone. Numerous attempts have been made throughout this period to arouse Mauritania's interest in continuing the work done.

As part of a recent initiative to revitalize contacts with Mauritania, Mauritania's representatives attended the workshop organized by CIRAD in April 2018 and they presented the progress on FMD control and risk assessment. In Mauritania FMD is endemic with three circulating serotypes: SAT 2, A and O (the latest seroprevalence survey conducted in 2012 showed 60% seroprevalence in cattle and 35% in small ruminants). It was agreed during this workshop that EuFMD will cover shipments of laboratory samples (11) to the OIE FMD reference laboratory (ANSES). This samples including sera (6), samples (1) and epithelial tissues (4) were collected in 2017 in a southern region (Gorgol) on the border with Senegal.

c. Algeria, Morocco and Tunisia

Three EuFMD 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.

Through EuFMD-CIRAD partnership, two workshops were carried out:

1. “Surveillance for FMD early detection and confidence in the absence of FMDV circulation in Algeria, Morocco and Tunisia”:

This workshop was carried out in Tunisia on 27th February- 1st March 2018 with 23 participants representing veterinary services and main national stakeholders (livestock keepers and private veterinarians) from the three countries and representatives of the FAO and the OIE Sub regional offices. The need of implementing an 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 that the early detection system has a good level of sensitivity. The set and achieved objectives were:

- ✓ To share and discuss the results of the recent FMDV circulation serosurvey conducted in the countries in 2017;
- ✓ To discuss surveillance options between veterinary services and key representatives of national stakeholders and the possibilities to improve their respective role on FMD early detection.
- ✓ To assess the effectiveness of the current FMD early detection systems and to identify the areas for improvement.
- ✓ To go toward design an ongoing risk based surveillance aimed to provide evidence of the effectiveness of control measures implemented.

Main national stakeholders’ representatives (livestock keepers and private veterinarians) and veterinary services worked together to:

- Map and discuss strengths and weaknesses of the current FMD surveillance systems;
- Define activities needed for improving early detection of FMDV circulation/incursion (working programme with Objectives, Actions, Actors, Indicators, Timeframe, and Needed assistance). These activities should be validated at national level and discussed during the next follow up online meetings.

The workshop was followed up on 11 July 2018 by an online meeting with the representatives of veterinary services with the following main outcomes:

- ✓ An update was provided on the evolution of the epidemiological situation in Algeria following the FMD outbreak reported in June 2018. New FMD topotype (serotype O, Nigeria 2016, topotype EA3) different from the FMD O strain circulating previously was confirmed that means new FMDV introduction. New reported outbreaks in three other districts (which gives a provisional cumulating of four outbreaks in four close regions in the north-central of Algeria with 33 bovine affected). Main measures implemented are (i) outbreaks management (animal sequestration in infected farms, culling of infected and sensitive animal in infected farms), (ii) reinforcing of the clinical prospections in hotspots (outbreaks areas, animal markets and close farms, slaughterhouses, high animal density zones) (iii) animal movement restriction except to slaughterhouses, (iv) Temporary Suspension of Cattle Heifer Imports (v) Raising farmers' awareness campaigns. The epidemiological situation has brought more and more uncertainties for the three countries because the period of the religious festivities of August will face relevant animal movements throughout the territory of the countries.
 - ✓ Countries in the region are expecting favourable results from ongoing vaccine matching tests that is being conducted by Pirbright institute for the new circulating FMDV with the

available/ordered FMD O vaccine strains and from the immunogenicity study conducted in Morocco with the assistance of IZSLER.

- ✓ Tunisia shared the results of the FMDV circulation survey carried out in Tunisia (2018): 1084 samples were sampled from non-vaccinated lambs in 106 epi-units from 51 high-risk districts, mainly in the Libya and Algeria borders, with an overall séroprévalence of 1,6% (18 positive samples).
- ✓ With regard to the current epi-situation crisis in Algeria, countries indicated that the objective of the development of active and passive surveillance protocols according to set objectives (to provide evidence of introduction/circulation and improve surveillance for FMD early detection for the three countries) should be suspended until the situation returned to normal. The focus was on the importance of implementing/reinforcing active inspections for clinical case finding, implementing syndromic surveillance in hotspots and high-risk zones, including national borders.
- ✓ The next online meeting is planned as of mid-September 2018.

2. “Qualitative and cartographic analysis of risks for the optimization of FMD and other transboundary animal diseases surveillance”

This workshop was carried out in Montpellier workshop 23rd -27th April 2018, with the participation of 13 national taskforce from Veterinary Services of six Maghreb and Sahel countries (Algeria, Chad, Mauritania, Morocco, Senegal and Tunisia). The main outcomes of this WS by country were:

- ✓ identification of risk factors and available / missing data;
- ✓ production of introduction and exposure FMD risk maps and the associated GIS queries;
- ✓ planned animal mobility surveys for 2018;
- ✓ risk-based monitoring protocols, linked to risk maps;
- ✓ report of the current FA surveillance;
- ✓ draft of national short (July 2018) and medium (end of 2018) term roadmaps for activities’ implementation to be validated at national level.

The workshop is being followed up, starting from July 2018, by online meetings with involved countries for validation of a roadmap and implementation of animal movement surveys and the collection of missing risk information for map updating.

Special support Morocco: At the request of Morocco, EuFMD will consider as of the end of September 2018 to provide its expertise to support the desirability and feasibility of establishing a FMD free zone in accordance with OIE conditions. The success of this prospect would be a success story that could encourage the countries in the region to engage in an effective control program of the disease.

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

EuFMD networks

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 in mid-2017, has more than 140 participants from more than 20 countries with a forecasted enlargement following the intensification of Pillar III activities, particularly in Central and West Africa. In line with the highest interest shown by participant to the francophone online course “field investigations on the FMD”, launched in June 2018, this network should

become an important platform for networking and sharing animal health information between animal health professionals among francophone countries in the three regions of North, West and Central Africa.

A webinar on Public-Private Partnership, carried out in French for the Francophone network in 14 May 2018 with the participation of representatives of public and private sectors from France, Morocco and Tunisia. The webinar focused on the Improvement of the role of the private veterinarian in the control of FMD, challenges and prospects of his involvement in the surveillance for early detection of FMD.

EuFMD online course

As a part of the activities of components 2.4 (training development and coordination) and 2.3 (support to REMESA network) aiming to strengthen/built national taskforce capacity, participants from the region were participating to the online courses below (For more detail, see 2.4 of pillar II report below):

- i. **Post vaccination monitoring in-depth course (PVM):** Participants (85) from 19 countries, including Morocco (4), Tunisia (4), Algeria (2) and Libya (5) have participated to the second edition of the course delivered from February to April 2018 and dedicated to countries from direct European neighboring.
- ii. **FMD investigations course: (June-July 2018):** Within the joint PII and PIII eLearning activity, around 300 participants from 19 countries from North, Western and Central Africa participated in the French edition of the online course on FMD investigations courses. To overcome the intermittency problems of Internet accessibility, and in parallel with our online training website, innovative approach was launched for this course using the Whatsapp™™ mobile application as well as social media to help on the delivery of course material.
- iii. **FMD Socio-economic impact online course:** The course is being developed with the partnership of CIRAD with the prospect to be delivered as of the end of September 2018 to francophone countries in North, Western and central Africa.

OIE – EuFMD workshop on safe trade and FMD control:

Within the collaboration with OIE, representatives from North Africa (Algeria, Libya, Morocco and Tunisia) that previously participated to the E-learning introductive course have attended the WS on Safe trade and FMD control dedicated to the European neighboring countries. This WS was carried out in Turkey 23-26 April 2018 for 12 countries and aimed to better understand the impact of FMD on trade and to better use the OIE Terrestrial Animal Health Code for safer trade in animals and animal products. It was a step-by-step approach to the understanding of FMD impact on international trade, analyzing risk, applying the principles and requirements of the relevant chapters of the OIE Terrestrial Code, and identifying options to reduce the FMD risk associated with trade.

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

As mentioned above in outcome 1, many activities are being implemented in support to REMESA action plan;

- i. Design and planning for active and passive serosurveillance protocol and identification of material technical support will be conducted during the online meeting with Algeria, Morocco and Tunisia with the objectives to provide evidence of introduction / circulation and improve surveillance for FMD early detection,
- ii. Ongoing activities within CIRAD partnership on Qualitative and cartographic analysis of risks for the optimization of FMD and other transboundary animal diseases surveillance

- iii. Field material (probang kits), financial support and technical support are being provided in support to Libya for ongoing activities related to the serosurveillance activities and animal markets and mobility studies.

As a second step of the participation to the EuFMD online in-depth course on FMD post vaccination monitoring, EuFMD plans to start in September 2018 the organization of a workshop on FMD surveillance and post-vaccination monitoring. This workshop would aim to strengthen/build capacity of vaccine selection capabilities, evaluate the effectiveness of vaccination and design serological surveys in the southern European neighboring.

During the 16th Joint Permanent Committee Meeting of REMESA (Morocco, 18-19 April 2018) the Assured Emergency Supply Option System (AESOP) was presented by EuFMD to promote the system feasibility for FMD vaccines as a complementary mechanism to the conventional vaccine bank systems.

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 region's countries on risk mapping, animal mobility and FMD circulation should be encouraged.

With the effective involvement of key stakeholders, 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.

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

- a. 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;
- b. Support the development of the coordination framework - REMESA networks (webinar series);
- 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. Depending on country commitment, finalize the development of RBSP in Mauritania and promote a regional laboratory network;
- e. Implement FMD early detection system and continuous risk based surveillance in Morocco, Algeria and Tunisia;
- f. Finalize the design of risk based surveillance and virus circulation monitoring, and promote risk based vaccination strategies in Morocco, Algeria and Tunisia;
- g. Support studies on risks associated to livestock value chain and animal mobility and trade.
- h. Tailored assistance for morocco to study the feasibility of implementing zoning with regard to OIE FMD standards starting from September 2018.

7.Budget (€)

Total Budget WorkPlan activity 24 months	Expenses Oct. 17-Aug 18	Expenses (forecast) Sep 18	% project completion (forecast)	Actual available (forecast)
326,000	115,337	29,320	44%	181,343

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 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	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		WE 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		
	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 April 2018 – September 2018

Component 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.

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

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

4. Progress against indicators

Activities	Indicators	Baseline Sept.15	Target 4 years	Achieved Sept 18	Explanation of indicator
2.4.1 Develop new courses after completion of regional needs and capacity assessment	New courses dev after reg.gap analysis	0	4	6 - 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 combo with PIII) - Safer Trade and FMD Control (4 hrs) - Containment Zones (4 hrs) - Risk Based Strategic Plan (4 hrs)	New online training courses dev., one course equivalent to 20 study hours
2.4.2 Develop monitoring framework for PCP-FMD training courses and materials	% of training courses satisfying M&E criteria	0	100	100	% of courses meeting M&E criteria

5. Reporting of activities

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

6. Progress report

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 with nominated training focal points in each “Pillar II” country in order to guarantee an **ongoing needs assessment framework** continues. 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).

An updated outline of the timetable for e-learning development and delivery is shown below:

New e-learning course development for Pillar II 2018 and 2019

	2018											
Course	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Risk Based Strategic Plan Open Access												
Safer trade introductory modules												
French upgrading of FMD Investigation Training Course												
French language socio-economics												
Russian language Risk Analysis Along the Value Chain												
Containment zone introductory modules												
Update to Progressive Control Pathway e-learning												
FMD Investigation Training Course in Farsi (possible)												

	2019								
Course	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
French language post vaccination monitoring*									
Russian language post vaccination monitoring*									
French language Risk Analysis Along the Value Chain*									
Russian language Socio-Economic Impact Assessment*									

* development of French and Russian language versions of the in-depth courses is dependant on feedback received by end 2018

E-learning course delivery for Pillar II 2018 and 2019

Course	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Post Vaccination Monitoring for Pillar II												
Safer Trade Induction Course												
Containment zones Induction Course												
French Language Socio-economic impact assessment												
FMD Investigation Training Course in French												
FMD Investigation Training Course in Arabic												
FMD Investigation Training Course in Turkish												
Russian Language Risk Analysis Along the Value Chain												
FMD Investigation Training Course in Farsi (possible)												
Progressive Control Practitioners' Network (funded PIII)												
English language Socio-Economic Impact Assessment (with PIII)												
FMD Laboratory Investigation Training Course (with PIII)												

	2019								
Course	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
French language post vaccination monitoring*									
Russian language post vaccination monitoring*									
French language Risk Analysis Along the Value Chain*									
Russian language Socio-Economic Impact Assessment*									
FMD Investigation Training Course in Turkish									
FMD Investigation Training Course in French									
FMD Investigation Training Course in Russian									
English language Post Vaccination Monitoring (with PIII)									
English language Risk Analysis Along the Value Chain (with PIII)									

Key changes to the timetable of pillar II e-learning since March 2018:

- Postponement to 2019 of the translation of the Post Vaccination Monitoring course into French and Russian language versions in order to be able to make use of new materials currently being developed by The Pirbright Institute and EuFMD under the GCRF-STARs project (see component 3.4).

- Russian language FMD Risk Analysis Along the Value Chain course brought forwards to 2018 due to delay of the above courses and due to recognized need for support to development of Risk Based Strategic Plans in Russian speaking countries.
- Further development of French and Russian language versions of the in-depth courses will only be carried out if the first in-depth courses in these languages (to be delivered in Oct/Nov/Dec 2018) are successful.
- Additional development of new e-learning modules on containment zones, in partnership with the OIE.
- Possible additional development of the FMD Investigation Training Course in Farsi (pending decision of Government of Iran).

Development of new e-learning courses

1 - Risk-Based Strategic Plan	Learning objectives
Modules from this course were used in the Risk Analysis Along the Value Chain e-learning course in 2017 and in June 2018. The course will be launched as an open-access self-directed e-learning course in September 2018.	<ol style="list-style-type: none"> 1. Be able to describe the position and purpose of the RBSP in the PCP-FMD framework. 2. 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. 3. Be able to convert risk hotspots, gaps and needs identified into component objectives for FMD control, and strategic risk-based tactics and activities. 4. Be able to define monitoring and evaluation indicators using SMART approach. 5. Be aware of the need for stakeholder consultation for the RBSP to be practically feasible and complied with. 6. Consider the RBSP as a living document for policy development on FMD control.
2- Safer Trade A workshop on Safer Trade and FMD was developed in partnership with the OIE. The delivery of this workshop was coordinated under component 2.1 and is reported there. An online induction course was developed and participants followed this short course for the month prior to the workshop, providing a solid basis in theoretical concepts allowing the workshop itself to be interactive and simulation based. Feedback from both the course participants and the OIE on the online training modules developed was positive and the modules will now be repurposed as an open access e-learning course. The delivery of this material, together with the material on containment zones reported below, as a tutored online course, is currently under consideration.	<ol style="list-style-type: none"> 1. Describe the obligations of WTO Member States with respect to international trade, as specified in the SPS Agreement 2. Identify the role of the OIE in the SPS Agreement, and know where to find the relevant standards 3. Explain the features of FMD virus infection and epidemiology relevant to international trade 4. Explain how the PCP-FMD is relevant to safe trade 5. Define 'risk' in the context of international trade, and explain its relevance to trade

<p>3- Containment zones</p> <p>A second workshop is currently under development with the OIE on the use of containment zones. An e-learning induction course has also been developed for this workshop and is open to participants in September 2018.</p>	<p><i>Introduction to zoning for FMD control //Study time: 30 minutes</i></p> <ul style="list-style-type: none"> • describe the key features of the different types of zones (relevant to FMD control) that are outlined in the OIE <i>Terrestrial Code</i>; • explain in simple terms the circumstances under which each type of zone is suitable to be applied, linking this to PCP stage (or OIE Status) as appropriate; • define the key requirements which should be fulfilled in order to start to apply a zoning approach; • explain the potential benefits of establishment of a zone in terms of facilitation of international trade and/or control of FMD; • explain the challenges and list potential disadvantages of a zoning approach. <p><i>Introduction to containment zones //Study time: 60 minutes (e-learning module to be newly developed for this course)</i></p> <ul style="list-style-type: none"> • describe the OIE <i>Terrestrial Code</i> definition of a containment zone and under what conditions it would be applicable and beneficial; • outline the key pre-requisites that must be fulfilled in order to be able to establish a containment zone; • outline the requirements for establishment and maintenance of a containment zone; • explain the roles and responsibilities of different stakeholders involved in the implementation and maintenance of a containment zone; • explain what should be included in a country's FMD contingency plan in order that the country is prepared to establish a containment zone (legislation, resources, finances, etc).
<p>4- French Language Socio-Economic Impact Assessment</p> <p>The English language Socio-Economic Impact Assessment course was reviewed and updated by CIRAD in July and August 2018. It is now being translated into French, for delivery in October and November 2018.</p>	
<p>5- Open Access Progressive Control Pathway</p> <p>Following the update to the PCP guidelines the open access PCP e-learning course has been updated to reflect the important changes made. A webinar and other communication activities are planned to publicize the release of the new version of the PCP e-learning.</p>	

Delivery of training courses

The following e-learning courses have been delivered to Pillar II countries from March to September 2018:

1-In-depth Post Vaccination Monitoring

This was the second edition of this in-depth course, which involves 24 hours study over a six week period. Countries in the wider pillar II area were each asked to nominate four participants for the course. The course trainers were Giancarlo Ferrari, David Paton and Nick Lyons.

The learning objectives of the course are 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 investigations 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.

The course involved four hour's study per week over a six-week period, with participants working to complete an assignment each week. The tutors provided individual feedback on the assignments submitted.

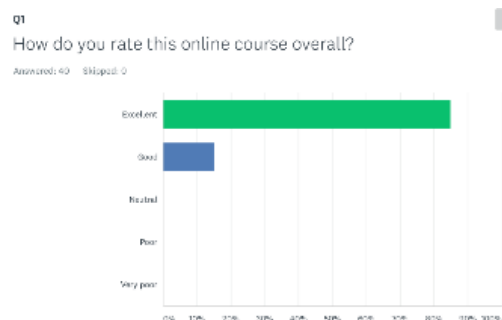
The course completion was as follows:

	Nominated	Completed
Algeria	1	1
Armenia	4	3
Azerbaijan	4	1
Egypt	4	0
Georgia	4	0
Iran	2	0
Iraq	4	3
Jordan	6	4
Kazakhstan	1	0
Kyrgyzstan	4	0
Lebanon	4	1
Libya	5	1
Mauritania	0	0
Morocco	4	3
Palestine	6	6
Sudan	5	4
Tajikistan	5	0
Tunisia	4	0
Turkey	4	3
Turkmenistan	4	0
TOTAL	75	30

Highlighted in bold in the table above are those countries with strong participation in and completion of the course. The overall level of completion is somewhat disappointing, skewed particularly by those countries in which none of the participants completed the course. Language difficulties certainly act as a barrier to completion with the low performance of those countries that are predominantly Russian speaking indicating the need for Russian language training. A larger number of participants will be involved in each in-depth training course in future, to account for expected completion rates.

The feedback from the course was positive overall, with 85% of the respondents rating the course as excellent. Participants rated the tutor marked assignments particularly highly, and commented that the course had raised their awareness of the importance of post vaccination monitoring.

When asked how what they had learned in the course would be practically implemented one respondent replied “1- Already, the developed vaccine tender (week 1) has been submitted to the Veterinary Authority and it, likely, produced a difference. 2- Perhaps, organizing a workshop to the lab. staff. 3- Develop a vaccine effectiveness study in Sudan 4- Improve our RBSP “. Participant’s suggestions for improvements included opening parts of the course to wider audiences, increasing the amount of material on field vaccine effectiveness and the need for further support in the design and evaluation of serological studies.



The e-learning was followed by regional workshops on Post Vaccination Monitoring which are reported under the other Pillar II components. The combination of the e-learning and the face-to-face workshops is a particularly effective one and should be replicated again if possible.

Course rating survey

2-FMD Investigation Training Course in Turkish

(See also component 2.1)

This course was conducted in April 2018, working in collaboration with GDFC in Turkey. This was the second time the Turkish language version of the course has been delivered.

The nominated participants were 150 veterinarians from Turkey and 12 Turkish speaking veterinarians from Azerbaijan.

The learning objectives of the course were that after studying the course participants would be able to:

1. recognise the clinical signs of foot-and-mouth disease in cattle, pigs and small ruminants and conduct a clinical examination of suspected animals;
2. age foot-and mouth disease lesions and understand the epidemiological and diagnostic importance of lesion ageing;
3. take appropriate samples for laboratory diagnosis and describe the diagnostic tools available for the detection of foot-and-mouth disease;
4. construct a timeline to carry out source and spread tracing and identify dangerous contacts, being able to prioritise them;
5. identify risk factors for local disease spread;
6. describe the risks of foot-and-mouth virus spread associated to veterinary personnel and relate the characteristics of the virus with appropriate biosecurity strategies;
7. effectively use personal protective equipment (PPE) and establish and effective cleaning and disinfection protocol for visiting foot-and-mouth disease suspected premises;
8. explain the key features of foot-and-mouth disease vaccines and the basic concepts related to vaccine programme implementation and monitoring;
9. describe the different epidemiological settings that determine the objective of a foot-and-mouth disease vaccination programme and outline different vaccination strategies;
10. explain the key features of the Progressive Control Pathway.

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

Summary of course completion:

	Number	Percentage
Completed	85	53
Logged in but didn't complete	31	19
Never logged in	46	28

The course completion was 55% (82/150) for Turkish participants, and 25% (3/12) for Azeri participants. Extensive efforts were made by both GDFC and EuFMD to remind and encourage participants to log in and complete the course. During the post course evaluation EuFMD and GDFC discussed ways to increase completion rates for future courses, including specific allocation of time during office hours to the course, altering the time of year of the training to better fit with vaccination schedules and compulsory completion of the course for the government employees nominated. A larger number of participants will be invited to join the next edition of the course, to correct for expected completion rates.

45% of the participants rated the course in the feedback survey as "Very good" and 47% of them as "Good". 46% of the participants considered the course very relevant and 51% considered it relevant for their needs. Participant suggestions and feedback in the survey will be used to guide future improvements to the course.

3-FMD Investigation Training Course in French

This course was organized for countries in North, West and Central Africa in June and July 2018. Please see component 3.4 for the full report.

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

The outcomes of all e-learning courses are monitored by an online feedback survey immediately after the workshop, and 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.

As the training program enters its fourth year under the current EC funded project there is a need for a wider evaluation of the EuFMD training program as a whole. For this purpose, a call for expression of interest in joining a small team of external advisors to evaluate the EuFMD training program has been publicized. Please see component 1.1 for further details.

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

The open access introductory e-learning course on the PCP and on Risk Based Strategic Plans 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. The planned French language Socio-Economic Impact Assessment course will involve participants from both Pillars II and III, including participants from North, West and Central Africa.

6. Issues for Executive Committee attention arising during implementation

Identification of suitable partners for Russian language e-learning development and delivery continues to be challenging. Further investigation into reasons for low completion of in-depth courses in some countries and methods to promote completion of e-learning courses is needed.

7. Priorities for the next six months

The next six months will focus on:

- Development of the following e-learning courses:
 - French FMD Socio-Economic Impact Analysis and Post Vaccination Monitoring;
 - Russian Risk Analysis Along the Value Chain and Post Vaccination Monitoring;
- Delivery of the following e-learning courses:
 - Containment zones e-learning induction course;
 - French FMD Socio-economic Impact Analysis;
 - FMD Investigation Training Course in Arabic;
 - Russian Risk Analysis Along the Value Chain;
 - Russian MD Investigation Training Course;
- Evaluation of the training program.

8. Success stories

The Post Vaccination Monitoring e-learning course was a particular success, with enthusiastic participation of a number of pillar II countries and quality assignments produced. The outcomes of this course were then directly used in the subsequent face to face workshops demonstrating the value of the blended learning modality.

The partnership with the OIE for the development of the Safer Trade and Containment Zones e-learning and workshops has been a valuable collaboration for both organizations and has generated e-learning modules which will be useful as open access resources in future.

9. Areas proposed to give more emphasis in the next 12-month period and activities likely to achieve greatest impact

An additional focus to achieve greater impact is to develop a communication strategy to maximise the numbers of people that make use of EuFMD's freely available open access e-learning courses.

10. Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Aug 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
148,000	53,732	13,638	46%	80,630

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 April 2018 – September 2018

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

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 Sept 2015	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 Report

Progress in this component is now significant since EuFMD has received requests from the FAO-OIE FMD working group. An expert mission request has been received by the working group to assist Gulf States in developing risk-based strategic plans. This is due to take place in September 2018. Part of this component supports the activities of the PCP Support Officer system which has been approved by the working groups (details provided under component 3.2).

3.1.2: Of note the improved communication since an EuFMD intern has been working on supporting the development of the GF-TADs website to increase visibility for their activities. A new section of the GF-TADs website, brings to light progress made to date, and increases visibility of upcoming events of the GF-TADs and its associated Working groups. The website helps to specify the existing frameworks coordinated at FAO and OIE and assist endemic countries through a series of incremental steps to better manage emerging livestock disease threats. With regards to FMD, GF-TADs aims to refine the functional and technical capacities around The Progressive Control Pathway for Foot-and-Mouth Disease (PCP-FMD). The website is an important instrument for communicating this message and to bring attention to Regional Roadmap meetings, and will serve as a portal to assist participants and other stakeholders following national and regional progress in FMD control. The new website has recently been made live but is still undergoing further development to make documents from these meetings more directly assessable to users.

As part of the LoA with CIRAD, a review of the FMD vaccine-uptake potential and other FMD control options in West and Central Africa over the next 20 years is being conducted. The findings of this report will help guide FMD control development for the region, an area where FMD is expected to become increasingly important as livestock systems develop.

A Short Term Professional has been recruited from Rwanda to assist with the activities of the working group who is based within the EuFMD team. A Letter of Agreement has been signed 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 – Aug 18	Expenses (forecast) Sept 18	% project completion (forecast)	Forecast available
86,894	31,633	7,000	44%	48,261

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		O M			W S		O M		O M		O M													
	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					W S		O M		O M		O M													
		3.1.3.2 Collaborate with FAO and OIE to support two or three expert team missions each year		T M	T M	T M		W S						W S					W S				WS			

EuFMD Phase IV

Report to the EuFMD Executive

Period April 2018 - September 2018

Component 3.2 - Support to Global Progress Monitoring of FMD Control programmes



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 II 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 three consultants.

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

2-Project team

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

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 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

With the 2nd version of the PCP guidelines recently finalized, EuFMD have reviewed the PCP e-learning modules and developed a number of communication products to explain the changes and the consequences for the PCP community. These communication products will be widely used: EuFMD website, PCPractitioner Network, FMD Regional roadmap meetings, etc.

EuFMD was asked to review the Self-assessment questionnaires that countries were asked to fill out for the PCP assessment procedure during the FMD Regional Roadmap meetings. In collaboration with OIE, a new Self-assessment Tool is developed that includes relevant PCP activities for Stages 1 to 3 in one list of statements. The tool will be made available online and will generate automatic feedback on accomplished and pending activities and for the latter will provide an overview by high and low priority. The SA Tool is going to be used for the upcoming regional roadmap meeting in Central and West Africa, September 2018.

Based on the FAO/OIE guidelines on Post-vaccination monitoring, EuFMD conducted a second online-training course for the Middle East and Northern Africa region between April and May 2018 (reported under 3.4). This online training was followed up by a regional meeting on post-vaccination monitoring in Amman, Jordan with participants from Lebanon, Palestine, Libya, Sudan and Jordan (participants from Egypt cancelled last-minute). As a third tier on this subject, small immunogenicity studies are supported to be conducted in each of the countries (see component 2.3).

The online training course on Socio-economic impact assessment of FMD is currently under review with CIRAD. CIRAD will modify the course content and translate it into French prior to delivering online training to the Francophone countries of North, Central and West Africa planned for autumn, 2018. This is being supported under Pillar II with added benefits for Pillar III countries. See also the training programme under component 3.4.

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.
- 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. In line with this intention, EuFMD is planning to support the development of regional support officers (PSOs). See outcome 3 for further details of this new system.

- c) 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.
- d) In September 2018, the Kingdom of Saudi Arabia supported a follow-up workshop on development of a risk-based strategy plans for five Gulf countries. The FMD Working Group is discussing the idea to extend such workshop to other countries in the region.
- e) The PCP Practitioner Network held two monthly sessions: “Apparent vaccine failure” and “Stakeholder identification, consultation and engagement”. Both sessions had participants from endemic regions (Africa and Asia) and FMD free regions (Europe). More information is with Component 3.4
- f) Under the programme of the OIE subregional representation in Bangkok, the national FMD committees of Cambodia, Lao PDR and Myanmar are currently supported in developing a RBSP for FMD control. These are expected to be presented at the next SEACFMD meeting in Vietnam later this year.

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

PCP-FMD Regional Roadmap meetings

In July 2018, a regional PCP-FMD Roadmap meeting was held in Entebbe, Uganda. This provided the opportunity for regional networking and for countries to provide updates on their PCP progress and be assessed by the Regional Advisory Group. This was the first such meeting since 2014 and EuFMD supported four participants (one from the East African Regional Laboratory Network and three from EuFMD). The main outcomes of this meeting were:

1. A new RAG was appointed being the CVOs for Uganda, Republic of Sudan and Kenya.
2. Requests were made to the GF-TADS FMD working group for further support in developing country control strategies and all countries to be encouraged, supported and committed themselves to reach at least Stage 2 of the PCP-FMD by 2020.
3. Post vaccination monitoring was discussed and countries were encouraged to become critical buyers of FMD vaccines
4. The outcome of PCP assessment was as follows: PCP Stage 0: Burundi (downgraded from stage 1), provisional PCP Stage 1: Comoros, Eritrea, Ethiopia, Kenya, Somalia and South Sudan, provisional PCP Stage 2: Sudan, PCP Stage 2: Uganda. Rwanda is to be assessed through an online interview as they were unable to make the meeting.

PCP Support Officer (PSO)

The EuFMD PCP Support Officer (PSO) proposal to the FAO/OIE FMD Working Group was agreed by both OIE and FAO in May 2018. Following a letter of introduction sent to the OIE delegates by the FMD WG, PSOs have started to provide follow-up to individual countries. PSOs provide support to countries assigned provisional PCP stages with occasional exceptions when the RAG or Working Group deems such support particularly important. A summary of the system so far includes:

1. PSOs have liaised 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 provision technical advice where appropriate;
2. The method of follow-up provided by the PSO is tailored to the individual needs of the country but will likely 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. Currently six PSOs are assigned from the group of EuFMD technical consultants. However, further training and recruitment of PSOs is envisaged in particular to support the emerging needs of Central

and West Africa but also to transfer PCP expertise to the regions. (see the countries in provisional Stages 1 and 2);

4. The online PSO repository is filled with relevant documentation including workshop approaches and presentations;
5. An information package for countries is compiled with elementary information on PCP-FMD, the RBSP and reference to relevant online training modules.

This table provides an overview of the state of affairs in July 2018.

Country	PSO	Response to PSO contact	Follow-up actions
Afghanistan	G. Ferrari	Yes	There was a meeting with the CVO in Kabul. The FMD working group has been contacted by Giancarlo to understand what the position of Afghanistan is after the RBSP was presented in the Sri Lanka meeting (December 2016) and then submitted to the working group
Lebanon	G. Ferrari	Yes	Under EuFMD workplan to support development of RBSP. Next RBSP workshop 26-28 July 2018
Jordan	G. Ferrari	Yes	Under EuFMD workplan to support development of RBSP. Next RBSP workshop
Kuwait	G. Ferrari	No	
Bahrain	G. Ferrari	Yes	The RBSP submitted by the country is already with the FMD working group.
Syria	G. Ferrari	Yes	Invited for RBSP workshop in Lebanon 26-28 July
Iraq	G. Ferrari	No	
United Arab Emirates	G. Ferrari	No	
Sri Lanka	C. Bartels	No	Plan to contact CVO/OIE Delegate by skype
Bangladesh	C. Bartels	No	Plan to contact CVO/OIE Delegate by skype
Bhutan	C. Bartels	No	Plan to contact CVO/OIE Delegate by skype
Kyrgyzstan	C. Potzsch	No	Carsten plans to contact CVO by a call
Saudi Arabia	N. Lyons	No	Regional workshop on RBSP scheduled for 2 nd week September. Organized by OIE, including other countries as Yemen, UAE, Kuwait, Bahrain
Sudan	K.VMaanen	No	Under EuFMD workplan to support development of RBSP
South Sudan	K.VMaanen	No	
Mozambique	D.Paton	No	
Malawi	D. Paton	Yes	EMC mission scheduled for 15-22 July, with plans to include country visits to Zimbabwe and Zambia
Tanzania	D. Paton	Yes	Draft RBSP submitted and under review by D.Paton
Zimbabwe	D.Paton	No	See Malawi

5-Issues for Executive Committee attention arising during implementation

EuFMD is now a full member of the FMD Working Group. This will facilitate a better understanding of the near-future plans laid out by the FMD Working Group as well better coordination and more direct collaboration between EuFMD and the FMD Working Group.

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

The PSO system intends to give positive support for countries to follow up on progressive FMD control after attending the regional roadmap meetings. Where the current PSOs are selected from the pool of EuFMD consultants, EuFMD plans to establish a varied roster of PSOs that is balanced by gender and region.

7. Budget

Total Budget Workplan activity 24 months	Expenses Oct 17 – Aug 18	Expenses Sept 18 (forecast)	% project completion (forecast)	Actual available (forecast)
155,954	52,575	7,600	39%	95,779

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						M S A A R C		M E A		E A		M W A		W S C A											
	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 April 2018 - September 2018

Component 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 in 2017-19 will 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 three 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 (€ 455,100 total contract WRLFMD – Component 3.3- 416,100 // 39,000 1.7).

2-Project team

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

Activities	Indicators	Baseline Sept 2017	Target 2 years	Unit of measure	Current Status
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	4.5**

**Based on figures in WRLFMD Quarterly reports from October 2017-June 2018 inclusive*

*** 9 from of 12 global network labs listed in WRLFMD LoA participated in 2018 test*

Progress Report

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

The 12th OIE/FAO FMD Laboratory Network Meeting was organized in Pretoria, South Africa 28th – 30th November 2017 as covered in the previous report to the executive committee. The next meeting is planned for November 2018 in the UK. 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).

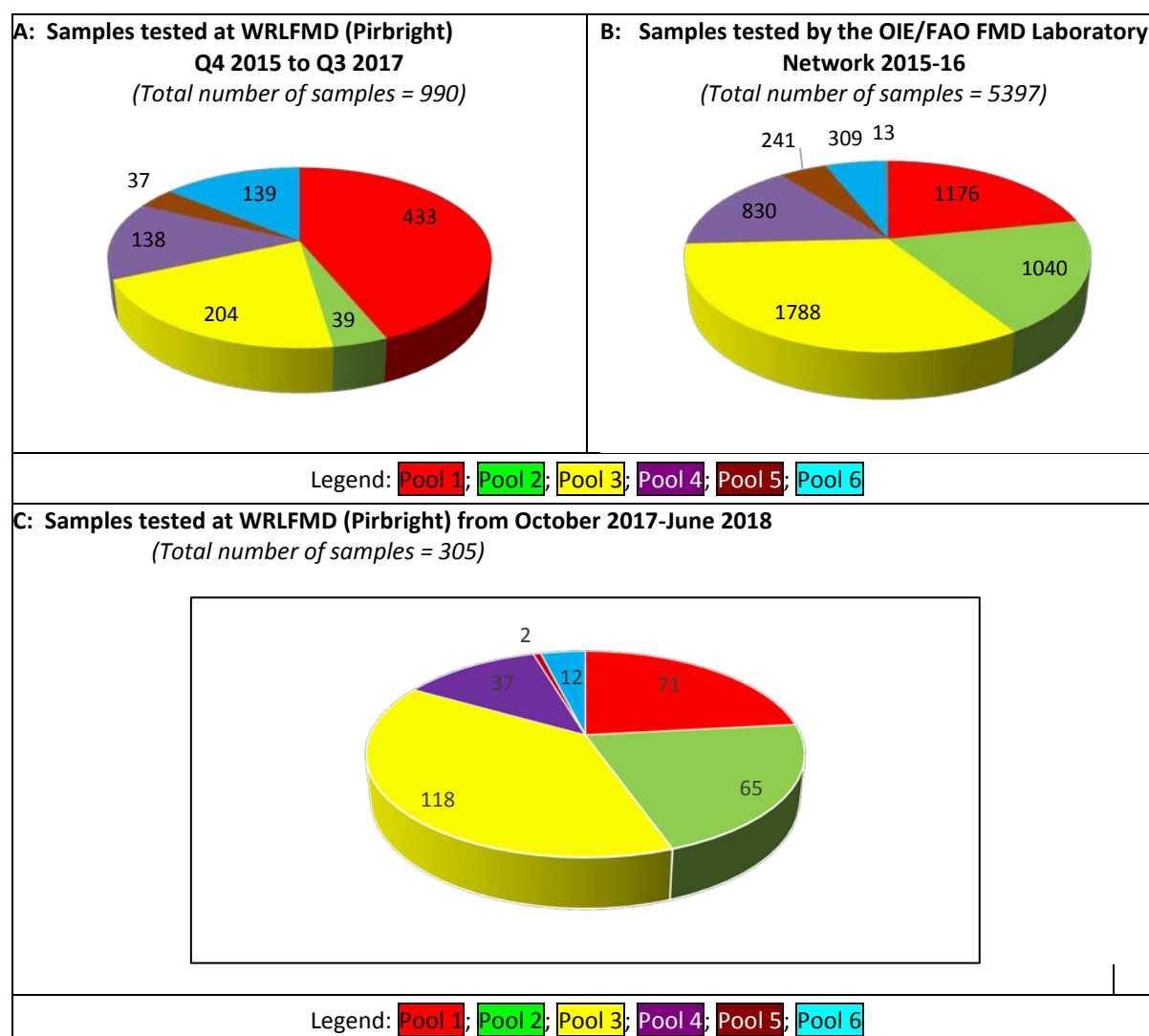
Recent achievements of the OIE/FAO Foot-and-Mouth Disease Reference Laboratory Network:

- 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 adopted by the OIE-GS in 2017).
-
- An annual report from the network has been drafted and is due to be published in August 2018.
- Regular communication and discussion with individuals (and as a group) regarding FMD outbreaks in regional pools – such as recent cases in North Africa (including exchange of lab data and reports);
- Informal meeting at GFRA meeting in Argentina (June 2018) – to establish working group for review of the OIE Manual;
- Representative from WRLFMD has attended FMD RoadMap meeting in Entebbe, Uganda (2nd-4th July);
- proposal with OIE being discussed to develop capacity for independent vaccine QA/QC at AU-PANVAC.

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 3000 clinical samples from suspect cases of FMD were tested by laboratories in the Global FMD Network (and associated laboratories) during 2016 (report for 2017 is pending). 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 WRLFMD 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: A&B). Under the current LoA (October 2017-July 2018), 305 samples were submitted to the WRL for virus detection. These came from six pools (see figure below: C). Two hundred and twenty (220) VP1 sequences were generated and vaccine matching tests were performed using 61 isolates from the following serotypes: O (n=33); A (n=14); Asia-1 (n=7); SAT1 (n=1); SAT2 (n=3); SAT3 (n=3). Fifty-four (54) serum samples were also received from Mongolia as part of their post-vaccination monitoring (partially supported from WRLFMD LoA). During this time, a sample shipment has been supported from Sudan and is currently being organised for Kenya, South Sudan and Zambia.



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). A two-week practical training course at Pirbright was provided for delegates from Thailand, Ethiopia; Estonia and New Zealand. 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.

VSF Project in Mali: Under this output, a LoA was finalised with VSF-Suisse on a project related to enhanced surveillance in West Africa using Lateral Flow Devices (LFDs) provided by Bohringer-Ingelheim. In April 2018, a practical training course for VSF was run by EuFMD staff in Bamako covering FMD diagnostics, epidemiology and biosecurity to assist with the finding and collection of samples (including virus inactivation of LFDs). For the project fieldwork, three zones were targeted for sampling to take into account the specificities of livestock farming in Mali:

- (i) a "Western" zone in the Kayes region characterized by animal migration routes between Mali, Mauritania and Senegal
- (ii) a "Central" zone whose main characteristic is the development of a more intensive breeding mode, mainly located in the Bamako peri-urban area
- (iii) an "Eastern" zone rather known as the "pastoral zone" in the so-called Gourma to take into account herd movements between Mali, Burkina and Niger.

Sample collection has been completed and a shipment to ANSES is currently being arranged where the samples will be tested. Further projects are currently being considered under this output including an assessment of LFDs in different ecological zones in WCA and the possible use of environmental sampling.

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. A short term professional from the region has been recently employed with one of their tasks being to try and revitalise this network.

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). A further FLITC is planned in the next year. Further funding has also been secured from BBSRC to develop an e-learning course in Post-vaccination monitoring (PVM), again in collaboration EuFMD which is on target for first delivery by the end of 2018.

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, Maison-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. WRLFMD staff assisted a recent FMD Investigation Course in French (FITC, see report for component 3.4). A short term professional from the region is due to start with EuFMD in September 2018 to assist development of this network.

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 11th 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. The 2018 PTS has been completed and results will be summarized in the 2018 annual report of the OIE/FAO FMD Laboratory Network. In total, 81 laboratories were invited to participate with 70 shipments arranged. Twenty-five laboratories were supported by EuFMD under components 1.7 and 3.3. Of the global network participants supported by EuFMD, nine out of 12 invited FMD laboratories actually participated in the 2018 PTS (China, India and Senegal did not participate).

5-Issues for Executive Committee attention arising during implementation

- In December 2017 an East African Regional Laboratory Meeting (EARLN) 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 which so far has been challenging.
- In West Africa (pool 5) only few countries are active with collecting, testing and reporting samples. The francophone network needs support including identifying subjects and speakers for webinars, but alternative forms of communication are needed in an area where conventional e-learning may not be appropriate. Anglophone countries in this region also require training in sample collection.
- The surveillance project with VSF in Mali has been successful so far with results from LFD testing expected in the next few months. Other projects to enhance disease surveillance are under development.
- Shipments from priority pools (3, 4, 5, 6) realised to fulfil requirements for adequate virological surveillance and disease intelligence (as formulated during 39th General Session). No targets have been reached for any priority pool this year.
- 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.

7. Budget

Total Budget Workplan activity 24 months	Expenses (actual) Oct. 17 –Aug. 18	Expenses (forecast) Sep 18	% project completion	Forecast available
628,772	465,927	4,900	75%	157,945

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	M		O M	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				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			W E B		O M	W E B		W E B		
	3.3.2.3 Support to obtain samples from outbreaks			L S				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 M		V	O M
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 April 2018 – September 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

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

4. Progress against indicators

Activities	Indicators	Baseline Sept 2015	Target 2 years	Achieved Sept 2018	Explanation of indicator
3.4.1	e-learning courses delivered	0	12	8 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); FMD Investigation Training Course (2); FMD Risk Analysis Along the Value Chain (also some countries in S, E and W Africa, NENA) West and Central Africa FMD Investigation Training Course in French (1)	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	172	Participants engaging in single e-learning event annually (e.g. 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.

An updated version of 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 program, including external evaluation, is currently being organized (see components 1.1 and 2.4 for more information).

3.4.1.3 Courses delivered and evaluated Asia region

Two e-learning courses have been conducted for South Asian countries in the period March- September 2018.

FMD Risk Analysis Along the Value Chain

This "in-depth" online course took place in June and July and involved 85 nominated participants from all South Asian (SAARC) countries, plus additional countries which were prioritized as requiring assistance in the development of Risk-Based Strategic Plans under the new PCP Support Officer system (see component 3.2).

The course aimed to enable participants to be confident in conducting their own risk analysis and value chain mapping, and that these skills could be used directly to develop or implement FMD control strategies in participant's countries.

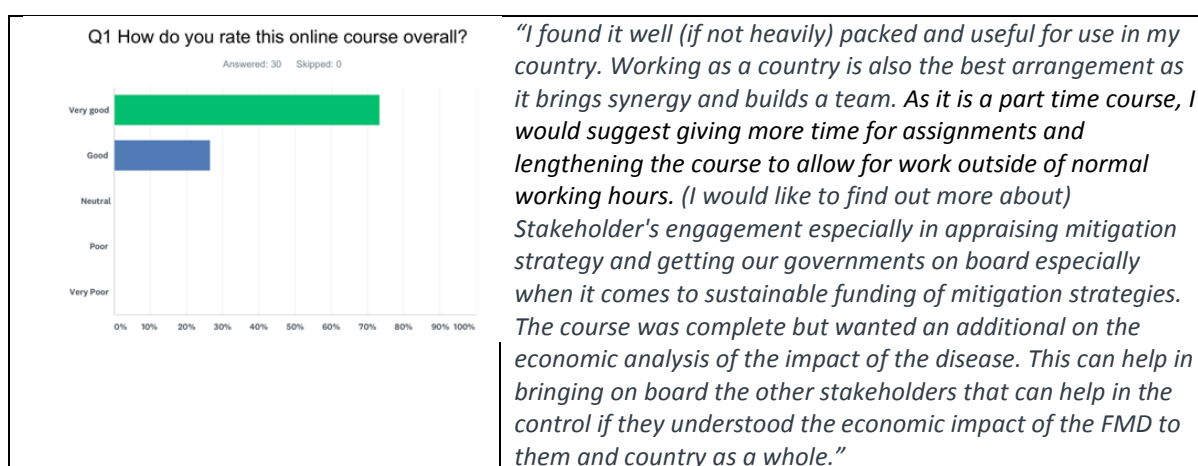
The learning objectives were that participants who complete the course would be able to *apply the key concepts and principles of risk analysis; map value chains in order to identify disease transmission risks and control options; assess the impact and feasibility of candidate risk mitigation measures; apply what you have learned to the development of 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. The assignments are reviewed each week by the course tutors, and additionally through peer review of each other's assignments. The assignments work through the process of mapping of value chains, risk analysis along the chain and identification of risk-based control options and the intention in that the assignments, once completed, can be directly added to a national Risk-Based Strategic Plan (RBSP).

39 of the 86 participants completed all aspects of the course. All except five countries had at least one participant taking a full and active part in the course, and as such, 12 participating countries developed materials that are intended to be used in their ongoing RBSP development. The final versions of the assignments, together with tutor's comments, have been passed to the PCP support officers for the countries concerned.

- Afghanistan, Cambodia, Laos, Myanmar, Maldives *Not completed*
- Bahrain, Bangladesh, Bhutan, Ethiopia, India, Iraq, Kenya, Malawi, Mozambique, Nepal, Nigeria, Pakistan, Sri Lanka, Sudan, Tanzania, Uganda, Zimbabwe *Full set assignments completed*

A summary of the participant's responses to the feedback survey is given below. Feedback was positive with participants stating the course was highly relevant to their needs (94%) and appreciating the practical application of the course. Many participants commented on the high time requirement needed for this course, particularly the course assignments.

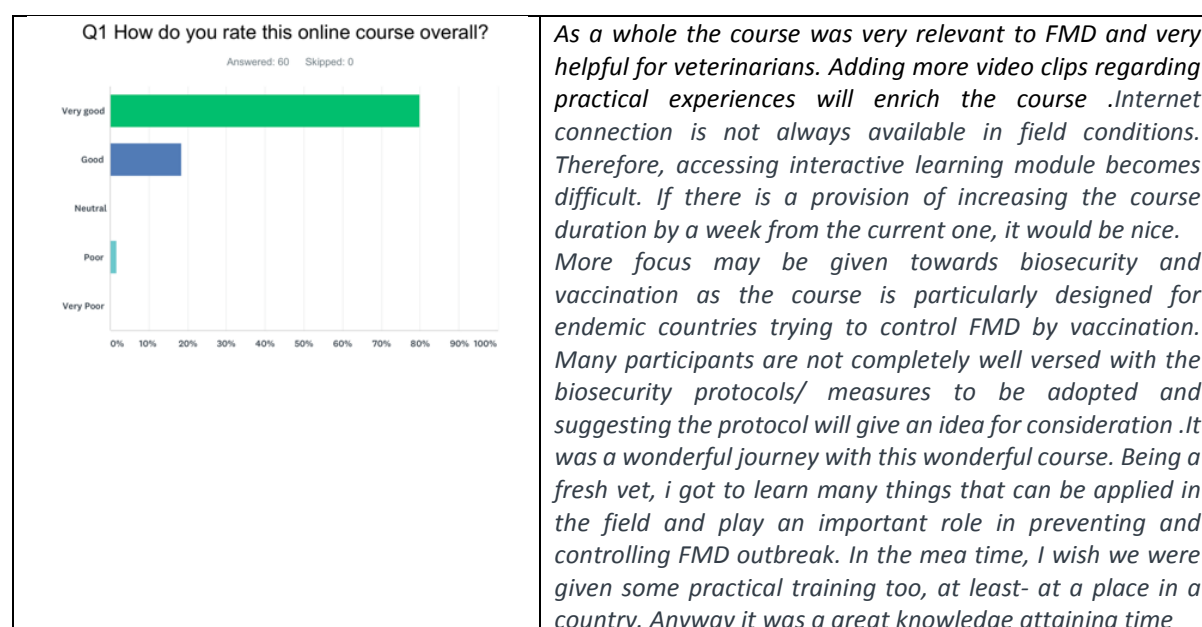


FMD Investigation Training Course for South Asia (2)

This was the second edition of the FMD Investigation Training Course for South Asia and was conducted in July 2018. 184 participants were enrolled in the course. Each participating country's Chief Veterinary Officer (CVO) was invited to nominate participants for the course and in addition it was possible for participants to nominate themselves for the course, and this opportunity was advertised through regional veterinary networks.

The learning objectives of the course were 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 risks of foot-and-mouth virus spread associated to veterinary personnel and relate the characteristics of the virus with appropriate biosecurity strategies; effectively use personal protective equipment (PPE) and establish and effective cleaning and disinfection protocol for visiting foot-and-mouth disease suspected premises; explain the key features of foot-and-mouth disease vaccines and the basic concepts related to vaccine programme implementation and monitoring; describe the different epidemiological settings that determine the objective of a foot-and-mouth disease vaccination programme and outline different vaccination strategies; explain the key features of the Progressive Control Pathway.*

36% of the 189 participants nominated for the course completed all the requirements and gained their certificates. This completion level is lower than the previous version of this course, and follow up is underway to better understand the reasons for relatively low completion levels. The feedback from those who did complete the course was positive, with a summary given below. Suggestions for improvements to the course included addition of further interactive videos and webinars.



Course survey

National e-learning courses in India

Formal letters have been sent, under the co-ordination of FAO India, to the Indian Council of Agricultural Research (ICAR) requesting collaboration in the delivery of national e-learning courses in India. This proposal has been approved, and work has begun to further co-ordinate with these partners for the adaptation of the e-learning course to the Indian situation.

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 program).

The letter of agreement concluded with CIRAD (see reported elsewhere) includes a short assessment of training needs in West and Central Africa. This training needs assessment is underway and the report is expected to follow the delivery of the French language socio-economics course, which has been postponed to be delivered in October 2018.

The findings and feedback of the first online course for North, West and Central Africa also provided important information for the training needs assessment for this region (see reported below).

3.4.1.5 Training courses and resources are delivered and evaluated in West and Central Africa.

A first pilot e-learning FMD Investigation Training Course in French was organized in July 2018. The CVO's of all countries in North, West and Central Africa were invited to nominate participants for the course. In addition, the opportunity for participants to nominate themselves was advertised through regional networks. A total of

298 participants were therefore registered on the course. In order to address concerns regarding internet connectivity in West and Central Africa, training materials and discussion forum posts were sent to participants using social media and mobile phone communication (Whatsapp™).

The learning objectives for this course were the same as for the FMD Investigation Training Course for South Asia, listed above.

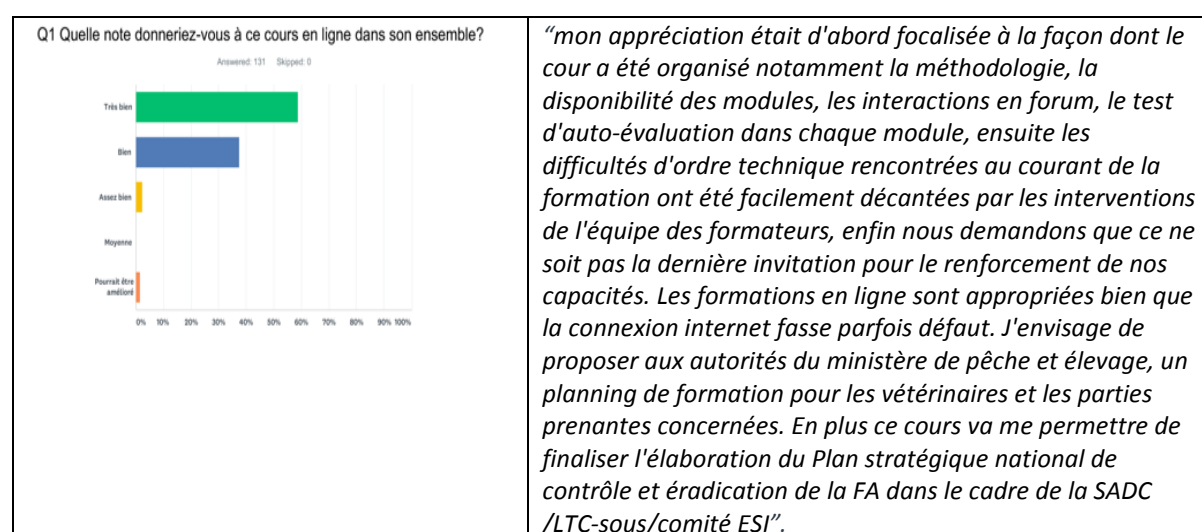
In total, 30% of participants completed the course. The split according to countries was as follows:

Percentage of completion online per country:

Algeria: 24% Benin: 21% Burkina Faso: 56% Cameroon: 23% Central African Republic: 0% Chad: 6% Congo: 0% Cote d'Ivoire: 47% DRC: 28% Kenya: 0% Gabon: 20% Guinea: 9% Morocco: 68% Niger: 29% São Tomé et Príncipe : 0% Senegal: 75% Togo: 0% Tunisia : 48%

While the relatively low percentage completion indicates that internet connectivity is challenging in this region, the enthusiastic participation of those who were able to be involved is encouraging. The use of social media and mobile phone technology helped drive additional participation.

Participants responded to a feedback survey, including additional questions related to identifying future training needs. Overall feedback was positive, with participants particularly valuing the discussion forum and interactive elements of the course including videos. Some participants suggested that additional time to complete the course should be given, and requested the addition of further interactive elements. Most participants agreed that they would be able to practically implement what they had learned, and requested further e-learning or training related to the topics of this course, or in addition, further training particularly related to disease control strategies and vaccination.



Course survey

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 the FMD Risk Analysis Along the Value Chain e-learning course were made available to countries outside the South Asia and W/C Africa target regions, please see reported above.

3.4.2.1 Develop webinar series and network for global PCP practitioners

Progressive Control Practitioners' Network

Two training topics were conducted under the Progressive Control Practitioners' network in the last six months. The network now has 172 members and between 25 and 45 participants attended each of the webinars. 11 participants have now been awarded a bronze level certificate, indicating that they have completed over 10 hours of training through the network.

A summary of the new training resources developed is included below.

Month Five: Investigation of Apparent Vaccine Failure

Training exercise: discussion of three scenarios of apparent vaccine failure; First webinar: Investigation of Apparent Vaccine Failure; Recorded presentation: Dr Klement: The Field Effectiveness of an Inactivated Vaccine for Prevention of FMD; Second webinar: Investigation of Apparent Vaccine Failure; Job aid: Matrix for investigation of apparent vaccine failure.

Month Six: Stakeholders: who are they, why and how can they contribute to progressive FMD control?

First webinar: Introduction to Stakeholders; A short assignment: tools for stakeholder consultation and setting up a multi-stakeholder process; Presentations: Private Sector Veterinary Service Providers and Extension Education; Second webinar: Introduction to Stakeholders, Public-Private Partnership

Francophone network

(Please also see reported under component 2.3)

The Francophone network has global reach with webinars conducted in French language. One webinar has been held in March- September: *Partenariat Public-Privé (2 /2): « Implication et amélioration du rôle du vétérinaire privé dans la lutte contre la fièvre aphteuse »*.

The online course for North, West and Central Africa has been beneficial in generating new audiences for the Francophone network and all those taking part in the online course have been added to the network.

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 however it has not been possible to move further and deliver webinars under these networks. This is a priority for the next six months.

3.4.2.3 Assist collaborating organizations to develop a sustainable system for training

A collaboration with ICAR, India, is now underway, see listed above. Similar partners for delivery of training in West and Central Africa should now be sought.

3.4.2.4 Research additional sources of funding to support training

EuFMD continues to work to support the development of new e-learning course and materials on FMD Post Vaccination Monitoring which is being carried out by The Pirbright Institute, UK. This will be rolled out as a live course, supported by EuFMD, in 2019.

6. Issues for Executive Committee attention arising during implementation

The prioritization of e-learning versus other methods of training for West and Central Africa will be discussed with the Executive Committee, based on the findings of the first pilot online training for this new region.

In addition, the ongoing efforts to improve participation in the Progressive Control Practitioners' network, and the degree to which resources should continue to be assigned to this network, will be discussed.

7. Priorities for the next six months

Priorities for the next six months include:

South Asia:

- National level e-learning course in India (and additional countries if appropriate), through newly developed partnerships
- Virtual support to laboratory and epidemiology networking
- Next regional e-learning courses: FMD Socio-economic Impact Assessment, FMD Laboratory Investigation Training Course.

West and Central Africa:

- Development of a plan for training development based on the findings of the FMD Investigation Training Course and the training needs assessment conducted by CIRAD.

Progressive Control Practitioners' Network:

- Focus on improving cost effectiveness by expanding audience numbers while reducing staff input required.
-

8. Success stories

The FMD Investigation Training course for North, West and Central Africa is a success story, with a large number of enthusiastic participants participating online and through mobile phone networking.

9. Areas proposed to give more emphasis in the next 24-month period and activities likely to achieve greatest impact

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.

The development of training program and roll-out of additional training courses or resources for West and Central Africa based on the findings of the training needs assessments conducted.

10 .Budget €

Total Budget Workplan activity 24 months	Expenses Oct 17 – Aug 18	Expenses Sep 18 (forecast)	% project completion (forecast)	Actual available (forecast)
195,532	68,823	9,950	40%	116,759

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 Dev & 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 Dev & implement a support network including training prog for the PCP practitioners 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																											

